Samsung Galaxy S III

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The **Samsung Galaxy S III** is a multi-touch, slate-format smartphone designed, developed, and marketed by Samsung Electronics that runs the Android operating system. It has additional software features, expanded hardware, and a redesigned physique from its predecessor, the Samsung Galaxy S II. The S III employs an intelligent personal assistant (S Voice), eye-tracking ability, increased storage, and a wireless charging option. Depending on country, the 4.8-inch (120 mm) smartphone comes with different processors and RAM capacity, and 4G LTE support.[12] The device was launched with Android 4.0.4 "Ice Cream Sandwich", and can be updated to Android 4.3 "Jelly Bean". The phone's successor, the Samsung Galaxy S4, was announced on 14 March 2013 and was released the following month.

Following an 18-month development phase, Samsung unveiled the S III on 3 May 2012.[13] The device was released in 28 European and Middle Eastern countries on 29 May 2012, before being progressively released in other major markets in June 2012. Prior to release, 9 million pre-orders were placed by more than 100 carriers globally.[14] The S III was released by approximately 300 carriers in nearly 150 countries at the end of July 2012.[4] More than 20 million units of the S III were sold within the first 100 days of release.[15] Samsung has since sold more than 50 million units.[5]

Due to overwhelming demand and a manufacturing problem with the blue version of the phone,[16] there was an extensive shortage of the S III, especially in the United States. Nevertheless, the S III was well-received commercially and critically, with some technology commentators touting it as the "iPhone killer". In September 2012, TechRadar ranked it as the No. 1 handset in its constantly updated list of the 20 best mobile phones,[17] while *Stuff* magazine likewise ranked it at No. 1 in its list of 10 best smartphones in May 2012.[18] The handset also won the "European Mobile Phone of 2012–13" award from the European Imaging and Sound Association,[19] as well as *T3* magazine's "Phone of the Year" award for 2012.[20] It played a major role in boosting Samsung's record operating profit during the second quarter of 2012.[21] As of November 2012, the Galaxy S III is part of a high-profile lawsuit between Samsung and Apple.[22] In November 2012, research firm Strategy Analytics announced that the Galaxy S III had overtaken the Apple iPhone 4S to become the world's best-selling smartphone model in Q3 2012.[23]

Samsung Galaxy S III

Galaxy S III in White

Manufacturer	Samsung Electronics
Slogan	"Designed for Humans (Inspired by Nature)"[1][2]
Series	Galaxy S
Compatible networks	2G GSM/GPRS/EDGE – 850, 900, 1800, 1900 MHz[3] 3G UMTS/HSPA+/CDMA2000 – 850, 900, 1700, 1900, 2100 MHz[3] 4G LTE – 700, 800, 1700, 1800, 1900, 2600 MHz
First released	29 May 2012
Availability by country	145 countries (July 2012)[4]
Units sold	9 million orders before release; 50 million total (as of 14 March 2013)[5]
Predecessor	Samsung Galaxy S II
Successor	Samsung Galaxy S4
Related	Samsung Galaxy Note II Samsung Galaxy S III Mini Samsung ATIV S

Contents

History

Design work on the S III started in late 2010 under the supervision of Chang Dong-hoon, Samsung's Vice President and Head of the Design Group of Samsung Electronics. From the start, the design group concentrated on a trend which Samsung dubs "organic", which suggests that a prospective design should reflect natural elements such as the flow of water and wind.[24] Some of the results of this design were the curved outline of the phone and its home screen's "Water Lux" effect, where taps and slides produce water ripples.[24]

Throughout the eighteen-month design process, Samsung implemented stringent security measures and procedures to maintain secrecy of the eventual design until its launch. Designers worked on three prototypes concurrently while regarding each of them as the final product. Doing so required a constant duplication of effort as they had to repeat the same process for all three prototypes.[25][26] The prototypes, which taking photos of was forbidden, were locked in a separate lab accessible only by core designers; the company's employees transported them instead of third-party couriers.[26][27] "Because we were only permitted to see the products and others weren't," explained Principal Engineer Lee Byung-Joon, "we couldn't send pictures or drawings. We had to explain the Galaxy S III with all sorts of words."[28] Despite such security measures, specifications of one of the three units were leaked by Vietnamese website Tinhte, although it was not the selected design.[29][30]

