

# DS 1000 Hybrid Digital Video Recorder

## INTEGRAL DIGITAL SENTRY® DVMS OPTIMIZED FOR MAINSTREAM APPLICATIONS

### Product Features

- 16- or 32- Input Digital Video Management System
- MPEG-4 Video Compression
- Support for Standard IP Video Devices
- Support for IP Cameras and Analog Cameras Simultaneously on a Single System
- Supports Pelco IP Cameras with Sarix™ HD Technology
- Supports the Recording of H.264 Streams from IP Cameras
- Detailed Reporting of System Settings and Configuration Changes
- Quick Review of up to 1 Hour of Video
- Quick Export of Video to DVD by Pushing the Easy Evidence Blue Button
- Easy Playback of Exported Video Without Additional Media Player
- 3-Year Limited Warranty
- Resolution, Quality, and Recording Rate Configurable per Individual Camera
- Up to 2 TB of Hard Drive Storage
- Up to 16 Audio Inputs
- 15 Alarm Inputs and 1 Relay Output
- Support for DS DataPoint Integration

**DS 1000's** channel count, frame rate, and compression technology provide a perfect solution for today's converging mainstream applications. **DS 1000** offers MPEG-4 compression in 16- and 32-channel configurations and records 5 to 10 images per second (ips). The MPEG-4 compression technology provides superior image quality while maintaining decreased file sizes. **DS 1000** supports up to 16 IP cameras along with analog cameras. It is also HD-enabled, capable of recording and displaying exceptional high-quality images captured by Pelco IP cameras with Sarix™ HD technology. This tight integration between product and technology makes **DS 1000** a robust HD end-to-end solution.

Through a single user interface, users can monitor multiple **DS 1000** systems along with any other Integral Digital Sentry® Digital Video Management System (DVMS). **DS 1000** also supports the complete Integral IT software suite consisting of archive utility and network health monitoring.



**DS 1000** also offers the easy evidence blue button. To send video of an incident to law-enforcement authorities, simply push this button to export the video clip to a CD, DVD, or portable USB drive. This is the simplest method of exporting video in the security industry.

**DS 1000** supports up to 2 TB of internal storage, which meets the requirements of most applications. Mass storage options are also available for additional storage requirements, providing overall flexibility and scalability.

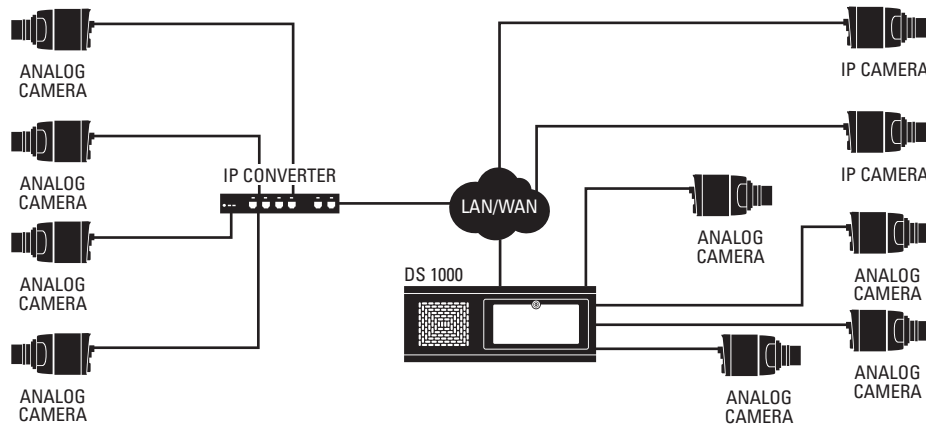
**DS 1000's** standard feature set and functionality provide a perfect convergence solution for the mainstream market. By simultaneously supporting IP and analog cameras on the same system, **DS 1000** offers a truly flexible hybrid.



# TECHNICAL SPECIFICATIONS

## APPLICATIONS

DS 1000 is a hybrid solution, allowing users to manage and monitor both analog and IP cameras on the same system. This allows users to leverage analog cameras that are already installed while benefitting from new IP cameras. A 16-channel DS 1000 system can support up to 16 analog channels as well as an additional 16 IP channels, for a total of 32 channels. A 32-channel DS 1000 can support up to 32 analog channels as well as an additional 8 IP channels, for a total of 40 channels.



### IMPORTANT NOTE. PLEASE READ.

The network implementation is shown as a general representation only and is not intended to show a detailed network topology. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the system as illustrated. Please contact your local Pelco Representative to discuss your specific requirements.

