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XProtect® Professional+ 2017 R2

Specification Sheet

Specification Sheet

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Feature Overview

Key features

- **Scalable multi-server and multi-site solution:**
  XProtect Professional+ supports an unrestricted number of users, hardware devices, servers and sites. It allows the expansion of any installation as it is required
- **High performance recording server:**
  Building on a native 64-bit windows implementation and a highly-optimized database technology with RAM-based pre-buffering, the recording server supports minimum 3.1 Gbit/s recording rate
- **Hardware accelerated Video Motion Detection:**
  Video motion detection decoding is done in the GPU part of the Intel CPU to significantly reduce the CPU load and improve performance of the recording servers. Requires CPU with support for Intel Quick Sync Video.
- **Centralized management:**
  A Management Client connected to the management server enables full remote system configuration of all recording servers, devices, rules, schedules and user rights
- **Milestone Interconnect™:**
  A unique system concept that allows all Milestone VMS, Milestone Arcus™ appliances and Milestone Husky™ NVRs to be interconnected with a central XProtect Corporate system to gain central surveillance operation across geographically dispersed sites
- **Alarm Manager:**
  Single-point alarm function that provides a consolidated and clear overview of security and system-related alarms
- **Metadata support:**
  Supports reception, storage and export of metadata, including metadata from camera-resided video analytics and location data in Video Push from Milestone Mobile
- **Edge Storage with audio support:**
  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, including the ability to combine centrally and remotely stored video using Scalable Video Quality Recording™ (SVQR).
- **64-bit recording servers:**
  Allow more cameras to be run on a single recording server
- **Intuitive map function:**
  Multi-layered and interactive maps display the location of every camera and offer control of the entire surveillance system
- **Bookmarking:**
  Allows users to mark video sections of particular interest and add descriptive notes for later analysis or sharing with other users
- **Multiple language support:**
  Lets most operators use the system in their native language with support for 30 different languages, while the Management Client is available in 14 languages
- **Fast evidence export:**
  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 and rights management:**
  Strict privileges on 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.
- **Versatile rule system:**
  Facilitates the automation of different aspects of the system, including camera control, system behavior and external devices, based on events or time schedules
- **Customer Dashboard**
  Support for sending system, server, storage and device status and errors to the Milestone Customer Dashboard

Integration options

- The Milestone Integration Platform Software Development Kit (MIP SDK) enables seamless integration of video analytics algorithms and other third-party applications in XProtect Smart Client and Management Client
- Compatible with XProtect® Transact and XProtect® Retail, which integrate video surveillance with ATMs, point-of-sale (POS) and enterprise resource planning (ERP) systems for managing loss prevention and fraud
- Compatible with XProtect® Access for video enabled physical security, which integrates with access control and intrusion systems
- Compatible with XProtect® LPR for automatic reading and tracking of vehicle license plates
- Generic event integration enables easy and fast integration of third-party applications and systems via a simple message-based socket communication interface
- Supports Milestone ONVIF Bridge that enables full video interoperability in multivendor installations using a standardized ONVIF compliant video-out interface
- System configuration API enables external applications to make changes to the system's configuration

Detailed Product Features

Recording server

System

- Simultaneous digital multi-channel MJPEG, MPEG4, MPEG-4 ASP, MxPEG, H.264 and H.265 video recording of IP cameras and IP video encoders without any software limitations on number of cameras per server
- Two-way audio allows users to transmit and record audio from connected microphones and audio from the operator's microphone to attached speakers
- Generic framework for receiving and storing metadata from compatible devices and clients
- Route traffic between multiple connected cameras and multiple clients requesting live view, playback and export
- A dedicated recording stream enables optimization stream properties (resolutions, encodings and frame rate) for video storage and forensic usage
- Secure high speed recording database holding JPEG images or MPEG4, MPEG-4 ASP, MxPEG, H.264 or H.265 streams
- Flexible control of recording characteristics for MPEG4/H.264/H.265 streams, making it possible to toggle between recording key frames only or the full stream
- Record more than 30 frames per second per camera, limited only by hardware
- Recording quality depends entirely on camera and video encoder capabilities with no software limitations
- Possibility to import pre-event images recorded locally in camera or video encoder
- Pre-recording buffer (used for event/motion based recording) in RAM minimizes the disk read/write operations when no video is recorded
- Edge Storage with flexible retrieval enables video retrieval from camera storage based on time schedules, events or manual requests. This enables users to effectively retrieve video recordings across low-bandwidth connections
- Scalable Video Quality Recording™ (SVQR) enables seamless merging of video stored centrally in the recording server, and video retrieved from a camera associated edge storage
- Built-in, real-time, camera-independent motion detection with the ability to generate motion metadata for Smart Search
- 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 allow more cameras to be run on a single server unit
- Secure HTTPS camera connection on devices supporting HTTPS

