

VideoXpert™ Software Distributions

SCALABLE VIDEO MANAGEMENT AND SURVEILLANCE SOFTWARE

Product Features

- Available in software-only distribution, for measured performance or convenient migration of customer-owned hardware
- Designed to eliminate single points of failure and ensure reliability through fault-tolerant software, distributed architecture, and multiple levels of redundancy
- Provides scalability and modular expansion
- Provides migration paths for Endura® and Digital Sentry® systems
- Aggregates VMS networks and manage all video through a single system (VideoXpert Ultimate distributions)
- Microsoft® Windows®-based for easy setup and maintenance
- VX Toolbox provides administration interface for device and system management capabilities
- Extensible through plug-ins including mapping, video information overlays (eConnect), and license plate recognition (PlateSmart)
- Create and assign tags, organizing network resources as you see fit

VideoXpert is a video management solution designed to fit surveillance operations of any size. Whether your operation has 100 cameras or 10,000, VideoXpert presents a solution to display, record, and manage your video resources.

VideoXpert products are available as software distributions that you can install on your own hardware, even existing video management hardware. This allows you to repurpose your own hardware and bring existing systems forward into VideoXpert.

Designed for Windows platforms, VideoXpert is easy to install, quick to setup, and should be familiar to most users. The system supports unicast and multicast transmission modes, making it easy to adapt to your current network scheme. Simplified interfaces ensure that users can adopt and use the system with relative ease. From the Web-based Admin Portal, you can configure the system, manage the database of devices, configure users and permissions, and assign cameras to recording devices. Through the Ops Center software, operators gain access to high quality video and powerful investigative tools.

VideoXpert servers can be clustered to provide redundancy and scalability within a single environment, enabling the system to grow in tune with your surveillance needs. As you add cameras, users, or recording devices, you can add servers and storage, enabling the system to support the additional resources and perform to your expectations. VideoXpert Ultimate can even aggregate other



- ONVIF compliant: Supports ONVIF S compliant cameras and devices
- Investigation mode enables operators to synchronize video playback and export investigative playlists covering scenes of interest
- Supported languages: German, Spanish, French, Italian, Korean, Polish, Portuguese, Russian, Turkish, Arabic, Japanese, and Chinese (Simplified)
- Workstations available with 3D mouse and programmable keyboard accessories to maximize operator control

VideoXpert systems, tying multiple VideoXpert systems into a single interface. Through aggregation, administrators can build and maintain a concerted video management system containing multiple sites.

As distributed systems, VideoXpert Ultimate and Enterprise architecture ensure that there is no single point of failure that would compromise the system or video recording services. The system is designed with multiple levels of redundancy through sophisticated failover and redundant recording schemes, maximizing system uptime. The architecture allows individual components to continue operating in the event of failures elsewhere in the system.

VideoXpert can integrate with physical security systems and other building systems to deliver situational awareness and control. Built around open standards, VideoXpert includes a complete application programming interface (API), software development kits (SDKs), and dedicated technical support, allowing other systems' manufacturers to develop interfaces leveraging VideoXpert's capabilities. VideoXpert also supports third-party IP cameras, allowing users to choose across hundreds of camera options from Pelco and third-party partners when configuring a system.



TECHNICAL SPECIFICATIONS

VideoXpert consists of four major components: Core, Media Gateway, Ops Center, and Storage. The Core performs central management operations, maintaining the system database, administering user rights and permissions, routing traffic, and other central operations. The Media Gateway handles all requests for video, ensuring that users at all levels of network access, LAN, WAN and even cellular, receive the right type of video for their application. The Ops Center Client is the operator console, providing an intuitive, but powerful interface from which users can access and investigate video throughout the system. And Storage (VXS) records video and delivers recorded video to users.

CORE

The Core is the heart of the VideoXpert system, it maintains the database of cameras and recording devices. The Core also hosts a convenient Web interface called the Admin Portal, from which you can configure and manage the system. Through the Admin Portal, you can administer user accounts and permissions, determining the system functions and devices users can access. You can create and assign “tags” to quickly organize cameras and devices within the system. You can also configure and respond to events within the system.

The Core browser provides basic access to video streaming resources, ensuring that users with appropriate permissions can view video from the system even without a hard client, using just a standard web browser.

