ipConfigure

Enterprise Surveillance Manager. Version 5.4
User Manual

This document describes the features and functions of ipConfigure's Enterprise Surveillance Manager (ESM) user interface. Screen shots in this manual may vary from the images of your particular ESM installation.

TABLE OF CONTENTS

ACTIVE X & FLASH

INTERNET EXPLORER SECURITY SETTINGS

The browser serves as the means of accessing ipConfigure's Enterprise Surveillance Manager (ESM) client interface. IpConfigure recommends using Microsoft Internet Explorer 6.0 (or higher) as an Active X control is required by the application to function properly. The Active X control contains the ipConfigure Embedded Media Player (ipConfigure EMPPackage.cab) which is necessary for displaying MJPEG, MPEG and H.264 video in the browser. Other graphical elements of the software require the Adobe Flash plug-in be installed.

Before you start make sure that your browser's security settings are properly configured for downloading and installing ActiveX controls. Launch Internet Explorer and go to: **Tools | Internet Options | Security** tab. Select **Internet** zone and click **Custom Level...**
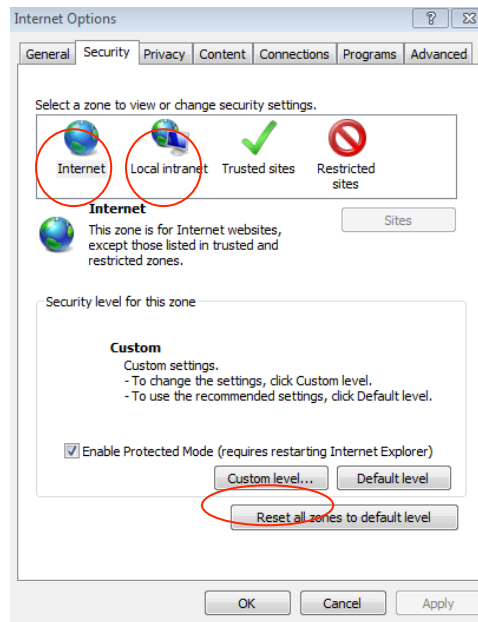
Under **"ActiveX controls and plug-ins"** make the following changes if applicable:

A.   Enable: Allow previously unused ActiveX controls to run without prompt
B.   Enable: Allow Scriptlets
C.   Enable: Display video and animation on a webpage that does not use external media player
D.   Prompt: Download signed ActiveX controls
E.   Enable: Run ActiveX controls and plug-ins
F.   Enable: Script ActiveX controls marked safe for scripting
G.   Enable: Automatic prompting for file downloads
H.   Enable: File download
I.   Enable: Font download

After you are done, make the same changes to **Local Intranet** zone's security settings. You will have to make these changes to each workstation that will be using ESM's client interface. It is also recommended to add the ESM URL to the **Trusted Site** zone.

Next download and install Adobe's Flash plug-in for Internet Explorer. The download can be found at: http://get.adobe.com/flashplayer or http://www.adobe.com

NOTE: *If you are upgrading or updating to a new version of ESM you should uninstall the ipConfigure Embedded Media Player Active X control using Control Panel | Add Remove Programs AND reboot your computer. When you log back into ESM you will be prompted to install the updated ipConfigure Embedded Media Player ActiveX control as described below.*

SAFARI/MAC SUPPORT

SETUP

ESM 5.4 supports Safari/Mac. This is supported by opening safari and pointing to the ESM web connection (e.g., http://esm or http://esm/admin). Live streaming and recorded playback will use Silverlight which is supported on Windows & Mac. The IE client will remain the same for ESM 5.4 and will continue to use ActiveX & Windows Media player for streaming live and recorded content.

Silverlight Live (MJPEG) & Recorded Playback (MJPEG, H.264)

ESM 5.4 Silverlight will be used for Safari browsers on Windows or Mac
a) MJPEG for live streaming via server streaming – (No H.264 or MPEG-4 live streaming)
b) Recorded playback supports MJPEG or H.264. No MPEG-4 playback supported for ESM 5.4
c) No audio live streaming or recorded playback of audio
All other features of live and recorded playback should be the same between Safari and IE users – we'll look to advance the Silverlight support overtime.
Server Streaming 5.4 (MJPEG): The first version of server streaming is included in ESM 5.4 for the Silverlight clients. This is only support for non-IE browsers using the Silverlight live streaming client. The IE client will remain the same using direct connection to the camera for all live streaming. Server streaming will support MJPEG only and will not support for MPEG-4 or H.264 live streaming for the Safari/Silverlight clients.

PAGE ELEMENTS

LOG IN SCREEN

Once you have configured the browser for Active X and Flash has been installed, type in the URL provided by your System Administrator for ESM in the Address Bar.

NOTE: *Ensure that your pop-up blocker has been disabled for this site and the URL for ESM has been added to the list of Allowed sites. (Tools | Pop-up Blocker | Pop-up Blocker Setting | Exceptions)*

Enter your User ID and Password. User names and passwords are case-sensitive. If this is the first time that you have logged onto to ESM you will be prompted to install the ipConfigureEMPPackage.cab ActiveX control.

