

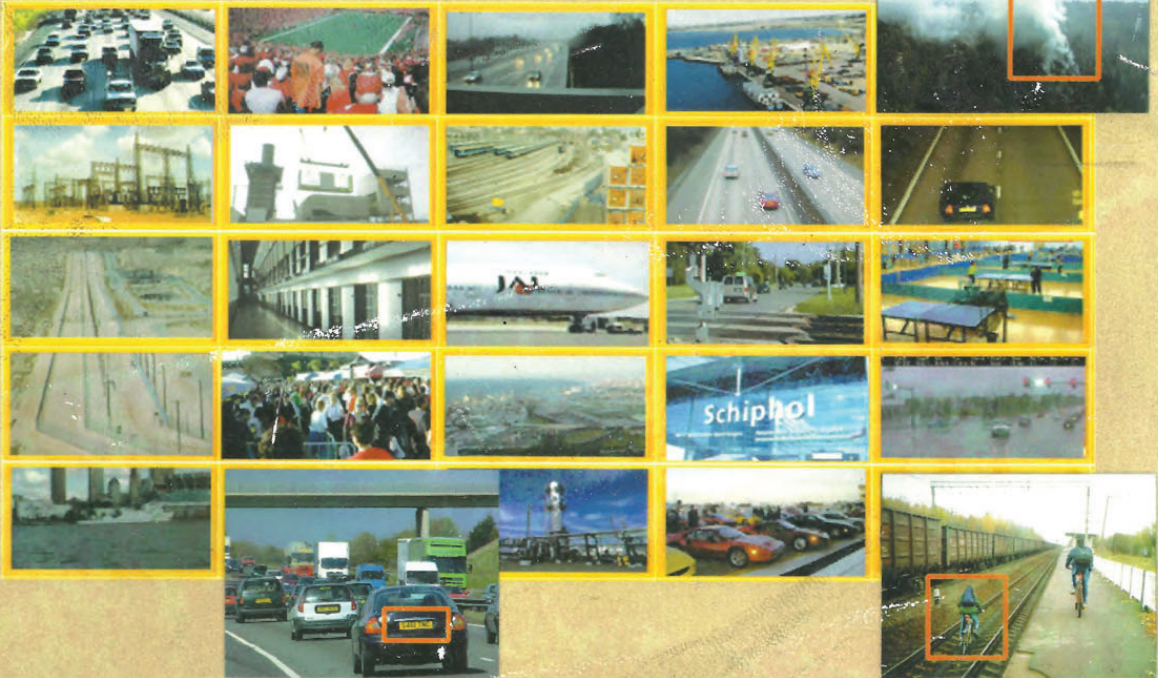
Aspectus

Video Intelligence

Millions of cameras are waiting

Video Intelligence System

VI-System™



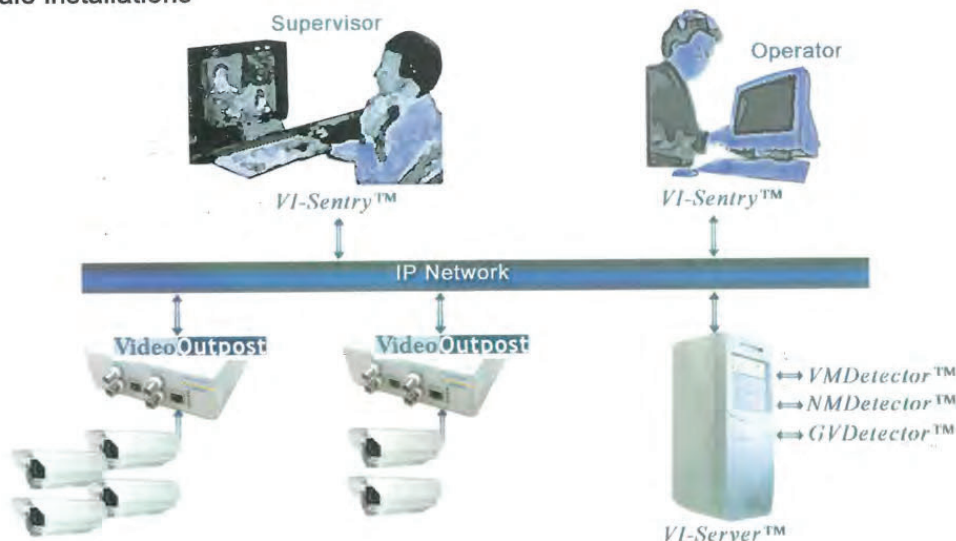
Automatically detects
multiple event types at
Large-scale digital surveillance
networks

