



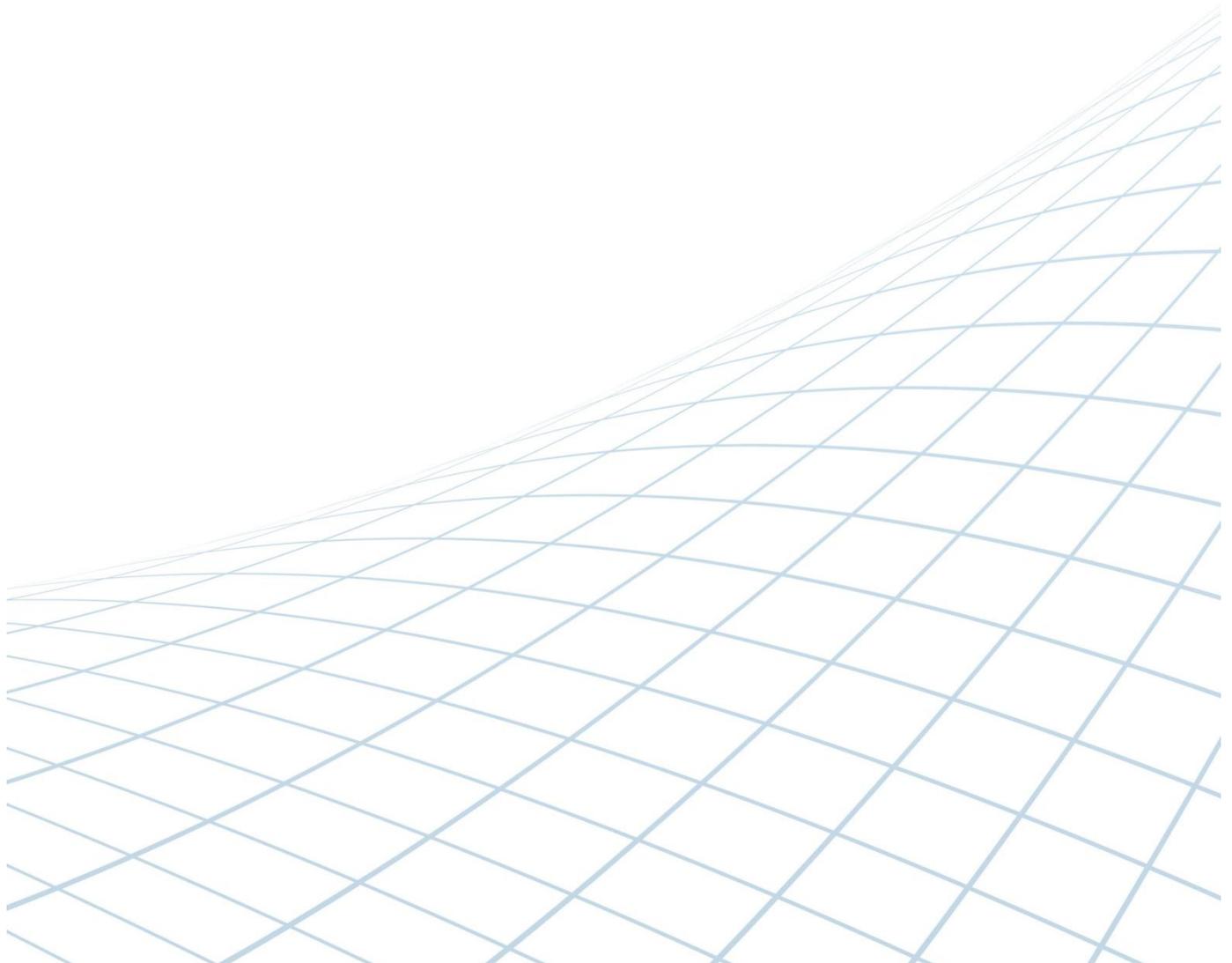
milestone

The Open Platform Company



XProtect[®] Expert 2013

Specification Sheet





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Feature Overview

Key Features

- **Limitless multi-server and multi-site solution:**
XProtect Expert supports an unlimited number of cameras, servers, sites and users allowing you to grow your installation according to your needs
- **Milestone Federated Architecture™:**
System concept that enables individual XProtect Expert systems to be interconnected with a central XProtect Expert system in a hierarchical architecture for infinite scalability and central management
- **Centralized Management:**
Full configuration of all devices, Recording Servers and users from a central manager console connected to the Management Server, which holds all configuration settings in a Microsoft SQL database
- **Bookmarking:**
Allows users to mark video sections of particular interest and add descriptive notes for later analysis or sharing with other users
- **Alarm Manager:**
Single-point alarm function that provides a consolidated and clear overview of security and system-related alarms
- **Intuitive Map Function:**
Multi-layered map environment provides interactive access and control of the complete surveillance system, at-a-glance overview of the system integrity, and seamless drag-and-drop integration with XProtect® Smart Wall product option
- **Edge Storage:**
Uses camera-based storage as a complement to the central storage in the recording servers, with flexible video retrieval based on time schedules, events or manual requests
- **Multi-stage Storage:**
Unique data storage solution that combines superior performance and scalability with video data grooming for cost-efficient, long-term video storage
- **Versatile Rule System:**
Versatile rule engine makes it easy to automate different aspects of the system, including the control of cameras, system behavior and external devices, such as lights and doors, based on events or time schedules, eliminating the need for manual control
- **64-bit Recording Servers:** Enable more cameras to be run on a single server unit
- **Multicast Support:**
Sends only one video stream per camera to multiple XProtect Smart Clients. Used to optimize the network load in systems with many users

