# Milestone XProtect™ Enterprise
top performance IP video surveillance with a comprehensive feature set

XProtect Enterprise is the right product for larger installations or multiple sites that need robust surveillance software with the full functionality of advanced management, flexible scheduling, fast searching, analysis, and integration with other systems. Controlling unlimited numbers of cameras, multiple servers and multiple sites, XProtect Enterprise interfaces with the widest choice of network video and computer hardware equipment – easy to install and easily scalable for future expansions.
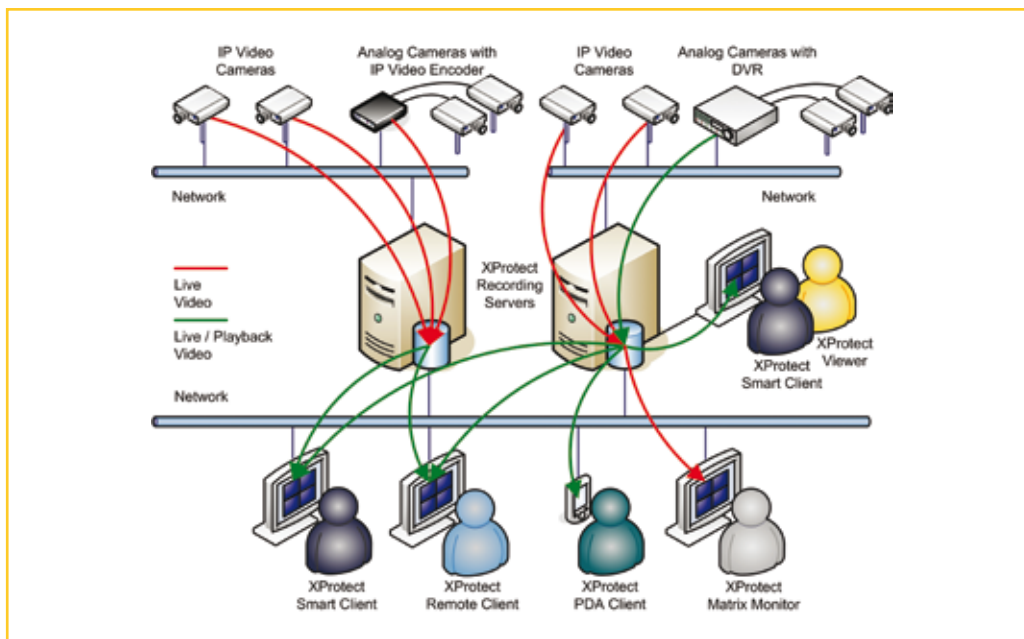
KEY BENEFITS:

◆ **Scalable solution:** Support for unlimited servers, sites and clients allow you to design the system to fit your organization.

◆ **Freedom to choose:** Compatible with more than 300 different IP-based video camera and encoder products, and selected DVRs from over 35 different vendors.

◆ **Dependable, robust and stable:** Proven in daily operation in more than 25,000 customer installations worldwide.

◆ **Use existing IP networks effectively:** Use effective video compression (MJPEG, MPEG4, MPEG4 ASP*, H.264* and MxPEG) and bandwidth optimized multi-streaming to leverage existing IP networks effectively.

◆ **Cost-optimized archiving:** Move your video data to more cost-effective storage media either locally or on the network.

◆ **High performance:** Achieved on standard computer equipment by utilizing powerful multi-threaded technology.

◆ **Flexible remote access:** Reach your video surveillance data from any location at any time using a desktop computer, laptop or PDA.

◆ **Open architecture:** IP technology, a versatile API/SDK and support for industrial protocols (OPC Data Access*) provides you endless integration possibilities with e.g. access control systems, alarms, gate barriers, etc.

◆ **Licensing per video channel:** Grow your installation along with your needs incrementally per camera.

◆ **Export evidence material fast:** Deliver authentic video proof to public authorities or for internal investigations.

◆ **Future-safe:** The IP approach is the foundation of tomorrow – available today. Ongoing product enhancements give you long-term returns on your surveillance investment.

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Milestone Systems

comprehensive video management tools

SYSTEM, ADMINISTRATION & INTEGRATION

◆ **Multi-server and multi-site video surveillance solution:** Unlimited recording of video from IP cameras, IP video encoders and selected DVRs with analog cameras.

