

High End Videosurveillance (MPEG-4 AVC/SVC)



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TOGETHER**



GE imagination at work



## Ultra-compact single channel encoder/decoder

## Discovery 105

## Specifications

Physical	Single channel encoder/decoder with ultra-compact form factor
Dimensions	72 (W) x 19 (H) x 95 (D) mm Weight: 300 g
Power supply	12V DC - 5W external power supply module
Power consumption	5 W (full load at 25°C)
Cooling device	Fanless cooling design
Temperature	Operating: -10°C to 50°C, max. 90% RH Storage: -40°C to 80°C
Conformity	CFR 47 part 15 Subpart B (FCC), European Community CE (Declaration of Conformity): EN55022B, EN55024, EN50130-4, EN60950-1, UL Std 60950-1
Interface port	Phoenix Terminal Connector
Serial	1 serial port (1x RS485 master input or output pass through)
I/O	1 x Input (TTL, compliant with 48V input voltage) 1 x Output (open collector, compliant with 48V external power)
USB	1 x USB 2.0 (For future extensions)
System	
Processor	TI DM6446
System memory	128 MB DDR2
Networking	Embedded auto-sensing single Ethernet 10/100 ethernet LAN IP multicast, unicast and multi-unicast support Ethernet/IP CoS support (802.1p/Q)
System monitoring	Remote alarm notification through SNMP/ HTTP, e-mail or pager Alarm module: audible and visual notification for system status Embedded monitoring: temperature, watchdog timer, voltage Running on the VisioWave Video Operating System (VOS). Requires VOS 4.1.1 software release or higher
Video	Latest H.264-SVC compression Discovery 105E: encoding only Discovery 105D: decoding only Low bandwidth and low latency PAL (720x576 @ 25 FPS); NTSC (720x486 @ 30 FPS) 1 BNC composite video @75 Ohm

## Ordering Information



- **H.264-SVC (Scalable Video Coding) includes**
  - True multi-streaming
  - Latest, most advanced compression standard
  - More capabilities than typical H.264 implementations via image/frame rate scalability
  - Reduced bandwidth (15-30%) and better image quality compared to MPEG4-ASP
  - Same quality from PTZ as from stationary cameras
- **A scalable network surveillance solution**
  - Part of the Intelligent Video Platform (IVP)
  - Hardware encoding (Discovery 105E) or decoding (Discovery 105D \*) unit
  - Supports 25/30 FPS (D1) and video content analysis
- **Simple to configure and install**
  - Remote system-wide configuration with easy-to-use software
  - Ultra-compact form factor
  - Mounting brackets for rack-mount or wall/ceiling fixing
- **Flexible video redirection**
  - Video streams can be sent to any recording IVP device that supports H.264-SVC
  - Video streams (live or recorded) can be viewed on analog monitors from any IVP H.264-SVC device
  - Video streams viewable from VSC (standard GUI) and from any viewer developed from the SDK
- **Leverage the power of the VisioWave VOS**
  - Common Video Operating System (VOS) allows all VisioWave devices to work together
  - Distributed intelligence for more flexibility
  - Supports live, playback and recording streams
  - Supports video protection, video redirection (device to device) and authentication