Additional Main Features

- **Automatic Camera Discovery:**
Enables fast discovery of almost 2,000 IP cameras, IP video encoders and digital video recorder (DVR) models from close to 100 different manufacturers
- **64-bit Recording Servers:** Enable more cameras to be run on a single server unit
- **Multiple Language Support:**
Lets most operators use the system in their native language with support for 26 different languages, while the Management Client is available in 11 languages
- **Sequence Explorer:**
Displays sequences, time intervals and bookmarks in thumbnail previews, the Sequence Explorer gives unparalleled visual overview of recorded video combined with smooth navigation
- **Fast Evidence Export:**
Quickly deliver authentic evidence to public authorities by exporting video to various formats, including video from multiple cameras in encrypted XProtect format with dedicated player application included
- **Audit Logs:**
Enables extensive logging of all user system accesses, configuration changes and operator actions
- **Flexible User Management and Rights Management:**
Strict privileges management of users' access to functions and camera actions. Modular user management with support for basic user accounts to global user management with single sign-on Microsoft® Active Directory accounts.
- **Privacy Masking:**
Allows users to define privacy masks on individual cameras to hide areas in the camera view that must not be visible or recorded
- **System Monitor**
Gives actual and historic performance and use reports of server performance, storage availability, network usage and camera performance

Integration Options

- The Milestone Integration Platform Software Development Kit (MIP SDK) 2013 enables seamless integration of video analytics algorithms and other third-party applications in the XProtect Smart Client and the Management Client
- Compatible with XProtect® Transact and XProtect® Retail, which integrate video surveillance with automated teller machines (ATMs), point-of-sale (POS) and enterprise resource planning (ERP) systems for managing loss prevention and fraud
- Integrate with access control systems, alarms, gates, building management systems, using hardware input/output (I/O), internal events and TCP/IP events
- Generic event integration enables easy and fast integration of third-party applications and systems via a simple message-based socket communication interface



Detailed Product Features

Recording Server

System

- Simultaneous digital multi-channel MJPEG, MPEG4, MPEG-4 ASP, MxPEG and H.264 video recording of IP cameras and IP video encoders without any software limitations on number of cameras per server
- Edge Storage with flexible retrieval enables managed video retrieval from camera storage based on time schedules, events or manual requests, enabling you to effectively retrieve video recordings across low-bandwidth connections
- Two-way audio, transmitting and recording audio from connected microphones and audio from the operator's microphone to attached speakers
- Route traffic between multiple connected cameras and multiple clients requesting live view, playback and export
- Multicast one video stream to all XProtect Smart Clients. The infrastructure must support IGMP to reach remote networks
- Dual-stream support allows for establishment of two independent streams from a camera to the recording server with different resolutions, encodings and frame rates, dependent on camera capabilities
- Secure high speed recording database holding JPEG images or MPEG4, MPEG-4 ASP, MxPEG or H.264 streams
- Record 30+ frames per second per camera, limited only by hardware
- Recording quality depends entirely on camera and video encoder capabilities - no software limitations
- Possibility to import pre-event images recorded locally in camera or video encoder
- Built-in, real-time, camera-independent motion detection
- The Recording Server runs as a Windows service under local system account or optional local Windows user or Microsoft Active Directory account with run-as-a-service privileges
- Port forwarding enables clients to access the recording servers from outside a Network Address Translation (NAT) firewall
- Support for both IPv4 and IPv6 addressing
- 64-bit Recording Servers enable more cameras to be run on a single server unit
- Secure HTTPS camera connection on devices supporting HTTPS

PTZ

- 'Pass-through' control of manual pan-tilt-zoom (PTZ) operation from clients with user priority
- 32,000 PTZ priority levels for control of rights between different operators and automatic patrolling schemes
- Execute rule-based go-to preset position on events and patrolling
- Pause PTZ patrolling on event and resume patrolling after manual session timeout

I/O and Events

- Support for devices with one or more input and output ports
- Powerful rule processing engine for execution of start and stop actions triggered by events or time profiles

Setup and Management

- Install the Recording Server from a web page on the management server. The Recording Server is completely managed from the Management Server and configuration changes are applied instantly while recording is in operation
- Local Recording Server configuration data is available during periods where the Management Server is inaccessible
- Recording Server manager is available in the local console notification area (icon tray) for status messages, start/stop of the service and change of network settings

Client Access

- Facilitate client access
- Clients are authenticated and authorized at the Management Server and use a session-limited access token to access the Recording Server

Alerting and Notification

- The system acts as an Simple Network Management Protocol (SNMP) agent that can generate an SNMP trap as a result of a rule activation

Logs

- Logging of system, event, audit and rule entries to the Management Server at regular intervals with local caching during offline scenarios



Management Server and Management Client

System

- Management Server for initial client logon, system configuration and logging
- Management Client for remote administration of recording servers, devices, security, rules and logging
- All configuration and logs from the entire system are stored in a centralized Microsoft SQL database and accessible by the Management Server only
- Failover solution for the Management Server provides a resilient system solution based on Windows Server Clustering, ensuring high system availability
- Management Server manager is available in the local console notification area (icon tray) for status messages and to start/stop the service
- The Management Server runs as a Windows service under local system account or optional local Windows user or Microsoft active directory account with run-as-a-service privileges
- To register and validate your licenses, the system offers easy-to-use online activation via the Internet and alternatively, offline activation via email for closed surveillance networks
- Support for both IPv4 and IPv6 addressing

