

# '871 Charts

## **Overview of KYOCERA AMP'D JET & ANGEL Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA AMP'D JET & ANGEL (the "Accused System"), and all substantially similar KYOCERA camera phone (or smart phone) products. The term "Accused System" includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the "871 Patent"). The term "Accused System" includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA's documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**KYOCERA AMP'D JET & ANGEL**

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA AMP'D JET & ANGEL**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)*

**Technical Specifications:**

CDMA Talk and Standby Times


**Highlights**

- High-speed 1x EV-DO wireless access

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

## 2 MAKING AND ANSWERING CALLS

### Making a call

Make sure you are in an area where a signal can be received. Look for the  symbol on the home screen. The more bars you see in this symbol, the stronger the signal. If there are no bars, move to where the signal strength is better.

### Answering a call

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your Contacts directory, the contact name appears.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 17 of 95)



Rear Camera

*Source: <http://www.kyocera-wireless.com/kx18-phone/user-guides.htm>*

**• VGA camera and a dedicated camera key**

The Accused System comprises of a rear camera for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)*

a manually portable housing;



The Accused System comprises a manually portable housing.

**Source:** [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* <http://www.kyocera-wireless.com/kx18-phone/user-guides.htm>

**Keypad** for entering numbers, letters, or symbols.

- VGA camera and a dedicated camera key

The Accused System comprises of a rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 11 of 95)

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)



a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

• 262,000-color display: vivid color display for viewing images, videos and games

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)



The Accused System comprises a color display and electronic camera (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/kx18-phone/user-guides.htm>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System must include a processor supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

# ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

- **Memory:**

8MB on-board storage (also supports Micro SD expandable memory for up to 512MB of additional storage)

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

### **Removable memory card**

Your Amp'd Mobile™ Jet phone uses a removable memory card that, when inserted into the phone, increases storage capacity. You can drag and drop files stored on your computer directly onto the card.

The removable memory card supports mp3, aac, mp4, 3gp, 3g2, m4a, and m4b file types, up to 512 MB.

The Accused System provides a removable memory card slot (supports up to 512MB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 69 of 94)

- **High-speed 1x EV-DO wireless access**

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

- **CDMA Mode:**  
CDMA 800/1900MHz/AMPS

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

a user interface for enabling a user to select the image data signal for viewing and transmission;



262,000 Color display acting as a user interface (Operating System: BREW 3.1.3)

*Source:* <http://www.kyocera-wireless.com/kx18-phone/index.htm>

- 262,000-color display: vivid color display for viewing images, videos and games
- BREW® 3.1.3 for downloads of games and ringers\*

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

### Transmitting Images via Multimedia Messages:


- Multi-media Messaging Service (MMS) capable\* -- send pictures or videos over-the-air to other MMS-capable handsets and to email addresses



## 12 | SENDING AND RECEIVING MULTIMEDIA MESSAGES

### Sending multimedia messages

You can only send multimedia messages to phones that are capable of receiving them or to email addresses. For details, check with your service provider. Multimedia messages have a predetermined character and file size limit. When you reach the character and file size limit for a single multimedia message, you must edit the message to meet the size limitation.

### Viewing multimedia messages

When you receive a multimedia message, the  icon appears on your phone's screen and remains until all messages are viewed. The message is stored in the InBox until the full message has been received, regardless of the auto receive enabled or disabled setting.

1. Press the left softkey  to **View** the multimedia message. If the message is long, press the Navigation key  down to view the entire multimedia message.


The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 80 and 82 of 95)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## 2 | MAKING AND ANSWERING CALLS

### Making a call

Make sure you are in an area where a signal can be received. Look for the  symbol on the home screen. The more bars you see in this symbol, the stronger the signal. If there are no bars, move to where the signal strength is better.

### Answering a call

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your Contacts directory, the contact name appears.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 17 of 95)



### Transmitting Images via Multimedia Messages:


- Multi-media Messaging Service (MMS) capable\* -- send pictures or videos over-the-air to other MMS-capable handsets and to email addresses



## 12 | SENDING AND RECEIVING MULTIMEDIA MESSAGES

### Sending multimedia messages

You can only send multimedia messages to phones that are capable of receiving them or to email addresses. For details, check with your service provider. Multimedia messages have a predetermined character and file size limit. When you reach the character and file size limit for a single multimedia message, you must edit the message to meet the size limitation.

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alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

- Backlit keypad

**Keypad** for entering numbers, letters, or symbols.



The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

QWERTY  
Keyboard

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

- **High-speed 1x EV-DO wireless access**

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

- **CDMA Mode:**  
CDMA 800/1900MHz/AMPS

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

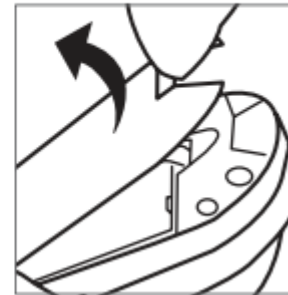
a power supply for powering the system.

- **Battery Type:**  
Standard: Up to 900 mAh lithium ion (Lilon)  
Extended: Up to 1550 mAh lithium ion (Lilon)

Source: <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

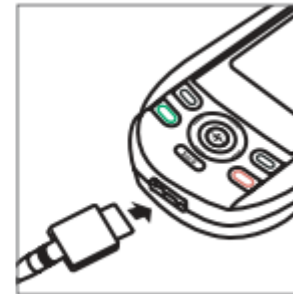
**To install the battery:**

1. Hold the phone face down.
2. Slide the tab at the bottom of the door up and remove the battery door.



**To charge the battery:**

1. Connect the AC adapter to the jack on the bottom of the phone.
2. Plug the adapter into a wall outlet.



The Accused System includes a power supply (900mAh Li-Ion battery) for powering the system (Phone).


Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 9 of 95)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## Taking a picture

### Slide open or closed

1. Select Menu → Camera.
2. Focus on the image using the phone's display as the viewfinder.

**Tip:** Press the Navigation key  up or down to zoom in or zoom out.\*

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 34 of 95)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

• **Memory:**

8MB on-board storage (also supports Micro SD expandable memory for up to 512MB of additional storage)

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

**Removable memory card**

Your Amp'd Mobile™ Jet phone uses a removable memory card that, when inserted into the phone, increases storage capacity. You can drag and drop files stored on your computer directly onto the card.

The removable memory card supports mp3, aac, mp4, 3gp, 3g2, m4a, and m4b file types, up to 512 MB.

The Accused System provides a removable memory card slot (supports up to 512MB) for storage of visual Images. The memory card is located within and supported by the portable housing.

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5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.





The Accused System includes a display for viewing incoming image data signals or multimedia message.

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### Viewing multimedia messages

When you receive a multimedia message, the  icon appears on your phone's screen and remains until all messages are viewed. The message is stored in the InBox until the full message has been received, regardless of the auto receive enabled or disabled setting.

1. Press the left softkey  to **View** the multimedia message. If the message is long, press the Navigation key  down to view the entire multimedia message.

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6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

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### Technical Specifications:

CDMA Talk and Standby Times


### Highlights

- High-speed 1x EV-DO wireless access

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## 2 | MAKING AND ANSWERING CALLS

### Making a call

Make sure you are in an area where a signal can be received. Look for the  symbol on the home screen. The more bars you see in this symbol, the stronger the signal. If there are no bars, move to where the signal strength is better.

### Answering a call

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your Contacts directory, the contact name appears.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

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*Source:* <http://www.kyocera-wireless.com/kx18-phone/user-guides.htm>

**• VGA camera and a dedicated camera key**

The Accused System comprises of a rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the

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**7,365,871 Claim Language**

**Accused System and Method – Kyocera Amp'd Jet & Angel**

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a VGA camera (rear camera) for capturing visual images.

Source: <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

- VGA camera and a dedicated camera key

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## Highlights

- High-speed 1x EV-DO wireless access

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High-speed (3G) data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

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a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable housing with built in wireless connectivity.

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## Highlights

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High-speed (3G) data service is available and active on your phone. Check with your service provider for availability.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 16 of

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When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your Contacts directory, the contact name appears.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

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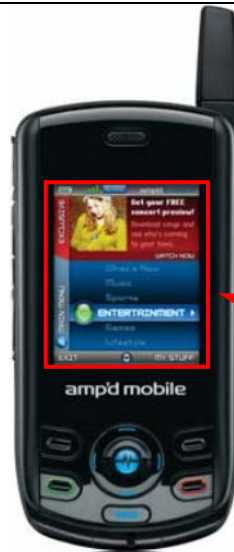
Source: <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

- VGA camera and a dedicated camera key

The Accused System comprises of a rear camera for capturing visual images and supported by the portable housing.

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a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;



262,000 display acting as a user interface (Operating System: BREW).

*Source: <http://www.kyocera-wireless.com/kx18-phone/index.htm>*

- 262,000-color display: vivid color display for viewing images, videos and games
- BREW® 3.1.3 for downloads of games and ringers\*


The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

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## **Taking a picture**

### **Slide open or closed**

1. *Select **Menu** → **Camera**.*
2. *Focus on the image using the phone's display as the viewfinder.*

**Tip:** Press the Navigation key  up or down to zoom in or zoom out.\*

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

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a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System must be having a processor supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

# ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

- **Memory:**

8MB on-board storage (also supports Micro SD expandable memory for up to 512MB of additional storage)

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

### **Removable memory card**

Your Amp'd Mobile™ Jet phone uses a removable memory card that, when inserted into the phone, increases storage capacity. You can drag and drop files stored on your computer directly onto the card.

The removable memory card supports mp3, aac, mp4, 3gp, 3g2, m4a, and m4b file types, up to 512 MB.

The Accused System provides a removable memory card slot (supports up to 512MB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 69 of 94)

Transmitting Images via Multimedia Messages:


## 12 | SENDING AND RECEIVING MULTIMEDIA MESSAGES

### Sending multimedia messages

You can only send multimedia messages to phones that are capable of receiving them or to email addresses. For details, check with your service provider. Multimedia messages have a predetermined character and file size limit. When you reach the character and file size limit for a single multimedia message, you must edit the message to meet the size limitation.

**Take Picture** to instantly take a new photo and attach it to your message.

**Media Gallery** to access all picture and video files in the phone:

- **Camera Pictures** displays thumbnails of the photos taken.
- Highlight a photo to add to the multimedia message. Press the left softkey  to choose **Select**.
- **Images** displays other images stored on the phone.
- **Video** displays videos stored on the phone.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 80 and 82 of 95)

## Highlights

- High-speed 1x EV-DO wireless access

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf) (Page 1 of 1)



High-speed (3G) data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals (Here: MMS) to the compatible remote receiving stations over wireless data networks.


*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 16 of 95)



the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## 2 | MAKING AND ANSWERING CALLS

### Making a call

Make sure you are in an area where a signal can be received. Look for the  symbol on the home screen. The more bars you see in this symbol, the stronger the signal. If there are no bars, move to where the signal strength is better.

### Answering a call

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your Contacts directory, the contact name appears.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 17 of 95)

## Highlights

- High-speed 1x EV-DO wireless access

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)(Page 1 of 1)



High-speed (3G) data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf)(Page 16 of 95)

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

## Keypad for entering numbers, letters, or symbols.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 11 of 95)



Alphanumeric  
Keyboard

The Accused System includes a Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf) (Page 1 of 1)

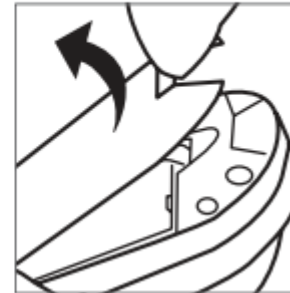
a power supply supported by the housing;

- **Battery Type:**  
Standard: Up to 900 mAh lithium ion (Lilon)  
Extended: Up to 1550 mAh lithium ion (Lilon)

Source: <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

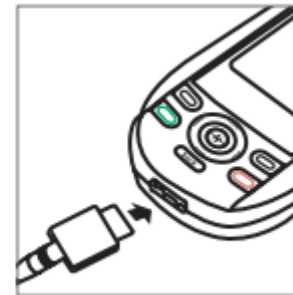
#### To install the battery:

1. Hold the phone face down.
2. Slide the tab at the bottom of the door up and remove the battery door.



#### To charge the battery:

1. Connect the AC adapter to the jack on the bottom of the phone.
2. Plug the adapter into a wall outlet.



The Accused System includes a power supply (900mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 9 of 95)

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

## Highlights

- High-speed 1x EV-DO wireless access

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)(Page 1 of 1)



High-speed (3G) data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks including 3G.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf)(Page 16 of 95)

**Transmitting and Receiving Images via Multimedia Messages:**


## 12 | SENDING AND RECEIVING MULTIMEDIA MESSAGES

### **Sending multimedia messages**

You can only send multimedia messages to phones that are capable of receiving them or to email addresses. For details, check with your service provider. Multimedia messages have a predetermined character and file size limit. When you reach the character and file size limit for a single multimedia message, you must edit the message to meet the size limitation.

**Take Picture** to instantly take a new photo and attach it to your message.


**Media Gallery** to access all picture and video files in the phone:




- **Camera Pictures** displays thumbnails of the photos taken.
- Highlight a photo to add to the multimedia message. Press the left softkey  to choose **Select**.
- **Images** displays other images stored on the phone.
- **Video** displays videos stored on the phone.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 80 and 82 of 95)

### **Viewing multimedia messages**

When you receive a multimedia message, the  icon appears on your phone's screen and remains until all messages are viewed. The message is stored in the InBox until the full message has been received, regardless of the auto receive enabled or disabled setting.

1. Press the left softkey  to **View** the multimedia message. If the message is long, press the Navigation key  down to view the entire multimedia message.
2. Press right softkey  to select **Options**.

**Save Picture** saves the picture embedded in the multimedia message.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.


*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 82 and 83 of 95)

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

## Taking a picture

### Slide open or closed

1. **Select Menu → Camera.**
2. *Focus on the image using the phone's display as the viewfinder.*

**Tip:** Press the Navigation key  up or down to zoom in or zoom out.\*

The Accused system includes an electronic camera for visually framing the subject to be captured.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 34 of 95)

**White Balance** allows the camera to adjust for different lighting. Options are Automatic, Fluorescent, Incandescent, or Daylight.

The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 33 of 95)



13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

- **Memory:**

8MB on-board storage (also supports Micro SD expandable memory for up to 512MB of additional storage)

*Source:* <http://www.kyocera-wireless.com/kx18-phone/tech-specs.htm>

### **Removable memory card**

Your Amp'd Mobile™ Jet phone uses a removable memory card that, when inserted into the phone, increases storage capacity. You can drag and drop files stored on your computer directly onto the card.

The removable memory card supports mp3, aac, mp4, 3gp, 3g2, m4a, and m4b file types, up to 512 MB.

The Accused System provides a removable memory card slot (supports up to 512MB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 69 of 95)

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.



Display window


*Source: <http://www.kyocera-wireless.com/kx18-phone/index.htm>*




- 262,000-color display: vivid color display for viewing images, videos and games
- BREW® 3.1.3 for downloads of games and ringers\*

The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source: [http://www.kyocera-wireless.com/kx18-phone/pdf/jet\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/jet_product_brochure.pdf)(Page 1 of 1)*

### Viewing multimedia messages

When you receive a multimedia message, the  icon appears on your phone's screen and remains until all messages are viewed. The message is stored in the InBox until the full message has been received, regardless of the auto receive enabled or disabled setting.

1. Press the left softkey  to **View** the multimedia message. If the message is long, press the Navigation key  down to view the entire multimedia message.
2. Press right softkey  to select **Options**.

**Save Picture** saves the picture embedded in the multimedia message.

**Save Video** saves the video embedded in the multimedia message.

**Save Sound** saves the sound embedded in the multimedia message.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

*Source:* [http://www.kyocera-wireless.com/kx18-phone/pdf/kx18\\_jet\\_user\\_guide.pdf](http://www.kyocera-wireless.com/kx18-phone/pdf/kx18_jet_user_guide.pdf) (Page 82 and 83 of 95)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



First portion of the housing consisting of display and camera.

Second portion of the housing consisting of keypad

*Source:* <http://www.kyocera-wireless.com/kx18-phone/>

## **Overview of KYOCERA BRIO Infringement of the '871 Patent**

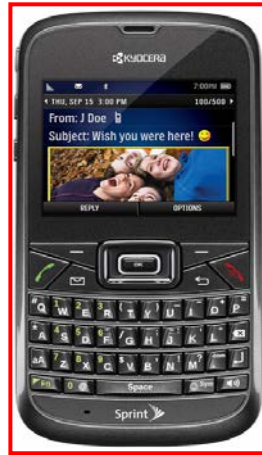
Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA BRIO (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera Brio**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/brio-phone/>

**Connectivity**

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>



**Data Service Active** – Data service is available. When active, the icon is animated.



**Data Service Dormant** – Data service is currently dormant.



**Data Service Unavailable** – Data service is currently unavailable.

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 19 of 121)

## Make and Answer Phone Calls

This topic will help you learn the basics of making and answering phone calls.

[Make Phone Calls](#)

[Dialing Options](#)

[Answer Phone Calls](#)


[Missed Call Notification](#)

[Call Emergency Numbers](#)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

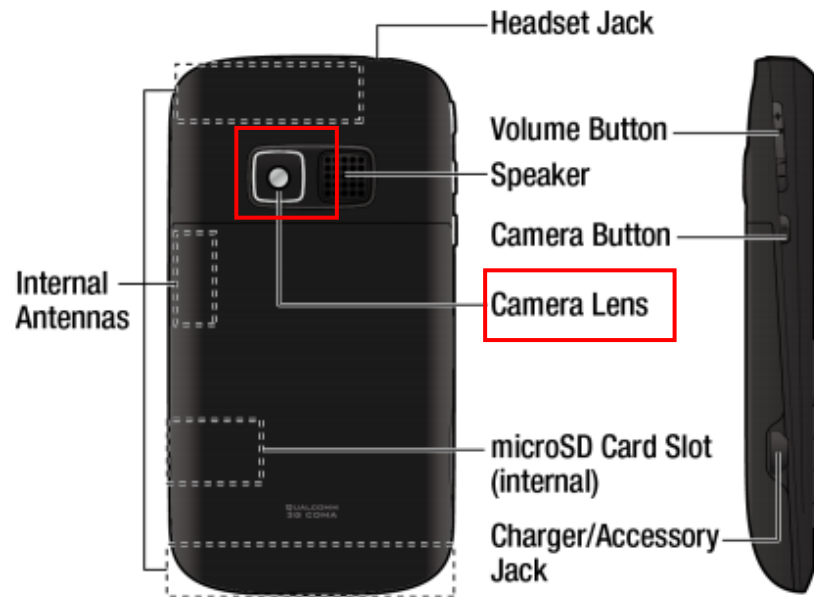
*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 30 of 121)

## Answer Phone Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Press  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys. See [Call Answer Mode](#).)

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 31 of 121)





Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 16 of 121)

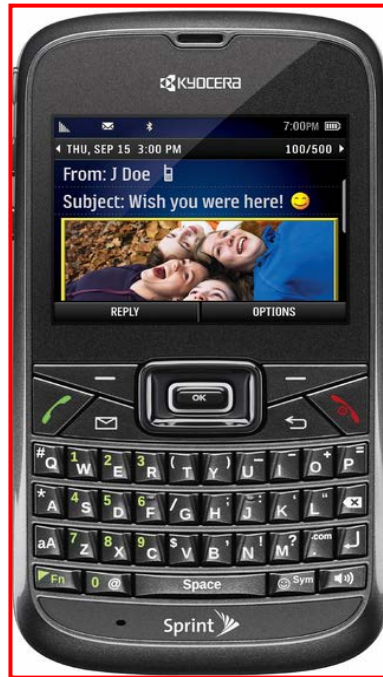
## Camera

- 1.3 MP camera with digital zoom

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

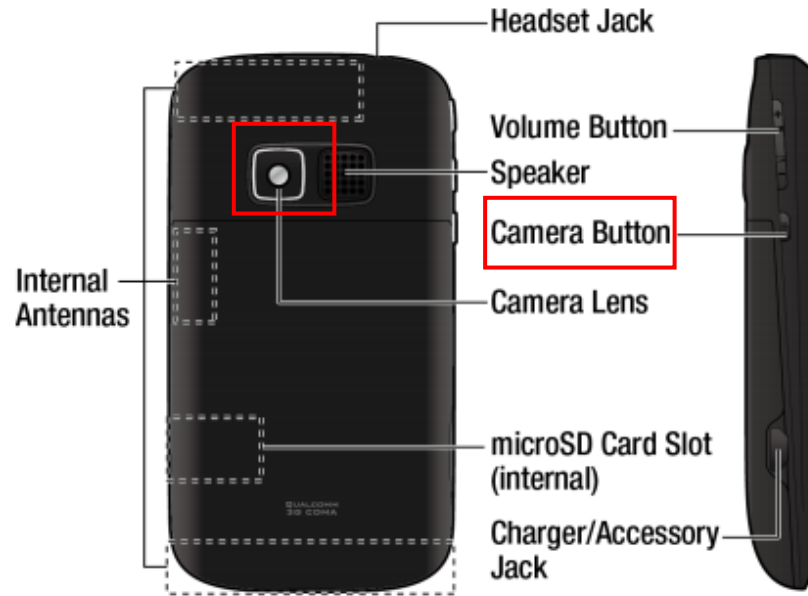
a manually portable housing;



The Accused System comprises a manually portable housing.

Source: <http://www.kyocera-wireless.com/brio-phone/>

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 16 of 121)

## Camera

- 1.3 MP camera with digital zoom

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

- 2.2" QVGA TFT (320 x 240 pixels)

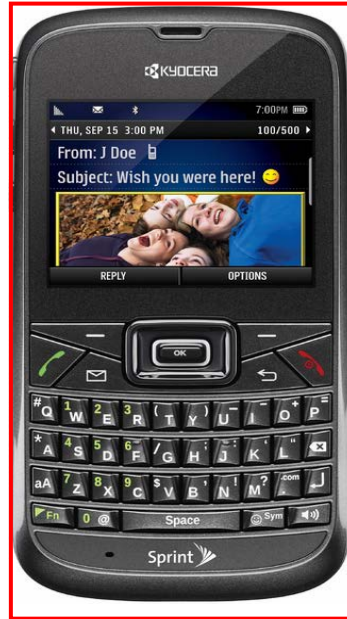
*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>



The Accused System comprises a 2.2" QVGA display (320 x 240) and electronic camera in the same housing being commonly movable when the housing is moved by the user.

*Source:* <http://www.kyocera-wireless.com/brio-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (QSC6055 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/brio-phone/>

## Chipset

- QSC6055

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

## Memory

- 128MB/128MB internal memory
- microSD™ supports up to 32GB optionally (microSD card not included)

**Source:** <http://www.kyocera-wireless.com/brio-phone/specs/>

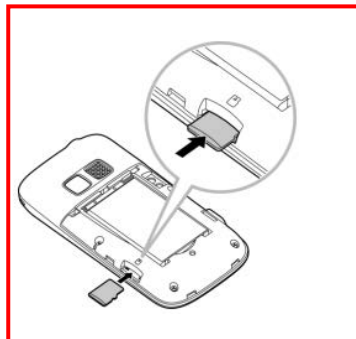


microSD memory card slot for storing and transferring photos

**Source:** <http://www.kyocera-wireless.com/brio-phone/>

Insert the microSD Card

Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.




**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 80 and 81 of 121)



## Connectivity

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

	<b>Data Service Active</b> – Data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> – Data service is currently dormant.
	<b>Data Service Unavailable</b> – Data service is currently unavailable.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 19 of 121)

a user interface for enabling a user to select the image data signal for viewing and transmission;

### Display

- 2.2" QVGA TFT (320 x 240 pixels)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

The Brio is a feature phone and runs the same old **Java-based operating system**

Source: <http://www.phonescoop.com/articles/article.php?a=8838>



2.2" QVGA display (320 x 240) acting as a user interface (Operating System Java Based).

Source: <http://www.kyocera-wireless.com/brio-phone/>

## Transmitting Images via Multimedia Messages:

### Text Messaging and Multimedia Messaging

Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or to record a new message or audio clip.)

Select files you would like to attach.

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 72 and 73 of 121)



The Accused System provides a user interface where a user can transmit images via multimedia messages by using “add attachment” option.

*Source:* <http://www.youtube.com/watch?v=ZmjcWCWHegg> (Time: 0.50 of 2.42)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## Make and Answer Phone Calls

This topic will help you learn the basics of making and answering phone calls.

Make Phone Calls

Dialing Options

Answer Phone Calls


Missed Call Notification

Call Emergency Numbers

The Accused System provides a telephonic system for sending and receiving audio signals.

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 30 of 121)

### Answer Phone Calls

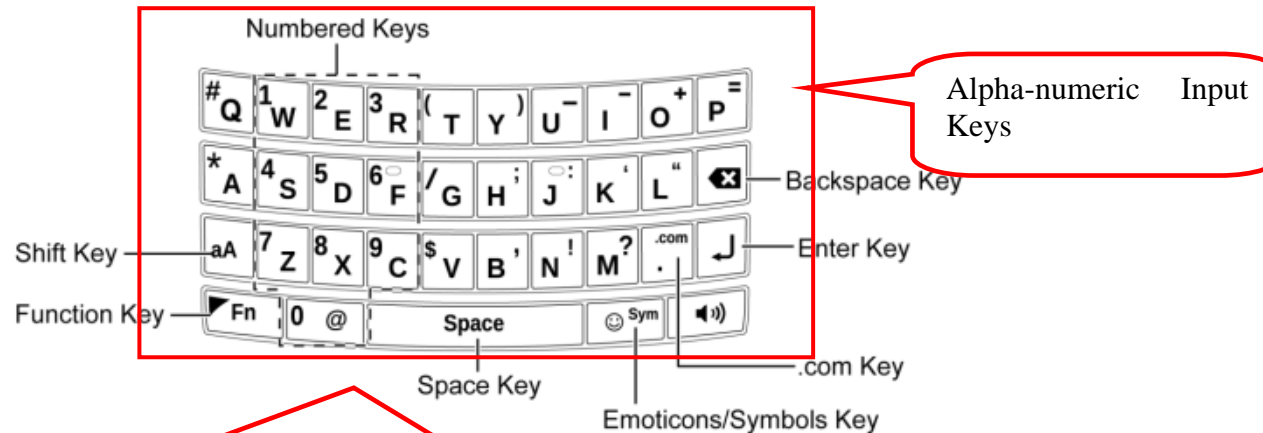
1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Press  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys. See [Call Answer Mode](#).)

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 31 of 121)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Enter Text

You can enter text on your phone using the QWERTY keyboard.



The Accused System includes a QWERTY Keypad with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 24 and 25 of 121)

## Connectivity

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)



**Source:** <http://www.kyocera-wireless.com/brio-phone/specs/>

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

	<b>Data Service Active</b> – Data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> – Data service is currently dormant.
	<b>Data Service Unavailable</b> – Data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 19 of 121)

a power supply for powering the system.

### Battery & Talk Time

- 870 mAh Lithium ion battery
- Talk Time: up to 4.71 hours\*

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>



The Accused System includes a power supply (870 mAh Li-Ion battery) for powering the system (Phone).

Source: <http://www.kyocera-wireless.com/brio-phone/>

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

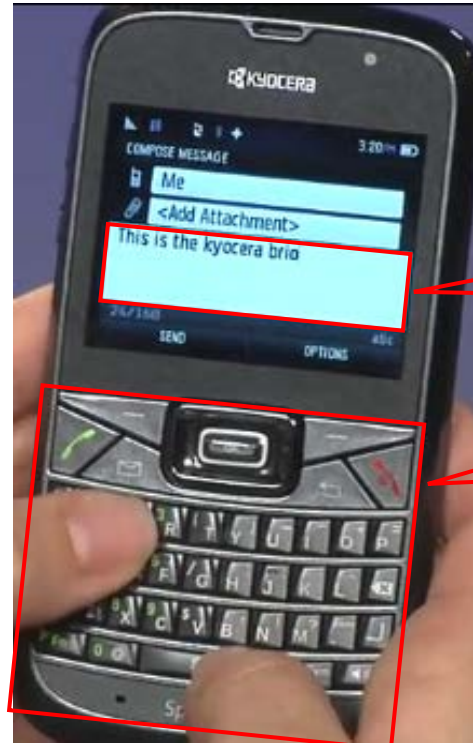


The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* <http://www.youtube.com/watch?v=4b2DtZ1RJso> (Time: 0.38 of 3.16)



3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Alphanumeric  
Message Input

Alphanumeric  
Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:** [http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454\\_7-35004027.html](http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454_7-35004027.html) (Time: 0.44 of 2.31)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

### Memory

- 128MB/128MB internal memory
- microSD™ supports up to 32GB optionally (microSD card not included)

**Source:** <http://www.kyocera-wireless.com/brio-phone/specs/>

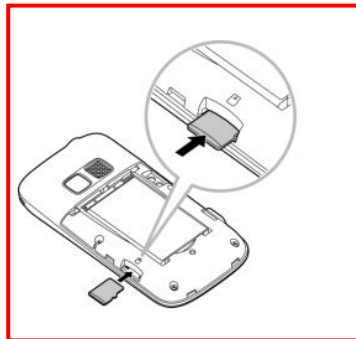


microSD memory card slot for storing and transferring photos

**Source:** <http://www.kyocera-wireless.com/brio-phone/>

Insert the microSD Card

Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 80 and 81 of 121)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/brio-phone/>

### ***Text Messaging and Multimedia Messaging***

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will be automatically displayed on your phone's screen.

Multimedia messages consist of both text and multimedia files, such as pictures or voice recordings. Outgoing multimedia messages can be up to 600 KB with up to 1000 text characters.

#### **View Messages**

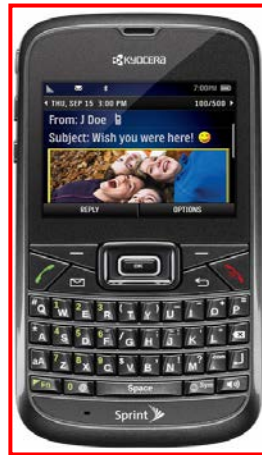
Highlight a thread and press  to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) ( Page 72 and 74 of 121)

**7,365,871 Claim Language**

**Accused System and Method – Kyocera Brio**

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/brio-phone/>

**Connectivity**

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>



**Data Service Active** – Data service is available. When active, the icon is animated.



**Data Service Dormant** – Data service is currently dormant.



**Data Service Unavailable** – Data service is currently unavailable.

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 19 of 121)

## Make and Answer Phone Calls

This topic will help you learn the basics of making and answering phone calls.

[Make Phone Calls](#)

[Dialing Options](#)

[Answer Phone Calls](#)


[Missed Call Notification](#)

[Call Emergency Numbers](#)

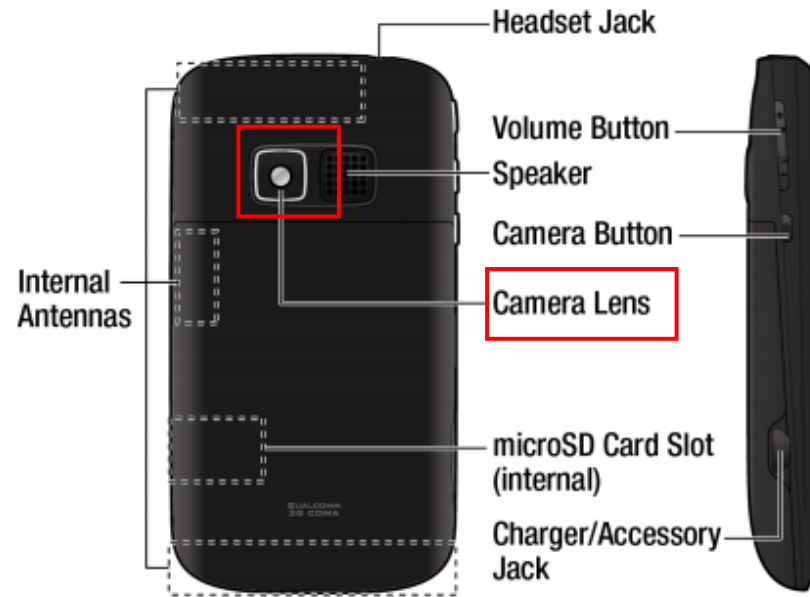
The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 30 of 121)

### Answer Phone Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Press  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys. See [Call Answer Mode](#).)

*Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 31 of 121)*



*Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 16 of 121)*

## Camera

- 1.3 MP camera with digital zoom

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



Source: <http://www.kyocera-wireless.com/brio-phone/>

## Camera

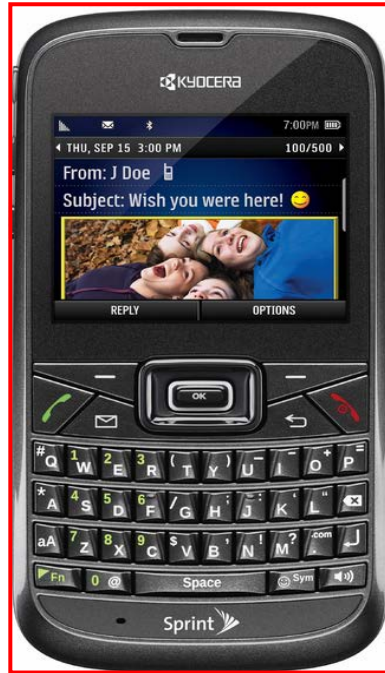
- 1.3 MP camera with digital zoom

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>



a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/brio-phone/>

## Make and Answer Phone Calls

This topic will help you learn the basics of making and answering phone calls.

Make Phone Calls

Dialing Options

Answer Phone Calls


Missed Call Notification

Call Emergency Numbers

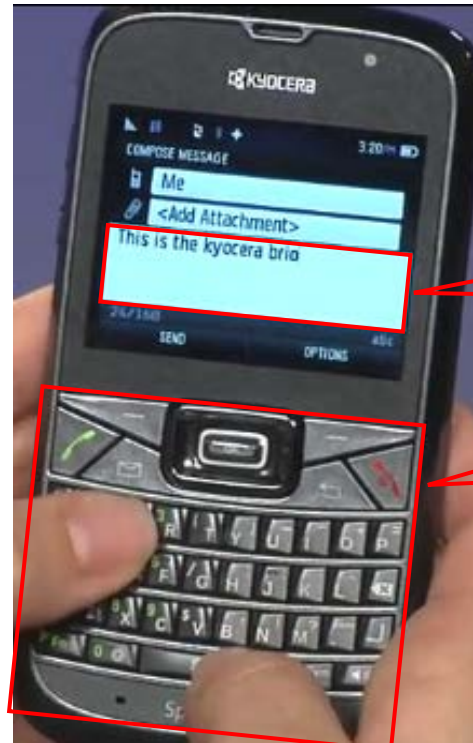
The Accused System provides a telephonic system for sending and receiving audio signals.

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 30 of 121)

### Answer Phone Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Press  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys. See [Call Answer Mode](#).)

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 31 of 121)



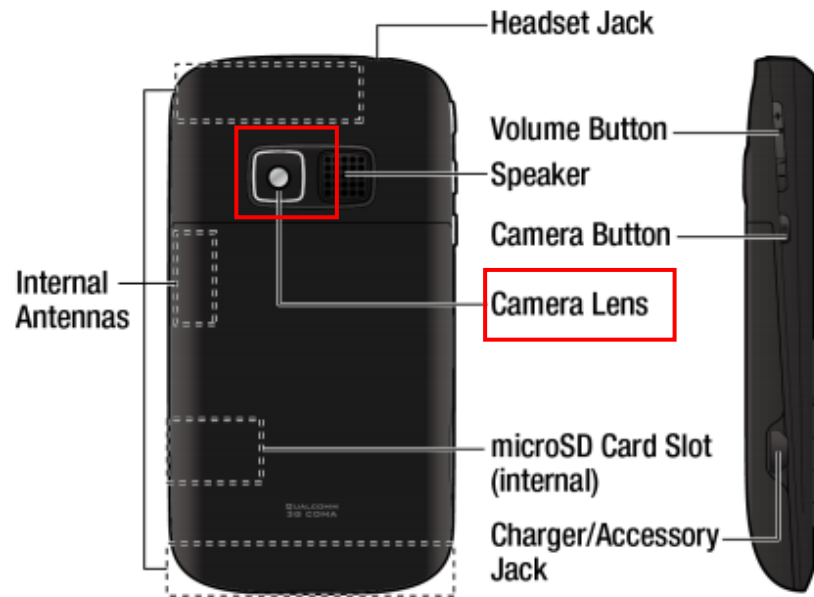
Alphanumeric  
Message Input

Alphanumeric  
Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:** [http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454\\_7-35004027.html](http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454_7-35004027.html) (Time: 0.44 of 2.31)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 16 of 121)

## Camera

- 1.3 MP camera with digital zoom

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

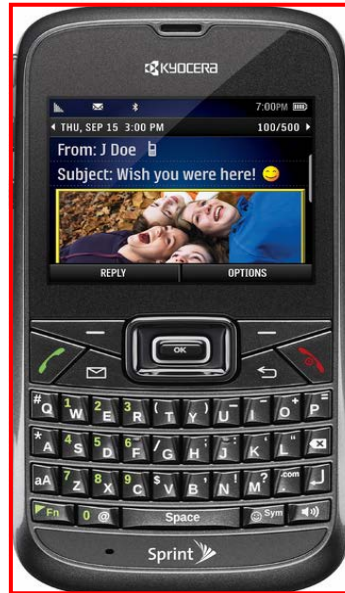
*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>



The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** <http://www.youtube.com/watch?v=4b2DtZ1RJs0> (Time: 0.38 of 3.16)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (QSC6055 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/brio-phone/>

## Chipset

- QSC6055

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

## Memory

- 128MB/128MB internal memory
- microSD™ supports up to 32GB optionally (microSD card not included)

**Source:** <http://www.kyocera-wireless.com/brio-phone/specs/>

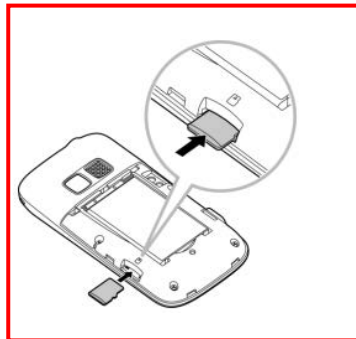


microSD memory card slot for storing and transferring photos

**Source:** <http://www.kyocera-wireless.com/brio-phone/>

Insert the microSD Card

Remove the microSD Card




The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

**Source:** [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 80 and 81 of 121)

### Connectivity

- CDMA2000 1xRTT, dual-band digital (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>

	<b>Data Service Active</b> – Data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> – Data service is currently dormant.
	<b>Data Service Unavailable</b> – Data service is currently unavailable.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 19 of 121)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

## Display

- 2.2" QVGA TFT (320 x 240 pixels)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.

*Source:* <http://www.kyocera-wireless.com/brio-phone/specs/>

The Brio is a feature phone and runs the same old **Java-based operating system**

*Source:* <http://www.phonescoop.com/articles/article.php?a=8838>



2.2" QVGA display (320 x 240) acting as a user interface (Operating System: Java Based).

*Source:* <http://www.kyocera-wireless.com/brio-phone/>

## Transmitting Images via Multimedia Messages:

### Text Messaging and Multimedia Messaging

Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or to record a new message or audio clip.)

Select files you would like to attach.

*Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 72 and 73 of 121)*



The Accused System provides a user interface where a user can transmit images via multimedia messages by using “add attachment” option.

*Source: <http://www.youtube.com/watch?v=ZmjcWCWHegg> (Time: 0.50 of 2.42)*

an integrated power supply for powering both the cellular telephone and the camera.

### Battery & Talk Time

- 870 mAh Lithium ion battery
- Talk Time: up to 4.71 hours\*

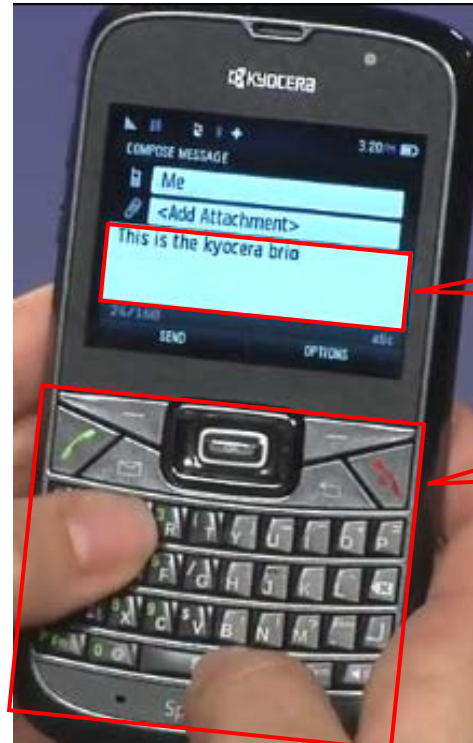
Source: <http://www.kyocera-wireless.com/brio-phone/specs/>



The Accused System includes a power supply (870 mAh Li-Ion battery) for powering the system (Phone).

Source: <http://www.kyocera-wireless.com/brio-phone/>

7.The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



Alphanumeric Message Input

Alphanumeric Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:** [http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454\\_7-35004027.html](http://reviews.cnet.com/cell-phones/kyocera-brio-gray-sprint/4505-6454_7-35004027.html) (Time: 0.44 of 2.31)



The Accused system comprises of display window for framing the visual Image.

*Source:* <http://www.youtube.com/watch?v=4b2DtZ1RJso> (Time: 0.38 of 3.16)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

### Memory

- 128MB/128MB internal memory
- microSD™ supports up to 32GB optionally (microSD card not included)

Source: <http://www.kyocera-wireless.com/brio-phone/specs/>

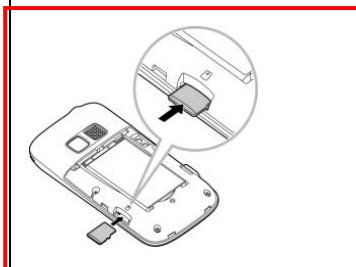


microSD memory card slot for storing and transferring photos

Source: <http://www.kyocera-wireless.com/brio-phone/>

Insert the microSD Card

Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

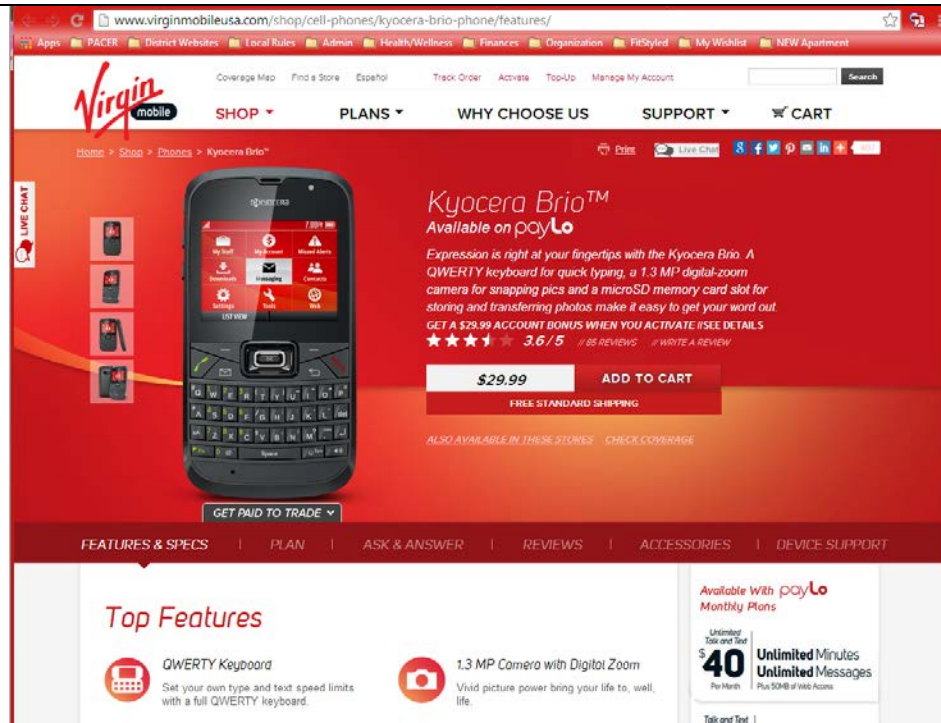
Source: [http://www.kyocera-wireless.com/brio-phone/pdf/Brio\\_payLo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/brio-phone/pdf/Brio_payLo_User_Guide_en.pdf) (Page 80 and 81 of 121)



7,365,871 Claim Language	Accused System and Method – KYOCERA BRIO
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.</p>	<p>The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom</p> <div> </div> <p><i>1.3 MP Camera with Digital Zoom</i></p> <p>Vivid picture power bring your life to, well, life.</p>



<http://www.virginmobileusa.com/shop/cell-phones/kyocera-brio-phone/features/>

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:

The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:

The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.

## **Overview of KYOCERA DURA XT (E4277) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the Kyocera DURA XT (E4277)(the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera DURA XT (E4277)**

**7,365,871 Claim Language**

**Accused System and Method – Kyocera DURA XT (E4277)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Front\\_Closed.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Front_Closed.jpg)

**Connectivity**

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Bluetooth® 2.0 + EDR
- Support for Bluetooth capable barcode scanners

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

You can select the most convenient way to respond to a call.

Your phone notifies you of incoming calls in the following ways:

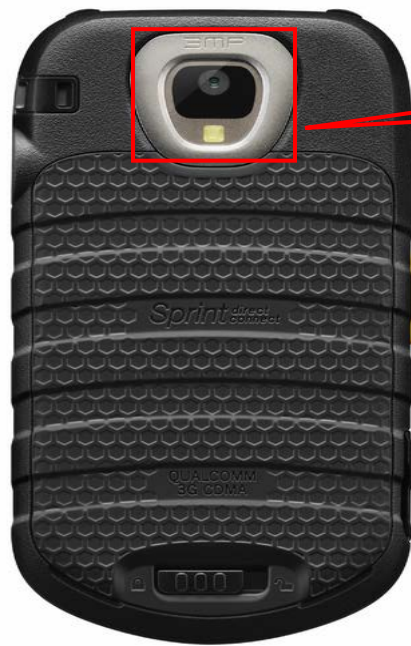
- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

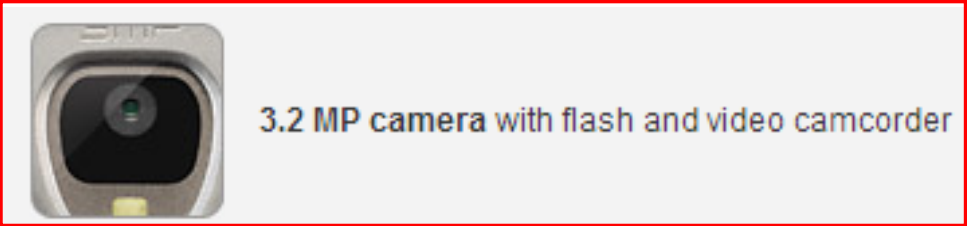
**Note:** If your phone is turned off, all calls automatically go to voicemail.

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 30 and 35 of 181)





Rear Camera



Source: <http://www.kyocera-wireless.com/duraxt-phone/>

a manually portable housing;



The Accused System comprises a manually portable housing.

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Front\\_Closed.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Front_Closed.jpg)

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

**Display:**

Main: 2.0" QVGA TFT (240 x 320 pixels)

External: High-contrast, 1.0" monochrome  
(96 x 64 pixels)

3.2 MP camera with flash and video camcorder

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

- 2.0" QVGA TFT (240 x 320 pixels) internal display

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>



The Accused System comprises a 2.0" QVGA display (240 x 320) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/duraxt-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (QSC6085 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/duraxt-phone/>

### Chipset

- QSC6085

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

- **microSD memory card included (supports up to 32GB microSD)**

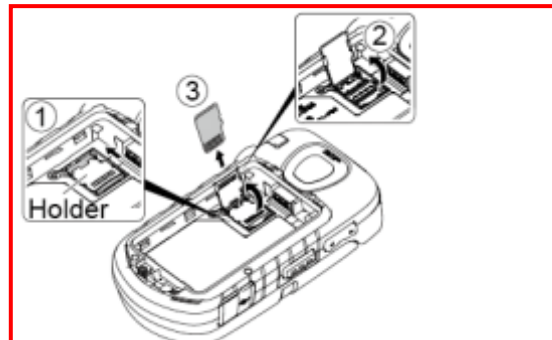
*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)

### *microSD Card*

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

#### Remove or Insert the microSD Card



The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 107 of 153)



### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Bluetooth® 2.0 + EDR
- Support for Bluetooth capable barcode scanners

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/specs/>

a user interface for enabling a user to select the image data signal for viewing and transmission;



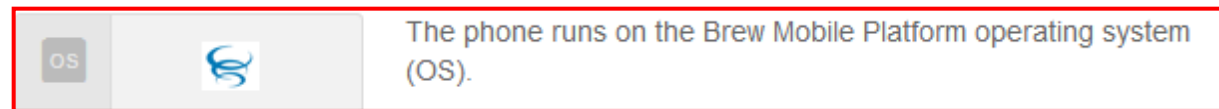
2.0" QVGA TFT display (240 x 320) acting as a user interface (Operating System: Brew mobile platform)

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

**Display:**  
Main: 2.0" QVGA TFT (240 x 320 pixels)  
External: High-contrast, 1.0" monochrome (96 x 64 pixels)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)



Source: <http://theinformr.com/cell-phones/kyocera-e4277/specs/>

## ***Text Messaging and Multimedia Messaging***

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on the phone's screen.


Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or video, or to record a new message or audio clip.)

Select files you would like to attach.

The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 95 and 96 of 153)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## **Make Phone Calls**

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System provides a telephonic system for sending and receiving audio signals.

## **Receive Phone Calls**

You can select the most convenient way to respond to a call.

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 30 and 35 of 181)

## *Text Messaging and Multimedia Messaging*

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on the phone's screen.


Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or video, or to record a new message or audio clip.)

Select files you would like to attach.

The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 95 and 96 of 153)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

- Keypad lets you enter numbers, letters, and characters, and perform functions.



The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 17 and 18 of 158)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Bluetooth® 2.0 + EDR
- Support for Bluetooth capable barcode scanners

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/specs/>

a power supply for powering the system.

**Battery Type:  
1360 mAh Lithium ion (Lilon)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(Page 1 of 1)



*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Battery.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Battery.jpg)

**2. Charge your battery.**

- Plug the USB connector into the charger/accessory jack on the lower left side of your phone.
- Plug the AC adapter into an electrical outlet.

The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 12 of 153)




2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.


### Take a Picture


It's easy to take a picture.

1. Press **MENU** **OK** > **Photos & Videos** > **Camera** to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key ()

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

3. Press , **MENU** **OK**, or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).

- To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 120 of 153)

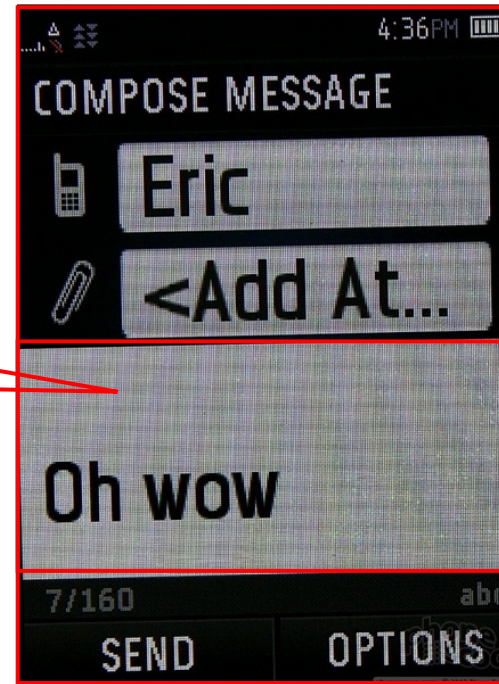


Display window

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time : 0.54 of 1.28)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Alphanumeric Message Input

Display Window

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

*Source:* Screenshot has taken using device.

- Keypad lets you enter numbers, letters, and characters, and perform functions.



Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 17 and 18 of 158)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removable housed in the housing for storing captured image data signals.

- microSD memory card included (supports up to 32GB microSD)

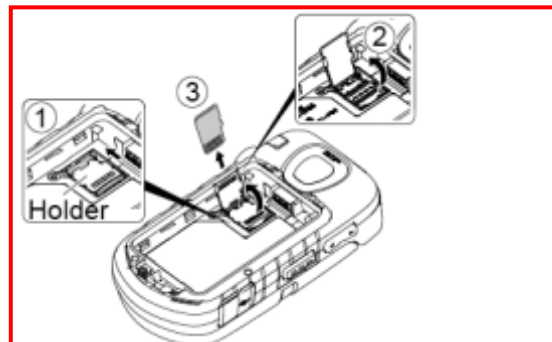
*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)(Page 1 of 1)

### microSD Card

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

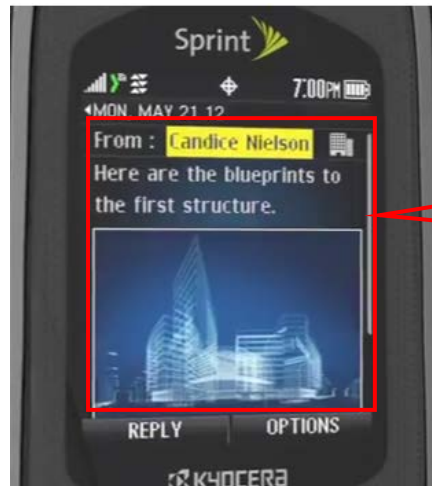
#### Remove or Insert the microSD Card



The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf)(Page 107 of 153)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time: 1.05 of 1.28)

## **Text Messaging and Multimedia Messaging**

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on your phone's screen.

