DX8100 Series Hybrid Video Recorder
8 TO 32 ANALOG/IP CAMERA INPUTS, UP TO 8 TB INTERNAL STORAGE

Product Features

- 8 to 32 Analog/IP Cameras
- DIACAP-Compliant
- Supports Pelco and AXIS® Standard Definition IP Cameras
- No Added IP Camera Licensing Fees
- USB 2.0 JBOD External Storage Supports up to 8 TB
- Remote Client Connection up to 200 Servers
- Internal Storage Capacity up to 8 TB
- 8, 16, 24, or 32 Looping Analog Video Channels
- Up to CIF/480 Images per Second (ips) Recording Rate
- DVD+RW Drive Standard
- Dynamic Adjustment of Video Settings
- 2 Standard Audio Channels with Live Audio Over the Network
- 8/16/24/32 Alarm Inputs and 8/16/24 Relay Outputs
- Online Help

The DX8100 Series hybrid video recorder (HVR) has long-served the professional security market with a wide variety of search tools, the ability to view up to 72 cameras at the server, ATM/POS recording, and more. The new hybrid recording capability in DX8100 version 2.0 offers an even more flexible and robust security recording platform.

The DX8100D is a security-enabled product for highly regulated markets. This model meets Defense Information Assurance Certification and Accreditation Process (DIACAP) standards. Government installations that have existing DX8100 systems can convert them to DIACAP-compliant systems without losing existing video.

Efficient and Easy Analog to IP Camera Recording

The new DX8100 resource meter monitors system resources in real time and is a useful gauge for the addition of IP cameras to the system. New configuration tools allow you to easily configure IP cameras. With no licensing fees for Pelco and AXIS® standard definition network cameras, the shift to IP recording is an affordable transition.

Flexible Storage

The DX8100 provides a variety of options for internal storage and data redundancy needs. New 8 TB models provide increased storage retention. New USB 2.0 JBOD (just a bunch of disks) external storage of up to 8 TB meets cost-sensitive demands. Combined, the new storage options increase the HVR’s recording capacity to 16 TB. Customers requiring file redundancy can select from a range of RAID 5 options up to 24 TB of external storage.

Increased Flexibility and Interconnectivity

With DS ControlPoint software, the DX8100 can connect to a Digital Sentry® system and other DX Series HVRs/DVRs. DS ControlPoint operators can simultaneously view and playback analog video and control cameras from any DX4500, DX4600, DX8000, or DX8100. Operators can also view and playback analog and IP video, while controlling cameras from any Digital Sentry system.

Adaptable Viewing

The DX8100’s unique server dual display capability allows simultaneous viewing of up to 72 cameras. Up to four extended composite monitors can function as public view monitors. The DX8100 favorites feature lets users quickly recall any combination of camera and views for easy camera navigation. These extensive selections make the DX8100 adaptable for complete surveillance viewing.
**System Health Check Monitoring**

**DX8100** provides a quick view of critical unit operating status. When an operating limit is exceeded, an alert appears on the server and connected remote clients. System health check monitoring helps ensure maximum system uptime and **DX8100** availability.

**Application and System Integration**

**DX8100** flexibility and expendability is accomplished through published and well-documented APIs. For information about the Pelco developer program, visit our Web site at www.pelco.com.

**Extensive Networking Options**

**DX8100** networks can grow as security requirements expand. A unit can operate as part of a network of as many as five **DX8100s** and **DX8000s**. This gives the HVR operator the ability to view and control up to 180 cameras. The remote client can administer **DX8100** servers, and it can simultaneously control and operate up to 36 cameras connected to any of 200 **DX8100** and **DX8000** HVR/DVRs. The remote client application, EmergencyAgent, and **DX8100** Viewer are included at no extra cost. These applications can be installed on an unlimited number of client workstations.

**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

ANALOG AND IP CAMERA CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum Analog Cameras</th>
<th>Maximum Analog and IP Cameras</th>
</tr>
</thead>
<tbody>
<tr>
<td>DX8108</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>DX8116</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>DX8124</td>
<td>24</td>
<td>32</td>
</tr>
<tr>
<td>DX8132</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

The total number of IP cameras depends on analog and IP camera settings and DX8100 system resources. You can record the maximum number of analog and IP cameras when all cameras are set to record at CIF/1 ips.