\* Available in August 2008

Discovery 1205/Discovery 1205D with 12 encoding/decoding video ports

Discovery 1205

Specifications

Physical	To assure high maintainability, the Discovery 1205 Series offer front access to all interfaces (power supply, video ports, I/O)
Dimensions	482 (W) x 89 (H) x 495 (D) mm (2U-19") Weight: 18kg with 4 HDDs
Power supply	600W power supply module
Power consumption	135 Watts
Cooling device	4 fans providing forced cooling air in the system
Temperature	Operating: 0°C to 40°C, max. 90% RH Storage: -20°C to 70°C
Conformity	FCC Class B Part 15 (Declaration of Conformity): CE (Declaration of Conformity): European Community EN55022 Class B, EN55024, EN60950, CFR47 Part 15, RoHS
Interface modules	Discovery 1205 Series features 4 factory installed modules with various I/O's, PTZ and audio ports (See Price Book for configurations). Each chassis supports a minimum of 1x PTZ port, 4x alarm inputs and 1x relay output.
Serial module	2 serial ports
I/O module	8 input, 4 output
Serial-I/O module	1 serial, 4 input, 2 output
Audio module	2 mono inputs and 1 mono output
System	
Video boards	3 slots for PCI-4 AP Video Codec boards
Memory	1GB DDR2 RAM
Internal storage	- 1 system HDD - 0/2/4 video data HDDs (SATA-2), depending on model
External storage	VisioWave Storage Server (ECVRS) and other Discovery 1205/2415 1 standard RS485/422 9-pin UART serial connector for PTZ camera control
Networking	Embedded dual Ethernet 10/100/1000 gigabit ethernet LANs IP multicast, unicast and multi-unicast support Ethernet/IP CoS support (802.1p/Q) Bandwidth throttling: settable bandwidth limits per channel
System	Remote alarm notification through SNMP/ HTTP, e-mail or pager Alarm module: audible and visual notification for system status CPU monitoring (fan, temperature, watchdog timer, voltage, etc.) Running on the VisioWave Video Operating System (VOS) Requires VOS 4.1 software release or higher
Video	Latest H.264-SVC compression Discovery 1205: 8 or 12 video channels (encode only) Discovery 1205D: 8 or 12 video channels (encode or decode selectable per channel) Low bandwidth and low latency PAL (720x576 @ 25FPS); NTSC (720x486 @ 30FPS) 4 BNC composite video @75 Ohm per video board



- **H.264-SVC (Scalable Video Coding) includes**
  - Latest, most advanced compression standard
  - Better image quality than MPEG4-ASP
  - True multi-streaming
  - More capabilities than typical H.264 implementations via image/frame rate scalability
  - Reduced bandwidth (15-30%) and better image quality compared to MPEG4-ASP
  - Same quality from PTZ as from stationary cameras

- **A scalable network surveillance solution**
  - 8-12 independently configurable analog ports PLUS accepts up to 12 IP camera inputs
  - Hardware encoding only (Discovery 1205) or encoding/decoding (Discovery 1205D) unit
  - 2 or 4 hard drives for internal recording
  - All ports simultaneously support 25/30 FPS (D1)
  - Simultaneous video content analysis on all ports

- **Simple to configure and install**
  - Remote system-wide configuration with easy-to-use software
  - All-in-one device: encode/decode, stream and record for both analog and IP inputs
  - Front panel access to all ports and interfaces
  - Compact 2U-19" rack mountable form factor

- **Leverage the power of the VisioWave VOS**
  - Common Video Operating System (VOS) allows all VisioWave devices to work together
  - Distributed intelligence for more flexibility
  - Simultaneous local and centralized storages
  - Supports video protection, video redirection (device to device) and authentication
  - Supports IP camera integration and management

Ordering Information

## Discovery 2405 Series with up to 24 video ports

## Discovery 2405

## Specifications

Physical	To assure high maintainability, the Discovery 2405 Series offer front access to all interfaces (power supply, video ports, interface modules, removable hard disk trays)
Dimensions	482.8 (W) x 132.5 (H) x 482 (D) mm (3U-19"); Weight: 18kg
Power supply	600W EPS1U power supply module
Cooling device	3 fans providing forced cooling air in the system
Temperature	Operating: 0°C to 40°C, max. 90% RH; Storage: -20°C to 70°C
Conformity	FCC Class B (Declaration of Conformity); European Community CE (Declaration of Conformity); EN55022 Class B, EN55024, EN60950, CFR47, Part 15
Interface modules	The Discovery 2405 Series offer 4 slots for interface modules which can be combined in any manner. A Serial-I/O module is included per default. Serial module: 2 serial ports I/O module: 8 input, 4 output Audio module: 1 full duplex port (Contact GE Security for availability) Serial-I/O module: 1 serial, 4 input, 2 output
System	Double processor CPU control board (Intel Xeon "Nocona" 2800 MHz processor with Intel E7520 chipset) Microsoft WePOS Winbond W83627HF Super I/O chip 1GB of Registered DDR266/333 RAM 6 slots for PCI-4 AP Video Codec Boards 1 PCI-Express slot for RAID controller board 9-pin UART serial support for PTZ camera remote control functions SVGA output for display Mouse, keyboard, 2 x USB 2.0 ports
Bus	3 PCI-X 133/100/66 MHz slots; 1 PCI-X 100/66 MHz slot; 1 PCI-X 66 MHz slot; 1 32-bit/33 MHz PCI 2.2 slot; 1 PCI-Express (x8) slot
Networking	Embedded dual Ethernet 10/100/1000 gigabit ethernet LANs IP multicast, unicast and multi-unicast support Ethernet/IP CoS support (802.1p/Q)
System monitoring	Remote alarm notification through SNMP/ HTTP, e-mail or pager Alarm module: audible and visual notification for system status CPU monitoring (fan, temperature, watchdog timer, voltage, etc.)
System administration	Web-based remote administration software, password protected. Running on the VisioWave Video Operating System (VOS). Requires VOS 4.0 software release or higher
Video Codec Board PCI-4 AP	Encoding only Low bandwidth and low latency PAL (720x576 @ 25 FPS); NTSC (720x486 @ 30 FPS) 4 BNC composite video @75 Ohm