NOTE: *If using Internet Explorer 7 or 8 make sure that Compatibility View is checked (Tools | Compatibility View) and that the ESM URL has been added to the list of websites to display by default in Compatibility View (Tools | Compatibility View Settings | Add).* **TIP:** *Look for the Compatibility View icon* *to the right of the Address bar.*

When prompted click on the Information Bar on the top of the page and select **Run Add-on**. A dialog box will appear. Click **Yes** to install the ActiveX control named "ipConfigure Embedded Media Player". *Depending on your network bandwidth connection it may take several minutes for the ActiveX to be downloaded from the server and installed.*

 NOTE: *If you are accessing ESM for the first time from outside your local network the ActiveX control may be flagged as being from an "Unknown Publisher". This is a known issue with Internet Explorer and it is safe to proceed with the installation.*

If you choose not to install the Active X control because a previous version is already installed click the **SKIP** button to bypass the download; otherwise you will automatically be taken to the MATRIX pages once the Active X is loaded.

NAVIGATION TABS
ESM provides five page navigation tabs within the browser window. These tabs allow for navigation between the different functions in the software.
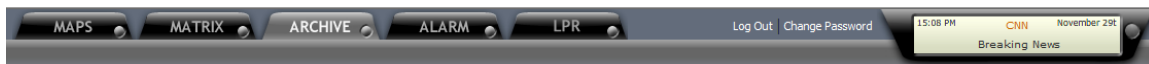
NOTE: *If the tabs are not displayed in your browser you may need to install Adobe's Flash player.*

MAPS: Displays images of regional locations, buildings and floor plans where cameras and devices are present. Map images and camera icons that are uploaded via ESM's Administrator interface. If your Administrator has not uploaded maps then a placeholder map will be displayed by default.

MATRIX: Shows live views of cameras which are selected from the Global Camera Directory. Custom camera layouts and camera views can be created and shared with other users.

ARCHIVE: Enables users to search cameras for events Motion Detection, Contact Alarms, Video Loss and Video Restore. This page includes an embedded Windows Media Player for playback (Preview) or in a separate pop-up window (View). Video clips can be sent to the Library for building case file and added to a Playlist to create one continuous clip from multiple clips.

ALARM: This page displays various alarms such as motion detection, system errors, and alerts in tabular format. Results can be filtered by Alarm Type and displayed by a user defined Refresh Rate.

LPR: This page provides access to the license plate recognition software. The LPR tab may be grayed out (disabled) if LPR software is not licensed or the feature is not available to a particular user.

RSS Notifications: This area displays notifications by ESM Administrators.   Text in box can be hyperlinked to an Internet or intranet site.

TIP: *The optimal screen resolution is 1024x768 or higher. Maximize Internet Explorer by selecting the F11 key for full screen mode. Toggle between full screen and regular views by hitting the F11 key again.*

ICONS & FUNCTIONS

MAPS page icons:

Location		Indicates locations where ESM is installed. *Click on the icon to drill down to another map or floor plan.*
Fixed Camera		Indicates the placement of a fixed camera on the map. *Hover over camera icons for a live view of the camera. Click on the icon for full resolution in a separate pop up window.*
PTZ Camera		Indicates placement of PTZ camera
Covert Fixed		Indicates placement of covert camera
Covert PTZ		Indicates placement of a covert PTZ camera
LPR Camera		Indicates placement of LPR camera.

MATRIX page icons:

Building		Indicates a building/location where cameras are located
Camera Online		Indicates a camera is online, viewable and recording
Camera Offline/Disabled		Indicates a camera is either offline, disabled (*by an ESM Administrator)* or not recording. *It may not be viewable live if selected however it is NOT recording. Please notify your ESM Administrator.*
Covert Camera		Indicates covert camera in the directory
LPR Camera		Indicates LPR camera
I/O Device		Indicates I/O device (Barix Barionet)

Decoder   Indicates a decoder

Your Layout   Indicates your custom layout. *Right click on this
                                     icon to create your own layout. Once created
                                     right click again to share or unshared with other
                                     users.*

Full Screen   Displays a single camera at full resolution in the
                                     matrix

One Up Layout   Displays 6 cameras where one occupies 75% of
                                     the matrix and the other 25%. *Drag cameras
                                     from Current Selections pane to determine order
                                     in the matrix.*

Grid Layout   Displays the number of cameras selected in the
                                     drop menu beside the icon. Chose from the
                                     following grids: 2x1, 2x2, 3x2, 3x3, 4x3, 5x4, 6x5.
                                     *Drag cameras from Current Selections pane to
                                     determine order in the matrix.*

Pop-up Camera Window icons:

Mic Muted   Indicates microphone has been muted at the
                                     workstation. The volume control slider will be
                                     disabled.

Mic On   Indicates microphone is on. A volume control
                                     slider will be enabled to increase/decrease the
                                     gain of the microphone at the workstation.