MEDIA GATEWAY

The Media Gateway routes video and audio traffic to appropriate users as requested. When a user requests a video stream, the Core fields the request and determines whether the user possesses the appropriate permissions to view the video stream. If the user can view the stream, the Media Gateway connects the user with the appropriate device — camera, encoder, or recorder as necessary.

Like Core servers, Media Gateways can be added to VideoXpert modularly, allowing a system with 1000 cameras to support 20 users, or a system with 100 cameras to support 200 users. You can add Media Gateways to the system in tune with media delivery needs.

CORE/MEDIA GATEWAY COMBINATION

While you can leverage separate Core and Media Gateway servers for systems of sufficient scale, a single, combined, Core and Media Gateway will support most VideoXpert environments. You can run both software applications on a single server, providing the complete range of VideoXpert functionality that you would expect for systems with fewer than 2000 cameras and 100 simultaneous users.

OPS CENTER

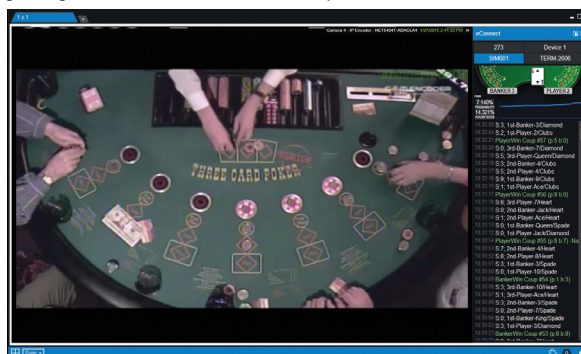
The Ops Center is a Windows-based application, providing an optimal environment from which users can watch live and recorded video. Through the Ops Center, users can configure and recall complete workspaces, enabling operators to quickly log in and get to work.

The application provides mechanisms to sort cameras by tags and other criteria, making it easy for users to find the cameras they need. Users can switch between live and recorded video on the fly,

ensuring a seamless viewing experience. With appropriate permissions, users can also share workspaces and even use the same tabs simultaneously, enabling collaboration within your surveillance operations.

The Ops Center also provides an Investigation Mode, through which users can create playlists from multiple video clips encompassing important scenes from an investigation. Users can export and encrypt their investigations, storing clips relevant to their investigation independent of the system’s network video storage for evidentiary safe-keeping and quick access.

The Ops Center supports modular plug-ins, exposing additional functionality for operators as required by your surveillance operations. The **Mapping** plug-in enables operators to arrange and find cameras on maps. Through mapping, operators can find and the camera providing the view they need, when they need it. The **PlateSmart** plug-in exposes license plate numbers, to track vehicles as they come and go. The **eConnect** plug-in displays real-time gaming information as a video overlay.



STORAGE

VideoXpert Storage software (VXS) is the recording platform that captures recorded video for your VideoXpert system. Storage software is designed for high availability and maintains performance levels in both normal and RAID error conditions, preventing dips in performance and ensuring that users can always obtain the video they need through VideoXpert.