◆ **Automatic camera model detection:** Supports more than 300 IP cameras, IP video encoders and selected DVR models from over 35 different vendors.

◆ **Unlimited number of recording servers:** Supporting unlimited cameras with up to 64 cameras per server. Continuously recording or activated by motion or event with speed up functionality.

◆ **Network and storage optimized:** Bandwidth optimized multi-streaming with new compression methods; MPEG4 ASP*, MxPEG and H.264*, besides MJEPG and MPEG4. Move recorded video data to more cost-effective storage media locally or on the network.

◆ **Built-in Video Motion Detection:** Independent of camera model and supporting up to 64 cameras simultaneously per server.

◆ **User initiated start and stop of recording:** Based on access privileges set by the administrator, client users can manually start recording for a pre-defined recording time.

◆ **Integration options:** Recording Server API/SDK, support for OPC* Data Access, TCP/IP activated events, and support for client plug-ins.

REMOTE OPERATIONS

◆ **Live view and playback:** From PDA and access clients supporting up to 64 cameras from multiple servers at the same time.

◆ **Advanced views layout:** Work with private and shared server-stored camera views containing up to 8x8 layouts, Hotspot, Matrix and Carousel elements, static and active HTML maps, all distributed across multiple computer monitors and windows.

◆ **Intelligent PTZ:** Manual control, presets, go to preset on event, absolute and relative positioning, patrolling with multiple schemes, wipe and wash commands, joystick control and scanning.

◆ **Virtual Matrix:** Control live camera views on remote computers for distributed viewing.

◆ **Input/Output Event Control:** Via cameras or networked I/O devices for event control, manual event buttons and event list in recordings.

◆ **Multi-channel, two-way audio:** Listen-in/recording with instant playback and transmit client microphone input to remote speakers.

SEARCH, EXPORT & SECURE DATA

◆ **Post recording processing:** Smart Search, Digital PTZ with optional image smoothing (Viewer only), or IPIX post-recording PTZ.

◆ **Evidence export:** JPEG, AVI, WAV and native database formats with stand-alone Viewer, data encryption and logs, user notes and report printing.

◆ **Authentication:** Microsoft Active Directory user accounts, and XProtect user names and passwords.

◆ **Authorization:** Microsoft Active Directory user accounts and groups, and XProtect user profiles, all controlling access privileges and allowed actions at camera level.

◆ **Logging:** Stores user actions by time, locations and cameras, and full system operation.

◆ **Alerting:** Notify users on event or motion detection by sound, e-mail and SMS.
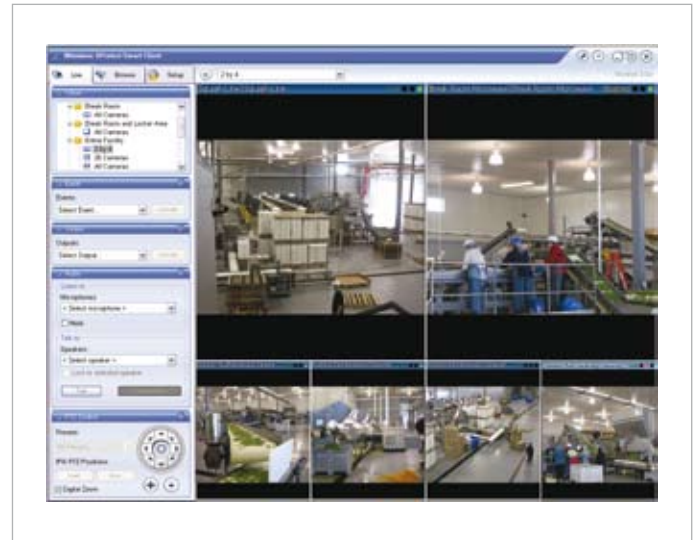
"With the Milestone software networked approach and Power Over Ethernet (POE) megapixel cameras from a leading camera manufacturer, we have great flexibility to scale up our needs as the business continues to grow," says Brett Chase, Vice President, Chase Farms Inc.