Milestone Federated Architecture™

- System concept that enables individual XProtect Expert systems to be interconnected with a central XProtect Expert system in a hierarchical architecture for infinite scalability and central management
- Centralized management access to all federated systems
- Resilient architecture that allows the individual systems to function as autonomous sites in the event of network problems

Storage

- Definition of one or more storage containers with individual archiving schemes and retention times. Recording capacity is limited only by disk space
- Each storage container is defined as live database and one optional archive, where the video data is moved from the live database to secondary disk systems or network drives. The archived data is still online and available for clients
- Ability to allocate individual devices to different storage containers
- Move a device or a group of devices between two different storage containers
- Storage overview gives instant indication of used vs. available storage in total and for individual cameras

Devices

- Wizard for automatic scanning IP network ranges for new devices including automatic model detection
- Fast detection of devices using broadcast detection protocols, such as universal plug and play (UPnP)

- Wizard for assisted discovery of single devices with automatic or manual model detection
- Wizard for swift replacement of malfunctioning devices with preserved configuration settings and recordings
- Enable and disable devices – very useful if they are down for maintenance
- Adjust brightness, color level, compression, maximum bit rate, resolution, rotation, etc., per camera or camera group
- Select and configure video format, frames per second (FPS), resolution and quality for the video stream used for recording per camera
- Select and configure one, or more, video streams per camera to be used for live viewing. Each stream can be in different video format, FPS, resolution and quality
- Adjustable group of pictures (GOP) length for MPEG4 and H.264 encoded video reduce the video stream size, which reduces network bandwidth and storage needs
- Optional preview window for immediate verification of video settings per camera or for a group of cameras
- Assign camera shortcut number for easy operation by clients
- Define multiple PTZ preset positions on the server
- Import PTZ preset positions from cameras
- PTZ scanning on supported devices. View or record while moving slowly from one position to another
- Define multiple PTZ patrolling schemes with adjustable wait time between shifts and customizable transitions with disabling of motion detection to avoid false alarms
- Run multiple patrolling schedules per camera per day. For example, run different schedules for day/night/weekend
- Privacy mask consistently hides certain areas in the camera view in live and playback video and in exported material
- Configure device events like motion detection with pre- and post-buffers, or input signal behavior options
- Fine-tune motion detection sensitivity per camera and exclude multiple zones for areas of no interest to avoid false alarms

Rules, time profiles and notifications

- Powerful Microsoft Outlook®-style rule system supports unlimited number of rules
- Rule actions are triggered by event, time interval or a combination of event and time. Rules can be optionally stopped by event or after a certain time
- Time profiles with reoccurring time selection and expire condition supporting unlimited number of time profiles
- Dynamic day length time profile follows the daylight changes over the year for a given location (defined by a GPS position), including daylight savings time



- Trigger events:
 - Hardware: Connection lost, connection restored and, disk space low
 - Built-in: Bookmark reference request, communication error, communication started, communication stopped, feed overflow started, feed overflow stopped, live client feed requested, live client feed terminated, output activated, output changed, output deactivated, PTZ manual session started, PTZ manual session stopped, recording started, recording stopped, settings changed and settings changed error
 - Device: Audio falling, audio passing, audio rising, directional violation, images received, input activated, input changed, input deactivated, motion started (device), motion stopped (device), object appearing, object disappearing, object dwelling, object entering, object exiting, object presence, object stopped, speedy object, tampering, temperature, tripwire and video lost
 - Plug-ins: Motion started and motion stopped
 - Recording Server: Archive available, archive unavailable, archiving not finished, database full – auto archiving, database disk full, database repair, database storage area available, database storage area unavailable, failover started and failover stopped
 - User-defined events: Allow clients and third-party systems to trigger a rule.
- Start actions: Start recording, start feed, set live frame rate, set recording frame rate, start patrolling, pause patrolling, move to PTZ preset position, move to default PTZ preset position, set output, send notification, make log entry, start plug-in, stop plug-in, apply settings on device, set Matrix to view, send SNMP trap, retrieve and store remote recordings from device (time interval from rule activation or interval between start and end times), save attached image, activate activating, and user defined event
- Stop actions: Stop recording, stop feed, restore default live frame rate, restore default recording frame rate, stop patrolling, resume patrolling, move to PTZ preset position, move to default PTZ preset position, set output, start plug-in, stop plug-in, apply new settings on device and set Matrix to view
- Multi-recipient customizable email notification with image and/or AVI attachment of incidents

Security

- Authenticate client access to the system based on Microsoft Active Directory local Windows or basic user accounts
- Authorize client access privileges per Microsoft Active Directory local Windows user account/group or basic user