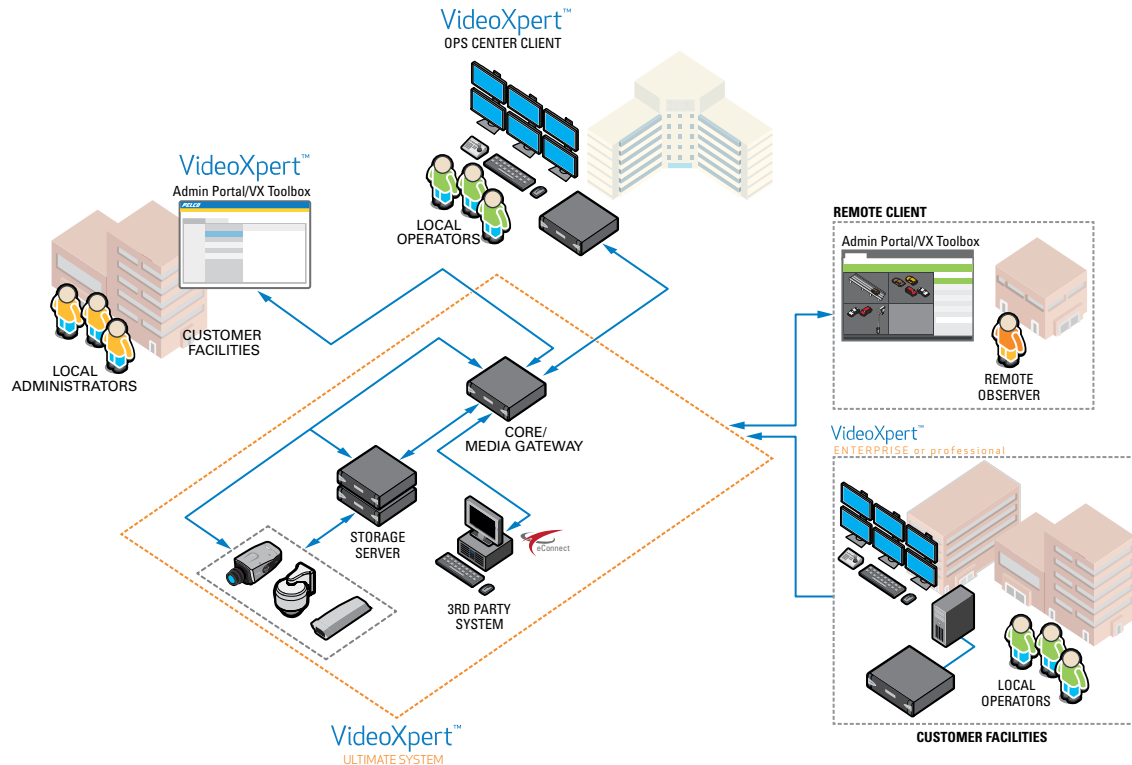
VideoXpert Storage natively supports third-party IP cameras via ONVIF S and driver packages, so you can bring your cameras into VideoXpert without expensive translation interfaces.

You can configure Storage through the same Web interface you use to configure the rest of your VideoXpert system, making it easy to set recording schedules and assign cameras to your storage servers. Storage supports motion, alarm, and bump-on-alarm style recording, so you can always capture events relevant to your environment at high quality. Storage also supports redundant recording, ensuring that VideoXpert continues recording video even if a single Storage server falls offline.

TECHNICAL SPECIFICATIONS

SYSTEM TOPOLOGY

VideoXpert Ultimate allows for expansion at any level of your security environment. Your system begins with a single server running Core and Media Gateway software. Your system requires the OPS Center Clients from which to view video and Storage server for recordings. As your surveillance needs grow, you can add servers to expand modularly within a single environment, or you can aggregate multiple VideoXpert systems to provide a single point of access for distributed video management networks.



VIDEOXPRT ACCESSORY SERVER

You can install the VideoXpert Accessory Server to provide NTP, basic DHCP, active failover, and load balancing services for small to moderately sized networks. The Accessory Server offers a native, multipurpose solution to control your time and addressing services from within VideoXpert.

When acting as a load balancer, the Accessory Server bridges multiple Core/Media Gateway (CMG) servers, optimizing performance and providing redundancy for your VideoXpert network. With the Accessory Server, you can easily increase your VideoXpert network's capacity and ensure the system's uptime so that users always have access to video.

ADVANCED OPERATOR CONTROLS

In addition to the standard keyboard and mouse, Ops Center workstations support an Enhanced Keyboard, and Enhanced Mouse, and the KBD5000. The Enhanced keyboard includes programmable keys to which operators can map shortcuts to their favorite tabs and workspaces; The new Enhanced Mouse or your existing KBD5000 are mapped to the full range of Ops Center controls; an operator can perform any and all operations using either control.



TECHNICAL SPECIFICATIONS

MINIMUM SYSTEM REQUIREMENTS¹

| | Core/CMG | Media Gateway | Ops Center | Storage |
|--------------------------|-----------------------------------|-------------------|--|---|
| Processor | Intel® Xeon® E3-1275 v3 | | | Intel® Xeon® E3-1276 v3 |
| Memory | 32 GB DDR3 ECC | 8 GB DDR3 Non-ECC | | 32 GB DDR3 ECC |
| Operating System | Microsoft® Windows® Server 2012 | | Windows 7 (64 bit), Windows 10 (64 bit) | Microsoft® Windows® Server 2012 |
| Minimum Storage Required | 480 GB | 120 GB | 120 GB | 200 GB |
| Video System | Intel HD Graphics P4700 or better | | | VGA interface; VXS models are designed to be configured remotely through web interface. |
| Interface | Gigabit Ethernet (1000Base-T) | | | |

¹ Software distributions tested without antivirus software installed.