AVAILABLE IP CAMERA BANDWIDTH

<table>
<thead>
<tr>
<th>Analog Camera Image Rate</th>
<th>Available Mbps IP Stream* for Each DX8100 Series</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DX8108</td>
</tr>
<tr>
<td>1 ips (Low)</td>
<td>13</td>
</tr>
<tr>
<td>15 ips (Medium)</td>
<td>11</td>
</tr>
<tr>
<td>30 ips (High)</td>
<td>11</td>
</tr>
</tbody>
</table>

*Testing has determined that recording at CIF, 2CIF, and 4CIF resolutions produces only small differences in the available bandwidth.

PELCO IP CAMERA RESOURCE USAGE

The available recording resources of the DX8100 is determined by the resolution and bit rate of the attached cameras. For example, a DX8108 with eight analog cameras recording at CIF/30 ips supports up to eleven IP110 cameras recording at CIF/15 ips.

<table>
<thead>
<tr>
<th>Stream</th>
<th>Resolution</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>4CIF/30 ips</td>
<td>2 Mbps</td>
</tr>
<tr>
<td>Secondary</td>
<td>CIF/15 ips</td>
<td>1 Mbps</td>
</tr>
</tbody>
</table>

Note: Pelco cameras with Sarix™ technology and AXIS IP camera resolutions and bit rates are variable. Refer to the appropriate product specification sheet for information about resource usage.

MAXIMUM ANALOG CAMERA RECORDING

<table>
<thead>
<tr>
<th>Model</th>
<th>Format</th>
<th>NTSC IPS</th>
<th>PAL IPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Per Camera</td>
<td>Total</td>
</tr>
<tr>
<td>DX8108</td>
<td>CIF</td>
<td>240</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>2CIF</td>
<td>120</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>4CIF</td>
<td>60</td>
<td>7</td>
</tr>
<tr>
<td>DX8116</td>
<td>CIF</td>
<td>480</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>2CIF</td>
<td>240</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>4CIF</td>
<td>120</td>
<td>7</td>
</tr>
<tr>
<td>DX8124</td>
<td>CIF</td>
<td>360</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>2CIF</td>
<td>180</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4CIF</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>DX8132</td>
<td>CIF</td>
<td>480</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>2CIF</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4CIF</td>
<td>120</td>
<td>3</td>
</tr>
</tbody>
</table>

Resolution and frame rate values can be assigned evenly among all cameras, or they can be configured independently for individual cameras. Frame rate values can also be customized according to recording mode (normal, motion, alarm, and ATM/POS).
TECHNICAL SPECIFICATIONS

**VIDEO**
- Signal System: NTSC/PAL
- Recording Resolutions:
  - 320 x 240
  - 640 x 240
  - 640 x 480
  - 352 x 240
  - 704 x 240
  - 704 x 480
  - 352 x 288
  - 704 x 288
- Compression: Pelco-engineered
- Video Inputs: 8/16/24/32 (looping with automatic termination)
- VGA Output: 1 primary
- Dual Display Card: 1 switch-selectable VGA (DB15) or analog (BNC) output
- Analog Video Outputs: 1 with DX8108/DX8116; 2 with DX8124/DX8132

**AUDIO**
- Audio Decoding: GSM610 Wave Format
- Audio Bit Rate: 8 Kbps
- Audio Channels: 2 on-board channels for local or live audio over the network
  - Note: Optional audio channels are available for all analog channels; on-board audio channels are disabled when optional audio is added.
- Input: Line-level input
- Output: Line-level output

**ELECTRICAL**
- Input Voltage: 100 to 240 VAC ±10%, 50/60 Hz, autoranging
- Power Consumption: Maximum 350 W
- Alarm Input Terminals: 8/16/24/32 (user selectable, N.O./N.C.)
- Relay Output Terminals: 8/16/24 (user selectable, N.O./N.C.)
- Relay Contact Ratings*:
  - Rated (Resistive) Load: 0.5 A at 120 VAC or 1 A at 24 VDC
- Remote Administration: Full remote control through TCP/IP network

**MECHANICAL**
- Connectors:
  - BNC: Video inputs and outputs
  - 6-pin mini-DIN: PS/2 mouse and keyboard
  - DB9: COM 1
  - DB15: VGA port
  - RJ-45: 10/100/1000 Megabit Ethernet port and RS-485/RS-422 ports
  - USB: 6 high-speed USB 2.0 ports (2 front, 4 back); connects the mouse, keyboard, and JBOD external storage
- Audio Connectors: Miniature male phone plug for line in, microphone in, and audio output
- Optional Audio Connectors: Female RCA jacks
- Audio Inputs: 8 with the 8-channel unit; 16 with the 16-channel unit
- Audio Outputs: 1