- Authorization roles control user access to:
 - Device: visibility of devices, live view, playback, AVI export, JPEG export, database export, sequences, smart search, input status, output control, AUX commands, view bookmark, edit bookmark, add bookmark and delete bookmark.
 - PTZ: PTZ control, PTZ priority and PTZ preset control
 - Speech: visibility of microphones and speakers, listen to live audio, browse audio, export audio and get audio sequences
 - Remote recordings : retrieve remote recordings
 - Application: manager, XProtect Smart Client/XProtect Web Client/Milestone Mobile, live/ playback/setup, status API and service registration API
 - User-defined event: trigger user-defined events
 - View groups privileges
 - XProtect Enterprise servers: Basic or Windows authentication details
 - Alarms: visibility of alarms and ability to manage alarms
 - MIP: custom-defined rights
 - Privileges for the map feature
- Time-based security, where users' access rights to devices and functions are based on time profile to block user access outside normal shift hours
- Session-limited token system with auto-refresh grants access for clients to recording servers and devices

Logging

- Logs of system, event, audit and rule entries are consolidated from all Recording Servers at regular intervals
- Each log file has adjustable size and time limitations to avoid overloading the database

XProtect Smart Client Profiles

- Centralized management of XProtect Smart Client application options enables optimization of the XProtect Smart Client for different user categories and skill levels
- Ability to enforce or recommend an optional setting for a user or group of users, using maximum three different Smart Client profiles
- Define general XProtect Smart Client application options, including (listing not exhaustive): visibility of time, visibility of camera live indicators, default image quality, default frame rate, keyboard and joystick setup, startup mode and de-interlacing filters
- Access to live mode and the availability of individual control panes and overlay buttons
- Access to playback mode and the availability of individual control panes, overlay buttons and settings for specific functions, such as default export path
- Access to setup mode and the availability of individual control panes and setup functions
- Definition of available view layouts



System Administration

- Built-in backup and restore support for manual system backup of all configuration data, including: system configuration data, maps, alarm definitions and configurations and views in the XProtect Smart Client
- System Monitor function gives actual and historic performance and usage reports of server performance, storage availability, network usage and camera performance
- Configuration Reporting enables complete or partial documentation of system configuration. Custom and site-specific free-text information, integrator's notes and logo can be added to the printer-friendly reports

Event Server

Alarm Manager

- Single-point alarm management of all internal system alarms and external security alarms
- Alarm descriptions and work instructions make alarms actionable for operators
- A alarm location map can be linked to each alarm providing instant situational awareness to the operator dealing with the alarm
- Customizable alarm priorities allow operators to focus on the most critical alarms
- Customizable alarm categories enable logical grouping of alarms dependent on their type and nature
- Customizable alarm statuses enable alignment of the alarm handling workflow with existing workflows and security systems
- Alarm handling result code enables tracking of the outcome of the alarms
- Automatic allocation to alarm owner with escalation and alarm forwarding possibilities
- Time profiles for definition of active alarms
- Possibility to associate one or more cameras to an alarm (maximum 15 cameras can be displayed simultaneously in the alarm preview window)
- A set of alarm handling reports gives valuable information about alarm inflow and alarm handling performance
- Extensive logging of alarms
- Microsoft Clustering support for the Event Server enables secure and redundant alarm handling



Milestone Mobile Server

- The Milestone Mobile server runs as a dedicated service, allowing it to be installed either together with an existing installation or on dedicated hardware for more demanding installations
- The Milestone Mobile server transcodes video so the streams are robust and can adapt to changing connection bandwidth. The server also optimizes the use of available bandwidth to get the best possible stream quality
- Installing the Milestone Mobile server plugin in the Management Client will give access to the Milestone Mobile server management in order to change default settings and read out miscellaneous status information
- Milestone Mobile servers can be installed in parallel, offering redundant setups and/or allowing more simultaneous users. Multiple Milestone Mobile servers allow users to connect to a server of their choice
- Milestone Mobile servers can be configured through the tray controller to easily adjust or update settings
- Use either a default-generated certificate for HTTPS encrypting the connection to the Milestone Mobile server or provide your own custom certificate
- All configuration of Video Push is done from the server, so users can download and use the Milestone Mobile client without having to do any configuration
- Milestone Mobile server supports creating server side export through XProtect Web Client and Milestone Mobile
The Milestone Mobile management plugin allows administrators to configure codec used as well as manage ongoing and completed exports
- The Milestone Mobile server automatically installs the XProtect Web Client. No additional setup is needed

XProtect Smart Client

General

- Dedicated task-oriented tabs for the Sequence Explorer, Alarm Manager and System Monitor, in addition to the traditional Live and Playback
- Application theme support with choice of dark or light themes
- True multi window support where secondary windows have full functionality and can be operated in independent mode, or synchronized mode where it follows the control of the main window
- Shortcuts to select a specific window, or specific camera in a window

Live view

- View live or playback video from 1-100 cameras per computer monitor/view from the same or different servers simultaneously
- Live view digital zoom allows full view recordings while the operator can digitally zoom in to see details
- Supports 38 different view layouts optimized for 4:3 and 16:9 display settings in both landscape and portrait
- Independent playback capability allows for instant playback of recorded video for one or more cameras, while in live mode
- Centralized storage of shared and private camera views, enables coherent access to views across the system
- Possibility to instantly re-arrange cameras in views for optimized monitoring of incidents, with single click restore of original view
- Instant camera placement in live view allows for instant replacement of cameras in a view, where a new cameras can be placed in a particular view and position through a simple drag-and drop operation
- Update on motion only optimizes CPU usage by allowing motion detection to control whether or not the image should be decoded and displayed. The visual effect is a still image in the view until motion is detected
- Multiple computer monitor support provides a main window and any number of either floating windows or full screen views
- Global hotspot function lets you work in detail with any camera selected from any view
- Local hotspot function lets you work in detail with a camera selected from the same view
- Carousel function allows a specified view to rotate between pre-defined cameras that are not necessarily present in the view at the same time. Operators can select default or custom display times for each camera, and they are able to manually switch to the next or previous camera in the carousel list
- Matrix function shows live video from multiple cameras in any view layout with customizable rotation paths, remotely controlled by computers sending Matrix remote commands
- Advanced video navigation includes fast/slow playback, jump to date/time, single step and video motion search