Type	Touchscreen smartphone
Form factor	Slate
Dimensions	136.6 mm (5.38 in) H 70.6 mm (2.78 in) W 8.6 mm (0.34 in) (9.0 mm (0.35 in) on S. Korea model) D[6][7]
Weight	133 g (4.69 oz)
Operating system	Android 4.0.4/4.1.2 "Ice Cream Sandwich" / "Jelly Bean" (TouchWiz "Nature UX" GUI) Upgrades to 4.3 "Jelly Bean" (December 2013)[8] Upgradable to Android 4.4.2 KitKat (Snapdragon variants)
Root access	Yes[9]
Unrestricted bootloader	Yes[9]
System on chip	Samsung Exynos 4 or Qualcomm Snapdragon S4 MSM8960
CPU	1.4 GHz quad-core Cortex-A9 or 1.5 GHz dual-core Krait
GPU	Mali-400 MP4 Adreno 225
Memory	1 GB RAM (international version) 2 GB RAM (LTE versions, selected markets)
Storage	16, 32 or 64 GB flash memory
Battery	2,100 mAh, 7.98 Wh, 3.8 V Li-ion User replaceable
Data inputs	List
Display	4.8 in (120 mm) HD Super AMOLED (720×1280) List [6]
Rear camera	8 megapixels List
Front camera	1.9 megapixels Zero shutter lag HD video (720p) at 30 frames/s[6]
Connectivity	List
Other	List In production

Speculation in the general public and media outlets regarding the handset's specifications began gathering momentum several months before its formal unveiling in May 2012. In February 2012, prior to the Mobile World Congress in Barcelona, Spain, there were rumors that the handset would incorporate a 1.5 GHz quad-core processor, a display of 1080p (1080×1920 pixels) resolution, a 12-megapixel rear camera and a HD Super AMOLED Plus touchscreen.[31][32] More accurate rumoured specifications included 2 GB of RAM, 64 GB of internal storage, 4G LTE, a 4.8-inch (120 mm) screen, an 8-megapixel rear camera, and a 9-millimetre (0.35 in) thick chassis.[31][32] Samsung confirmed the existence of the Galaxy S II's successor on 5 March 2012, but it was not until late April 2012 that Samsung's Senior Vice-President Robert Yi confirmed the phone's name to be "Samsung Galaxy S III".[33][34]
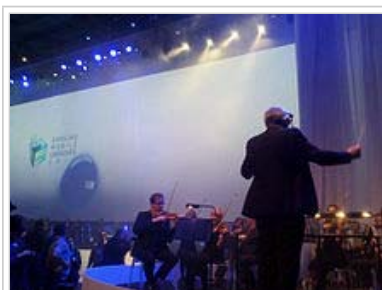
Development status	
SAR	■ Int'l version: 0.490 W/kg 1 g (head) 1.02 W/kg 1 g (body) 1.02 W/kg 1 g (hotspot)[11] ■ U.S. version: 0.55 W/kg (head) 1.49 W/kg (body)[6]
Website	Website (http://www.Samsung.com/global/galaxys3/)

After inviting reporters in mid-April, Samsung launched the Galaxy S III during the Samsung Mobile Unpacked 2012 event at Earls Court Exhibition Centre, London, on 3 May 2012, instead of unveiling their products earlier in the year during either the World Mobile Congress or Consumer Electronics Show.[13][35] One explanation for this decision is that Samsung wanted to minimize the time between its launch and availability.[36] The keynote address of the hour-long event was delivered by Loesje De Vriese, marketing director of Samsung Belgium.[37]

Following the launch of the Galaxy S4 in June 2013, Samsung was reportedly retiring the phone earlier than planned due to low sales numbers and to streamline manufacturing operations.[38]

The Galaxy S III was launched at Samsung Mobile Unpacked 2012 (3 May 2012).

Specifications

Hardware and design

The Galaxy Nexus (left) and the Galaxy S III

The Galaxy S III has a magnesium chassis measuring 136.6 mm (5.38 in) long, 70.7 mm (2.78 in) wide, and 8.6 mm (0.34 in) thick, with the device weighing 133 grams (4.7 oz). Samsung abandoned the rectangular design of the Galaxy S and Galaxy S II, and instead incorporated round corners and curved edges, reminiscent of the Galaxy Nexus.[39] The device has been available in several color options, white, blue-grey, red, black, brown, and gray.[40] A "Garnet Red" model was made available exclusively to U.S. carrier AT&T on 15 July 2012.[41][42]