Multimedia messages consist of both text and multimedia files, such as pictures, videos, or voice recordings. Outgoing multimedia messages can be up to 1 MB with up to 1000 text characters.

### **View Messages**

Highlight a thread and press **MENU OK** to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 95 and 97 of 153)

6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/>

#### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Bluetooth® 2.0 + EDR
- Support for Bluetooth capable barcode scanners

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/specs/>

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Call Using Abbreviated Dialing Features

Call a Phone Number With Pauses

Call a Phone Number in a Message

Call Emergency Numbers

## ***Receive Phone Calls***

You can select the most convenient way to respond to a call.

Your phone notifies you of incoming calls in the following ways:

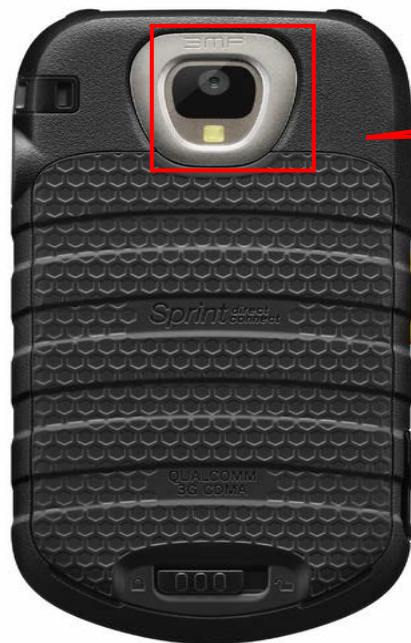
- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

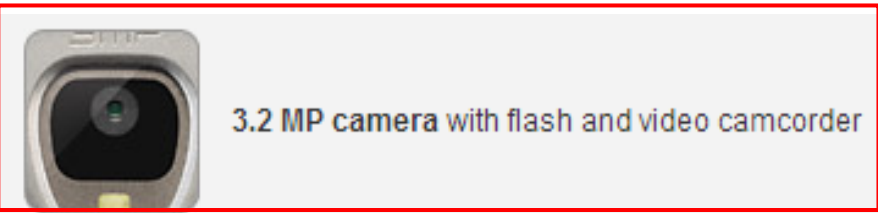
**Note:** If your phone is turned off, all calls automatically go to voicemail.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 30 and 35 of 181)



Rear Camera

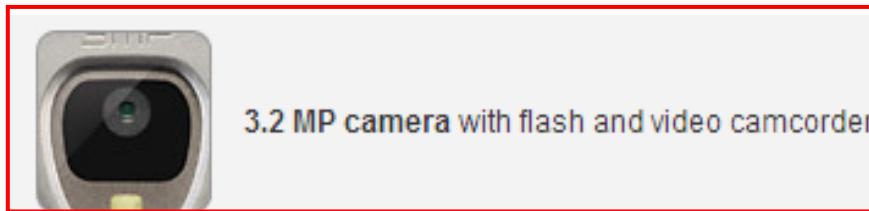


The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/duraxt-phone/>



a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

Source: <http://www.kyocera-wireless.com/duraxt-phone/>

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular Telephone

Source: <http://www.kyocera-wireless.com/duraxt-phone/>

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- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 30 and 35 of 181)

- Keypad lets you enter numbers, letters, and characters, and perform functions.



Alpha-numeric Input Keys

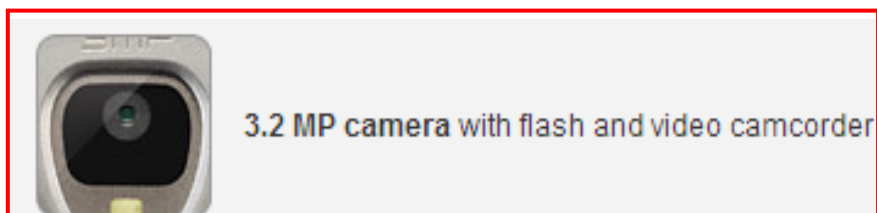
The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 17 and 18 of 158)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear Camera




The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/duraxt-phone/>


## Take a Picture


It's easy to take a picture.

1. Press **MENU** **OK** > **Photos & Videos** > **Camera** to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key (.

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

3. Press , **MENU** **OK**, or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).

- To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 120 of 153)



Display window

The Accused system includes an electronic camera for visually framing the subject to be captured

**Source:** <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time : 0.54 of 1.28)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (QSC6085 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/duraxt-phone/>

### Chipset

- QSC6085

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

- **microSD memory card included (supports up to 32GB microSD)**

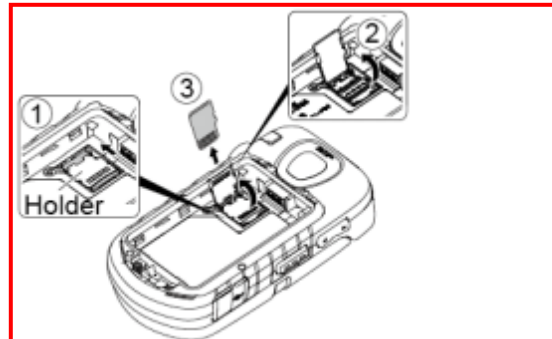
*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 1 of 1)

## microSD Card

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

### Remove or Insert the microSD Card



The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 107 of 153)

### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Bluetooth® 2.0 + EDR
- Support for Bluetooth capable barcode scanners

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/duraxt-phone/specs/>

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



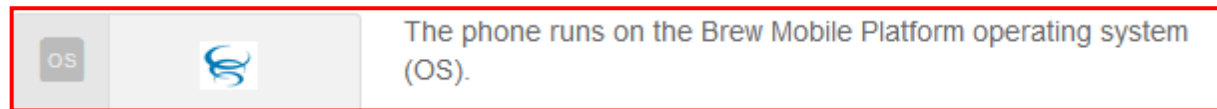
2.0" QVGA TFT display (240 x 320) acting as a user interface (Operating System: Brew mobile platform)

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

**Display:**  
Main: 2.0" QVGA TFT (240 x 320 pixels)  
External: High-contrast, 1.0" monochrome (96 x 64 pixels)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)



Source: <http://theinformr.com/cell-phones/kyocera-e4277/specs/>

## *Text Messaging and Multimedia Messaging*

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on your phone's screen.


Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or video, or to record a new message or audio clip.)

Select files you would like to attach.

The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 95 and 96 of 153)

an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:  
1360 mAh Lithium ion (Lilon)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(page 1 of 1)



*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Battery.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Battery.jpg)

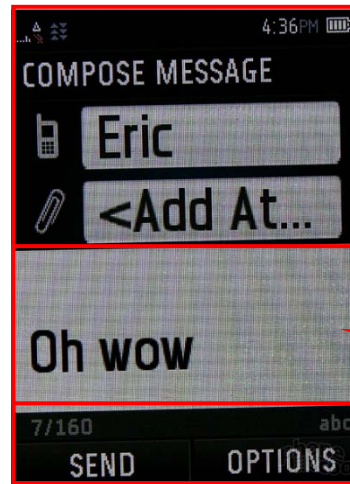
**2. Charge your battery.**

- Plug the USB connector into the charger/accessory jack on the lower left side of your phone.
- Plug the AC adapter into an electrical outlet.

The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 12 of 153)

7.The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Alphanumeric Message Input

Source: Screenshot has taken using device.



Display window

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

Source: <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time : 0.54 of 1.28)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

- **microSD memory card included (supports up to 32GB microSD)**

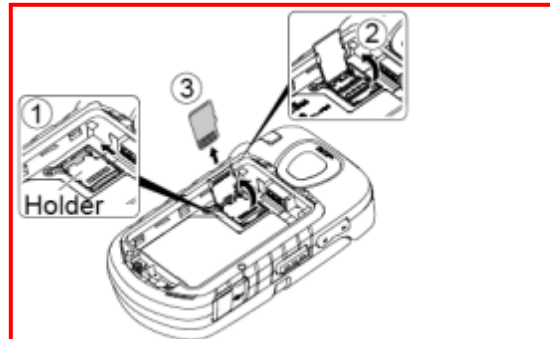
*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)(Page 1 of 1)

### microSD Card

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

#### Remove or Insert the microSD Card



The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf)(Page 107 of 153)



7,365,871 Claim Language

Accused System and Method – Kyocera DURA XT ( E4277 )

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a 3.2 megapixel auto focus rear camera for capturing visual images.




Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

**3.2 MP camera with flash and video camcorder**

Source: [http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)

**CDMA 1xRTT EVDO Rev. A, dual-band digital  
(800/1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(page 1 of 1)

	Data Service Available - Sprint data service is available. When active, the icon is animated.
	Data Service Dormant - Sprint data service is currently dormant.
	Data Service Unavailable - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 21 of 153)

a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;






The Accused System includes a portable handled housing with built in wireless connectivity.

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Front\\_Closed.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Front_Closed.jpg)

**CDMA 1xRTT EVDO Rev. A, dual-band digital (800/1900 MHz)**

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf) (page 1 of 1)

	Data Service Available - Sprint data service is available. When active, the icon is animated.
	Data Service Dormant - Sprint data service is currently dormant.
	Data Service Unavailable - Sprint data service is currently unavailable.

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 21 of 153)

## ***Make Phone Calls***

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## ***Receive Phone Calls***

You can select the most convenient way to respond to a call.

Your phone notifies you of incoming calls in the following ways:

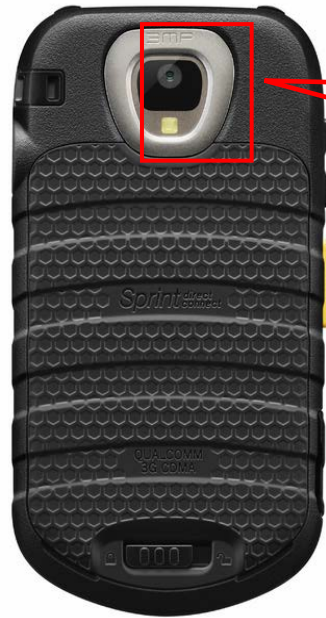
- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

### ***Source:***

[http://www.kyocerawireless.com/eventphone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocerawireless.com/eventphone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 30 and 35 of 181)



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (3.2 MP Rear Camera) which are commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

**3.2 MP camera with flash and video camcorder**

*Source:* [http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf)  
*f*(Page 1 of 1)

a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

### Display

- 2.0" QVGA TFT (240 x 320 pixels) internal display

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>





Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)


## Take a Picture

It's easy to take a picture.

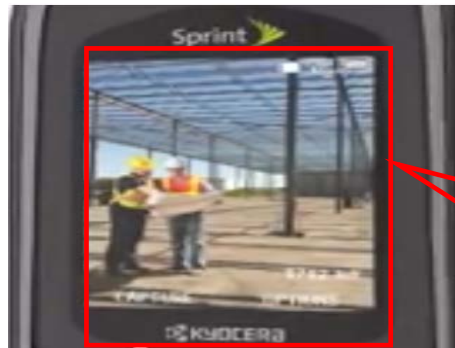
1. Press **MENU OK** > **Photos & Videos** > **Camera** to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key (.

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.
3. Press , **MENU OK**, or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).

- To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 120 of 153 )



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time 0:53 of 1:28 )

a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (QSC6085 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal.

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Front\\_Closed.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Front_Closed.jpg)

### Chipset

- QSC6085

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>



a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

- **microSD memory card included (supports up to 32GB microSD)**

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)

### microSD Card

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

Remove or Insert the microSD Card

microSD Card Settings

microSD Card Folders

File Manager

Connect Your Phone to Your Computer

The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 107 of 153)

## ***Text Messaging and Multimedia Messaging***

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on your phone's screen.

Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or video, or to record a new message or audio clip.)




Select files you would like to attach.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf)  
(Page 95 and 96 of 153 )

**CDMA 1xRTT EVDO Rev. A, dual-band digital  
(800/1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(page 1 of 1)

	Data Service Available - Sprint data service is available. When active, the icon is animated.
	Data Service Dormant - Sprint data service is currently dormant.
	Data Service Unavailable - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals (Here: MMS) to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 21 of 153)

the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

You can select the most convenient way to respond to a call.

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.




If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

**Source:** [http://www.kyocerawireless.com/eventphone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocerawireless.com/eventphone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf)  
(Page 30 and 35 of 181)

**CDMA 1xRTT EVDO Rev. A, dual-band digital  
(800/1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(page 1 of 1)

	Data Service Available - Sprint data service is available. When active, the icon is animated.
	Data Service Dormant - Sprint data service is currently dormant.
	Data Service Unavailable - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 21 of 153)

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

• Keypad lets you enter numbers, letters, and characters, and perform functions.



The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 17 of 153 )

a power supply supported by the housing;

**Battery Type:  
1360 mAh Lithium ion (Lilon)**

Source: [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(Page 1 of 1)



Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Battery.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Battery.jpg)

**2. Charge your battery.**

- Plug the USB connector into the charger/accessory jack on the lower left side of your phone.
- Plug the AC adapter into an electrical outlet.




The Accused System includes a power supply (1360mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf)  
(Page 12 of 153)

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

**CDMA 1xRTT EVDO Rev. A, dual-band digital (800/1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/DuraXT_Spec_Sheet_English.pdf)  
(Page 1 of 1)

	Data Service Available - Sprint data service is available. When active, the icon is animated.
	Data Service Dormant - Sprint data service is currently dormant.
	Data Service Unavailable - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocera-wireless.com/duraxt-phone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 21 of 153)



## ***Text Messaging and Multimedia Messaging***

With messaging, you can send and receive messages between your phone and another messaging-ready phone. When you receive a new message, it will automatically display on your phone's screen.

### **Compose a message.**

- Press **OPTIONS** (right softkey) to select additional options.

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

Select a location where your file is stored. (You can also choose to take a new picture or video, or to record a new message or audio clip.)

Select files you would like to attach.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf)  
(Page 95 and 96 of 153 )

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

### Take a Picture

It's easy to take a picture.

1. Press **MENU OK** > **Photos & Videos** > **Camera** to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key (**📷**).

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.
3. Press **📷**, **MENU OK**, or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).
  - To return to camera mode to take another picture, press **CAMERA** (left softkey) or **📷**.

### Zoom

This feature allows you to zoom in on an object when you take a picture. You can adjust the zoom from 1x to 12x.

1. From camera mode, press the navigation key right to zoom in or left to zoom out.
  - or –
  - From camera mode, press the volume button up to zoom in or down to zoom out.
2. Press **📷**, **MENU OK**, or **CAPTURE** (left softkey) to take a picture.

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 120 of 153)



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

*Source:* <http://www.youtube.com/watch?v=hf8BBXFN6g0> (Time 0:53 of 1:28 )

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

- microSD memory card included (supports up to 32GB microSD)

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT\\_Spec\\_Sheet\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/DuraXT_Spec_Sheet_English.pdf) (Page 1 of 1)

### microSD Card

Your phone is equipped with a preinstalled microSD™ (Secure Digital) memory card and its adapter to expand the phone's available memory space. It allows you to store images, videos, music, and voice data in your phone.

**Note:** Be sure to use only recommended microSD cards (up to 32 GB). Using non-recommended microSD cards could cause data loss and damage your phone.

Remove or Insert the microSD Card

microSD Card Settings

microSD Card Folders

File Manager

Connect Your Phone to Your Computer

The Accused System provides a removable memory card slot (up to 32GB). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf) (Page 107 of 153)

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

### Display

- 2.0" QVGA TFT (240 x 320 pixels) internal display

Source: <http://www.kyocera-wireless.com/duraxt-phone/specs/>



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

When you are viewing a messaging thread list, a message thread, or a message details screen, you can choose from among the following options. (Options will vary according to screen.)

- ▶ Press **TALK** or **SPEAKER** to make a call.
- ▶ Press **SEND MESSAGE** (left softkey) to send a message to the entry.
- ▶ Press **REPLY** (left softkey) to reply to a message.
- ▶ Press **SEND** (left softkey) to send a draft message.
- ▶ Press **RESEND** (left softkey) to resend a failed message.
- ▶ Select a message, press **OPTIONS** (right softkey) and select an option:
  - **Forward** to forward the selected message.
  - **Call Alert** to send a Call Alert.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

**Source:** [http://www.kyocerawireless.com/duraxtphone/pdf/Sprint\\_DuraXT\\_User\\_Guide\\_English.pdf](http://www.kyocerawireless.com/duraxtphone/pdf/Sprint_DuraXT_User_Guide_English.pdf)  
(Page 97 of 153)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.

First portion of the housing consisting of display



Second portion of the housing consisting of keypad, camera etc

*Source:* [http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT\\_Back.jpg](http://www.kyocera-wireless.com/duraxt-phone/gallery/large/DuraXT_Back.jpg)

## **Overview of KYOCERA DURAMAX and DURA PRO Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the Kyocera DURAMAX and DURA PRO (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. Plaintiff has charted the KYOCERA DURAMAX as representative of the other products, which operate in a substantially similar way. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera DURAMAX**



**7,365,871 Claim Language**

**Accused System and Method – Kyocera DURAMAX**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/duramax-phone/>

	<b>Data Service Available</b> - Sprint data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> - Sprint data service is currently dormant.
	<b>Data Service Unavailable</b> - Sprint data service is currently unavailable.

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

## ***Make Phone Calls***

There are several convenient ways to place calls from your phone.

Call Using the Phone Keypad

Call With the Phone Closed

Call From History

Call From Contacts

Call Using the Plus (+) Code

Call Using a Speed Dial Number

Call Using Abbreviated Dialing Features

Call a Phone Number With Pauses

Call a Phone Number in a Message

Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## ***Receive Phone Calls***

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)



**Source:** <http://www.kyocera-wireless.com/duramax-phone/>

**Main: 2.0" QVGA TFT (240 x 320 pixels)  
3.2 MP camera with flash and camcorder**

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

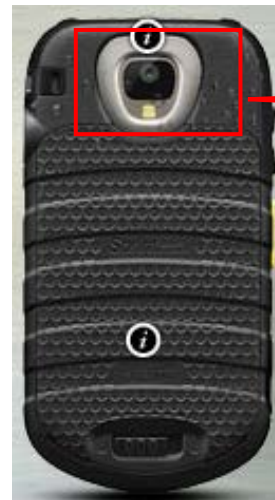
a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/duramax>

an integral image capture device comprising an electronic camera contained within the portable housing;



Rear Camera

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

Main: 2.0" QVGA TFT (240 x 320 pixels)  
3.2 MP camera with flash and camcorder

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)  
(Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

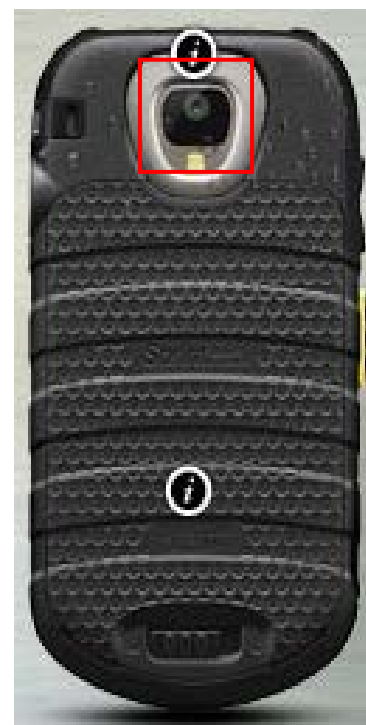
## Display

Main: 2.0" QVGA TFT (240 x 320 pixels)

Source: <http://www.kyocera-wireless.com/duramax-phone/specs/>



The Accused System comprises a 2.0 QVGA TFT (240x320 pixels) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.



Source: <http://www.kyocera-wireless.com/duramax-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (Qualcomm QSC6085.) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

**Chipset:**  
QSC6085

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

## Memory:

1GB microSD memory card included (supports up to 32GB microSD)

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

### Insert the microSD Card

### Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf) (Page 94 of 143)



**Data Service Available** - Sprint data service is available. When active, the icon is animated.



**Data Service Dormant** - Sprint data service is currently dormant.



**Data Service Unavailable** - Sprint data service is currently unavailable.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

a user interface for enabling a user to select the image data signal for viewing and transmission;



LCD (Color TFT/TFD)  
Resolution: 240 x 320 pixels  
(QVGA)

Source: <http://www.kyocera-wireless.com/duramax-phone/>

## Display:

Main: 2.0" QVGA TFT (240 x 320 pixels)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

### Transmitting Images via Multimedia Messages:

#### *Send a Multimedia Message (MMS)*

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press  > Messaging.

**Shortcut:** Press **MESSAGING** (left softkey) in standby mode.

2. Press **Send Message**.
3. Select a recipient from the list or from the following options:
  - **Go to Contacts** to select a recipient from your Contacts. (Qualifying Contacts entries must contain a phone number or an email address.)

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

The Accused System provides a user interface where user can tap on **ADD ATTACHMENT** icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 92 of 143)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System provides a telephonic system for sending and receiving audio signals.

## Receive Phone Calls

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)

### Transmitting Images via Multimedia Messages:

#### *Send a Multimedia Message (MMS)*

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press  > Messaging.

**Shortcut:** Press **MESSAGING** (left softkey) in standby mode.

2. Press Send Message.

3. Select a recipient from the list or from the following options:

- Go to Contacts to select a recipient from your Contacts. (Qualifying Contacts entries must contain a phone number or an email address.)

Select **<Add Attachment>** and select a category of files you would like to attach (Picture, Video, Voice, Audio, or File Manager).

The Accused System provides a user interface where user can tap on ADD ATTACHMENT icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 92 of 143)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;






Alpha-numeric Input Keys

The Accused System includes a keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>



a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

	<b>Data Service Available</b> - Sprint data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> - Sprint data service is currently dormant.
	<b>Data Service Unavailable</b> - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

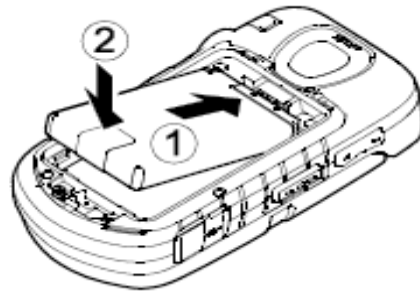
*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

a power supply for powering the system.

**Battery Type:**  
1360 mAh Lithium ion (Lilon)

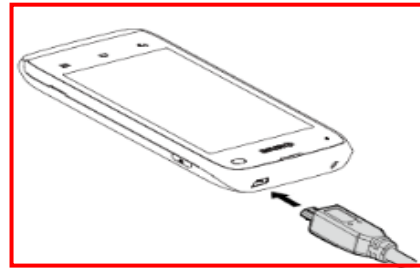
*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)

Insert the battery, contacts end first, and gently press into place



**Charge your battery.**


- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.






The Accused System includes a power supply (1360mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 18 of 143)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

1. Press  > Photos & Videos > Camera to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key ().

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.
3. Press , , or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).
  - To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 116 of 143)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** [http://support.sprint.com/support/tutorial/Take\\_and\\_share\\_a\\_picture\\_Kyocera\\_DuraMax/26294-632](http://support.sprint.com/support/tutorial/Take_and_share_a_picture_Kyocera_DuraMax/26294-632)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Alphanumeric message input

Alphanumeric Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:**

[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

## Memory:

1GB microSD memory card included (supports up to 32GB microSD)

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

Insert the microSD Card

Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32 GB) .The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 94 of 143)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

**Source:**

[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

### Connectivity

CDMA 1xRTT EVDO Rev. A, dual-band digital  
(800/1900 MHz)

*Source:* <http://www.kyocera-wireless.com/duramax-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)





*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

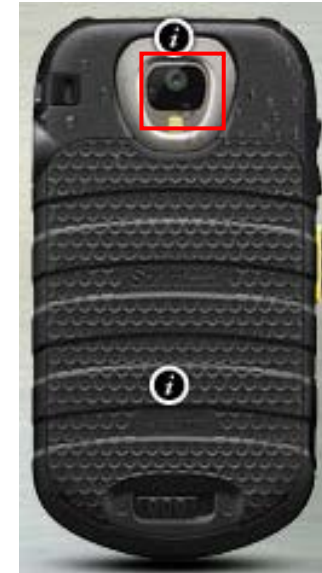
**Camera**  
3.2 MP camera with flash and camcorder

The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)

(Page 1 of 1)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source:* <http://www.kyocera-wireless.com/duramax>

### Camera

3.2 MP camera with flash and camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/duramax>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)



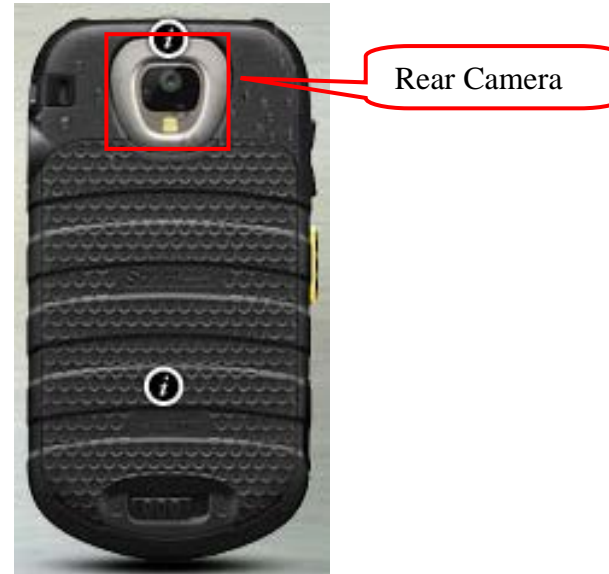
Alphanumeric Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:**

[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

### Camera

3.2 MP camera with flash and camcorder

The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)

(Page 1 of 1)



The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** [http://support.sprint.com/support/tutorial/Take\\_and\\_share\\_a\\_picture\\_Kyocera\\_DuraMax/26294-632](http://support.sprint.com/support/tutorial/Take_and_share_a_picture_Kyocera_DuraMax/26294-632)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (Qualcomm QSC6085.) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/duramax-phone/>

**Chipset:**  
QSC6085

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)



In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

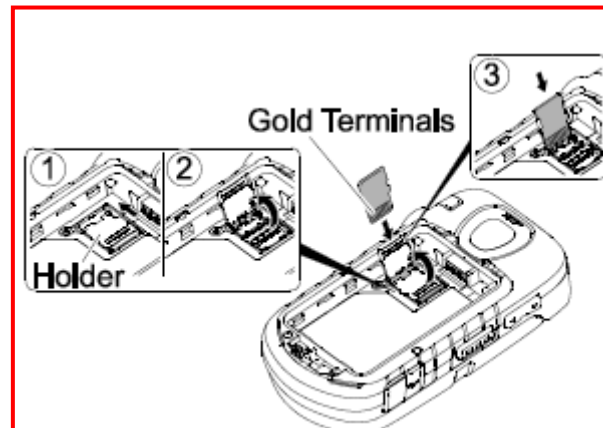
## Memory:

1GB microSD memory card included (supports up to 32GB microSD)

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)*

Insert the microSD Card

Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf) (Page 103 of 143)*



**Data Service Available** - Sprint data service is available. When active, the icon is animated.



**Data Service Dormant** - Sprint data service is currently dormant.



**Data Service Unavailable** - Sprint data service is currently unavailable.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

## Display

Main: 2.0" QVGA TFT (240 x 320 pixels)

Source: <http://www.kyocera-wireless.com/duramax-phone/specs/>



The Accused System comprises a 2.0 QVGA TFT (240x320 pixels) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/duramax-phone/>

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or

## Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press  > Messaging.

**Shortcut:** Press **MESSAGING** (left softkey) in standby mode.

2. Press **Send Message**.
3. Select a recipient from the list or from the following options:
  - Go to **Contacts** to select a recipient from your Contacts. (Qualifying Contacts entries must contain a phone number or an email address.)

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

The Accused System provides a user interface where user can tap on “ADD ATTACHMENT” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

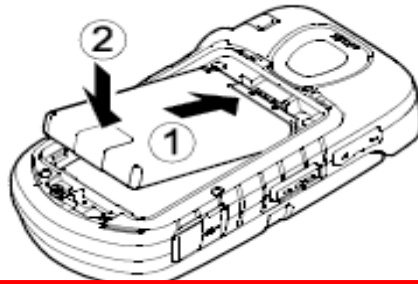
**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 92 of 143)

an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:**  
1360 mAh Lithium ion (Lilon)

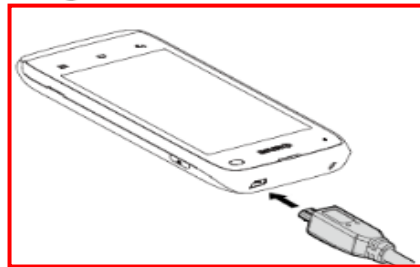
*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)*

Insert the battery, contacts end first, and gently press into place



**Charge your battery.**

- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.



The Accused System includes a power supply (1360mAh Li-Ion battery) for powering the system (Phone).

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 18 of 143)*

7.The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



Alphanumeric Input Message

Alphanumeric Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:**

[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)





The Accused system comprises of display window for framing the visual Image.

*Source:* [http://support.sprint.com/support/tutorial/Take\\_and\\_share\\_a\\_picture\\_Kyocera\\_DuraMax/26294-632](http://support.sprint.com/support/tutorial/Take_and_share_a_picture_Kyocera_DuraMax/26294-632)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

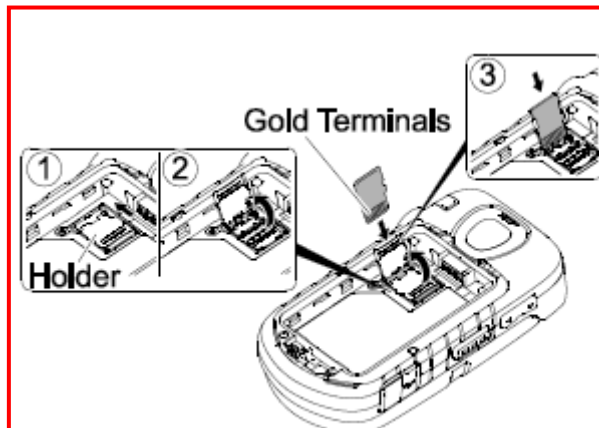
### Memory:

1GB microSD memory card included (supports up to 32GB microSD)

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

Insert the microSD Card

Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf) (Page 103 of 143)

**7,365,871 Claim Language**

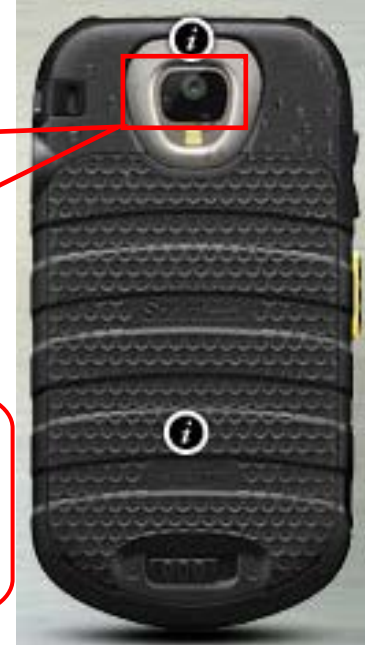
**Accused System and Method – Kyocera Duramax**

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System comprises of a 3.2 megapixel auto focus rear camera for capturing visual images.

The Accused System is a handheld device with built in wireless connectivity and camera.



Source : <http://www.kyocera-wireless.com/duramax-phone/>

Main: 2.0" QVGA TFT (240 x 320 pixels)  
3.2 MP camera with flash and camcorder

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)



**Data Service Available** - Sprint data service is available. When active, the icon is animated.



**Data Service Dormant** - Sprint data service is currently dormant.



**Data Service Unavailable** - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/duramax>

	<b>Data Service Available</b> - Sprint data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> - Sprint data service is currently dormant.
	<b>Data Service Unavailable</b> - Sprint data service is currently unavailable.

Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

## Make Phone Calls

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

Your phone notifies you of incoming calls in the following ways:

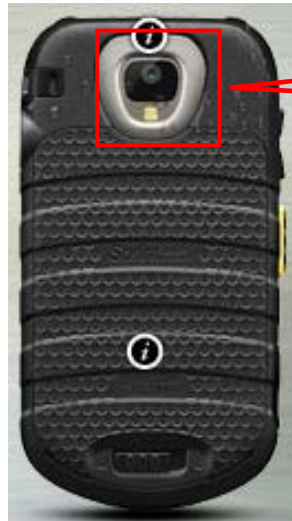
- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)



Rear Camera

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

Main: 2.0" QVGA TFT (240 x 320 pixels)  
3.2 MP camera with flash and camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (3.2 MP Rear Camera) which are commonly movable with the housing

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

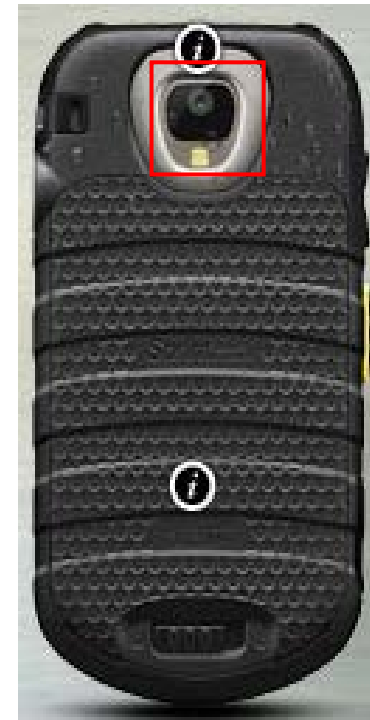
## Display

Main: 2.0" QVGA TFT (240 x 320 pixels)

Source: <http://www.kyocera-wireless.com/duramax-phone/specs/>




The Accused System includes a display for viewing incoming image data signals or multimedia message.








## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press  > Photos & Videos > Camera to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key ().

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.
3. Press , , or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).
  - To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 116 of 143)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** [http://support.sprint.com/support/tutorial/Take\\_and\\_share\\_a\\_picture\\_Kyocera\\_DuraMax/26294-632](http://support.sprint.com/support/tutorial/Take_and_share_a_picture_Kyocera_DuraMax/26294-632)

a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (Qualcomm QSC6085.) supported by the portable housing capable of generating an image data signal.

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

**Chipset:**  
QSC6085

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

## Memory:

1GB microSD memory card included (supports up to 32GB microSD)

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)*

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

Insert the microSD Card

Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf) (Page 94 of 143)*

### Transmitting Images via Multimedia Messages:

#### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press  > Messaging.

**Shortcut:** Press **MESSAGING** (left softkey) in standby mode.

2. Press Send Message.
3. Select a recipient from the list or from the following options:
  - Go to **Contacts** to select a recipient from your Contacts. (Qualifying Contacts entries must contain a phone number or an email address.)

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

The Accused System provides a user interface where user can tap on **ADD ATTACHMENT** icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 92 of 143)



**Data Service Available** - Sprint data service is available. When active, the icon is animated.



**Data Service Dormant** - Sprint data service is currently dormant.



**Data Service Unavailable** - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)*

the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## ***Make Phone Calls***

There are several convenient ways to place calls from your phone.

- Call Using the Phone Keypad
- Call With the Phone Closed
- Call From History
- Call From Contacts
- Call Using the Plus (+) Code
- Call Using a Speed Dial Number
- Call Using Abbreviated Dialing Features
- Call a Phone Number With Pauses
- Call a Phone Number in a Message
- Call Emergency Numbers

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## ***Receive Phone Calls***

Your phone notifies you of incoming calls in the following ways:

- The phone rings or vibrates.
- The LED indicator flashes.
- The backlight illuminates.
- The screen displays an incoming call message.

If the incoming call is from a number stored in your Contacts, the entry's name is displayed. The caller's phone number may also be displayed, if available.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call With the Phone Open

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 25 and 26 of 143)



**Data Service Available** - Sprint data service is available. When active, the icon is animated.



**Data Service Dormant** - Sprint data service is currently dormant.



**Data Service Unavailable** - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source: [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)*

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;



The Accused System display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* <http://www.kyocera-wireless.com/duramax-phone/>

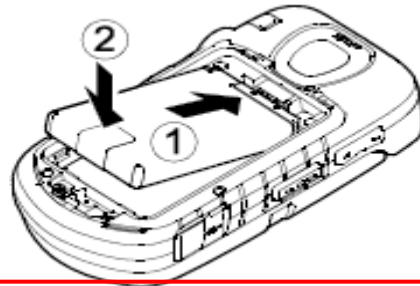


a power supply supported by the housing;

**Battery Type:**  
1360 mAh Lithium ion (Lilon)

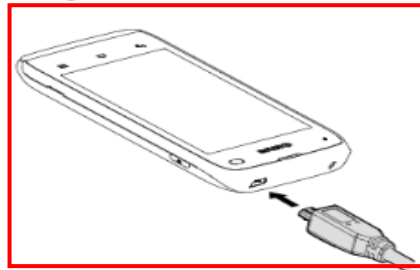
*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf)

Insert the battery, contacts end first, and gently press into place



**Charge your battery.**




- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.



The Accused System includes a power supply (1360mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 18 of 143)

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

	<b>Data Service Available</b> - Sprint data service is available. When active, the icon is animated.
	<b>Data Service Dormant</b> - Sprint data service is currently dormant.
	<b>Data Service Unavailable</b> - Sprint data service is currently unavailable.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 20 of 143)

## Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press  > Messaging.

**Shortcut:** Press **MESSAGING** (left softkey) in standby mode.

2. Press Send Message.
3. Select a recipient from the list or from the following options:
  - Go to **Contacts** to select a recipient from your Contacts. (Qualifying Contacts entries must contain a phone number or an email address.)

Select **<Add Attachment>** and select a category of files you would like to attach (**Picture, Video, Voice, Audio, or File Manager**).

The Accused System provides a user interface where user can tap on **ADD ATTACHMENT** icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 92 of 143)



The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.


**Source:**


[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)




at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press  > Photos & Videos > Camera to activate camera mode. Additional camera options are available. See [Camera Mode Options](#) for more information.

**Shortcut:** To activate camera mode, you can also press and hold the camera key ().

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.
3. Press , , or **CAPTURE** (left softkey) until the shutter sounds. The picture will automatically be saved in the selected storage area. See [Store Pictures and Videos](#).
  - To return to camera mode to take another picture, press **CAMERA** (left softkey) or .

**Source:** [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf)  
(Page 116 of 143)



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance and lens Zoom can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

**Source:**

[http://support.sprint.com/support/tutorial/Take\\_and\\_share\\_a\\_picture\\_Kyocera\\_DuraMax/26294-632](http://support.sprint.com/support/tutorial/Take_and_share_a_picture_Kyocera_DuraMax/26294-632)

- **Zoom** to zoom in on a subject. See [Zoom](#).
- **Color Tone** to select a wide variety of color tones for the picture.

**Image Controls** to adjust settings for **Brightness, White Balance, Sharpness, or Contrast**.

**Source:** [http://www.kyocera-wireless.com/e2000-phone/pdf/e2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/e2000-phone/pdf/e2000_user_guide_EN.pdf) (Page 34 and 35 of 88)

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

## Memory:

1GB microSD memory card included (supports up to 32GB microSD)

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

Insert the microSD Card

Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/duramax-phone/pdf/DuraMax_User_Guide_en.pdf) (Page 94 of 143)

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

## Display

Main: 2.0" QVGA TFT (240 x 320 pixels)

Source: <http://www.kyocera-wireless.com/duramax-phone/specs/>



The Accused System comprises a 2.0" QVGA TFT (240x320 pixels)

Source: <http://www.kyocera-wireless.com/duramax-phone/>



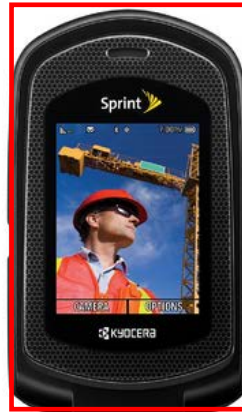


The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

**Source:**

[http://support.sprint.com/support/tutorial/Send\\_or\\_receive\\_a\\_picture\\_with\\_text\\_Kyocera\\_DuraMax/26294-153](http://support.sprint.com/support/tutorial/Send_or_receive_a_picture_with_text_Kyocera_DuraMax/26294-153)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



First portion of the housing consisting of display



Second portion of the housing consisting of Keypad

Source: <http://www.kyocera-wireless.com/duramax-phone/>

## **Overview of KYOCERA (E2500) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA (E2500) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera (E2500)**

Kyocera Ex. 1002  
p. 236

KYO'871-IC 00235

**7,365,871 Claim Language**

**Accused System and Method – Kyocera (E2500)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (page 1 of 1)

**GENERAL**

2G Network	GSM 850 / 900 / 1800 / 1900
SIM	Mini-SIM
Announced	2008, April. Released 2008, April

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/kyocera\\_e2500-3225.php](http://www.gsmarena.com/kyocera_e2500-3225.php)



Rear Camera

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**

2.0 inch 128 x 128 CSTN 65K color

Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* [http://www.kyocerawireless.com/e2500phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocerawireless.com/e2500phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)



an integral image capture device comprising an electronic camera contained within the portable housing;



Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**  
2.0 inch 128 x 128 CSTN 65K color

Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Display:**  
2.0 inch 128 x 128 CSTN 65K color

**Source:** [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf)(Page 1 of 1)



The Accused System comprises a 2.0" display (128 x 128) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

<http://www.kyocera-wireless.com/e2500-phone/>

**Source:** <http://www.kyocera-wireless.com/e2500-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor MT6226M supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

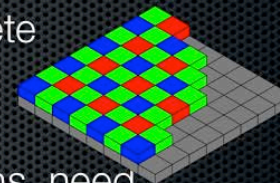
**Chipset:  
MT6226M**

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 2GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a user interface for enabling a user to select the image data signal for viewing and transmission;



2.0 inch display (128 x 128) acting as a user interface (Operating System: java TM 2.0).

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**  
2.0 inch 128 x 128 CSTN 65K color

• Java™ 2.0

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (page 1 of 1)

**1. Transmitting Images via Multimedia Messages:**

- **MMS and SMS**
- **Instant messaging\***

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

**2. Transmitting Images via Email Messages:**

- **Email\***

The Accused System provides a user interface where a user can view and transmit images via Email messages

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)



a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

<b>GENERAL</b>	2G Network	GSM 850 / 900 / 1800 / 1900
	SIM	Mini-SIM
	Announced	2008, April. Released 2008, April

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

**Source:** [http://www.gsmarena.com/kyocera\\_e2500-3225.php](http://www.gsmarena.com/kyocera_e2500-3225.php)

## 1. Transmitting Images via Multimedia Messages:

### • MMS and SMS

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Instant messaging capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e2500-phone/features.htm>

## 2. Transmitting Images via Email Messages:

### • Email\*

The Accused System provides a user interface where a user can view and transmit images via Email messages.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;



Alpha-numeric  
Input message Area

Alpha-numeric Input Keys

The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

**Source:** [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

**Band:**  
**Quad-band GSM/GPRS/EDGE**  
**(850, 900, 1800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a power supply for powering the system.

**Battery Type:**  
920 mAh lithium ion (Lilon) battery  
Standard lithium ion (Lilon) battery

The Accused System includes a power supply (920mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

**Display:**  
2.0 inch 128 x 128 CSTN 65K color

Display window

- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.



Display Window

Alphanumeric Keys

**Source:** [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removable housed in the housing for storing captured image data signals.

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot up to 2GB for storage of visual Images. The memory card is located within and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

supports up to 2GB microSD™ expandable memory for music, pictures or videos

**Source:** <http://www.kyocera-wireless.com/e2500-phone/tech-specs.htm>



5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Instant messaging capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e2500-phone/features.htm>

**7,365,871 Claim Language**

**Accused System and Method – Kyocera (E2500)**

6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (page 1 of 1)

**GENERAL**

2G Network	GSM 850 / 900 / 1800 / 1900
SIM	Mini-SIM

Announced 2008, April. Released 2008, April

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

Source: [http://www.gsmarena.com/kyocera\\_e2500-3225.php](http://www.gsmarena.com/kyocera_e2500-3225.php)



Rear Camera

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**

2.0 inch 128 x 128 CSTN 65K color

Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf)(Page 1 of 1)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf)(Page 1 of 1)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (page 1 of 1)

<b>GENERAL</b>	2G Network	GSM 850 / 900 / 1800 / 1900
	SIM	Mini-SIM
	Announced	2008, April. Released 2008, April

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/kyocera\\_e2500-3225.php](http://www.gsmarena.com/kyocera_e2500-3225.php)



Alpha-numeric  
Input Keys

The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)



an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear Camera

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

*Source:* <http://www.kyocera-wireless.com/e2500-phone/>

Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability

The Accused System comprises of a 1.3 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor MT6226M supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Chipset:  
MT6226M**

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (page 1 of 1)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



2.0 inch display (128 x 128) acting as a user interface (Operating System: java TM 2.0).

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**  
2.0 inch 128 x 128 CSTN 65K color

• Java™ 2.0

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

**1. Transmitting Images via Multimedia Messages:**

- **MMS and SMS**
- **Instant messaging\***

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

**2. Transmitting Images via Email Messages:**

- **Email\***

The Accused System provides a user interface where a user can view and transmit images via Email messages

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:**  
920 mAh lithium ion (Lilon) battery

The Accused System includes a power supply (920mAh Li-Ion battery) for powering the system (Phone and Camera).

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)



7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: <http://www.kyocera-wireless.com/e2500-phone/>

**Display:**

2.0 inch 128 x 128 CSTN 65K color

- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/e2500-phone/pdf/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500-phone/pdf/e2500_product_brochure.pdf) (Page 1 of 1)

7,365,871 Claim Language	Accused System and Method – KYOCERA (E2500)
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.</p>	<p>The Accused System contains a control circuit connected to the camera that contains one of the following functions:zoom</p> <p><b>Additional Features</b></p> <ul style="list-style-type: none"> <li>• Music Player (MP3, WAV, imy, MIDI, AMR, AAC)</li> <li>• Video player (MP4, 3GP)</li> <li>• 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)</li> </ul>

**E2500**



## Kyocera E2500

### Highlights

- Slim profile, compact design
- Music player with dedicated keys
- Full-featured 1.3 megapixel camera flash, zoom, video recorder and photo editing capability
- Bluetooth® technology with multimedia stereo
- microSD™ expansion slot (comes with 1GB microSD™ card)
- Quad-band GSM/GPRS

### Additional Features

- Music Player (MP3, WAV, imy, MIDI, AMR, AAC)
- Video player (MP4, 3GP)
- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)
- MMS and SMS

[http://www.kyocera-wireless.com/e2500/e2500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e2500/e2500_product_brochure.pdf)

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>



## **Overview of KYOCERA (E3500) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA (E3500) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera (E3500)**

Kyocera Ex. 1002  
p. 282

KYO'871-IC 00281

**7,365,871 Claim Language**

**Accused System and Method – Kyocera (E3500)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)



**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Display:**

**Main: 2.0 inch 128 x 128 65K-color CSTN**

**Sub: 1.0 inch 96 x 96 65K-color CSTN**

*Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)*



The Accused System comprises a 2.0 inch display (128 x 128) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

*Source: <http://www.kyocera-wireless.com/e3500-phone/>*



a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor MT6226M supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/e3500-phone/>

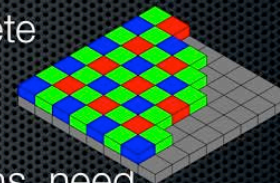
**Chipset:  
MT6226M**

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**

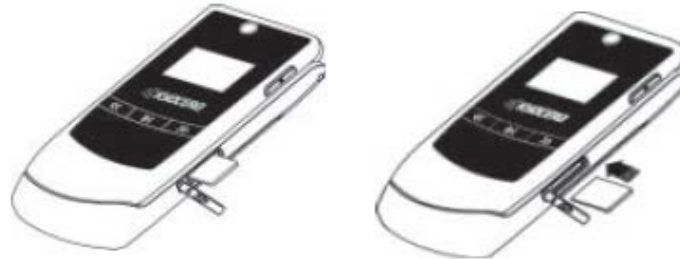
- microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 2GB for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf)(Page 1 of 1)

#### How to place SD card

Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



#### How to remove the SD card

Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

The Accused System external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60)



2.0 inch display (128 x 128) acting as a user interface (Operating System: java TM 2.0).

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Display:**

Main: 2.0 inch 128 x 128 65K-color CSTN  
Sub: 1.0 inch 96 x 96 65K-color CSTN

The Accused System provides a display where a user can view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

## 1. Transmitting Images via Multimedia Messages:

### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

a user interface for enabling a user to select the image data signal for viewing and transmission;



2.0 inch display (128 x 128) acting as a user interface (Operating System: java TM 2.0).

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Display:**

Main: 2.0 inch 128 x 128 65K-color CSTN  
Sub: 1.0 inch 96 x 96 65K-color CSTN

• Java™ 2.0

The Accused System provides a user interface where a user can view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf)(Page1 of 1)



## 1. Transmitting Images via Multimedia Messages:

### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

The Accused System provides a telephonic system for sending and receiving audio signals.

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)

## 1. Transmitting Images via Multimedia Messages:

### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;



Alpha-numeric  
Input message  
Display Area

Alpha-numeric Input Keys

The Accused System includes screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**GPRS Connection**

Press [Change] soft key (left) to change the setting for the GPRS connection. It will switch and save the GPRS connection to set on:

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 39 of 60)

a power supply for powering the system.

**Battery Type:  
920 mAh lithium ion (Lilon) battery**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**HOW TO INSERT THE BATTERY**

- a. Align the bottom of the battery with the slot in the bottom of the phone.
- b. Then sit the battery on the back of the phone until it clicks into place.

**HOW TO REMOVE THE BATTERY**

- a. Turn off your phone first.
- b. Push up the battery release latch
- c. Slowly lift the battery away from the up.



**HOW TO CHARGE THE BATTERY**

- a. Plug your charger in the wall socket.
- b. Connect the other end to the interface connector on the bottom of the phone.
- c. Battery can be charged if you connect USB cable to your PC from the phone.

The Accused System includes a power supply (920mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 14 of 60)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

#### CAMERA

If you want to take a photo, please follow the procedure as below.

- a. Open the folder.
- b. Press 'Camera' key to enter camera mode
- c. Press 'OK' key to take a photo
- d. If you want to save the image, press save button and write the title, otherwise press back button.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

#### Display:

Main: 2.0 inch 128 x 128 65K-color CSTN

Sub: 1.0 inch 96 x 96 65K-color CSTN

Display window

- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

**MESSAGES**  
**Write a Message**  
**[Text Message]**

- a. Select [Text Message] menu in the [Write Message] menu.
- b. Make a message. You can insert Template, Object, change format text, Insert PHB Number, Insert PHB Name, and change input method.
- c. After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.
  - Send Only
  - Save and Send
  - Save
  - Send to Many
  - Send by Group

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

Alphanumeric  
Message Input



Display Window

Alphanumeric Keys

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>



4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removable housed in the housing for storing captured image data signals.

**Memory:**

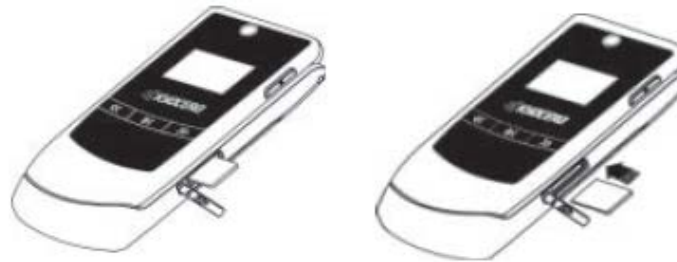
- microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot up to 2GB for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**How to place SD card**

Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



**How to remove the SD card**

Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**[Multimedia Message]**

You can use and edit the MMS templates and write a message in this menu.

Select a template and press the [Option] soft key:

**View:** allows you to view and listen to the template message.

**Properties:** shows properties of the templates (From, Cc, Subject, Date, and Memory).

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 33 of 60)

6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)



The Accused System provides a 1.3 MP main camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

**Camera:  
1.3 MP with flash, zoom and video recorder**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Camera:**  
1.3 MP with flash, zoom and video recorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular Telephone

Source: <http://www.kyocera-wireless.com/e3500-phone/>

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)

)





Alphanumeric  
Input Keys

The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



The Accused System provides a 1.3 MP main camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display which is operable to display the image to be captured

**Source:** <http://www.kyocera-wireless.com/e3500-phone/>

#### CAMERA

If you want to take a photo, please follow the procedure as below.