# TECHNICAL SPECIFICATIONS

## SYSTEM

|                  |                                   |
|------------------|-----------------------------------|
| Operating System | Windows® XP Professional          |
| User Interface   | Digital Sentry or DS ControlPoint |
| Internal Storage | 500 GB, 1 TB, or 2 TB             |

## VIDEO/AUDIO

|                          |                                   |            |
|--------------------------|-----------------------------------|------------|
| Video Standards          | NTSC/PAL                          |            |
| Video Encoding           | MPEG-4                            |            |
| Video Decoding           | iVEX, MPEG-4, MJPEG, wavelet      |            |
| Video Resolutions        | <u>NTSC</u>                       | <u>PAL</u> |
| CIF (IP or analog)       | 352 x 240                         | 352 x 288  |
| 4CIF (IP cameras)        | 704 x 480                         | 704 x 576  |
| HD (IP cameras)          | Up to 5 megapixels (NTSC and PAL) |            |
| Analog Camera Inputs     |                                   |            |
| DS 1000-F16              | 16                                |            |
| DS 1000-F32              | 32                                |            |
| IP Camera Capacity       |                                   |            |
| DS 1000-F16              | 16                                |            |
| DS 1000-F32              | 8                                 |            |
| Recording Rate           |                                   |            |
| DS 1000-F16 (analog)     | 10 ips per channel                |            |
| DS 1000-F32 (analog)     | 5 ips per channel                 |            |
|                          | <u>NTSC</u>                       | <u>PAL</u> |
| IP Recording Rate (CIF)  | 30                                | 25         |
| IP Recording Rate (4CIF) | 7.5                               | 6.1        |
| IP Camera Resolution     | Up to 5 megapixels (NTSC and PAL) |            |
| Audio Channels           | Up to 16                          |            |
| Codec                    | MPEG1 Layer 2                     |            |
| Bits Per Second          | 32 to 192 Kbps                    |            |
| Sampling frequency       | 32 kHz                            |            |

## AUXILIARY INTERFACES

|               |                        |
|---------------|------------------------|
| PTZ Interface | RS-232, RS-422, RS-485 |
| Network       | 10/100/1000Base-T      |
| Alarm Inputs  | 15 dry contact         |
| Relay Output  | 1 Form C               |

## MECHANICAL

### Connectors

|                  |  |
|------------------|--|
| BNC              | Video inputs and outputs   |
| Terminal Blocks  | Input triggers, audio inputs, RS-422/RS-485, output relays               |
| USB              | 6 high-speed USB 2.0 ports   |
| DB15             | VGA port   |
| DVI              | Digital Video Interface  |
| 1394             | 1394 (not used)  |
| RJ-45            | 10/100/1000 Megabit Ethernet port  |
| Audio Connectors | Miniature phono plug for line in, line out, and microphone in (not used) |

### Optional I/O Connectors

|                    |                               |
|--------------------|-------------------------------|
| Audio Levels       |                               |
| Input              | Line-level input              |
| Output             | Line-level output             |
| Audio Connectors   | Terminal block                |
| Audio Inputs       | Up to 16                      |
| Trigger Connectors | Terminal block                |
| Trigger Inputs     | TTL, dry contact to GND       |
| Outputs            | Form C relay, contact closure |
| RS-422/RS-485      | Terminal block                |

## POWER

|                   |                                  |
|-------------------|----------------------------------|
| Input Voltage     | 100 to 240 VAC ±10%, 50/60 Hz    |
| Power Consumption | 310 W maximum (280 W sustaining) |

## PHYSICAL

|                 |  |
|-----------------|--|
| Dimensions      | 21" D x 19" W x 7" H (4 RUs)<br>(53.34 x 48.26 x 17.78 cm) |
| Unit Weight     | 40 lb (18.1 kg)  |
| Shipping Weight | 54 lb (24.5 kg)  |

## ENVIRONMENTAL

|                       |   |
|-----------------------|---|
| Operating Temperature | 50° to 95°F (10° to 35°C)                                   |
| Storage Temperature   | -40 to 149°F (-40 to 65°C)                                  |
| Operating Humidity    | 20% to 80%, noncondensing                                   |
| Operating Altitude    | -50 to 10,000 ft (-15 to 3,048 m)                           |
| Operating Vibration   | 0.25 G at 3 Hz to 200 Hz at a sweep rate of 0.5 octave/min. |

## REMOTE PC CLIENT REQUIREMENTS

|                  |  |
|------------------|--|
| Processor        |  |
| Minimum          | Pentium® 2.4 GHz with Hyper-Threading Technology |
| Recommended      | Intel® Core™2 Duo 2.4 GHz                        |
| Internal Memory  |  |
| Minimum          | 512 MB   |
| Recommended      | 2 GB   |
| Operating System |  |
| Minimum          | Windows XP Home or Windows Vista®                |
| Recommended      | Windows XP Professional SP 2                     |
| Video System     |  |
| Minimum          | 128 MB RAM with DirectX® 9.0c                    |
| Recommended      | Dual-head, 256 MB RAM with DirectX 9.0c          |

## CERTIFICATIONS

- CE, Class A
- FCC, Class A
- UL Listed

**NOTICE:** Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users should refer to the Operation manuals for cautionary statements regarding user selected options and how they might affect video quality. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.