The S III comes in two distinct variations that differ primarily in the internal hardware. The international S III version has Samsung's Exynos 4 Quad system on a chip (SoC) containing a 1.4 GHz quad-core ARM Cortex-A9 central processing unit (CPU) and an ARM Mali-400 MP graphics processing unit (GPU).[43] According to Samsung, the Exynos 4 Quad doubles the performance of the Exynos 4 Dual used on the S II, while using 20 percent less power.[44] Samsung had also released several 4G LTE versions—4G facilitates higher-speed mobile connection compared to 3G—in selected countries to exploit the corresponding communications infrastructures that exist in those

markets.[45] Most of these versions use Qualcomm's Snapdragon S4 SoC featuring a dual-core 1.5 GHz Krait CPU and an Adreno 225 GPU.[46] The South Korean and Australia versions are a hybrid of the international and 4G-capable versions.[7]

The S III has a maximum of 2 GB of RAM, depending on model.[45] The phone comes with either 16 or 32 GB of internal storage, with a 64 GB version to be available internationally; additionally, microSDXC storage offers a further 64 GB for a potential total of 128 GB.[47] Moreover, 50 GB of space is offered for two years on Dropbox—a cloud storage service—for purchasers of the device, doubling rival HTC's 25 GB storage for the same duration.[48]

The S III's HD Super AMOLED display measures 4.8 inches (120 mm) on the diagonal, making it Samsung's third largest phone display, only exceeded by the Galaxy Note's 5.3 inches (130 mm) and the Galaxy Note II's 5.55 inches (141 mm).[49] With a 720×1280-pixel (720p) resolution, its pixel per inch (PPI, a measure of pixel density) is a relatively high 306,[47] which is accommodated by the removal one of the three subpixels—red, green and blue—in each pixel to create a PenTile matrix-display; consequently, it does not share the "Plus" suffix found on the S II's Super AMOLED Plus display.[50] The glass used for the display is the damage-resistant Corning Gorilla Glass 2.[39] The device's software includes a feature known as "Smart Stay", which uses the device's front camera to detect whether the user's eyes are looking at the screen, and prevents the screen from automatically turning off while the user is still looking at the screen.[51]

The S III has an 8-megapixel camera similar to that of the Galaxy S II. It can take 3264×2448 resolution photos and record videos in 1920×1080-pixel (1080p) resolution. Samsung improved the camera's software over that of its predecessor to include zero shutter lag, and Burst Mode and Best Shot, which work together to quickly take numerous photos before the best-judged frame is selected.[52] The phone can also take pictures while recording videos.[50] The rear-facing camera is complemented by a 1.9-megapixel front-facing camera that can record 720p videos.[52] The phone has LED flash and autofocus.[53] [54]

Back view of the Japanese S III model, SC-06D

In addition to the 4.8-inch (120 mm) touchscreen, the S III has several physical user inputs, including a home button located below the screen, a volume key on the left side and a power/lock key on the right.[55] At the top there is a 3.5-millimetre (0.14 in) headphone jack and one of the two microphones on the S III; the other is located below the home button.[55] The S III is advertised as having an MHL port that can be used both as a micro-USB On-The-Go port, and for connecting the phone to HDMI devices. However, a retailer later discovered that Samsung had made a modification to the electronics of the port such that only the adapter made specifically for this model by Samsung could be used.[56]

The S III's li-ion 2,100 mAh battery is said to have a 790-hour standby time or 11 hours of talk time on 3G, compared to 900 hours in standby and 21 hours of talk time on 2G.[57] Built into the battery is near field communication connectivity, which allows users to share map directions and YouTube videos quickly using Wi-Fi Direct (through Android Beam), and perform non-touch payments at shops that employ specially equipped NFC cash registers.[58] The battery can be wirelessly charged using a special charging pad (sold separately) that utilizes magnetic resonance to produce a magnetic field through which electricity could be transferred.[59]

CNET TV torture-tested an S III by cooling it to 24 °F (−4 °C), placing it in a heat-proof box and heating it to 190 °F (88 °C), and submerging it in water—the S III survived all three tests. The phone also did not exhibit any scratches when a key was repeatedly scraped against the display.[60] However, Android Authority later carried out a drop test with the purpose of comparing the Samsung Galaxy S III and the iPhone 5. The screen on the S III shattered on the second drop test, while the iPhone received only minor scuffs and scratches on the metal composite frame after three drop tests.[61]