Millions of cameras are waiting

Overview

The Aspectus **VI-System™** is a Video Intelligence system for large-scale video surveillance networks (dozens to thousands of cameras). **VI-System™** is based on Aspectus patented **IPoIP™** (Image Processing over IP) technology that constitutes a breakthrough in the way Video Intelligence is processed, enabling video cameras to produce a whole new layer of surveillance benefits on top of existing infrastructure. **IPoIP™** distributed image processing enables low-cost deployment of a large number of intelligent and powerful sensors in the field. In addition to the traditional use of CCTV cameras for alarm verification and recording, **IPoIP™** enables all cameras to be used for automatic detection of a variety of security breach events such as intrusion detection, unattended bags, unauthorized crowding, suspicious behavior, facial recognition, LPR (License Plate Recognition), smoke and fire detection and more.

Aspectus Detectors were designed from the ground up to support the **IPoIP™** architecture. The **VI-System™** also leverages proven 3rd party algorithms that were modified and packaged to become **IPoIP™** compatible. This approach enables Aspectus to offer a wide range of first-class, quality Detectors and Video Intelligence solutions at competitive price points, highly suitable for large scale installations



Aspectus VI-System™ Benefits

- **Fully Integrated System** – An end-to-end solution that integrates a rich set of event-detection capabilities with video transmission, recording and display in one suit.
- **Powerful** – High-end algorithms including detection of multi-camera events, sequence of events, alert levels and many other features which are all enabled by using a powerful server.
- **Central location** – Aspectus' unique **IPoIP™** architecture reduces the amount of equipment in the field to compact **VideoOutpost™** units - lower installation and maintenance cost.
- **Flexible** – Modify detection rules in minutes in order to meet customer's constantly changing needs, using a powerful toolbox including VMD and many other algorithms.
- **Scalable** – Scale-up from few dozens to thousands of cameras at your own rate, while using all the components purchased at day one.
- **Open System** - Designed for easy integration with a variety of video devices, algorithms and applications.
- **Manageable** – All detection rules, configuration data, events video records are stored on a central database, enabling easy backup and management from any location on the network.
- **Reliable** – The combination of robust equipment in the field and a fail-safe server ensures very high reliability and minimizes maintenance cost and field visits.

Millions of cameras are waiting



VideoOutpost™

The **VideoOutpost™** is a compact field-based video device which performs raw video processing and MPEG4 video encoding. **VideoOutpost™** converts any analog camera to an IP camera with first-class Video Intelligence capabilities. The raw video processing (called "feature extraction") is done by Aspectus unique **VI-Agent™** algorithm, which is embedded inside the **VideoOutpost™**. The result is very low-bandwidth data (usually less than 10Kbps) which is transmitted to the **VI-Server™** for further processing. Only when an event is detected or upon operator's demand, the **VideoOutpost™** is requested to transmit a video stream.

VideoOutpost™ uses a high performance MPEG4 video encoder at up to D1 quality. **VideoOutpost™** features an audio channel (for intercom and PA purposes), digital inputs (for external sensors), dry-contact outputs (for remote activation of illumination and other appliances) and a serial port for PTZ camera interface. 1-Channel or 4-Channels versions are available. **VideoOutpost™** is the only system component (other than the cameras) in the field, while all the other components are installed at the control room or anywhere around the network. This ensures high reliability and low maintenance cost.



