

DX4500/DX4600 Series Digital Video Recorder

8/16 CAMERA INPUTS, 250 GB TO 8 TB STORAGE, FLEXIBLE SEARCH CAPABILITIES

Product Features

- 8- or 16- Channel Digital Video Recorder
- Up to 480 Images per Second (IPS) Recording Rate
- Up to 704 x 480 (NTSC), 704 x 576 (PAL) Recording Resolution
- Support for KBD300A Keyboard Camera Control
- Pelco C Coaxitron®, Pelco D, and Pelco P PTZ Protocols
- Normal, Alarm, Motion, Instant Recording, and Multi-Event Recording
- Scheduled Backup
- HDD Storage Manager
- Increased Frame Rate and Resolution for Event Recording
- Channel Resolution, Quality, and Frame Rate Settings Configurable per Individual Camera
- Picture-On-Picture for Multiscreen Live and Playback Video
- Remote and Web Client
- Local and Remote PTZ Control
- Third-Party PTZ Protocols
- Up to 4 Audio Inputs and 1 Audio Output

A fully featured and fully affordable entry-level digital video recorder (DVR), the **DX4500/DX4600** Series is the next generation in DVRs. Equipped with an embedded operating system, it offers camera capacity, features, and functionality exceeding other DVRs. The **DX4500/DX4600** is designed for the entry-level market that requires 8 or 16 camera inputs; greater internal hard drive storage capacity; fast frame rate recording; and efficient playback, search, and export capability. The **DX4500/DX4600** not only replaces the traditional VCR and multiplexer combination, it provides a solution that scales from standalone to networked.

Designed to work with today's broadband networks, the **DX4500/DX4600** allows you to view and control the DVR across local or wide area networks. The **DX4500/DX4600** remote client allows live viewing and video playback for a maximum of sixteen **DX4000** series servers simultaneously. This display can consist of multiple **DX4500/DX4600** servers and one **DX4004** server.

With DS ControlPoint software, the **DX456/4600** can connect to a Digital Sentry® system and other DX Series HVRs/DVRs. DS ControlPoint operators can simultaneously view and playback



- Export and Import System Configurations
- Pre- and Post-Alarm Recording
- Up to 16 Alarm Inputs and Up to 4 Relay Outputs
- Main Monitor for VGA or Analog Display, Analog Spot Monitor
- Multilingual On-Screen Display
- USB, CD-RW, or DVD±RW Media for Video Export
- Event Notifications by E-mail, Emergency Agent, or Sounder
- Time/Date, Bookmark, Event, and Pixel Search

analog video and control cameras from any **DX4500, DX4600, DX8000, or DX8100**. Operators can also view and playback analog and IP video and control cameras from any Digital Sentry system.

Recording at resolutions of up to 704 x 480 (4CIF), the **DX4500/DX4600** captures crystal clear pictures, creating effective footage for later use and retrieval. Each DVR input channel can be configured individually to meet a specific security application requirement for video retention. User-configurable disk partitioning is used to allocate specific hard disk space for storing continuous video data and event-initiated video data. The retention time can be different for retaining continuous recorded video and event-initiated recorded video. Video critical to investigation and archiving is easily exported to a USB memory device or to an optional DVD±RW device.

Exported video is easily reviewed at the **DX4500/DX4600**, the remote client, or using the export player. The export video preview feature allows you to verify the content and quality of video exported to a disc or a USB drive. At the client, users can easily and quickly capture a video scene, save it in JPEG format, and then store it on the hard drive. User-configurable disk partitioning is used to allocate specific hard



TECHNICAL SPECIFICATIONS

disk space for storing continuous video data and event-initiated video data. The retention time can be different for retaining continuous recorded video and event-initiated recorded video.