- **Codec-independent hardware, VisioWave operating system (VOS) and SDK**
  - Upgrade to new upcoming compression standards (Ex. MPEG4-SVC) and technologies via software
  - No hardware configuration required
- **MPEG4-AVC (Advanced Video Coding) included**
  - Latest compression standard
  - Better image quality than MPEG4-ASP
  - More capabilities than typical H.264 implementations - including temporal scalability
  - Equivalent multiple streaming from a single stream
  - Reduced bandwidth (15-30%) over MPEG4-ASP
  - Same quality from PTZ as from stationary cameras
- **Leverage the power of the VisioWave Video Operating System (VOS)**
  - VOS allows all VisioWave devices to work together
  - Distributed intelligence for more flexibility
  - Supports live, playback and recording streams
  - Supports IP camera integration and management
  - Supports video protection and authentication
- **A scalable network surveillance solution**
  - Up to 24 independent configurable video ports
  - Up to 8 onboard RAID hard drives for recording
  - All ports simultaneously support 25/30 FPS (D1)
  - Simultaneous video content analysis on all ports
  - Open platform for 3rd party applications
- **Simple to configure and install**
  - Remote system-wide configuration with easy-to-use software
  - Front panel access to all ports and interfaces
  - Compact 3U-19" rack mountable form factor

## Ordering Information

Discovery 2415 Series with up to 24 video ports

Discovery 2415

Specifications

Physical	To assure high maintainability, the Discovery 2415 offers front access to all interfaces (hard disks, power supply, video ports and interface modules)
Dimensions	482.8 (W) x 177 (H) x 410 (D) mm (4U-19") Weight: 18kg (w/o HDD), 22kg (with 8HDDs)
Power supply	600W ATX 1U power supply module (100/250V-50/60Hz)
Power consumption	350W (full load at 25°C)
Cooling device	3 fans providing forced cooling air in the system from back to front; Fan cooled CPU
Temperature	Operating: 0°C to 40°C, max. 90% RH Storage: -20°C to 70°C
Conformity	FCC Class B (Declaration of Conformity); European Community CE (Declaration of Conformity); EN55022 Class B, EN55024, EN60950, CFR47, Part 15, UL 60950-1 (IEC 60950-1)
Interface modules	The Discovery 2415 Series offer 4 slots for interface modules which can be combined in any manner. A Serial-I/O module is included per default.
Serial module	2 serial ports (2x RS485/RS422)
I/O module	8 alarm input x 4 relay output
Audio module	2 input mono and 1 output mono
Serial-I/O module	1 serial (RS485/RS422), 4 alarm input x 2 output
System	Industrial PICMG 1.3 architecture 6 slots for PCI-4 AP Video Codec Boards 1 PCI-Express slot for RAID5 controller board or DAS support
Networking	Embedded dual Ethernet 10/100/1000 gigabit ethernet LANs IP multicast, unicast and multi-unicast support Ethernet/IP CoS support (802.1p/Q)
System monitoring	Remote alarm notification through SNMP/ HTTP, e-mail or pager Alarm module: audible and visual notification for system status Embedded monitoring: fan speed, temperature, watchdog timer, voltage Running on the VisioWave Video Operating System (VOS). Requires VOS 4.1.1 software release or higher
Video Codec Board PCI-4 AP	Encoding only: H.264-SVC Low bandwidth and low latency PAL (720x576 @ 25 FPS); NTSC (720x486 @ 30 FPS) 4 BNC composite video @75 Ohm



