DX9200 Series Digital Video Recorder

UNLIMITED CAMERA INPUTS, UNLIMITED STORAGE

Product Features

- Compatible with Existing DX9000 and DX9100 Recorders When Using DX9100VS Viewstations
- Individual Units Accommodate 8, 16, 24, 32, or 40 Camera Inputs up to 30 Images Per Second or 16, 32, or 48 Cameras up to 15 Images per Second
- Can Be Integrated with Pelco CM6800/CM9740/CM9760 Matrix for Alarm and Relay Communciation
- Hot-Swappable HDD RAID Arrays for Video Storage
- Hot-Swappable Power Supplies on Recorder for Increased Protection
- Redundant System Drives in Recorder Configured in RAID 1 Array for Fail-Safe Operation
- Complete Audit Trail Database, with Six Month History, that Tracks Who Did What, Where, and When
- DVR Management Capability Providing Automatic Video Routing to a Back-up Spare Recorder in Case of Failure
- Viewstation Language Support for English, French, German, Italian, Polish, Portuguese, Russian, Simplified Chinese, and Spanish

DX9200 SERIES SYSTEM
(VIEWSTATION, RECORDER, STORAGE UNIT)

The **DX9200 Series** Digital Video Recorder (DVR) is an enterprise class recording system that can store and play back images from any number of cameras at 7.5, 15, or 30 images per second per camera simultaneously. These images are transferred to a number of RAID storage units for safekeeping and can be recalled from Viewstations that are connected to the network.

Recorders can be ordered in various configurations from 8 to 40 cameras for units that record up to 30 images per second and from 16 to 48 cameras for units that record up to 15 images per second. There is no limitation on how many of each type of recorder can be used in any application, allowing for literally thousands of cameras to be recorded simultaneously. Even when using the video motion detection feature, images may be continuously recorded at a preset frame rate and motion events are simply marked within the recording for easy retrieval. Alternatively, the system may be programmed to record only based on internal video motion detection or on an alarm condition to minimize hard disk storage requirements. Continuous recording or event-based recording may be programmed individually for each camera with daily schedules for maximum flexibility.

Video storage units configured independently for each system are available in various sizes to accommodate length of storage requirements. Every system can store weeks or months of video, depending on the number of cameras being recorded, directly on the system's hard drives for instant retrieval and playback.

The storage units use RAID (Redundant Array of Independent Disks) technology. Level 5 or Level 5+1 is available. In Level 5, data is divided between drives in such a way that if one drive fails, the data can be reconstructed from the remaining drives. Level 5+1 is similar to Level 5, but includes a hot spare drive. If a drive fails, the redundant data automatically relocates to the hot spare and begins the reconstruction process without user intervention.

Viewstations can be distributed on the system's network to accommodate viewing of live or recorded video. These stations allow simultaneous viewing of live or recorded video, in any combination, from as many as four cameras simultaneously. The user can even watch three recorded streams and a live stream from the same camera while other users on the same network are accessing that very same camera.

Because of the low bandwidth requirements on the network, the system can be distributed over many buildings in many different physical locations in different cities or even countries.

All DX9200 Series systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purpose of information only and does not constitute approval or certification of receiving party. Proof of certification must be provided prior to shipment of DX9200 Systems contained herein.

SYSTEM COMPONENTS/ORDERING INFORMATION

DX9100 SERIES VIEWSTATION

- 7 different access levels for configuring operator functions
- View up to four cameras simultaneously
- View live or recorded video simultaneously
- One SVGA monitor output and one composite output (monitors not included)
- All software installed, including Windows® 2000
- TCP/IP addressable
- Multilanguage support; English (default), French, German, Italian, Polish, Portuguese, Russian, Simplified Chinese, and Spanish

One or more viewstations may be installed on a network. Wherever a viewstation is located, an operator can view live or playback video from any camera on the system.

DX9200 SERIES RECORDER

- Unlimited number of recorders can be installed
- Depending on model:
  - Connect up to 48 cameras
  - Record up to 7.5, 15, or 30 images per second per camera
- Redundant hot-swappable power supplies
- Redundant system drides configured in RAID 1 array
- Looping video inputs
- TCP/IP addressable

The DX9200 recorder acts as the server for the system. All of the cameras connect to the recorder and the video is digitized, compressed, and sent to the storage unit via SCSI connections. The server is connected to the network and sends all live and playback video to the viewstation upon command.

DX9200 SERIES VIDEO STORAGE UNIT

- Hot-swappable drives in case of failure
- SCSI interface for faster video transfer
- Consult factory for storage capacity
- Choose from RAID 5 or RAID 5+1 configurations
- Backup power supply and fan module

Depending on how much video you are recording and how long you need to keep it, multiple storage units can be connected to each recorder. RAID technology is used to stripe data across multiple drives. A choice of Level 5 or Level 5+1 configuration is available. Level 5 provides protection in case a drive fails as the missing data can be reconstructed from the data on the other drives. Level 5+1 provides added protection by including a hot spare drive.