- a. Open the folder.
- b. Press 'Camera' key to enter camera mode
- c. Press 'OK' key to take a photo
- d. If you want to save the image, press save button and write the title, otherwise press back button.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 19 of 60)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (MT6226M Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Chipset:  
MT6226M**

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

**Memory:**

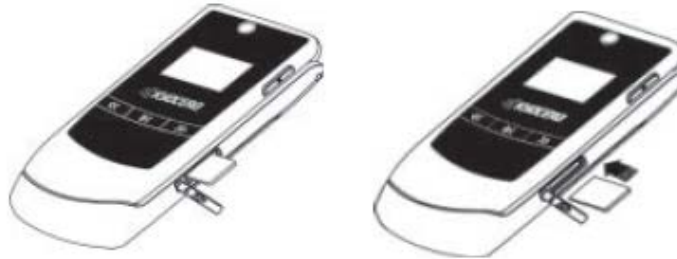
- microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 2GB for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

#### How to place SD card

Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



#### How to remove the SD card

Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60)

## Quad-band GSM/GPRS/EDGE (850, 900, 1800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)



a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Display:**  
**Main: 2.0 inch 128 x 128 65K-color CSTN**  
**Sub: 1.0 inch 96 x 96 65K-color CSTN**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

### Transmitting Images via Multimedia Messages:

#### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:  
920 mAh lithium ion (Lilon) battery**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**HOW TO INSERT THE BATTERY**

- a. Align the bottom of the battery with the slot in the bottom of the phone.
- b. Then sit the battery on the back of the phone until it clicks into place.

**HOW TO REMOVE THE BATTERY**

- a. Turn off your phone first.
- b. Push up the battery release latch
- c. Slowly lift the battery away from the up.



**HOW TO CHARGE THE BATTERY**

- a. Plug your charger in the wall socket.
- b. Connect the other end to the interface connector on the bottom of the phone.
- c. Battery can be charged if you connect USB cable to your PC from the phone.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 14 of 60)

The Accused System includes a power supply (920mAh Li-Ion battery) for powering the system (Phone).

7.The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



Display Window for framing the visual image

Alphanumeric Input Keys

The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

## CAMERA

If you want to take a photo, please follow the procedure as below.

- a. Open the folder.
- b. Press 'Camera' key to enter camera mode
- c. Press 'OK' key to take a photo
- d. If you want to save the image, press save button and write the title, otherwise press back button.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 19 of 60)

- **1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

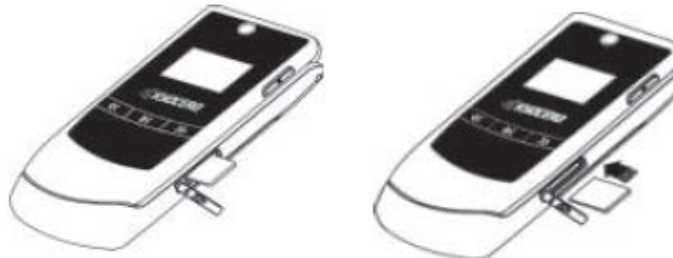
**Memory:**

- microSD™ memory expansion slot (up to 2 GB)

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**How to place SD card**

Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



The Accused System provides a removable memory card slot (up to 2GB for storage of visual Images). The memory card is located within and supported by the portable housing.

**How to remove the SD card**

Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60 (Page 160 of 172))

7,365,871 Claim Language

Accused System and Method – Kyocera E3500

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a 1.3 megapixel auto focus rear camera for capturing visual images.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Camera:**  
1.3 MP with flash, zoom and video recorder

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)



(a) a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf)(Page 1 of 1)

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (1.3 MP Rear Camera) which are commonly movable with the housing.

*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

- 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

(b) a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

**Display:**

**Main: 2.0 inch 128 x 128 65K-color CSTN**

**Sub: 1.0 inch 96 x 96 65K-color CSTN**

*Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)*



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source: <http://www.kyocera-wireless.com/e3500-phone/>*

### CAMERA

If you want to take a photo, please follow the procedure as below.

- a. Open the folder.
- b. Press 'Camera' key to enter camera mode
- c. Press 'OK' key to take a photo
- d. If you want to save the image, press save button and write the title, otherwise press back button.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 19 of 60)

### Display:

Main: 2.0 inch 128 x 128 65K-color CSTN

Sub: 1.0 inch 96 x 96 65K-color CSTN

Display window

• 1.3 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

(c) a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor(MT6226M Processor) supported by the portable housing capable of generating an image data signal.

Source: <http://www.kyocera-wireless.com/e3500-phone/>

**Chipset:  
MT6226M**

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

(d) a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

**Memory:**  
• microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot (up to 2GB for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**How to place SD card**  
Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



**How to remove the SD card**  
Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

Source: [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60)

## 2. Transmitting Images via Multimedia Messages:

### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)



(e) the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

### Making a Call from Message

You can make a call from message by pushing Dial & Menu Confirmation key when the message you want to call back is highlighted. And you can also make by choosing "Call Back" Menu in the option of "Inbox" after you read a message.

### Redialing the last Number

The phone stores the last 30 numbers dialed. To recall any of these numbers, proceed as follows.

- a. Press the Dial key to display a list of the last numbers.
- b. Use Up & Down navigation keys to scroll through the numbers until the required number is highlighted.
- c. Dial the number highlighted

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### Answering a Call

When you answer a call, the phone rings or vibrates according to the setting with the incoming call animation. When the caller can be identified, the caller's phone number and name, if stored in phonebook, will be displayed. If the caller cannot be identified, only the caller's phone number will be displayed.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 18 of 60)

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

(f) a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

**MESSAGES**  
**Write a Message**  
**[Text Message]**

- a. Select [Text Message] menu in the [Write Message] menu.
- b. Make a message. You can insert Template, Object, change format text, Insert PHB Number, Insert PHB Name, and change input method.
- c. After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

Send Only  
Save and Send  
Save  
Send to Many  
Send by Group

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) ( page 32 of 60)



The Accused System includes a keypad with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alphanumeric Keys

**Source:** <http://www.kyocera-wireless.com/e3500-phone/>

(g) a power supply supported by the housing;

**Battery Type:**  
**920 mAh lithium ion (Lilon) battery**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

#### HOW TO INSERT THE BATTERY

- a. Align the bottom of the battery with the slot in the bottom of the phone.
- b. Then sit the battery on the back of the phone until it clicks into place.

#### HOW TO REMOVE THE BATTERY

- a. Turn off your phone first.
- b. Push up the battery release latch
- c. Slowly lift the battery away from the up.



#### HOW TO CHARGE THE BATTERY

- a. Plug your charger in the wall socket.
- b. Connect the other end to the interface connector on the bottom of the phone.
- c. Battery can be charged if you connect USB cable to your PC from the phone.

The Accused System includes a power supply (920mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 14 of 60)

(h) the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

## Quad-band GSM/GPRS/EDGE (850, 900, 1800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

### 1. Receiving Images via Multimedia Messages:

#### [Multimedia Message]

You can use and edit the MMS templates and write a message in this menu.

Select a template and press the [Option] soft key:

**View:** allows you to view and listen to the template message.

**Properties:** shows properties of the templates (From, Cc, Subject, Date, and Memory).

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 33 of 60)

## 2. Transmitting Images via Multimedia Messages:

### [Multimedia Message]

The MMS (multimedia messaging service), also called Photo Message, allows end-users to send and receive messages containing multimedia content (including images, video, sound and text). It provides a rich media of personal multimedia messages from between mobile to mobile, and mobile to e-mail.

- a. With this menu, you can write a message and insert Image, Sound, and Attachment from the file manager.
- b. Select [Multimedia Message] menu in the [Write Message] menu.
- c. Make a message. You can edit To, CC, BCC, Subject, and Content.

④Max recipients of To, CC, BCC are 20 each.

You can input the number directly or get from the phonebook by pressing the [Search] soft key.

After you complete the message, press the [Option] soft key (left) and then select "Done." Choose one of following options.

- Send Only
- Save and Send
- Save to Drafts
- Send Options
- Exit

The Accused System provides a user interface where a user can transmit images via multimedia

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 32 of 60)

(i) at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

**Source:** <http://www.kyocera-wireless.com/e3500-phone/>

#### CAMERA

If you want to take a photo, please follow the procedure as below.

- a. Open the folder.
- b. Press 'Camera' key to enter camera mode
- c. Press 'OK' key to take a photo
- d. If you want to save the image, press save button and write the title, otherwise press back button.

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 19 of 60)

#### White Balance:

Auto/Daylight/Tungsten/Fluorescent/Cloud/Incandescence

Scene Mode: Allows you to select scene mode auto or night

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 42 of 60)

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

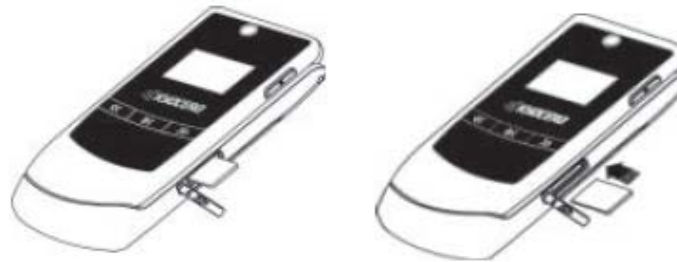
**Memory:**

- microSD™ memory expansion slot (up to 2 GB)

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (Page 1 of 1)

**How to place SD card**

Open the SD card slot on the right side of phone and ensure the direction of the SD card with its gold contacts facing forward and gently press until hearing click sound.



**How to remove the SD card**

Open the SD card slot on the right side of phone and gently press until hearing click sound, then the SD card comes forward.

The Accused System provides a removable memory card slot (up to 2GB for storage of visual Images). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 15 of 60)



14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

**Display:**  
**Main: 2.0 inch 128 x 128 65K-color CSTN**  
**Sub: 1.0 inch 96 x 96 65K-color CSTN**

*Source:* [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_product_brochure.pdf) (page 1 of 1)



*Source:* <http://www.kyocera-wireless.com/e3500-phone/>

### 1. Viewing The Received Images via Multimedia Messages:

#### [Multimedia Message]

You can use and edit the MMS templates and write a message in this menu.

Select a template and press the [Option] soft key:

**View:** allows you to view and listen to the template message.

**Properties:** shows properties of the templates (From, Cc, Subject, Date, and Memory).

**Source:** [http://www.kyocera-wireless.com/e3500-phone/pdf/e3500\\_user\\_guide.pdf](http://www.kyocera-wireless.com/e3500-phone/pdf/e3500_user_guide.pdf) (Page 33 of 60)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.

First portion of the housing consisting of display



Second portion of the housing consisting of keypad, camera etc



Source: <http://www.kyocera-wireless.com/e3500-phone/>

## **Overview of KYOCERA (E4600) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA (E4600) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera (E4600)**

Kyocera Ex. 1002  
p. 349

KYO'871-IC 00348

**7,365,871 Claim Language**

**Accused System and Method – Kyocera (E4600)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/tech-specs.htm>

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**GENERAL**

2G Network	GSM 850 / 900 / 1800 / 1900
SIM	Mini-SIM

Announced 2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

**Source:** [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)



*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

**2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)**

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/tech-specs.htm>

an integral image capture device comprising an electronic camera contained within the portable housing;



Source: <http://www.kyocera-wireless.com/e4600-phone/index.htm>

2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



The Accused System comprises a 2.2" Capacitive touch screen HVGA display (176 x 220) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor MT6227 supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

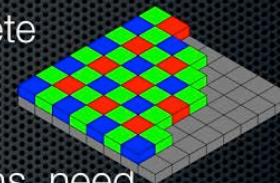
**Chipset:  
MT6227**

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
**microSD™ memory expansion slot (up to 2 GB)**

The Accused System provides a removable memory card slot (up to 2GB). The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

**Band:**  
**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

a user interface for enabling a user to select the image data signal for viewing and transmission;



2.2" display (176 x 220) acting as a user interface (Operating System: java™ 2.0 )

Source: <http://www.kyocera-wireless.com/event-phone/>

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

• Java™ 2.0

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



**1. Transmitting Images via Multimedia Messages:**

- **MMS and SMS**
- **Instant messaging\***

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**2. Transmitting Images via Email Messages:**

- **Email\***

The Accused System provides a user interface where a user can view and transmit images via Email messages

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

**GENERAL**

2G Network GSM 850 / 900 / 1800 / 1900

SIM Mini-SIM

Announced 2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)

**1. Transmitting Images via Multimedia Messages:**

• **MMS and SMS**

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e4600-phone/features.htm>

**2. Transmitting Images via Email Messages:**

• **Email\***

The Accused System provides a user interface where a user can view and transmit images via Email messages.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;



Alpha-numeric  
Input message Area

Alpha-numeric Input Keys

The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

**Band:**  
**Quad-band GSM/GPRS/EDGE**  
**(850, 900, 1800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a power supply for powering the system.

**Battery Type:**  
780 mAh lithium ion (Lilon) battery

Standard lithium ion (Lilon) battery

The Accused System includes a power supply (780mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

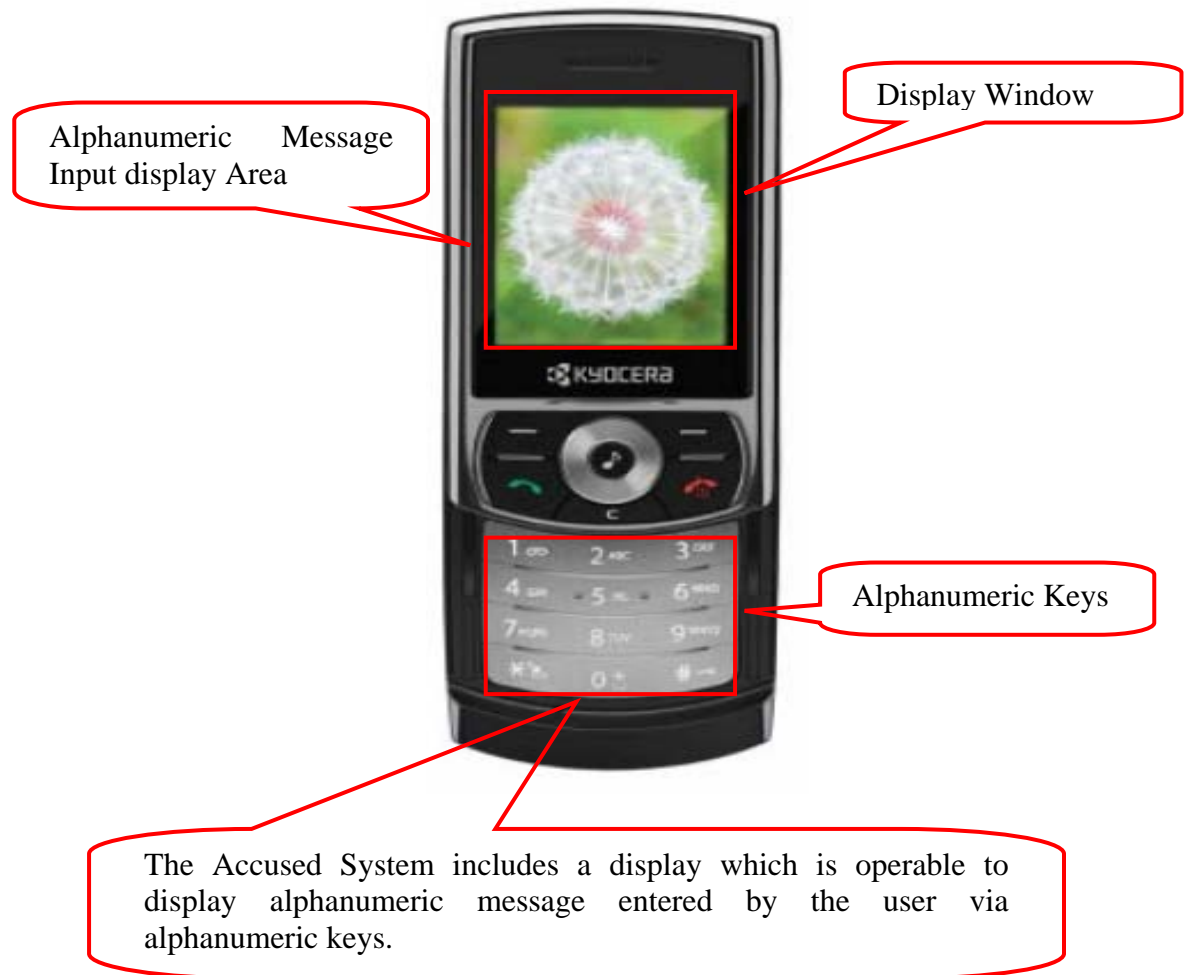
Display window

• 2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removable housed in the housing for storing captured image data signals.

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot up to 2 GB for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

supports up to 2GB microSD™ expandable memory for music, pictures or videos

*Source:* <http://www.kyocera-wireless.com/e4600-phone/tech-specs.htm>

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals via multimedia or Email messages.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

- 2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e4600-phone/features.htm>

**7,365,871 Claim Language**

**Accused System and Method – Kyocera E4600**

6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/techspecs.htm>

**Band:**  
Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**GENERAL**

2G Network	GSM 850 / 900 / 1800 / 1900
SIM	Mini-SIM

Announced 2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

**Source:** [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)



Rear  
Camera

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source:* <http://www.kyocera-wireless.com/e4600-phone/techspecs.htm>

2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/e4600-phone/techspecs.htm>

GENERAL	2G Network	GSM 850 / 900 / 1800 / 1900
	SIM	Mini-SIM
	Announced	2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)



The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alphanumeric Input Keys

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear  
Camera

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor MT6227 supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

**Chipset:  
MT6227**

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

**Memory:**  
**microSD™ memory expansion slot (up to 2 GB)**

The Accused System provides a removable memory card slot (up to 2GB). The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

**Band:**  
**Quad-band GSM/GPRS/EDGE**  
**(850, 900, 1800, 1900 MHz)**

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



2.2" display (176 x 220) acting as a user interface (Operating System: java™ 2.0)

Source: <http://www.kyocera-wireless.com/event-phone/>

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

• Java™ 2.0

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**1. Transmitting Images via Multimedia Messages:**

- **MMS and SMS**
- **Instant messaging\***

The Accused System provides a user interface where user can view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**2. Transmitting Images via Email Messages:**

- **Email\***

The Accused System provides a user interface where a user can view and transmit images via Email messages

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:**  
780 mAh lithium ion (Lilon) battery

The Accused System includes a power supply (780mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)



7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



The Accused System includes a display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alphanumeric Input Keys

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

• 2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

**Memory:  
microSD™ memory expansion slot (up to 2 GB)**

The Accused System provides a removable memory card slot (up to 2GB). The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

**7,365,871 Claim Language**

**Accused System and Method – Kyocera E4600**

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a 1.3 megapixel auto focus rear camera for capturing visual

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

**1.3 MP with flash, zoom and video recorder**

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) page ( 1 of 1)

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

**Source:** [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



*Source:* <http://www.kyocera-wireless.com/event-phone/>

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**

The Accused System includes a portable handled housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

**GENERAL**

2G Network	GSM 850 / 900 / 1800 / 1900
SIM	Mini-SIM

Announced 2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (1.3 MP Rear Camera) which are commonly movable with the housing.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

**1.3 MP with flash, zoom and video recorder**

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) page ( 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

**Display:**

2.2", 176 x 220 pixels; 65K-color TFT

- 2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (Java™ 2.0 Processor) supported by the portable housing capable of generating an image data signal.

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

Java™ 2.0

Source: [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot up to 2 GB for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

supports up to 2GB microSD™ expandable memory for music, pictures or videos

*Source:* <http://www.kyocera-wireless.com/e4600-phone/tech-specs.htm>

## Transmitting Images via Multimedia Messages

### • MMS and SMS

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e4600-phone/features.htm>

### Quad-band GSM/GPRS/EDGE (850, 900, 1800, 1900 MHz)

The Accused System is capable of sending digitized signals (Here: MMS) to the compatible remote receiving stations over wireless data

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

**GENERAL**

<b>2G Network</b>	GSM 850 / 900 / 1800 / 1900
<b>SIM</b>	Mini-SIM
<b>Announced</b>	2008, August. Released 2008, August

The Accused System supports “Mini-SIM” for transmitting and receiving audio calls to/from a compatible remote receiving station over cellular telephone network.

*Source:* [http://www.gsmarena.com/news.php3/kyocera\\_e4600-3227.php](http://www.gsmarena.com/news.php3/kyocera_e4600-3227.php)

**Quad-band GSM/GPRS/EDGE  
(850, 900, 1800, 1900 MHz)**


The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

### Enter Numbers with QWERTY Keypad

From the text entry field, select **Options > Numbers Only** and press the number key to enter your number.

The  icon indicates you are in **Numbers Only** mode. Press the **Symbol** key twice quickly (within two seconds) to change modes. Press the **Symbol** key once to change the mode for the next character only.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 21 of 92)



The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alpha-numeric Input Keys

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

a power supply supported by the housing;

**Battery Type:**  
780 mAh lithium ion (Lilon) battery  
Standard lithium ion (Lilon) battery

The Accused System includes a power supply (780mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)



the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

## Quad-band GSM/GPRS/EDGE (850, 900, 1800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

### Transmitting and Receiving Images via Multimedia Messages:

#### ▪ MMS and SMS

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

- Enhanced Messaging Service (EMS) capable\*
- Multi-media Messaging Service (MMS) capable\*

*Source:* <http://www.kyocera-wireless.com/e4600-phone/features.htm>



The Accused System includes a display for viewing incoming image data signals via multimedia or Email messages.

*Source: <http://www.kyocera-wireless.com/e4600-phone/index.htm>*

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

• 2.0 megapixel camera with flash, zoom, video recording, photo editor (image cropping/flipping, create tiled image, add frames, icons and text, apply effects)

The Accused System includes a display which is operable to display the image to be captured and camera controls. Lens zoom can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

**Memory:**  
microSD™ memory expansion slot (up to 2 GB)

The Accused System provides a removable memory card slot up to 2 GB for storage of visual Images. The memory card is located within and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) (Page 1 of 1)

supports up to 2GB microSD™ expandable memory for music, pictures or videos

**Source:** <http://www.kyocera-wireless.com/e4600-phone/tech-specs.htm>

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

**Display:**  
2.2", 176 x 220 pixels; 65K-color TFT

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf) page ( 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* <http://www.kyocera-wireless.com/e4600-phone/index.htm>

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



First portion of the housing consisting of display

Second portion of the housing consisting of keypad, camera etc

*Source:* [http://www.kyocera-wireless.com/e4600-phone/pdf/e4600\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/e4600-phone/pdf/e4600_product_brochure.pdf)(Page 1 of 1)

## **Overview of KYOCERA ECHO Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA ECHO (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



## **KYOCERA ECHO**

Kyocera Ex. 1002

p. 408

KYO'871-IC 00407



**7,365,871 Claim Language**

**Accused System and Method – KYOCERA ECHO**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source: <http://www.kyocera-wireless.com/echo-phone/downloads.htm>*





**Connectivity**

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack


*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)*

## Make and Answer Calls

### ▶ Make Your First Phone Call

1. Press  > .
2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ Answer an Incoming Call

- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .

### ▶ Ignore an Incoming Call

- Flick the Ignore icon .

### ▶ Mute the Ringer on a Call

To mute the ringer:

- Press the volume button .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 6 of 15)



Rear Camera

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 3 of 15)*

### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)*

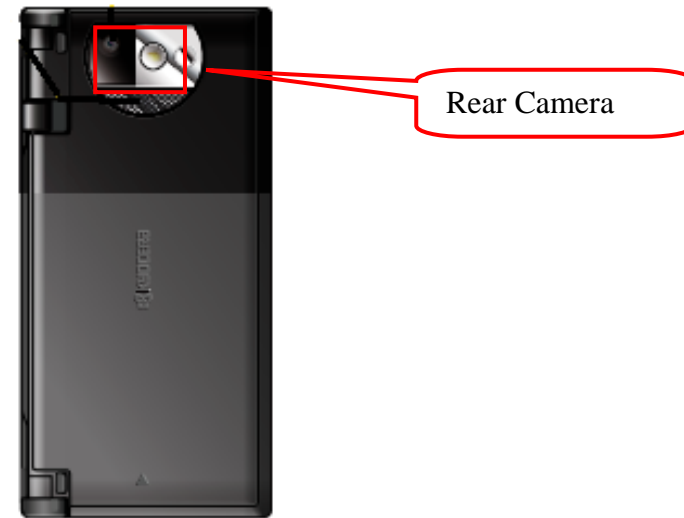
a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 3 of 15)

#### **Highlights**

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)

Source: <http://www.kyocera-wireless.com/c5121-phone/specs/>



The Accused System comprises a 4.7" Capacitive touch screen WVGA, TFT (800 x 480) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 3 of 15)

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (1GHz Snapdragon QSD8650 Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### **Processor**

- 1GHz Snapdragon processor (QSD8650 Android)

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

- **Expandable memory: 8GB microSD card included; supports cards up to 32GB**

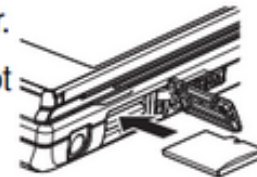
*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### **The microSD Card**

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### **Re-inserting the microSD Card**

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.



The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 85 of 161)

### **Connectivity**

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

a user interface for enabling a user to select the image data signal for viewing and transmission;



4.7" WVGA 262K color TFT display (800 x 480 pixels) acting as a user interface (Operating System: QSD8650 Android).

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

#### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)

#### Processor


- 1GHz Snapdragon processor (QSD8650 Android)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### Transmitting Images via Multimedia Messages:

#### ▶ Send a Picture (MMS) Message

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.





*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

(Page 9 of 15)


a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## ***Make and Answer Calls***

### ▶ **Make Your First Phone Call**

1. Press  > .
2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ **Answer an Incoming Call**


- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 6 of 15)

### Transmitting Images via Multimedia Messages:

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4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

(Page 9 of 15)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Entering Text Using the Onscreen Keyboards

### Selecting the Keyboard Type

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the keyboard, simply tap a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.

1. From a screen where you can enter text, tap and hold a text entry field, and then tap **Input method**.



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

QWERTY Keyboard

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_User_Guide_en.pdf) (Page 51 of 199)



a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

#### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

a power supply for powering the system.

**Talk Time:**

- Up to 420 minutes (7 hours)

**Included Accessories**

- (2) 1370 mAh Li-Ion batteries

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

▶ **Install the Battery**

1. Press both thumbs firmly against the battery cover, and push upward to remove it.
2. Insert the battery, contacts end first, and gently press into place.
3. Replace the cover, making sure all tabs have aligned, and gently slide the cover downward until the cover is seated.

▶ **Charge the Battery**

1. Plug the smaller end of the micro-USB cable into the charger/accessory jack on the lower-left side of your device.
2. Plug the other end of the cable into a USB port on your computer.

The Accused System includes a power supply (1370mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

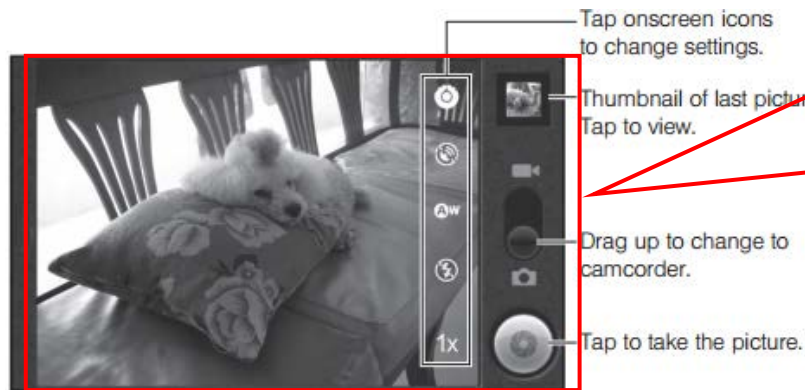
(Page 2 of 15)

2. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

### Take a Picture or Record a Video

1. Press > > **Camera**. (To record a video, move the slider to the camcorder icon and then select a recording mode [Video Mail or Long Video]).
2. Frame your subject in the screen.
3. Tap to take a photo.  
—or—  
Tap to begin capturing video, and tap to stop recording.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 10 of 15)






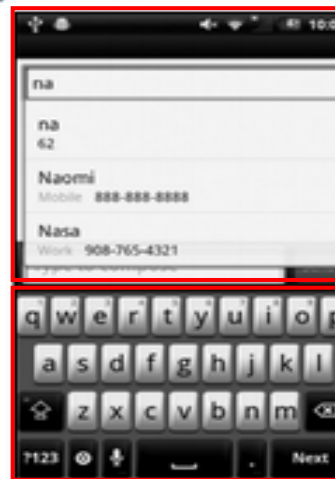
The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 89 of 161)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

### Composing Messages

1. Press Home  >  > Messaging  > New message.
2. Enter the phone number or email address of the recipient in the To field using the onscreen keyboard. As you type, entries with matching information in your Contacts will appear in a list. Tap an entry to select it.



3. Enter a message in the text field.

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_User_Guide_en.pdf)  
(Page 124 of 199)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

- **Expandable memory: 8GB microSD card included; supports cards up to 32GB**

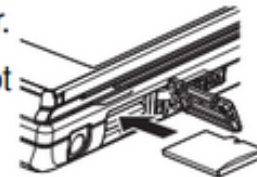
*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)*

### **The microSD Card**

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### **Re-inserting the microSD Card**

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.



The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)*

*(Page 85 of 161)*


5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### Send a Picture (MMS) Message

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

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**7,365,871 Claim Language**

**Accused System and Method – Kyocera ECHO**

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising.



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>





**Connectivity**

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack


*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

## Make and Answer Calls

### ▶ Make Your First Phone Call

1. Press  > .
2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ Answer an Incoming Call

- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .

### ▶ Ignore an Incoming Call

- Flick the Ignore icon .

### ▶ Mute the Ringer on a Call

To mute the ringer:

- Press the volume button .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 6 of 15)





Rear Camera

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 3 of 15)*

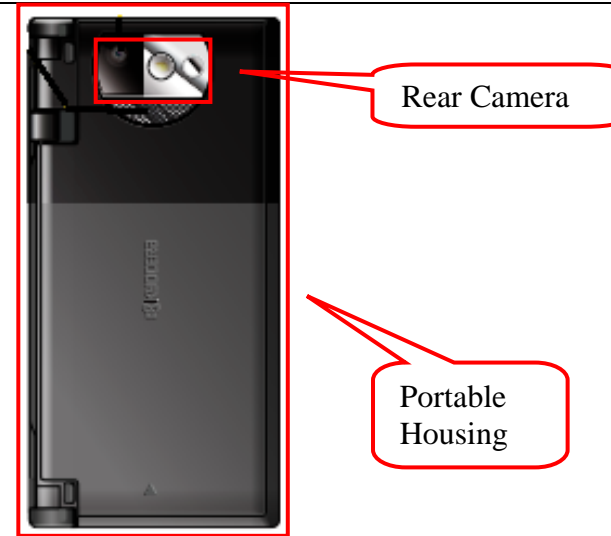
### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)*

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 3 of 15)*

#### **Highlights**

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

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a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals







Cellular telephone


*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

## Make and Answer Calls

### ▶ Make Your First Phone Call

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2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ Answer an Incoming Call

- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .

### ▶ Ignore an Incoming Call

- Flick the Ignore icon .

### ▶ Mute the Ringer on a Call

To mute the ringer:

- Press the volume button .

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

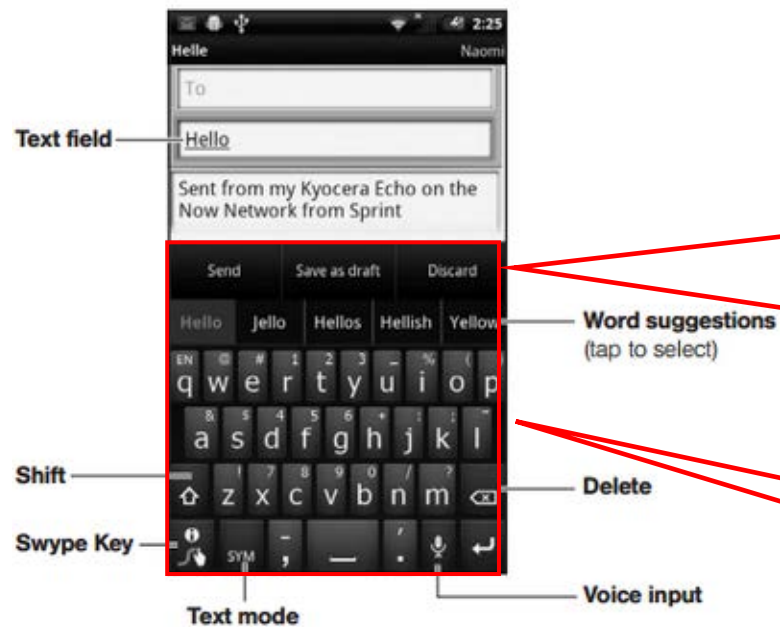
Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 6 of 15)

## Entering Text Using the Onscreen Keyboards

### Selecting the Keyboard Type

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the keyboard, simply tap a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.

1. From a screen where you can enter text, tap and hold a text entry field, and then tap **Input method**.

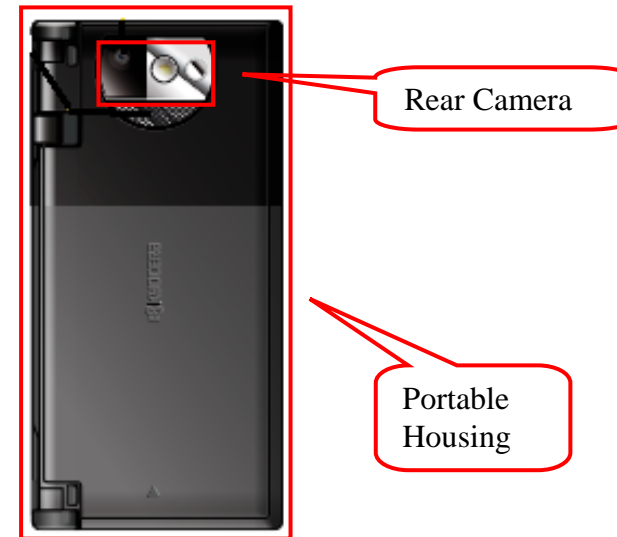


The Accused System includes a touchscreen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

QWERTY Keyboard

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_User_Guide_en.pdf)  
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an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 3 of 15)







#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

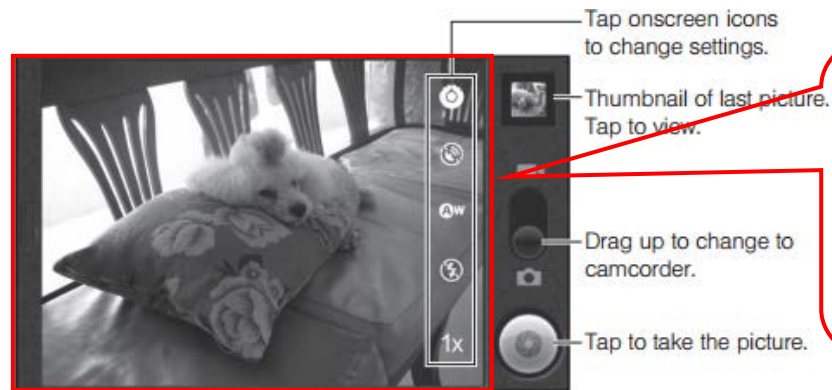
The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### Take a Picture or Record a Video

1. Press  >  > **Camera**. (To record a video, move the slider to the camcorder icon  and then select a recording mode [**Video Mail** or **Long Video**]).
2. Frame your subject in the screen.
3. Tap  to take a photo.  
—or—  
Tap  to begin capturing video, and tap  to stop recording.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 10 of 15)*



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)  
(Page 89 of 161)*

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



4.7" WVGA 262K color TFT display (800 x 480 pixels) acting as a user interface (Operating System: QSD8650 Android). The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

#### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)

#### Processor

- 1GHz Snapdragon processor (QSD8650 Android)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)



In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

- **Expandable memory: 8GB microSD card included; supports cards up to 32GB**

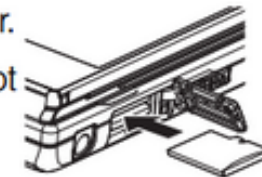
*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### **The microSD Card**

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### **Re-inserting the microSD Card**

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.



The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)

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### **Connectivity**

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



4.7" WVGA 262K color TFT display (800 x 480 pixels) acting as a user interface (Operating System: QSD8650 Android).

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

#### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)

#### Processor


- 1GHz Snapdragon processor (QSD8650 Android)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### Transmitting Images via Multimedia Messages:

#### ► Send a Picture (MMS) Message

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.





*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

(Page 9 of 15)


a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## **Make and Answer Calls**

### ▶ **Make Your First Phone Call**

1. Press  > .
2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ **Answer an Incoming Call**

- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .


The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

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### Transmitting Images via Multimedia Messages:

#### ► Send a Picture (MMS) Message

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

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an integrated power supply for powering both the cellular telephone and the camera.

### **Talk Time:**

- Up to 420 minutes (7 hours)

### **Included Accessories**

- (2) 1370 mAh Li-Ion batteries

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

#### **▶ Install the Battery**

1. Press both thumbs firmly against the battery cover, and push upward to remove it.
2. Insert the battery, contacts end first, and gently press into place.
3. Replace the cover, making sure all tabs have aligned, and gently slide the cover downward until the cover is seated.

#### **▶ Charge the Battery**

1. Plug the smaller end of the micro-USB cable into the charger/accessory jack on the lower-left side of your device.
2. Plug the other end of the cable into a USB port on your computer.

The Accused System includes a power supply (1370mAh Li-Ion battery) for powering the system (Phone).

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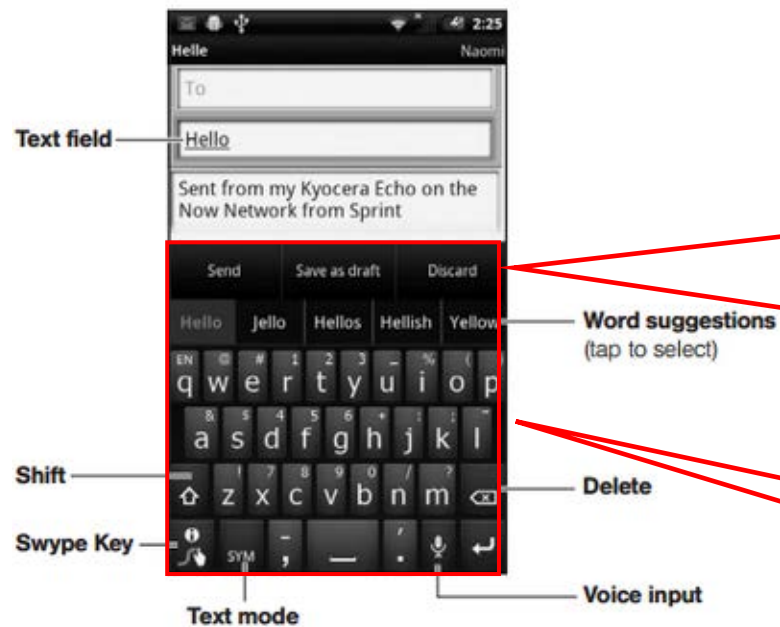
7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image

## Entering Text Using the Onscreen Keyboards

### Selecting the Keyboard Type

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the keyboard, simply tap a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.

1. From a screen where you can enter text, tap and hold a text entry field, and then tap **Input method**.









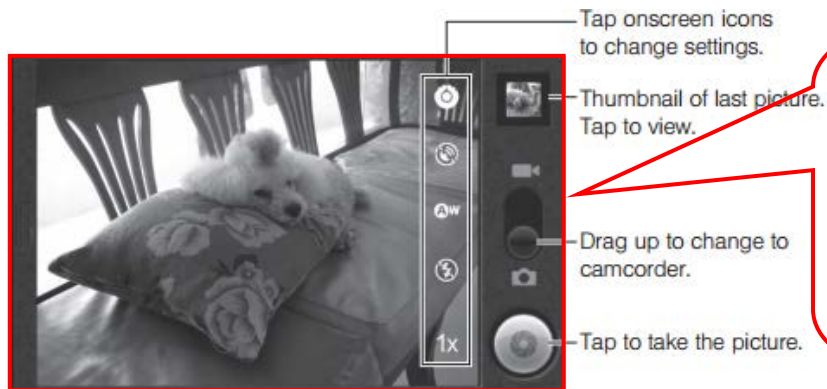
The Accused System includes a touchscreen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

QWERTY  
Keyboard

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### Take a Picture or Record a Video

1. Press  >  > **Camera**. (To record a video, move the slider to the camcorder icon  and then select a recording mode [**Video Mail** or **Long Video**]).
2. Frame your subject in the screen.
3. Tap  to take a photo.  
—or—  
Tap  to begin capturing video, and tap  to stop recording.



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 10 of 15)

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)  
(Page 89 of 161)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

- Expandable memory: 8GB microSD card included; supports cards up to 32GB

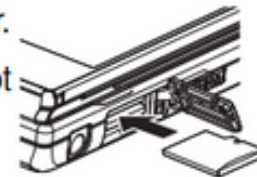
Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### The microSD Card

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### Re-inserting the microSD Card

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.



The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

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**7,365,871 Claim Language**

**Accused System and Method – Kyocera Echo**

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System includes a portable housing with built in wireless connectivity including 3G.



*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

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**Highlights**

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

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- Connectivity**
- EV-DO rev. A dual-band digital (800 & 1900 MHz)
  - Wi-Fi (802.11 b/g)
  - Wi-Fi hotspot capability (supports up to 5 devices)\*
  - Stereo Bluetooth® 2.1 + EDR
  - 3.5mm stereo headset jack

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	Sprint 3G data service (EVDO) is available. When active, the icon is animated.
	Sprint 1xRTT data service is available. When active, the icon is animated.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks including 3G.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 22 of 161)



a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity including 3G.

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
(Page 3 of 15)

	Sprint 3G data service (EVDO) is available. When active, the icon is animated.
	Sprint 1xRTT data service is available. When active, the icon is animated.


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## Make and Answer Calls

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- Flick the Ignore icon .

### ▶ Mute the Ringer on a Call

To mute the ringer:

- Press the volume button .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 6 of 15)





Rear Camera

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 3 of 15)*

#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display
- 5 MP camera with flash, autofocus and 720p HD camcorder

The Accused System comprises of a 5 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)*

a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)

Source: <http://www.kyocera-wireless.com/c5121-phone/specs/>



Source 1

The Accused System comprises a 4.7" Capacitive touch screen WVGA, TFT (800 x 480) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.









Source 2

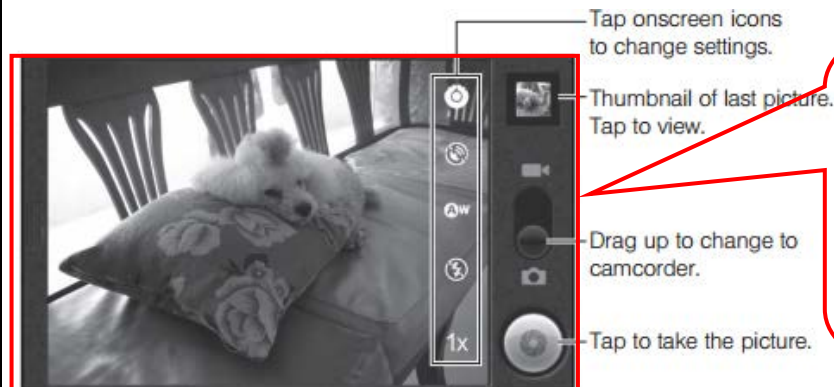
Source 1: <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

Source 2: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)  
(Page 3 of 15)

### Take a Picture or Record a Video

1. Press  >  > **Camera**. (To record a video, move the slider to the camcorder icon [] and then select a recording mode [Video Mail or Long Video]).
2. Frame your subject in the screen.
3. Tap  to take a photo.  
—or—  
Tap  to begin capturing video, and tap  to stop recording.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf) (Page 10 of 15)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 89 of 161)

a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (1GHz Snapdragon QSD8650 Processor) supported by the portable housing capable of generating an image data signal.

*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### **Processor**

- 1GHz Snapdragon processor (QSD8650 Android)

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

- **Expandable memory: 8GB microSD card included; supports cards up to 32GB**

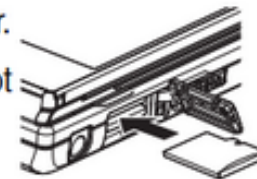
*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### **The microSD Card**

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### **Re-inserting the microSD Card**

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.




The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)

(Page 85 of 161)

**Transmitting Images via Multimedia Messages:**

▶ **Send a Picture (MMS) Message**

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

*(Page 9 of 15)*

### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)



Sprint 3G data service (EVDO) is available. When active, the icon is animated.







Sprint 1xRTT data service is available. When active, the icon is animated.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 22 of 165)


the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## **Make and Answer Calls**

### ▶ **Make Your First Phone Call**

1. Press  > .
2. Enter a phone number using the phone keypad. (The number will appear just above the keypad as you enter it. Tap  to delete one or more digits.)
3. Tap .

### ▶ **Answer an Incoming Call**

- Make sure your device is on. (If your device is off, incoming calls go to voicemail.)
- On the incoming call screen, flick the Answer icon .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

(Page 6 of 15)





### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

	Sprint 3G data service (EVDO) is available. When active, the icon is animated.
	Sprint 1xRTT data service is available. When active, the icon is animated.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 22 of 165)

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

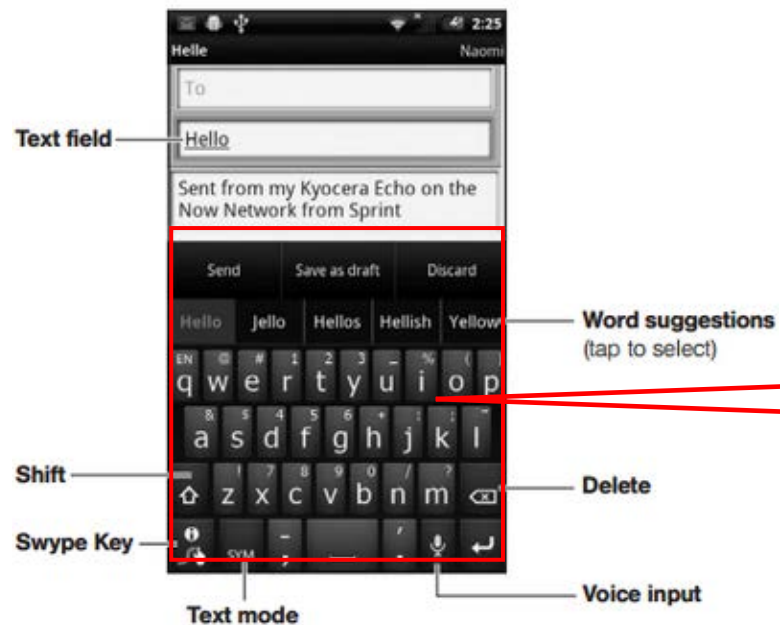
## Entering Text Using the Onscreen Keyboards

### Selecting the Keyboard Type

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the keyboard, simply tap a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.

The Accused System includes a touchscreen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

1. From a screen where you can enter text, tap and hold a text entry field, and then tap **Input method**.



Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_User_Guide_en.pdf) (Page 51 of 199)

a power supply supported by the housing;

### **Talk Time:**

- Up to 420 minutes (7 hours)

### **Included Accessories**

- (2) 1370 mAh Li-Ion batteries

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### ▶ **Install the Battery**

1. Press both thumbs firmly against the battery cover, and push upward to remove it.
2. Insert the battery, contacts end first, and gently press into place.
3. Replace the cover, making sure all tabs have aligned, and gently slide the cover downward until the cover is seated.

### ▶ **Charge the Battery**

1. Plug the smaller end of the micro-USB cable into the charger/accessory jack on the lower-left side of your device.
2. Plug the other end of the cable into a USB port on your computer.

The Accused System includes a power supply (1370mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)

(Page 2 of 15)



the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

### Connectivity

- EV-DO rev. A dual-band digital (800 & 1900 MHz)
- Wi-Fi (802.11 b/g)
- Wi-Fi hotspot capability (supports up to 5 devices)\*
- Stereo Bluetooth® 2.1 + EDR
- 3.5mm stereo headset jack

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.


Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

	Sprint 3G data service (EVDO) is available. When active, the icon is animated.
	Sprint 1xRTT data service is available. When active, the icon is animated.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 22 of 165)

### Transmitting and Receiving Images via Multimedia Messages:

#### ▶ Send a Picture (MMS) Message

1. Follow steps 1 – 3 for sending a text message.
2. Press  > **Attach**.
3. Tap a media type (**Pictures, Videos, etc.**) to open the Gallery application.
4. Tap a picture or clip to select it.
5. Add additional pictures or clips, if desired.
6. If you are satisfied with your message, tap **Send**.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_GetStarted\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_GetStarted_Guide_en.pdf)





*(Page 9 of 15)*



The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

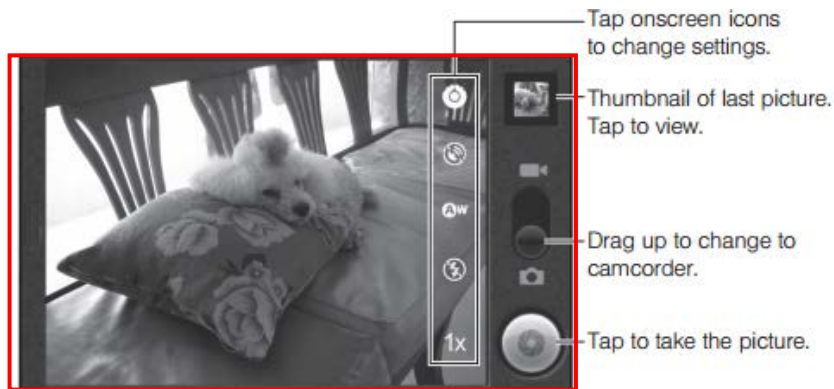
*Source:* <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

To view and play a multimedia message:

1. Press **Home**  >  > **Messaging** .
2. From the Messaging screen, tap a multimedia message to open its contents.
3. While the message is open, tap  to play the file.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 105 of 161)

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.



**AW White balance**

Tap to compensate for color differences found within different lighting conditions. Choose from: **Auto, Daylight, Cloudy, Incandescent, or Fluorescent**

**Flash mode**

Tap to set the flash mode from **Auto, On, or Off**.

**1x Zoom**

Tap to adjust the zoom from **1X to 2X**.

The Accused System includes a display which is operable to display the image to be captured and camera controls. Lens focus, White Balance and lens zoom can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

**Source:** [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf)  
(Page 89 and 90 of 161)

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

- **Expandable memory: 8GB microSD card included; supports cards up to 32GB**

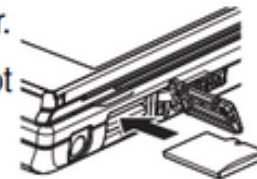
*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

### **The microSD Card**

Your device is equipped with a preinstalled 8GB microSD™ (Secure Digital) memory card and its adapter to expand the device's available memory space. It allows you to store images, videos, and music data in your device.

### **Re-inserting the microSD Card**

1. Open the microSD card slot cover.
2. Insert a microSD card into the slot with the metal contacts facing down.



The Accused System provides a removable memory card (supports up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 85 of 161)



14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.



4.7" WVGA 262K color TFT display (800 x 480 pixels) acting as a user interface (Operating System: QSD8650 Android).

Source: <http://www.kyocera-wireless.com/echo-phone/downloads.htm>

#### Highlights

- Dual 3.5" WVGA touchscreen displays combine to form a 4.7" display

#### Screen Resolution:

- 800 X 480 pixels, WVGA 262K-color TFT (x2)





#### Processor

- 1GHz Snapdragon processor (QSD8650 Android)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Spec_Sheet.pdf) (Page 2 of 2)

To view and play a multimedia message:

1. Press **Home**  >  > **Messaging** .
2. From the Messaging screen, tap a multimedia message to open its contents.
3. While the message is open, tap  to play the file.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

*Source:* [http://www.kyocera-wireless.com/echo-phone/pdf/Echo\\_Basic\\_Guide.pdf](http://www.kyocera-wireless.com/echo-phone/pdf/Echo_Basic_Guide.pdf) (Page 105 of 161)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



Source: <http://www.kyocera-wireless.com/c5121-phone/>

## **Overview of KYOCERA EVENT (C5133) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA EVENT (C5133) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



## KYOCERA EVENT (C5133)

Kyocera Ex. 1002  
p. 477

KYO'871-IC 00476

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA EVENT (C5133)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/event-phone/>

**Connectivity**

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

*Source:* <http://www.kyocera-wireless.com/event-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

Call From Recent Calls

Call From People

Call a Number in a Text Message

Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 43 and 47 of 181)



*Source: <http://www.kyocera-wireless.com/event-phone/>*

3.5" IPS touchscreen display  
3.2 MP camera with LED flash and video camcorder

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)*



a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/event-phone/>

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* <http://www.kyocera-wireless.com/event-phone/>

3.5" IPS touchscreen display  
3.2 MP camera with LED flash and video camcorder

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf) (Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

- 3.5" capacitive touchscreen, HVGA (480 x 320 pixels)

Source: <http://www.kyocera-wireless.com/event-phone/specs/>



Source: <http://www.kyocera-wireless.com/event-phone/>

The Accused System comprises a 3.5" Capacitive touch screen HVGA display (480 x 320) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/event-phone/>

**Chipset:**  
MSM8655 @ 1GHz  
(QUALCOMM Snapdragon processor)

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
4GB ROM/512MB RAM  
microSD™ supports up to 32GB

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

### microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

**Insert the microSD Card**

**Remove the microSD Card**

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 4GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf)(Page 168 of 181)

## Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

Source: <http://www.kyocera-wireless.com/event-phone/specs/>



3.5" HVGA LCD display (480 x 320) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

The Accused System provides a display where a user can select to view or send images via MMS or Email messages.