- **H.264-SVC (Scalable Video Coding) includes**
  - True multi-streaming
  - Latest, most advanced compression standard
  - More capabilities than typical H.264 implementations via image/frame rate scalability
  - Reduced bandwidth (15-30%) and better image quality compared to MPEG4-ASP
  - Same quality from PTZ as from stationary cameras
- **A scalable network surveillance solution**
  - 8-24 independent configurable analog video ports
  - Simultaneous GE video content analysis on all ports
  - In addition, up to 24 IP camera inputs (via network)
  - All ports simultaneously support 25/30 FPS (D1)
- **High-end storage possibilities**
  - Internal RAID5: 8 hot-swappable, via front accessible 1TB drives (6.3TB usable video storage)
  - Support for external DAS (direct attached storage) via SAS arrays for extended duration storage needs\*
- **Simple to configure and install**
  - Remote system-wide configuration with easy-to-use software
  - Front panel access to all ports and interfaces
  - 4U-19" rack mountable and only 410mm deep
- **Leverage the power of the VisioWave VOS**
  - Common Video Operating System (VOS) allows all VisioWave devices to work together
  - Distributed intelligence for more flexibility
  - Supports live, playback and recording streams
  - Supports video protection, video redirection (device to device) and authentication

\* DAS options via SAS available in December 2008

Ordering Information

Discovery 2415                      Discovery 2415 Series with up to 24 video ports

Discovery 2415 Series with up to 24 video ports

Discovery 2415



Evolution HD 3005 with up to 30 simultaneous video ports

Evolution HD 3005

Specifications

Physical	CompactPCI form factor with aluminum frame and galvanized sheet steel
Dimensions	444 (W) x 175 (H) x 305 (D) mm (4U-19"); Weight: 12kg
Power supply	2 redundant, hot-swappable power supply units (2 x 300W) with automatic selection of power line input range (110V - 230V)
Cooling device	Hot-swappable tray with 3 fans providing forced cooling air in the system
Temperature	Operating: 0°C to 45°C, max. 90% RH; Storage: -20°C to 60°C
Conformity	EMC 89/336/EEC (EN 55022 Class B, EN 55024); Low voltage EMC 72/23/EEC (EN 60950); EMC EN50121-4; FCC: CFR 47, Part 15, Sub part B, Class 1 digital devices; RUL, CUL (Power supply)
System	2 RS232 serial ports for PTZ camera remote control functions Rear I/O module for SCSI and RS-232 PMC slot for optional modules
Networking	Dual Gigabit Ethernet Intel® 82546GB Controller Chips, 10/100/1000 Base-TX with RJ-45 connectors
System monitoring	Autonomous system monitoring module (power, fan speed, temperature, voltage) with independent Ethernet & COM ports Remote alarm notification through SNMP/HTTP, e-mail or pager Alarm module: audible (Buzzer) and visual (LED) notification for system status classified as minor, major or critical Optional CPU monitoring (fan, temperature, watchdog timer, voltage, etc.)
System administration	Web-based remote administration software, password protected Running on the VisioWave Video Operating System (VOS) Requires VOS 4.0 software release or higher
Video Codec Board CPCI-6 AP	6 independent video channels Encoding only Low bandwidth and low latency PAL (720x576 @ 25 FPS); NTSC (720x486 @ 30 FPS) 6 BNC composite video @75 Ohm
Optional	2 slots for embedded storage hard disks



Ordering Information

Evolution HD 3005	Evolution HD 3005 with up to 30 simultaneous video ports
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- Industrial 4U-19" rack-mounted enclosure
- Up to 5 slots for video boards (6 totally independent video codec's) and 2 optional modules for integrated serial ports for PTZ camera remote control
- Codec-independent hardware, VisioWave operating system (VOS) and SDK
  - Upgrade to new upcoming compression standards and technologies via software
  - No hardware configuration required
- H.264/MPEG4-SVC (Scalable Video Coding) included
  - Latest compression standard
  - Better image quality than MPEG4-ASP
  - More capabilities than typical H.264 implementations - including full scalability
  - Equivalent multiple streaming from a single stream
  - Reduced bandwidth (15-30%) over MPEG4-ASP
  - Same quality from PTZ as from stationary cameras
- A scalable network surveillance solution
  - Up to 30 independent configurable video ports
  - All ports simultaneously support 25/30 FPS (D1)
  - Simultaneous video content analysis on all ports
- Redundant and hot-swappable power supplies
- Dual Gigabit Ethernet controller chips
- 2 embedded storage hard disks
- SCSI interface for connection to RAID storage equipments
- Optional serial and isolated I/O modules
- Support for Ethernet/IP CoS