Pan-tilt-zoom (PTZ)

- "Pass-through" control of manual PTZ operation from clients with user priority
- Three 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
- Import PTZ presets defined in the PTZ camera
- Rename imported PTZ presets

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

- Download and install the recording server from a web page on the management server. The recording server is completely managed via the Management Client and configuration changes are applied instantly while recording is in operation
- Selecting "Single computer" set up during the initial installation the system automatically performs certain configurations for an easier installation experience
- 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
- System administrators controlling systems with multiple users can control access permission per client for each of the three XProtect clients, resulting in safer security access

Logs

- Logging of system, audit and rule entries to the management server with local caching during offline scenarios

Management server and Management Client

System

- Management server for user authentication logon, system configuration and logging

- Management Client for central administration of the system such as recording servers, devices, security, rules and logging
- Management Client compatible with XProtect Professional+ 2017 R2 and newer
- All configuration and logs from the entire system are stored in a centralized Microsoft SQL database
- 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 automatic or manual online activation via the Internet and alternatively, offline activation via email and web for closed surveillance networks
- Support for both IPv4 and IPv6 addressing

Milestone Interconnect

- XProtect Professional+ is compatible with Milestone Interconnect enabling multiple XProtect Professional+ systems to be connected with a central XProtect Corporate system to gain central surveillance operation across geographically dispersed sites

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
- Archiving scheme define when video is archived and how long the video data is retained before deletion
- Ability to allocate individual devices to different storage containers
- Move a device or a group of devices between two storage containers
- Storage overview gives instant indication of used vs. available storage in total and for individual cameras

Devices

- Hardware wizard to add devices; automatically using Universal Plug and Play (UPnP) discovery, via IP network range scanning, or using manual device detection. All methods support automatic or manual model detection
- Wizard for swift replacement of malfunctioning devices with preserved configuration settings and recordings
- Wizard for easy moving of hardware devices (with attached cameras, microphones, speakers, inputs, outputs and metadata devices) between recording servers in runtime without losing settings, recordings, rules, permissions etc.
- Enable and disable devices if they are not used or are down for maintenance
- Adjust settings such as brightness, color level, compression, maximum bit rate, resolution and rotation per camera or camera group
- Enable up to two streams per camera; one stream for live viewing and one stream for recording
- Select and configure video format, frames per second (FPS), resolution and quality for the video streams.
- Adjustable group of pictures (GOP) length for MPEG4 H.264 and H.265 encoded video
- Assign camera shortcut number for easy operation by clients
- Optional preview window for immediate verification of video settings per camera or for a group of cameras
- Define multiple PTZ preset positions per camera
- Import PTZ preset positions from cameras
- PTZ scanning on supported devices
- 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 manually or automatically
- Apply one or multiple exclusion zones for where motion detection is to be disabled to avoid unwanted detection

Rules, time profiles and notifications

- Powerful Microsoft Outlook®-style rule system supports an unlimited number of rules
- Rule actions can be 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 support an unlimited number of time profiles
- Dynamic day-length time profile follows daylight changes over the year for a given location defined by a GPS position, including daylight savings time
- Play audio files on rule making it possible to automate announcements over speakers.
- Trigger events:
  The XProtect Professional+ VMS system and

connected devices support a wide set of events that can be used to trigger actions using the rule system. Events are grouped in the following categories:
- Hardware: events that relate to physical hardware devices connected to the system
- Devices: events that relates to certain functions and states of devices available to the XProtect VMS system via the connected hardware devices
- External Events: events that relate to VMS integrations
- Recording server: events that relate to archiving and database functions.
- Analytics: events from integrated applications and systems
- For further details on available trigger events, please refer to the XProtect VMS Administrator's Manual
- Start actions: The triggering events may initiate a wide set of actions in the VMS system, connected devices or integrated systems.
  For a complete list of available actions, please refer to the XProtect VMS Administrator's Manual
- Stop actions: The rule engine may also trigger stop actions in the VMS system, connected devices or integrated systems upon the completion of a rule.
  For a complete list of available stop actions, please refer to the XProtect VMS Administrator's Manual
- Multi-recipient customizable email notification with image and/or AVI attachment of incidents