- Import static or active HTML maps for fast navigation to cameras and to provide a good overview of premises
- Hide HTML page toolbar in HTML page views
- Activate Matrix via graphical maps of premises using JavaScript or integrate with centralized access control systems
- The operator can assign outputs, PTZ presets and views as actions to joystick buttons and as keyboard shortcuts. The actions are grouped to optimize overview
- Two-way audio support lets the XProtect Smart Client recognize live and recorded audio from camera connected microphones and outgoing audio from the operator's microphone to one or multiple camera speakers
- Adaptive de-interlacing option secures high video quality, based on the actual video content received. The XProtect Smart Client optionally applies a filter to areas of the image where jagged edges would otherwise show up

PTZ

- Control PTZ cameras by using;
 - PTZ preset positions
 - PTZ point-and-click control
 - Overlay buttons
 - PTZ zoom to a defined rectangle
 - Video overlaid PTZ control
 - Virtual joystick function
 - Joystick
- Take manual control of a PTZ camera that is running a patrolling scheme. After a timeout with no activity the camera reverts to its scheduled patrolling scheme.
- Fisheye camera (Grandeye™/IPIX™) support for 1x2 or 2x2 'Quad View' for viewing all 360° at once
- 360° ImmerVision Enables® Panomorph lens technology

I/O and Events

- Overlay buttons provide intuitive control of cameras, camera-integrated devices and other integrated systems directly from the camera view
- Manually trigger output port relay operation, for example when controlling gates
- Manually trigger events by activating a server-defined event from a list

Bookmarking

- Manually define bookmarks as quick bookmarks or detailed bookmarks with bookmark details
- Bookmarks are shown in timeline with instant preview
- Listing and previewing of bookmarks in recording search
- Bookmark reports enable effortless incident documentation
- Direct video export of bookmark reduces time needed to prepare forensic video material

Playback

- Integrated video timeline with time navigation and playback controls, including an integrated function to select a time interval for export or video retrieval from edge storage devices and interconnected systems, simplify playback navigation and video export
- Quick overview of recorded sequences, events and bookmarks
- Independent playback capability allows for independent playback of recorded video from one or more cameras
- Instant camera placement in playback view allows users to instantly replace cameras in a view, where a new camera can be placed in a particular view and position with a simple drag-and drop operation
- Smart Search lets you quickly search selected areas in the recorded video for motion. Within a camera image, you can mark single or multiple areas
- Playback view digital zoom allows the operator to digitally zoom in to see details in the recorded video
- Smart Search lets you quickly search selected areas in the recorded video for motion. Within a camera image, you can mark single or multiple areas
- Playback view digital zoom allows the operator to digitally zoom in to see details in the recorded video

Export and Print

- Snapshot function enables operators to produce instant visual documentation of a camera through a snapshot function that saves a camera image to a file, or send it directly to a printer
- Export in XProtect format; including a standalone Recording Viewer application for instant and easy viewing by authorities
- Export preview with looped playback
- Encryption and password protection of exported video material with a choice of following strong encryption algorithms: 56-bit DES 128-bit, 192-bit and 256-bit AES
- Secure video evidence handling with a digital signature of exported video material that enables users to verify the video has not been modified or tampered with when viewing the export in the XProtect Smart Client – Player
- Create evidence material in media player format (AVI files) or still image format (JPEG images)
- Disable re-export option to prevent undesirable distribution of sensitive evidence material
- Bulk camera export in multiple formats to multiple destinations, including direct export to optical media, results in more efficient video exports and more secure handling of evidence material
- Export comment function enables users to add general and/or camera-specific comments to a video export when exporting to XProtect format. When exporting to media player format, comments can be added as pre/post slides
- Print incident reports include image, surveillance details and free-text user comments



Sequence Explorer

- Dedicated dockable tab for the Sequence Explorer
- Separate window displaying sequences, time intervals and bookmarks in thumbnail previews, the Sequence Explorer gives unparalleled visual overview of recorded video combined with smooth navigation
- Presents recorded sequences and bookmarks for individual cameras, or all cameras in a view
- Smooth navigation with sliding preview and “drag-and-throw” function for video thumbnails
- Instant playback of video sequences and bookmarks

Map Function

- Built-in map function in the XProtect Smart Client that provides intuitive overview of the system and offers integrated access to all system components
- Map images can be in standard graphic file formats including JPG, GIF, PNG and TIF
- Any number of layered maps such as city, street, building and room,
- Instant camera preview on ‘mouse over’, and one-click show all cameras on map
- One click function to open floating window with all cameras (maximum 25 cameras) on the map
- Depiction of camera view zones on map with clickable PTZ zones for instant PTZ control
- Easy drag-and-drop and point-and-click definition of: cameras, servers, microphones, speakers, I/O devices, hot-zones for map hierarchies, camera view-zones and PTZ camera presets position view zones
- Integrated control of speakers, microphones, and events and output I/O control, including: doors, gates, light and access control systems
- Real-time status monitoring indication from all system components including cameras, I/O devices and system servers
- Graphical at-the-glance visualization of the system status through color coding
- Hierarchical propagation of status indications to higher ordered maps
- Different levels of status indications available (alarm, warning and errors)
- System performance data for cameras and servers including camera resolution, FPS, network usage and disk space
- Ability to suppress status indications (error, warning etc.) for a given device
- Possibility to edit device names in a map, and assign map specific names and references to devices in a map
- Map editing subject to user rights