**ENVIRONMENTAL**
- Operating Temperature: 50° to 95°F (10° to 35°C)
- Relative Humidity: Maximum 80%, noncondensing

**PHYSICAL**
- Dimensions:
  - Desktop: 19.9" D x 17.0" W x 7.0" H (50.55 x 43.18 x 17.78 cm)
  - Rack Mount: 22.0" D x 19.0" W x 7.0" H (55.88 x 48.26 x 17.78 cm)
- Expansion Unit Dimensions:
  - Desktop: 8.19" D x 17.00" W x 1.73" H (20.80 x 43.18 x 4.39 cm)
  - Rack Mount: 8.19" D x 19.00" W x 1.73" H (20.80 x 48.26 x 4.39 cm)
- Approximate Weight†:
  - Unit: DX8108-250 39.8 lb (18.1 kg); DX8116-250 40.3 lb (18.3 kg); DX8124-250 40.8 lb (18.5 kg); DX8132-250 41.3 lb (18.7 kg); DX8108-8000 44.9 lb (20.4 kg); DX8116-8000 45.4 lb (20.6 kg); DX8124-8000 45.9 lb (20.8 kg); DX8132-8000 46.4 lb (21.1 kg)
  - Shipping: DX8108-250 61.0 lb (27.6 kg); DX8116-250 62.0 lb (28.0 kg); DX8124-250 62.0 lb (28.0 kg); DX8132-250 63.0 lb (28.5 kg); DX8108-8000 67.0 lb (30.4 kg); DX8116-8000 67.0 lb (30.4 kg); DX8124-8000 68.0 lb (30.8 kg); DX8132-8000 68.0 lb (30.8 kg)

**CLIENT APPLICATIONS**
- Remote client
- Web client
- DX8100 viewer
- Emergency agent
- DS ControlPoint version 1.5 or later

*Relays are grounded.
†Minimum and maximum weights shown for example models. Contact factory for specific model weights.
TECHNICAL SPECIFICATIONS

RECOMMENDED SYSTEM REQUIREMENTS

Processor Dual core 1.6 GHz or greater
Memory 2 GB RAM, minimum
Video AGP or PCI-e VGA card with minimum 64 MB video RAM (nonshared memory), 1024 x 768 or 1280 x 1024 display resolution, and DirectX® 8.1 application programming interface
Monitor SVGA or XGA with 1024 x 768 or 1280 x 1024 resolution
Operating System Microsoft® Windows® 2000 (SP4) or Windows XP; Professional DirectX 8.1 or later, 500 MB free disk space
Web Browser Multicast Internet Explorer® 6.0
Remote Client Internet Explorer 6.0 and 7.0
Web Client Internet Explorer 6.0 and 7.0
Antivirus Software* Symantec® Endpoint Protection version 11.0.4

*Supported on Windows XP Embedded only.

CERTIFICATIONS

• CE and FCC, Class A (all DX8124-M, DX8124-MA, DX8132-M, and DX8132-MA models)
• CE and FCC, Class B (all except DX8124-M, DX8124-MA, DX8132-M, and DX8132-MA models)
• UL/cUL Listed
• C-Tick

THIRD-PARTY PRODUCT SUPPORT

The DX8100 Series HVR is compatible with the third-party domes listed in the following table. Please note that this list is subject to change. For more information about dome compatibility or third-party devices, contact Pelco Product Support.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE® (Kalatel)</td>
<td>CyberDome™ Day/Night</td>
</tr>
<tr>
<td>LG®</td>
<td>LPT-S163HM</td>
</tr>
<tr>
<td>Panasonic®</td>
<td>WV-CW864</td>
</tr>
<tr>
<td>Samsung™</td>
<td>SCC-641</td>
</tr>
<tr>
<td>American Dynamics® (Sensormatic®)</td>
<td>SpeedDome® Ultra VII</td>
</tr>
<tr>
<td>Philips® CSI</td>
<td>AutoDome® Day/Night</td>
</tr>
<tr>
<td>Baxall™</td>
<td>BP01-RAS916</td>
</tr>
</tbody>
</table>

The DX8100 has been tested with the USB 2.0 JBOD ICY DOCK® model MB561US-4S-1. Pelco tested this unit with a maximum capacity of four Seagate 2 TB Barracuda 7200.11 (model ST31500341AS) drives.

Notes:

• The DX8100 version 2.0 interface is designed to work with AXIS standard definition cameras. The interface was written using VAPIX® Application Programming Interface (API) version 2.0 (Firmware 4.xx). Pelco Product Support is limited to the interface. The DX8100 has been tested to work with the AXIS Model 211 and 232D network cameras.
• Consult the appropriate product Web site for specific model information.