Operation of the unit is made easy through the front panel, remote control device, or mouse. For surveillance applications requiring PTZ capability, the **DX4500/DX4600** addresses and controls pan/tilt/zoom (PTZ) equipment such as Spectra® domes and mini domes or third-party cameras. The optional KBD300A keyboard operates Pelco and third-party PTZ cameras that support Pelco C (Coaxitron), Pelco D, or Pelco P protocols.

Multi-event recording on the DX4600 supports single-event recording or a combination of alarm, motion, or instant event recording at a resolution, quality, and image rate specific to each camera. With the ability to trigger recording and in response to events (such as alarm inputs, motion detection, and video loss), the **DX4600** becomes an automated monitoring engine as well.

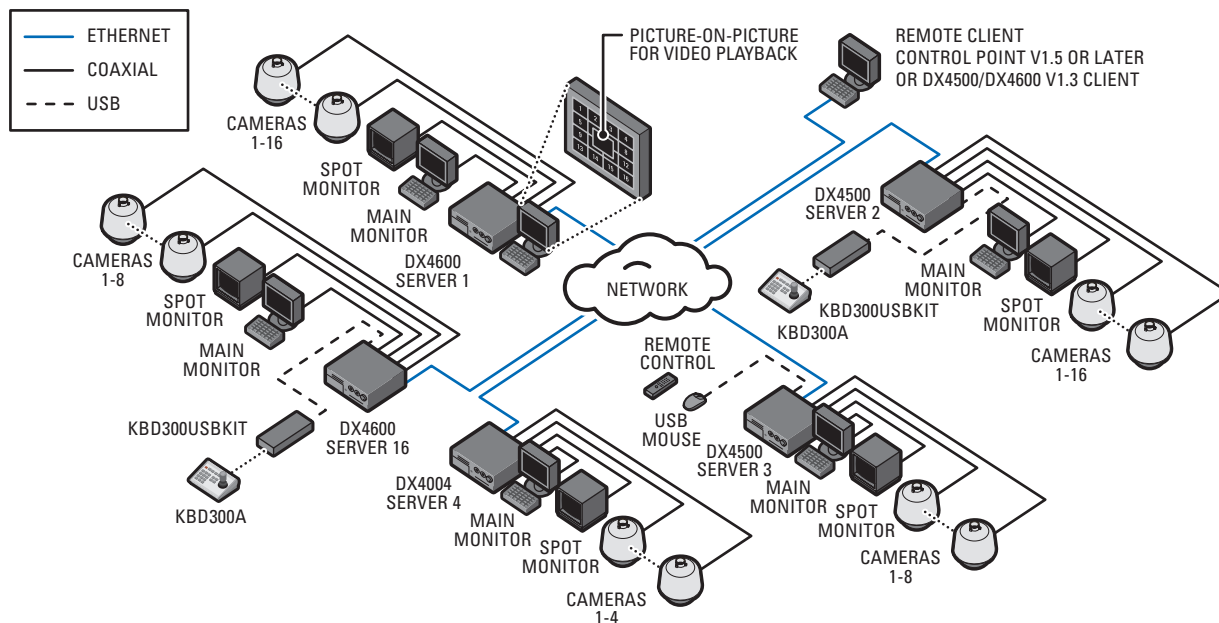
The **DX4500/DX4600** provides a robust set of features for small- to multiple-site applications. From the incorporation of watermarking technology to prevent alterations to captured video, to the ability to capture log entries, to the inclusion of Pelco's world renowned customer service promise, the **DX4500/DX4600** embodies the ideal entry-level DVR to protect people and assets.

APPLICATIONS

The remote client-to-server connectivity allows operation from a remote location, connecting multiple servers simultaneously. The remote client can be used to operate and administer both **DX4500/DX4600** and **DX4000** servers installed at multiple locations. For example, small sites can use the **DX4000** to record and display video from 1 to 4 cameras; medium sized sites can use the **DX4500/DX4600** to record and display video from 8 or 16 cameras. Additionally, the remote client is an application for the Microsoft® Windows Vista® operating system and supports all editions.