Camera Navigator

- Provides consistent and comprehensive visual verification, ensuring easier tracking of moving objects in geographically complex security environments
- Automatically displays thumbnail views of nearby cameras
- Add-on to the map application - no special configuration needed

Alarm Manager

- Dedicated dockable tab for the Alarm Manager
- Alarm list with extensive filtering capabilities and an alarm preview in both Live and Playback mode
- Extensive alarm sort and filtering functions allow operators to focus on most critical alarms
- Instant preview of primary camera and related cameras helps reduce the number of false alarms
- Tight integration with the map function allows for indication and acknowledgement of active alarms via the map
- Alarm descriptions and work instructions make alarms actionable for the operators
- Alarm escalation and alarm forwarding possibilities allow operators with appropriate skills to handle different alarms
- Alarm reports enable effortless documentation of incidents
- Alarm location map presents the alarm operator with a map showing the alarm area when an alarm is selected
- Optional sound notifications for different alarm priorities for notification of new incoming alarm
- Alarm disabling option enables users to suppress alarms from a given device in a certain time period
- Instant access to both live and recorded video from the cameras that are related to the alarm
- Alarm handling reports give valuable information about alarm inflow and alarm handling performance

System Monitor

- Dedicated dockable tab with system performance and use information
- System Monitor function gives actual and historic performance and use reports of storage availability, network usage, and server and camera performance

Setup and management

- Install the XProtect Smart Client from a web page on the Management Server
- Notification about new updates at log-in
- Application options allow users to adapt the layout and personalize the application to their particular preferences

Authentication

- System log-in uses Microsoft Active Directory, local Windows, or basic user account
- Use current Windows logon for authentication
- Auto-log-in and auto-restore views

System

- Support for IPv4 and IPv6 addressing
- 64-bit Windows® operating system support enables better performance when viewing and operating many cameras
- Support for multicast streams with automatic switch to unicast if the network becomes unreliable



XProtect Smart Client - Player

- Playback of recorded or archived video and audio evidence
- Same user-friendly interface and most functions as the XProtect Smart Client
- Instant one-click playback for easy viewing of exported video evidence
- Advanced second-level investigation tools make it easy to refine exported video and re-export the most essential evidence
- The project tool allows users to merge video exports or archives from two different locations or XProtect systems together into one new export
- View up to 100 cameras time-synched during playback
- Scrollable activity timeline with magnifying feature
- Instant search on recordings based on date/time and activity/alarm (video motion detection)
- Evidence can be generated as a printed report, a JPEG image, an AVI film or in XProtect format
- Export audio recordings in WAV or AVI format
- Export video digitally zoomed to view an area of interest only and to minimize export footprint size
- Re-export evidence containing XProtect format and the XProtect Smart Client - Player for instant, easy viewing by authorities
- Verification of digital signatures added in the Recording Server, or as a part of the export enables users to verify that the video has not been modified or tampered with
- Encryption and password protection of exported video material with a choice of following strong encryption algorithms: 56-bit DES 128-bit, 192-bit and 256-bit AES
- Secure video evidence handling with a digital signature of re-exported video material enables users to verify that the video has not been modified or tampered with when viewing the export in the XProtect Smart Client – Player
- View, modify or add general and/or camera-specific comments for a given video export
- De-interlacing of video from analog cameras
- IPIX technology for PTZ in 360° recorded images
- 360° ImmerVision Enables® panomorph lens technology

XProtect Web Client

- Access XProtect Smart Client views through the browser and avoid advanced setup
- Shared views can be managed centrally via the server with administrator/user rights and user groups
- Easy video playback including fast/slow playback, single frame step, and jump to date/time with frame preview while adjusting time
- Control PTZ cameras remotely, also using preset positions
- Dynamic bandwidth optimization when streaming from server to client gives better use of bandwidth
- Create AVI files or save JPEG images
- Export on the server to avoid moving large video files back and forth. Only download needed files or save them for downloading when on a faster connection
- Preview exports on the server without downloading them
- Trigger outputs and events with live view of related camera
- System login using XProtect user name and password
- System login using Microsoft Active Directory user
- Secure connection through HTTPS
- No installation needed on client computer



