milestone The Open Platform Company

XProtect® Essential 2016

Specification Sheet

Contents

Feature Overview 3
XProtect Essential server modules 3
XProtect Essential client modules 3
Detailed Product Features 4
XProtect Essential server modules 4
XProtect Essential Server 2016 4
XProtect Essential client modules 6
XProtect Smart Client 6
XProtect Smart Client - Player 6
XProtect Web Client 7
Milestone Mobile 8
System Requirements 9
Supported languages 9
Licensing structure 9
Base server license 9
Camera license 9
Client license 9

Feature Overview

XProtect Essential server modules

- **Single-server video surveillance solution:**
  Unlimited recording of video for up to 26 IP cameras, IP video encoders and selected digital video recorders (DVRs) with analog cameras
- **Wide IP camera and device support:**
  Supports more than 2,400 IP cameras, encoders and DVRs from 120 different manufacturers
- **ONVIF™ and PSIA compliant:**
  Supports ONVIF™ and PSIA compliant cameras and devices
- **Optimized recording storage management:**
  Unique data storage and archiving solution that combines superior performance and scalability with cost-efficient, long-term video storage
- **Wide compression technology support:**
  Supports a variety of compression methods: MJPEG, H.263, MPEG-4 Pt. 2 Simple Profile and Advanced Simple Profile, H.264/MPEG-4 AVC, and MxPEG
- **Dual streaming:**
  Hardware use is optimized with two independent, configurable video streams, one for live viewing and one for recording. No client side configuration needed
- **System configuration wizards:**
  Guide the user through the process of adding cameras, configuring video and recording, adjusting motion detection and configuring users
- **Built-in video motion detection:**
  Independent of camera model and supporting up to 26 cameras simultaneously
- **Pre-activated license:**
  Initial activation of license with automatic online or offline activation. After that, cameras can be added to the system without having to perform license activation
- **Privacy masking:**
  Enables administrators to define privacy masks for individual cameras to hide areas in the camera view that must not be visible or recorded in order to comply with local legislation
- **Easy installation:**
  Start an installation with a few mouse clicks – all languages and applications in one installer (Management Application supports 11 languages). Unified installer that is shared between all XProtect Professional VMS products[1].
  Users can add components to or remove them from your installation at a later time
- **Support for Customer Dashboard**
  Resellers can monitor the health of installed systems with a valid and active SUP, so actions can be taken proactively before the issue becomes a problem for the customer. This offers peace of mind to system owners

XProtect Essential client modules

- **Power of choice:**
  Use any combination of the three available clients, XProtect Smart Client, XProtect Web Client and Milestone Mobile
- **View live video:**
  Use any client for constant live monitoring
- **View recorded video:**
  Use any client to review incidents
- **Camera awareness by map:**
  Use a floor plan or similar map to get overview of camera placement and quickly access video
- **Common design:**
  The XProtect clients share common design and basic functionalities, such as camera views, enabling a seamless switch between interfaces as needs require
- **PTZ Control:**
  Pan-tilt-zoom (PTZ) cameras can be controlled with any of the clients; therefore, suspicious activity can be investigated
- **Share or export recordings:**
  Export video in native database format and share with external viewers using the XProtect Smart Client Player. Moreover, instantly share exports between Milestone Mobile and XProtect Web Client using a server side export to avoid moving large files through remote connections
- **Output control and event triggering:**
  Use any client to activate system events or trigger outputs on the connected devices
- **Push Notifications**
  Receive push notifications in Milestone Mobile when alarms are triggered or alarms are assigned to a specific user. Even when the application is not running
- **Available in 29 languages**
  Use any of the clients in your preferred language from the list of the 29 languages supported

[1] XProtect Enterprise, XProtect Professional, XProtect Express, XProtect Essential and XProtect Go

Detailed Product Features

XProtect Essential server modules

XProtect Essential Server 2016

Management Application

- A single Management Application provides a consolidated single point of access to XProtect Essential Recording Servers
- System configuration wizards guide the user through the process of adding cameras, configuring video and recording, adjusting motion detection and configuring users
- Device scanning enables the fast discovery of camera devices using methods such as Universal Plug and Play, broadcast and IP range scanning
- Smart bulk configuration option allows simultaneous changes to the settings across multiple devices and in few clicks
- The adaptable application behavior guides novice users, while expert users can optimize the application for a more advanced use
- The export and import of system and user configuration data enables a reliable system operation and fast system recovery
- System cloning enables users to efficiently clone multiple systems with the same or similar configuration
- The import of offline configuration data enables offline editing of configuration data including camera and device definitions
- Each time a configuration change is confirmed, automatic system restore points are created enabling an easy rollback to previously defined system configuration points. This also enables the cancelation of undesired configuration changes and restoration of earlier valid configurations
- Automatic configuration wizard helps users to configure the system when the Management Application starts for the first time