## Hardware equipment for industrial recording solutions

ECVRS

### Specifications

Physical	The Enhanced Centralized Video Recording Server is a 3U rack mounting and industrial high-end server with the following configuration:
Dimensions	445 (W) x 132 (H) x 430.5 (D) mm (3U-19")
Power supply	2 redundant power supply units (2 x 400W)
System Configuration	Xeon 3.0 GHz with 1 MB cache, 800 MHz FSB
	Up to 16 GB DDR (RAM)
	2 x 200 GB SATA system hard disks
	SCSI Ultrawide 320
Networking	Dual gigabit Ethernet interfaces
Other	Running on the VisioWave Video Operating System (VOS)



### Ordering Information

ECVRS                      Hardware equipment for industrial recording solutions

- 3U rack mount server for industrial recording solutions
- High-end equipment with Xeon-processor motherboard
- Redundant power supply, redundant SATA system hard disks and redundant gigabit interfaces
- Directs video and audio streams onto VRU clusters via SCSI or towards Storage Area Networks (SAN) via iSCSI and Fibre Channel
- System health monitoring
- Mouse, keyboard, VGA and 2 USB 2.0 ports

## Video Recording Units for high capacity recording

## VRU Series

## Specifications

Physical	
Dimensions	VRU 810/ VRU 1210: 446 (W) x 88 (H) x 490 (D) mm (2U-19")
Weight	VRU 1610: 445 (W) x 130 (H) x 487 (D) mm (3U-19")
	VRU 810: 16 kg (net, without HD), 22 kg (gross, with HD's)
	VRU 1210: 18 kg (net, without HD), 27 kg (gross, with HD's)
Power supply	VRU 1610: 18 kg (net, without HD), 30 kg (gross, with HD's)
	2 redundant power supplies (VRU 810, VRU 1210: 2 x 350 W; VRU 1610: 2 x 460 W)
Cooling fans	2/3 redundant cooling devices
Temperature	Operating: 0°C to 40°C, 5-95% RH
RAID controller	State-of-the-art 400MHz RISC processor
Hard disk enclosures	8/12/16 hot-swappable SATA hard disks
Capacities (with 400 GB hard disks)	
VRU 810	2.5 TB (net, with RAID 5 enabled)
VRU 1210	4 TB (net, with RAID 5 enabled)
VRU 1610	5.5 TB (net, with RAID 5 enabled)
RAID level	Supports RAID levels 0, 1 (0+1), 3, 5, 10, 30, 50, 60, NRAID and JBOD
Data transfer rate	363 MB/sec

## Ordering Information

VRU Series                      Video Recording Units for high capacity recording



- RAID levels: 0, 1 (0+1), 3, 5, 10, 30, 50, 60, NRAID and JBOD
- Up to 16 SATA hard disks in a 3U enclosure (VRU 1610)
- Up to 8 or 12 SATA hard disks in a 2U enclosure (VRU 810, VRU 1210)
- Fully integrated system backplane
- Dual SCSI-U320 host channels - SAN ready
- Cableless connection to all hard disks for better performance and reliability
- 2 (VRU 810, VRU 1610) or 3 (VRU 1210) hot-swappable fans, located at the back for easy maintenance
- 2 hot-swappable redundant power supplies
- Hot-spare, hot-swap, and on-line auto-rebuild function support
- Auto failure detection
- Hot-swappable hard disks with LEDs to indicate hard disk status
- System monitoring (fan, power, disk drives, ...) via LED indicators, audible alarm and through SNMP or management software