User rights management

- Common and central management of all user rights across all user and programmatic (MIP SDK) interfaces
- Overall system security definition makes it possible to globally allow or deny permission to devices and functions (such as manage, read, edit and delete)
- Device-specific security definition makes it possible to allow or deny permission to individual devices and functions (such as manage, read, edit and delete).
- Roles control user and administrator access to:
- General: XProtect Smart Client profiles, dual authorization rights
- Cameras: visibility, administrate, live view (playback search sequences, export, smart search, AUX commands, manual recording, bookmark functions
- Microphones and speakers: visibility, administrate, listen to live audio, playback audio search sequences, export, manual recording, bookmark functions, speak to speakers
- Inputs and outputs: visibility, administrate, status, activation
- PTZ: manual control, activate PTZ presets, PTZ priority, manage PTZ presets and patrolling, lock/unlock PTZ presets and release PTZ session
- Remote recordings: retrieve remote recordings
- External events: visibility, administrate, trigger
- View groups privileges
- Servers: XProtect® Enterprise, XProtect® Professional and XProtect® Express slave server access and authentication details,
- Alarms: visibility of alarms and ability to manage alarms
- MIP: Plug-in permissions
- General application permissions: Management Client, XProtect Smart Client, XProtect Web Client and Milestone Mobile

Logging

- Logs of system, audit and rule entries are consolidated from all recording servers and clients
- Each log file has adjustable size and time limitations

XProtect Smart Client profiles

- Centralized management of XProtect Smart Client application options enables optimization of XProtect Smart Client for different user categories and skill levels
- Ability to enforce or recommend optional XProtect Smart Client application options for a user or group of users, using up to three different XProtect 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
- Access to Sequence Explorer, Alarm Manager
- Definition of available view layouts

System administration

- Built-in backup and restore support for manual system backup of all configuration data, including (listing not exhaustive): system configuration data, maps, alarm settings and definitions and client views
- 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
- License overview including add-on products, Milestone Care coverage and renewal date
- License owner information, that is synchronized with the software registration page on the Milestone website
- Expanded license information for multi-site installations where both the total used licenses

for the common SLC is presented and the license use in the specific system
- License overview that presents the license use of all the individual sites running on the same SLC
- "Changes without activation" function that allow additions and replacements of limited number of hardware devices without requiring license activation

Authentication

- System log-in uses Microsoft Active Directory, local Windows or basic user account
- Use current Windows logon for authentication
- Dual authorization offers an optional additional level of system security, where Management Client users are granted access to the system only when a second user or supervisor has confirmed the log-in with a successful authorization of the second user
- Kerberos support enables deployment in high security Kerberos IT environments

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
- An 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 on the same server as other system components or on dedicated hardware in more demanding installations
- The Milestone Mobile server can transcode video so streams are robust and can adapt to changing connection bandwidth as well as optimize the use of available bandwidth to get the best possible stream quality in the XProtect Web Clients and Milestone Mobile clients
- Adjustable transcoding logic enables capping of video resolution and frame rate for video streams provided to XProtect Web Clients and Milestone Mobile clients
- Option to bypass the transcoding logic and send direct streams to XProtect Web Clients
- Installing the Milestone Mobile server plugin in the Management Client will give access to Milestone Mobile server management in order to change settings, read out miscellaneous status information, configure codecs used for exports as well as manage ongoing and completed exports
- Milestone Mobile servers can be installed in parallel, offering redundancy and/or allowing more simultaneous users
- 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
- Video Push configuration is done from the server, so users can download and use Milestone Mobile without having to do any configuration
- Milestone Mobile server supports creating server-side export through XProtect Web Client and Milestone Mobile
- XProtect Web Client, including optional browser plug-ins, is included with the Milestone Mobile server. No additional setup is needed
- Smart Connect enables easy configuration of internet access to the Mobile Server by automatic configuration of firewalls and internet routers via UPnP. Smart Connect also verifies the configuration and operation of the internet connection, and can be used to email connection details to Mobile Client users[1]