Source: <http://www.kyocera-wireless.com/event-phone/>

## Display:

3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf) (Page 1 of 1)

a user interface for enabling a user to select the image data signal for viewing and transmission;



3.5" HVGA LCD display (480 x 320) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: <http://www.kyocera-wireless.com/event-phone/>

**Display:**

3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

**Operating System**

Android™ 4.0 (Ice Cream Sandwich)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf) (Page 1 of 1)



## 1. Transmitting Images via Multimedia Messages:


### *Send a Multimedia Message (MMS)*

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press **Home** , and touch  > **Messaging**.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.

5. Touch  and select from the following file attachments.

- **Pictures:** Open Gallery to attach a photo from your storage card.
- **Capture picture:** Run the camera application to take a photo and attach it.
- **Videos:** Open Gallery to attach a video from your storage card.




The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.


*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 99 of 181)

## 2. Transmitting Images via Email Messages:

### **Compose and Send Email**

Compose and send email using any account you have set up on your device. Increase your productivity by attaching files such as pictures or videos to your email messages.

1. Press **Home** , and touch  > **Email**.
2. On the email account Inbox, touch .

To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file”

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 93 of 181)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## **Make Phone Calls**

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

Call From Recent Calls

Call From People

Call a Number in a Text Message

Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused System provides a telephonic system for sending and receiving audio signals.

## **Receive Phone Calls**

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.





**Answer an Incoming Call**


**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 43 and 47 of 181)

## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

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3. Fill in one or more recipients.
5. Touch  and select from the following file attachments.
  - **Pictures:** Open Gallery to attach a photo from your storage card.
  - **Capture picture:** Run the camera application to take a photo and attach it.
  - **Videos:** Open Gallery to attach a video from your storage card.




The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.


*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 99 of 181)

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To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images viaEmail messages by tapping on “Attach file” option.

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 93 of 181)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Touchscreen Keyboard

The touchscreen keyboard lets you enter text directly onscreen.

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the touchscreen keyboard, simply touch a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 28 and 29 of 181)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* <http://www.kyocera-wireless.com/event-phone/specs/>

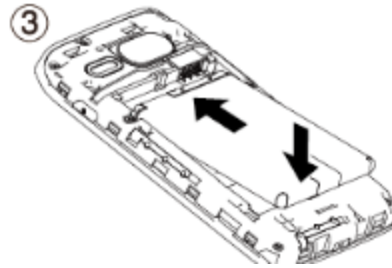
a power supply for powering the system.

## Battery & Talk Time

- 1500 mAh Lithium Ion (Lilon) battery

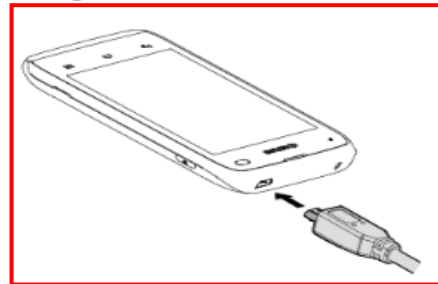
Source: <http://www.kyocera-wireless.com/event-phone/specs/>

Insert the battery, contacts end first, and gently press into place (③).



Charge your battery.

- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.



The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).



Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 13 of 181)



2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. **Touch**  to take the photo.

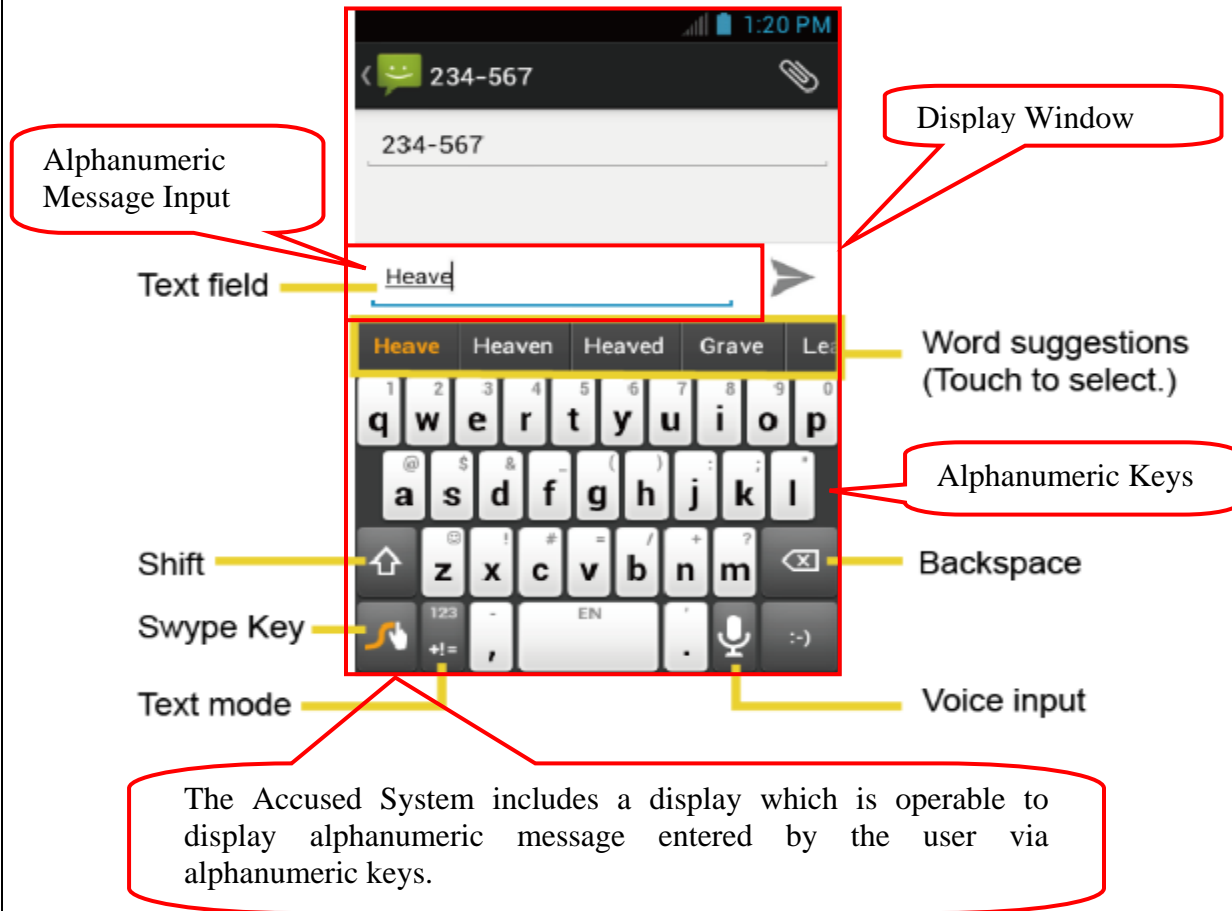


Viewfinder Screen

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 138 and 137 of 181)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 29 of 181)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

**Memory:**  
4GB ROM/512MB RAM  
microSD™ supports up to 32GB

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

Insert the microSD Card

Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 4GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 168 of 181)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* <http://www.kyocera-wireless.com/event-phone/>

To view a multimedia message (MMS):

1. Press **Home** , and touch  > **Messaging**.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch **Save attachment on the options menu.**

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 101 of 181)

**7,365,871 Claim Language**

**Accused System and Method – Kyocera EVENT (C5133)**

6.A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/event-phone/>

- Connectivity**
- CDMA 1x EVDO rev. A 1x Advanced
  - Wi-Fi® (802.11 b/g/n)

Source: <http://www.kyocera-wireless.com/event-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

Call From Recent Calls

Call From People

Call a Number in a Text Message

Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 43 and 47 of 181)



*Source: <http://www.kyocera-wireless.com/event-phone/>*

**3.5" IPS touchscreen display**

**3.2 MP camera with LED flash and video camcorder**

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)*

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



Portable Housing

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (rear camera) which are commonly movable with the housing.

Source: <http://www.kyocera-wireless.com/event-phone/>



a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/event-phone/>

## ***Make Phone Calls***

There are several convenient ways to place calls from your device.

**Call Using the Phone Dialpad**

**Call From Recent Calls**

**Call From People**

**Call a Number in a Text Message**

**Call Emergency Numbers**

**Call Numbers with Pauses**

**Call Using Plus (+) Code Dialing**

**Call Using the Internet Calling**

## ***Receive Phone Calls***

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### **Answer an Incoming Call**

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 43 and 47 of 181)

## Touchscreen Keyboard

The touchscreen keyboard lets you enter text directly onscreen.

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the touchscreen keyboard, simply touch a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.



The Accused System includes an onscreen keypad/keyboard with alphanumeric input keys which are operated by the user to transmit alphanumeric signals.

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 28 and 29 of 181)

## Display

- 3.5" capacitive touchscreen, HVGA (480 x 320 pixels)

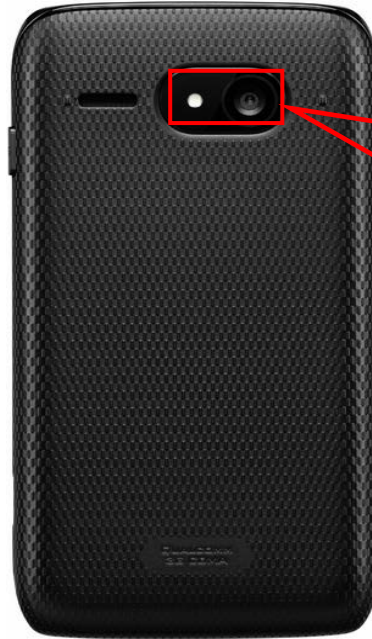
*Source:* <http://www.kyocera-wireless.com/event-phone/specs/>



The Accused System comprises a 3.5" Capacitive touch screen HVGA display (480 x 320) which is operable to display alphanumeric message entered by the user via alphanumeric keys.

*Source:* <http://www.kyocera-wireless.com/event-phone/>

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/event-phone/>



3.5" IPS touchscreen display

3.2 MP camera with LED flash and video camcorder


Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. Touch  to take the photo.



The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 138 and 137 of 181)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating and transmitting the image data signal to other remote devices via cellular telephone. . The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/event-phone/>

**Chipset:**  
MSM8655 @ 1GHz  
(QUALCOMM Snapdragon processor)

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

Source: <http://www.kyocera-wireless.com/event-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
4GB ROM/512MB RAM  
microSD™ supports up to 32GB

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

[Insert the microSD Card](#)

[Remove the microSD Card](#)

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 4GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf)(Page 168 of 181)

### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** <http://www.kyocera-wireless.com/event-phone/specs/>

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



3.5" HVGA LCD display (480 x 320) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: <http://www.kyocera-wireless.com/event-phone/>

**Display:**

3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

**Operating System**

Android™ 4.0 (Ice Cream Sandwich)





The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.


Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

## 1. Transmitting Images via Multimedia Messages:

### *Send a Multimedia Message (MMS)*

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

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2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
5. Touch  and select from the following file attachments.
  - **Pictures:** Open Gallery to attach a photo from your storage card.
  - **Capture picture:** Run the camera application to take a photo and attach it.
  - **Videos:** Open Gallery to attach a video from your storage card.




The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 99 of 181)

## 2. Transmitting Images via Email Messages:

### *Compose and Send Email*

Compose and send email using any account you have set up on your device. Increase your productivity by attaching files such as pictures or videos to your email messages.

1. Press **Home** , and touch  > **Email**.
2. On the email account Inbox, touch .

To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 93 of 181)

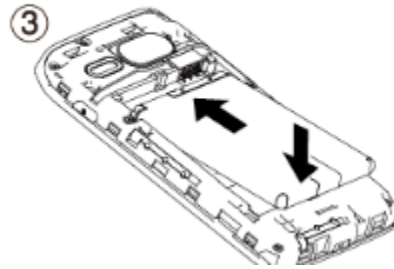
an integrated power supply for powering both the cellular telephone and the camera.

## Battery & Talk Time

- 1500 mAh Lithium Ion (Lion) battery

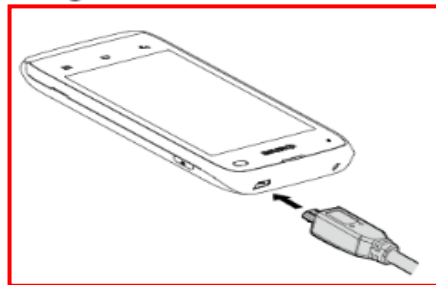
Source: <http://www.kyocera-wireless.com/event-phone/specs/>

Insert the battery, contacts end first, and gently press into place (3).



Charge your battery.

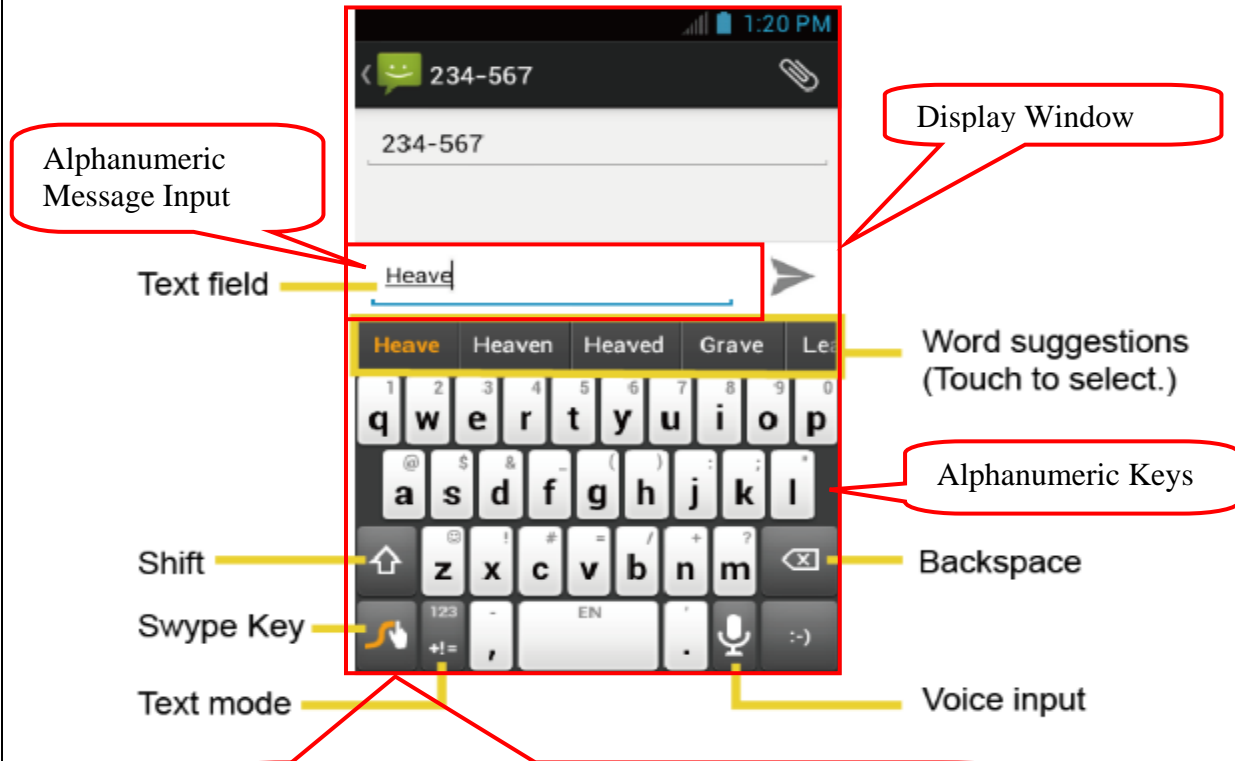
- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.



The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (telephone and camera).

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 13 of 181)

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image





The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 29 of 181)

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. Touch  to take the photo.



Display window

The Accused system comprises of display window for framing the visual Image.

**Source:** [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 138 and 137 of 181)



8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

## Memory:

4GB ROM/512MB RAM

microSD™ supports up to 32GB

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_Spec_Sheet.pdf)(Page 1 of 1)

## microSD Card

You can use an optional microSD™ (Secure Digital) or microSDHC™ memory card to store images, videos, music, documents, and voice data on your device. The microSD cards are sold separately and are not included with this device.

**Note:** In this guide, the name of microSD™ memory card and microSDHC™ memory card is abbreviated as microSD card, microSD, or memory card.

**Note:** Be sure to use only recommended microSD cards. Using non-recommended microSD cards could cause data loss and damage your device.

Insert the microSD Card

Remove the microSD Card

The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf)(Page 168 of 181)

7,365,871 Claim Language	Accused System and Method – KYOCERA EVENT (C5133)
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>												
<p>at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.</p>	<p>The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom and white balance</p> <table border="1"> <tr> <td>Rear Camera</td> <td></td> </tr> <tr> <td>Built-In</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Resolution</td> <td style="text-align: center;">3+ megapixels</td> </tr> <tr> <td>Zoom</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Flash</td> <td style="text-align: center;">LED</td> </tr> <tr> <td>Additional Rear Camera Info</td> <td style="text-align: center;">Effects, ISO, White balance, Scene mode, Auto exposure</td> </tr> </table> <p><a href="http://theinformr.com/cell-phones/kyocera-event/specs/">http://theinformr.com/cell-phones/kyocera-event/specs/</a></p>	Rear Camera		Built-In	✓	Resolution	3+ megapixels	Zoom	✓	Flash	LED	Additional Rear Camera Info	Effects, ISO, White balance, Scene mode, Auto exposure
Rear Camera													
Built-In	✓												
Resolution	3+ megapixels												
Zoom	✓												
Flash	LED												
Additional Rear Camera Info	Effects, ISO, White balance, Scene mode, Auto exposure												
<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>												
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>												

## **Overview of KYOCERA G2GO (M2000) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA G2GO (M2000) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**Kyocera G2GO (M2000)**

**7,365,871 Claim Language**

**Accused System and Method – Kyocera G2GO (M2000)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>

⏮ Data service is available and active on your phone. Check with your service provider for availability.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

## Answer Phone Calls

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)





The Accused System comprises of a 1.3 megapixel rear camera with flash for capturing visual images and supported by the portable housing.



Full-featured 1.3 MP camera with dedicated key, digital zoom and photo editing

Source: <http://www.kyocera-wireless.com/m2000-phone/>

a manually portable housing;



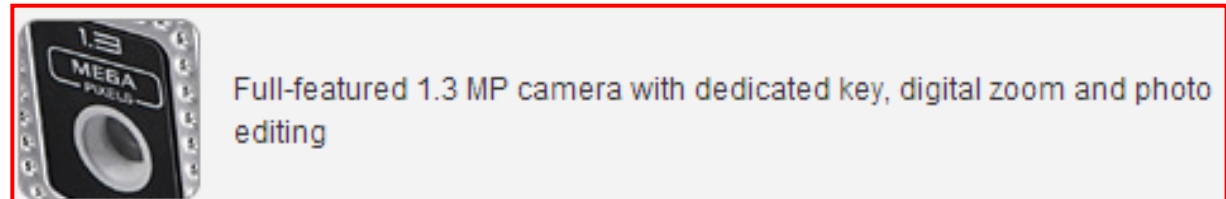
The Accused System comprises a manually portable housing.

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>

an integral image capture device comprising an electronic camera contained within the portable housing;



The Accused System comprises of a 1.3 megapixel rear camera with flash for capturing visual images and supported by the portable housing.



Source: <http://www.kyocera-wireless.com/m2000-phone/>

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Display:**

• 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System comprises a 2.4" QVGA (320 X 240) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (100 MHz single core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

**Source:** <http://www.kyocera-wireless.com/m2000-phone/>



**Source:** <http://www.phonearena.com/phones/compare/Kyocera-G2GO-M2000,Motorola-DROID-2/phones/3457,4681>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly

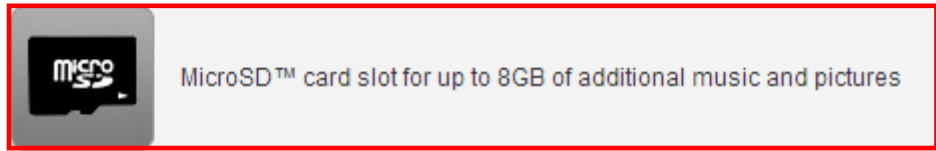


<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;



Source : <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>





Data service is available and active on your phone. Check with your service provider for availability.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

a user interface for enabling a user to select the image data signal for viewing and transmission;

## Display:

- 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System comprises a 2.4" QVGA (320 X 240) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

- Java support\*

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)

**Transmitting Images via Multimedia Messages:**

**Create a Multimedia Message**

From **New Pic Msg**, enter a recipient's phone number or email address. (Select **Options** to access contacts, groups or recently used addresses. Scroll down to move to the next field when done.)

Enter a subject.

Enter a message.

Attach an image file. (Select **Options** to access more features.)

Attach a sound file. (Select **Options** to access more features.)

When done, select **Send**.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 41 of 92)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

## Answer Phone Calls

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

**Transmitting Images via Multimedia Messages:**

**Create a Multimedia Message**

From **New Pic Msg**, enter a recipient's phone number or email address. (Select **Options** to access contacts, groups or recently used addresses. Scroll down to move to the next field when done.)

Enter a subject.

Enter a message.

Attach an image file. (Select **Options** to access more features.)

Attach a sound file. (Select **Options** to access more features.)

When done, select **Send**.


The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 41 of 92)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

### Enter Numbers with QWERTY Keypad

From the text entry field, select **Options > Numbers Only** and press the number key to enter your number.

The  icon indicates you are in **Numbers Only** mode. Press the **Symbol** key twice quickly (within two seconds) to change modes. Press the **Symbol** key once to change the mode for the next character only.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 21 of 92)



Alpha-numeric  
Input Keys

The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* [http://reviews.cnet.com/cell-phones/kyocera-x-tc-g2go/4505-6454\\_7-33573791.html](http://reviews.cnet.com/cell-phones/kyocera-x-tc-g2go/4505-6454_7-33573791.html)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>



Data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

a power supply for powering the system.

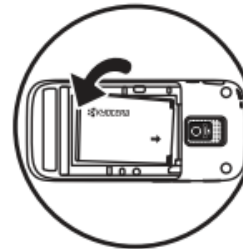
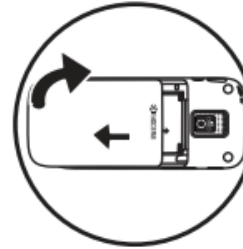
### Battery & Talk Time

- 790 mAh Lithium ion (Lilon) battery
- Talk time: Up to 250 minutes (3.25 hours)

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>

### Install the Battery

1. With the back of the phone facing you, press on the back cover and slide it to the bottom of the phone.
2. Lift the back cover from the bottom to remove.
3. Place the battery in the phone casing with the metal contacts toward the top of the phone.
4. Align the back cover side tabs with the slots on each side of the phone.



The Accused System includes a power supply (790mAh Li-Ion battery) for powering the system (telephone and camera).

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 9 of 92)



2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## Take a Picture

1. To activate the camera, press and hold the **Camera** key. You can also select **Camera** from the main menu.
2. Focus on the image using the phone's display as a viewfinder.
3. To take a picture, press the **OK** key. The picture is saved to **Camera Pictures**.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 79 of 92)

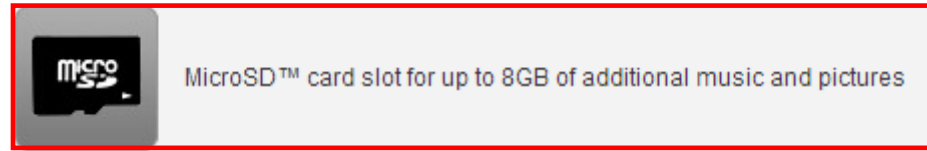


The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* <http://www.youtube.com/watch?v=44FJ8EmjJeA> (Time 3.25 of 6.48)



4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.



*Source :* <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.

**Display:**

• 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

### Save Attached Files

When viewing a received message with files attached, select the applicable save option to save the attached files, including graphics, sounds, contacts (vCard), or events (vCal). For example, to save a contact, select **Options > Save Contact**.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 47 of 92)

**7,365,871 Claim Language**

**Accused System and Method – Kyocera G2GO M2000**

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>

⬇ Data service is available and active on your phone. Check with your service provider for availability.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

## Answer Phone Calls

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)



Rear Camera



Full-featured 1.3 MP camera with dedicated key, digital zoom and photo editing

The Accused System comprises of a 1.3 megapixel rear camera with flash for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/m2000-phone/>



a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing

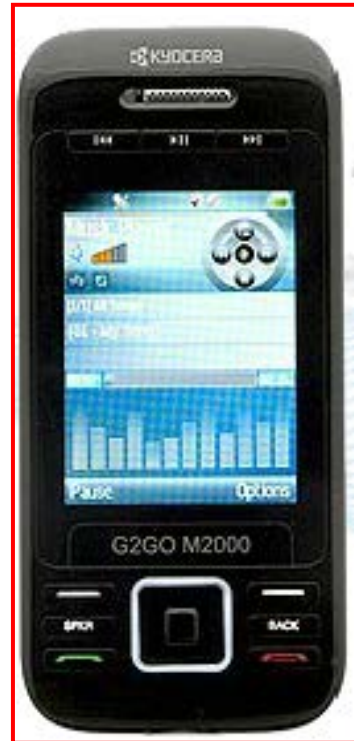


Full-featured 1.3 MP camera with dedicated key, digital zoom and photo editing

The Accused System comprises of a 1.3 megapixel rear camera with flash for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

## Answer Phone Calls

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

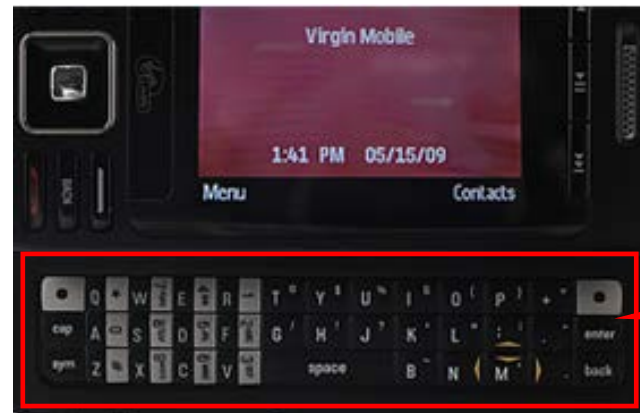
*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

### Enter Numbers with QWERTY Keypad

From the text entry field, select **Options** > **Numbers Only** and press the number key to enter your number.

The **123** icon indicates you are in **Numbers Only** mode. Press the **Symbol** key twice quickly (within two seconds) to change modes. Press the **Symbol** key once to change the mode for the next character only.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 21 of 92)



The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* [http://reviews.cnet.com/cell-phones/kyocera-x-tc-g2go/4505-6454\\_7-33573791.html](http://reviews.cnet.com/cell-phones/kyocera-x-tc-g2go/4505-6454_7-33573791.html)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear  
Camera



Full-featured 1.3 MP camera with dedicated key, digital zoom and photo editing

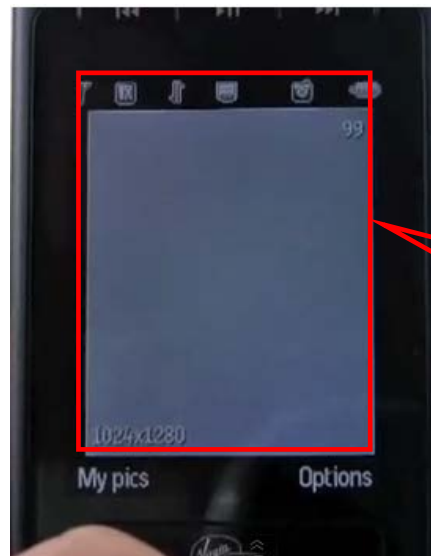
The Accused System comprises of a 1.3 megapixel rear camera with flash for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

## Take a Picture

1. To activate the camera, press and hold the **Camera** key. You can also select **Camera** from the main menu.
2. Focus on the image using the phone's display as a viewfinder.
3. To take a picture, press the **OK** key. The picture is saved to **Camera Pictures**.

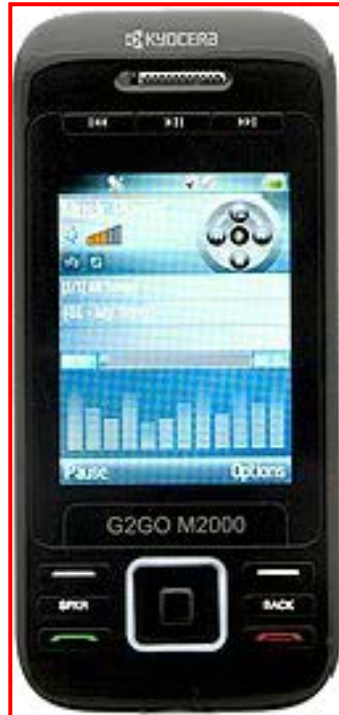
**Source:** [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 79 of 92)



The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** <http://www.youtube.com/watch?v=44FJ8EmjJeA> (Time 3.25 of 6.48)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (100 MHz single core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/m2000-phone/>



Source: <http://www.phonearena.com/phones/compare/Kyocera-G2GO-M2000,Motorola-DROID-2/phones/3457,4681>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



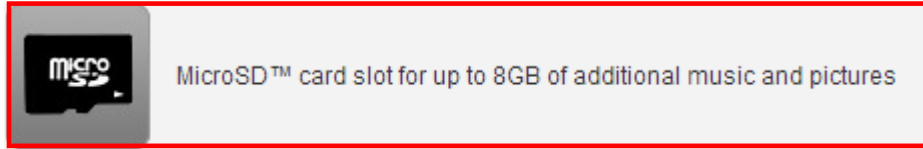
<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image



Source : <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>



Data service is available and active on your phone. Check with your service provider for availability.

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Display:**  
• 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System comprises a 2.4" QVGA (320 X 240) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

• Java support\*

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)

**Transmitting Images via Multimedia Messages:**

**Create a Multimedia Message**

From **New Pic Msg**, enter a recipient's phone number or email address. (Select **Options** to access contacts, groups or recently used addresses. Scroll down to move to the next field when done.)

Enter a subject.

Enter a message.

Attach an image file. (Select **Options** to access more features.)

Attach a sound file. (Select **Options** to access more features.)

When done, select **Send**.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 41 of 92)

an integrated power supply for powering both the cellular telephone and the camera.

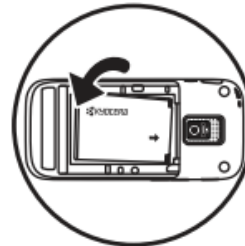
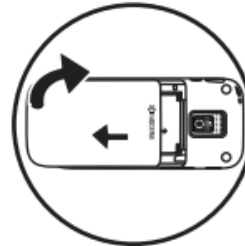
### Battery & Talk Time

- 790 mAh Lithium ion (Lilon) battery
- Talk time: Up to 250 minutes (3.25 hours)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>

### Install the Battery

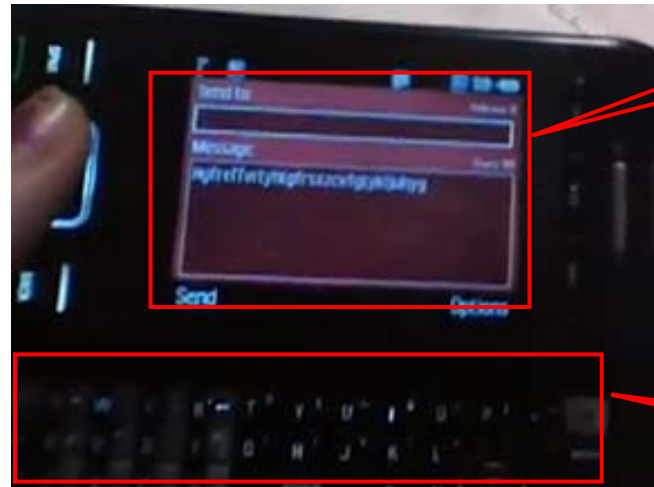
1. With the back of the phone facing you, press on the back cover and slide it to the bottom of the phone.
2. Lift the back cover from the bottom to remove.
3. Place the battery in the phone casing with the metal contacts toward the top of the phone.
4. Align the back cover side tabs with the slots on each side of the phone.



The Accused System includes a power supply (790 mAh Li-Ion battery) for powering the system (telephone and camera).

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 9 of 92)

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image

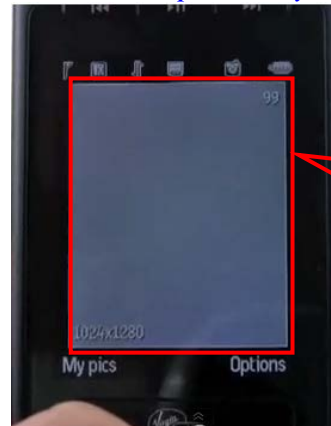


Display Window

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Alphanumeric Keys

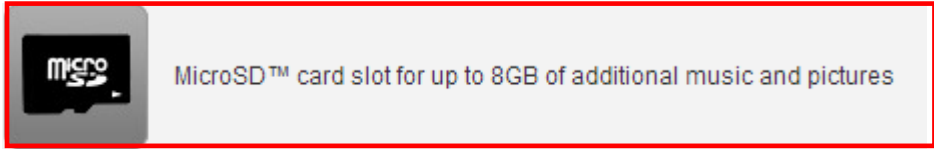
Source: <http://www.youtube.com/watch?v=SRZlcwp32jk> (Time: 8.06 of 10.42)



The Accused system includes an electronic camera for visually framing the subject to be captured.

Source: <http://www.youtube.com/watch?v=44FJ8EmjJeA> (Time 3.25 of 6.48)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing



Source : <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)



7,365,871 Claim Language

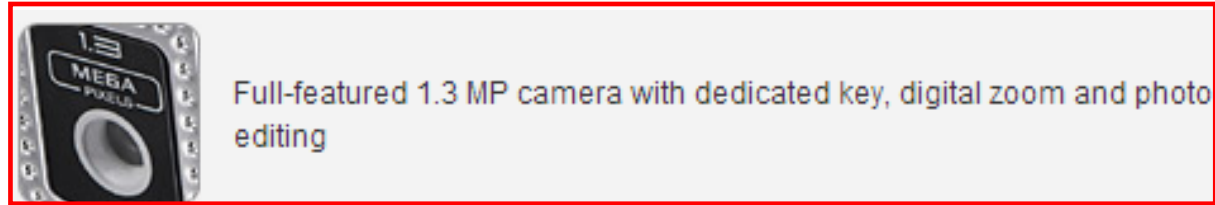
Accused System and Method – Kyocera G2GO M2000

12. A combination of handheld wireless telephone and digital camera comprising:



The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a 1.3 megapixel auto focus rear camera for capturing visual images.



Source: <http://www.kyocera-wireless.com/m2000-phone/>

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>

⚡ Data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>

⏏ Data service is available and active on your phone. Check with your service provider for availability.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

## Answer Phone Calls

When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

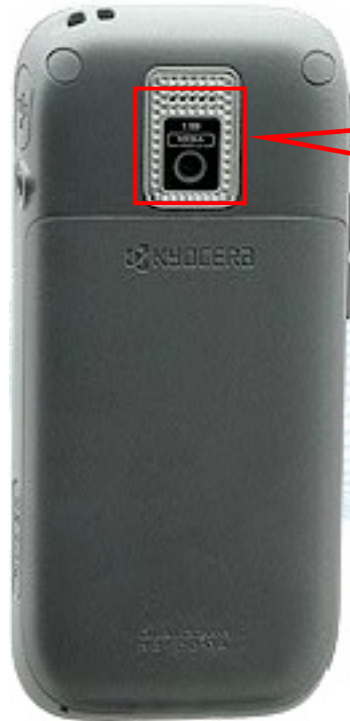
### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (1.3 MP Rear Camera) which are commonly movable with the housing.



Full-featured 1.3 MP camera with dedicated key, digital zoom and photo editing

Source: <http://www.kyocera-wireless.com/m2000-phone/>

a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

**Display:**

• 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

## Take a Picture

1. To activate the camera, press and hold the **Camera** key. You can also select **Camera** from the main menu.
2. Focus on the image using the phone's display as a viewfinder.
3. To take a picture, press the **OK** key. The picture is saved to **Camera Pictures**.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 79 of 92)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* <http://www.youtube.com/watch?v=44FJ8EmjJeA> (Time 3.25 of 6.48)

a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (100 MHz single core Processor) supported by the portable housing capable of generating an image data signal.

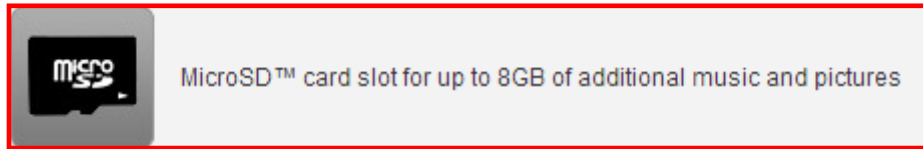
Source: <http://www.kyocera-wireless.com/m2000-phone/>



Source: <http://www.phonearena.com/phones/compare/Kyocera-G2GO-M2000,Motorola-DROID-2/phones/3457,4681>



a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;



*Source :* <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)

**Transmitting Images via Multimedia Messages:**

**Create a Multimedia Message**

From **New Pic Msg**, enter a recipient's phone number or email address. (Select **Options** to access contacts, groups or recently used addresses. Scroll down to move to the next field when done.)

Enter a subject.

Enter a message.

Attach an image file. (Select **Options** to access more features.)

Attach a sound file. (Select **Options** to access more features.)

When done, select **Send**.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 41 of 92)

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>



Data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals (Here: MMS) to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## Make Phone Calls

### Call Using a Number

1. Enter a phone number.
2. Press the **Send** key.

### Call Using a Contact

1. From **View All**, highlight a contact.
2. Press the **Send** key.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

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When a call comes in, the phone rings, vibrates, or lights up. The phone number of the caller also appears if it is not restricted. If the number is stored in your contacts list, the contact's name appears. There are several ways you can answer a phone call.

### Answer Using Earpiece

Press the **Send** key.

### Answer Using Speakerphone

Press the **Speakerphone** key.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 18 of 92)

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

*Source:* <http://www.kyocera-wireless.com/m2000-phone/specs/>



Data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)

a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

### Enter Numbers with QWERTY Keypad

From the text entry field, select **Options > Numbers Only** and press the number key to enter your number.

The **123** icon indicates you are in **Numbers Only** mode. Press the **Symbol** key twice quickly (within two seconds) to change modes. Press the **Symbol** key once to change the mode for the next character only.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page21 of 92)



The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alpha-numeric Input Keys

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

a power supply supported by the housing;

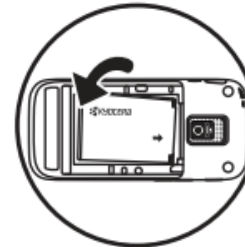
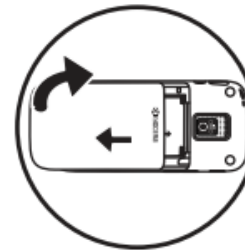
### Battery & Talk Time

- 790 mAh Lithium ion (Lilon) battery
- Talk time: Up to 250 minutes (3.25 hours)

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>

### Install the Battery

1. With the back of the phone facing you, press on the back cover and slide it to the bottom of the phone.
2. Lift the back cover from the bottom to remove.
3. Place the battery in the phone casing with the metal contacts toward the top of the phone.
4. Align the back cover side tabs with the slots on each side of the phone.



The Accused System includes a power supply (790mAh Li-Ion battery) for powering the system (telephone and camera).

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 9 of 92)

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

CDMA2000® 1x dual-band digital only (800 & 1900 MHz)

Source: <http://www.kyocera-wireless.com/m2000-phone/specs/>



Data service is available and active on your phone. Check with your service provider for availability.

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 15 of 92)



**Transmitting and Receiving Images via Multimedia Messages:**

**Create a Multimedia Message**

From **New Pic Msg**, enter a recipient's phone number or email address. (Select **Options** to access contacts, groups or recently used addresses. Scroll down to move to the next field when done.)

Enter a subject.

Enter a message.

Attach an image file. (Select **Options** to access more features.)

Attach a sound file. (Select **Options** to access more features.)

When done, select **Send**.

The Accused System provides a user interface where a user can transmit images via multimedia messages.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 41 of 92)

### Save Attached Files

When viewing a received message with files attached, select the applicable save option to save the attached files, including graphics, sounds, contacts (vCard), or events (vCal). For example, to save a contact, select **Options > Save Contact**.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 47 of 92)

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

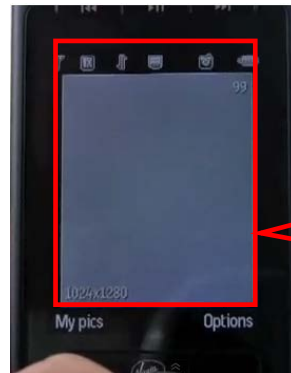
## Take a Picture

1. To activate the camera, press and hold the **Camera** key. You can also select **Camera from the main menu.**
2. Focus on the image using the phone's display as a viewfinder.
3. To take a picture, press the **OK** key. The picture is saved to **Camera Pictures.**

## Set White Balance

1. From camera mode, select **Options > Settings > White Balance.**
2. Scroll left or right to select the white balance setting. Look at the viewfinder to see how each setting looks.

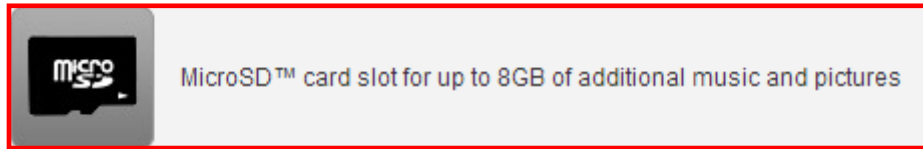
**Source:** [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 79 and 80 of 92)



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

**Source:** <http://www.youtube.com/watch?v=44FJ8EmjJeA> (Time 3.25 of 6.48)

13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.



Source : <http://www.kyocera-wireless.com/m2000-phone/>

### Remove the Memory Card

To remove the memory card:

1. Remove the rubber memory card cover.
2. Use your finger nail to press and release the memory card in the slot until it bounces outward.
3. Carefully take the memory card out of the slot.



The Accused System provides a removable memory card slot (up to 32GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 11 of 92)

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

**Display:**

• 2.4" 240 x 320, QVGA TFT

Source: [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_product\\_brochure.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_product_brochure.pdf) (Page 1 of 1)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: <http://www.kyocera-wireless.com/m2000-phone/>

### Save Attached Files

When viewing a received message with files attached, select the applicable save option to save the attached files, including graphics, sounds, contacts (vCard), or events (vCal). For example, to save a contact, select **Options > Save Contact**.

The Accused System provides a display window where a user can view the received multimedia messages and can save the attachments to the phone's memory.

*Source:* [http://www.kyocera-wireless.com/m2000-phone/pdf/m2000\\_user\\_guide\\_EN.pdf](http://www.kyocera-wireless.com/m2000-phone/pdf/m2000_user_guide_EN.pdf) (Page 47 of 92)

15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.

First portion of the housing consisting of display



Second portion of the housing consisting of Slide-Out QWERTY keypad, camera etc

*Source:* <http://www.kyocera-wireless.com/m2000-phone/>

## **Overview of KYOCERA HYDRO (C5171) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA HYDRO (C5171) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.





**Kyocera Hydro (C5171)**

Kyocera Ex. 1002  
p. 593

KYO'871-IC 00592

**7,365,871 Claim Language**

**Accused System and Method – Kyocera Hydro (C5171)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:





The Accused System includes a portable housing with built in wireless connectivity, including 3G.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>



*Source:* <http://www.kyocera-wireless.com/c5171-phone/specs/>


	3G (data service)
	1x (data service)

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 18 of 158)

## Make Phone Calls

### Call Using the Phone Dialpad

1. Press Home  and touch  to display the phone screen.

- If the dialpad is not displayed when the Phone application opens, touch the Phone tab .

2. Touch the number keys on the dialpad to enter the phone number.

3. Touch the Talk key  to call the number.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 29 of 158)

## Receive Phone Calls

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call

► On the Incoming call screen, flick the Answer icon



*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 33 of 158)



Rear Camera

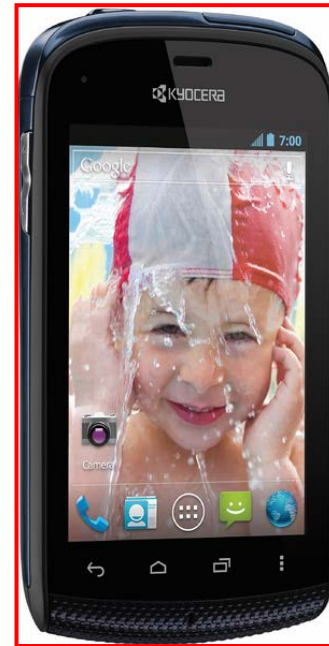
*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

**3.2 MP camera with flash and video camcorder**

The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

**3.2 MP camera with flash and video camcorder**

The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

- 3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>

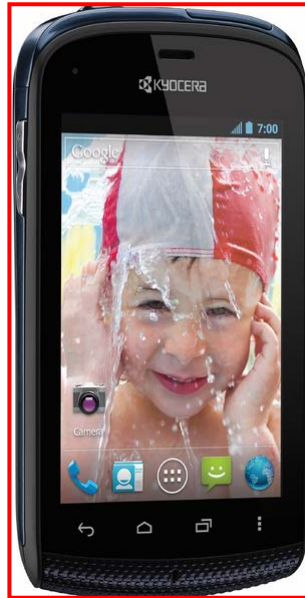


The Accused System comprises a 3.5" HVGA display (480 x 320) and electronic camera in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/c5171-phone/>



a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

### Chipset

- MSM8655 @ 1GHz (QUALCOMM Snapdragon processor)

*Source:* <http://www.kyocera-wireless.com/c5171-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

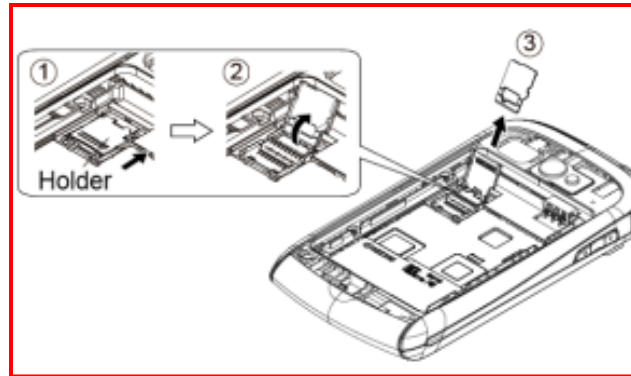
**Memory:**  
2GB/512MB  
4GB Muve Music™ SanDisk memory  
card included

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

Your device is equipped with a microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

### Remove the microSD Card



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.



*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)

(Page 126,127 of 158)

## Connectivity

- CDMA 1x EVDO Rev. A 1x Advanced

*Source:* <http://www.kyocera-wireless.com/c5171-phone/specs/>

 3G	3G (data service)
 1x	1x (data service)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 18 of 158)

a user interface for enabling a user to select the image data signal for viewing and transmission;

### Display

- 3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

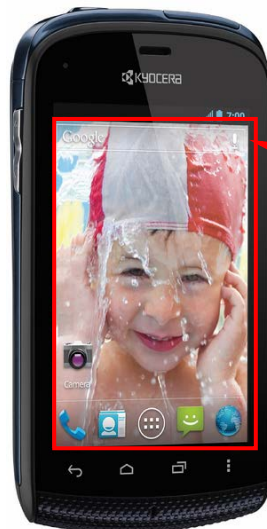
Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>

### Operating System

Android™ 4.0 (Ice Cream Sandwich)

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.






3.5" HVGA display (480 x 320) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: <http://www.kyocera-wireless.com/c5171-phone/>

## 1. Transmitting Images via Multimedia Messages:

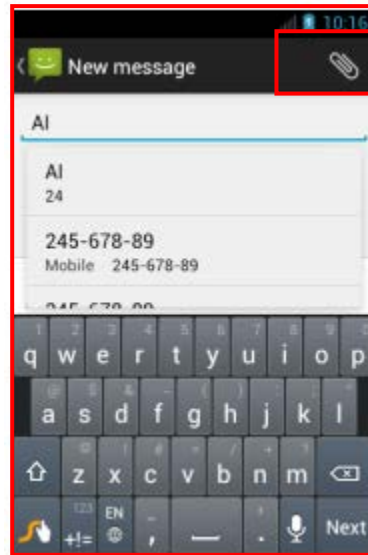
### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press Home  and touch  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.

User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro Cricket User Guide en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 60 of 158)






The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.


*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 60 of 158)

## 2. Transmitting Images via Email Messages:


### Send a Gmail Message


1. Press Home  and touch  > Gmail.
2. Touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your People list are displayed. Touch a match to enter that address directly.



**Tip:** If you want to send a CC or a BCC of the email to other recipients, press **Menu**  and touch **Add Cc/Bcc**.

4. Enter the subject, and then compose your message.

**Note:** If you want to attach a picture, press **Menu**  and touch **Attach file**. Locate and then touch the picture you want to attach.

5. After composing your message, touch .

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.





**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 53 and 54 of 158)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## Make Phone Calls

### Call Using the Phone Dialpad

The Accused System provides a telephonic system for sending and receiving audio signals.

1. Press Home  and touch  to display the phone screen.
  - If the dialpad is not displayed when the Phone application opens, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.


*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 29 of 158)

## Receive Phone Calls

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call



- ▶ On the Incoming call screen, flick the Answer icon .

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 33 of 158)

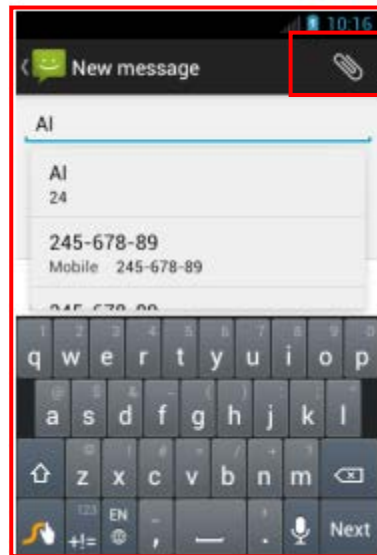
## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press Home  and touch  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 60 of 158)






User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.


The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 60 of 158)

## 2. Transmitting Images via Email Messages:


### Send a Gmail Message

1. Press Home  and touch  > Gmail.
2. Touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your People list are displayed. Touch a match to enter that address directly.

**Tip:** If you want to send a CC or a BCC of the email to other recipients, press Menu  and touch Add Cc/Bcc.

4. Enter the subject, and then compose your message.

**Note:** If you want to attach a picture, press Menu  and touch Attach file. Locate and then touch the picture you want to attach.