## Software Development Kit for integration

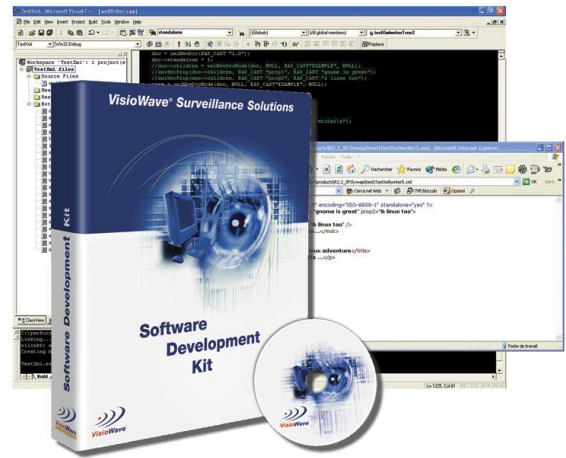
SDK

### Specifications

System Requirements	Total compatibility with the VisioWave Video Operating System and GE Security Digital Video Equipments.
	Microsoft Windows® 2000 or XP

### Ordering Information

SDK	Software Development Kit for integration
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- Integration of GE Security video solutions into any security management system like access control, building management, airport management, ...
- Allows the development and customization of Graphical User Interfaces (GUI)
- Easy installation
- Extensive sample applications library with source code for quick start
- Takes full advantage of the VisioWave Video Operating System (VOS) functionalities
- Compatible with virtually all software development tools, including Visual C++, Visual .NET, JavaScript, Delphi, Visual Basic, C++ Builder, ...
- Based on ActiveX® Technology
- Object oriented software
- Full Unicode support for internationalization

## Specifications

Network services	Constant quality or constant bandwidth video streaming
	Guaranteed minimum bandwidth requirements and traffic shaping
	Ethernet Class of Service (802.1p/Q) IP multicast, unicast and multi-unicast support
Video services	Management of video acquisition, encoding, decoding and restitution
	Fine bandwidth control (frame rate, compression ratio)
	Real-time video transmission over IP networks with CoS support
	PTZ camera remote control via the COM gateway ('Mobile Camera Language' allows to include any camera)
	OSD: Real-time visual enhancements of displayed video with data from image processing modules on analog monitors
Video recording	Sequences' and preset salvos' control management
	Simultaneous live streaming, recording, searching, playback and extraction
	Local storage for intelligent bandwidth management
	Centralized storage for simplified maintenance, decreased costs and quick access to video sequences
	Possibility of recorded video playback on analog monitors
	On alarm or on event recording with dynamic tuning of video parameters (frame rate)
	Pre/post alarm storage
	Video and audio time stamping of stored sequences
	Support for NTP protocol
	Multiple search criteria and user friendly interface for quick and easy retrieval
Audio services	Synchronized multi-sources video playback including audio
	The system provides intercom and "public address" functionalities (microphone announcements from a PC, dissemination of prerecorded messages) and the management of MP3 audio stream parameters.
Event management	Isolated I/O interfaces on all equipments; Support of external sensors; Relay outputs for event triggering;
	Centralized event and alarm management; On alarm recording; Pre/post alarm recording; On alarm camera PTZ positioning; On alarm monitor display or cycles;
	Integrated and centralized event and alarm management for whichever action;
Image processing	Image processing applications are taking advantage of the scalability of the video codec and the low CPU requirements.
	Up to 600 FPS per CPU can be processed! The VOS is a scalable and open architecture. (Open to third party plug-ins through the Plug-in Development Kit).
Health monitoring	The VOS provides various hardware health monitoring features.
	Power supply status, chassis temperature, fan speed and status, current voltage on the system power rails, hard disk status (SMART), system configuration, network interfaces, storage equipment.



- Management of video acquisition, en- & decoding and restitution
- Video switching, sequencing and salvos on analog monitors
- Web-based and password protected remote administration tools for complete system setup
- PTZ remote control functions through the network
- Complete policies for local/remote scheduled recording
- Synchronization of multiple video and audio sequences
- Alarm and redundant event management
- Video Content Analysis and alarm management for preventive security and for operating cost reduction
- Support of network unicast, IP multicast, ATM SVC multicast or unicast UBR/CBR/VBR-nrt
- Support of Ethernet/IP Class of Service and ATM QoS
- Centralized analysis and diagnostic tools
- Central maintenance of the complete system
- SDK for system integration and customization
- Plug-In Development Kit for third-party applications
- Video and audio authentication (SHA-RSA, Digital Certificate Management, Public Key)
- External Data: Streaming and recording of external data (such GPS coordinates)
- Meta Data: Definable tags for video retrieval