The remote client can export a video data file in AVI or native format from a **DX4500/DX4600** server, or in AVI format from a **DX4000** server. It can also store the file at a specified destination on the remote computer's hard drive or other allocated storage media. Use the Windows Media® Player or similar viewer to view video exported in AVI format. Use the **DX4500/DX4600** Export Viewer to playback video exported in native format or to view authenticated watermarked video. Use the **DX4000** Backup Player to view authenticated watermarked video.

The remote client can play back video from the live view or search modes of the **DX4500/DX4600**; the **DX4000** can play back video from the remote client's date/time search mode. For the **DX4000**, the playback mode, playback controls, and playback speed and volume controls are available in the remote client's date/time search mode. With only a few clicks of a button, the remote client can quickly print a **DX4500/DX4600** live view playback/search mode image or a **DX4000** date/time search mode playback video image.



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.

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ELECTRICAL/VIDEO

Input Voltage	100 to 240 VAC ±10%, 50/60 Hz, autoranging	
Power Consumption	Maximum 85 W	
Signal System	NTSC/PAL, switchable	
Operating System	Linux®-Embedded	
Recording Resolutions	NTSC	PAL
	704 x 480	704 x 576
	704 x 240	704 x 288
	352 x 240	352 x 288
Video Outputs	1 main VGA or analog 1 analog spot (displays up to 4 cameras)	
Video Compression	MPEG-4	
Remote Connection	LAN/WAN TCP/IP 10/100 Mbps Network port	
Bandwidth Throttle	Server-based, 128 Kbps to 100 Mbps	

THIRD-PARTY PTZ COMPATIBILITY

Third-Party PTZ Device	Protocol
Bosch® AutoDome® Day/Night	Bosch_AutoDome
Samsung™ SCC 641	Samsung_SCC
LG™ LPT-SD163HM	LG_SD168
Baxall™ BPD1-RAS916	Pelco P
American Dynamics™ Speed Dome Ultra VII	Pelco P

MAXIMUM IPS RECORDING

Model	Format	NTSC IPS		PAL IPS	
		Total	Per Camera	Total	Per Camera
DX4508	CIF	120	15	100	12.5
	2CIF	60	7.5	48	6
	4CIF	30	3	24	3
DX4516	CIF	240	15	200	12.5
	2CIF	120	7.5	96	6
	4CIF	60	3	48	3
DX4608	CIF	240	30	200	25
	2CIF	120	15	100	12.5
	4CIF	60	7.5	48	6
DX4616	CIF	480	30	400	25
	2CIF	240	15	200	12.5
	4CIF	120	7.5	96	6

AUDIO

Decoding	ADPCM2
Bit Rate	8 Kbps
Input	Line-level input, 8 Kbps
Output	Line-level output
Audio Inputs	2 with DX4500, 4 with DX4600, RCA sockets
Audio Output	1 RCA socket

MECHANICAL

Connectors	
Video Inputs	8 or 16, BNC
Video Outputs	8 or 16, BNC, looping
Alarm Input	8 or 16 N.C. or N.O.
Relay Output	2 or 4, N.C. or N.O. 30 VDC/1 A 125 VAC/0.5 A
TCP/IP port	RJ-45, 10/100 Mbps
Serial Port	2 RS-422/RS-485 for PTZ control
USB Port	3, USB 2.0 (1 front and 2 back panel)

GENERAL

Operating Temperature	32° to 95°F (0° to 35°C)
Relative Humidity	Maximum 80%, noncondensing
Dimensions	19.50" D x 16.88" W x 3.75" H (49.5 x 42.9 x 9.5 cm)

Note: Depth includes jog dial to power cord; height includes an additional 0.25" to accommodate rubber feet.