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 DX8100. For example, the model number for a 32-channel system with 1000 GB storage and audio option is DX8132-1000A. The model number for a DIACAP 32-channel system with 1000 GB storage, MUX, and audio options is DX8132-1000DMA.

Note: When a MUX or audio option is ordered, the MUX or audio option will have the same number of channels as the unit.

<table>
<thead>
<tr>
<th>Channels</th>
<th>Storage in GB</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>250</td>
<td>M = MUX</td>
</tr>
<tr>
<td>16</td>
<td>500</td>
<td>A = Audio</td>
</tr>
<tr>
<td>24</td>
<td>750</td>
<td>MA = MUX and Audio</td>
</tr>
<tr>
<td>32</td>
<td>1000</td>
<td>D = DIACAP</td>
</tr>
<tr>
<td></td>
<td>1500</td>
<td>DM = DIACAP and MUX</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>DA = DIACAP and Audio</td>
</tr>
<tr>
<td></td>
<td>4000</td>
<td>DMA = DIACAP, MUX, and Audio</td>
</tr>
</tbody>
</table>

To order a custom system, specify the base unit first, and then specify the custom option. For example, for a 32-channel system with 1000 GB storage and 8 audio inputs, order the DX8132-1000 and the DX8108-AUD separately. For more information about ordering customized configurations, contact your Pelco sales representative.

SUPPLIED ACCESSORIES

- Power Cords 1 USA and 1 European
- USB Keyboard and Mouse 1 each for configuration and operation
- Recovery Disc 1, for re-imaging the unit
- Resource Disc 1, contains server and client software and documentation
- Audio Input Breakout Cables (optional)
- Terminal Blocks
  - Alarm (green) 1 (8 inputs) or 2 (16 inputs)
  - Relay (blue) 1 (8 inputs) or 2 (16 inputs)
- Rack Mount Kit 1 standard kit (brackets, rails, and hardware)

Note: A monitor is not supplied with DX8100 Series HVR.

OPTIONAL ACCESSORIES

- DX8100-EXP DX8100 16-channel expansion unit kit; racks, 1 RU per unit (rack ears and screws are provided)
- DX8108-AUD DX8100 8-channel audio input card
- DX8116-AUD DX8100 16-channel audio input card
- DX8100-512RAM DX8100 memory upgrade from 512 MB to 1 GB*
- DX8108-MUX DX8100 8-channel graphics acceleration and additional composite output card
- DX8116-MUX DX8100 16-channel graphics acceleration and additional composite output card
- DX8100-SCI DX8100 internal Ultra 160 SCSI card†
- DX8100HDDI-6TB 6 TB external RAID 5 storage expansion unit†
- DX8100HDDI-12TB 12 TB external RAID 5 storage expansion unit†
- DX8100HDDI-18TB 18 TB external RAID 5 storage expansion unit†
- DX8100HDDI-24TB 24 TB external RAID 5 storage expansion unit†
- DX8100HDDI-250KIT DX8100 SATA 250 GB upgrade
- DX8100HDDI-500KIT DX8100 SATA 500 GB upgrade
- DX8100HDDI-750KIT DX8100 SATA 750 GB upgrade
- DX8100HDDI-1000KIT DX8100 SATA 1000 GB upgrade
- DX8100HDDI-1500KIT DX8100 SATA 1500 GB upgrade
- DX8100HDDI-2000KIT DX8100 SATA 2000 GB upgrade
- Regcom AVE® RS-485 network system unit‡
- Hydra AVE RS-485 network system control unit‡
- VSI-PRO AVE Video serial interface for ATM/POS§
- KBD300A KBD300A Universal keyboard (requires KBDKIT/KBDKIT-X)
- KBDKIT/KBDKIT-X Remote keyboard wiring kit
- DX8100DSP-XP Dual Display Card and version 2.0 software upgrade for Windows XP Embedded
- DX81SWV20XPE Software only upgrade for DX8100 Windows XP Embedded
- DX8100XPEUP Windows XP Embedded license upgrade
- DX81SWV20XPED Software for converting DX8100 version 1.0 (or later) to DIACAP version 2.0D**

*Provides pre- and post- alarm recording up to 15 minutes. Pre- and post-alarm recording is up to 60 seconds without upgrade.
†Not for use with DX8124 or DX8132 models.
‡One Regcom unit is required for each ATM/POS device; one Hydra unit is required for each DX8100 serial connection used. One to four serial ports may be used. Support is limited to 16 total ATM/POS devices. Hydra, Regcom, and the required cabling are available from AVE.
§The VSI-PRO and required cabling is available from AVE.
**For information about the DIACAP supported features, refer to the most current version of the DX8100 v2.0D DIACAP Addendum (C4653M).