



## Discovery 2415

Discovery 2415 Series with up to 24 video ports

### Overview

The Discovery 2415 is a multi-function video recorder that uses the latest and most powerful H.264-SVC compression available which provides improved video quality, flexibility and scalability (see 'H.264-SVC compression'). The unit combines digital video capture, streaming with internal and/or external storage and analytics within a single unit operating on an IP-based network. This encoder is part of the VisioWave IVP (Intelligent Video Platform), which is a cohesive family of precision engineered equipment designed to help protect people, property and critical infrastructure.

The unit supports from 8 to 24 analog video channels and includes up to eight internal 1 TB video data drives in a hot-swappable RAID5 configuration. Standard support includes integrated PTZ control ports, alarm inputs and relay outputs. Customer orderable interface modules provide extended serial ports, alarm inputs/relay outputs as well as audio channel support for maximum flexibility. Also standard are GE video content analysis algorithms simultaneously for all analog camera inputs including Activity Detection and various camera health monitoring services (camera blur, obscuration, displacement). The unit also represents hybrid digital video support through direct integration of up to 24 industry standard IP cameras for a combined total support of 48 video inputs. Advanced analytics (direction of motion, object left behind, people counting and more) can be integrated from industry leading developers as part of the VisioWave IVP solution. All of these features combine to establish the Discovery 2415 as one of the most versatile units in its class.

The Discovery 2415 serves as an important video acquisition and data collection point. It is seamlessly integrated via the Video Operating System (VOS) with other IVP devices, such as Evolution HD and other Discovery Series devices. This ensures all devices meet the needs of both fixed and mobile platform video applications, as well as to provide an integration platform for access control, energy management and other industry specific functions.



### Standard Features

- **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

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## Specifications

|                                   |   |
|-----------------------------------|---|
| <b>Physical</b>                   | 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")<br>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<br>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)   |
| <b>Interface modules</b>          | 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  |
| <b>System</b>                     | Industrial PICMG 1.3 architecture<br>6 slots for PCI-4 AP Video Codec Boards<br>1 PCI-Express slot for RAID5 controller board or DAS support  |
| <b>Networking</b>                 | Embedded dual Ethernet 10/100/1000 gigabit ethernet LANs<br>IP multicast, unicast and multi-unicast support<br>Ethernet/IP CoS support (802.1p/Q)   |
| <b>System monitoring</b>          | Remote alarm notification through SNMP/ HTTP, e-mail or pager<br>Alarm module: audible and visual notification for system status<br>Embedded monitoring: fan speed, temperature, watchdog timer, voltage<br>Running on the VisioWave Video Operating System (VOS).<br>Requires VOS 4.1.1 software release or higher |
| <b>Video Codec Board PCI-4 AP</b> | Encoding only: H.264-SVC<br>Low bandwidth and low latency<br>PAL (720x576 @ 25 FPS); NTSC (720x486 @ 30 FPS)<br>4 BNC composite video @75 Ohm   |

## Ordering Information

| Part No.       | Description  |
|----------------|--|
| Discovery 2415 | Discovery 2415 Series provides up to 24 individually configurable video ports along with internal RAID5 storage, external storage and integrated video content analysis. |

## H.264-SVC compression

The H.264-SVC compression delivers the best image quality for the bandwidth available in the industry. Unlike other H.264 or MPEG4 compression, GE's codec features true multi-streaming which allows a single encoding process to provide multiple simultaneous combinations (profiles) of image size (D1, CIF, QCIF) to be extracted at various frame rates. This flexibility allows the customer much greater control managing and optimizing bandwidth needs across the network. Furthermore, the scalable H.264-SVC stream doubles the number of simultaneous video streams that can be displayed on client workstation compared to other H.264 compression schemes.

Unlike traditional dual streaming which requires two independent encoders that produce one MPEG4-ASP stream and typically one MJPEG stream frequently with severe frame rate limitations, GE's H.264-SVC scalable multi-streaming technology provides more than 6 simultaneous stream combinations of frame rate and image size for multi-cast or unicast networks without limitation with a single encoder. This allows support for multiple simultaneous live, recorded and video analytic profiles. Live viewing streams may need different profiles for restricted bandwidth clients versus less restricted bandwidth client workstations. Recording streams may need different profiles whenever local high density and lower density centralized storages are combined in a single system. Additional stream profiles may be required to meet the needs of PDA video transmission as well as to feed advanced video analytic algorithms. GE's H.264-SVC compression is flexible enough to address true multi-streaming needs.



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