5. After composing your message, touch .

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

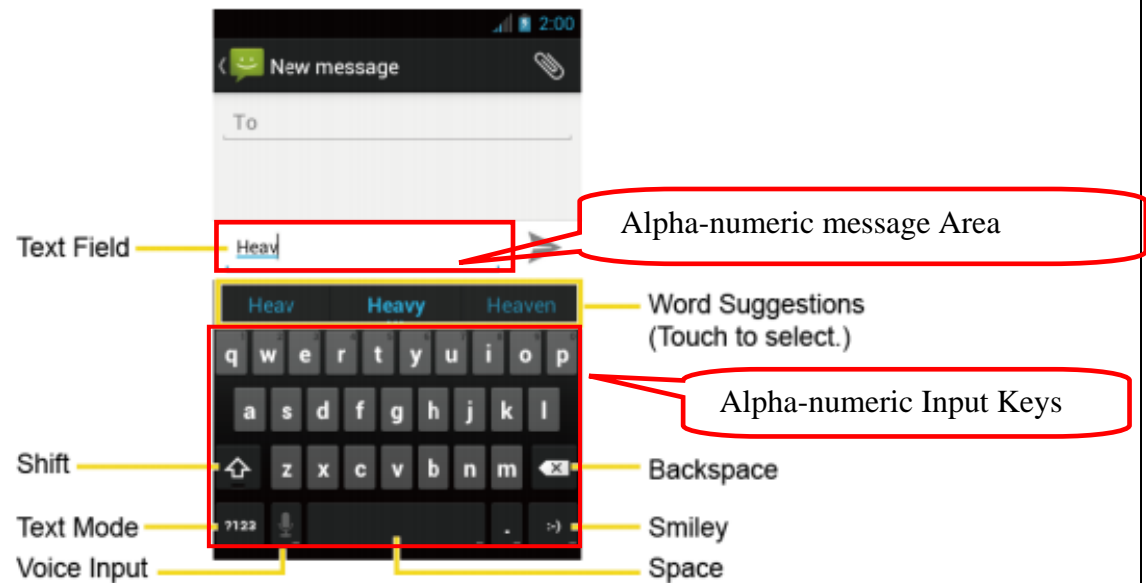
**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 53 and 54 of 158)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Touchscreen Keyboard

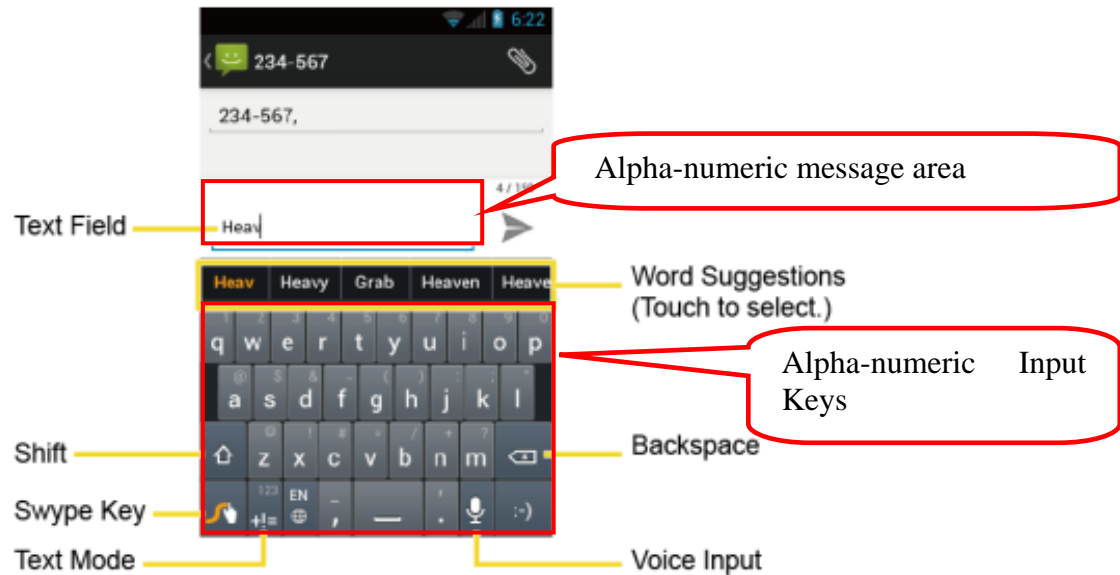
Two types of keyboards are available on your device: **Android keyboard** and **Swype**.

### Android Keyboard Overview



**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 20 of 158)

### Swype Keyboard Overview



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.



Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)(Page 24 of 158)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- CDMA 1x EVDO Rev. A 1x Advanced

Source: <http://www.kyocera-wireless.com/torque-phone/specs/>

	3G (data service)
	1x (data service)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 18 of 158)

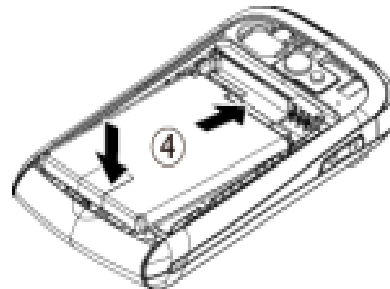
a power supply for powering the system.

## Battery & Talk Time

- 1500 mAh Lithium ion (Li-Ion)
- Talk Time: up to 8.5 hours\*

Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>

Insert the battery, contacts end first, and gently press into place (4).



The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 10 of 158)



2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

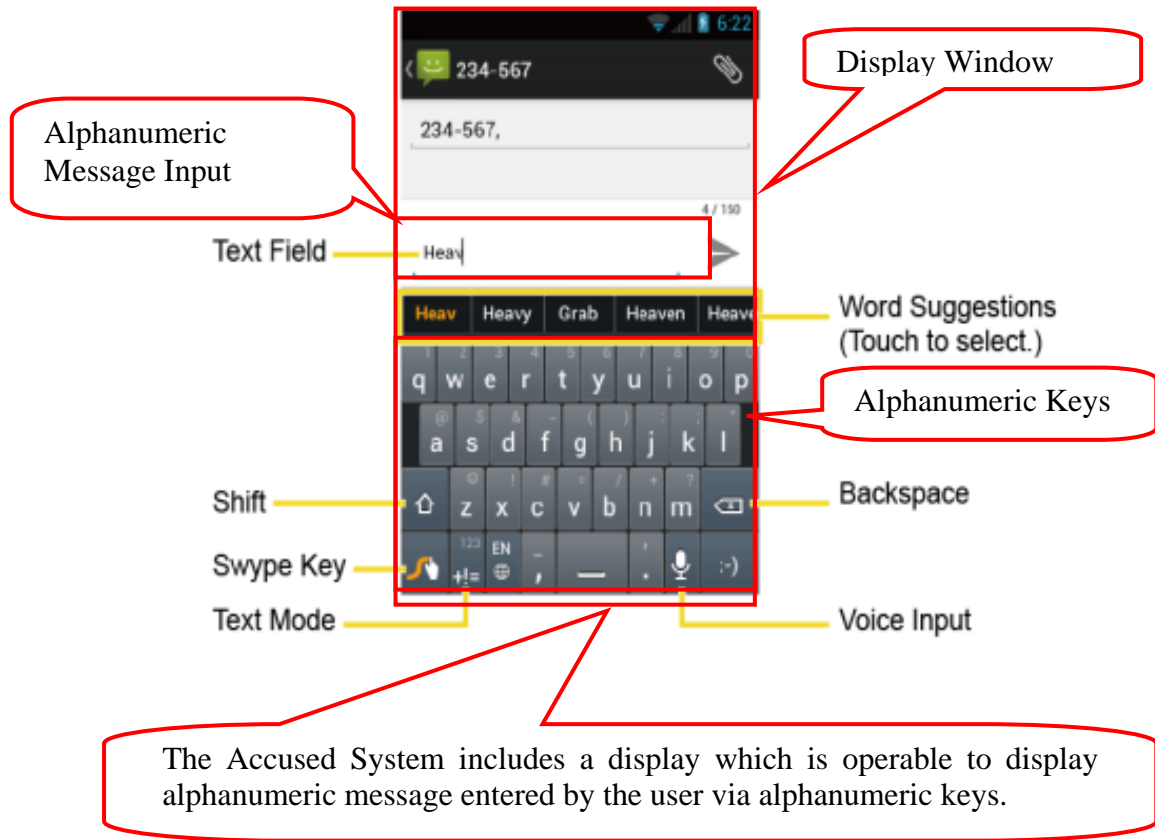
### Camera Viewfinder Screen



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)(Page 99 of 158)*

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 24 of 158)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

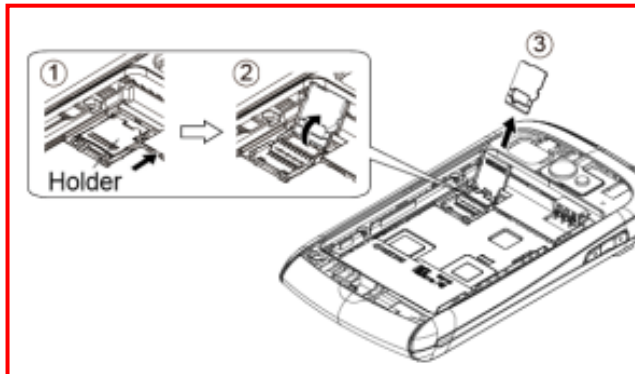
**Memory:**  
2GB/512MB  
4GB Muve Music™ SanDisk memory card included

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

### **microSD Card**

Your device is equipped with a microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

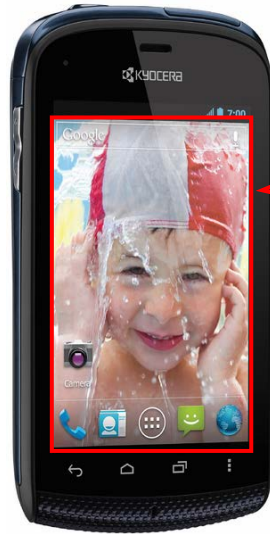
#### **Remove the microSD Card**



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 126,127 of 158)



5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

**Source:** <http://www.kyocera-wireless.com/c5171-phone/>

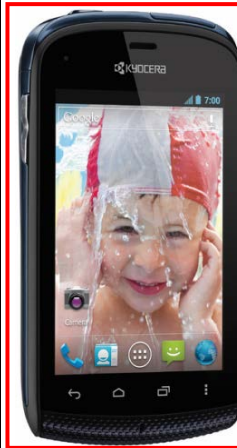
To view a multimedia message (MMS):

1. Press Home  and touch  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch **Save attachment** on the options menu.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 63 of 158)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity, including 3G.

Source: <http://www.kyocera-wireless.com/c5171phone/>

### Connectivity

- CDMA 1x EVDO Rev. A 1x Advanced

Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>





	3G (data service)
	1x (data service)

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 18 of 158)

## **Make Phone Calls**

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

### **Call Using the Phone Dialpad**

1. Press Home  and touch  to display the phone screen.
  - If the dialpad is not displayed when the Phone application opens, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)

(Page 29 of 158)

### **Receive Phone Calls**

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### **Answer an Incoming Call**

- ▶ On the Incoming call screen, flick the Answer icon .

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)

(Page 33 of 158)



*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

**3.2 MP camera with flash and video camcorder**

The Accused System comprises of a 3.2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

**3.2 MP camera with flash and video camcorder**

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>



a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals







Cellular telephone

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

## **Make Phone Calls**

### **Call Using the Phone Dialpad**

1. Press Home  and touch  to display the phone screen.
  - If the dialpad is not displayed when the Phone application opens, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.


*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 29 of 158)

## Receive Phone Calls

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call

► On the Incoming call screen, flick the Answer icon .

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

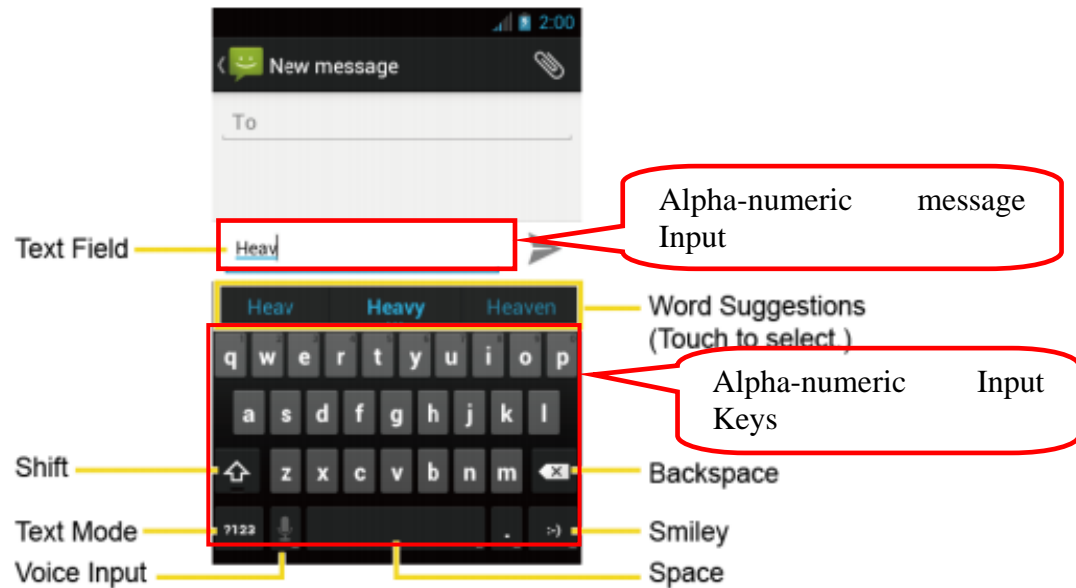
**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)

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## Touchscreen Keyboard

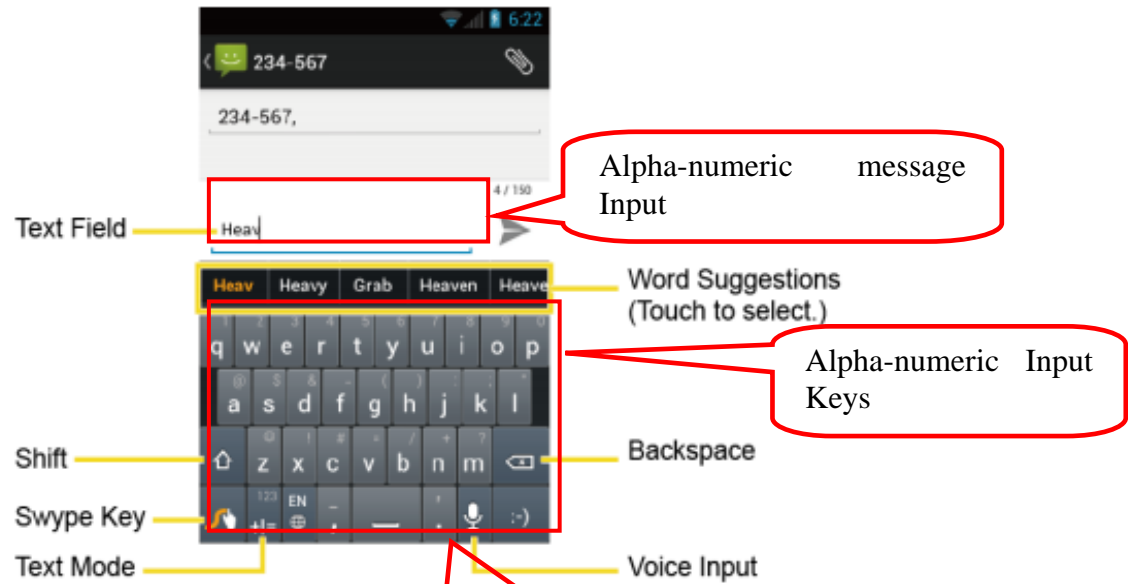
Two types of keyboards are available on your device: **Android keyboard** and **Swype**.

### Android Keyboard Overview



**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 20 of 158)

## Swype Keyboard Overview



The Accused System includes an onscreen keypad/keyboard with alphanumeric input keys which are operated by the user to transmit alphanumeric signals.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 24 of 158)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

**3.2 MP camera with flash and video camcorder**

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

### Camera Viewfinder Screen



Display window

The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 99 of 158)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/c5171-phone/>

### Chipset

- MSM8655 @ 1GHz (QUALCOMM Snapdragon processor)

*Source:* <http://www.kyocera-wireless.com/c5171-phone/specs/>

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>



a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

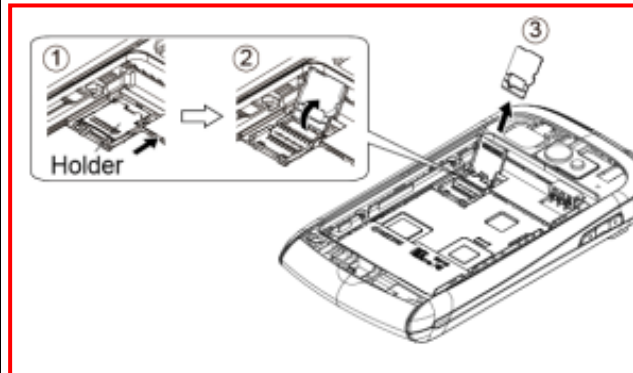
**Memory:**  
2GB/512MB  
4GB Muve Music™ SanDisk memory card included

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

### microSD Card

Your device is equipped with a microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

### Remove the microSD Card





The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 126,127 of 158)

## Connectivity

- CDMA 1x EVDO Rev. A 1x Advanced

**Source:** <http://www.kyocera-wireless.com/c5171-phone/specs/>

	3G (data service)
	1x (data service)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro Cricket User Guide en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 18 of 158)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

### Display

- 3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

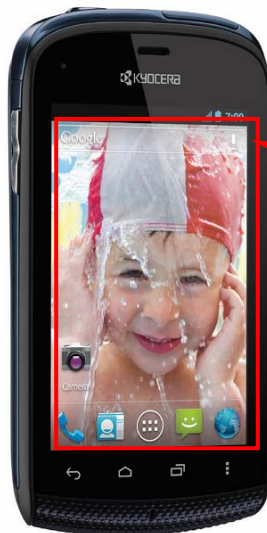
Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>

### Operating System

Android™ 4.0 (Ice Cream Sandwich)

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.



3.5" HVGA display (480 x 320) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: <http://www.kyocera-wireless.com/c5171-phone/>

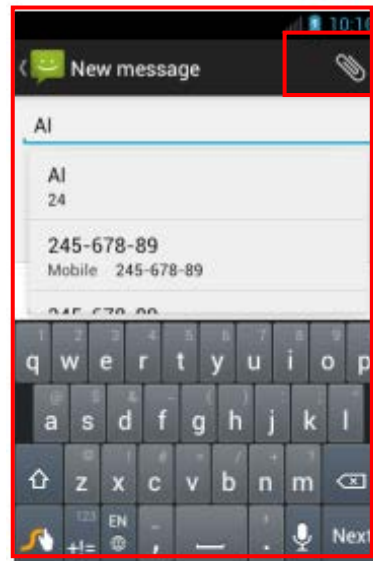
## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press Home  and touch  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 60 of 158)






User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.


The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 60 of 158)


## 2. Transmitting Images via Email Messages:

### Send a Gmail Message

1. Press Home  and touch  > Gmail.
2. Touch .
3. Enter the message recipient's email address in the **To** field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your People list are displayed. Touch a match to enter that address directly.

**Tip:** If you want to send a CC or a BCC of the email to other recipients, press **Menu**  and touch **Add Cc/Bcc**.

4. Enter the subject, and then compose your message.

**Note:** If you want to attach a picture, press **Menu**  and touch **Attach file**. Locate and then touch the picture you want to attach.

5. After composing your message, touch .

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 53 and 54 of 158)

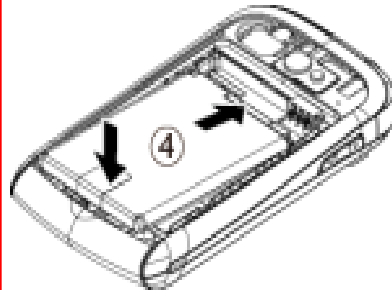
an integrated power supply for powering both the cellular telephone and the camera.

## Battery & Talk Time

- 1500 mAh Lithium ion (Li-Ion)
- Talk Time: up to 8.5 hours\*

Source: <http://www.kyocera-wireless.com/c5171-phone/specs/>

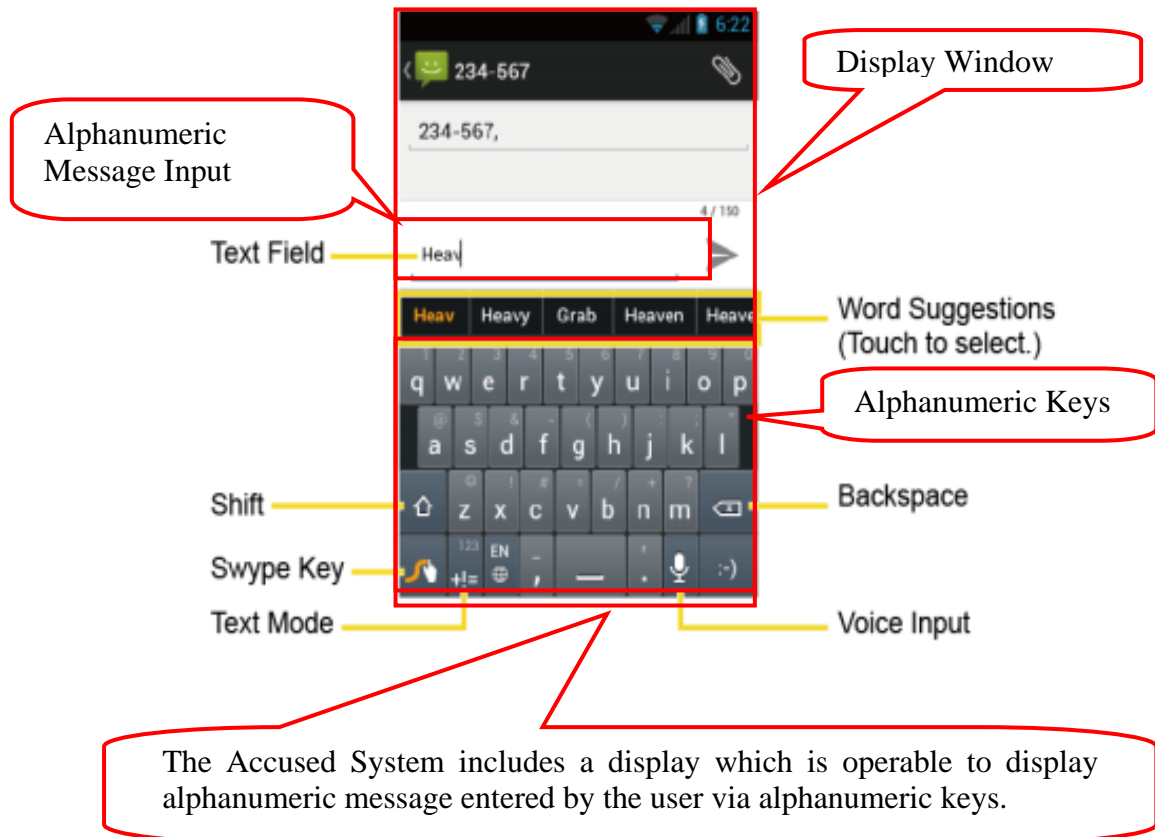
Insert the battery, contacts end first, and gently press into place (4).



The Accused System includes a power supply (1500 mAh Li-Ion battery) for powering the system (Phone and Camera).

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 10 of 158)

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
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### Camera Viewfinder Screen



The Accused system comprises of display window for framing the visual Image.

**Source:** [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf)  
(Page 99 of 158)



8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

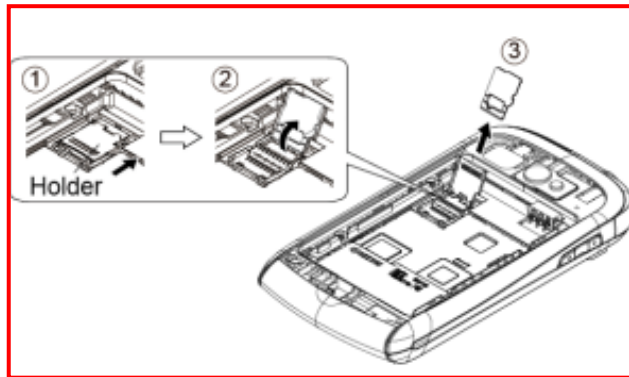
**Memory:**  
2GB/512MB  
4GB Muve Music™ SanDisk memory card included

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_Spec_Sheet.pdf) (Page 1 of 1)

**microSD Card**

Your device is equipped with a microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

**Remove the microSD Card**



The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro\\_Cricket\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/c5171-phone/pdf/Hydro_Cricket_User_Guide_en.pdf) (Page 126,127 of 158)

7,365,871 Claim Language	Accused System and Method – KYOCERA HYDRO (C5171)
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:  
  
a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom

Camera	
Resolution	3.2 megapixel
Video	Yes
Zoom	Yes



<http://www.mycricket.com/cell-phones/details/kyocera-hydro-c5171>

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>

## **Overview of KYOCERA HYDRO (C5170) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA HYDRO (C5170) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “’871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**KYOCERA HYDRO (C5170)**

Kyocera Ex. 1002

p. 647

KYO'871-IC 00646

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA HYDRO (C5170)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

**Connectivity**

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

*Source:* <http://www.kyocera-wireless.com/hydro-phone/specs/>



## Make Phone Calls

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

Call From Recent Calls

Call From People

Call a Number in a Text Message

Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

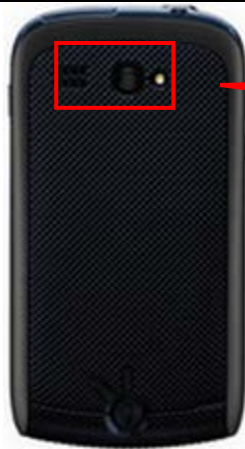
When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call

**Source:** [http://www.kyocerawireless.com/hydrophone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocerawireless.com/hydrophone/pdf/Hydro_User_Guide_Boostmobile_en.pdf)

(Page 30 and 34 of 178)



Rear Camera

Source: [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Back.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Back.jpg)

***3.5" IPS touchscreen display***

***3.2 MP camera with flash and video camcorder***

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Back.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Back.jpg)

3.5" IPS touchscreen display  
3.2 MP camera with LED flash and video camcorder

The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf)  
(Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

Source: <http://www.kyocera-wireless.com/hydro-phone/specs/>



The Accused System comprises a 3.5" Capacitive touch screen HVGA display (480 x 320) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source: [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

**Chipset:**  
MSM8655 @ 1GHz  
(QUALCOMM Snapdragon processor)

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf)  
(Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
2GB/512MB  
2GB microSD™ card included  
(supports up to 32GB)

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

Your device is equipped with a 2 GB microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

**Important:** Your device comes with the microSD card preinstalled.

Remove the microSD Card

Install a microSD Card

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 2GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 154 and 155 of 178)



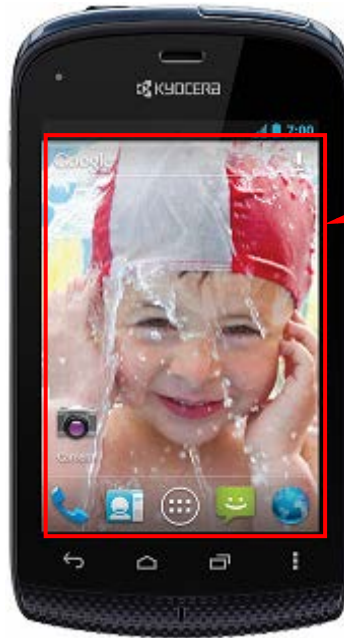
### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/hydro-phone/specs/>

a user interface for enabling a user to select the image data signal for viewing and transmission;



3.5" HVGA IPSLCD display (480 x 320 pixels) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

**Display:**  
3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)  
**Operating System**  
Android™ 4.0 (Ice Cream Sandwich)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

## 1. Transmitting Images via Multimedia Messages:


### *Send a Multimedia Message (MMS)*

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Press **Home** , and touch  > **Messaging**.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.

5. Touch  and select from the following file attachments.

- **Pictures:** Open Gallery to attach a photo from your storage card.
- **Capture picture:** Run the camera application to take a photo and attach it.
- **Videos:** Open Gallery to attach a video from your storage card.




The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.


*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 84 and 85 of 178)

## 2. Transmitting Images via Email Messages:

### Compose and Send Email

Compose and send email using any account you have set up on your device. Increase your productivity by attaching files such as pictures or videos to your email messages.

1. Press **Home** , and touch  > **Email**.
2. On the email account Inbox, touch .

To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 79 and 80 of 178)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## ***Make Phone Calls***

There are several convenient ways to place calls from your device.

**Call Using the Phone Dialpad**

**Call From Recent Calls**

**Call From People**

**Call a Number in a Text Message**

**Call Emergency Numbers**

**Call Numbers with Pauses**

**Call Using Plus (+) Code Dialing**

**Call Using the Internet Calling**

The Accused System provides a telephonic system for sending and receiving audio signals.

## ***Receive Phone Calls***

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.





**Answer an Incoming Call**


**Source:** [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 30 and 34 of 178)

## 1. Transmitting Images via Multimedia Messages:

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2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
5. Touch  and select from the following file attachments.
  - **Pictures:** Open Gallery to attach a photo from your storage card.
  - **Capture picture:** Run the camera application to take a photo and attach it.
  - **Videos:** Open Gallery to attach a video from your storage card.




The Accused System provides a user interface where user can tap on  icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 84 and 85 of 178)

## 2. Transmitting Images via Email Messages:

### *Compose and Send Email*

Compose and send email using any account you have set up on your device. Increase your productivity by attaching files such as pictures or videos to your email messages.

1. Press **Home** , and touch  > **Email**.
2. On the email account Inbox, touch .

To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

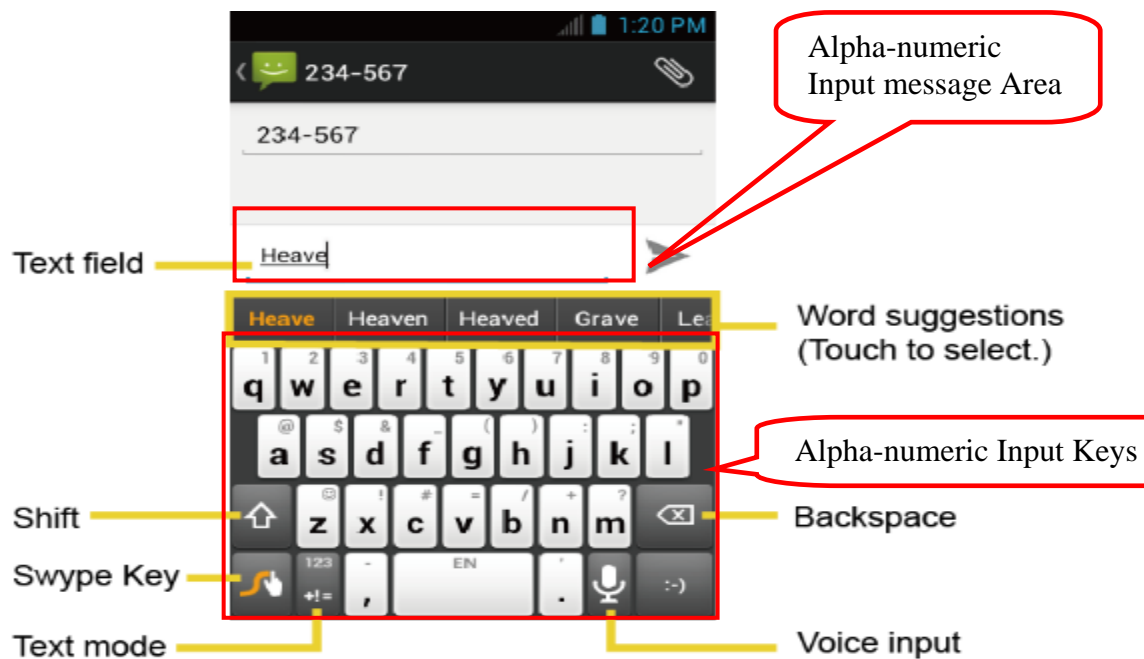
*Source:* [http://www.kyocera-wireless.com/event-phone/pdf/Event\\_Virgin\\_Mobile\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/event-phone/pdf/Event_Virgin_Mobile_User_Guide_en.pdf) (Page 93 of 181)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Touchscreen Keyboard

The touchscreen keyboard lets you enter text directly onscreen.

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the touchscreen keyboard, simply touch a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 17 and 18 of 178)



a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

**Source:** <http://www.kyocera-wireless.com/hydro-phone/specs/>

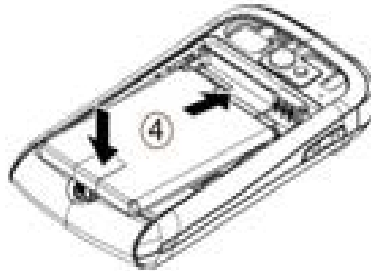
a power supply for powering the system.

## Battery & Talk Time

- 1500 mAh Lithium Ion (Lilon) battery

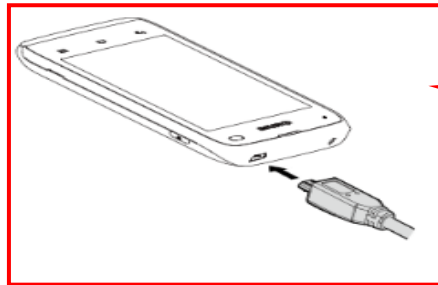
Source: <http://www.kyocera-wireless.com/hydro-phone/specs/>

- Insert the battery, contacts end first, and gently press into place (4).



### Charge your battery.

- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.





The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 2 and 3 of 178)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. Touch  to take the photo.

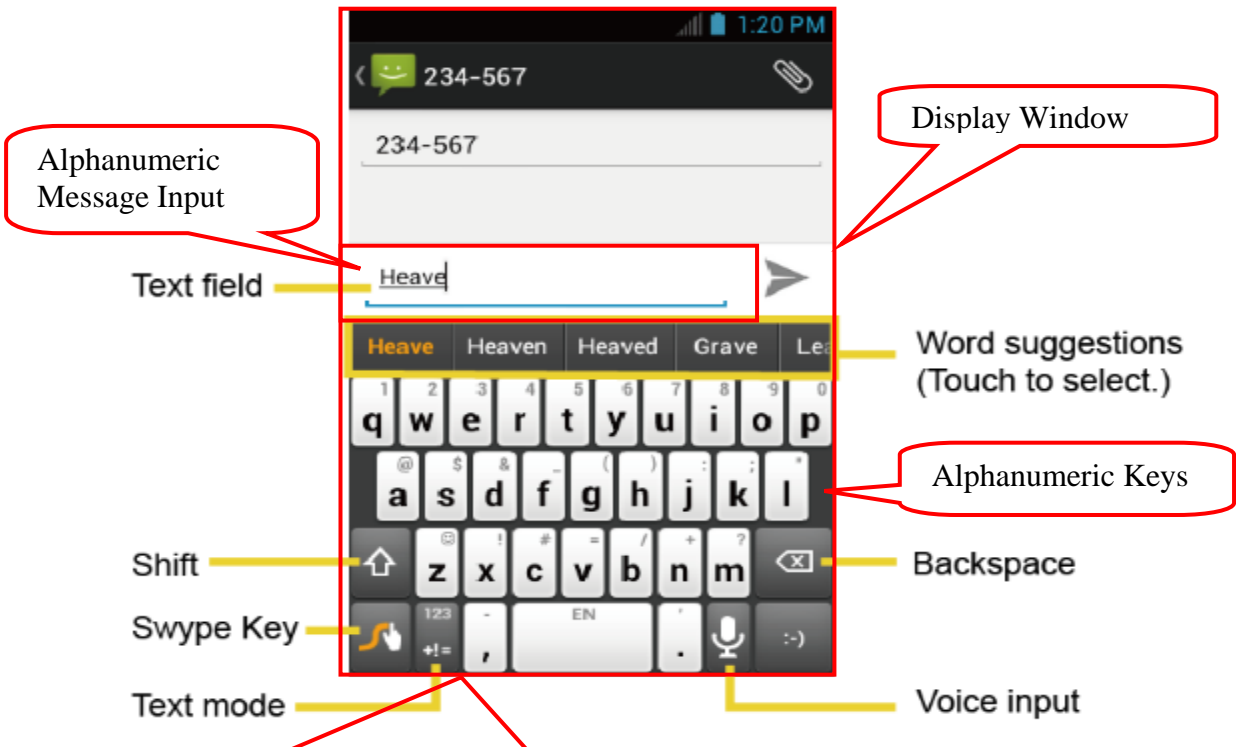


Display window

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 123 and 124 of 178)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



The Accused System includes a display which is operable to display alphanumeric message entered by the user via

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 18 of 178)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

**Memory:**  
2GB/512MB  
2GB microSD™ card included  
(supports up to 32GB)

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

## microSD Card

Your device is equipped with a 2 GB microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

**Important:** Your device comes with the microSD card preinstalled.

Remove the microSD Card

Install a microSD Card

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 2GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 154 and 155 of 178)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

To view a multimedia message (MMS):

1. Press **Home** , and touch  > **Messaging**.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch **Save attachment** on the options menu.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 86 and 87 of 178)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



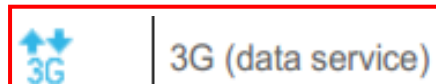
The Accused System includes a portable housing with built in wireless connectivity.

*Source:* <http://www.kyocera-wireless.com/hydro-phone/>

#### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

*Source:* <http://www.kyocera-wireless.com/hydro-phone/specs/>



*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 27 of 189)

## ***Make Phone Calls***

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

Call From Recent Calls

Call From People

Call a Number in a Text Message

Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

## ***Receive Phone Calls***

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call

**Source:** <http://www.kyocera-wireless.com/hydro->

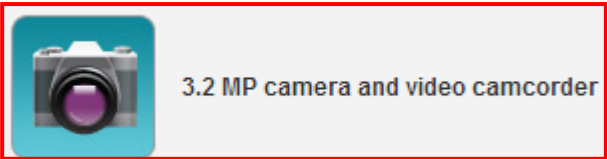
[phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 30 and 34 of 178)





Rear Camera

*Source:* <http://www.kyocera-wireless.com/hydro-phone/>



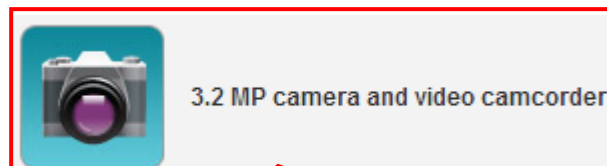
The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-phone/>

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



Source: <http://www.kyocera-wireless.com/hydro-phone/>



The Accused System comprises of a 3.2 megapixel rear camera with LED flash for capturing visual images and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/hydro-phone/>

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/hydro-phone/>

## Make Phone Calls

There are several convenient ways to place calls from your device.

Call Using the Phone Dialpad

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Call Emergency Numbers

Call Numbers with Pauses

Call Using Plus (+) Code Dialing

Call Using the Internet Calling

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from an entry stored in People, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your device is turned off, all calls automatically go to voicemail.

Answer an Incoming Call

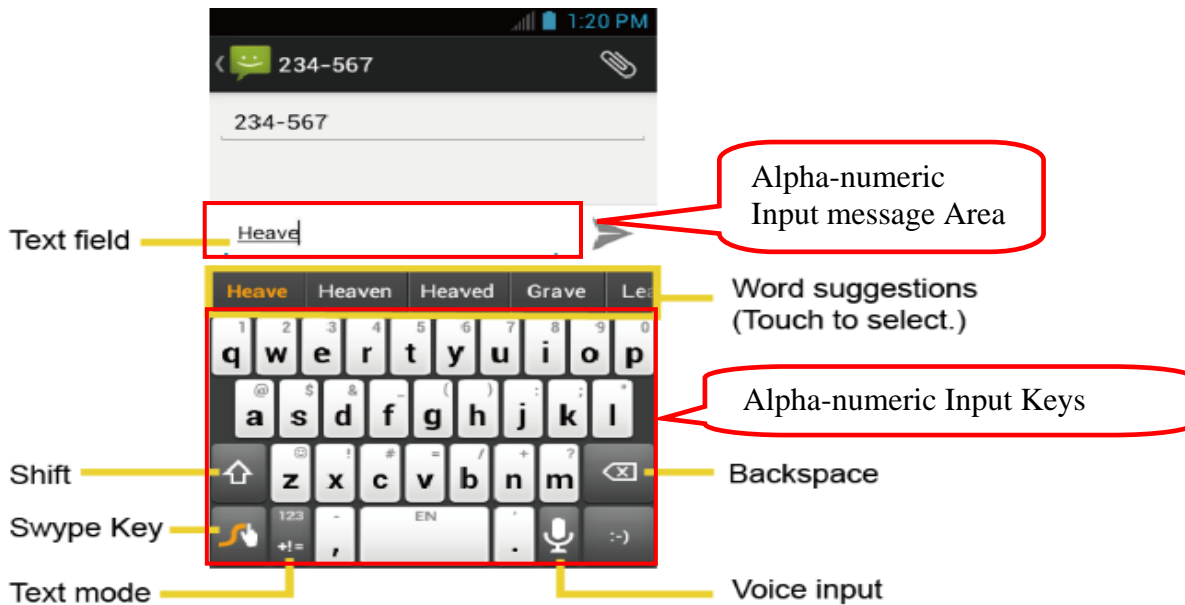
Source: <http://www.kyocera-wireless.com/hydro->

[phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](#) (Page 41 and 45 of 189)

## Touchscreen Keyboard

The touchscreen keyboard lets you enter text directly onscreen.

Your device provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text. To manually display the touchscreen keyboard, simply touch a text field where you want to enter text. There are two ways of entering text on your device: **Swype** and **Android keyboard**.



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 28 and 29 of 189)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



*Source:* [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Back.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Back.jpg)



3.5" IPS touchscreen display  
3.2 MP camera with LED flash and video camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.


*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf)  
(Page 1 of 1)

## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. **Touch  to take the photo.**

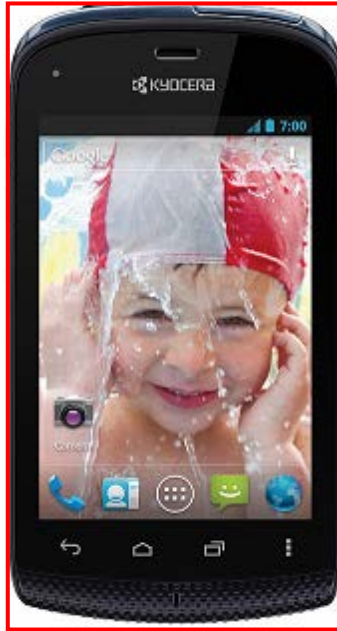


Display window

The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 134 and 135 of 189)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (1 GHZ MSM8655 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* <http://www.kyocera-wireless.com/hydro-phone/>

**Chipset:**  
MSM8655 @ 1GHz  
(QUALCOMM Snapdragon processor)

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)



In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

**Memory:**  
2GB/512MB  
2GB microSD™ card included  
(supports up to 32GB)

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

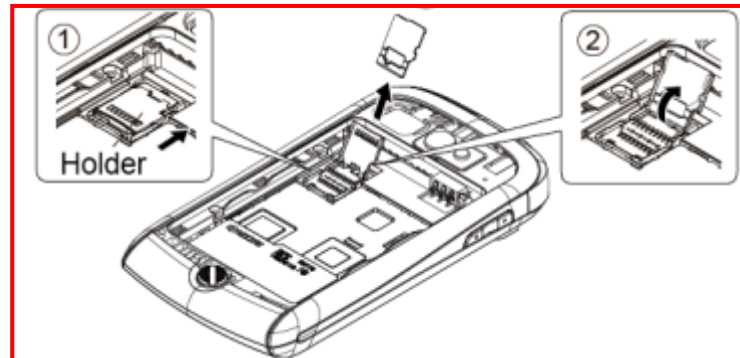
## microSD Card

Your device is equipped with a 2 GB microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

**Important:** Your device comes with the microSD card preinstalled.

Remove the microSD Card

Install a microSD Card



Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 165 of 189)

The Accused System provides a removable memory card slot (up to 32GB) and 512MB RAM/ 2GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

### Connectivity

- CDMA 1x EVDO rev. A 1x Advanced
- Wi-Fi® (802.11 b/g/n)

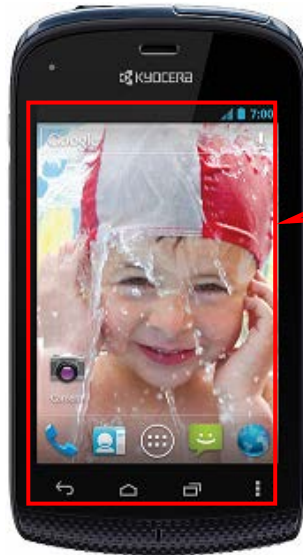
*Source:* <http://www.kyocera-wireless.com/hydro-phone/specs/>



The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 27 of 189)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



3.5" HVGA IPS LCD display (480 x 320 pixels) acting as a user interface (Operating System: Android 4.0 (Ice Cream Sandwich)).

Source: [http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro\\_Front.jpg](http://www.kyocera-wireless.com/hydro-phone/gallery/large/Hydro_Front.jpg)

**Display:**

3.5" capacitive touchscreen, HVGA IPS LCD (480 x 320 pixels)

**Operating System**

Android™ 4.0 (Ice Cream Sandwich)


The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

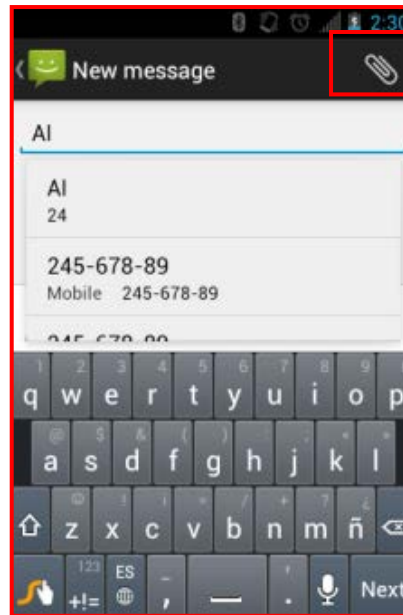
## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

Touch  and select from the following file attachments.

- **Pictures:** Open Gallery to attach a photo from your storage card.



User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.




The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.


*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 95 of 189)

## 2. **Transmitting Images via Email Messages:**

### *Compose and Send Email*

Compose and send email using any account you have set up on your device. Increase your productivity by attaching files such as pictures or videos to your email messages.

1. Press **Home** , and touch  > **Email**.
2. On the email account Inbox, touch .

To add an attachment, press **Menu** , and touch **Attach file**, and choose from the following options:

- **Pictures:** Select photos from Gallery.
- **Videos:** Select videos from Gallery.

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach file” option.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 90 and 91 of 189)

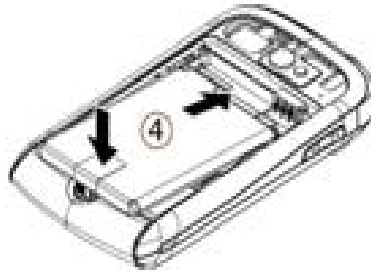
an integrated power supply for powering both the cellular telephone and the camera.

## Battery & Talk Time

- 1500 mAh Lithium Ion (Lilon) battery

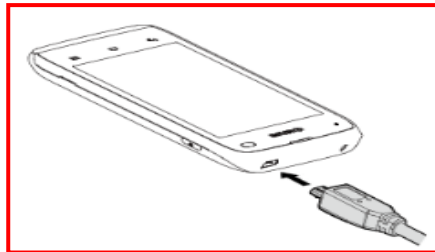
Source: <http://www.kyocera-wireless.com/hydro-phone/specs/>

- Insert the battery, contacts end first, and gently press into place (4).



Charge your battery.

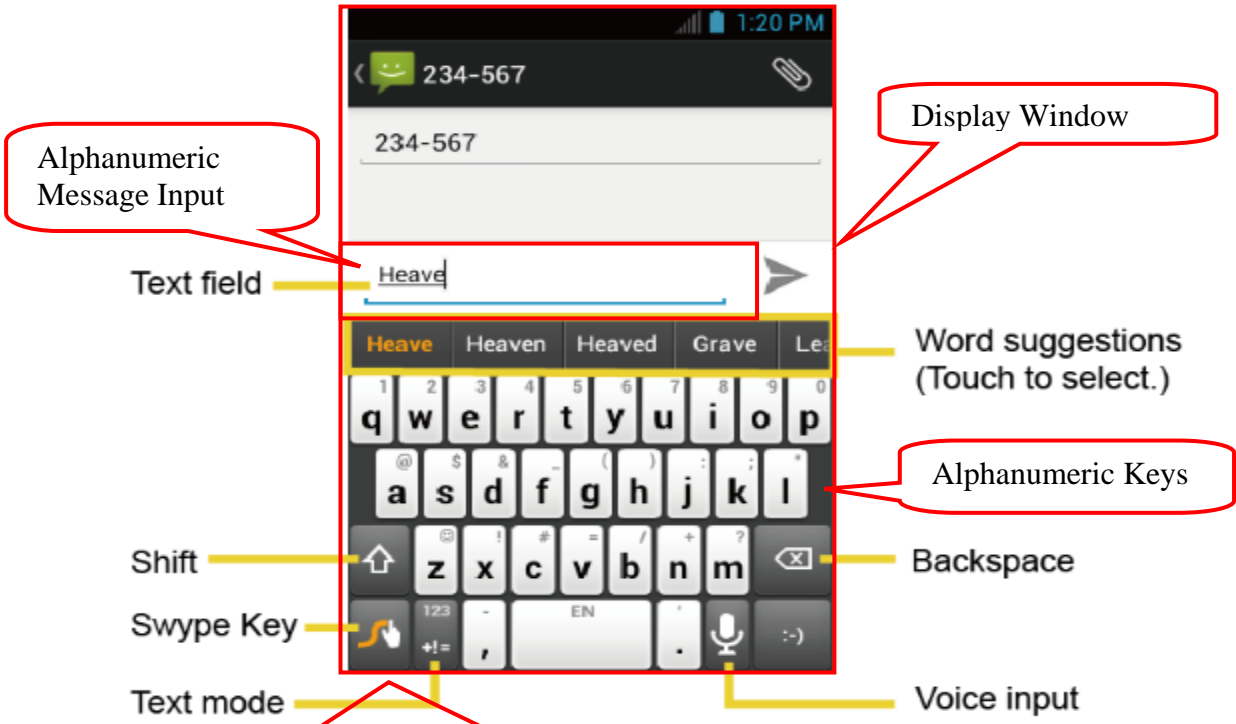
- Plug the smaller end of the micro-USB cable into the device's charger/accessory jack.



The Accused System includes a power supply (1500mAh Li-Ion battery) for powering the system (Phone).

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 13 and 14 of 178)

7.The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image





The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 18 of 178)



## Take a Picture

You can take high-resolution pictures using your device's camera.

1. Press **Home** , and touch  > **Camera**.
2. Change the settings if necessary.
3. **Frame your subject on the screen.**

**Tip:** Hold the device vertically when taking portrait shots or hold the device horizontally when taking landscape shots. Then you will not need to rotate the photo after capturing it.

4. Touch  to take the photo.



Display window

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 134 and 135 of 189)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

**Memory:**  
2GB/512MB  
2GB microSD™ card included  
(supports up to 32GB)

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_Spec_Sheet.pdf) (Page 1 of 1)

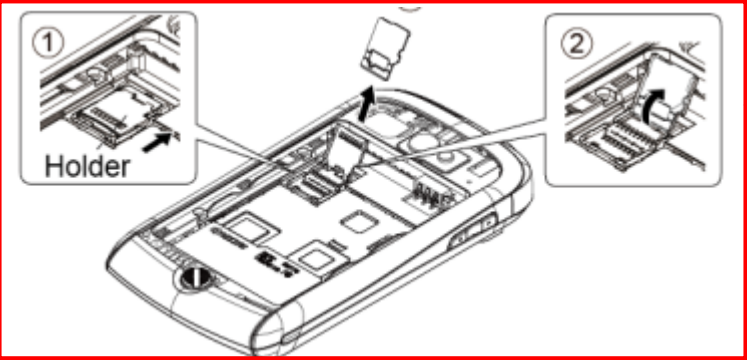
### microSD Card

Your device is equipped with a 2 GB microSD™ (Secure Digital) memory card that allows you to store images, videos, music, documents, and voice data on your device.

**Important:** Your device comes with the microSD card preinstalled.

Remove the microSD Card

Install a microSD Card



The Accused System provides a removable memory card slot (upto 32GB) and 512MB RAM/ 2GB ROM for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro\\_User\\_Guide\\_Boostmobile\\_en.pdf](http://www.kyocera-wireless.com/hydro-phone/pdf/Hydro_User_Guide_Boostmobile_en.pdf) (Page 165 of 189)

7,365,871 Claim Language	Accused System and Method – KYOCERA HYDRO (C5170)
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>																												
<p>at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.</p>	<p>The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom</p> <table border="1"> <thead> <tr> <th colspan="2">Camera &amp; Features</th> </tr> </thead> <tbody> <tr> <td>Primary Camera</td> <td>: 3.15 Megapixels, 2048 x 1536 pixels</td> </tr> <tr> <td>Primary Camera Type</td> <td>: Digital</td> </tr> <tr> <td>Camera Flash LED</td> <td>: No</td> </tr> <tr> <td>Secondary Camera</td> <td>: No</td> </tr> <tr> <td>Geo-Tagging</td> <td>: Yes</td> </tr> <tr> <td>Date-Tagging</td> <td>: Yes</td> </tr> <tr> <td>Video-Recording</td> <td>: Yes</td> </tr> <tr> <td>3G or Video Call</td> <td>: No</td> </tr> <tr> <td>Camera Zoom</td> <td>: Digital Zoom</td> </tr> <tr> <td>TV Output</td> <td>: No</td> </tr> <tr> <td>Panorama</td> <td>: No</td> </tr> <tr> <td>Camcorders</td> <td>: Yes</td> </tr> <tr> <td>Camera Features</td> <td>: Autofocus</td> </tr> </tbody> </table> <p><a href="http://www.gsmarc.com/kyocera/hydro-c5170/">http://www.gsmarc.com/kyocera/hydro-c5170/</a></p>	Camera & Features		Primary Camera	: 3.15 Megapixels, 2048 x 1536 pixels	Primary Camera Type	: Digital	Camera Flash LED	: No	Secondary Camera	: No	Geo-Tagging	: Yes	Date-Tagging	: Yes	Video-Recording	: Yes	3G or Video Call	: No	Camera Zoom	: Digital Zoom	TV Output	: No	Panorama	: No	Camcorders	: Yes	Camera Features	: Autofocus
Camera & Features																													
Primary Camera	: 3.15 Megapixels, 2048 x 1536 pixels																												
Primary Camera Type	: Digital																												
Camera Flash LED	: No																												
Secondary Camera	: No																												
Geo-Tagging	: Yes																												
Date-Tagging	: Yes																												
Video-Recording	: Yes																												
3G or Video Call	: No																												
Camera Zoom	: Digital Zoom																												
TV Output	: No																												
Panorama	: No																												
Camcorders	: Yes																												
Camera Features	: Autofocus																												

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>

## **Overview of KYOCERA HYDRO EDGE (C5215) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA HYDRO EDGE (C5215) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**KYOCERA HYDRO EDGE (C5215)**

Kyocera Ex. 1002  
p. 696

KYO'871-IC 00695



**7,365,871 Claim Language**









**Accused System and Method – KYOCERA HYDRO EDGE (C5215)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a handheld device.