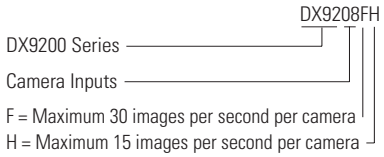
ORDERING INFORMATION

To order a DX9200 system, you must contact Pelco's Digital Support Group at 1-800-289-9100 or 1-559-292-1981 for assistance. Supply Pelco with the following information:

1. The number of cameras and camera types (fixed indoor, fixed outdoor, PTZ, high movement fixed, high movement PTZ) you need at each site. Also specify the resolution required and number of images (7.5, 15, or 30) required per camera. This will determine the number and type of recorders required.

Recorder Models

DX9208F
DX9216F
DX9224F
DX9232F
DX9240F
DX9216H
DX9232H
DX9248H



2. Specify the length of time that you need to store video data. Storage time can range from a few days to several weeks or months. The time you specify will determine how many video storage units you need for each recorder. This will be calculated by Pelco.

   Also, you need to specify whether you want RAID 5 or RAID 5+1 configuration for your system. Level 5 +1 is recommended. In level 5 all data and parity blocks are divided between the drives in a storage unit in such a way that if a single drive is removed (or fails), the data on the missing drive can be reconstructed using the data on the remaining drives. In a Level 5+1 configuration, a hot spare drive is included. Therefore, if a single drive is removed (or fails), the redundant data, on the remaining drives, relocates automatically to the hot spare and begins the reconstruction process without user intervention.

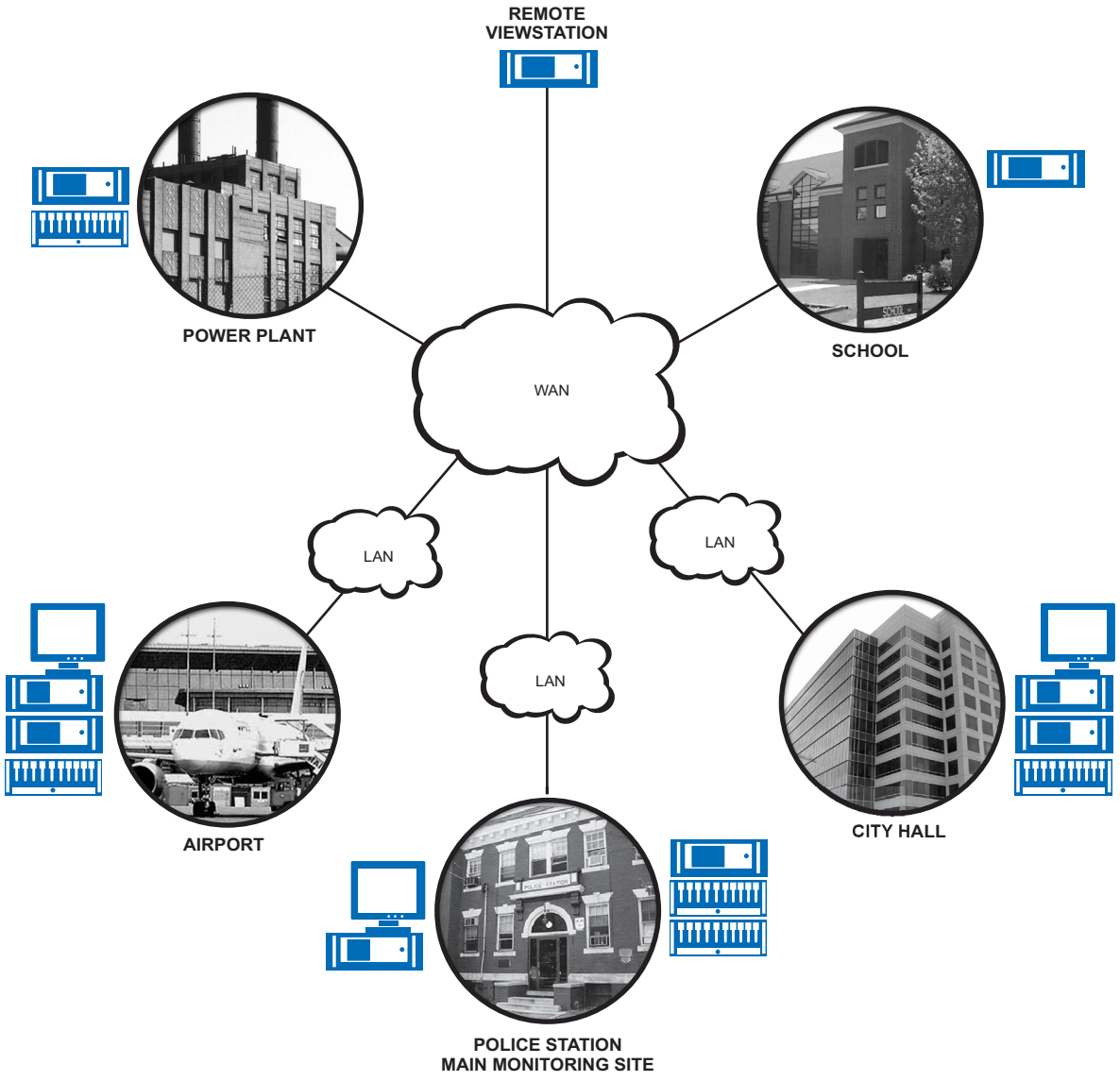
3. Determine the number of DX9100VS viewstations that you need. You do not need a viewstation for each recorder. The number of viewstations depends on the number of locations you want for viewing video.