Software and services

The Galaxy S III is powered by Android, a Linux-based, open source mobile operating system developed by Google and introduced commercially in 2008.[62][63] Among other features, the software allows users to maintain customized home screens which can contain shortcuts to applications and widgets for displaying information. Four shortcuts to frequently used applications can be stored on a dock at the bottom of the screen; the button in the center of the dock opens the application drawer, which displays a menu containing all of the apps installed on the device. A tray accessed by dragging from the top of the screen allows users to view notifications received from other apps, and contains toggle switches for commonly used functions. Pre-loaded apps also provide access to Google's various services. The Galaxy S III uses Samsung's proprietary TouchWiz graphical user interface (GUI). The "Nature" version used by the S III has a more "organic" feel than previous versions, and contains more interactive elements such as a water ripple effect on the lock screen.[24] To complement the TouchWiz interface, and as a response to Apple's Siri, the phone introduces S Voice, Samsung's intelligent personal assistant. S Voice can recognize eight languages including English, Korean, Italian and French.[64] Based on Vlingo, S Voice enables the user to verbally control 20 functions such as playing a song, setting the alarm, or activating driving mode; it relies on Wolfram Alpha for online searches.[51]

The S III initially shipped with Android version 4.0.4, named "Ice Cream Sandwich", which became commercially available in March 2012 with the Nexus S and Galaxy Nexus.[65] Ice Cream Sandwich has a refined user interface, expanded camera capabilities, security features and connectivity.[66] In mid-June 2012, Google unveiled Android 4.1 "Jelly Bean", which employs Google Now, a voice-assistant similar to S Voice, and incorporates other software changes. Samsung accommodated Jelly Bean in the S III by making last-minute hardware changes to the phone in some markets.[67] Jelly Bean updates began rolling out to S IIIs in selected European countries, and to the T-Mobile in the United States in November 2012.[68][69] Samsung started pushing Android 4.1.2 Jelly Bean to the international version of the S III in December 2012.[70] In December 2013, Samsung began rolling out Android 4.3 for the S III, adding user interface features backported from the Galaxy S4, and support for the Samsung Galaxy Gear smartwatch.[8]

The S III comes with a multitude of pre-installed applications, including standard Android ones like YouTube, Google+, Voice Search, Google Play, Gmail, Map, and Calendar, in addition to Samsung-specific apps such as ChatON, Game Hub, Music Hub, Video Hub, Social Hub and Navigation.[55][57] To address the fact that iPhone users are reluctant to switch to Android because the OS is not compatible with iTunes, from June 2012 Samsung offered customers of its Galaxy series the Easy Phone Sync app to enable the transfer of music, photos, videos, podcasts, and text messages from an iPhone to a Galaxy device.[71] The user is able to access Google Play, a digital-distribution multimedia-content service exclusive to Android, to download applications, movies, music, TV programs, games, books, and magazines.

Apart from S Voice, Samsung has directed the bulk of the S III's marketing campaign towards the device's "smart" features, which facilitate improved human-device interactivity. These features include: "Direct Call", or the handset's ability to recognise when a user wants to talk to somebody instead of messaging them, if they bring the phone to their head; "Social Tag", a function that identifies and tags people in a photo and shares photos with them; and "Pop Up Play", which allows a video and other applications to occupy the screen at the same time.[72] In addition, the S III can beam its screen to a TV or be used as a remote controller (AllShare Cast and Play) and share photos with people who are tagged in them (Buddy Photo Share).[72][72]

The S III can access and play traditional media formats such as music, movies, TV programs, audiobooks, and podcasts, and can sort its media library alphabetically by song title, artist, album, playlist, folder, and genre. One notable feature of the S III's music player is Music Square, which analyses a song's intensity and ranks the song by mood so that the user can play songs according to their current emotional state.[48] The device also introduced Music Hub, an online music store powered by 7digital with a catalogue of over 19 million songs.[73]

The S III was the first smartphone to support Voice Over LTE with the introduction of HD Voice service in South Korea.[74] The phone enables video calling with its 1.9 MP front-facing camera, and with support for the aptX codec, improves Bluetooth-headset connectivity.[75] Texting on the S III does not embody any new significant features from the S II. Speech-to-text is aided by the Vlingo and Google's voice-recognition assistant. Not unlike other Android devices, there are a multitude of third-party typing applications available that could complement the S III's stock keyboard.[76]

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