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

Icon	Status
	Bluetooth® enabled
	Wi-Fi® active (full signal)
	Vibrate
	Silent
	Network (full signal)
	Network (roaming, full signal)
	Network (no signal)
	3G (data service)

The Accused System includes a portable housing with built in wireless connectivity, including 2G and 3G.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 31 of 187)

- 5.0MP camera with flash and video camcorder including enhanced features: panorama, HDR (High Dynamic Range), facial recognition, smile/blink detection, and burst mode settings

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



The Accused System provides a 5-megapixel main camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 11 of 187)

## Phone Calls




With the Sprint National Network and your phone's calling features, you can enjoy clear phone calls across the country.

### Make Phone Calls

There are several convenient ways to place calls from your phone.

#### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone's dialpad.

1. Touch Home  > Phone. If the dialpad is not displayed, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

## Receive Phone Calls

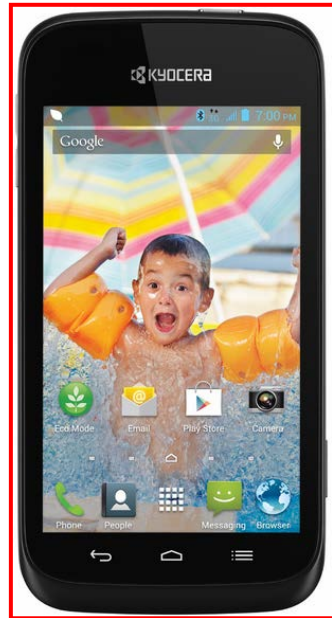
The following information lets you know how to answer incoming calls, mute the ringer on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 43 and 47 of 187)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

an integral image capture device comprising an electronic camera contained within the portable housing;

- **5.0MP camera** with flash and video camcorder including enhanced features: panorama, HDR (High Dynamic Range), facial recognition, smile/blink detection, and burst mode settings

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



The Accused System provides a 5-megapixel electronic camera for capturing visual images and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 11 of 187)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

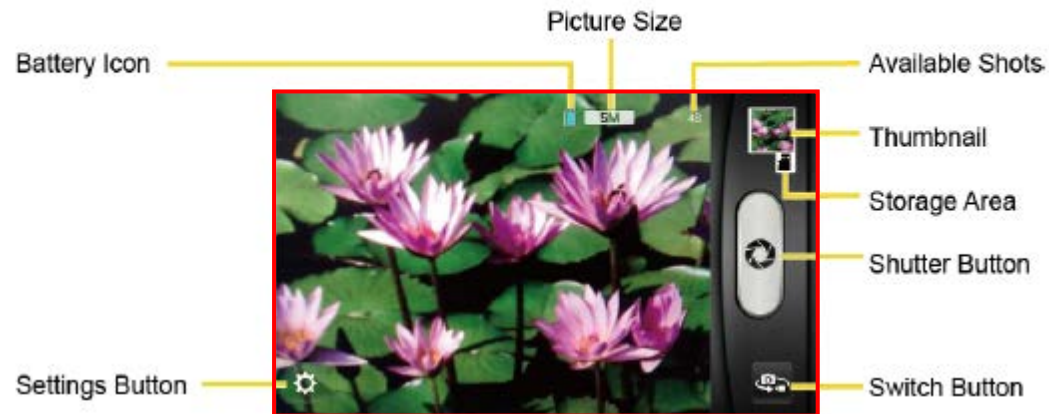
**Display:**  
4.0" capacitive touchscreen, WVGA,  
(800 x 480 pixels)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

### Camera Viewfinder Screen

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused System comprises a 4.0 inch capacitive display which is operable by user for viewing a visual image.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 11 of 187)



**Source 1:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

**Source 2:** [http://www.kyocera-wireless.com/hydro-edge-  
phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 11 of 187)



a processor in the housing for generating an image data signal representing the image framed by the camera;

- Fast and Smart—1.0GHz dual-core processor for fast access to apps and web surfing
- Android™ 4.1 (Jelly Bean) featuring Google Play™ with access to thousands of Android Apps

The Accused System includes a processor (1 GHZ Dual Core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

**Memory:**  
4GB ROM/1GB RAM  
microSD™ memory card slot  
(supports up to 32GB)

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

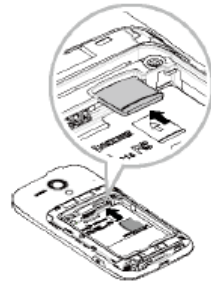
**Insert a microSD Card**

Remove the battery cover and the battery to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) and [Insert and Charge the Battery](#).
2. Lift the battery and remove it.



3. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card in until it snaps into place.



4. Replace the battery and the battery cover. See [Insert and Charge the Battery](#).

The Accused System provides a removable memory card slot (up to 32GB) and 1GB RAM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 152 of 187)






Display screen of portable housing

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

### Send a Multimedia Message (MMS)









When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 79 of 187)

Icon	Status
	Bluetooth® enabled
	Wi-Fi® active (full signal)
	Vibrate
	Silent
	Network (full signal)
	Network (roaming, full signal)
	Network (no signal)
	3G (data service)

The Accused System is capable of receiving/sending digitized signals (images) to the compatible remote stations over 2G, 3G or 4G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 31 of 187)

a user interface for enabling a user to select the image data signal for viewing and transmission;

**Display:**  
4.0" capacitive touchscreen, WVGA, (800 x 480 pixels)  
**Operating System:**  
Android 4.1 (Jelly Bean)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)






4.0 inch, capacitive display (800 x 480) acting as a user interface (Operating System: Android 4.1 (Jelly Bean)).

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)



## 1. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.
4. To save the attachment to the storage card, touch and hold the message, and then touch **Save attachment** on the options menu.




The Accused System provides a user interface where a user can transmit or receive images via multimedia messages or via email messages.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 79 and 82 of 187)

## 2. Transmitting and Receiving Images via Email Messages:

### **Send a Gmail Message**



Use your phone to send Gmail messages.


1. Touch Home  >  > Gmail.
2. In any folder, touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch Menu  > Attach picture. Locate and then touch the picture you want to attach.

### **Read and Reply to Gmail Messages**

Your phone allows you to access, read, and reply to all your Gmail messages.

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the Notifications bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 72 and 73 of 187)



a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## 1. Making or receiving telephonic calls :

### Phone Calls




With the Sprint National Network and your phone's calling features, you can enjoy clear phone calls across the country.

#### Make Phone Calls

There are several convenient ways to place calls from your phone.

#### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone's dialpad.

1. Touch Home  > Phone. If the dialpad is not displayed, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

### Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringer on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

The Accused System provides a telephonic system for sending and receiving audio signals (calling functionality).

#### Source:




[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 43 and 47 of 187)



## 2. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.
4. To save the attachment to the storage card, touch and hold the message, and then touch **Save attachment** on the options menu.

The Accused System includes a mobile phone located within the portable housing. The mobile phone provides functionality that allows for the user to convey (or share) image data (photos) with other devices through Multimedia messages.

#### Source:




[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 79 and 82 of 187)

### 3. Transmitting and Receiving Images via Email Messages:

#### Send a Gmail Message

Use your phone to send Gmail messages.



1. Touch Home  >  > Gmail.
2. In any folder, touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.


User can share (or send) image data (photos) with other devices through Email messages.

**Note:** If you want to attach a picture, touch Menu  > Attach picture. Locate and then touch the picture you want to attach.

#### Read and Reply to Gmail Messages

Your phone allows you to access, read, and reply to all your Gmail messages.

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the Notifications bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

#### Source:

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 72 and 73 of 187)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

### **Enter Text**

You can type on your phone using one of the available touchscreen keyboards.

### **Touchscreen Keyboards**

Your phone offers you a choice of two touchscreen keyboards for entering text. The keyboard appears automatically onscreen when you touch a text entry field, and they can be used in either portrait or landscape mode.

The methods available include:

- **Swype** lets you enter letters and words in one continuous motion by swiping your finger across the letters. See **Swype** for details.
- **Android keyboard** lets you use a traditional QWERTY setup to enter text. Additional options expand your ability to enter text faster and more accurately. See **Android Keyboard** for details.

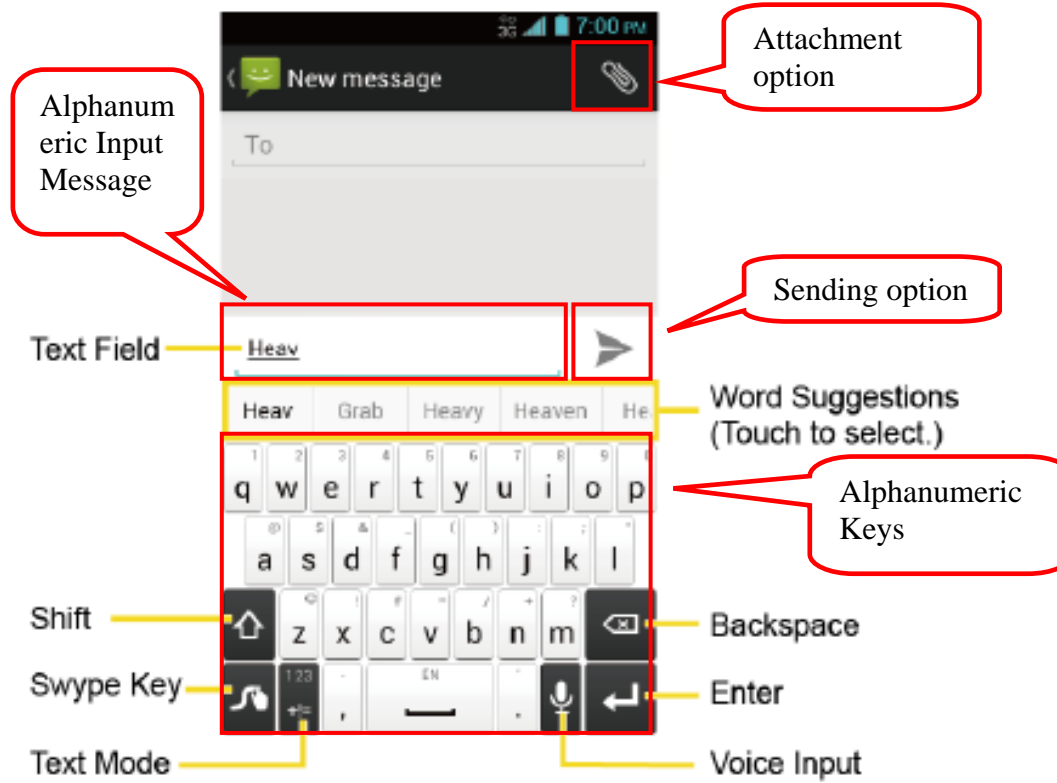
The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 32 of 187)

## Swype Keyboard Overview











**Source:**

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(Page 33 of 187)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

Icon	Status
	Bluetooth® enabled
	Wi-Fi® active (full signal)
	Vibrate
	Silent
	Network (full signal)
	Network (roaming, full signal)
	Network (no signal)
	3G (data service)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over 2G or 3G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 31 of 187)

**Radios:**

CDMA2000® 1xAdvanced,  
EVDO Rel 0, EVDO Rev. A  
dual-band (800, 1900 MHz)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

a power supply for powering the system.

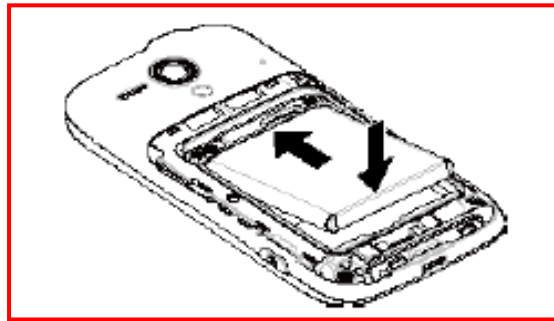
**Battery Type:**  
1600mAh Lithium ion (Li-Ion)

The Accused System includes a power supply (battery) for powering the system (Phone).

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

- Insert the battery, contacts end first,



**Source:**

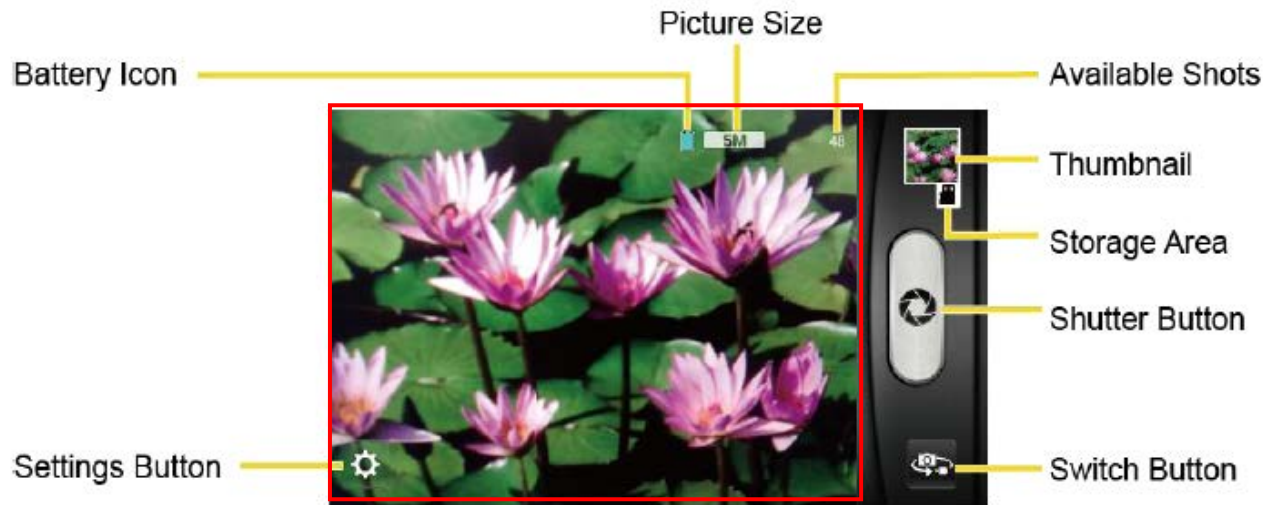
[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 12 of 187)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

### Camera Viewfinder Screen

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

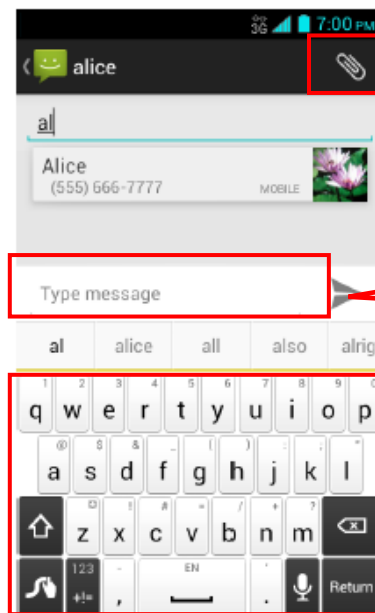
(Page 123 of 187)



3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

3. Fill in one or more recipients. You can:

- Enter phone numbers or email addresses in the **To** field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.



Alphanumeric  
Input Message

Alphanumeric  
Keypad

The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 79 of 187)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removable housed in the housing for storing captured image data signals.

**Memory:**  
4GB ROM/1GB RAM  
microSD™ memory card slot  
(supports up to 32GB)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

**Insert a microSD Card**

Remove the battery cover and the battery to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) and [Insert and Charge the Battery](#).
2. Lift the battery and remove it.



3. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card in until it snaps into place.



4. Replace the battery and the battery cover. See [Insert and Charge the Battery](#).

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 152 of 187)

The Accused System provides a removable memory card for storage of visual Images. The memory card is located within and supported by the portable housing.

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



4" Display for viewing incoming image data.



**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

Display:  
4.0" capacitive touchscreen, WVGA,  
(800 x 480 pixels)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.
4. To save the attachment to the storage card, touch and hold the message, and then touch **Save attachment** on the options menu.

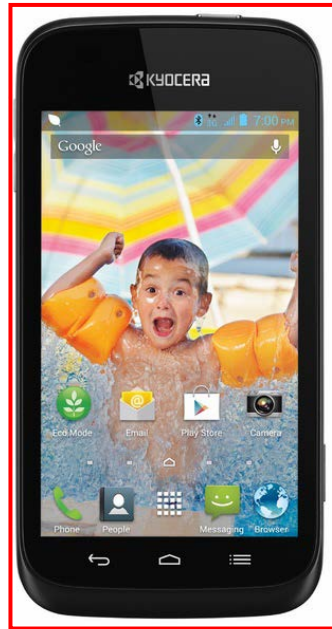
The Accused System includes a display for viewing incoming image data signals or multimedia messages.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)









(Page 79 and 82 of 187)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising:



The Accused System includes a handheld device.

*Source:* [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

Icon	Status
	Bluetooth® enabled
	Wi-Fi® active (full signal)
	Vibrate
	Silent
	Network (full signal)
	Network (roaming, full signal)
	Network (no signal)
	3G (data service)

The Accused System includes a portable housing with built in wireless connectivity, including 2G or 3G.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 31 of 187)

- 5.0MP camera with flash and video camcorder including enhanced features: panorama, HDR (High Dynamic Range), facial recognition, smile/blink detection, and burst mode settings

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



The Accused System provides a 5-megapixel main camera for capturing visual images and supported by the portable housing.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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## Phone Calls




With the Sprint National Network and your phone's calling features, you can enjoy clear phone calls across the country.

### Make Phone Calls

There are several convenient ways to place calls from your phone.

#### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone's dialpad.

1. Touch Home  > Phone. If the dialpad is not displayed, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringer on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

#### Source:

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 43 and 47 of 187)



a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing;



The Accused System comprises a manually portable housing.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

- 5.0MP camera with flash and video camcorder including enhanced features: panorama, HDR (High Dynamic Range), facial recognition, smile/blink detection, and burst mode settings

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



The Accused System provides a 5-megapixel electronic camera for capturing visual images and supported by the portable housing.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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## Phone Calls




With the Sprint National Network and your phone's calling features, you can enjoy clear phone calls across the country.

### Make Phone Calls

There are several convenient ways to place calls from your phone.

#### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone's dialpad.

1. Touch Home  > Phone. If the dialpad is not displayed, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringer on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

Both camera and phone within the housing are commonly movable by the hand of user.

#### Source:

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals:

## Phone Calls




With the Sprint National Network and your phone's calling features, you can enjoy clear phone calls across the country.

### Make Phone Calls

There are several convenient ways to place calls from your phone.

#### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone's dialpad.

1. Touch Home  > Phone. If the dialpad is not displayed, touch the Phone tab .
2. Touch the number keys on the dialpad to enter the phone number.
3. Touch the Talk key  to call the number.

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringer on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

#### Source:

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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The Accused System consists of a display screen

Display:  
4.0" capacitive touchscreen, WVGA,  
(800 x 480 pixels)

Source 1

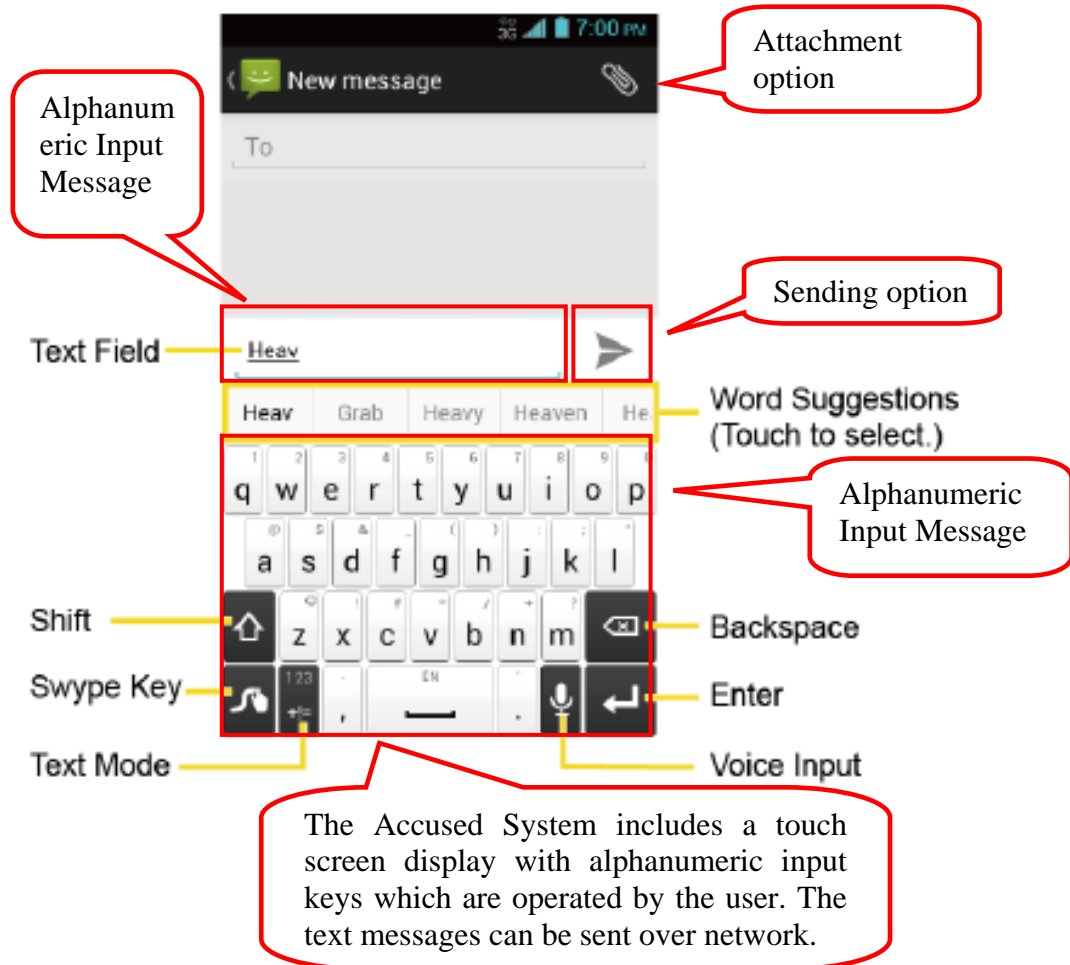
Source 2

**Source 1:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)

**Source 2:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

## Swype Keyboard Overview



**Source:**




[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 33 of 187)



### 3. Transmitting and Receiving Images via Multimedia Messages:

#### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

#### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.
4. To save the attachment to the storage card, touch and hold the message, and then touch **Save attachment** on the options menu.

The Accused System is capable of sending or receiving digitized signals to the compatible remote receiving stations.

**Source:**




[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 79 and 82 of 187)

#### 4. Transmitting and Receiving Images via Email Messages:

##### **Send a Gmail Message**



Use your phone to send Gmail messages.


1. Touch Home  >  > Gmail.
2. In any folder, touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch Menu  > Attach picture. Locate and then touch the picture you want to attach.

##### **Read and Reply to Gmail Messages**

Your phone allows you to access, read, and reply to all your Gmail messages.

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the Notifications bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 72 and 73 of 187)



an integral electronic camera in the housing, the camera for visually framing a visual image to be captured;

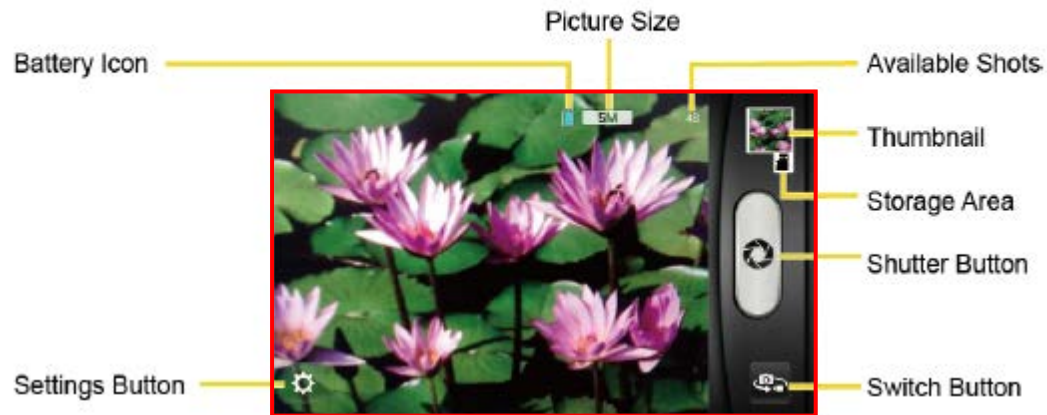
Display:  
4.0" capacitive touchscreen, WVGA,  
(800 x 480 pixels)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

### Camera Viewfinder Screen

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 11 of 187)

- 5.0MP camera with flash and video camcorder including enhanced features: panorama, HDR (High Dynamic Range), facial recognition, smile/blink detection, and burst mode settings

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



The Accused System provides a 5-megapixel electronic camera for capturing visual images and supported by the portable housing.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

(Page 11 of 187)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone;

- Fast and Smart—1.0GHz dual-core processor for fast access to apps and web surfing
- Android™ 4.1 (Jelly Bean) featuring Google Play™ with access to thousands of Android Apps

The Accused System includes a processor (1 GHz Dual Core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Radios:  
CDMA2000® 1xAdvanced,  
EVDO Rel 0, EVDO Rev. A  
dual-band (800, 1900 MHz)

These images can be sent or shared with other devices over 2G or 3G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image;

**Memory:**  
4GB ROM/1GB RAM  
microSD™ memory card slot  
(supports up to 32GB)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

**Insert a microSD Card**

Remove the battery cover and the battery to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) and [Insert and Charge the Battery](#).
2. Lift the battery and remove it.



3. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card in until it snaps into place.



4. Replace the battery and the battery cover. See [Insert and Charge the Battery](#).

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 152 of 187)

The Accused System provides a removable memory card slot (up to 32GB) and 1GB RAM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.






Display screen of portable housing

**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-<br/>Generic.jpg)

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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Radios:  
CDMA2000® 1xAdvanced,  
EVDO Rel 0, EVDO Rev. A  
dual-band (800, 1900 MHz)

The Accused System is capable of receiving/sending digitized signals (images) to the compatible remote stations over 2G or 3G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Display:**  
4.0" capacitive touchscreen, WVGA,  
(800 x 480 pixels)  
**Operating System:**  
Android 4.1 (Jelly Bean)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)



4.0 inch, capacitive display acting as a user interface for viewing framed images (Operating System: Android 4.1 (Jelly Bean)).




**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge\\_Front-  
Generic.jpg](http://www.kyocera-wireless.com/hydro-edge-phone/gallery/large/Edge_Front-Generic.jpg)





## 1. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The Compose screen opens.
3. Fill in one or more recipients. You can:
  - Enter phone numbers or email addresses in the To field. If you're sending the message to several recipients, separate the phone numbers or email addresses with a comma. As you enter information, any matching phone numbers or addresses from your contacts list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.
4. To save the attachment to the storage card, touch and hold the message, and then touch **Save attachment** on the options menu.

#### Source:




[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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## 2. Transmitting and Receiving Images via Email Messages:

### Send a Gmail Message



Use your phone to send Gmail messages.


1. Touch Home  >  > Gmail.
2. In any folder, touch .
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch Menu  > Attach picture. Locate and then touch the picture you want to attach.

### Read and Reply to Gmail Messages

Your phone allows you to access, read, and reply to all your Gmail messages.

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the Notifications bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

#### Source:

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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Radios:  
CDMA2000® 1xAdvanced,  
EVDO Rel 0, EVDO Rev. A  
dual-band (800, 1900 MHz)

The Accused System provides a user interface (operating system: Android) where a user can select to view or send multimedia messages or images over the 2G or 3G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

an integrated power supply for powering both the cellular telephone and the camera.

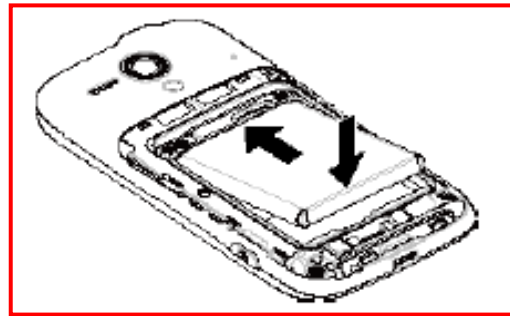
**Battery Type:**  
1600mAh Lithium ion (Li-Ion)

The Accused System includes a power supply (battery) for powering the phone as well as camera.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

- Insert the battery, contacts end first,



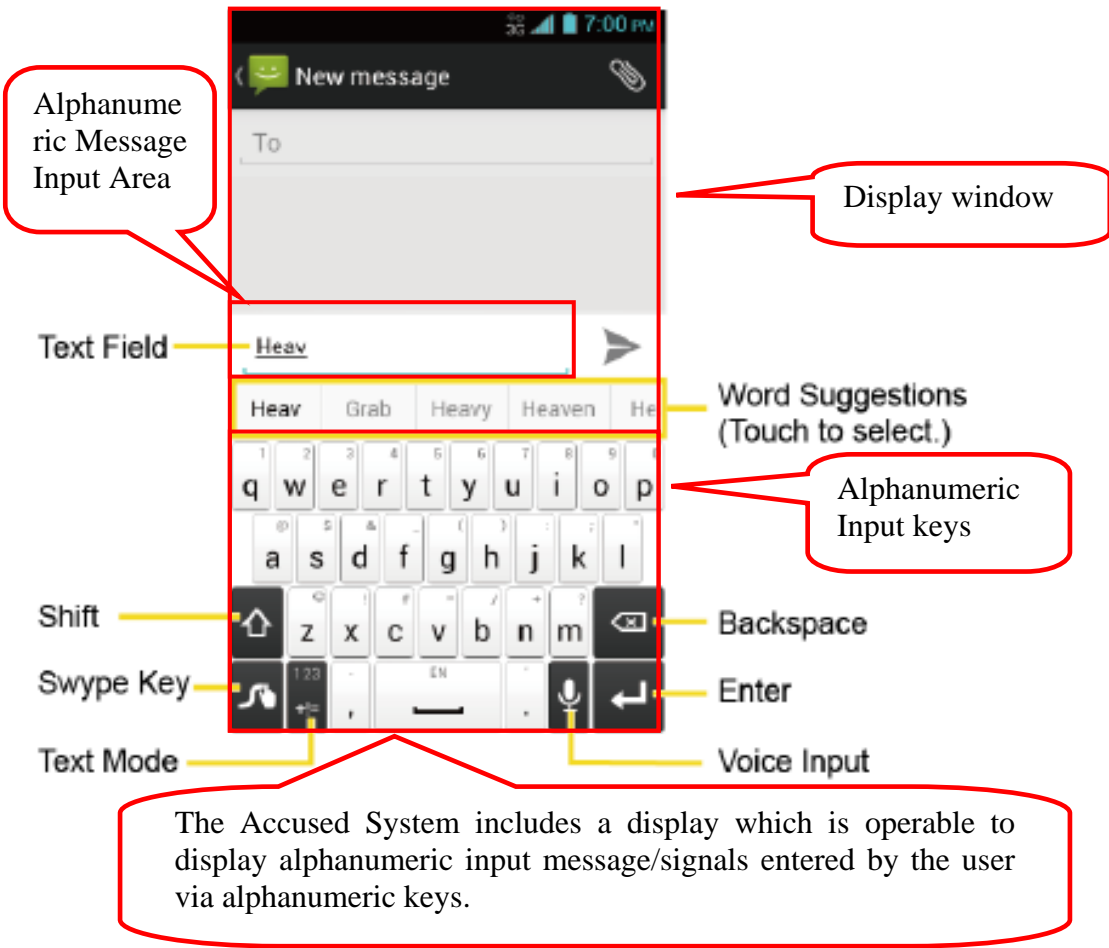
**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image.

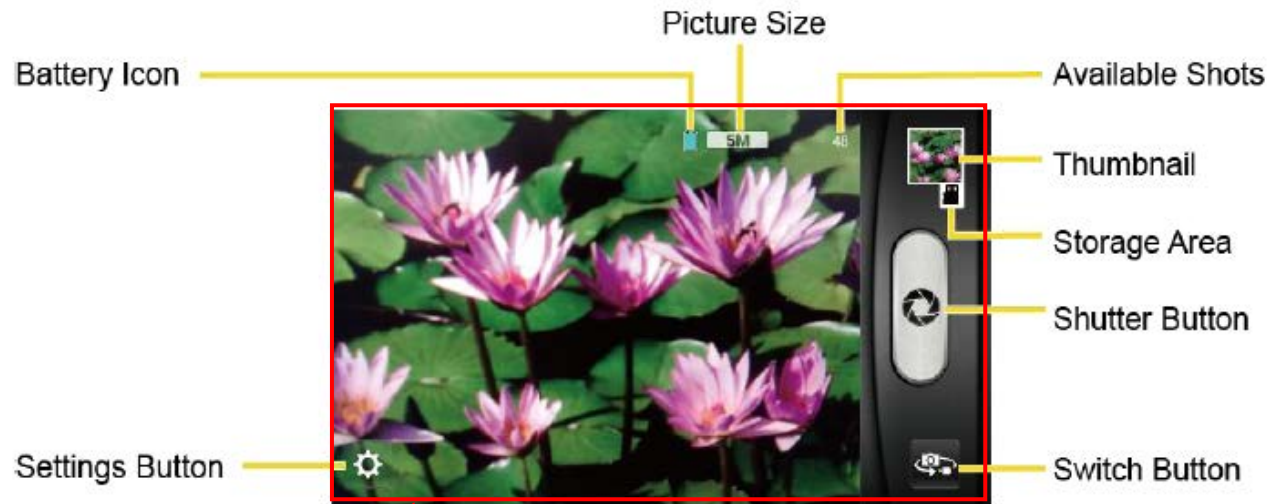
### Swype Keyboard Overview



Source: [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 33 of 187)

## Camera Viewfinder Screen

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused system comprises of display window for framing the visual Image.

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf)

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8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing.

**Memory:**  
4GB ROM/1GB RAM  
microSD™ memory card slot  
(supports up to 32GB)

**Source:**

[http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_Spec\\_Sheet\\_Sprint.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_Spec_Sheet_Sprint.pdf)

**Insert a microSD Card**

Remove the battery cover and the battery to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) and [Insert and Charge the Battery](#).
2. Lift the battery and remove it.



3. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card in until it snaps into place.



4. Replace the battery and the battery cover. See [Insert and Charge the Battery](#).




**Source:** [http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro\\_EDGE\\_User\\_Guide\\_Sprint\\_en.pdf](http://www.kyocera-wireless.com/hydro-edge-phone/pdf/Hydro_EDGE_User_Guide_Sprint_en.pdf) (Page 152 of 187)

The Accused System provides a removable memory card for storage of visual Images. The memory card is located within and supported by the portable housing.

7,365,871 Claim Language	Accused System and Method – KYOCERA HYDRO EDGE (C5215)
12. A combination of handheld wireless telephone and digital camera comprising:	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>



<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.</p>	<p>The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom and white balance</p> <p><b>Camera Settings</b></p> <p>You can adjust your camera's settings using the icons on the main camera screen and the full camera settings menu.</p> <ul style="list-style-type: none"> <li>▪  <b>Zoom:</b> Displays the zoom slider on the screen. Drag the slider to zoom in and out.</li> <li>▪  <b>Camera light:</b> Selects from <b>ON</b>, <b>OFF</b>, or <b>Auto</b>.</li> <li>▪  <b>More Settings:</b> <ul style="list-style-type: none"> <li>• <b>Focus settings:</b> Selects from <b>Auto</b>, <b>Face detection</b>, <b>Macro</b>, or <b>OFF</b>.</li> <li>• <b>Shooting scene:</b> Selects from <b>Auto</b>, <b>Portrait</b>, <b>Landscape</b>, <b>Night portrait</b>, <b>Night landscape</b>, or <b>Action</b>.</li> <li>• <b>Add location info:</b> Touch the <b>OFF</b> icon to turn it on. Touch the <b>ON</b> icon to turn it off.</li> <li>• <b>Image quality:</b> Selects from <b>Super fine</b>, <b>Fine</b>, or <b>Normal</b>.</li> <li>• <b>Blink detection:</b> Touch the <b>OFF</b> icon to turn it on. Touch the <b>ON</b> icon to turn it off.</li> <li>• <b>Auto exposure:</b> Selects from <b>Frame average</b>, <b>Center weighted</b>, or <b>Spot metering</b>.</li> <li>• <b>Select ISO:</b> Selects from <b>Auto</b>, <b>100</b>, <b>200</b>, <b>400</b>, or <b>800</b>.</li> <li>• <b>White balance:</b> Selects from <b>Auto</b>, <b>Daylight</b>, <b>Cloudy</b>, <b>Incandescent</b>, or <b>Fluorescent</b>.</li> </ul> </li> </ul> <p><a href="http://www.kyocera-wireless.com/hydro-edge/Hydro_EDGE_User_Guide_Sprint_en.pdf">http://www.kyocera-wireless.com/hydro-edge/Hydro_EDGE_User_Guide_Sprint_en.pdf</a></p>

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>

## **Overview of KYOCERA HYDRO ELITE (C6750) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA HYDRO ELITE (C6750) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**KYOCERA HYDRO ELITE (C6750)**

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA HYDRO ELITE (C6750)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity, including 2G and 3G.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

**Connectivity**

- CDMA 1xRTT, CDMA 1xEVDO, LTE, GSM, EDGE, UMTS, HSPA+, GPRS









*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

### Call Using the Phone Dialpad

The most "traditional" way to place a call is by using the phone dialpad.

1. Tap  >  (Starter mode) or  (Standard mode). If the dialpad is not displayed, tap the Dialpad tab  (Starter mode) or  (Standard mode).
2. Tap the number keys on the dialpad to enter the phone number.
3. Tap the Call key  or  to call the number.
4. To end the call, tap .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 57 of 228)

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

~~When you receive a phone call from a contact, the~~ Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in Contacts, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call

- ▶ On the Incoming call screen, tap  (Starter mode) or flick  (Standard mode).

**Source:**

[http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 63 of 228)



**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/>

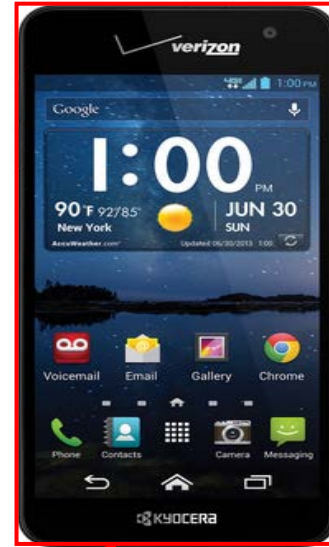
8MP camera and camcorder with digital zoom, LED flash, auto-focus; panoramic, HDR, multi-shot, and smile-shutter modes  
1.3MP front-facing camera for video chat and self-portraits

The Accused System comprises of an 8 megapixel rear camera and 1.3 megapixel front camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)



a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

an integral image capture device comprising an electronic camera contained within the portable housing;



The Accused System comprises of an 8 megapixel rear camera and 1.3 megapixel front camera acting as an image capturing device and supported by the portable housing.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

8MP camera and camcorder with digital zoom, LED flash, auto-focus; panoramic, HDR, multi-shot, and smile-shutter modes  
1.3MP front-facing camera for video chat and self-portraits

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf>  
(Page 1 of 1)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

## Display

- 4.3" impact-resistant, capacitive touchscreen, HD (1280 x 720 pixels)
- MagniFont Mode – allows enlargement of select text on screen for easy-to-read display

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>



The Accused System comprises a 4.3" HD display (1280 x 720) and electronic cameras (both rear and front camera) in the same housing being commonly movable when the housing is moved by the user.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

a processor in the housing for generating an image data signal representing the image framed by the camera;



The Accused System includes a processor (1.5 GHZ dual core MSM8960 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

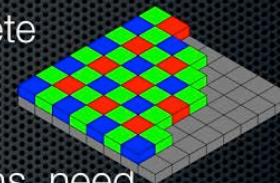
Chipset:  
MSM8960 @ dual-core 1.5GHz  
(QUALCOMM Snapdragon processor)

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

## Memory:

16GB ROM/1.5GB RAM  
MicroSD™ memory card slot (supports up to 32GB)

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

### Insert a microSD Card

Remove the battery cover to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) on page 9.
2. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card into the slot.



3. Replace the battery cover. For information on how to do this, see step 2 in [Insert and Charge the Battery](#) on page 6.

The Accused System provides a removable memory card slot (up to 32GB) and 1.5 GB RAM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 186 of 228)

### Connectivity

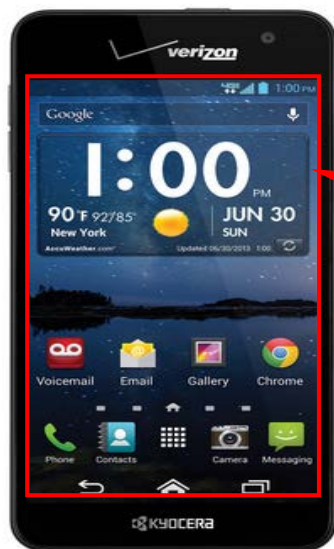
- CDMA 1xRTT, CDMA 1xEVDO, LTE, GSM, EDGE, UMTS, HSPA+, GPRS

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>



a user interface for enabling a user to select the image data signal for viewing and transmission;



4.3" HD display (1280 x 720) acting as a user interface (Operating System: Android 4.1 (Jelly Bean)).

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

**Display:**  
4.3" impact-resistant, capacitive touchscreen,  
HD (1280 x 720 pixels)

**Operating System:**  
Android™ 4.1 (Jelly Bean)






The Accused System provides a user interface where a user can select to view or send multimedia messages or images.

*Source:* [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 66 of 182)

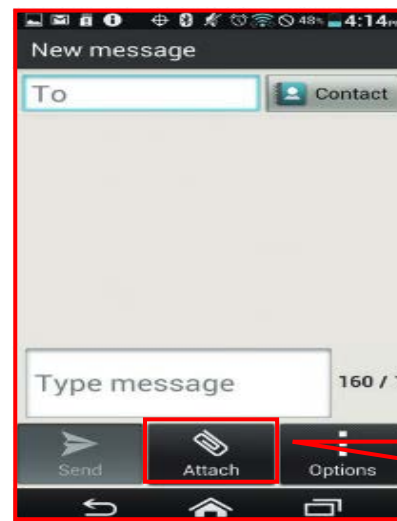
## 1. Transmitting Images via Multimedia Messages:

### **Send a Multimedia Message (MMS)**

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voice, audio or video files, or slideshows.

1. Tap  > **Messages** > **Messaging**.  
– or –  
Tap  > **Apps**  > **Messaging**.
2. On the Messaging screen, tap  or . The Compose screen opens.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)



The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.





User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)


## 2. Transmitting Images via Email Messages:

### Send a Gmail Message


Use your phone to send Gmail messages.

1. Tap  > **Menu**  or **Apps**  > **Gmail**.
2. In the inbox, tap .
3. Enter the message recipient's email address in the **To** field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Tap a match to enter that address directly.

**Tip:** You can enter a name saved in **Contacts** to call up the email address. Tap a match from an available list.

4. If you want to send a carbon copy (Cc) or a blind carbon copy (Bcc) of the email to other recipients, tap  > **Add Cc/Bcc**.
5. Enter the subject, and then compose your email.

**Note:** If you want to attach a picture, tap  > **Attach picture**. Locate and then tap the picture you want to attach.

6. After composing your message, tap .

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach Picture”.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 91 of 228)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;









## Make Phone Calls

There are several convenient ways to place calls from your phone.

The Accused System provides a telephonic system for sending and receiving audio signals.

### Call Using the Phone Dialpad

The most “traditional” way to place a call is by using the phone dialpad.

1. Tap  >  (Starter mode) or  (Standard mode). If the dialpad is not displayed, tap the Dialpad tab  (Starter mode) or  (Standard mode).
2. Tap the number keys on the dialpad to enter the phone number.
3. Tap the Call key  or  to call the number.
4. To end the call, tap .

**Source:** [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 57 of 228)

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in Contacts, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call




- ▶ On the Incoming call screen, tap  (Starter mode) or flick  (Standard mode).

**Source:** [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 63 of 228)

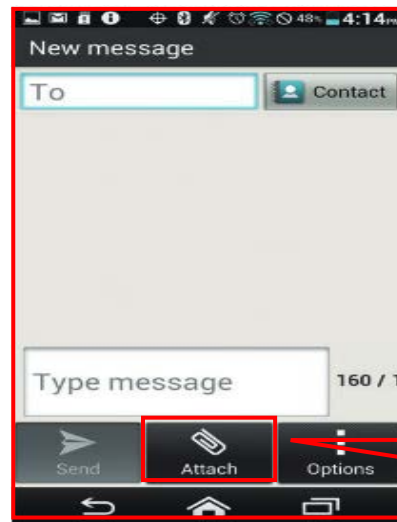
## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voice, audio or video files, or slideshows.

1. Tap  > **Messages** > **Messaging**.  
– or –  
Tap  > **Apps**  > **Messaging**.
2. On the Messaging screen, tap  or . The Compose screen opens.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)



The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.





User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)


### 1. Transmitting Images via Email Messages:

#### **Send a Gmail Message**


Use your phone to send Gmail messages.

1. Tap  > **Menu**  or **Apps**  > **Gmail**.
2. In the inbox, tap .
3. Enter the message recipient's email address in the **To** field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Tap a match to enter that address directly.

**Tip:** You can enter a name saved in **Contacts** to call up the email address. Tap a match from an available list.

4. If you want to send a carbon copy (Cc) or a blind carbon copy (Bcc) of the email to other recipients, tap  > **Add Cc/Bcc**.
5. Enter the subject, and then compose your email.

**Note:** If you want to attach a picture, tap  > **Attach picture**. Locate and then tap the picture you want to attach.

6. After composing your message, tap .

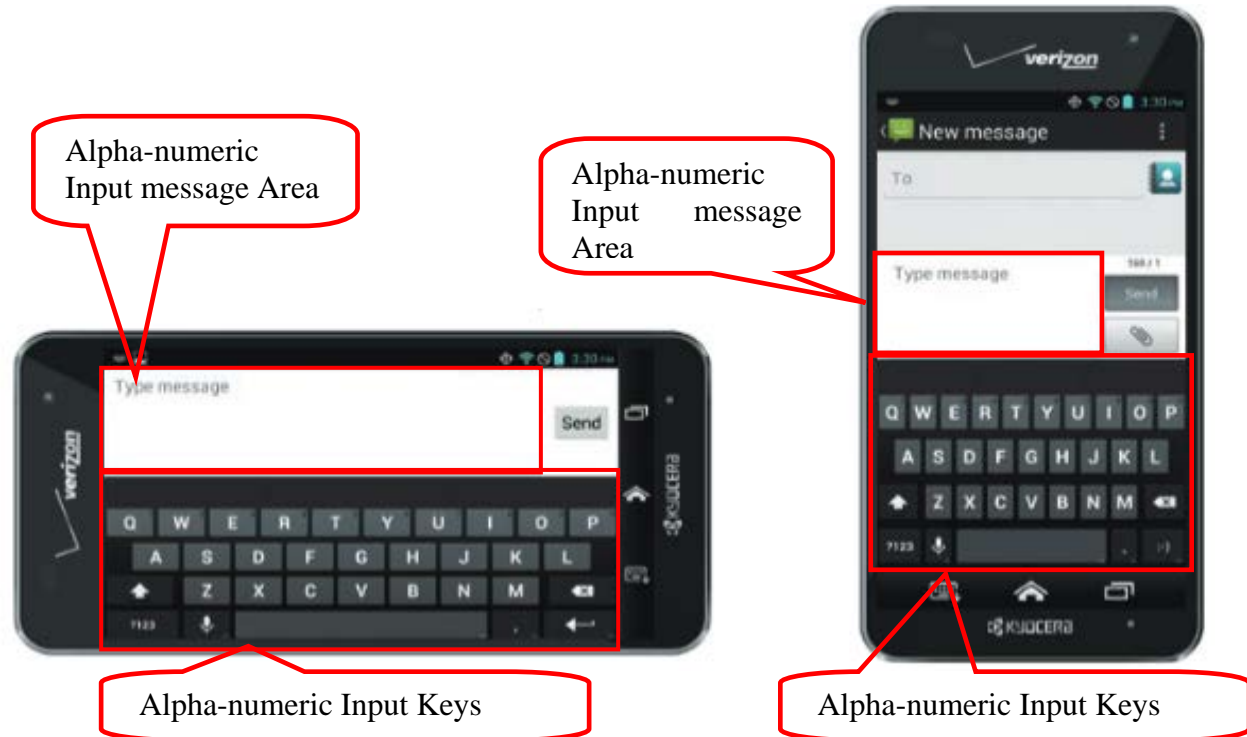
The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on "Attach Picture".

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 91 of 228)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Kyocera Keyboard

Kyocera keyboard provides you QWERTY keyboard and Phone keypad, and you can choose which to use in both Starter and Standard modes. The Phone keypad displays in a phone-like keypad style and is convenient for users who are used to such a typing system.



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 43 and 35 of 228)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

### Connectivity

- CDMA 1xRTT, CDMA 1xEVDO, LTE, GSM, EDGE, UMTS, HSPA+, GPRS

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>



a power supply for powering the system.

### Battery & Talk Time

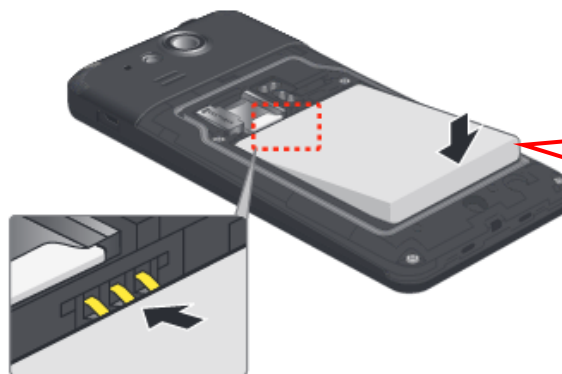
- 2100mAh Lithium Ion (Li-Ion) battery
- Talk Time: up to 13 hours\*
- Standby Time: Up to 9.84 days (236.21 hours)\*

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>

### Insert and Charge the Battery

Follow the steps below to insert and charge the battery.

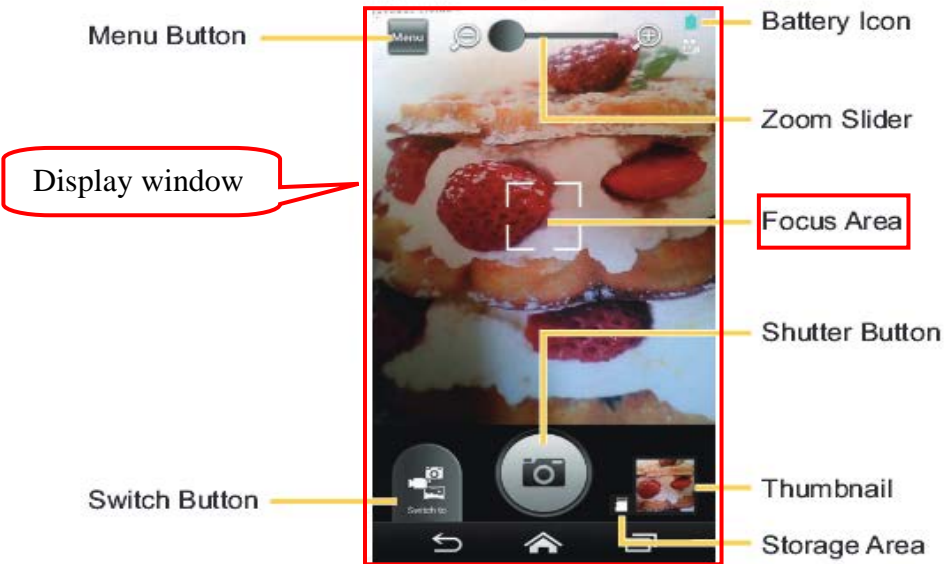
1. Insert the battery, making sure to align the gold contacts. Press down gently to secure the battery.