Note: Use uninterruptible power supplies (UPS) for all recorders and storage units.

APPLICATIONS

A local area network (LAN) is required whenever one or more recorders AND one or more viewstations are located at the same site. The recorders and viewstations are linked through a hub that enables the viewstations to communicate with the recorders in the same facility; for example, the police station. The recorders, viewstations, and hub at the same location form a LAN. The hub also has a connection to a wide area network (WAN*), allowing viewstations at the police station, for example, to monitor what is happening at the other sites, such as the airport or power plant.

When there is only a single recorder or a single viewstation at a site, as at the power plant or school, the equipment is connected directly to the wide area network.



* When connecting through a WAN, ensure that multicasting is supported for the viewing of live video.

TECHNICAL SPECIFICATIONS

RECORDER

Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	265W maximum, redundant hot-swappable
Signal System	NTSC/PAL, auto-sensing
Operating System	Windows® 2000 and SP3 Service Pack
Recording Resolution	
NTSC (DX9200H)	352 x 240 (CIF) at 7.5 or 15 ips
PAL (DX9200H)	352 x 288 (CIF) at 6.25 or 12.5 ips
NTSC (DX9200F)	352 x 240 (CIF) at 7.5, 15, or 30 ips 704 x 240 (2CIF) at 7.5 or 15 ips
PAL (DX9200F)	352 x 288 (CIF) at 6.25, 12.5, or 25 ips 704 x 288 (2CIF) at 6.25 or 12.5 ips
Recording Speed Per Camera	
NTSC (DX9200H)	7.5 or 15 ips
PAL (DX9200H)	6.25 or 12.5 ips
NTSC (DX9200F)	7.5, 15, or 30 ips
PAL (DX9200F)	6.25, 12.5, or 25 ips
Compression	MPEG-1
Video Inputs	16/32/48 maximum 15 ips 8/16/24/32/40 maximum 30 ips
Video Outputs	1 SVGA
Remote Control	Full remote control via TCP/IP

Mechanical

Connectors	
BNC	Up to 48 video inputs on patch panel; up to 48 looping video outputs on patch panel
SCSI Interface	Two ports available
DB37	1-6 ports available
DB9	COM 1 and 2
RJ-45	Ethernet port (10/100BASET)
USB 2.0	One high-speed port available
6-pin mini-DIN	PS/2 mouse and keyboard
DB15, SVGA	Monitor port
Audio Inputs	Not used
DIN5	AT keyboard connector (not used)

General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.3" H x 17.0" W x 19.6" D (18.54 x 43.18 x 49.78 cm)
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight (maximum)	53.7 lb (24.4 kg)

Certifications

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A

Accessories

Rack ears and rack-mount rails

IDE STORAGE UNIT

Electrical/Video

Input Voltage	90-254 VAC, 50/60 Hz, auto-ranging
Power Consumption	Hot-swappable, redundant power supplies, 600W maximum

Mechanical

Connectors	
Recorder Interface	SCSI only

General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 85%, non-condensing
Desktop Dimensions	5.25" H x 17.0" W x 21.2" D (13.3 x 43.18 x 53.85 cm)
Rack Mount Dimensions	5.25" H x 19.0" W x 21.2" D (3 RUs) (13.3 x 48.26 x 53.85 cm)
Unit Weight (maximum)	73.8 lb (33.5 kg)
Shipping Weight	103 lb (46.8 kg)

Certifications

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

Accessories

- Rack ears and rack-mount rails

VIEWSTATION

Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	90 W maximum
Operating System	Windows 2000 and SP2 Service Pack

Mechanical

Connectors	
6-pin mini-DIN	PS/2 mouse and keyboard
DB9	Two RS-232 COM ports available for external devices
DB15	SVGA monitor port (1024 x 768)
DB15	Composite monitor port (analog adapter provided)
DB25	Printer port
RJ-11	Internal modem (for use with pcAnywhere™ software only)
RJ-45	Ethernet port (10/100BaseT) Ethernet port (10/100/1000BaseT)
USB 2.0	Two high-speed ports available
RCA	Audio output (reserved for future use)
Hardware	
Processor	Pentium® 4, 2.4 GHz
RAM	512 MB DDR
Video card	Matrox Millennium™ G450
Modem	V.90/56K
Drive	CD-RW

General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.0" H x 17.0" W x 19.6" D (17.78 x 43.18 x 49.78 cm)
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight	33 lb (15.0 kg)
Shipping Weight	51 lb (23.1 kg)

Certifications

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

Accessories

Keyboard, mouse, rack ears, and rack-mount rails

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