Approximate Weight*	Unit	Shipping
DX4508-250	13.94 lb (6.3 kg)	21 lb (9.5 kg)
DX4508DVD-4000	18.8 lb (8.5 kg)	26 lb (11.8 kg)
DX4516-250	14.48 lb (6.6 kg)	22 lb (10.0 kg)
DX4516DVD-4000	19.34 lb (8.8 kg)	27 lb (12.3 kg)
DX4608DVD-250	16.34 lb (7.4 kg)	24 lb (10.9 kg)
DX4608DVD-8000	22.54 lb (10.2 kg)	30 lb (13.6 kg)
DX4616DVD-250	16.88 lb (7.7 kg)	24 lb (10.9 kg)
DX4616DVD-8000	23.08 lb (10.5 kg)	30 lb (13.6 kg)

*Minimum and maximum weights shown for example models. Contact the factory for specific model weights.

CERTIFICATIONS

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

REMOTE PC CLIENT APPLICATION

Minimum PC Requirement

Operating System	Windows®2000 (SP4), Windows XP (SP2), or later and DirectX® 8.1 or later
Processor	Intel® Pentium® 4
Memory	512 MB
Video Card	VGA card with minimum 64 MB video RAM
Hard Drive	40 GB hard drive with minimum of 15 GB of available space

Recommended PC Requirements

Operating System	Windows XP (SP3), Windows Vista, or Windows 7
Processor	1 GHz or higher, 32-bit (x86) or 64-bit (x64)
Memory	1 GB (32-bit) or 2 GB (64-bit) RAM
Video Card	DirectX 9 graphics card with Windows Display Driver Model (WDDM) 1.0 or higher driver and 128 MB of graphics memory
Hard Drive	40 GB hard drive with minimum 20 GB of available space
Remote Administration	Full remote control through TCP/IP network

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.

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PRODUCT MODELS AND FEATURES

Feature	DX4508	DX4516	DX4608	DX4616
IPS	120	240	240	480
Multi-Event Recording	No	No	Yes	Yes
Pixel Search	No	No	Yes	Yes
Maximum Hard Drive Storage (GB)	4000	4000	8000	8000
Audio Inputs	2	2	4	4
Alarms Inputs	8	16	8	16
Relay Outputs	2	2	2	4
Standard Optical Disk Drive	None	None	CD-RW	CD-RW
Optional Optical Disk Drive	CD-RW or DVD±RW	CD-RW or DVD±RW	DVD±RW	DVD±RW

MODEL NUMBERS

Use the following table to specify and customize your DX4500/DX4600. For example, the model number for an 8-channel DX4500 with 250 GB of internal storage and an optional DVD±RW optical drive is DX4508DVD-250. The model number for a 16-channel DX4600 with 250 GB of internal storage and an optional DVD±RW optical drive is DX4616DVD-250.

CREATING MODEL NUMBERS

DX4XXXXX – XXXX			
Model	Channels	Disk Drive	Storage (GB)
5 (DX4500)	08	CD-RW* DVD±RW†	250
6 (DX4600)	16	DVD±RW†	500
			750
			1000
			1500
			2000
			4000
			6000† 8000†

* Optional for the DX4500 and standard for the DX4600.
 † Optional for the DX4500/DX4600. The DVD±RW drive supports double-layer recording.
 ‡ Drive configurations for only the DX4600.

SUPPLIED ACCESSORIES

Power cords (USA and European), USB mouse, remote control, remote client application disc, alarm and relay terminal blocks, and rack mounting kit.

COMPATIBLE PRODUCTS

Esprit Positioning Systems
Spectra Domes

OPTIONAL ACCESSORIES

DX4546HDD250KIT	DX4500/DX4600 SATA 250 GB upgrade
DX4546HDD500KIT	DX4500/DX4600 SATA 500 GB upgrade
DX4546HDD750KIT	DX4500/DX4600 SATA 750 GB upgrade
DX4546HD1000KIT	DX4500/DX4600 SATA 1000 GB upgrade
DX4546HD2000KIT	DX4500/DX4600 SATA 2000 GB upgrade
DX4546-DVDKIT	DVD drive upgrade for the DX4500/DX4600
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

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