*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 20 of 228)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

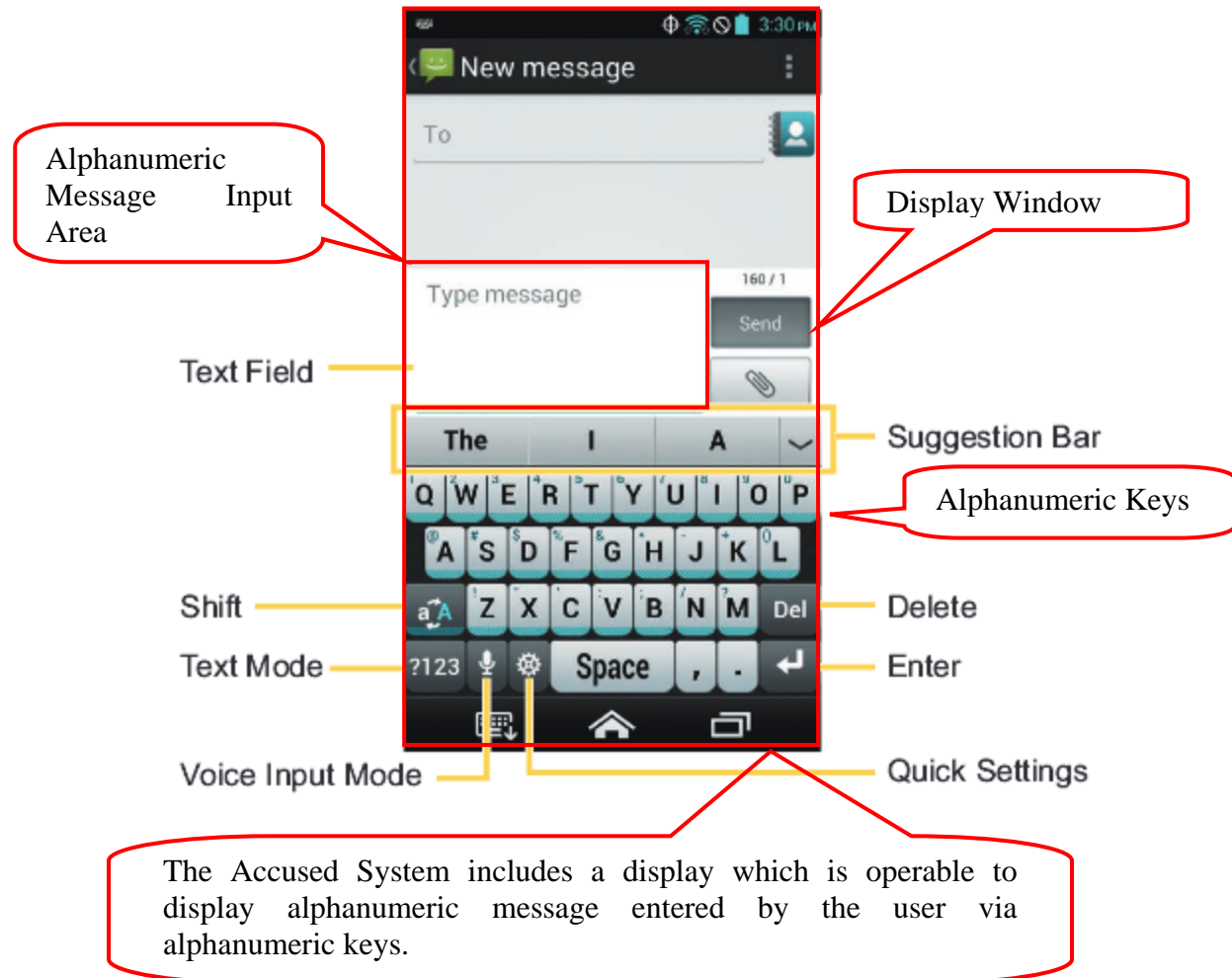
The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 147 of 228)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.



Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 43 of 228)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

## Memory:

16GB ROM/1.5GB RAM  
MicroSD™ memory card slot (supports up to 32GB)

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

## Insert a microSD Card

Remove the battery cover to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) on page 9.
2. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card into the slot.

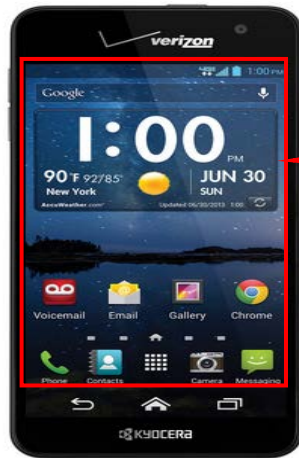


The Accused System provides a removable memory card slot (up to 32GB) in addition to 1.5 GB RAM for storage of visual Images. The memory card is located within and supported by the portable housing.

3. Replace the battery cover. For information on how to do this, see step 2 in [Insert and Charge the Battery](#) on page 6.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 186 of 228)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

**Source:** [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 12 of 182)

### View a Multimedia Message (MMS)

1. Tap  > Messages > Messaging.

– or –

Tap  > Apps  > Messaging.

2. On the Messaging screen, tap a multimedia message or message thread to open it.

3. Tap the attachment to open it.

**Tip:** To save the attachment, tap (Starter mode) or tap and hold (Standard mode) the message, and then tap **Save attachment** on the options menu.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 104 of 228)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

### Connectivity

- CDMA 1xRTT, CDMA 1xEVDO, LTE, GSM, EDGE, UMTS, HSPA+, GPRS









Source: <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

### Call Using the Phone Dialpad

The most “traditional” way to place a call is by using the phone dialpad.

1. Tap  >  (Starter mode) or  (Standard mode). If the dialpad is not displayed, tap the Dialpad tab  (Starter mode) or  (Standard mode).
2. Tap the number keys on the dialpad to enter the phone number.
3. Tap the Call key  or  to call the number.
4. To end the call, tap .

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 57 of 228)

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in Contacts, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

### Answer an Incoming Call

- ▶ On the Incoming call screen, tap  (Starter mode) or flick  (Standard mode).

**Source:** [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 63 of 228)



**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/>

8MP camera and camcorder with digital zoom, LED flash, auto-focus; panoramic, HDR, multi-shot, and smile-shutter modes  
1.3MP front-facing camera for video chat and self-portraits

The Accused System comprises of an 8 megapixel rear camera and 1.3 megapixel front camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)



a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

8MP camera and camcorder with digital zoom, LED flash, auto-focus; panoramic, HDR, multi-shot, and smile-shutter modes  
1.3MP front-facing camera for video chat and self-portraits

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (Front as well as Rear Camera) which are commonly movable with the housing.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

## Make Phone Calls

There are several convenient ways to place calls from your phone.

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The most “traditional” way to place a call is by using the phone dialpad.

1. Tap > (Starter mode) or (Standard mode). If the dialpad is not displayed, tap the Dialpad tab (Starter mode) or (Standard mode).
2. Tap the number keys on the dialpad to enter the phone number.
3. Tap the Call key or to call the number.
4. To end the call, tap .

*Source:* [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 57 of 228)

## Receive Phone Calls

The following information lets you know how to answer incoming calls, mute the ringtone on incoming calls, reject incoming calls, and more.

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in Contacts, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

## Answer an Incoming Call

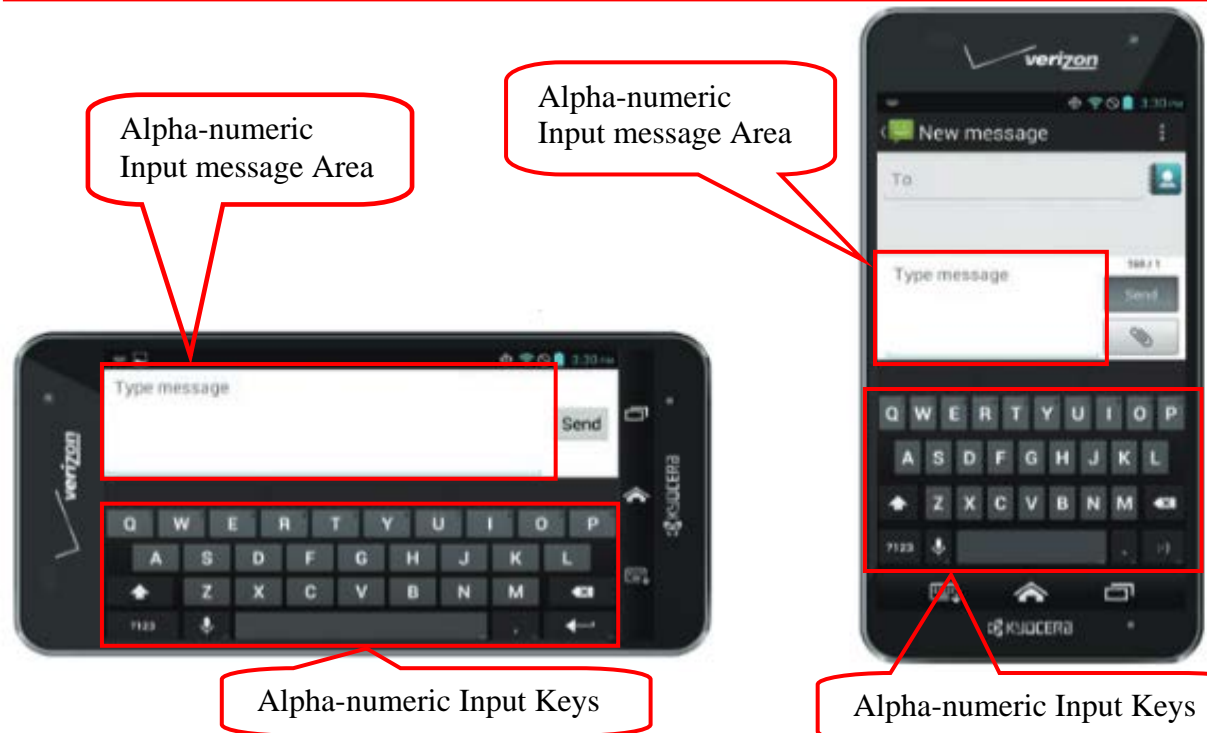
- ▶ On the Incoming call screen, tap  (Starter mode) or flick  (Standard mode).

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

**Source:** [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 63 of 228)

## Kyocera Keyboard

Kyocera keyboard provides you QWERTY keyboard and Phone keypad, and you can choose which to use in both Starter and Standard modes. The Phone keypad displays in a phone-like keypad style and is convenient for users who are used to such a typing system.



The Accused System includes an onscreen keypad/keyboard with alphanumeric input keys which are operated by the user to transmit alphanumeric signals.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 43 and 35 of 228)



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 43 of 228)

an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



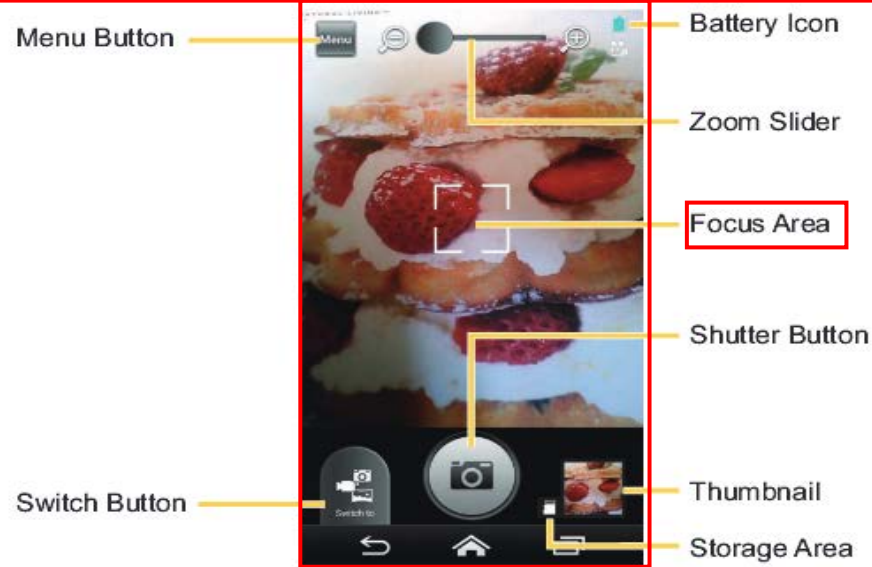
*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/>

8MP camera and camcorder with digital zoom, LED flash, auto-focus; panoramic, HDR, multi-shot, and smile-shutter modes  
1.3MP front-facing camera for video chat and self-portraits

The Accused System comprises of an 8 megapixel rear camera and 1.3 megapixel front camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused system includes an electronic camera for visually framing the subject to be captured.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 147 of 228)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (1.5 GHZ dual core MSM8960 Qualcomm Snapdragon Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

Chipset:  
MSM8960 @ dual-core 1.5GHz  
(QUALCOMM Snapdragon processor)

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)



In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

## Memory:

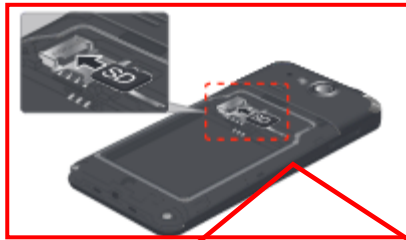
16GB ROM/1.5GB RAM  
MicroSD™ memory card slot (supports up to 32GB)

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-spec-sheet.pdf> (Page 1 of 1)

## Insert a microSD Card

Remove the battery cover to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) on page 9.
2. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card into the slot.



3. Replace the battery cover. For information on how to do this, see step 2 in [Insert and Charge the Battery](#) on page 6.

The Accused System provides a removable memory card slot (up to 32GB) and 1.5 GB RAM for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 186 of 228)

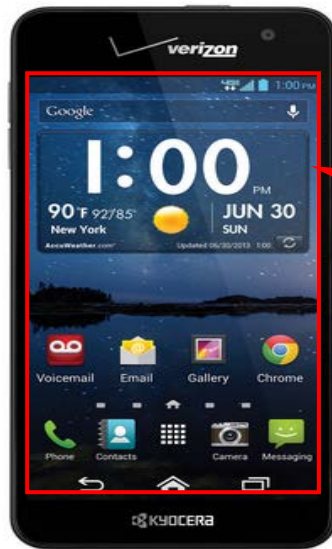
### Connectivity

- CDMA 1xRTT, CDMA 1xEVDO, LTE, GSM, EDGE, UMTS, HSPA+, GPRS

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and



4.3" HD display (1280 x 720) acting as a user interface (Operating System: Android 4.1 (Jelly Bean)).

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/>

Display:  
4.3" impact-resistant, capacitive touchscreen,  
HD (1280 x 720 pixels)

Operating System:  
Android™ 4.1 (Jelly Bean)




The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://sharp-world.com/products/smartphone/fx/Sharp\\_FX\\_user\\_manual-en.pdf](http://sharp-world.com/products/smartphone/fx/Sharp_FX_user_manual-en.pdf) (Page 66 of 182)

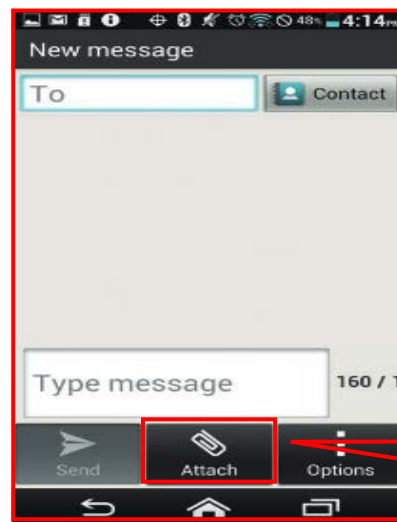
## 1. Transmitting Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voice, audio or video files, or slideshows.

1. Tap  > **Messages** > **Messaging**.  
– or –  
Tap  > **Apps**  > **Messaging**.
2. On the Messaging screen, tap  or . The Compose screen opens.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)



The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.




User can tap on “Attach” icon to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 101 of 228)


## 2. Transmitting Images via Email Messages:

### **Send a Gmail Message**


Use your phone to send Gmail messages.

1. Tap  > **Menu**  or **Apps**  > **Gmail**.
2. In the inbox, tap .
3. Enter the message recipient's email address in the **To** field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Tap a match to enter that address directly.

**Tip:** You can enter a name saved in Contacts to call up the email address. Tap a match from an available list.

4. If you want to send a carbon copy (Cc) or a blind carbon copy (Bcc) of the email to other recipients, tap  > **Add Cc/Bcc**.
5. Enter the subject, and then compose your email.

**Note:** If you want to attach a picture, tap  > **Attach picture**. Locate and then tap the picture you want to attach.

6. After composing your message, tap .

The Accused System provides a user interface where a user can view and transmit images via Email messages by tapping on “Attach Picture”.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 91 of 228)

an integrated power supply for powering both the cellular telephone and the camera.

### Battery & Talk Time

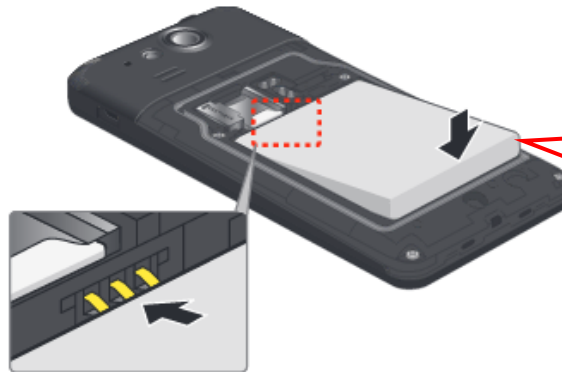
- 2100mAh Lithium Ion (Li-Ion) battery
- Talk Time: up to 13 hours\*
- Standby Time: Up to 9.84 days (236.21 hours)\*

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/specs/>

### Insert and Charge the Battery

Follow the steps below to insert and charge the battery.

1. Insert the battery, making sure to align the gold contacts. Press down gently to secure the battery.

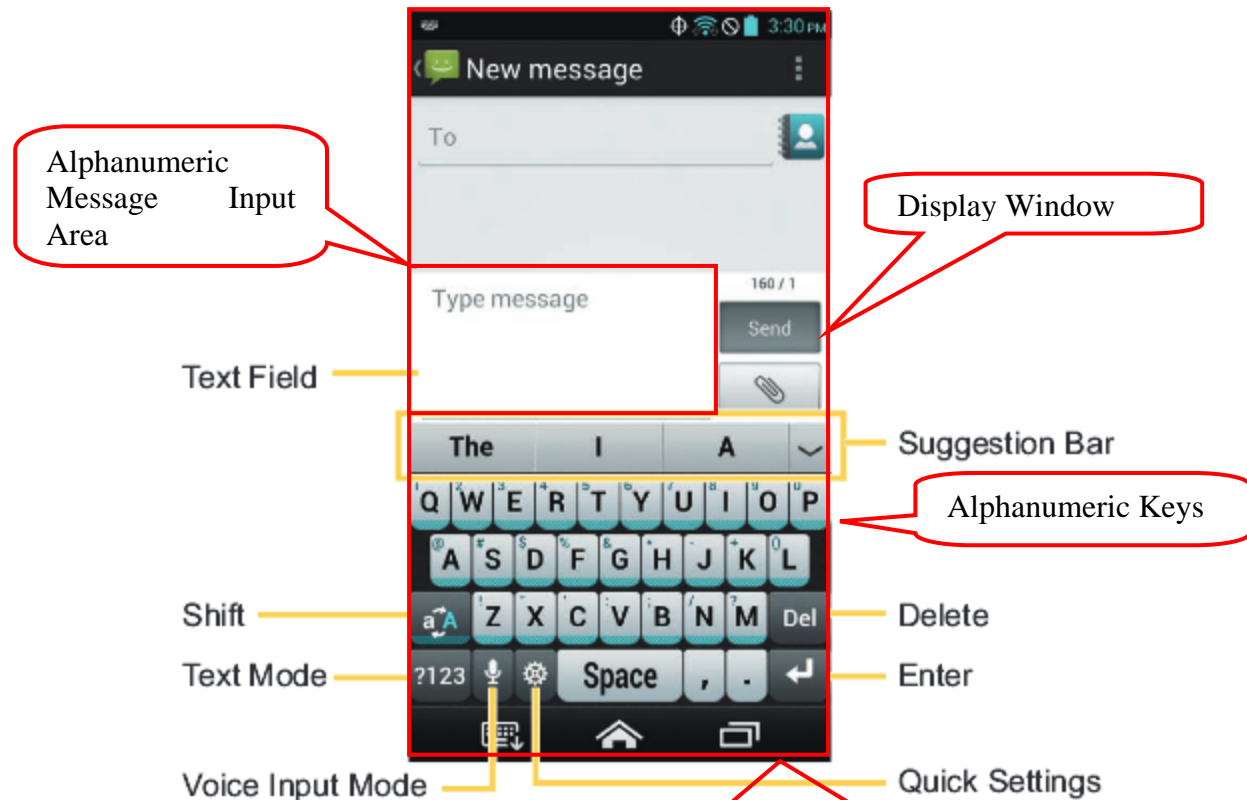


The Accused System includes a power supply (2100mAh Li-Ion battery) for powering the system (telephone and camera).

*Source:* <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 20 of 228)



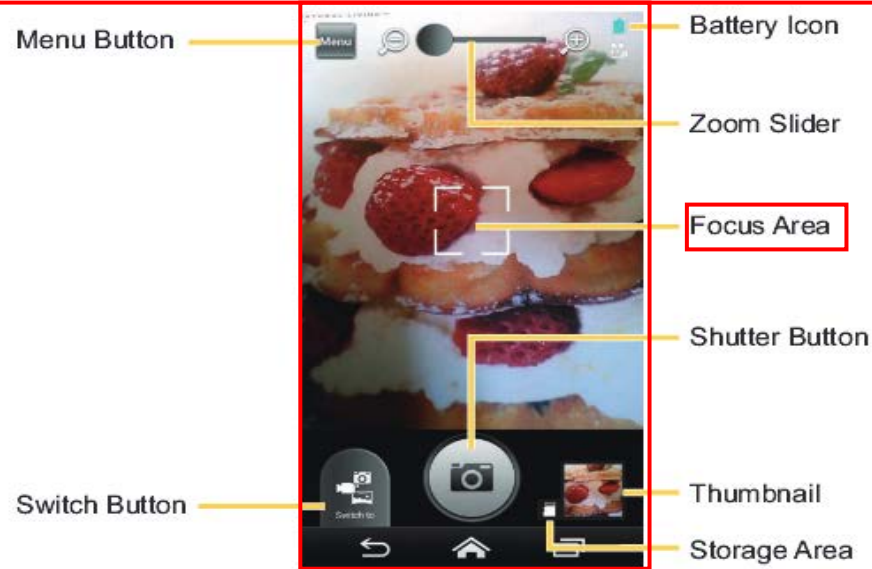
7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image



The Accused System includes a display which is operable to display alphanumeric input message/signals entered by the user via alphanumeric keys.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 43 of 228)

The Viewfinder screen lets you view your subject and access camera controls and options.



The Accused system comprises of display window for framing the visual Image.

Source: <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 147 of 228)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

### ***Insert a microSD Card***

Remove the battery cover to insert a compatible microSD card into your phone.

1. Turn your phone off and remove the battery cover. See [Turn Your Phone On and Off](#) on page 9.
2. Insert a microSD card into the microSD card slot with the gold terminals facing down. Gently push the card into the slot.



3. Replace the battery cover. For information on how to do this, see step 2 in [Insert and Charge the Battery](#) on page 6.

The Accused System provides a removable memory card slot (up to 32GB) for storing captured images. The memory card is located within and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-elite-phone/pdf/kyocera-hydro-elite-user-guide-english.pdf> (Page 186 of 228)

7,365,871 Claim Language	Accused System and Method – KYOCERA HYDRO ELITE
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>

the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

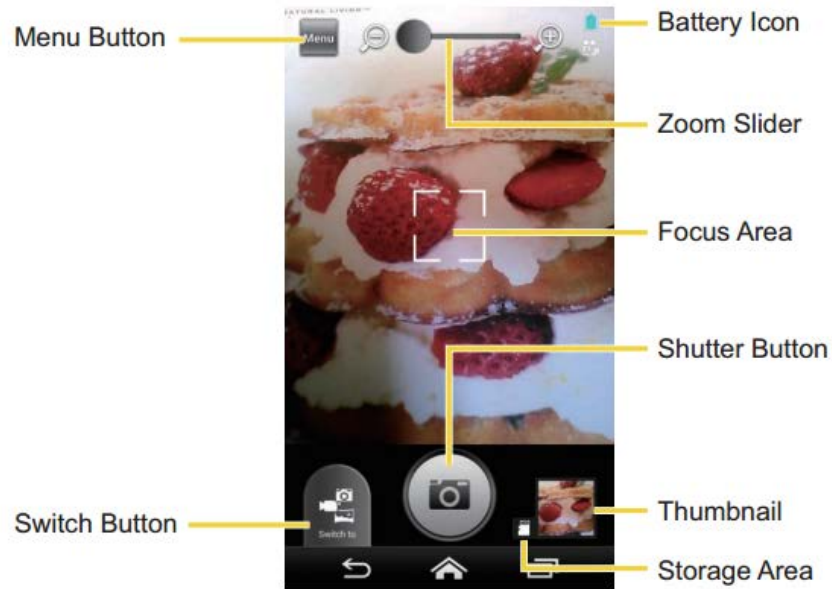
Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));

The Accused System contains a control circuit connected to the camera that contains one of the following functions: zoom

### Camera Viewfinder Screen

The Viewfinder screen lets you view your subject and access camera controls and options.



<http://www.kyocera-wireless.com/hydro-elite/kyocera-hydro-elite-user-guide-english.pdf>

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>

## **Overview of KYOCERA HYDRO XTRM Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA HYDRO XTRM (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.





## **KYOCERA HYDRO XTRM**

Kyocera Ex. 1002  
p. 809

KYO'871-IC 00808

**7,365,871 Claim Language**






**Accused System and Method – KYOCERA HYDRO XTRM**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a handheld device.

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)

	Network (no signal)
	4G (data service)
	3G (data service)
	1x (data service)
	Airplane mode

The Accused System includes a portable housing with built in wireless connectivity, including 2G or 3G or 4G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

(Page 24 of 165)



The Accused System provides a 5.0 MP main camera and 1.3 MP front camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")




- 5.0MP camera with flash and video camcorder and 1.3MP front-facing camera

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

## Phone Calls

### Make Phone Calls

#### Call Using the Phone Dialpad


1. Touch Home  > .
- If the dialpad is not displayed when the Phone app launches, touch the Phone tab .

### Receive Phone Calls

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

#### Answer an Incoming Call

- ▶ On the Incoming call screen, flick the Answer icon .

The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

(Page 34 and 38 of 165)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")

an integral image capture device comprising an electronic camera contained within the portable housing;



The Accused System provides a 5.0 MP main camera and 1.3 MP front camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")

- 5.0MP camera with flash and video camcorder and 1.3MP front-facing camera

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

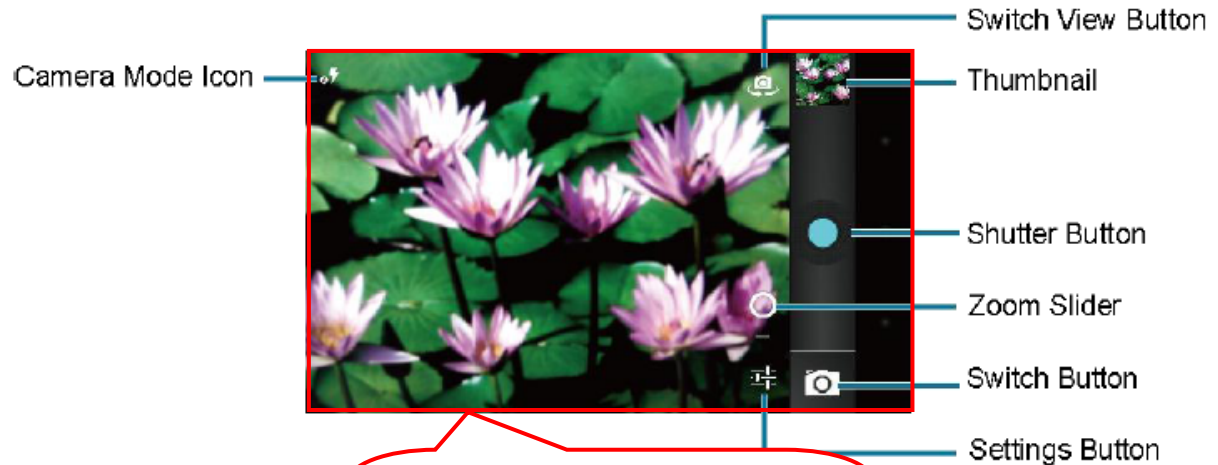
a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Display:**

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

**Camera Viewfinder Screen**



The Accused System comprises a 4.0 inch capacitive display which is operable by user for viewing a visual image.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)(Page 102 of 165)



The Accused System comprises 4.0 inch display and electronic camera in the same housing being commonly movable when the housing is moved by the user.

Source: <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")



a processor in the housing for generating an image data signal representing the image framed by the camera;

- Fast and smart – 1.2GHz dual core processor for fast access to apps and web surfing
- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

The Accused System includes a processor (1.2 GHz Dual Core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

# ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

#### Memory:

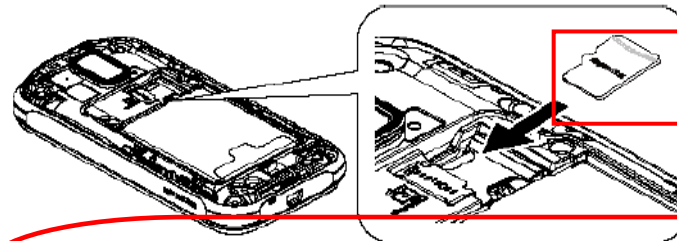
- 4GB ROM/1GB RAM
- microSD™ memory (supports up to 32GB)

Source: [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

#### microSD Card

A microSD™ card is an optional accessory that allows you to store images, videos, music, documents, and voice data on your phone.

2. Insert a microSD card into the microSD card holder with the gold terminals facing down. Gently push the card in until it snaps into place.



The Accused System provides a removable memory card slot (up to 32GB) and 1GB RAM for storage of visual images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 131 of 165)






Display screen of portable housing

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)

## Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

### Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 of 165)

- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

### Radios:

- LTE Cat. 3, CDMA 1x EVDO Rev.A, 1x Advanced

The Accused System is capable of receiving/sending digitized signals (images) to the compatible remote stations over 2G, 3G or 4G network.

Source: [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

a user interface for enabling a user to select the image data signal for viewing and transmission;

**Display:**

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

**Operating System:**

- Android™ 4.1 (Jelly Bean)

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)






4.0 inch, capacitive display (800 x 480) acting as a user interface (Operating System: Android 4.1 (Jelly Bean)).

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")



## 1. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch Save attachment on the options menu.

**Note:** When Auto-retrieve in MMS settings is disabled, only the message header is downloaded. To download the entire message, touch the Download button at the left side of the message. For details, see [Text and MMS Options](#).




The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.


**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 and 68 of 165)



## 2. Transmitting and Receiving Images via Email Messages:


### Send a Gmail Message

1. Touch Home  >  > Gmail.
2. Touch  on the Inbox screen.
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch  > Attach picture, select the app to use, and then locate and select the picture you want to attach.

### Read and Reply to Gmail Messages

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the status bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

#### **Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 58 of 165)






a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;

## 1. Making or receiving telephonic calls :

### Make Phone Calls

#### Call Using the Phone Dialpad


1. Touch Home  >  .
  - If the dialpad is not displayed when the Phone app launches, touch the Phone tab  .

### Receive Phone Calls

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

#### Answer an Incoming Call

- ▶ On the Incoming call screen, flick the Answer icon .

The Accused System provides a telephonic system for sending and receiving audio signals (calling functionality).




#### Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)(Page 34 and 38 of 165)



## 2. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch Save attachment on the options menu.




**Note:** When Auto-retrieve in MMS settings is disabled, only the message header is downloaded. To download the entire message, touch the Download button at the left side of the message. For details, see [Text and MMS Options](#).


The Accused System includes a mobile phone located within the portable housing. The mobile phone provides functionality that allows for the user to convey (or share) image data (photos) with other devices through Multimedia messages.

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 and 68 of 165)


### 3. Transmitting and Receiving Images via Email Messages:


#### Send a Gmail Message

1. Touch Home  >  > Gmail.
2. Touch  on the Inbox screen.
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch  > Attach picture, select the app to use, and then locate and select the picture you want to attach.

#### Read and Reply to Gmail Messages

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the status bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

User can share (or send) image data (photos) with other devices through Email messages.

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 58 of 165)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## Text Entry

### Touchscreen Keyboard

Two types of keyboards are available on your phone: Android keyboard and Swype. Simply touch a text field where you want to enter text to call up a keyboard. You can turn the phone sideways to bring up a bigger keyboard. See [Auto-Rotate Screen](#).

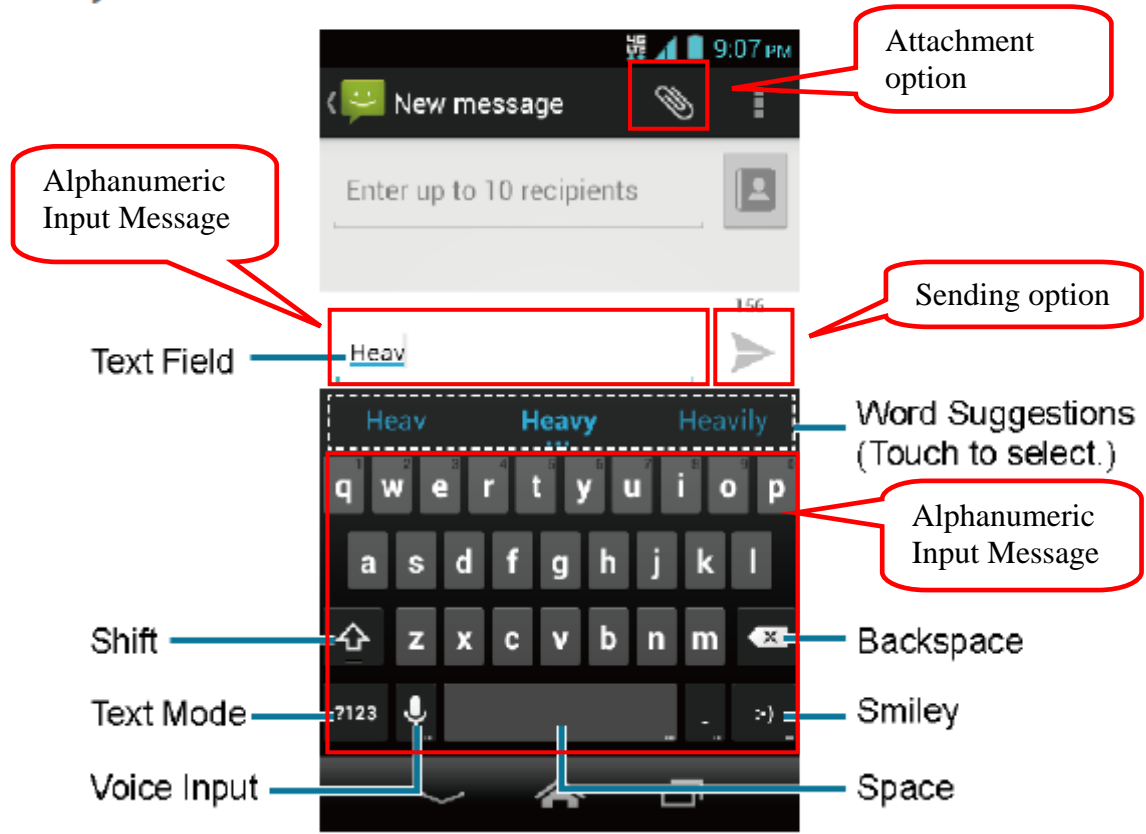
The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)(Page 25 of 165)

# Android Keyboard

## Android Keyboard Overview



Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 25 of 165)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

Radios:

- LTE Cat. 3, CDMA 1x EVDO Rev.A, 1x Advanced

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over 3G or 4G network.

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

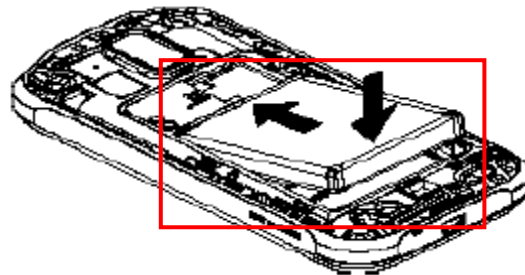
a power supply for powering the system.

**Battery Type:**  
• 2000 mAh Lithium ion (Li-Ion)

The Accused System includes a power supply (battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

2. Insert the battery, contacts end first,

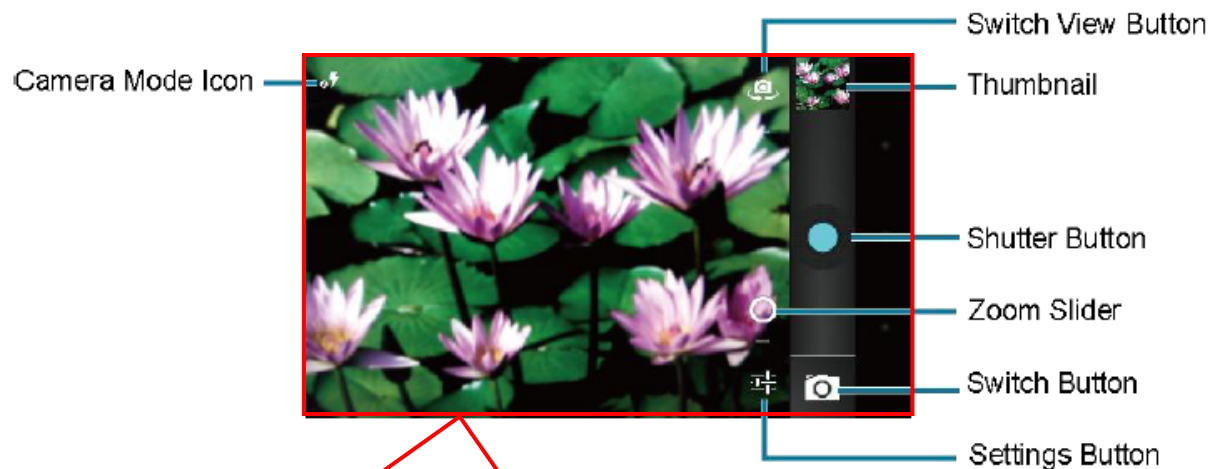


*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 10 of 165)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

### Camera Viewfinder Screen



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

**Source:**

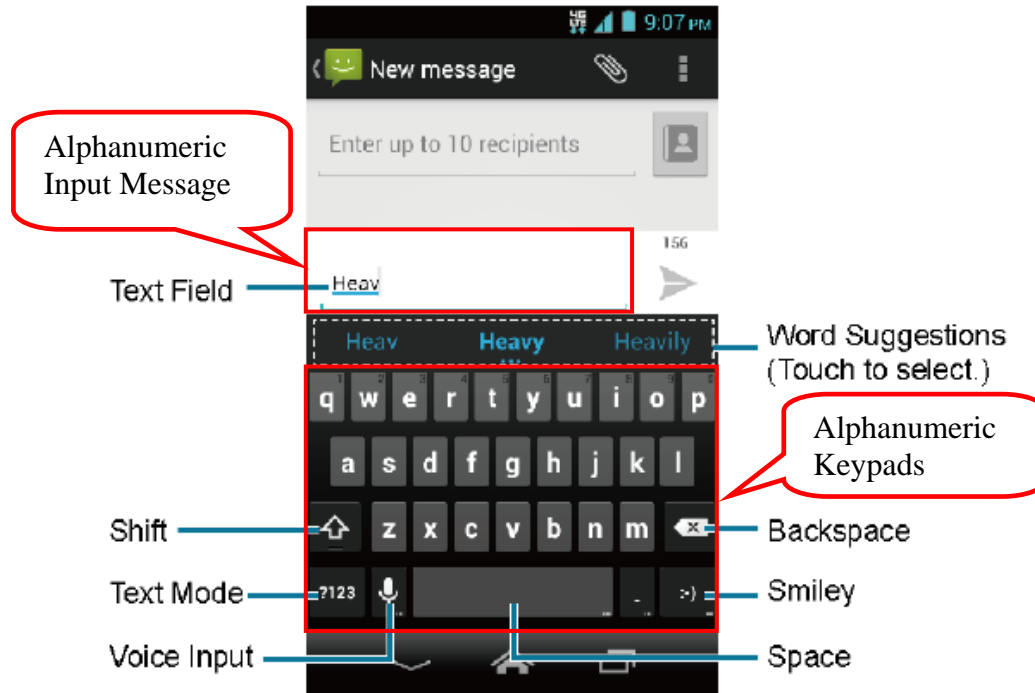
[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)(Page 102 of 165)



3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

## Android Keyboard

### Android Keyboard Overview



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 25 of 165)

4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

#### Memory:

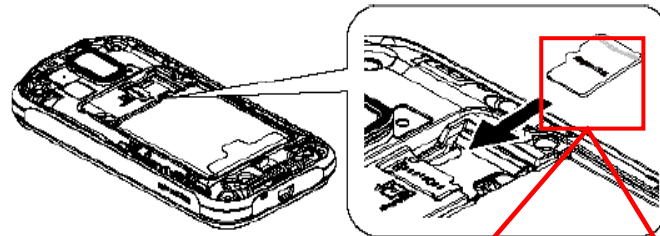
- 4GB ROM/1GB RAM
- microSD™ memory (supports up to 32GB)

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

#### microSD Card

A microSD™ card is an optional accessory that allows you to store images, videos, music, documents, and voice data on your phone.

2. Insert a microSD card into the microSD card holder with the gold terminals facing down. Gently push the card in until it snaps into place.



The Accused System provides a removable memory card for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 131 of 165)

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.

**Display:**

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

**Operating System:**

- Android™ 4.1 (Jelly Bean)



**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)



4" Display for viewing incoming image data.

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch Save attachment on the options menu.

**Note:** When Auto-retrieve in MMS settings is disabled, only the message header is downloaded. To download the entire message, touch the Download button at the left side of the message. For details, see *Text and MMS Options*.

The Accused System includes a display for viewing incoming image data signals or multimedia messages.

**Source:**






[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 68 of 165)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising:



The Accused System includes a handheld device.

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)

	Network (no signal)
	4G (data service)
	3G (data service)
	1x (data service)
	Airplane mode

The Accused System includes a portable housing with built in wireless connectivity, including 2G or 3G or 4G network.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

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The Accused System provides a 5.0 MP main camera and 1.3 MP front camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")



- 5.0MP camera with flash and video camcorder and 1.3MP front-facing camera


*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

## Phone Calls

### Make Phone Calls

#### Call Using the Phone Dialpad

1. Touch Home  > .

  - If the dialpad is not displayed when the Phone app launches, touch the Phone tab .

### Receive Phone Calls

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

#### Answer an Incoming Call

- ▶ On the Incoming call screen, flick the Answer icon .

The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

(Page 34 and 38 of 165)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing;



The Accused System comprises a manually portable housing.

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")





The Accused System provides a 5.0 MP main camera and 1.3 MP front camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)


- 5.0MP camera with flash and video camcorder and 1.3MP front-facing camera

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

## Phone Calls

### Make Phone Calls

#### Call Using the Phone Dialpad

1. Touch Home  > .

- If the dialpad is not displayed when the Phone app launches, touch the Phone tab .


The Accused System is capable of sending and receiving audio calls to a compatible remote receiving station.

### Receive Phone Calls

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

#### Answer an Incoming Call

▶ On the Incoming call screen, flick the Answer icon .

Both camera and phone within the housing are commonly movable by the hand of user.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

(Page 34 and 38 of 165)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals:

## Phone Calls

### Make Phone Calls

#### Call Using the Phone Dialpad

1. Touch Home  > .


- If the dialpad is not displayed when the Phone app launches, touch the Phone tab .

### Receive Phone Calls

When you receive a phone call from a contact, the Incoming call screen appears and displays the caller ID icon, name, and phone number of the calling party. When you receive a phone call from someone who is not stored in People, only the default caller ID icon and phone number appear on the Incoming call screen.

**Note:** If your phone is turned off, all calls automatically go to voicemail.

#### Answer an Incoming Call

► On the Incoming call screen, flick the Answer icon .

#### Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf)

(Page 34 and 38 of 165)

#### Display:

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

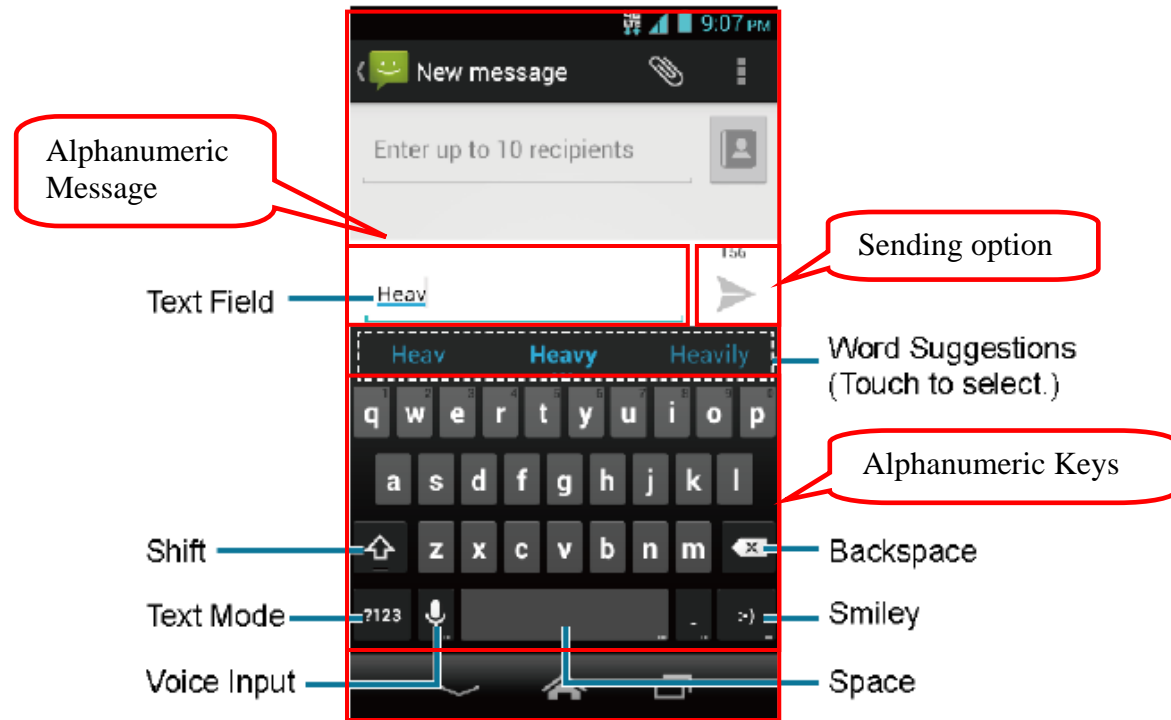


The Accused System consists of a display screen.

*Source: <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")*

# Android Keyboard

## Android Keyboard Overview



The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user. The text messages can be sent over network.




**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 25 of 165)



### 3. Transmitting and Receiving Images via Multimedia Messages:

#### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

#### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch Save attachment on the options menu.




**Note:** When Auto-retrieve in MMS settings is disabled, only the message header is downloaded. To download the entire message, touch the Download button at the left side of the message. For details, see *Text and MMS Options*.


The Accused System is capable of sending or receiving digitized signals to the compatible remote receiving stations.

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 and 68 of 165)

#### 4. Transmitting and Receiving Images via Email Messages:


##### Send a Gmail Message

1. Touch Home  >  > Gmail.
2. Touch  on the Inbox screen.
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch  > Attach picture, select the app to use, and then locate and select the picture you want to attach.

##### Read and Reply to Gmail Messages

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the status bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 58 of 165)

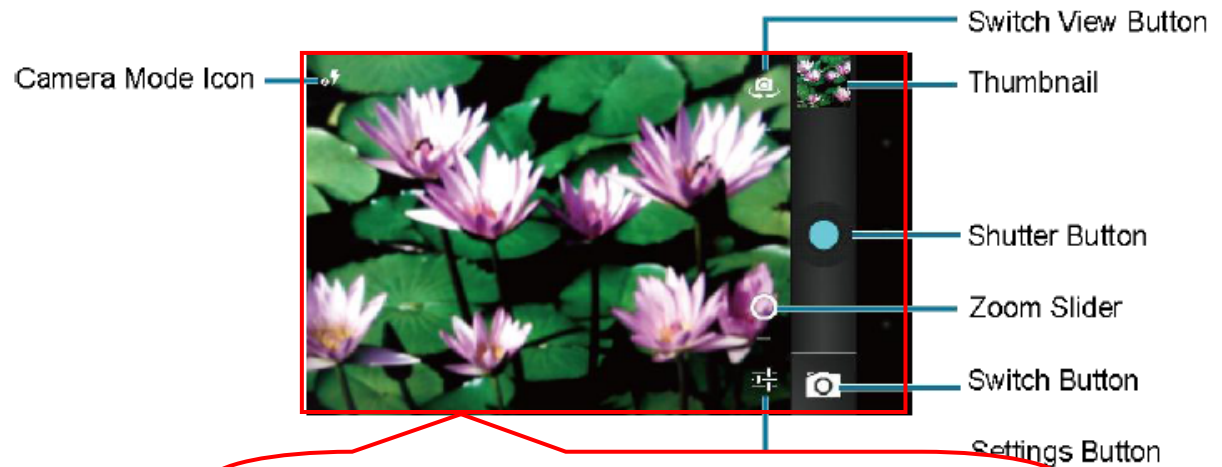
an integral electronic camera in the housing, the camera for visually framing a visual image to be captured;

**Display:**

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

**Camera Viewfinder Screen**



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 102 of 165)





**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)

- 5.0MP camera with flash and video camcorder and 1.3MP front-facing camera

The Accused System provides a 5.0 MP main camera and 1.3 MP front camera for capturing visual images and supported by the portable housing.

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone;

- Fast and smart – 1.2GHz dual core processor for fast access to apps and web surfing
- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

**Radios:**

- LTE Cat. 3, CDMA 1x EVDO Rev.A, 1x Advanced

These images can be sent or shared with other devices over 2G or 3G network.

The Accused System includes a processor (1.2 GHz Dual Core Processor) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

# ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image;

#### Memory:

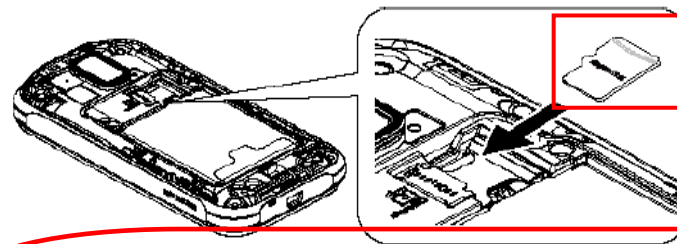
- 4GB ROM/1GB RAM
- microSD™ memory (supports up to 32GB)

Source: [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

#### microSD Card

A microSD™ card is an optional accessory that allows you to store images, videos, music, documents, and voice data on your phone.

2. Insert a microSD card into the microSD card holder with the gold terminals facing down. Gently push the card in until it snaps into place.



The Accused System provides a removable memory card slot (up to 32GB) and 1GB RAM for storage of visual images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page

131 of 165)






Display window of portable housing

*Source:* <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on “View Gallery”)

## Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

### Source:

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 of 165)

- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

### Radios:

- LTE Cat. 3, CDMA 1x EVDO Rev.A, 1x Advanced

The Accused System is capable of receiving/sending digitized signals (images) to/from the compatible remote stations over 2G, 3G or 4G network.

Source: [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Display:**

- 4" IPS, capacitive touchscreen, WVGA (800 x 480 pixels)

**Operating System:**

- Android™ 4.1 (Jelly Bean)

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)






4.0 inch, capacitive display acting as a user interface for viewing framed images (Operating System: Android 4.1 (Jelly Bean)).

**Source:** <http://www.kyocera-wireless.com/hydro-xtrm-phone/> (Click on "View Gallery")



## 1. Transmitting and Receiving Images via Multimedia Messages:

### Send a Multimedia Message (MMS)

When you need to add a little more to a text message, you can send a multimedia message (MMS) with pictures, recorded voices, or audio or video files, or slideshows.

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch . The compose screen opens.
3. Fill in one or more recipients.
  - Enter phone numbers or email addresses in the Enter up to 10 recipients field. If you're sending the message to several recipients, separate the phone numbers or email addresses with commas. As you enter information, any matching phone numbers or addresses from your People list are displayed. Touch a match to enter that number or address.

### View a Multimedia Message (MMS)

1. Touch Home  >  > Messaging.
2. On the Messaging screen, touch a multimedia message or message thread to open it.
3. Touch the attachment to open it.

**Tip:** To save the attachment, touch and hold the message, and then touch Save attachment on the options menu.

**Note:** When Auto-retrieve in MMS settings is disabled, only the message header is downloaded. To download the entire message, touch the Download button at the left side of the message. For details, see *Text and MMS Options*.




**Source:**


[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 65 and 68 of 165)





## 2. Transmitting and Receiving Images via Email Messages:


### Send a Gmail Message

1. Touch Home  >  > Gmail.
2. Touch  on the Inbox screen.
3. Enter the message recipient's email address in the To field. If you are sending the email message to several recipients, separate the email addresses with a comma. As you enter email addresses, any matching addresses from your contacts list are displayed. Touch a match to enter that address directly.

**Note:** If you want to attach a picture, touch  > Attach picture, select the app to use, and then locate and select the picture you want to attach.