Mic Disabled   Indicates that audio is not available or enabled
                                     for this camera.

Speaker Muted   Indicates the speaker that is connected to the
                                     line out of the camera is muted. The volume
                                     control slider will be disabled.

Speaker On   Indicates the speaker that is connected to the
                                     line out of a camera is enabled. A volume control
                                     slider will be enabled to increase/decrease the
                                     volume of the speaker.

	Speaker Disabled	Indicates that audio is not available or enabled for this camera.
	PTZ Auto Focus Off	Indicates PTZ auto focus is disabled. PTZ Focus In and PTZ Focus Out icons will be enabled.
	PTZ Auto Focus On	Indicates PTZ auto focus is enabled. PTZ Focus In and PTZ Focus Out icons will be disabled.
	PTZ Auto Focus Disabled	Indicates mechanical PTZ functionality is not available for this camera.
	PTZ Focus In	Select the down arrow to focus out. *This control is only available when PTZ Auto Focus is off.*
	PTZ Focus Out	Select the up arrow to focus in. *This control is only available when PTZ Auto Focus is off.*
	Monitor On	Indicates that the camera at interactive monitoring station (*e.g. nurse's station*) is on and streaming video to the decoder (*in the patient's room*). *Only applicable if interactive monitoring camera type is configured by ESM Administrator.*
	Monitor Off	Indicates the camera at interactive monitoring station (*e.g. nurse's station*) is off and therefore not streaming video to the associated decoder (*in the patient's room). Only applicable if interactive monitoring camera type is configured by ESM Administrator.*
	Monitor Disabled	Indicates the camera at the interactive monitoring station is disabled and the decoder is off in the patient room. *Only applicable if interactive monitoring camera type is configured by ESM Administrator.*

ARCHIVE page icons:

Preview	Select to preview an event using the embedded media player on the page.
View	Select to view events at full resolution in a separate pop-up window.
Library	Send clip to library where it stored and can be shared with others.
Add to Playlist	Adds a video clip to a playlist.
Move Clip Up	Moves clip in the playlist up.
Move Clip Down	Moves clip in the playlist down.
Delete	Deletes a clip in the playlist.
No Event	Gray dot on the timeline indicates no event occurred.
Motion Event	Red dot on the timeline indicates motion has been recorded.
No Motion Event	Blue dot on the timeline indicates a continuous recording scheduled however no motion has been detected.
Video Loss	Indicates a loss of a video stream.
Video Restored	Indicates a video stream was restored.
Contact Alarm	Indicates a contact alarm from a Barix Barionet device.
Motion and Alarm	Indicates motion detection has been triggered along with a contact alarm from a Barix Barionet device.
Alarm and No Motion	Indicates a contact alarm has been triggered from a Barix Barionet device with no motion.
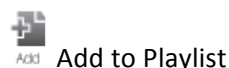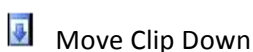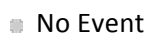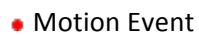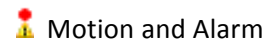
◆ Start Marker   Slide green diamond on time line to mark the start of playback.

◆ Stop Marker   Slide red diamond on time line to mark the end of playback.

ALARM page icons:

🟢 Motion Alarm   Indicates a Motion Alarm. *Click "View Event" to view video in separate pop up window.*

ⓘ Update Alarm   Indicates a System Update.

🔴 System Error   Indicates a System Error.

LIBRARY page icons:

Shared **Shared**   Indicates a clip is shared with other users.

Unshared **Unshared**   Indicates a clip is not shared with other users.

Export **Export**   Export video to desired location.

Delete **Delete**   Delete information or event.

LPR page icons:

Verify **Verify**   Verifies plate information. *Feature is used to improve LPR accuracy and add supplemental information about the vehicle.*

Watch **Add to Watch List**   Used to add license plate number to a watch list.

Stats **Stats**   Displays the time and frequency of plate at a given location or number of locations.

Edit **Edit**   Edit the plate information in the Watch List.

 Update   Updates Watch List information after editing.

 Cancel   Cancels edit to Watch List.

 Export   Exports JPEG image of the license plate capture
                                                          to desired location

 Watch List Alert   Indicates the LPR engine has detected a license
                                                          plate on the Watch List.

MAPS PAGE

REGIONAL MAPS

The map interface provides users with the ability to navigate through regional maps of ESM locations. The primary method of navigating is by selecting the blue Location icon , which allows the user to drill-down to any number of map layers. The Building Directory in the left hand column provides an alternative method to navigate to locations. Simply click on name of the location in the left hand column and the map will be displayed.

BUILDING MAPS

A building map includes camera icons that represent the placement and orientation of cameras in the facility.

NOTE: *Maps and camera Icons are loaded in the application by ESM Administrators*.