Milestone Mobile Client

- Add login credentials for multiple servers in the Milestone Mobile client to easily switch between sites or different connection addresses
- Views are inherited from the connected XProtect VMS system. The client automatically obtains the user's private and shared views from the system to be used as camera lists in the Milestone Mobile client
- A view with all cameras is automatically generated, allowing the Milestone Mobile client to be used when no views are set up. It also provides a quick way of searching through cameras
- Cameras can be viewed in full screen to take better advantage of the device's screen. It is also possible to search through cameras in a view while in full screen by swiping left or right
- Digital pinch to zoom enables users to zoom in on a part of the image for closer review and conduct detailed investigation of video when using megapixel or high-definition cameras
- Playback recordings from the database and select a specific time or recorded sequence to start playback, step through recordings and select a playback speed.
- View recordings from the database while keeping an eye on what is currently happening. The client displays a live picture-in-picture frame of the same camera when in playback mode. The picture-in-picture can be moved by dragging and double-tapping will return to live view
- Control pan-tilt-zoom (PTZ) cameras with Milestone Mobile either manually or by selecting predefined presets for quick navigation
- Video Push allows users to use their mobile devices' cameras as cameras in your XProtect VMS. Easy to use and requires no setup in the mobile device
- Trigger outputs and events:
Use your mobile device to trigger outputs connected to the XProtect VMS, or trigger user-defined events to have greater control while on the go
- Connect securely to the Milestone Mobile server using HTTPS encryption
- Export on the server to avoid moving large video files back and forth. Only download needed files or save them for downloading when on a faster connection



Minimum System Requirements

The following are *minimum* requirements for the computers used:

Computer running Management Server

Name	Description
CPU	Intel® Xeon®, minimum 2.0 GHz (Dual Core recommended)
RAM	Minimum 1 GB (2 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP or PCI-Express, minimum 1024 x 768, 16-bit color
Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 50 GB free (depends on number of servers, cameras, rules, and logging settings)
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) * ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) * ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) * ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) * ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) * ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 or 64 bit) ▶ Microsoft Windows Server 2003 (32 or 64 bit) <p>To run the management server in a clustered environment on Windows Server 2003/2008, you must use either the Enterprise or Data Center edition.</p> <p>* Only recommended in smaller installation with maximum 10 simultaneous client users</p>
Software	Microsoft® .NET 3.5 SP1 and .NET 4.0 and Internet Information Services (IIS) 5.1 or newer

Computer running Recording Server

Name	Description
CPU	Dual Core Intel Xeon, minimum 2.0 GHz (Quad Core recommended)
RAM	Minimum 1 GB (2 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP, or PCI-Express, minimum 1024 x 768, 16-bit color
Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 100 GB free (depends on number of cameras and recording settings)



Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 or 64 bit) ▶ Microsoft Windows Vista® Business (32 or 64 bit) ▶ Microsoft Windows Vista Enterprise (32 or 64 bit) ▶ Microsoft Windows Vista Ultimate (32 or 64 bit) ▶ Microsoft Windows Server 2003 (32 or 64 bit)
Software	Microsoft® .NET 4.0 Framework.

Computer running Management Client

Name	Description
CPU	Intel Core2TM™ Duo, minimum 2.0 GHz
RAM	Minimum 1 GB
Network	Ethernet (100 Mbit or higher recommended)
Graphics Adapter	AGP or PCI-Express, minimum 1024 x 768 (1280 x 1024 recommended), 16-bit color
Hard Disk Space	Minimum 100 MB free
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft Windows Vista® Ultimate (32 bit or 64 bit) ▶ Microsoft Windows Vista Enterprise (32 bit or 64 bit) ▶ Microsoft Windows Vista Business (32 bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 (32 bit or 64 bit) ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2003 (32 bit or 64 bit)
Software	Microsoft® .NET 4.0 Framework, DirectX 9.0 or newer, and Windows Help (WinHlp32.exe) which can be downloaded from http://www.microsoft.com/downloads/ .

Computer running Event Server

Name	Description
CPU	Intel® Xeon®, minimum 2.0 GHz (Dual Core recommended)
RAM	Minimum 1 GB (2 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP or PCI-Express, minimum 1024 x 768, 16-bit color



Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 10 GB free (depends on number of servers, cameras, rules, and logging settings)
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 or 64 bit) ▶ Microsoft Windows Server 2003 (32 or 64 bit)
Software	Microsoft® .NET 4.0 and Internet Information Services (IIS) 5.1 or newer.

Computer running Log Server

Name	Description
CPU	Intel® Xeon® , minimum 2.0 GHz (Dual Core recommended)
RAM	Minimum 1 GB (2 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP or PCI-Express, minimum 1024 x 768, 16-bit color
Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 10 GB free (depends on number of servers, cameras, rules, and logging settings)
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 or 64 bit) ▶ Microsoft Windows Server 2003 (32 or 64 bit)
Software	Microsoft® .NET 4.0 and Internet Information Services (IIS) 5.1 or newer.

Computer running Service Channel

Name	Description
CPU	Intel® Xeon® , minimum 2.0 GHz (Dual Core recommended)
RAM	Minimum 1 GB (2 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP or PCI-Express, minimum 1024 x 768, 16-bit color
Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 10 GB free (depends on number of servers, cameras, rules, and logging settings)



Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft® Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 or 64 bit) ▶ Microsoft Windows Server 2003 (32 or 64 bit)
Software	Microsoft® .NET 4.0 Framework, and Internet Information Services (IIS) 5.1 or newer

Please note that XProtect Expert 2013 will be the last version of the XProtect Expert product line supporting Microsoft Windows Server 2003.

