DS Enterprise Digital Video Management System

VIDEO MANAGEMENT HARDWARE FOR USE WITH INTEGRAL DIGITAL SENTRY® SOFTWARE

Product Features

- Supports up to 512 Cameras Managed from a Single Database
- Advanced iVEX Compression
- 120 to 480 Images per Second (ips) Recording Over 16 to 128 Cameras at up to 704 x 480 (NTSC), 704 x 576 (PAL) Recording Resolution
- Supports Pelco IP Cameras with Sarix™ HD Technology
- Supports the Recording of H.264 Streams from IP Cameras
- Redundant Video Storage and Power Supplies
- Integral Digital Sentry® Video Monitoring Software
- Internal Storage up to 1 TB
- Optional RAID Storage with Unlimited Disk Space for Long-Term Video Storage
- 4 Audio Inputs
- FlashGUARD Watchdog Sends Alerts When System Fails or Powers Down
- Quick Review of up to 90 Minutes of Video
- Remote Administration

- 1-Week Graphical Display of Recorded Video
- Optional Support for IP Camera and Active Alert™ Video Analytics
- 3-Year Limited Warranty
- Support for DS DataPoint Integration

DS Enterprise is a complete Digital Video Management System (DVMS) that accommodates a virtually unlimited number of cameras in multiple locations, all administered and operated from remote stations over a network or the Internet. **DS Enterprise** has redundant video storage drives, power supplies, and operating systems, ensuring that your surveillance system will remain active in environments where most other systems would fail or stop recording. Each system can accommodate up to 512 cameras, all managed from a single database. **DS Enterprise** provides unparalleled scalability, allowing you to increase the number of inputs as your needs grow. Analog outputs allow you to display live video from up to 16 cameras on an external monitor. **DS Enterprise** also supports up to 16 IP cameras in a hybrid configuration and supports up to four channels of video analytics.

DS Enterprise is 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 Enterprise** a robust HD end-to-end solution.

Integral Digital Sentry® world-class security software provides IT-focused, scalable solutions that allow users to manage all data and hardware devices from a single client user interface. Open architecture is the cornerstone of the Digital Sentry design, and users can choose IP cameras or encoders that fit their application. **DS Enterprise** supports the majority of third-party IP cameras available today and will continue to add support for new cameras as they are released to the market. Digital Sentry customers also benefit from IT-focused software applications including the SNMP-based network health and event monitoring application and Archive Utility, a flexible long-term storage application.