LIVE VIEW – MOUSE OVER

When the user's mouse is placed over a camera icon live video will be displayed in a pop up window next to the icon. The same is true for PTZ camera icons . In addition, PTZ controls including presets (if defined by the ESM Administrator) will be available. Users can use their mouse to pan and tilt and mouse wheel to zoom in and out. Additional PTZ controls include area zoom where a box can be drawn on the screen for mechanical or digital zoom. Also keyboard keys can be utilized for zooming, (i.e. arrow keys, +/-). For faster movement, hold down the control key and any combo of 2 other keys.

LIVE VIEW - FULL RESOLUTION

To enlarge a live view, click on the camera icon. A separate pop-up window will be displayed on your screen. You may enlarge the window by pulling the lower right corner of the popup with your mouse or clicking on the maximize icon on the title bar of the window.   You may also drag this window to

another monitor.

POP UP WINDOW CONTROLS

The addition of several camera controls in a full resolution pop up window helps to provide more clarity and ease of access. Whether or not these controls are enabled or visible may vary depending on several factors; in most cases users will see PTZ and audio controls. *Please see ICONS and FUNCTIONS section pages 6-11 to familiarize you with what controls may be available. This example shows how ESM is used in a hospital to improve nurse efficiency and ultimately patient care.*
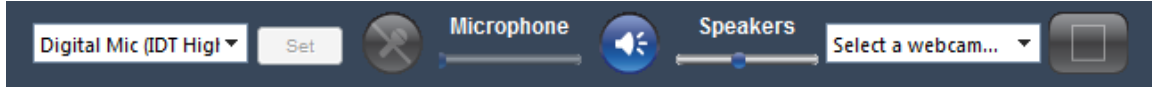
MATRIX PAGE

The Matrix page enables the user to view live video feeds from any location in various camera layouts. Additionally layouts can be customized and shared with other users. ESM has the capability of viewing up to 30 cameras on one monitor and a total of 120 using four monitors.

GLOBAL CAMERA DIRECTORY

The Global Camera Directory displays the locations, building and devices that are in use by ESM. By the

selecting the ⊞ icon, you can expand the directory tree. Conversely by selecting the ⊟ icon collapses the directory tree. To hide the entire Global Camera Directory column, select the gray arrow located on the right side of the panel (3). Users can drag and drop cameras from the directory right into the matrix. (1) Select / deselect to choose all cameras for that location (2) Check the box to select / deselect cameras to view (3) Sideways gray arrow will hide entire Global Camera Directory. To undo, click the arrow again. To make the frame wider mouse over the vertical frame until the horizontal handle ◄► appears. Click and drag to the desired width.
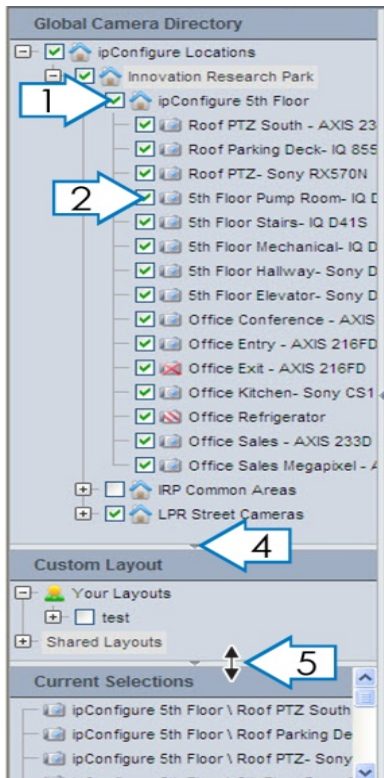
NOTE: This function is not enabled for the ARCHIVE and LPR pages.

(4) Downward gray arrow will hide the Custom Layout and Current Selections sections of the Global Camera Directory. To undo, click the arrow again. (5) Each section of the Global Camera Directory can be resized using the up and down arrow handle. Mouse over the frame until the vertical handle appears ↕. Click and drag to desired height.

LAYOUT OPTIONS

ESM provides three types of user defined layout formats: Full Screen   , One-Up   , and Grid Layout
   . Users can select the best viewing format for their surveillance needs. Different layouts can be combined when using multiple monitors.

MULTIPLE MONITOR SUPPORT

Each tab includes a small circle located on the bottom right of every tab (1). This button provides the ability to generate another copy or instance of that page. Users can select the new instance button and drag the new page to another monitor.

NOTE: ESM can support up to 120 live camera views divided equally among 4 monitors or 30 live cameras per monitor. In order to display 30 cameras per monitor users must select Grid Layout and a 6x5 grid from the drop down list.