Detailed Product Features
XProtect Enterprise Server Modules

RECORDING SERVER

◆ Simultaneous digital multi-channel video and audio recording and relaying.
◆ Two-way audio transmitting client microphone input to remote speakers attached to IP devices.
◆ Bandwidth optimized multi-streaming by splitting the single video stream from camera to differentiated streams for live view and recording. Client can request live view at a different frame rate and at lower resolution than the recording settings.
◆ Connectivity to cameras, video encoders and selected DVRs supports MJPEG, MPEG4, MPEG4 ASP*, H.264* and MxPEG.
◆ Auto-detect camera models during setup.
◆ Flexible multi-site, multi-server license structure charged per camera.
◆ Unlimited number of installed cameras; simultaneous recording and live view of up to 64 cameras per server.
◆ Recording technology: secure high speed database holding JPEG images or MPEG4 and MxPEG streams including audio.
◆ Recording speed: 30+ frames per second per camera, limited only by hardware.
◆ Recording quality depends entirely on camera and video encoder capabilities: no software limitation.
◆ Start cameras on live view requests from clients.
◆ 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.
◆ Built-in, real-time, camera independent motion detection (VMD); fully adjustable sensitivity, zone exclusions, recording activation with frame rate speed up, and alert activation through email or SMS.
◆ Start recording on event.
◆ Client initiated start of recording based on pre-defined recording time and access privileges.
◆ Pan Tilt Zoom (PTZ) preset positions, up to 50 per camera.
◆ Absolute and relative PTZ positioning.
◆ PTZ go-to preset position on events.
◆ Combine PTZ patrolling and go-to positions on events.
◆ Set multiple patrolling schedules per camera per day: i.e. different for day/night/weekend.
◆ PTZ scanning on supported devices: viewing or recording while moving slowly from one position to another.
◆ VMD-sensitive PTZ patrolling among selected presets.
◆ Send Wipe and Wash commands to supported PTZ models.

◆ On pre-defined events Matrix remote commands are automatically sent to display live video remotely on computers running the Matrix Monitor or the Smart Client with Matrix Plug-in.
◆ Flexible online, sound, e-mail and SMS notification and patrolling scheduling per camera, triggered by time or event.
◆ Recording Server runs as a Windows Service.

RECORDING SERVER MANAGER

◆ 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.

"I can view any of the cameras in any building at any server throughout our Wide Area Network. We're looking to grow and our security will change. Having both central and local access to the system provides us with an extra benefit to be able to monitor all of our assets all of the time." - Larry Schmidt, Director of Business Operations at United School District 475, Kansas, which has 22 buildings and 18 sites.

Detailed Product Features

RECORDING VIEWER

- Playback recorded video and audio locally on the Recording Server.
- View up to 16 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).
- 'Smart Search' for highlighted image zones and objects.
- Evidence can be generated as a printed report, a JPEG image, an AVI film or in the native database format.
- Export audio recordings in WAV or AVI format.
- Export video digitally zoomed to view area of interest only and to minimize export footprint size.
- Export 'Evidence CD' containing native database and Recording Viewer for instant, easy viewing by authorities.
- Encryption & password protection option for exported recordings and files.
- Ability to add comments to exported evidence, also encrypted.
- Option to send email.
- De-interlacing of video from analog cameras.
- IPIX technology for PTZ in 360° recorded images.

IMAGE SERVER

- Remote access for Smart and Remote Clients.
- Built-in web server for download and launch of clients and plug-ins.
- Set up one Master and multiple Slave Servers.
- Authenticate access based on Microsoft Active Directory user account, or XProtect user name and password.
- Authorize access privileges per Microsoft Active Directory user account/group, XProtect user profile or grant full access.
- 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, DB export, Sequences, Smart Search and audio. As well as Set up views, Edit private views and Edit shared public views.
- Audit logs of exported evidence by user and file.
- Audit logs of client user activity by time, locations and cameras.

PDA SERVER

- Remote access for PDA Client.
- Handle login and session requests between PDA clients and Image Server.
- Resize video surveillance images to fit the screen layout of PDA Client.