## Ordering Information

VOS

VisioWave Video Operating System

## Specifications

### Standard GUI Software

Live viewing	View cameras in normal or expanded size from anywhere in the system; On-Screen or traditional joystick for PTZ control; View cameras on PC or analog monitors (virtual matrix);
Playback	Playback (with speed control) of stored video to analog or PC monitors; Frame advance & reverse play; Searches for stored video based on alarms, user or time; Synchronized audio and video; Exports images that can be e-mailed and burns evidence CDs.
Events	Various events are supported: alarm input, motion detection, system status, camera maintenance, client workstation reports; The operator can acknowledge, delete or deactivate alarms and activate or deactivate sound;
Graphic maps	Utilizes graphical maps and floor plans; Add camera icons for selecting cameras for live viewing and control;  Calling live or playback cameras can be done directly from the map. A variety of different map formats, even vectorized, are supported.
Health monitoring	Monitoring of device fans, temperature, video ports and status of storages & HDD and network operations.
MultiVision	Multi-Screen Live Views (drag-n-drop): place on main client PC monitor or 2nd monitor with camera number/title; Save custom views for easy operator call-up; Multiple layouts.
Configuration	Configuration of events, cameras & camera groups, audio, I/O, storage, event manager & plug-ins, alarms, maps, users & user rights.  "Express Configuration Wizard", a fast and easy tool for quick configuration of new devices. A more complete configuration via the intuitive "ConfigPanel" application which allows administering the whole video security network.
Digital Video Equipments	
VSC 4.1.1	All H.264-SVC equipments: Discovery 105E/1205/2405/2415, Evolution HD 3005, ECVRS  Requires VOS 4.1.1 software release or higher
Minimum System Requirements	
Windows XP Pro compliant PC	Intel Pentium IV (3.2 GHz CPU); 1 GB RAM; Min. 120 GB HD (depending on the storage needs); CD ROM; Network board; Graphic card 32 MB supporting DirectX 9, HW 3D acceleration and pixel shaders 2.0; Windows XP Pro SP2;
VSC versions	
Note	Not all new features are supported under the wavelet version

### Ordering Information

VSC VisioWave Security Center



- Intuitive GUI (Graphical User Interface) and workspace management for analog and IP cameras
- MultiVision (multi-screen display)
- Interactive video switching using a clickable map
- Latest video compression scheme: H.264-SVC (H.264 with temporal and spatial scalability)
- Fast video retrieval and playback with timeline navigation
- Recording policy access panel with recording scheduling and archiving functions on CD, DVD, USB key, etc.
- Real-time events and alarms monitoring
- Enterprise solution with redundancy functionalities for ongoing operability
- Video content analysis included: activity detection and camera maintenance agent plug-ins
- Multi-criteria search of recorded sequences
- Integrated camera PTZ and set-up control; PTZ locking
- Integrated graphical keyboard and joystick
- Fast image print
- Extended multi-user support with group hierarchies
- User authentication and log access
- Audio support and broadcast



## Professional equipment for Video Content Analysis applications

VCAS

### Specifications

Physical	The Video Content Analysis Server is a 3U rack mounting and industrial high-end server with the following configuration:
Dimensions	445 (W) x 132 (H) x 430.5 (D) mm (3U-19")
Power supply	2 redundant power supply units (2 x 400W)
System Configuration	Double Xeon 3.0 GHz with 1 MB cache, 800 MHz FSB Up to 16 GB DDR (RAM) 2 x 200 GB SATA system hard disks
Networking	Dual gigabit Ethernet interfaces
Other	Running on the VisioWave Video Operating System (VOS)



### Ordering Information

VCAS	Professional equipment for Video Content Analysis applications
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- 3U rack mount server for professional video content analysis applications
- High-end equipment with bi-processor motherboard
- Redundant power, redundant gigabit interfaces and redundant hard disks
- Mouse, keyboard, VGA and double USB 2.0 ports
- Designed for professional third party plug-ins, especially ISA program applications
- System health monitoring

## Activity Detector plug-in for intelligent security applications

AD

### Specifications

System Requirements	Total compatibility with the VisioWave Video Operating System and GE Security Digital Video Equipments
	Microsoft Windows® 2000 or XP for the configuration tool
AD functionalities	Detection of activity in the scene
	Arbitrary number of ROIs (Region of Interest)
	Configuration of sensitivity for the alarm threshold
	Sensitivity adjustment for image noise
	Can replace traditional physical sensors for intrusion detection (f. ex. door opening contacts)
	Robust detection of local changes in the scene
	Automatic background image update
	Enables intelligent storage solutions
	Reduces the number of video sources to be monitored by an operator