MOTION and TIMED CYCLES

Three options are provided for the cycling of cameras in Matrix based on selected grid patterns.
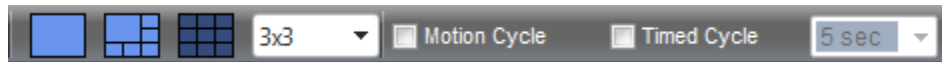
Motion cycle rotates the cameras selected in the Global Camera Directory only when motion is detected. Motion is indicated by a red square next to the name of the camera while a green square indicates no motion is detected. If motion is detected on more cameras that are available to be displayed based on the chosen layout, the cycling process will halt until any one of the actively displayed cameras ceases to detect motion. *For example: The user has chosen a 2x2 grid and six cameras have been selected from the Global Camera Directory. Only after motion ceases to be detected by one of cameras being displayed in the 2x2 grid will another camera which has detected motion be able to take its place*

Timed cycle rotates cameras selected in the Global Camera Directory based on a predefined interval. By default the Timed Cycle's interval is every 5 seconds. Users can select other intervals of 2, 5, 10 and 15 from the drop down list next to the Time Cycle option.

Both Timed/Motion cycle options can be selected in the One-Up layout   . This option rotates cameras in the larger window on a timed cycle and the smaller windows based on motion activity.

NOTE: *Users can arrange the order cameras are displayed in the matrix by reordering the list in the Current Selections pane. Click and drag the names of the cameras to desired order.*

CUSTOM LAYOUT & CURRENT SELECTIONS

User can create custom camera views and matrix layouts with Your Layouts. Your Layouts Furthermore

Your Layouts can be shared with other ESM users. To create a custom layout simply right click on the Your Layout icon 👤 and select **New Layout.** You will be prompted to name Your Layout. Drag cameras from the Global Camera Directory into Your Layout pane. To remove cameras from Your Layout right click and select **Remove**. To share and unshare Your Layout with other ESM users right click on Your Layout name and select **Share** or **Unshare**. Other options include **Delete** and **Rename** Your Layout.

TIP: Users can digitally zoom on any camera in the Matrix by clicking on the image and holding down the left mouse button. To zoom out, right click on the image and deselect **Digital Zoom**.

ARCHIVE PAGE

The Archive page enables users to search, playback, store and export recorded video. Windows Media Player is used to playback video in ESM; however exported video can be played back with any WMV (Windows Media Video) capable media player. ESM uses an ASF (Advanced Streaming Format) file extension to encapsulate the WMV file. ASF is one of the streaming media formats that is supported by Windows Media Player.

NOTE: *To playback video that was recorded using H.264 compression the proper third party codec must be installed in Windows Media Player. To determine if Windows Media Player has a H.264 codec installed click on Help | About Windows Media Player and click on the Technical Support Information hyperlink in the dialogue box. Scroll down to the **Video Codec** section and ascertain if a H.264 codec is installed.*
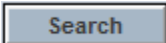
TIP: *User can also choose to playback exported video to another media player such as VLC media player which supports H.264 video natively. For more information go to: http://www.videolan.org/vlc/*

MULTI-CAMERA SEARCH TIMELINE
A search timeline provides a visual representation of the video events for cameras that are selected from the Global Camera Directory by the hour and minute. Users can search on four event types: **Motion Detection**, **Contact Alarms** (for Barix Barionet device), **Video Loss,** and **Video Restored.** *Please familiarize yourself with the ICONS and FUNCTIONS section for the possible events.*

Most commonly a search on Motion is represented by red dots ● while continuous recording are represented by blue dots ●.
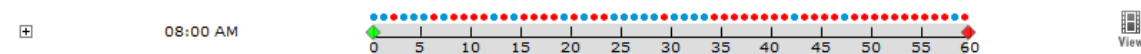

To search for an event first choose the type of event(s). Next choose the camera(s) from the Global Camera Directory upon which to perform the search and click the **Search** button. Next choose the day on the calendar the event occurred (indicated by red numbers) to display the search results. Click

another day to display its results.

TIMELINE ACTIONS

Each hour offers a set of actions to the right: **Preview**, **View**, **Library**, and **Add**. Each hour provides a Start marker ◆ and a Stop marker ◆ that allows users to select a timeframe on the timeline for the purpose of preview, playback, export, and Library storage. Simply drag the start marker to the beginning minute where you want playback to start and the stop marker to the end.
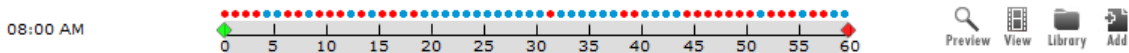
By selecting the **Preview** icon 🔍 , the video recorded between the start and stop marker will play in embedded Windows Media Player on the page while the **View** icon performs the same function in a separate pop up window.   Users can drag View windows to another monitor. If a multiple camera search has been performed and a ⊞ icon appears on the hour you can expand the hour by clicking the ⊞ icon and view each selected camera's timeline for events.   Click on the ⊟ icon to collapse the hour. Selecting the View icon on the hour will bring up a multi-camera playback pop up window.
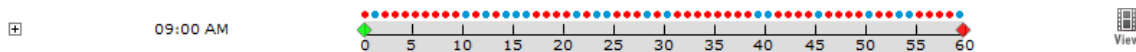
Users can send clips to the **Library** by selecting the Library icon 📁 where they are stored indefinitely and can be shared with other users as well as viewed and exported. Choose the **Add** icon to send the clip to the **Playlist**.