> *"I am extremely happy with the surveillance system. Ease of use and administration in the software are all very simple to do. Last but not least, Milestone has proved to be reliable and stable with our server never having gone down with any problems in over a year" – Chris Lee, Director of Operations at Global SATCOM Technology*
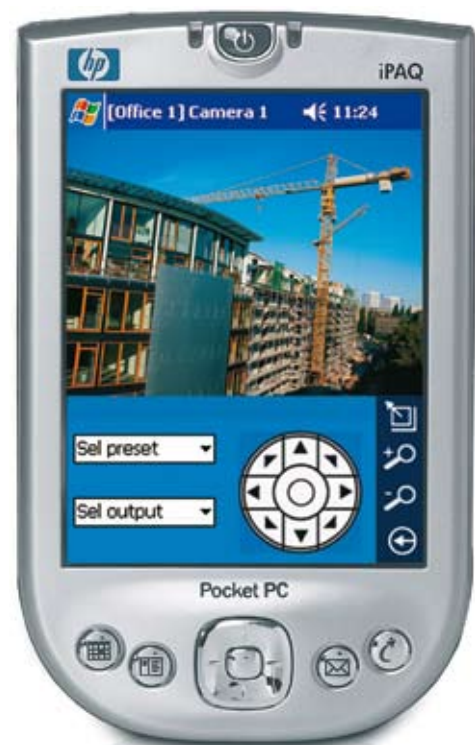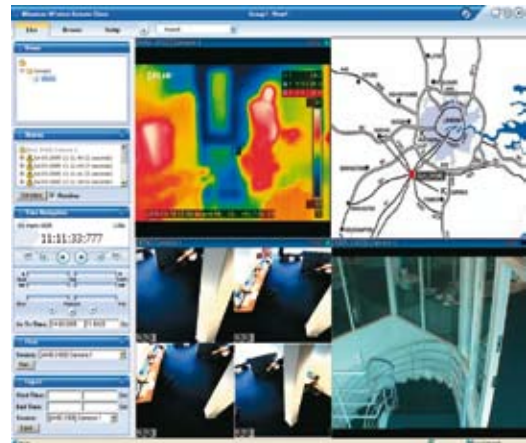
Detailed Product Features

XProtect Enterprise Client Modules

REMOTE CLIENT

- View live video or playback recordings for 1-16 cameras simultaneously; from the same or different servers.
- 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 premise overviews.
- Control output port relay operation, like control of gates.
- Quick overview of sequences with detected motion and preview window.
- Quick overview of events/alerts.
- Control PTZ cameras remotely, also 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.
- IPIX 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.
- Create AVI files or save JPEG images.
- Print incident reports with free-text user comments.
- System logon using XProtect user name and password.
- System logon using Microsoft Active Directory user accounts.

With XProtect Remote Client you can import static or active HTML maps for good premise overviews and quick navigation to cameras in multiple locations.

"Milestone was selected for several reasons: its open architecture allows a mix of hardware that provides great cost savings. It was the only solution that allowed us to scale the storage high enough for our needs. It fit our current requirements and will also scale nicely for future expansion. The software is easily updated when new enhancements and technologies become available. The browser interface for remote viewing and incident review allows any of our internal workstations to access video images without the need for proprietary software application installation, and the open standards make sharing video evidence with outside agencies effortless." - Peter Ducato, Asst. VP
Management Information Systems, F&M Banks, California
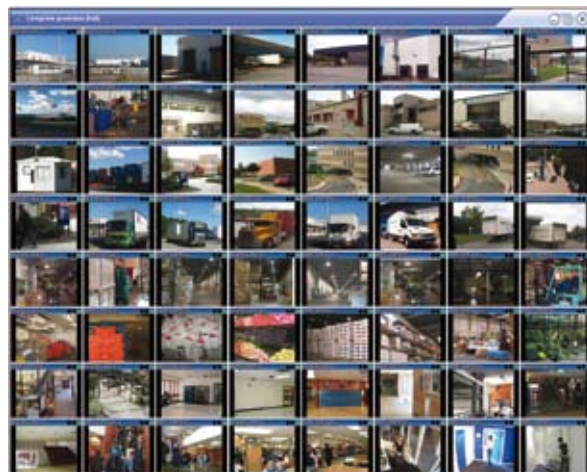
Detailed Product Features
XProtect Enterprise Client Modules

SMART CLIENT

◆ Smart Client includes all the features of XProtect Remote Client plus more:

◆ Installed per default on Recording Server for local viewing and playback of video and audio.

◆ Start recording on cameras for a pre-defined time (default 5 minutes). Subject to privileges set by administrator.

◆ Live view digital zoom allows zoomed-out recordings while the operator digitally can zoom in to see details.

◆ 'Update On Motion Only' optimizes CPU usage by letting motion detection control whether the image should be decoded and displayed or not. The visual effect is a still image in the view until motion is detected.