All DS systems run the same Digital Sentry software, allowing users to combine the DS hardware that fits the specific application. Users can also monitor video, audio, and transactional data from the DVMS through the DS ControlPoint client user interface.
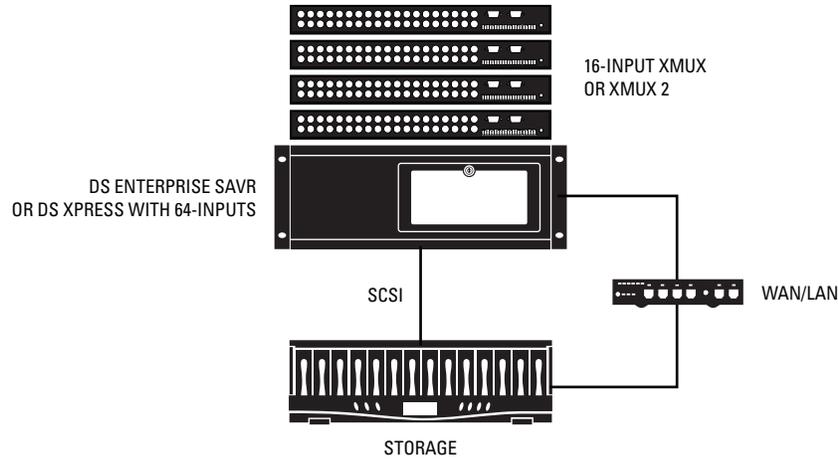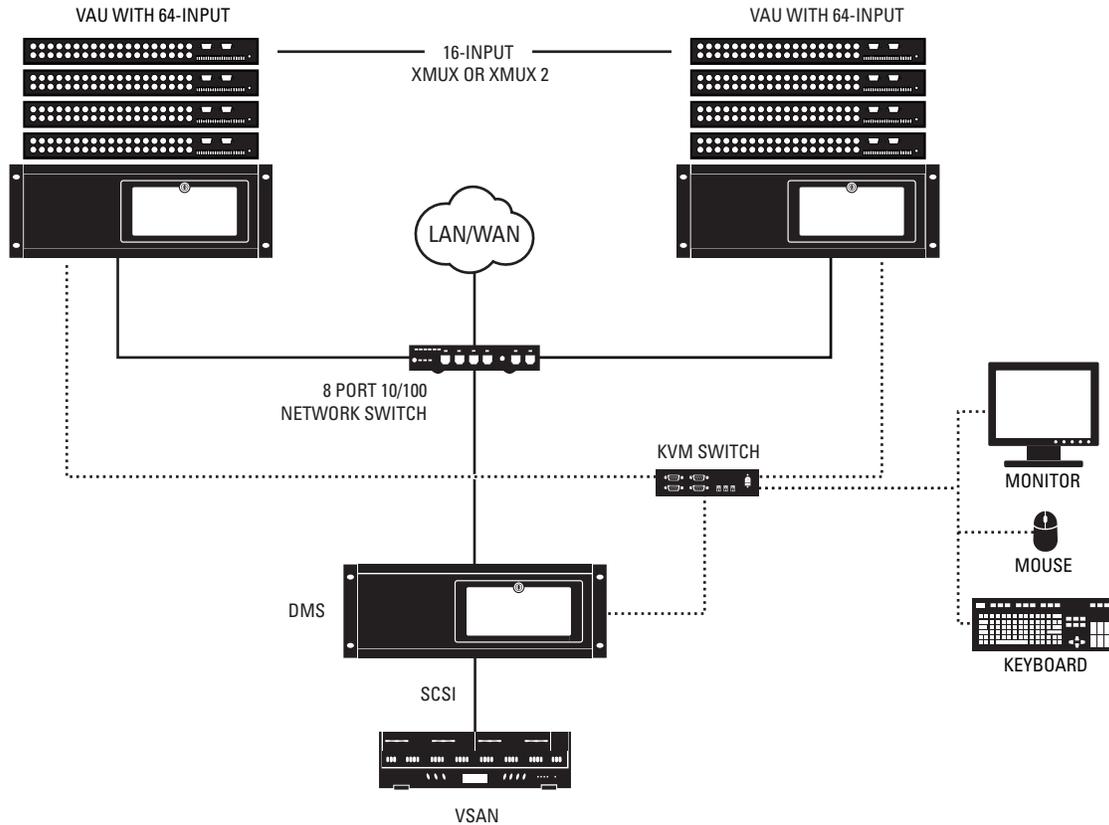
TECHNICAL SPECIFICATIONS

TYPICAL SYSTEMS

The diagrams below illustrate conceptually how several types of DS systems can be connected. These illustrations cover only a small percentage of the possible combinations of DS components.

16-INPUT XMUX
OR XMUX 2

DS ENTERPRISE SAVR
OR DS XPRESS WITH 64-INPUTS

SCSI

WAN/LAN

STORAGE

TYPICAL DS ENTERPRISE SAVR OR DS XPRESS SYSTEM

The server is the centerpiece of a DS system. Separate VAUs can connect to the server through a switch. The server stores large amounts of video on the optional VSAN storage unit. An optional RS-232 trigger input from an access control system and a digital I/O panel can also be connected to the server.

VAU WITH 64-INPUT

VAU WITH 64-INPUT

16-INPUT
XMUX OR XMUX 2

LAN/WAN

8 PORT 10/100
NETWORK SWITCH

KVM SWITCH

MONITOR

MOUSE

DMS

KEYBOARD

SCSI

VSAN

TYPICAL DS ENTERPRISE DISTRIBUTED SYSTEM

IMPORTANT NOTE. PLEASE READ. The network implementations are shown as general representations only and are not intended to show detailed network topologies. Your actual network will differ, requiring changes or perhaps additional network equipment to accommodate the systems 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	
SAVR	160 GB or 250 GB, mirrored
VAU	500 GB or 1 TB RAID 10
External Storage	Unlimited (optional)

VIDEO/AUDIO

Video Standards	NTSC/PAL	
Video Encoding	iVEX	
Video Decoding	iVEX, MPEG-4, MJPEG, wavelet, H.264	
Video Resolutions		
Analog Cameras	NTSC	PAL
4CIF	704 x 480	704 x 576
2CIF	704 x 240	704 x 288
CIF	352 x 240	352 x 288
IP Channels	NTSC	PAL
CIF	352 x 240	352 x 288
4CIF	704 x 480	704 x 576
HD	Up to 5 megapixels (NTSC and PAL)	
Analog Camera Inputs	16, 32, 64, or 128	
IP Camera Capacity	16	
Maximum Cameras	128 combined analog and IP cameras	
Recording Rate per Channel	NTSC	PAL
	30 ips	25 ips
IP Recording Rate		
(16 Channels)	NTSC	PAL
At 4CIF Resolution	5 ips	4.2 ips
At CIF Resolution	15 ips	12.5 ips
Audio Channels	4	
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	16 dry contact; RS-232 serial