PLAYLIST

A Playlist in ESM is comprised of video clips that have been added by the user from a timeline search. Users create a Playlist when they wish to export individual video clips as one continuous video file. Clips in the Playlist can be rearranged using the Move Up /Move Down icons and deleted ✕ . Once the playlist is organized it can be exported by selecting the **Export** button. You will be prompted for a name and location for the video.

Users can clear the contents of the Playlist manually clicking the **Clear** button.

NOTE: *This function does not delete the video clip from the system it simply removes it from the Playlist. All Playlists are automatically purged when the users logs out of ESM.*
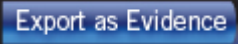
ARCHIVE VIEWER

The Archive Viewer provides playback functions using Windows Media Player controls. Play, pause, forward and reverse functions are available. Users can capture a still image by using the Capture Frame, button Capture Frame . To capture a frame, first press the **pause** button on Windows Media Player. The Capture Frame button will become active. You will be prompted with a *Save As* dialogue where you can specify the name and location to save the JPEG file. Users can annotate the image by adding comments as well as e-mailed or print it from the Capture Frame dialogue box.

NOTE: The quality of the still images is determined by the ESM Administrator. Three options are available of high, medium and low quality. Quality is also determined by the resolution of the camera.

Users can also send clips to the **Library**; perform a **Quick Export** or **Export as Evidence.**

EXPORTING VIDEO

Quick Export exports the selected video as a Windows WMV file while **Export as Evidence** Export as Evidence exports two files for each minute of video in a compressed (zipped) folder. The folder will contain a file of the one minute video clip (.mpeg) and another file with the extension of .hsh. Therefore if you wanted to export 5 minutes of **Export as Evidence** video you would see 5 videos files and 5 .hsh files in the zipped folder – 10 in total. The .hsh file is a hash file that is created by ESM using a 512-bit cryptography algorithm. Users can use a third party hashing software utility to ensure the recorded video is the original and had not been modified by others after it was exported. If it had been altered the hash files would not be equal.

**NOTE**: *Export as Evidence is only available for MPEG4 and H.264 video in ESM 5.4.*

Users can also export all video associated with a selected camera by right clicking on the camera in the Global Camera Directory and selecting the Mass Export feature. Mass Export . All video associated with a selected camera will be exported as a compressed (zipped) file. The file will contain all one-minute videos (in the original folder structure) and a Windows Media playlist file. You will be prompted to name the file and specify the date range. Click the Export button to execute. You will receive a notification in the **RSS Notifications box** that the exported clip has been added to the Library.

MAC/SILVERLIGHT

When viewing an archive video on a Mac or using Silverlight, users will need to install **the ipConfigure player** to view the video. Click on a video and it will appear in a pop-up window. Right click (control click for

Mac users) in the video frame and select the option to install the ipConfigure Player. Then select **Quick Export**. **FOR MAC USERS ONLY:** Once the video is exported it must be moved to the users **Movies Folder**. Open the ipConfigure Player and chose the exported video from the Movies Folder.

THUMBNAIL SEARCH
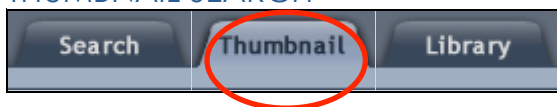
The Thumbnail search is a single camera search method that enables users to quickly find the video clips of interest by displaying snapshots of the first frame of recorded video by the hour and minute. When the Thumbnail Search tab is clicked, a list of locations and cameras will be displayed in the column. Select a camera of interest. Thumbnail images will be displayed on the page. To view a whole hour of video, click on the time stamp above the image. To view thumbnails of every minute in that hour, click on the image. To view video for a specific minute, click on the image again or on the time stamp and a pop up playback window will appear.

THE LIBRARY
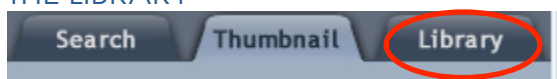
The Library is a repository to store video clips that are not subject to be deleted except by the owner of the clip. Users can send video clips to the Library from a timeline Search and Thumbnail pop up playback window. Users can give the clips unique descriptions and share them with other ESM users by clicking on the Share icon . To unshare a clip, click on the icon again . Each clip is appears in a tabular format with the Date, Camera, Location, Description, Owner, Duration and Total Size. Export and Viewing functions are available and function as previously described.

ALARM PAGE

The Alarm page provides ESM users with another way of searching and displaying alarms based on Motion Detection, System Errors, Alerts (for use with the Barix Barionet device) and Updates. Alarms can be displayed as they are detected by ESM using low bandwidth. Users select cameras from the Global Camera Directory and click on Filter to display results by alarms type and Page Settings Page Settings to set the Refresh Rate and the number of alarms to display per page.

NOTE: Be sure to click on the Apply button to submit your selections to the search engine when new

selections have been made.