### Ordering Information

AD Activity Detector plug-in for intelligent security applications



- Enhanced security through real-time image processing
- Highly customizable
- Low CPU utilization
- High reliability
- Compatible with all GE Security digital video equipments
- For fixed and onboard solutions
- Applicable simultaneously on all video ports
- Easy plug-in installation
- Graphical configuration tool included
- High performance algorithm
- Monitors the whole image or only an arbitrary number of ROIs (Region of Interest)
- Reduces video surveillance operating costs by improving the efficiency and efficacy of surveillance operators
- Can replace physical sensors for intrusion detection (like IR sensors, door opening contacts, etc)

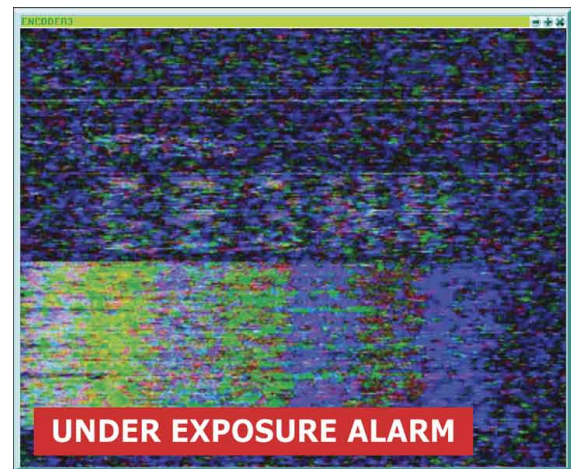


## Camera Maintenance Agent plug-in for intelligent security applications

CMA

### Specifications

System Requirements	Total compatibility with the VisioWave Video Operating System and GE Security Digital Video Equipments.
CMA functionalities	Detection of over exposure (uniformly white and very bright images)
	Detection of under exposure (uniformly black and very dark images)
	Configuration of the over/under exposure level detection threshold
	Configuration of the percentage of white/black pixels in the image for the alarm threshold
	Detection of blurred camera signals
	Detection of lens occlusion
	Detection of displaced cameras
	Configurable signal duration before the alarm event
	Ideal for sensitive sites or recording oriented installations
	Simplifies maintenance



### Ordering Information

CMA	Camera Maintenance Agent plug-in for intelligent security applications
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- Enhanced security through real-time image processing
- Variety of detection functions: over and under exposure, blur, lens occlusion and camera displacements
- Low CPU utilization
- High reliability
- Compatible with all GE Security digital video equipments
- For fixed and onboard solutions
- Applicable simultaneously on all video ports
- Easy plug-in installation
- No configuration needed
- High performance algorithm

# Content

## Digital Video Encoders and Recorders

<b>Discovery 105</b>	Ultra-compact single channel encoder/decoder	Page : 1
<b>Discovery 1205</b>	Discovery 1205/Discovery 1205D with 12 encoding/decoding video ports	Page : 2
<b>Discovery 2405</b>	Discovery 2405 Series with up to 24 video ports	Page : 3
<b>Discovery 2415</b>	Discovery 2415 Series with up to 24 video ports	Page : 4
<b>Evolution HD 3005</b>	Evolution HD 3005 with up to 30 simultaneous video ports	Page : 6

## Digital Video Storage Solutions

<b>ECVRS</b>	Hardware equipment for industrial recording solutions	Page : 7
<b>VRU Series</b>	Video Recording Units for high capacity recording	Page : 8

## Software

<b>SDK</b>	Software Development Kit for integration	Page : 9
<b>VOS</b>	VisioWave Video Operating System	Page : 10
<b>VSC</b>	VisioWave Security Center	Page : 11

## Video Content Analysis

<b>VCAS</b>	Professional equipment for Video Content Analysis applications	Page : 13
<b>AD</b>	Activity Detector plug-in for intelligent security applications	Page : 14
<b>CMA</b>	Camera Maintenance Agent plug-in for intelligent security applications	Page : 15



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GE imagination at work