XProtect® Corporate 5.0
and
XProtect® Smart Wall 1.0

Specification Sheet

Contents

Feature Overview

Key features

- **Limitless multi-server and multi-site solution:**
  XProtect Corporate 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 multiple individual XProtect Corporate systems to be interconnected into 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
- **XProtect Smart Wall – Add-on video wall option:**
  Flexible and hardware independent video wall option that seamlessly integrates with the Management Client and XProtect Smart Client
- **High availability – Failover Servers:**
  Redundancy options for Recording and Management Servers ensure maximum system uptime and continuous system availability
- **Edge Storage:**
  Edge Storage with flexible retrieval enables managed video retrieval from camera storage based on time schedules and events
- **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:**
  Set up scheduled or event-driven camera and output actions with numerous options including support for time profiles
- **Multicast Support:**
  Send one video stream to multiple XProtect Smart Clients. The infrastructure must support Internet Group Management Protocol (IGMP) to reach remote networks
- **System Monitor**
  Gives actual and historic performance and use reports of server performance, storage availability, network usage and camera performance

Additional main features

- **Automatic camera discovery:**
  Enables fast discovery of more than 1,300 different IP-based video cameras and encoders from more than 80 vendors
- **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
- **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:**
  Full awareness of the system and user activity with comprehensive audit logs
- **Configure access privileges:**
  Ensure system consistency and global user management with single sign-on Microsoft® Active Directory credentials and control privileges and allowed camera actions.
- **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
- **Sequence Explorer:**
  Displaying sequences, time intervals and bookmarks in thumbnail previews, the Sequence Explorer gives unparalleled visual overview of recorded video combined with smooth navigation
- **Independent playback**
  Allows you to instantly play back recorded video in live or playback mode

Integration options

- The Milestone Integration Platform Software Development Kit (MIP SDK) 3 enables seamless integration of third-party applications in the XProtect Smart Client and the Management Client
- Open for integration of video analytics algorithms 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/Failover 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
- A Failover Server can be on standby for a single or a group of Recording Servers and automatically synchronize recordings back to the original Recording Server once it is back online
- Edge Storage with flexible retrieval enables managed video retrieval from camera storage based on time schedules and events, enabling you to effectively retrieve video recordings across low-bandwidth connections
- Two-way audio, transmitting client microphone input to remote speakers attached to IP devices
- 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
- Multi-stream can establish two independent streams from a camera to the XProtect Corporate recording server with different resolutions, encodings and frame rates, dependent on camera capabilities
- Multi-live streaming gives the possibility to define multiple streams for live viewing with different properties. It optimizes XProtect Smart Client viewing performance according to the available bandwidth and view layouts, which is ideal for deployments with remote viewing
- 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
- Importing pre-alarm images recorded 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

- Readable video database folder names (video database folders names - GUIDs are replaced with readable device/purpose names in Microsoft® Windows® Explorer)
- Digital signing of the Recording Server's video database can be used to verify that recorded video has not been modified or tampered with while stored in the XProtect Corporate system or after export
- Remote Connect Services enable you to securely connect remote cameras across different types of private and public networks

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
- 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 online 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 multiple individual XProtect Corporate systems to be interconnected in to 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

Recording Servers
- Authorize installed Recording Servers for use with the system

Multi-Stage storage
- Definition of multiple 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 optional archives, 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
- Achieving schemes define when video is archived to next archiving stage in the storage container and how long the video data is retained before deletion
- Optional video data grooming possibility enables compression (grooming) of the video by reducing the frame rate of the video data
- Ability to allocate individual devices to different storage containers

- Move a device or a group of devices between two different storage containers
- Light and strong video database encryption option, using DES-56 encryption algorithm
- 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
- 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
- PTZ scanning on supported devices. View or record while moving slowly from one position to another
- 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
- Rule-based creation of bookmarks
- Trigger events:
  - 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
  - Hardware: Audio falling, audio passing, audio rising, directional violation, images received, input activated, input changed, input deactivated, motion started (hardware), motion stopped (hardware), 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, create bookmark, send notification, make log entry, start plug-in, stop plug-in, apply settings on device, send matrix command, send SNMP trap, save attached image, activate activating, and user defined event
- Stop actions: Stop recording, stop feed, restore live frame rate, restore 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 settings on device and send matrix command
- XProtect Smart Wall start and stop actions (requires XProtect Smart Wall product option); Set XProtect Smart Wall to preset layout, Set XProtect Smart Wall monitor layout and camera content
- Multi-recipient customizable email notification with image and/or AVI attachment of incidents
- Define custom alerts for use with third-party systems