Computer running Milestone Mobile Server

Name	Description
CPU	Intel® Pentium® 4, 2.4 GHz or higher (Core™ 2 or higher recommended)
RAM	Minimum 2 GB (4 GB or more recommended)
Network	Ethernet (1 Gbit recommended)
Graphics Adapter	Onboard GFX, AGP, or PCI-Express, minimum 1024 x 768, 16-bit color
Hard Disk Type	E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard Disk Space	Minimum 10 GB free hard disk space available (When using server-side export additional storage space is needed)
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32* bit or 64 bit) ▶ Microsoft Windows 8 Pro (32* bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32* bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32* bit or 64 bit) ▶ Microsoft Windows 7 Professional (32* bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32* or 64 bit) ▶ Microsoft Windows Vista® Business (32* or 64 bit) ▶ Microsoft Windows Vista Enterprise (32* or 64 bit) ▶ Microsoft Windows Vista Ultimate (32* or 64 bit) ▶ Microsoft Windows Server 2003 (32* or 64 bit) <p>* 32 bit Mobile server installer available as separate download</p>
Software	Microsoft® .NET 4.0 Framework.

Computer running XProtect Smart Client (incl. XProtect Smart Client – Player)

Name	Description
CPU	Intel Core2 Duo, minimum 2.0 GHz (Quad Core recommended for larger views)
RAM	Minimum 512 MB (1 GB recommended for larger views, 1 GB recommended on Microsoft® Windows® Vista®)



Network	Ethernet (100 Mbit or higher recommended)
Graphics Adapter	AGP or PCI-Express, minimum 1280 x 1024, 16 bit colors
Hard Disk Space	Minimum 500 MB free
Operating System	<ul style="list-style-type: none"> ▶ Microsoft® Windows® 8 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 8 Pro (32 bit or 64 bit) ▶ Microsoft Windows 7 Ultimate (32 bit or 64 bit) ▶ Microsoft Windows 7 Enterprise (32 bit or 64 bit) ▶ Microsoft Windows 7 Professional (32 bit or 64 bit) ▶ Microsoft Windows Server 2012 (64 bit): Standard and Datacenter. ▶ Microsoft Windows Server 2008 R2 (64 bit): Standard, Web, High Performance Computing (HPC), Enterprise, and Datacenter. ▶ Microsoft Windows Server 2008 (32 bit or 64 bit) ▶ Microsoft Windows Server 2003 (32 bit or 64 bit) ▶ Microsoft Windows Vista Ultimate (32 bit or 64 bit) ▶ Microsoft Windows Vista Enterprise (32 bit or 64 bit) ▶ Microsoft Windows Vista Business (32 bit or 64 bit) ▶ Microsoft Windows XP® Professional (32 bit or 64 bit)
Software	Microsoft® .NET 4.0 Framework, DirectX 9.0 or newer, and Windows Help (WinHlp32.exe) which you can download from http://www.microsoft.com/downloads/ .

Please note that XProtect Smart Client 2013 will be the last version of the XProtect Smart Client product line supporting Microsoft Windows Server 2003 and Microsoft Windows XP Professional.

Computer running XProtect Web Client

Name	Description
CPU	Intel Core2 Duo, minimum 2.0 GHz (Quad Core recommended for larger views)
RAM	Minimum 512 MB (1 GB recommended for larger views, 1 GB recommended on Microsoft® Windows® Vista®)
Network	Ethernet/WiFi (100 Mbit or higher recommended)
Graphics Adapter	AGP or PCI-Express, minimum 1280 x 1024, 16 bit colors
Hard Disk Space	Minimum 500 MB free
Operating System	Any capable of running the below browsers
Software	Browser: <ul style="list-style-type: none"> ▶ Microsoft Internet Explorer® 9 or later ▶ Safari® 5 or later ▶ Google Chrome™ 16 or later ▶ Mozilla® Firefox® 11 or later

Device running Milestone Mobile

Name	Description
Free System Memory	10MB or more available free system memory for installing the application
Operating System	<ul style="list-style-type: none"> ▶ Android 2.2 or higher ▶ iOS 6.0 or higher
Network	2G/3G data connection. 4G or WiFi recommended.



Miscellaneous

Supported Languages

XProtect Smart Client 2013

- English, Arabic, Bulgarian, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, Finnish, French, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Norwegian (Bokmål), Polish, Russian, Swedish, Slovak, Spanish, Thai and Turkish

XProtect Web Client 2013

- English, Arabic, Bulgarian, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, Finnish, French, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Norwegian (Bokmål), Polish, Russian, Swedish, Slovak, Spanish, Thai and Turkish

Milestone Mobile 2013

- English, Arabic, Bulgarian, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, Finnish, French, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Norwegian (Bokmål), Polish, Russian, Swedish, Slovak, Spanish, Thai and Turkish

XProtect Management Client 2013

- English, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Danish, French, German, Italian, Japanese, Russian and Spanish

XProtect Smart Wall 2013

- Operator interface:
English, Arabic, Bulgarian, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, Finnish, French, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Norwegian(Bokmål), Polish, Russian, Swedish, Slovak, Spanish, Thai and Turkish
- Management interface:
English, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Danish, French, German, Italian, Japanese, Russian and Spanish

Licensing Structure

Base server license

- An XProtect Expert base server license is mandatory for installing the product
- The base server license permits the following deployments within the legal entity purchasing the base server license:
 - Unlimited number of Management Servers
 - Unlimited number of Recording Servers
 - Unlimited number of XProtect Smart Clients, XProtect Web Clients and Milestone Mobile applications

Camera channel license

- To connect to a camera, a license per camera channel is required. In total, for all copies of the product installed under this license, the product may only be used with as many cameras as you have purchased camera licenses for
- Camera licenses can be purchased in any numbers. To extend the installation with additional camera licenses, the base server license number (SLC) is required when ordering