Recording Server

- Native 64-bit recording server provides for optimal utilization of available hardware resources
- Flexible license structure charged per camera
- Up to 26 installed cameras; simultaneous recording and live view of all the cameras
- Recording quality depends entirely on camera and video encoder capabilities: no software limitation (30+ frames per second per camera)
- Cameras supporting SSDP, mDNS or ONVIF Discovery added to the local network can automatically be discovered and installed in the default Smart Client view
- The Milestone Customer Dashboard allows resellers to take immediate action and fix any problems on a customer's installation for example: a broken camera, hard disk failure etc. offering peace of mind to the system owner
- Dual streams from cameras can be optimized individually on compression, resolution and frame rate, meeting recording and live monitoring requirements
- Bandwidth is optimized with multi-streaming by splitting a single camera video stream to different streams for live view and recording, therefore they can each be optimized independently with respect to frame rate and resolution
- Simultaneous digital multi-channel video and audio recording and live viewing (relaying)
- Connectivity to cameras and video encoders supports MJPEG, H.263, MPEG-4 Pt. 2 Simple Profile and Advanced Simple Profile, H.264/MPEG-4 AVC, and MxPEG
- Recording technology: secure high-speed database holding JPEG images or MPEG4 and MxPEG streams including audio
- Unlimited recording capacity with multiple archives possible per day
- Hourly to daily database archiving with optional automatic move to network drive saves storage capacity on the local server – with images still available transparently for playback
- Start recording on event
- Authenticate access based on local Windows user account, or XProtect user name and password
- Authorize access privileges per local Windows user account, XProtect user profile or grant full access
- Audit logs of exported evidence by user and file
- Audit logs of client user activity by time, location and camera
- Local console management of the Recording Server accessible from the notification area
  - Start and stop Recording Server service
  - Access to Recording Server configuration settings
  - Access to Recording Server help system
  - View system status and log information
  - Built-in web server for download and launch of clients and plug-ins
- Remote access for XProtect Smart Client and XProtect Web Client
- User profiles control access to: live view, PTZ, PTZ presets, output control, events, listen to microphone, talk to speaker, manual recording; playback, AVI export, JPG export, XProtect (database) export, sequences, Smart Search and audio – as well as set up views, edit private views and edit shared public views
- Client-initiated start of recording based on predefined recording time or manual stop and access privileges
- Start cameras on live view requests from clients
- Built-in camera independent motion detection; choice of fully adjustable sensitivity or automatic sensitivity adjustment, zone exclusions, recording

activation with frame rate speed up, and alert activation through email
- PTZ preset positions, up to 25 per camera
- Absolute and relative PTZ positioning
- Copy a Smart Client – Player to all hard drives used for recording and archiving. A Smart Client Project file is also created (when the recording server is shut down), making it simple and easy to access video even if the hard drive is removed from the server

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
- Can transcode 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
- Several options for the administrator to configure the system to meet performance expectations. Including optional transcoding, client-side decoding, or a dynamic combination depending on streams
- The Mobile server plugin in the Management Application gives access to the Milestone Mobile server management in order to change default settings and read out miscellaneous status information
- Multiple Milestone Mobile servers can be installed in parallel, offering redundant setups and/or allowing more simultaneous users. They also allow users to connect to a server of their choice
- 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, therefore users can download and use the Milestone Mobile client without having to do any configuration
- 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
- Automatically installs XProtect Web Client. No additional setup is needed
- Smart Connect can automatically configure network addresses and validate external connectivity, as well as invite users to start using Milestone Mobile