Alarm information is displayed on the page by **Type** (Motion, Error, Update, Alert) **Timestamp**, **Source** (Camera), **Description**, **Status** (On-Line/Off-Line), **Device Name** and **Action**. Users can **View Event** or **View Details** in the case of a Motion Event to display the video in a separate pop up playback window.

> **TIP:** *A live view of the selected camera can be viewed by clicking on the Camera Name in the Source Column.*

The push pin icon locks the Filter and Page Setting frame on the page while the X collapses the frame. The down push pin indicates the frame is locked **.** To unlock the frame click the push pin again.

LPR PAGE

ipConfigure's LPR software fits in seamlessly to the ESM user interface and enables the automatic recognition of license plate data on vehicles and motorcycles. If LPR software has not been purchased (*or if an ESM Administrator has chosen to disable the feature*) the LPR tab will be grayed out.

PLATE SEARCH

The LPR search screen allows users to define searches against specific tag numbers based on accuracy, repetitive visits, or predefined watch lists. Additionally, users can playback video from the assigned overview camera if one is installed.

In order to perform a LPR Search a LPR camera has to be setup and available in the Global Camera Directory. LPR cameras are designated by the LPR icon ▓ Check the box next to LPR camera to enable a Search.

Users can enter any number of characters in the Search Plate Number field or none at all. If no characters are entered and the Accuracy setting is lowered to 25% all results will be displayed in a given time/date range. Wildcard characters are also available if the entire plate number is not known:

Wildcard character	Description	Example
%	Any string of zero or more characters.	F% - Any plate that begins with F, i.e. FXY 241 F3% - Any plate that begins with F3, i.e. F3T 021 %12 – Any plate that ends with 12, i.e. AGT 712 %BR% - Any plate that contains BR, i.e. GBR 1234
_ (underscore)	Any single character.	RG_0 - Any plate that starts with RG, ends with 0 and has one other character, i.e. RG40
[ ]	Any single character within the specified range ([A-F]) or set ([ABCDEF]).	[K-L]% - Any plate that starts with K or L, i.e. L45 001

[^]	Any single character not within the specified range ([^A-F]) or set ([^ABCDEF]).	%[^A-C] - Any plate that does not end with A, B, or C, i.e. KXX 121

The following information is display above the Search area: Date, Time, Watch List Flag, Watch List Name, Tag Number, Tag Image, and Accuracy Rate of read tag, Location of the LPR camera and Time of capture, along with Actions.
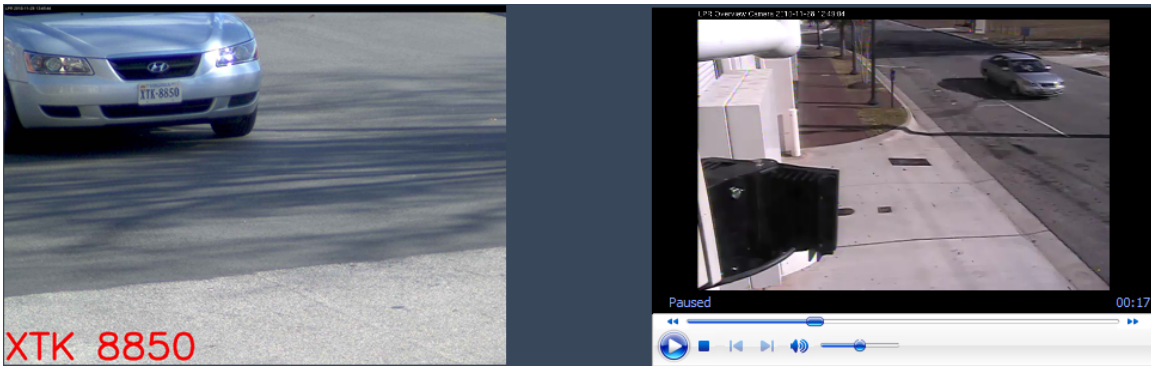
NOTE: Click on the Tag Image **XTK 8850** to display a snapshot of the vehicle in a pop up window.

LPR ACTIONS

Once results have been returned in the Search pane the following actions are available for use:

View   Verify   Add   Stats   Export

Select the View icon to display an image of the vehicle on the LPR page above the Search pane.

If an overview camera has been installed and configured the corresponding video that is associated with the plate capture will also be displayed. The LPR result in red text is overlaid on the image on bottom left hand corner of the window.

NOTE: The text overlay can be disabled by your ESM Administrator if it obscures the plate.

Click on the snapshot image of the vehicle and a separate pop up window will be displayed allowing you to zoom in and zoom out with a magnifying glass

The Verify icon allows users to verify the tag read and thus improve the accuracy of the LPR algorithm on future reads. A Verify Plate dialogue box will appear enabling operators to correct the result and add other information such as the State, Country, Manufacturer, Model and Color of the vehicle. When verified, tag number will change to green text on the page.

NOTE: Click on the images in the Verify Plate dialogue box to display and save the full resolution image of

the plate data and the snapshot of the vehicle.