# TECHNICAL SPECIFICATIONS

## MODEL NUMBERS

Use the following table to create a model number to specify your DS 1000. For example, the model number for a 32-channel system with 500 GB storage is DSF32500. The model number for a 16-channel system with 2000 GB storage is DSF162000.

| DSFXXYYYY |               |
|-----------|---------------|
| Channels  | Storage (GB)  |
| Channels  | Storage in GB |
| 16        | 500           |
| 32        | 1000          |
|           | 2000          |

## SUPPLIED ACCESSORIES

USB Keyboard  
 USB Mouse  
 Power Cord  
 Keys  
 Resource CD  
 Recovery CD  
 Documentation CD

## OPTIONAL ACCESSORIES

|          |  |
|----------|--|
| KBD300A  | KBD300A Desktop keyboard with full switching and programming capabilities, plus joystick control of PTZ functions  |
| KBDKIT   | Remote keyboard wiring kit. Required when using a single keyboard in ASCII Mode. Includes two RJ-45 wall blocks and one 120 VAC to 12 VAC transformer. Maximum cable distance for RS-422/RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Use shielded twisted pairs cable that meets basic requirements for RS-422/RS-485 applications. (One wall block and transformer is required for each keyboard.) |
| KBDKIT-X | Same as KBDKIT except includes 230 VAC to 12 VAC transformer   |
| PV140    | RS-422/RS-232 converter kit with 12 VDC power supply   |

## IP CAMERA LICENSES

*(Required for Each Connected IP Camera)*

|              |  |
|--------------|--|
| DS-SW-CAM    | IP camera license for IP camera or analog camera connected to IP encoder         |
| DS-SW-CAM-P  | IP camera license if camera or device is purchased from Pelco                    |
| DS-SW-CAM-P4 | IP camera license for IP quad camera or 4-port converter if purchased from Pelco |

## OPTIONAL SOFTWARE

|             |  |
|-------------|--|
| AUSRV-SW-1L | Archive utility server software license for first DVMS unit (required)     |
| AUS 2-10L   | Archive utility server software license for second to tenth DVMS units     |
| AUS-1L      | Archive utility server software license for eleventh or greater DVMS units |

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## OPTIONAL EXTERNAL STORAGE

|                |  |
|----------------|--|
| 3530-10030-RV  | SATABoy™ external storage, 8 drives, hot-swappable 3.0 TB RAID 5   |
| 3530-10030-ADD | Additional 3.0 TB RAID 5 external storage unit (an additional three units can be daisy-chained to the first unit)  |
| 3530-10031-RV  | SATABoy external storage, 14 drives, hot-swappable 6.0 TB RAID 5   |
| 3530-10031-ADD | Additional 6.0 TB RAID 5 external storage unit (an additional three units can be daisy-chained to the first unit)  |
| 3590-00411     | SATABoy SATA 500 GB hard drive (includes carrier)  |
| 3590-01055     | SATABoy daisy chain SCSI cable   |
| 6990-00299     | SATABoy power supply   |
| 3590-01059     | SATABoy spare parts kit (includes daisy chain cable, power supply, and 500 GB hard drive)                          |
| 3530-10040-RV  | SATABeast™ external storage, 42 drives, hot-swappable 18.0 TB RAID 5   |
| 3530-10040-ADD | Additional 18.0 TB RAID 5 external storage unit (an additional three units can be daisy-chained to the first unit) |
| 3590-00041     | SATABeast SATA 500 GB hard drive (includes carrier)  |
| 3590-00042     | SATABeast 3-meter fiber cable  |
| 3590-00043     | SATABeast power supply   |
| 3590-00044     | SATABeast spare parts kit (includes fiber cable, power supply, and 500 GB hard drive)                              |
| 3530-10051-RV  | SATA 404S, 4 drives, hot-swappable 1.5 TB RAID 5   |
| 3530-10051-ADD | Additional 1.5 TB RAID 5 external storage unit (an additional three units can be daisy-chained to the first unit)  |
| 3530-10052-RV  | SATA 404S, 4 drives, hot-swappable 2.0 TB JBOD   |
| 3530-10052-ADD | Additional 2.0 TB JBOD external storage unit (an additional three units can be daisy-chained to the first unit)    |
| 3530-10053     | SATA 404S SATA 500 GB hard drive (includes carrier)  |
| 3530-10054     | SATA 404S daisy chain SCSI cable (DVMS to storage)   |
| 3530-10055     | SATA 404S daisy chain SCSI cable (storage to storage)  |
| 3530-10056     | SATA 404S power supply (not hot-swappable)   |
| 3530-10057     | SATA 404S spare parts kit (includes two daisy chain cables, power supply, and 500 GB hard drive)                   |

## OPTIONAL INTRAVUE NETWORK HEALTH AND EVENT MONITORING APPLICATION

|            |   |
|------------|---|
| ITNMS-016  | 48 analog nodes; 16 IP nodes/host           |
| ITNMS-032  | 96 analog nodes; 32 IP nodes/host           |
| ITNMS-064  | 192 analog nodes; 64 IP nodes/host          |
| ITNMS-128  | 384 analog nodes; 128 IP nodes/host         |
| ITNMS-256  | 768 analog nodes; 256 IP nodes/host         |
| ITNMS-512  | 1,536 analog nodes; 512 IP nodes/host       |
| ITNMS-ULTD | Unlimited analog nodes; 1,024 IP nodes/host |

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