Security

- Authenticate client access to Recording Servers based on Microsoft Active Directory or local Windows user accounts
- Authenticate client access to XProtect Enterprise 6 and newer master and slave servers based on Microsoft Active Directory or basic user accounts
- Authorize client access privileges per Microsoft active directory or local Windows user account/group
- 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
  - Application: manager, XProtect Smart Client/XProtect Remote Client, 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
  - Federated XProtect Corporate sites
  - Alarms: visibility of alarms and ability to manage alarms
  - MIP: custom-defined rights
  - Privileges for the map feature and XProtect Smart Wall access and control
- 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
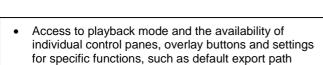
Logging

- Logs of system, event, audit, rule and alert 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
- 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 a 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

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

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
- Seamless access to cameras in federated systems
- 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
- Hotspot function lets you work in detail with a camera selected from a view containing multiple cameras
- 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 a camera's microphone and outgoing audio to the camera's speaker, as well as transmitting operator microphone input 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
- 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
- Graphical timeline displays a scrollable view of recorded sequences by variable time spans for an excellent graphical overview of recorded images
- Playback view digital zoom allows the operator to digitally zoom in to see details in the recorded video

Playback
- Integrated video timeline with time navigation and playback controls, including an integrated function to select a time interval for export, 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

Export and print
- 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'
- 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
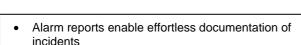- Map editing subject to user rights

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
- Global common alarm list for all sites in a Milestone Federated Architecture

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

Live view and playback
- View live video for 1-16 cameras simultaneously from the same or different servers
- Playback of up to nine recorded videos with date, sequence or time searching
- Advanced video navigation including fast/slow playback, jump to date/time, single step and video motion search
- Individual views can be user defined in various layouts: view or playback camera images from multiple servers simultaneously in the same view
- Shared views can be managed centrally via the server with admin/user rights and user groups
- Import static or active HTML maps for fast navigation to cameras and good premises overviews
- Control output port relay operation, like control of gates
- Quick overview of sequences with detected motion and preview window

I/O and events
- Quick overview of events

PTZ
- Control PTZ cameras remotely or by using preset positions
- Remote PTZ point-and-click control
- Remote PTZ zoom to a marked rectangle
- Take manual control over a PTZ camera that runs a patrolling scheme. After a timeout with no activity the camera reverts to its scheduled patrolling
- Fisheye camera (Grandeye™/IPIX™) support for 1x2 or 2x2 'Quad View' for viewing all 360° at once
- Optional video compression in streaming from server to client gives better use of bandwidth

Export
- Create AVI files or save JPEG images
- Print incident reports with free-text user comments

Authentication
- System log-in using XProtect user name and password
- System log-in using Microsoft Active Directory user accounts

System
- Thin browser-based client that does not require any software installation

XProtect Smart Wall

System
- Hardware independent - runs on standard servers and displays and no special video wall hardware or network configurations required
- Flexible and seamlessly scalable – supports any numbers of XProtect Smart Walls with any number and any combination of monitors at any location

Management
- Management of XProtect Smart Wall fully integrated with XProtect Corporate's Management Client
- Intuitive XProtect Smart Wall builder enables easy definition of any number of XProtect Smart Walls, including the size and position of individual monitors
- XProtect Smart Wall presets provide powerful control of the layout (camera grid) and actual camera content
- All user actions are subject to assignment of user rights

Control
- Dynamic user control of XProtect Smart Wall layout and content through manual drag-and-drop of cameras and views into the XProtect Smart Wall via the XProtect Smart Client
- Automatic event-driven control of XProtect Smart Wall layout and content based on rules, such as motion detection, I/O, integrated third-party applications, time, or video analytics events
- Layout control enables instant insertion of a camera in a specific monitor and position, changes of the XProtect Smart Wall monitor layout, setting of all (or some) of the monitors in the XProtect Smart Wall to a predefined layout and set of camera feeds
- Intuitive integration with the map function enables users to easily drag-and-drop cameras into the XProtect Smart Wall from the map

View
- Individual XProtect Smart Client users can view XProtect Smart Wall views as a part of the available view selection, which enables XProtect Smart Wall to be used as an operator collaboration tool

Minimum System Requirements

XProtect Corporate Servers

XProtect Corporate Recording / Failover Servers 5.0

- **Hardware platform:**
  Dual Core Intel® Xeon®, minimum 2.0 GHz (Quad Core recommended)
  RAM: minimum 1 GB (2 GB or more recommended).
  Ethernet (1 Gigabit recommended)
  HDD: minimum 100 GB free (depends on number of cameras and recording settings)
  HDD type: E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
- **Operating system:**
  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 2008 R2 (64 bit), 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), or Microsoft Windows Server 2003 (32 or 64 bit)
- **Software:**
  Microsoft .NET 4.0 Framework