VI-Server™

The **VI-Server™** is the "brain" and main component of the **VI-System™** platform. It can receive and process data streams from tens to thousands of **VideoOutpost™** units installed in the field. Using the **IPoIP™** architecture, which supports low-bandwidth bi-directional communication with the **VideoOutpost™** units, the **VI-Server™** is able to perform a wide range of software pre-configured detection missions in real time.

The server hardware can be custom configured in a variety of manners to achieve a desired level of fault tolerance and redundancy for a specific installation. The **VI-Server™** software is designed to support single and multi-processor hardware on a **Windows™** or **Linux™** based environment. All of the information generated by the Detectors, including detailed event history, resides on a central database that also provides backup, retrieval, and extensive reporting capabilities. **Aspectus VI-Server™** can be flexibly scaled up to accommodate tens and up to thousands of video channels (cameras).



VI-Sentry™

The **VI-Sentry™** is a C2 (command & control) application which enables users to monitor and handle events, set event detection criteria and control various parameters. Using **VI-Sentry™**, a single operator may handle, review, and analyze automatically detected suspicious activity from thousands of cameras in the field. **VI-Sentry™** is designed to minimize the amount of visual information exposed to the operator.

Only suspected events or manually selected cameras are displayed. In order to facilitate the definition of event criteria rules, **VI-Sentry™** uses a friendly wizard that guides the user step-by-step how to set the very powerful rules easily and efficiently. The **VI-Sentry™** also supports definition of complex multi-camera events (e.g. a person is detected by both camera 1 and camera 2) and also sequences (e.g. a vehicle stops for more than 1 minute, and a person leaves the vehicle unattended). The **VI-Sentry™** is also used to access and display recorded video of detected events. The user may search the event log for specific records by date, camera name or location, type of event and much more. The **VI-Sentry™** can be operated from any PC station on the network.



Aspectus VI-System™ - Data sheet

VideoOutpost™

Video Input	1-4, IVp-p, 75Ω, NTSC/PAL
Video Out	IVp-p, 75Ω, NTSC/PAL
Video Format	MPEG-4 up to 4CIF 30FPS
Digital Inputs	8 opto- isolated
Digital Outputs	4 dry contact
Serial Ports	RS232/RS485
LED Indicators	Power, Network
Built in Test	Yes
Network	Ethernet 10/100
Unique ID	Yes
Power Consumption	10w
Watchdog	Yes
Remote Control	Full control, remote software update
Bi directional audio	Yes
Real Time Clock	Yes

VI-Sentry™

Minimal PC Requirements	P4 2GHz 512MB RAM
Operating System	WindowsXP
Modes of operation	Setup, Detection Rule Wizard, Event Monitor

Display	Graphical or aerial photograph all sites Sensor locations and status
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VI-Server™

Operating System	Windows Server, Linux
Number of cameras supported	Fully scalable from 10's to 1000's
Number of simultaneous detectors per camera	Unlimited
Supported detectors	VMD, SOD, LOP, LPR, TV, BR, FR, VSD
Detector scheduling	Daily, weekly, monthly, custom
Redundancy	Fully redundant, no single point of failure

Video Display	Detection areas and rules Up to 32 live/recorded video windows
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Reports	Event logs Detector scheduling System performance statistics
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Video Recording format	MPEG-4 up to 4CIF 30FPS
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Pre alarm Recording	Up to 120 seconds
Recorded data	Event video with object track, date and time, camera details, event type and other data

Video Storage	Up to 10,000 events of 5 minutes each.
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The following Detectors will be available:

VMDetector™ - A Large-scale Video Motion Detection system

NMDetector™ - Static objects detection (unattended bag, stopped car).

Loss prevention (detects missing objects in a museum, retail etc.)

GVDetector™ - detects vandal graffiti, ad sticking and painting at public places

All specifications are preliminary and subject to change without notice.

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