◆ Shared and private camera views offer 1x1 up to 8x8 layouts in addition to asymmetric views.

◆ Multiple computer monitor support with a main window and any number of either windowed or full screen views.

◆ Hotspot function for working in details 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 carousel function and to switch to previous or next camera.

◆ Matrix function to view live video from multiple cameras through the Image Server in any view layout with customizable rotation path, remotely controlled by Smart Clients or Recording Servers sending Matrix remote commands.

◆ Send Matrix remote commands to display live video remotely on computers running the Matrix Monitor or the Smart Client with Matrix Plug-in.

◆ Cameras' built-in audio sources available in live and in playback.

◆ Transmit client microphone input to one or all remote speakers attached to IP devices.

◆ Goto PTZ preset positions directly from camera menu.

◆ Send wipe and wash commands to supported PTZ by programming keyboard shortcuts or joystick buttons.

◆ Goto a specific camera directly from camera menu.

◆ Copy camera images to clipboard.

◆ Manually trigger events by activating an administrator defined event from a list.

◆ Audible alerts activated by motion detection or event occurrence per camera.

◆ Smart Search lets you quickly search selected areas of camera images for motion. Within a camera image, you can mark a specific area, multiple areas or overlapping areas for detecting motion sequences.

◆ Graphical timeline displays scrollable view of recorded sequences by adjustable time spans for an excellent graphical overview of when images have been recorded.

◆ Digital zoom function is enabled per default for fixed cameras in live view and for fixed and PTZ cameras in playback mode.

◆ Features for printing images.

◆ Export 'Evidence CD' containing native database and Recording Viewer for instant, easy viewing by authorities.

◆ AVI export automatically includes assigned audio source.

◆ Encryption & password protection option for exported recordings and files when exporting to database format.

◆ Assign outputs, PTZ presets, events and views as actions to joystick buttons and as keyboard shortcuts.

◆ Hide HTML page toolbar in HTML page views.

◆ Current camera state is displayed as text in title bar of live view item window as green (live), red (recording) or yellow (stopped).

◆ Video quality is optimized when maximizing live and playback windows.

◆ Context sensitive help function.

The Floating Window option in the XProtect Smart Client enables you to watch a potentially huge number of cameras at the same time – that's good overview! Create as many floating views as you want in different groups like buildings, departments, or all entrances.

MATRIX MONITOR

- Virtual Matrix showing live video directly from up to 4 cameras at a time triggered remotely by Matrix remote commands.
- Camera view shifts by FIFO (first-in-first-out).
- Multiple events can control a single Matrix monitor and single events can control multiple monitors.
- Manually confirm or auto-accept Matrix remote commands.
- Show live video at the maximum speed (frame rate) allowed by your cameras.

PDA CLIENT

- View live or playback video from a single server or from multiple servers in half-screen or full-screen formats.
- In live view you can control Pan/Tilt/Zoom cameras manually or use preset positions, and control the cameras' output relays to trigger external actions like opening doors or gates, turning on lights, etc.
- To find recordings, you can jump to specific time/date or to next detected motion, or use motion detection sequence overviews.
- When viewing recordings, you can playback at variable speed or single step image by image.
- The PDA client connects to the XProtect Enterprise server using any IP connection; typically wireless LAN, GPRS, etc.
- Video compression from the server to PDA optimizes bandwidth usage.
- System logon using XProtect user name and password.

> *"It's important that we're putting in the IP technology and wireless network that allows you to look at all the options for adding more as you go along. We want this kind of technology built in for future flexibility. It sets up the connectivity for the whole community." – Roy F. McCampbell, Comptroller/ Chief Financial Officer for Bellwood, Illinois*

INTEGRATION OPTIONS

- Compatible with XProtect Transact that integrates video surveillance with ATM or POS cash register systems for managing loss prevention and fraud.
- Compatible with XProtect Central for alarm overviews and operational status in larger video surveillance installations.
- Integrate with access control systems, alarms, gates, building management systems, etc. using hardware I/O, internal events and TCP/IP events or the OPC Data Access.
- With the Milestone Software Development Kit (SDK) you can integrate video into other software products by using the API to view live images, playback recorded activities, 'go to' specific times, and search for motion.
- Create, import and use HTML pages for navigation between views or to trigger a virtual matrix in XProtect Smart and Remote Clients.
- Develop third party plug-ins for the Smart Client to expand with new functionality.