### Read and Reply to Gmail Messages

1. Touch Home  >  > Gmail.
2. Touch a message to display it.

**Tip:** You can also access new messages through the status bar. When a new Gmail message arrives, you'll see the  icon in the status bar. Slide the bar down to display notifications. Touch a message to display it.

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- 4G LTE™ – connect to the world at speeds up to 10 times faster than 3G

Radios:

- LTE Cat. 3, CDMA 1x EVDO Rev.A,  
1x Advanced

The Accused System provides a user interface (operating system: Android) where a user can select to view or send multimedia messages or images over the 2G or 3G network.

**Source:** [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

an integrated power supply for powering both the cellular telephone and the camera.

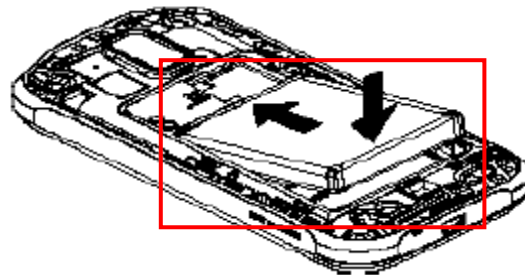
**Battery Type:**

- 2000 mAh Lithium ion (Li-Ion)

The Accused System includes a power supply (battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

2. Insert the battery, contacts end first,



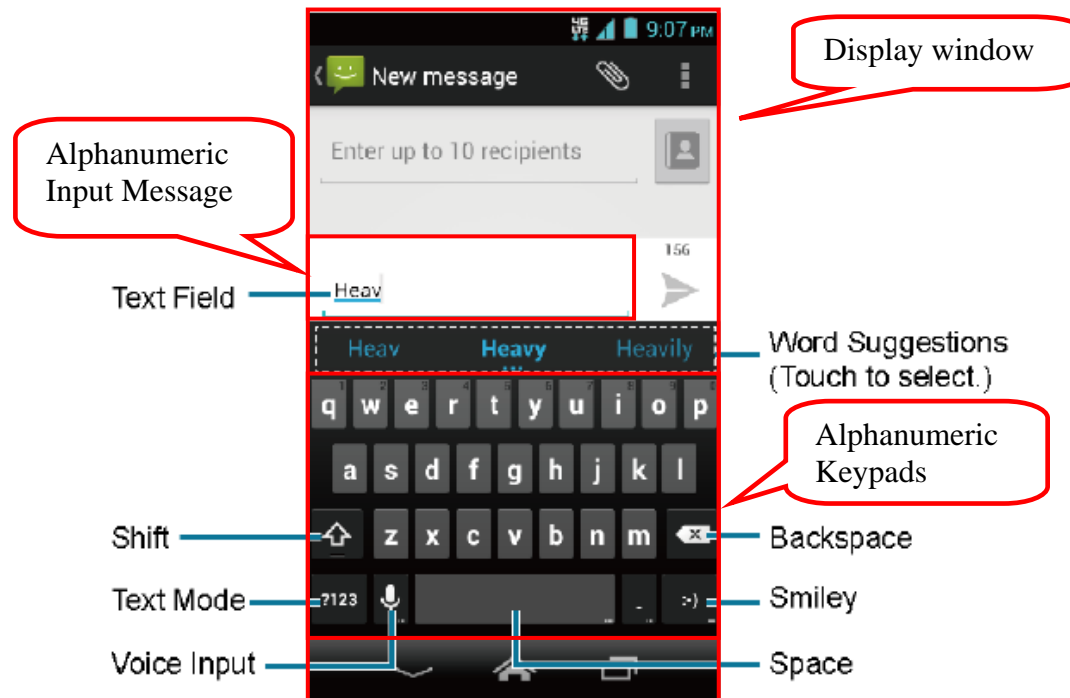
*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 10 of 165)

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image.

## Android Keyboard

### Android Keyboard Overview

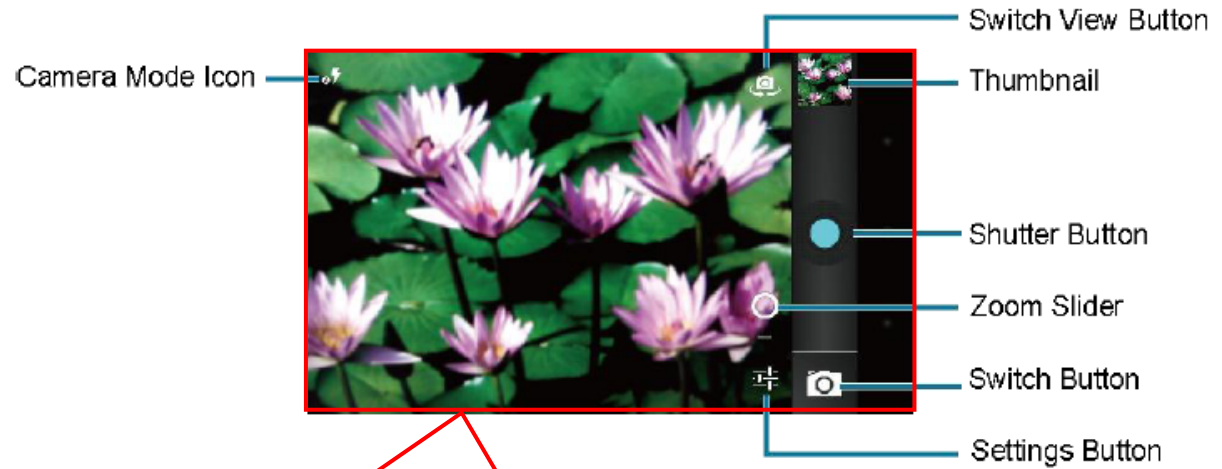


The Accused System includes a display which is operable to display alphanumeric input message/signals entered by the user via alphanumeric keys.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 25 of 165)

## Camera Viewfinder Screen



The Accused system comprises of display window for framing the visual Image.

**Source:**

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 102 of 165)

8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing.

**Memory:**

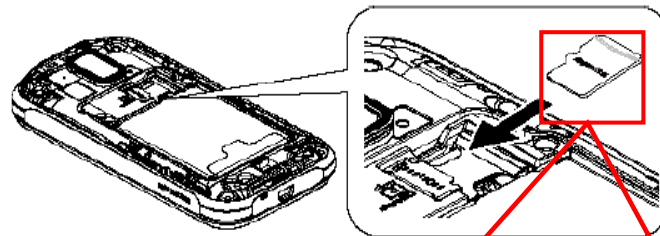
- 4GB ROM/1GB RAM
- microSD™ memory (supports up to 32GB)

*Source:* [http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_Spec_Sheet.pdf)

**microSD Card**

A microSD™ card is an optional accessory that allows you to store images, videos, music, documents, and voice data on your phone.

2. Insert a microSD card into the microSD card holder with the gold terminals facing down. Gently push the card in until it snaps into place.



The Accused System provides a removable memory card for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:*

[http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm-phone/pdf/Hydro_XTRM_User_Guide_en.pdf) (Page 131 of 165)

7,365,871 Claim Language	Accused System and Method – KYOCERA HYDRO XTRM
<p>12. A combination of handheld wireless telephone and digital camera comprising:</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising (step 1 (pre)):</p>
<p>a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a manually portable housing (step 1(a)); and</p> <p>an integral image capture device comprising an electronic camera contained within the portable housing (step 1(b));</p>
<p>a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand (step 1(c));</p>
<p>a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a processor in the housing for generating an image data signal representing the image framed by the camera (step 1(d));</p>

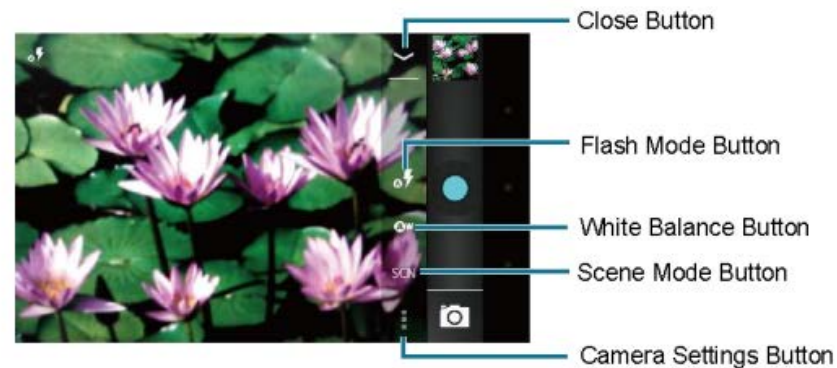
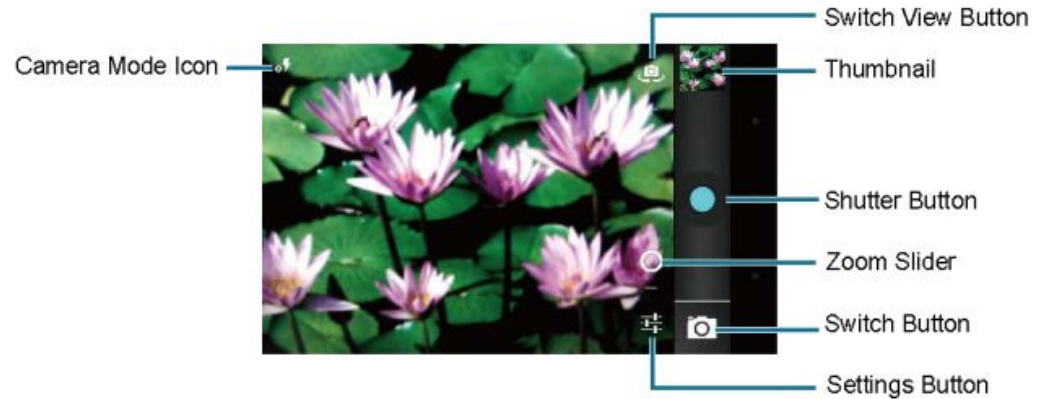
<p>a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image (step 1(e));</p>
<p>the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal (step 1(g)); and</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>
<p>a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals (step 1(h));</p>
<p>a power supply supported by the housing;</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a power supply for powering the system (step 1(j));</p>
<p>the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 1 as if fully stated herein:</p> <p>a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station (step 1(i));</p>



at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

The Accused System contains a control circuit connected to the camera that contains one of the following functions: white balance and zoom

### Camera Viewfinder Screen



[http://www.kyocera-wireless.com/hydro-xtrm/uscellular/Hydro\\_XTRM\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/hydro-xtrm/uscellular/Hydro_XTRM_User_Guide_en.pdf)

<p>13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 4 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.</p>
<p>14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.</p>	<p>Plaintiff incorporates by reference the discussion and evidence from the following step of claim 5 as if fully stated herein:</p> <p>The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.</p>

## **Overview of KYOCERA INCOGNITO (SCP6760) Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA INCOGNITO (SCP6760) (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



**KYOCERA INCOGNITO (SCP6760)**

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA INCOGNITO (SCP6760)**

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)


**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)


## ***Making and Answering Calls***

### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

### ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 25 and 26 of 129)



**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keypad with one-touch keys for Text & Emoticons
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

**Source:** <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)



an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)



Source 1

*Source 1:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

The Accused System comprises a 2.6", QVGA, TFT (320 x 240) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source 2

a processor in the housing for generating an image data signal representing the image framed by the camera;



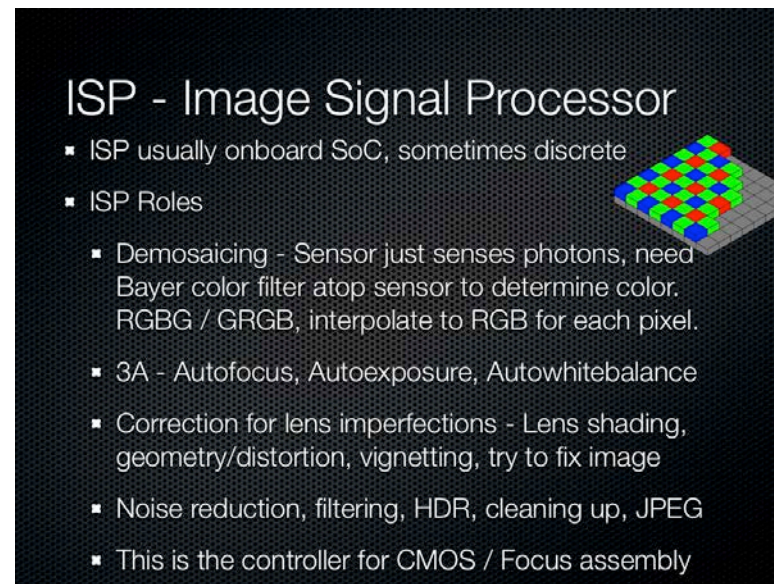
The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

• **QSC6075 chipset**

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.



**ISP - Image Signal Processor**

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

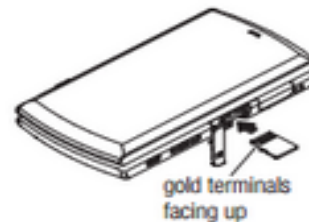
a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

- Supports up to 16GB microSDHC (microSD card not included)

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

#### **Inserting the microSD Card**

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



#### **Removing the microSD Card**

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf) (Page 77 of 129)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a user interface for enabling a user to select the image data signal for viewing and transmission;



Source 1

Main: 2.6",  
QVGA (320 x  
240 pixels) TFT  
Sub-display: 1.1"  
(128 x 64 pixels)  
acting as a user  
interface.

Source 2

*Source 1:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_front\\_closed\\_Final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_front_closed_Final.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

**Screen Resolution:**

Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

**Transmitting Images via Multimedia Messages:**

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (**Picture**, **Video**, or **Audio**).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf)(Page 100 of 129)




a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;


## ***Making and Answering Calls***

### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

### ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760->

[phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-) (Page 25 and 26 of 129)

**Transmitting Images via Multimedia Messages:**

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (**Picture**, **Video**, or **Audio**).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf)(Page 100 of 129)

alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

Full QWERTY keypad with one-touch keys for Text & Emoticons



Alpha-numeric Input Keys

The Accused System includes a touch screen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a power supply for powering the system.

**Battery Type:**  
840 mAh lithium ion (Lilon) battery

**Talk Time:**  
Up to 5.1 hours

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

**1** Install the battery.

- Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

**Charging the Battery**

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.



The Accused System includes a power supply (840mAh Li-Ion battery) for powering the system (Phone).

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 2 and 22 of 129)

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## ***Taking Pictures***

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Pictures* > *Camera* to activate camera mode. Additional camera options are available.
2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf)(Page 83 of 129)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

## Entering Text

### Selecting a Text Input Mode

Your phone provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text.

1. From a screen where you can enter text, press **TEXT MODE..** (right softkey) to change the text mode. (If you are in the message entry screen, press **OPTIONS** (right softkey) > **Text Mode.**)



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

Alphanumeric Keys

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 31 of 129)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

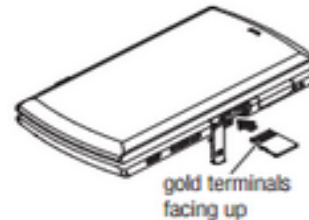
4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

- Supports up to 16GB microSDHC (microSD card not included)

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

#### **Inserting the microSD Card**

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



#### **Removing the microSD Card**

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 77 of 129)




5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)


### Viewing Messages

Highlight a thread and press  to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Highlight a message to see details for that message.

## Accessing Email

Using Email on your phone is even easier than using multiple email accounts on your computer. Launch the application for instant access to all your accounts. (The procedures below are subject to the application updates.)

1. Once you have set up your Email, press  > **Messaging** > **Email** to launch the application. (You will see your default account inbox.)

– or –

From an **Email New Message** notice (if you have enabled Mail Push), select **VIEW** (left softkey) to go to your inbox.

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf> (Page 101 and 108 of 129)

**7,365,871 Claim Language**

**Accused System and Method – KYOCERA INCOGNITO(SCP6760)**

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity, including 3G.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)


**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)


## ***Making and Answering Calls***

### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

### ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

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The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.



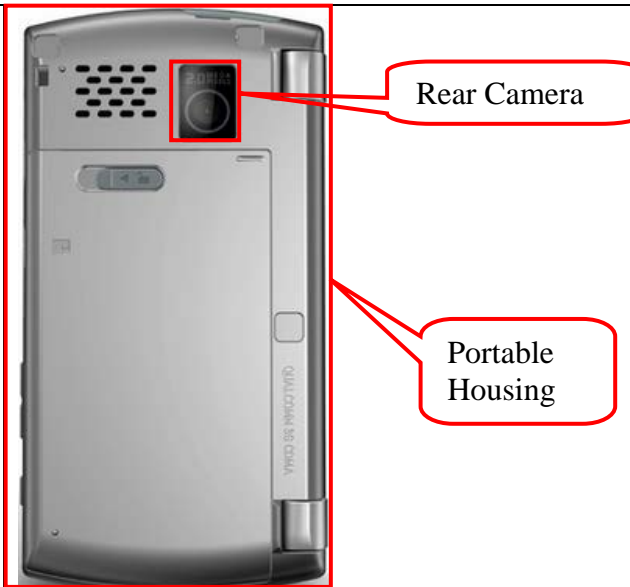
*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keyboard
- 2.0 megapixel camera and camcorder

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



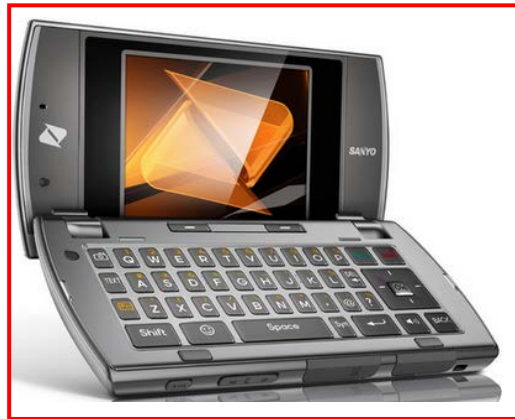
*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals




Cellular telephone

Source: [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

## ***Making and Answering Calls***


### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

## **Answering Calls**

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 25 and 26 of 129))

- Full QWERTY keypad with one-touch keys for Text & Emoticons



Alpha-numeric  
Input Keys

The Accused System includes  
an keypad/keyboard with  
alphanumeric input keys which  
are operated by the user to  
transmit alphanumeric signals.

*Source :* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)



an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear Camera

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder


*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

## ***Taking Pictures***

---

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Pictures* > *Camera* to activate camera mode. Additional camera options are available.

The Accused system includes an electronic camera for visually framing the subject to be captured.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf) ( Page 83 of 129)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

• **QSC6075 chipset**

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

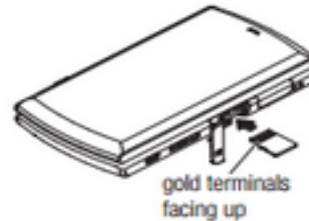
<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

- Supports up to 16GB microSDHC (microSD card not included)

#### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



#### Removing the microSD Card

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf)(Page 77 of129)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.



2.6" QVGA display (320x240) acting as a user interface.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

**1. Transmitting Images via Multimedia Messages:**

3. Compose a message.

■ Press **OPTIONS** (right softkey) to select additional options.

4. Select <Add Attachment> and select a category of files you would like to attach (*Picture, Video, or Audio*).

5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)

6. Select files you would like to attach.

7. Review your message and press **SEND** (left softkey).

The Accused System provides a user interface where a user can transmit images via multimedia messages by tapping on “Attach” icon.

[Source: http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 100 of 129)



an integrated power supply for powering both the cellular telephone and the camera.

**Battery Type:**  
840 mAh lithium ion (Lilon) battery

**Talk Time:**  
Up to 5.1 hours

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

1. **Install the battery.**
  - Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

#### **Charging the Battery**

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 2 and 22 of 129)

The Accused System includes a power supply (840 mAh Li-Ion battery) for powering the system (Phone and Camera).

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image

## Entering Text

### Selecting a Text Input Mode

Your phone provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text.

1. From a screen where you can enter text, press **TEXT MODE..** (right softkey) to change the text mode. (If you are in the message entry screen, press **OPTIONS** (right softkey) > **Text Mode.**)



The Accused System includes a display which is operable to display alphanumeric message entered by the user via alphanumeric keys.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf) (Page 31 of 129)

## ***Taking Pictures***

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Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Pictures* > *Camera* to activate camera mode. Additional camera options are available.

The Accused system comprises of display window for framing the visual Image.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 83 of 129)

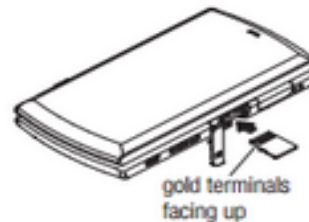
8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

- Supports up to 16GB microSDHC (microSD card not included)

Source: [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

#### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



#### Removing the microSD Card

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 77 of 129)

12. A combination of handheld wireless telephone and digital camera comprising:



Source 1

The Accused System comprises of a 1.3 megapixel auto focus rear camera for capturing visual images.

The Accused System is a handheld device with built in wireless connectivity and camera.



Source 2

*Source 1:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keypad with one-touch keys for Text & Emoticons
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

(a) a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)


**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)


## ***Making and Answering Calls***

### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

### ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 25 and 26 of 129)





Rear Camera

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

- Full QWERTY keypad with one-touch keys for Text & Emoticons

- 2.0 MP camera and camcorder

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

(b) a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)



Source 1

The Accused System includes a display for viewing incoming image data signals or multimedia message.





Source 2

*Source 1:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

## ***Taking Pictures***

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Pictures* > *Camera* to activate camera mode. Additional camera options are available.
2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 83 of 129)



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

(c) a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



Display Window

The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

• QSC6075 chipset

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

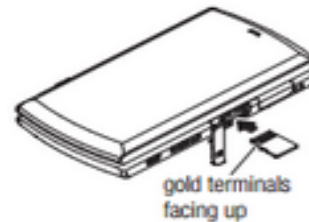
• Supports up to 16GB microSDHC (microSD card not included)

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

(d) a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



### Removing the microSD Card

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 77 of 129)

**Transmitting Images via Multimedia Messages:**

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (**Picture**, **Video**, or **Audio**).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

The Accused System provides a user interface where a user can transmit images via multimedia messages.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 100 of 129)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)


(e) the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;

## ***Making and Answering Calls***


---

### ***Making Calls***

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)

### ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call.

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 25 and 26 of 129)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

(f) a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

- Full QWERTY keypad with one-touch keys for Text & Emoticons

Source: <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>



The Accused System includes a Slide-Out Qwerty Keyboard with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Alpha-numeric Input Keys

The Accused System includes a touchscreen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/incognito-scp-6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp-6760-phone/gallery/large/3_4_open(right)_final.jpg)



(g) a power supply supported by the housing;

**Battery Type:**  
840 mAh lithium ion (Lilon) battery

**Talk Time:**  
Up to 5.1 hours

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

1. **Install the battery.**

- Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

**Charging the Battery**

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 2 and 22 of 129)

The Accused System includes a power supply (840mAh Li-Ion battery) for powering the system (Phone).

(h) the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)

**Transmitting Images via Multimedia Messages:**

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (*Picture*, *Video*, or *Audio*).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

The Accused System provides a user interface where a user can transmit images via multimedia messages.


**Source:** [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 100 of 129)

## ***Accessing Messages***

*To read a message:*

- ▶ When you receive a message, your phone will display a notification message. Use your navigation key or press **VIEW** (left softkey) to view the message.

## ***Viewing Messages***

Highlight a thread and press  to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.



Highlight a message to see details for that message.

*Source: [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 101 of 129)*

(i) at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

## ***Taking Pictures***

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Pictures* > *Camera* to activate camera mode. Additional camera options are available.
2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

- *Image Controls* to select an option from *Brightness*, *White Balance*, or *Contrast*.



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost Mobile Incognito SCP6760 User Guide en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost%20Mobile%20Incognito%20SCP6760%20User%20Guide%20en.pdf) (Page 83 and 84 of 129)

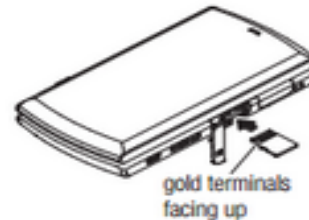
13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

- Supports up to 16GB microSDHC (microSD card not included)

*Source:* <http://www.kyocera-wireless.com/incognito-scp6760-phone/specs/>

#### **Inserting the microSD Card**

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



#### **Removing the microSD Card**

1. Open the microSD slot and push the card inward slightly and release, causing it to come about halfway out of the slot.
2. Gently remove the card from the slot.
3. Close the slot cover.

The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost\\_Mobile\\_Incognito\\_SCP6760\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Boost_Mobile_Incognito_SCP6760_User_Guide_en.pdf) (Page 77 of 129)

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito\\_SCP6760\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-scp6760-phone/pdf/Incognito_SCP6760_Spec_Sheet.pdf)



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source 1



Source 2

*Source 1:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760\\_back\\_closed\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/6760_back_closed_final.jpg)

## ***Accessing Messages***

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Highlight a thread and press  to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Highlight a message to see details for that message.

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15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



*Source:* [http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3\\_4\\_open\(right\)\\_final.jpg](http://www.kyocera-wireless.com/incognito-scp6760-phone/gallery/large/3_4_open(right)_final.jpg)



## **Overview of KYOCERA INCOGNITO Infringement of the '871 Patent**

Plaintiff accuses KYOCERA of infringement by making, using, selling, offering for sale and importation the KYOCERA INCOGNITO (the “Accused System”), and all substantially similar KYOCERA camera phone (or smart phone) products. The term “Accused System” includes the associated computer hardware and internal semiconductors, software and data, and processes and methods related thereto.

The Accused System is accused of directly infringing U.S. Patent No. 7,365,871 (the “871 Patent”). The term “Accused System” includes the associated hardware, computer hardware, internal semiconductors, software and data, and processes and methods related thereto. The asserted claims include elements that are implemented, at least in part, by proprietary electronics and software in the Accused System and Method. The precise designs, processes, and algorithms used in them are held secret, at least in part, and are not publicly available in their entirety. An analysis of KYOCERA’s documentation and/or source code may be necessary to fully and accurately describe all infringing features and functionality of the Accused System and, accordingly, Plaintiff reserves the right to supplement these contentions once such information is made available to Plaintiff. Furthermore, Plaintiff reserves the right to revise these contentions, including as discovery in the case progresses, in view of the Court's final claim construction in this action and in connection with the provision of its expert reports.



## KYOCERA INCOGNITO

Kyocera Ex. 1002  
p. 930

KYO'871-IC 00929

7,365,871 Claim Language

Accused System and Method – KYOCERA INCOGNITO

1. A handheld self-contained cellular telephone and integrated image processing system for both sending and receiving telephonic audio signals and for capturing a visual image and transmitting it to a compatible remote receiving station of a wireless telephone network, the system comprising:



The Accused System includes a portable housing with built in wireless connectivity.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)



**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)


## Making and Answering Calls

### Making Calls

#### Using the External Keypad

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

### Answering Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 34 and 35 of 176)



Rear Camera

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a manually portable housing;



The Accused System comprises a manually portable housing.

*Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)*

an integral image capture device comprising an electronic camera contained within the portable housing;



*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a display for displaying an image framed by the camera, the display being supported by the housing, the display and the electronic camera being commonly movable in the housing when the housing is moved by hand;

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



The Accused System comprises a 2.6", QVGA, TFT (320 x 240) and electronic cameras (rear camera) in the same housing being commonly movable when the housing is moved by the user.

Source 1

Source 2

*Source 1:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)

*Source 2:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)



a processor in the housing for generating an image data signal representing the image framed by the camera;



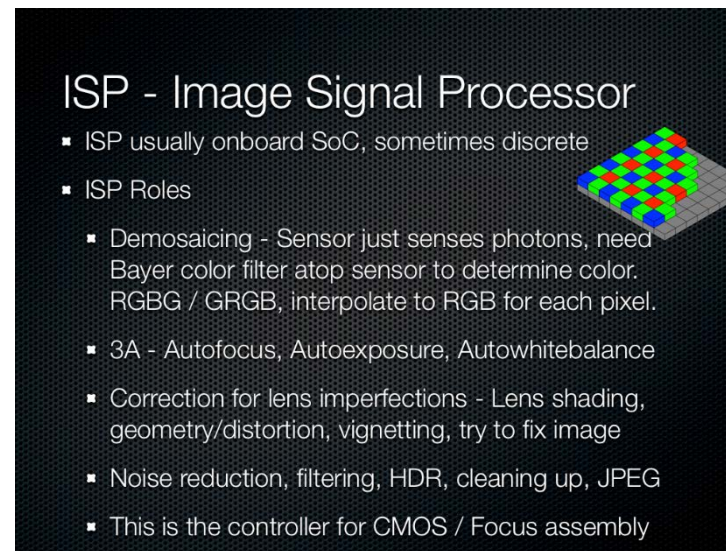
The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)

• **QSC6075 chipset**

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.



**ISP - Image Signal Processor**

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly

Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the wireless telephone network the digitized framed image;

- **1GB microSD memory card (comes installed)**

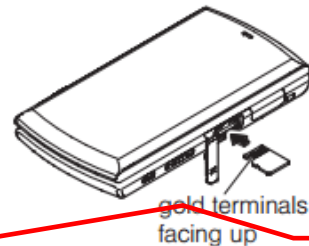
*Supports up to 16GB microSDHC.*

- **microSD card adapter**

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

### **Inserting the microSD Card**

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)*

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a user interface for enabling a user to select the image data signal for viewing and transmission;



Main: 2.6",  
QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1"  
(128 x 64 pixels)  
acting as a user interface.

Source 1

Source 2

Source 1: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_front\\_w\\_OLED.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_front_w_OLED.jpg)

Source 2: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)

The Accused System provides a user interface where a user can select to view or send images via MMS or Email messages.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

### Transmitting Images via Multimedia Messages:

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (*Picture, Video, or Audio*).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

#### *To reply to a message:*

1. While the message is displayed, press **REPLY** (left softkey).
2. Select *Reply to Sender* or *Reply All* if you are replying to MMS messages.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.



*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 of 176)

a telephonic system in the housing for sending and receiving digitized audio signals and for sending the image data signal;


## Making and Answering Calls

### Making Calls

#### Using the External Keypad

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

### Answering Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 34 and 35 of 176)

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*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 of 176)



alphanumeric input keys in the housing for permitting manually input digitized alphanumeric signals to be input to the processor, the telephonic system further used for sending the digitized alphanumeric signals;

## ***Entering Text With the QWERTY Keypad***

Your phone features a QWERTY keypad, specifically designed for easy and comfortable text entry.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 46 of 176)



Alpha-numeric  
Input Keys.

The Accused System includes a touchscreendisplay with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

a wireless communications device adapted for transmitting any of the digitized signals to the compatible remote receiving station; and

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over data network.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a power supply for powering the system.

## **Battery Type: 840 mAh lithium ion (Lilon) battery**

### **Excellent Battery Performance**

- Talk Time - Standard Battery: up to 5.1 hours<sup>3</sup>

*Source:* <http://www.kyocera-wireless.com/incognito-phone/specs/>

#### **1. Install the battery.**

- Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

#### **Charging the Battery**

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.



*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 14 and 30 of 176)

The Accused System includes a power supply (840mAh Li-Ion battery) for powering the system (Phone).

2.The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display for framing the image to be captured by the image capture device is operable to display the image at the system whereby the image can be viewed and framed prior to capture in the memory.

## Taking Pictures

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Photos & Videos* > *Camera* to activate camera mode. (Additional camera options are available.
2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.



The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 106 of 176)

3. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing alphanumeric messages input at the alphanumeric keys.

## Entering Text

### Selecting a Text Input Mode

Your phone provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text.

1. From a screen where you can enter text, press **TEXT MODE..** (right softkey) to change the text mode. (If you are in the message entry screen, press **OPTIONS** (right softkey) > **Text Mode.**)

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 42 of 176)



The Accused System includes a display which is operable to display alphanumeric message.

Alphanumeric keypad.

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

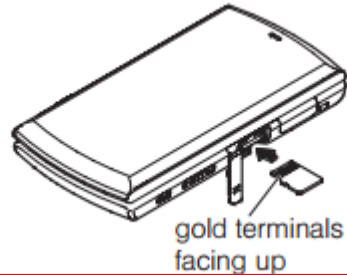
4. The self-contained cellular telephone and integrated image processing system of claim 1, further comprising a removable memory module in addition to the memory, said removable memory able to be removably housed in the housing for storing captured image data signals.

- 1GB microSD memory card (comes installed)  
*Supports up to 16GB microSDHC.*
- microSD card adapter

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)*

5. The self-contained cellular telephone and integrated image processing system of claim 1, wherein the display is operable to display for viewing incoming image data signals.



The Accused System includes a display for viewing incoming image data signals or multimedia message.

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open.jpg)

### Accessing Messages

To read a message:

- ▶ When you receive a message, your phone will display a notification message. Use your navigation key or press **VIEW** (left softkey) to view the message.

### Viewing Messages

Highlight a thread and press **MENU OK** to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Highlight a message to see details for that message.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 and 126 of 176)

6. A handheld cellular telephone having an integrated electronic camera for both sending and receiving telephonic audio signals and for capturing a visual image, converting the visual image to a digitized image data signal and transmitting digitized image data signal via a cellular telephone network, the cellular telephone comprising



The Accused System includes a portable housing with built in wireless connectivity, including 3G.

**Source:**

[http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)

**Mode:**

CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

**Source:** [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



### Highlights



- Unique glow-thru keypad and screen
- Music and video player with microSD card slot
- Full QWERTY keyboard
- 2.0 MP camera and camcorder
- 3G Speed

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)


## Making and Answering Calls

### Making Calls

#### Using the External Keypad

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

### Answering Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

**Source:**

[http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf)

(Page 34 and 35 of 176)



Rear Camera

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises of a 2 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a manually portable housing supporting the cellular telephone and the integrated electronic camera, the cellular telephone and the integrated electronic camera being movable in common with the housing



*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

a cellular telephone in the housing, the cellular telephone further including a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network, a keypad for entering manually input alphanumeric signals to be transmitted over the cellular telephone network, and a display window for viewing the manually input alphanumeric signals



Cellular telephone



**Source**

[http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)


## Making and Answering Calls

### Making Calls

#### Using the External Keypad

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

## ***Answering Calls***

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused system comprises a transmitter/receiver for transmitting and receiving audio telephone messages over a cellular telephone network.

### **Source:**

[http://www.kyocera-wireless.com/incognitophone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognitophone/pdf/Sprint_Incognito_User_Guide_en.pdf)  
(Page 34 and 35 of 176)

## *Entering Text With the QWERTY Keypad*

Your phone features a QWERTY keypad, specifically designed for easy and comfortable text entry.



Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

## ***Entering Text***

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### ***Selecting a Text Input Mode***

Your phone provides convenient ways to enter letters, numbers, and symbols whenever you are prompted to enter text.

1. From a screen where you can enter text, press ***TEXT MODE..*** (right softkey) to change the text mode. (If you are in the message entry screen, press ***OPTIONS*** (right softkey) > ***Text Mode.***)

The Accused System includes an onscreen keypad/keyboard with alphanumeric input keys which are operated by the user to transmit alphanumeric signals.

**Source:** [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 42 of 176)



an integral electronic camera in the housing, the camera for visually framing a visual image to be captured



Rear Camera

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera which is commonly movable with the housing.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



## ***Taking Pictures***

---

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > ***Photos & Videos > Camera*** to activate camera mode. (Additional camera options are available.)

*To review your stored pictures and videos in the In Phone folder:*

- ▶ Highlight  and press  > ***Photos & Videos > My Photos & Videos > In Phone.***

The Accused system includes an electronic camera for visually framing the subject to be captured.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 94 and 111 of 176)

a processor associated with the electronic camera for capturing and digitizing the framed image in a format for transmission over the cellular telephone network via the cellular telephone



The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal. The processing platform(s) necessarily provide the visual image data in a digital format and the execution of the compression algorithm necessarily provides compressed visual image data. Examples of said circuitry include but are not limited to the processor core(s), PowerVR GPUs, and DSPs (including but not limited to image signal processor(s)).

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

• QSC6075 chipset

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

In addition ISP does all the other housekeeping, it controls autofocus, exposure, and white balance for the camera system. Recently correcting for lens imperfections like vignetting or color shading imparted by the imperfect lens system [...] has been added, along with things like HDR recombining, noise reduction, other filtering, face or object detection, and conversion between color spaces. There's variance between the features that ISP does, but this is really the controller for getting that bayer data into a workable image array.

## ISP - Image Signal Processor

- ISP usually onboard SoC, sometimes discrete
- ISP Roles
  - Demosaicing - Sensor just senses photons, need Bayer color filter atop sensor to determine color. RGBG / GRGB, interpolate to RGB for each pixel.
  - 3A - Autofocus, Autoexposure, Autowhitebalance
  - Correction for lens imperfections - Lens shading, geometry/distortion, vignetting, try to fix image
  - Noise reduction, filtering, HDR, cleaning up, JPEG
  - This is the controller for CMOS / Focus assembly



Obviously the last part is the human interface part of the equation, which is an ongoing pain point for many OEMs. There are two divergent camps in smartphone camera UX – deliver almost no options, let the ISP and software configure everything automatically (Apple), and offer nearly every option and toggle that makes sense to the user (Samsung). Meanwhile other OEMs sit somewhere in-between (HTC, others).

<http://www.anandtech.com/show/6777/understanding-camera-optics-smartphone-camera-trends/4>

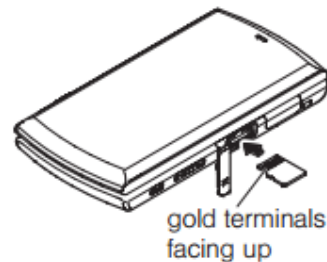
a memory associated with the processor for receiving and storing the digitized framed image, accessible for selectively displaying in the display window and accessible for selectively transmitting over the cellular telephone network the digitized framed image

- **1GB microSD memory card (comes installed)**  
*Supports up to 16GB microSDHC.*
- **microSD card adapter**

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)

The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing. The memory may include, but is not limited to, one or more of the following: internal memory, embedded flash memory, embedded RAM, or cache memory. The memory may be associated with one or more digital signal processors (including but not limited to image signal processors) or other processing units.

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

**Highlights**

- Unique glow-thru keypad and screen
- Music and video player with microSD card slot
- Full QWERTY keyboard
- 2.0 MP camera and camcorder
- 3G Speed

The Accused System includes both internal as well as external memories which are accessible for selectively displaying and transmitting digitized images to the compatible remote receiving stations over telephone network.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

a user interface for enabling a user to selectively display the digitized framed image in the display window and subsequently transmit the digitized framed image over the cellular telephone network; and

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)

The Accused System provides a user interface where a user can select to view or send Images via Multimedia messages or Email.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



2.6" QVGA display (320 x 240) acting as a user interface.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

**1. Transmitting Images via Multimedia Messages:**

3. Compose a message.

- Press **OPTIONS** (right softkey) to select additional options.

4. Select <Add Attachment> and select a category of files you would like to attach (*Picture, Video, or Audio*).

5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)

6. Select files you would like to attach.

7. Review your message and press **SEND** (left softkey).

*To reply to a message:*

1. While the message is displayed, press **REPLY** (left softkey).

2. Select *Reply to Sender* or *Reply All* if you are replying to MMS messages.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 of 176)

The Accused System provides a user interface where a user can transmit images via multimedia messages



an integrated power supply for powering both the cellular telephone and the camera.

## **Battery Type:** 840 mAh lithium ion (Lilon) battery

### Excellent Battery Performance

- Talk Time - Standard Battery: up to 5.1 hours<sup>3</sup>

*Source:* <http://www.kyocera-wireless.com/incognito-phone/specs/>

#### 1. Install the battery.

- Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

#### Charging the Battery

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.

*Source:*



[http://www.kyocerawireless.com/incognitophone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocerawireless.com/incognitophone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 14 and 30 of 176)

The Accused System includes a power supply (840mAh Li-Ion battery) for powering the system (Phone and camera).

7. The handheld cellular telephone of claim 6, wherein the display window for viewing the alphanumeric signals is within the display window for framing the visual image

## Taking Pictures

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Photos & Videos* > *Camera* to activate camera mode. (Additional camera options are available.)
  2. Using the phone's Main Screen as a viewfinder, aim the camera lens at your subject.
- *Review Media* to go to the In Phone folder or memory card folder to review your saved pictures.
  - *Details/Edit* to edit your picture or display details relating to your pictures.



The Accused system comprises of display window for framing the visual Image.

**Source:** [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 94 and 111 of 176)

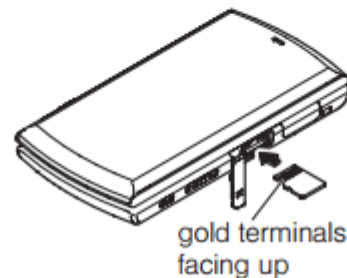
8. The handheld cellular telephone of claim 6, further including a second memory selectively removable from the housing

- **1GB microSD memory card (comes installed)**  
*Supports up to 16GB microSDHC.*
- **microSD card adapter**

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)*

The Accused System provides a removable memory card slot for storage of visual Images. The memory card is located within and supported by the portable housing.

12. A combination of handheld wireless telephone and digital camera comprising:



Source 1

The Accused System is a handheld device with built in wireless connectivity and camera.

The Accused System comprises of a 2.0 megapixel auto focus rear camera for capturing visual images.



Source 2

Source 1: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)

Source 2: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

The Accused System comprises of a 2.0 megapixel rear camera for capturing visual images and supported by the portable housing.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

(a) a handheld housing which supports both the wireless telephone and the digital camera, the wireless telephone and electronic camera being commonly movable with the housing;



The Accused System includes a portable handled housing with built in wireless connectivity.

*Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)*

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)



The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*


## Making and Answering Calls

### Making Calls

#### Using the External Keypad

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

### Answering Calls

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 34 and 35 of 176)



The Accused System comprises a manually portable housing supporting both cellular telephone and electronic camera (2.0 MP Rear Camera) which are commonly movable with the housing.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

- Full QWERTY keyboard
- 2.0 MP camera and camcorder

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



(b) a display supported in the housing for framing an image to be captured and for viewing the image, whereby an operator can view and frame the image prior to capture;

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



Source 1

Source 1: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)



Source 2

Source 2: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

## **Taking Pictures**

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Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Photos & Videos* > *Camera* to activate camera mode. (Additional camera options are available.)

2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

The Accused System includes a display which is operable to display the image to be captured. Also, the image can be viewed and framed on the display prior to capture in the memory.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 106 of 176)

(c) a processor for processing the image framed by the camera for generating a digitized framed image as displayed in the display;



The Accused System includes a processor (QSC6075 Chipset) supported by the portable housing capable of generating an image data signal.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)

• **QSC6075 chipset**

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

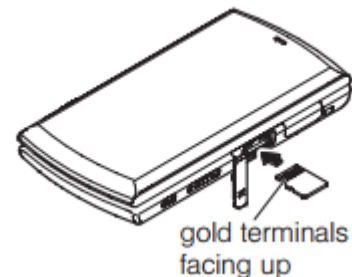
(d) a memory associated with the processor for receiving and storing the digitized framed image, for selectively displaying in the display window and for selectively transmitting over a wireless telephone network the digitized framed image;

- 1GB microSD memory card (comes installed)  
*Supports up to 16GB microSDHC.*
- microSD card adapter

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)*

### Transmitting Images via Multimedia Messages:

3. Compose a message.
    - Press **OPTIONS** (right softkey) to select additional options.
  4. Select <Add Attachment> and select a category of files you would like to attach (*Picture, Video, or Audio*).
  5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
  6. Select files you would like to attach.
  7. Review your message and press **SEND** (left softkey).
- To reply to a message:*
1. While the message is displayed, press **REPLY** (left softkey).
  2. Select *Reply to Sender* or *Reply All* if you are replying to MMS messages.

The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 of 176)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals (Here: MMS) to the compatible remote receiving stations over wireless data networks connectivity.



*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

(e) the wireless telephone being selectively operable to accept and digitize audio signals to be transmitted, the wireless telephone being selectively operable to convert received digitized audio signals into acoustic audio, the wireless telephone being selectively operable to transmit and receive non-audio digital signals, the non-audio digital signals including a selected digitized framed image;


## **Making and Answering Calls**

### **Making Calls**

#### **Using the External Keypad**

1. Enter a phone number from standby mode. (If you make a mistake while dialing, touch  to erase the numbers.)
2. Touch .

### **Answering Calls**

1. Make sure your phone is on. (If your phone is off, incoming calls go to voicemail.)
2. Touch  to answer an incoming call. (Depending on your settings, you may also answer incoming calls by pressing other keys.)

The Accused System is capable of sending and receiving audio calls to/from a compatible remote receiving station.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 34 and 35 of 176)

**Mode:**  
CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



(f) a set of input keys supported by the housing to permit alphanumeric signals to be manually input by an operator into the wireless telephone, the alphanumeric signals being presented in the display for viewing by the operator;

## ***Entering Text With the QWERTY Keypad***

Your phone features a QWERTY keypad, specifically designed for easy and comfortable text entry.

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)  
(Page 46 of 176)



Alpha-numeric  
Input Keys

The Accused System includes a touchscreen display with alphanumeric input keys which are operated by the user for sending alphanumeric signals.

Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

(g) a power supply supported by the housing;

**Battery Type:**  
840 mAh lithium ion (Lilon) battery  
Excellent Battery Performance

- Talk Time - Standard Battery: up to 5.1 hours<sup>3</sup>

Source: <http://www.kyocera-wireless.com/incognito-phone/specs/>

1. Install the battery.

- Slide the battery release latch into its unlock position and slide the battery cover downward to remove it.

**Charging the Battery**

Keeping track of your battery's charge is important. If your battery level becomes too low, your phone automatically turns off, and you will lose any information you were just working on.

Always use a Sprint-approved or Kyocera-approved desktop charger, travel charger, or vehicle power adapter to charge your battery.

1. Plug the phone charger into an electrical outlet.
2. Plug the other end of the phone charger into the micro-USB connector located on the upper right side of your phone.

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 14 and 30 of 176)

The Accused System includes a power supply (840mAh Li-Ion battery) for powering the system (Phone).

(h) the wireless telephone including a wireless transmitter/receiver for transmitting digital signals sent from and receiving digital signals sent to the wireless telephone; and

**Mode:**  
**CDMA EVDO, Dual-band Digital  
(800, 1900 MHz)**

The Accused System is capable of sending digitized signals to the compatible remote receiving stations over wireless data networks.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)

### Transmitting Images via Multimedia Messages:

3. Compose a message.
  - Press **OPTIONS** (right softkey) to select additional options.
4. Select <Add Attachment> and select a category of files you would like to attach (*Picture, Video, or Audio*).
5. Select a location where your file is stored. (You can also choose to take a new picture/video/audio.)
6. Select files you would like to attach.
7. Review your message and press **SEND** (left softkey).

#### *To reply to a message:*

1. While the message is displayed, press **REPLY** (left softkey).
2. Select *Reply to Sender* or *Reply All* if you are replying to MMS messages.



The Accused System provides a user interface to view and select the captured images that needs to be transmitted to other remote receiving station via MMS.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 of 176)

(i) at least one camera control circuit connected to an input device for controlling at least one of the following functions: gain, pedestal, setup, white clip, lens focus, white balance, lens iris, lens zoom.

## Taking Pictures

Taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button.

1. Highlight  and press  > *Photos & Videos* > *Camera* to activate camera mode. (Additional camera options are available.)
2. Using the phone's main screen as a viewfinder, aim the camera lens at your subject.

- *Image Controls* to select an option from *Brightness*, *White Balance*, or *Contrast*.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 106 and 110 of 176)



The Accused System includes a display which is operable to display the image to be captured and camera controls. White Balance can be controlled by tapping their respective buttons on the viewfinder screen of the camera.

*Source:* [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_2.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_2.jpg)

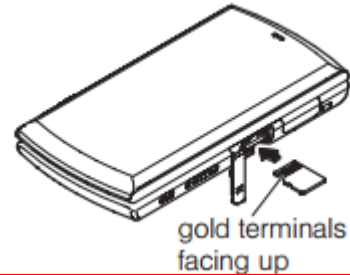
13. The combination of claim 12 and further comprising: a removable memory module removably housed in the housing for storing captured images.

- 1GB microSD memory card (comes installed)  
*Supports up to 16GB microSDHC.*
- microSD card adapter

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)*

### Inserting the microSD Card

1. Open the microSD slot cover and insert a microSD card into the slot with the gold terminals facing up (see illustration below).
2. Gently press the card until it snaps into place.
3. Close the slot cover.



The Accused System provides a removable memory card (supports up to 16GB) for storage of visual Images. The memory card is located within and supported by the portable housing.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 99 of 176)*

14. The combination of claim 12 and further comprising: the display also being operable for viewing images received by the receiver.

**Screen Resolution:**  
Main: 2.6", QVGA (320 x 240 pixels) TFT  
Sub-display: 1.1" (128 x 64 pixels)  
glow-thru OLED

Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito\\_Spec\\_Sheet.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Incognito_Spec_Sheet.pdf)



Source 1

The Accused System includes a display for viewing incoming image data signals or multimedia message.



Source 2

Source 1: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)


Source 2: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_back.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_back.jpg)

## ***Accessing Messages***

*To read a message:*

- ▶ When you receive a message, your phone will display a notification message. Use your navigation key or press **VIEW** (left softkey) to view the message.

## ***Viewing Messages***

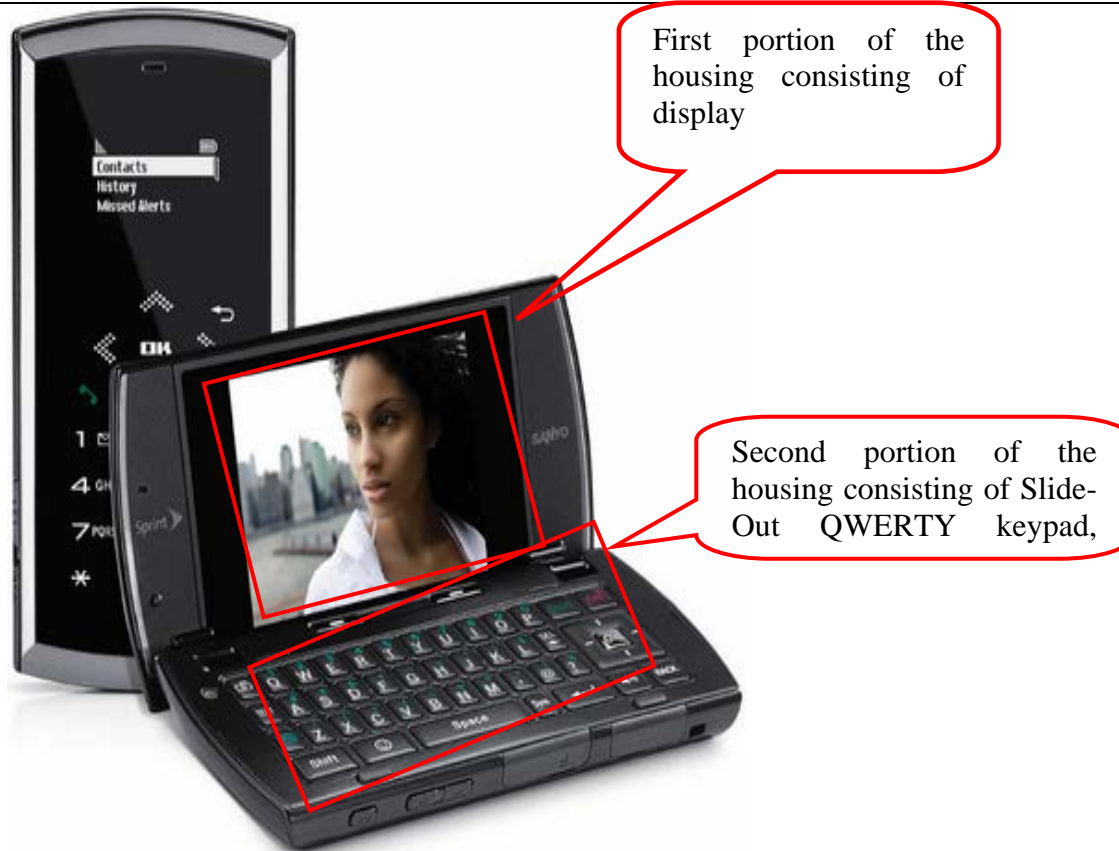
Highlight a thread and press  to display the messages sent to and received from a particular contact, in reverse chronological order. Failed, pending, and draft messages are also listed.

Highlight a message to see details for that message.

*Source: [http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint\\_Incognito\\_User\\_Guide\\_en.pdf](http://www.kyocera-wireless.com/incognito-phone/pdf/Sprint_Incognito_User_Guide_en.pdf) (Page 125 and 126 of 176)*



15. The combination of claim 12 and further comprising: the housing having a first portion, the housing having a second portion joined to the first portion, at least one of the first portion and the second portion being moveable in relation to the other of the first portion and the second portion, the first portion and the second portion also being commonly movable by hand when fixed in relation to each other.



*Source: [http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito\\_open\\_and\\_closed.jpg](http://www.kyocera-wireless.com/incognito-phone/gallery/large/Incognito_open_and_closed.jpg)*