SOFTWARE LICENSE, SERVER, AND WORKSTATION MODELS

Use the following table to create a model number for your VideoXpert software package. Your model number consists of the distribution you want to choose and the model/software product you want to install. For example, an Enterprise Core licenses is modeled "E1-COR-SW". For VideoXpert Storage and Aggregation features, you must use camera licenses; each camera utilizing Storage or Aggregation will consume a single license (available in single or 32-count packages).

Note: Ops Center software does not require a license. You can install the software on any workstation meeting the system requirements.

Due to the complexity of network and system design for larger distributions, VideoXpert Ultimate requires either training certification, or that the installation be performed by Pelco Professional Services. While not required for Enterprise distributions, it is strongly recommended that system installers and administrators be Pelco-certified.

| Distribution | Model | Description |
|----------------------------------|---------|---|
| E1 | BASE | Enterprise base license, including one Core, one Media Gateway, one VXS license, and 32 camera licenses |
| (Ultimate) U1 (Enterprise) E1 | COR-SW | Core software license |
| | MGW-SW | Media Gateway software license |
| | VXS-SW | Storage software license |
| | NSM-1UP | Upgrade license enabling NSM5200 models to support VideoXpert systems, 100 channel licenses included |
| | DSS-1UP | Upgrade license enabling DS servers to serve as recorders within VideoXpert, 50 channel licenses included |
| | 1C-SUP1 | Software upgrade subscription; entitles you to upgrades for one year |
| | 1C-SUP3 | Software upgrade subscription; entitles you to upgrades for three years |
| | 1C | Camera license |
| | 32C | 32 camera licenses |
| U1 | AGG-1C | (Optional) Ultimate site upgrade license for managing one camera |

VIDEOXPRT PLAYER

The VideoXport player decrypts, validates, and plays-back secured exports from VideoXpert. You can download the player directly from VideoXpert along with an exported video file or you can download it from Pelco.com. These are the minimum system requirements for non-VideoXpert machines running the VideoXport player:

| | | | |
|-----------------------|--|-----------------------|--|
| Hardware Requirements | Dual Core i5 2.67 GHZ 4 GB RAM 200+ GB of free HDD space or more GPU that supports OpenGL 3.0 or higher 1024 x 768 or higher screen resolution 100/1000 Ethernet Network Interface Card | Software Requirements | Sound Card Windows 7 Pro or Ultimate 64 bit or higher .NET 4.6.1 or higher OpenGL 3.0 or higher Direct3D 9 or higher |
|-----------------------|--|-----------------------|--|

TECHNICAL SPECIFICATIONS

SUPPORTED LANGUAGES

The Admin Portal and Ops Center interfaces are available in:

- German
- Spanish
- French
- Italian
- Korean
- Polish
- Portuguese
- Russian
- Turkish
- Arabic
- Chinese (simplified)
- Japanese

VIDEOXPERT ACCESSORY SERVER

VX-A3-ACC VideoXpert Accessory Server with EU, UK, and US power cords

OPS CENTER CLIENT OPTIONAL ACCESSORIES

| | |
|-----------------|--|
| 3DX-600-3DMOUSE | Enhanced 3D Mouse and Joystick |
| Y-U0023-G910KBD | Enhanced Keyboard |
| A1-KBD-3D-KIT2 | Enhanced Keyboard and 3D Mouse Combination Kit |

STANDARDS/ORGANIZATIONS

- Pelco is a member of the MPEG-4 Industry Forum
- Pelco is a member of the Universal Plug and Play (UPnP) Forum, Steering Committee
- Pelco is a member of the Universal Serial Bus (USB) Implementers Forum
- Pelco is a contributor to the International Standards for Organization / Electrotechnical Commission (ISO/IEC) Joint Technical Committee 1 (JTC1), "Information Technology," Subcommittee 29, Working Group 11
- Compliance, ISO/IEC 14496 standard (also known as MPEG-4)
- Compliance, International Telecommunication Union (ITU) Recommendation G.711, "Pulse Code Modulation (PCM) of Voice Frequencies"
- Compliance, Open Network Video Interface Forum (ONVIF) Profile S