XProtect Essential client modules

XProtect Smart Client

- Dedicated task-oriented tab for the Sequence Explorer in addition to the traditional Live and Playback tabs
- Application theme support with choice of dark or light theme
- Installed per default on Recording Server for local viewing and playback of video and audio
- Camera search function, which promptly finds cameras, type 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
- Start recording on cameras for a pre-defined time (default five minutes). Subject to privileges set by administrator
- Support for native 64-bit operating systems
- Independent playback capability allows for instant playback of recorded video for one or more cameras, while in live and playback mode
- Interactive maps provide the operator with a comprehensive overview of cameras and layout of an entire surveillance installation
- Seamlessly export video in various formats including video from multiple cameras, with evidence viewer, data logs and user notes included
- 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
- When exporting video in AVI or MKV format, the export can be played back in a standard player application. When exporting in MKV format the video is exported in the same format as originally recorded (similar to creating database export), as long as privacy masking is not enabled and video is recorded in H.264, JPEG or MPEG-4, except for MPEG-4 short header mode
- Quickly gather and refine evidence using Smart Search to locate changes or objects in the video
- Live view digital zoom allows zoomed-out recordings while the operator can digitally zoom in to see details
- “Update on Motion only” optimizes CPU use by allowing motion detection 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
- Shared and private camera views offer 1x1 up to 10x10 layouts in addition to asymmetric views
- Views optimized for both 4:3 and 16:9 screen ratios
- Hotspot function to 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 with individual timing and order with multiple appearances
- Carousel function can be controlled allowing the operator to pause the carousel function and to switch to the previous or the next camera
- Overlay buttons provide an intuitive control of cameras, camera-integrated devices and other integrated systems directly from the camera view
- The cameras’ built-in audio sources are available in live and in playback
- Separate pop-up window displaying sequences and time intervals in thumbnail previews, the Sequence Explorer provides a visual overview of recorded video combined with smooth navigation
  – Presents recorded sequences for individual cameras or all cameras in a view
  – Available in both live and playback modes
  – Smooth navigation with sliding preview and “drag-and-throw” function for video thumbnails
  – Instant playback of video sequences
- Application options allow users to adapt the layout and personalize the application according to their preferences
- 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
- 360° ImmerVision Enables® panomorph lens technology removes blind spots and allows operators to track, detect and analyze the entire area in live or playback mode. Only one camera license required for the 360° panomorph lens
- Create, edit or delete PTZ presets (not possible for PTZ type 2, where PTZ presets are stored in the camera device, but can’t be modified from the XProtect software)
- Support for hardware accelerated decoding using Intel Quick Sync video
- 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

XProtect Smart Client - Player

- Playback of recorded or received video and audio evidence
- Offers a simplified and even more user-friendly interface compared to the XProtect Smart Client, including the capability to switch back to the full XProtect Smart Client interface, with almost the same 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
- Scrollable activity timeline with magnifying feature
- Instant search on recordings based on date/time and activity/alarm
- Smart Search enables users to quickly search selected areas of camera images for motion
- 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 or AVI format
- Audio in MKV export is PCM, and therefore available in a decoded version of what was originally recorded
- Export video digitally zoomed to view area of interest only and to minimize export footprint size
- Re-export evidence in XProtect, AVI or MKV format with the XProtect Smart Client - Player for instant, easy viewing by authorities
- Encryption and password protection option for exported recordings and files
- Ability to add comments to exported evidence also encrypted
- De-interlacing of video from analog cameras
- 360° ImmerVision Enables® panomorph lens technology
- Automatically copies to all hard drives used by the recording server to store recordings and archives

XProtect Web Client

- Access XProtect Smart Client views through a browser to avoid using any advanced features
- Shared views can be managed centrally via the server with administrator/user rights and user groups
- Playback video easily including fast/slow playback, single frame step and jump to date/time with frame preview while adjusting time
- Search for cameras and views to quickly find specific cameras in the system
- Control PTZ cameras remotely using preset positions
- Dynamic bandwidth optimization when streaming from server to client giving a better use of bandwidth
- Optional client-side decoding for improved video quality and reduced server load
- Create AVI files or save JPEG images
- Create investigations with one or more cameras to quickly access them from anywhere and convert to exports when needed
- Export on the server to avoid moving large video files back and forth. Users can download only the files they need or save them to download when a faster connection is available
- Trigger outputs and events with live view of a related camera
- System login using XProtect user name and password
- Secure connection through HTTPS
- No installation required

Milestone Mobile

- 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
- Search for cameras and views to quickly find specific cameras in the system
- 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 PTZ cameras manually or by selecting predefined presets for quick navigation
- Video Push allows users to use the camera in their mobile as any other camera in the installation. It is very easy to use and requires no setup in the mobile device
- Trigger outputs and events: Administrators can use their 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. Users can download only the files they need or save them to download later when a faster connection is available
- View and manage alarms with easy access to related video recordings
- Receive push notifications when new alarms are triggered or alarms are assigned to a user
- Automatic server setup with Smart Connect

System Requirements

The listing of the system requirements are moved online to better service our customers. Please find the system requirements per product here:
http://www.milestonesys.com/SystemRequirements

Supported languages

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

Licensing structure

Base server license

- An XProtect Essential base server license is mandatory for installing the software; it may be installed on a single computer per software license code (SLC)
- The base server license contains the XProtect Essential Server module and XProtect Mobile server, plus the client modules XProtect Smart Client, XProtect Smart Client – Player, XProtect Web Client and Milestone Mobile

Camera license

- To connect to a camera, one license per camera 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
- Video encoders connected to multiple analog cameras require a camera license per encoder to operate
- I/O devices require a camera license per I/O device
- Up to 26 camera licenses can be purchased per SLC. To extend the installation with additional camera licenses, the SLC is required when ordering

Client license

- The XProtect Essential client modules: XProtect Smart Client, XProtect Smart Client – Player, XProtect Web Client and XProtect Mobile do not require additional licenses and can be installed and used on a number of terminals