MECHANICAL

Connectors

BNC	Video inputs and outputs
Terminal Blocks	Input triggers, audio inputs, RS-422/RS-485, output relays
USB	4 high-speed USB 2.0 ports; connect mouse and keyboard
DB15	VGA port
RJ-45	Dual 10/100/1000 Megabit Ethernet ports
6-Pin Mini-DIN	PS/2 mouse and keyboard
Audio Connectors	Miniature phono plug for line in (unused), line out, and microphone in (unused)
DB25	Printer

Optional I/O Connectors

Audio Levels	
Input	Line-level input
Output	Line-level output
Audio Connectors	Terminal block
Audio Inputs	4
Trigger Connectors	Terminal block
Trigger Inputs	Transistor-transistor logic (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	300 W maximum

PHYSICAL

Dimension	
DS Enterprise	23" D x 19" W x 7" H (4RU) (58.42 x 48.26 x 17.78 cm)
XMUX2	13.0" D x 19.0" W x 1.7" H (1RU) (33.02 x 48.26 x 4.32 cm)
Unit Weight	
DS Enterprise	40 lb (18.14 kg)
XMUX2	6 lb (2.72 kg)
Shipping Weight	
DS Enterprise	50 lb (22.68 kg)
XMUX2	10 lb (4.54 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/minute

REMOTE PC CLIENT REQUIREMENTS

Processor	
Minimum	Intel® 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

Systems Streaming Between 4 and 32 H.264 Cameras

CPU Speed	Intel Core2 Quad Q9400, 2.66 GHz (4 CPUs)
VGA Card	NVIDIA® GeForce™ 9600 GT (512 MB, minimum)
Memory	4 GB RAM

CERTIFICATIONS

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

TECHNICAL SPECIFICATIONS

MODELS

Stand-Alone Video Recorders (SAVR)

3556-10002	DS SAVR, 32 video inputs, 32 looping outputs, SCSI storage interface
3556-10004	DS SAVR, 64 video inputs, 64 looping outputs, SCSI storage interface
3558-10004	DS SAVR, 128 video inputs, SCSI storage interface
3556-10002-X	DS SAVR, 32 video inputs, 32 looping outputs, fiber storage interface
3556-10004-X	DS SAVR, 64 video inputs, 64 looping outputs, fiber storage interface
3558-10004-X	DS SAVR, 128 video inputs, fiber storage interface

Distributed Systems with Data Management Servers (DMS) and Video Acquisition Units (VAU)

3512-10003	DS DMS, SCSI storage interface
3512-10003-X	DS DMS, fiber storage interface
3552-10002	DS VAU, 32 video inputs, 32 looping outputs
3552-10004	DS VAU, 64 video inputs, 64 looping outputs
3554-10004	DS VAU, 128 video inputs

NOTE: All VAUs must be connected to a DMS. Up to five VAUs can be connected to a single DMS.

SUPPLIED ACCESSORIES

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

Also Included with DS SAVR and DS VAU:
XMUX2 Units
XMUX Cables
Rack Hardware

OPTIONAL ACCESSORIES

KBD300A	KBD300A desktop keyboard with full switching and programming capabilities and joystick control of PTZ functions; requires a KDB300USBKIT or a KBD300USBKIT-X
KBD300USBKIT	Remote keyboard wiring kit (120 VAC) for KBD300A
KBD300USBKIT-X	Remote keyboard wiring kit (230 VAC) for KBD300A

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 EXTERNAL STORAGE

DX8100HDDI-2250	2.25 TB external RAID 5 storage expansion unit
DX8100HDDI-4500	4.5 TB external RAID 5 storage expansion unit
DX8100HDDI-6750	6.75 TB external RAID 5 storage expansion unit
DX8100HDDI-9000	9 TB external RAID 5 storage expansion unit

OPTIONAL SOFTWARE AND HARDWARE

AUSRV-SW-1L	Archive utility server software license for first DVMS unit
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
3590-00502	ActiveAlert™ 2-camera video analytics for Digital Sentry version 3.0
3590-00504	ActiveAlert 4-camera video analytics for Digital Sentry version 3.0
3590-01067	ActiveAlert 2-camera video analytics for Digital Sentry version 4.0 or later
3590-01068	ActiveAlert 4-camera video analytics for Digital Sentry version 4.0 or later

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

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.*