XProtect Smart Client

General

- Dedicated task-oriented tabs for the Sequence Explorer and the Alarm Manager, in addition to the traditional Live and Playback tabs
- 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 or synchronized mode

[1] Use of Smart Connect require Milestone Care Plus

where they follow the control of the main window
- Shortcuts to select a specific window or specific camera in a window
- Camera search function promptly finds cameras, types of cameras and views in the system with the ability to create temporary views to display all or a subset of cameras matching the search criteria
- Display metadata bounding boxes from supported devices in live views and playback

Customization

- Application options enables customization of the general behavior and look of the XProtect Smart Client
- The customization can either be made as individual personalization managed by each operator, or centrally enforced using Smart Client Profiles
- Offers a simplified user interface with the possibility option to toggle between "Simple" and "Advanced" modes, where Advanced mode is default
- Control of general look & feel and navigation properties, such as color mode, camera title bar, grid sizes etc.
- Availability of control panes and functions in live and playback tabs, and in setup mode
- Information included in time line in playback tab
- Behavior and availability of expert function
- Setup of keyboard short cuts and joystick controls
- Specific behavior of alarms and access control notifications
- Advanced application settings such as use of hardware acceleration, videos diagnostics overlay and time zone settings
- Application language

Live view

- View live video from 1-100 cameras per computer monitor/view
- Multiple computer monitor support provides a main window and any number of either floating windows or full screen views
- Live view digital zoom allows a full view of recordings while the operator can digitally zoom in to see details
- Supports multiple 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 new cameras can be placed in a particular view and positioned through a simple drag-and drop operation
- Update on "motion only" optimizes CPU use by allowing motion detection to control whether or not the image should be decoded and displayed
- Global hotspot function allows users to work in detail with any camera selected from any view
- Local hotspot function allows users to work in detail with a camera selected from the same view
- Carousel function allows a specific view item 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
- 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.
- Two-way audio support enables XProtect Smart Client to record and play live 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. XProtect Smart Client can optionally apply a filter to areas of the image where jagged edges would otherwise show up
- Operators may start/stop manual recording on individual cameras, where the recording status is propagated to all XProtect Smart Client users active in the system

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
- Manage PTZ presets and patrolling profiles
- Start, stop and pause patrolling
- View who have PTZ control and time to automatic release
- Lock PTZ control
- 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.

- 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 quick or detailed bookmarks with the bookmark function
- 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 a bookmark reduces the time needed to prepare forensic video material

Playback

- Playback video from 1-100 cameras per computer monitor/view
- Advanced video navigation includes fast/slow playback, jump to date/time, single step and video motion search
- 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
- Toggle between simple and advanced timeline mode
- Overview of recorded sequences and bookmarks
- Independent playback capability allows the 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
- Digital zoom allows the operator to see magnified details in the recorded video

Export and print

- The snapshot function enables operators to produce instant visual documentation of a camera by saving the camera image to a file, or sending it directly to a printer
- The storyboarding function makes it possible to include video sequences from different or overlapping time intervals form different cameras in the one and the same export
- Export in XProtect format; including the standalone XProtect Smart Client - Player 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, 192 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), MKV format, 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.
- In media player format comments can be added as pre/post slides
- Print incident reports including image, surveillance details and free-text user comments

Sequence Explorer

- Dedicated tab for the Sequence Explorer
- Search options are: recording sequences (with support for time slicing), bookmarks and Smart Search
- Smooth navigation with sliding preview and "drag-and-throw" function for video thumbnails
- Preview of selected sequence with auto play and direct export support

Map function

- Built-in map function in XProtect Smart Client 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 shows 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 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 use and disk space
- Ability to suppress status indications (such as error and warning) 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 environments
- Automatically displays thumbnail views of nearby cameras
- Add-on to the map application with 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 and related cameras helps reduce the number of false alarms
- Tight integration with the map function allows operators to indicate and acknowledge active alarms in the map
- Alarm descriptions and work instructions make alarms actionable for operators
- Alarm escalation and alarm forwarding possibilities allow operators with appropriate skills to handle different alarms
- Alarm reports enable incident documentation
- Alarm location map presents the alarm operator with a map showing the alarm area when an alarm is selected
- Alarm notification to a single or a groups of Milestone Mobile client users using Push Notifications
- 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