Milestone Systems
The Open Platform IP Video Software

MINIMUM SYSTEM REQUIREMENTS:

Common requirements:
CPU: Intel® Pentium® 4 or higher (Intel® Core™2 Duo recommended for Enterprise Server 6.5 and Smart Client 3.5), min. 2.4 GHz
OS: Microsoft Windows XP Professional (32 bit or 64 bit**) and Windows Server 2003 (32 bit or 64 bit**), Windows Server 2008 (32 bit or 64 bit**), Windows Vista Business (32 bit or 64 bit**), Windows Vista Enterprise (32 bit or 64 bit**) and Windows Vista Ultimate (32 bit or 64 bit**)
Graphics Card: AGP or PCI-Express, minimum 1024 x 768 (1280 x 1024 recommended), 16 bit colors
Network: Ethernet (100 Mbit or higher for Smart Client 3.5, Remote Client 3.5, and Matrix Monitor 2.3; 1 Gbit for Server 6.5 recommended)
** Running as a 32 bit application

XProtect Enterprise Server 6.5:
RAM: Minimum 1GB (2 GB or more recommended)
Hard disk type: E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster)
Hard disk space: Minimum 80 Gbyte free (depends on number of cameras and recording settings)
Software: DirectX 9.0 or newer required to run Playback Viewer application, and Microsoft .NET 1.1 Framework required to run Recording Server Manager plus PDA Server, and Internet Information Server (IIS) 5.1 or newer to run PDA Server

XProtect Smart Client 3.5:
RAM: Minimum 512 Mbyte (1 GB recommended for larger views, 1 GB recommended on Vista)
Hard disk space: Minimum 100 Mbyte free
Software: Microsoft .NET 2.0 Framework and DirectX 9.0 or newer

XProtect Remote Client 3.5:
RAM: Minimum 256 Mbyte (512 MB recommended for larger views, 1 GB recommended on Vista)
Hard disk space: Minimum 10 Mbyte free
Software: DirectX 9.0 or newer

XProtect Matrix Monitor 2.3:
RAM: Minimum 512 Mbyte (1 GB recommended on Windows Vista)
Hard disk space: Minimum 50 Mbyte free
Software: DirectX 9.0 or newer

XProtect PDA Client 1.0:
CPU: Intel StrongARM® or 100% compatible
RAM: Minimum 32 Mbyte
Network: Ethernet (256 Kbit or higher recommended)
Graphics Card: minimum 320 x 200, 16 bit colors
OS: Microsoft Windows Pocket PC 2003/2003 SE/Mobile 5.0

SUPPORTED LANGUAGES:

Enterprise Server 6.5: English, German, French, Spanish, Italian, Danish, and Japanese. Help system and Recording Server Manager in English only.
Smart client 3.5: English, German, French, Spanish, Italian, Danish, Japanese, Arabic*, Dutch*, Polish*, and Russian*.
Remote Client 3.5: English, German, French, Spanish, Italian, Danish, and Japanese.
Matrix Monitor 2.3 and PDA Client 1.0: English.
OPC Server and Client: English.
Service Release

* The feature is not included in version 6.5a but will be available in a service release as soon as possible in the first half of 2008.

LICENSE INFORMATION:

Base Server License:
Mandatory for installing the product and covers installation on an unlimited number of computers using the same Software License Code and designated as Master Servers or Slave Servers.
The Base Server License includes the Enterprise Server modules: Recording Server, Recording Viewer, Recording Server Manager, Image Server, PDA Server, Smart Client, Remote Client, PDA Client, and Matrix Monitor.

Camera License:
A camera license is required for each connected camera, either directly or per video channel through a video encoder or DVR. Camera Licenses can be purchased in any numbers.

Client License:
All client modules are not licensed and can be installed and used on any number of computers.

COMPANY PROFILE:
Milestone Systems is a global developer of open platform IP video management software. The XProtect™ platform is easy to use, robust and proven in more than 35,000 customer installations. With support for the industry's widest choice in network hardware and integration with other systems, XProtect provides best-of-breed solutions to "video enable" organizations - reducing costs, optimizing processes, and protecting assets. Milestone software is sold through authorized partners in 63 countries.