XProtect Corporate Management Server 5.0

- **Hardware platform:**
  Dual Core Intel Xeon, minimum 2.0 GHz (Dual Core recommended).
  RAM: minimum 1 GB (2 GB or more recommended)
  HDD: minimum 50 GB free (depends on number of servers, cameras, rules, and logging settings)
  HDD type: E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
- **Operating system:**
  Microsoft Windows Server 2008 R2 (64 bit), Microsoft Windows Server 2008 (32 or 64 bit), Microsoft Windows Server 2003 (32 or 64 bit)
  To run redundant cluster solution, Microsoft Windows Server 2003/2008 Enterprise or Data Center edition is needed
- **Software:**
  Microsoft .NET 4.0 Framework
  Microsoft .NET 3.5 Framework SP 1 required for the SQL Server containing XProtect Corporate's system configuration
  Internet Information Service (IIS) 5.1, or newer

XProtect Event Server 3.0

- **Hardware platform:**
  Intel Xeon, minimum 2.0 GHz (Dual Core recommended)
  RAM: Minimum 1 GB (2 GB or more recommended)
  Ethernet (1 Gigabit recommended)
  HDD: Minimum 10 GB free (depends on number of servers, cameras, rules, and logging settings)
  HDD type: E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
- **Operating system:**
  Microsoft Windows Server 2008 R2 (64 bit),
  Microsoft Windows Server 2008 (32 or 64 bit),
  Microsoft Windows Server 2003 (32 or 64 bit)
  To run redundant cluster solution, Microsoft Windows Server 2003/2008 Enterprise or Data Center edition is needed
- **Software:**
  Microsoft .NET 4.0 Framework.
  Internet Information Service (IIS) 5.1, or newer

XProtect Corporate Clients

XProtect Smart Client 7.0 and Smart Wall 1.0

- **Hardware platform:**
  Intel Core2™ Duo, minimum 2.0 GHz (Quad Core recommended for larger views)
  RAM: Minimum 512 MB (1 GB recommended for larger views)
  HDD: Minimum 100 MB free
- **Graphics Card:**
  AGP or PCI-Express, minimum 1280×1024, 16 bit colors
- **Operating system:**
  Microsoft® Windows® XP Professional (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 2008 R2 (64 bit), 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) or Microsoft Windows Server 2003 (32 or 64 bit)
- **Software:**
  Microsoft .NET 4.0 Framework
  DirectX 9.0, or newer
  Windows Help (WinHlp32.exe)

XProtect Remote Client 3.8

- **Hardware platform:**
  Intel Pentium® 4, minimum 2.4 GHz
  RAM: Minimum 256 MB (512 MB recommended for larger views, 1 GB recommended for Windows Vista)
  HDD: Minimum 10 MB free
- **Operating system:**
  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 2008 R2 (64 bit), 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 XP Professional (32 or 64 bit*) or Microsoft Windows Server 2003 (32 or 64 bit*)
- **Software:**
  DirectX 9.0, or newer
  Windows Help (WinHlp32.exe)

XProtect Management Client 5.0

- **Hardware platform:**
  Intel Core2 Duo, minimum 2.0 GHz
  RAM: Minimum 1 GB. Ethernet (100 megabit or higher recommended)
  HDD: Minimum 100 MB free
- **Operating system:**
  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 2008 R2 (64 bit), 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*) or Microsoft Windows Server 2003 (32 or 64 bit*)
- **Software:**
  Microsoft .NET 4.0 Framework
  DirectX 9.0, or newer
  Microsoft Internet Explorer, Firefox or Safari browser for online help

*)   Note that the server will run as a 32-bit service/application

Miscellaneous

Supported Languages

XProtect Smart Client 7.0
- 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 Remote Client 3.8
- English, German, French, Spanish, Simplified Chinese, Japanese, Italian, Danish and Swedish

XProtect Corporate Management Client 5.0
- English, Portuguese (Brazil), Simplified Chinese, Traditional Chinese, Danish, French, German, Italian, Japanese, Russian and Spanish

XProtect Smart Wall 1.0
- 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 Corporate 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 / Failover Servers
  - Unlimited number of XProtect Smart Clients and XProtect Remote Clients

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

Licensing of Milestone Federated Architecture
- Milestone Federated Architecture can freely be deployed *within the same legal entity.* This implies that unlimited sites and cameras can be included in the federated hierarchy, without the need for additional or special licenses
- Deployment of Milestone Federated Architecture between two, or more, XProtect Corporate systems owed by *different legal entities,* one XProtect Corporate Milestone Federated Architecture device license is required for each named device (camera) in the federated sites that shall be accessible in the federating site

XProtect Smart Wall application license
- XProtect Smart Wall is an add-on product to XProtect Corporate and subject to separate licensing
- The XProtect Smart Wall application license permits connection of unlimited numbers of XProtect Smart Walls (including physical displays) and camera feeds