Setup and management

- Download and install 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 a basic user account
- Use current Windows logon for authentication
- Auto-log-in and auto-restore views
- Dual authorization offers an optional additional level of system security, where XProtect Smart Client users are granted access to the system only when a second user or supervisor has confirmed the log-in with a successful authorization of the second user

System

- Support for IPv4 and IPv6 addressing
- 64-bit Windows® operating system support enables better performance when viewing and operating many cameras
- Support for hardware accelerated decoding using Intel Quick Sync video

XProtect Smart Client - Player

- Play back recorded or archived video and audio evidence, including edited storyboard exports
- Same user-friendly interface and most functions as XProtect Smart Client
- Offers a simplified user interface with the possibility option to toggle between “Simple” and “Advanced” modes, where Advanced mode is default
- 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
- Metadata bounding boxes included in exports are displayed time synchronized in XProtect Smart Client – Player
- 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
- Camera search function promptly finds cameras, types of cameras and camera views in the system
- 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 or MKV film or in XProtect format
- Export audio recordings in WAV, MKV or AVI format
- Exported video can be digitally zoomed to view an area of interest and minimize export footprint size

- Re-export evidence containing XProtect format and XProtect Smart Client - Player for instant, easy viewing by authorities
- Encryption and password protection of exported video material with a choice of the following strong encryption algorithms: 56-bit DES 128, 192 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 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
- 360° ImmerVision Enables® panomorph lens technology

XProtect Web Client

- Access XProtect views through the browser and avoid advanced setup
- Shared views can be managed centrally via the server with administrator/user rights and user groups
- Camera search function promptly finds cameras, types of cameras and camera views in the system
- Easy multi camera video playback including fast/slow playback, single frame step and jump to date/time with frame preview while adjusting time
- Investigation function with ability to save exports for later usage or download
- Users can quickly get an overview and act if needed via the list of alarms
- Option for client-side video decoding via browser plug-ins (please refer to http://www.milestonesys.com/Product-System-Requirements/ for details on supported browsers)
- Control PTZ cameras remotely with PTZ mouse gestures, including 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 log-in using XProtect user name and password
- System log-in using Microsoft Active Directory user
- Secure connection through HTTPS
- No installation needed on client computer

Milestone Mobile

- Supports any mobile device running Android® 2.2, iOS5, and Windows® Phone 8, or newer versions
- Add log-in credentials for multiple servers in Milestone Mobile 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 Milestone Mobile
- A view with all cameras is automatically generated, allowing Milestone Mobile to be used when no views are set up. It also provides a quick way of searching through cameras
- Camera search function promptly finds cameras, types of cameras and camera views in the system
- 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
- Play back 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 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 the XProtect VMS. Easy to use and requires no setup in the mobile device
- Option to include location metadata in Video Push
- Trigger outputs and events:
  Mobile devices can trigger outputs connected to the XProtect VMS, or 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
- Receive alarm notifications using Push Notifications, notifications include access to video, alarm information and instructions [2]

[2] Use of Push Notifications require Milestone Care Plus

- Smart Connect with automatic Mobile Server discovery on LAN using UPnP, and easy connection via WAN to known Mobile servers without having to keep track of actual server addresses
- Investigation function to access investigations done in the Web client

Miscellaneous

Minimum system requirements

The following are minimum requirements for the computers used, please refer to:
https://www.milestonesys.com/support/product-system-requirements/

Supported languages

For details on supported languages, please refer to:
http://www.milestonesys.com/support/supported-languages/

Licensing structure

Server base license

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

Hardware device license

- To connect cameras, audio devices, video encoders and other devices to XProtect Professional+, one license per physical hardware device is required. In total, for all copies of the product installed under this license, the product may only be used with hardware devices as you have purchased hardware device licenses for
- An unlimited number of hardware device licenses can be purchased. To extend an installation with additional hardware device licenses, the base server license number (SLC) is required when ordering