Add to a watch list icon selects that specific tag to be added to a Watch List and subsequently will display a red flag icon if captured on future reads. To create a Watch List refer to the Watch List section below.

The Stats icon provides a pop up window which display a chart of the location(s), date(s) and frequency of the selected plate. The x-axis lists the date of capture while the y-axis lists the number of captures. Multiple locations will be displayed by different color squares in the chart. Operators can view the frequency that plate has been captured in the past 1, 7, 14 or 30 days as well as export the results in Excel, Word and PowerPoint format. The Stats window can be pinned to the forefront of your display using the push pin icon . Results on the chart can be updated in real-time by clicking the refresh icon.

TIP: Mouse over the colored squares in the chart to display the time of the capture.

The Export icon allows operators to save still images of the captured vehicle as well as the associated video from a secondary overview camera (if installed). Users will be prompted with the option to save both the overview video and the still image of the vehicle. If user selects "No" to save the overview video (*or no overview camera is installed*) then just the still image of the vehicle will be saved.

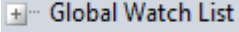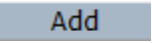**NOTE:** Overview video clips are one minute in length.

REAL-TIME

The Real-time tab provides users with up to the minute results including the date/time of detection, tag number, tag image, location, LPR camera name and a series of actions (*as previously described*) that can be taken. Simply choose a LPR designated camera from the Global Camera Directory and the last fifty LPR events will be displayed on the page. Operators can choose several page results refresh rates using the drop down list. Refresh Rate: 15 sec

If the tag number is indicated in blue text then it has not been verified by an operator. If the tag number is indicated in green text then the tag has been verified.   Tag images may be viewed in a larger pop up window if selected.

NOTE: Verifying plate data is optional. Although the algorithm can be trained it is not required in order to achieve accurate reads. The accuracy of the algorithm is largely a result of camera placement.

WATCH LIST

Operators can create a custom list of plates that once detected can trigger flags on the LPR Real Time page and are indicated on the LPR Search page. To create a watch list select the Watch List tab **Watch List** and right click on the Global Watch List **Global Watch List** . You will be prompted to enter a name for your watch list. To manually add a plate to a Watch List select a Watch List then click the Add button **Add** at the top of the page. Enter plate information in the fields provided then click the add button to save. Operators can also input a Confidence Level (percentage) which will affects how close the algorithm has to come to a match in order to display a watch list hit. Your watch list is now available for use by all operators. Users can automatically add plates on the LPR Search page and on the Real Time page using the icon.

NOTE: Email alerts can also be triggered from Watch List hits if so configured by your ESM Administrator.

Other actions include the Edit icon which enables operators to edit the plate number, state, or trigger confidence. After making edits select the Update to save your changes or Cancel to disregard edits. The delete icon removes a plate number from the Watch List and Stats which graphs the frequency that particular plate has been detected at a location(s) over a specified period of time.

Email alerts can be sent when a plate number matches a Watch List entry if your ESM Administrator has enabled this feature. Simply type in email addresses (separated by commas) in the Email field at the top of the page to receive notifications of flagged tags. Hit the Update button to save changes.

Emails: lpr_operator@ipconfigure.com   Update

ESM MOBILE

ESM Mobile allows for the availability to view live streams from your cameras using any iPhone or iPad device. To utilize this feature, make sure your mobile device is connected to Wi-Fi. Select your internet browser on your device and login into ESM with your User ID and Password.
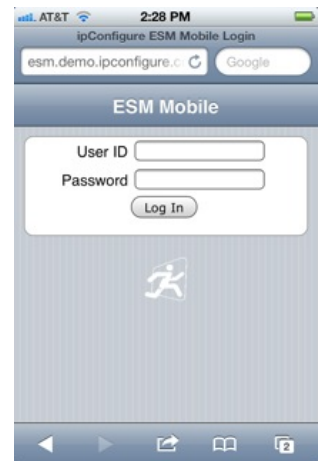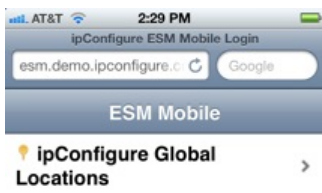
Once logged in, a Global Locations tab will appear; Click on this tab.
Next, click on your main location. In this screenshot, the head/main location is
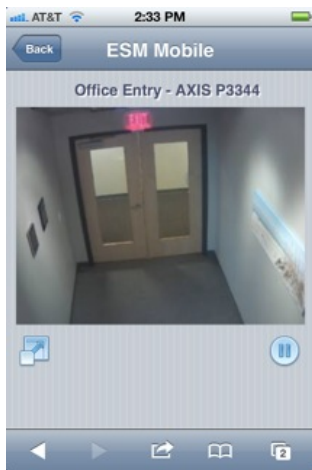**Innovation Research Park.**
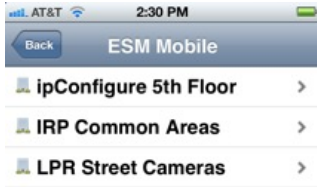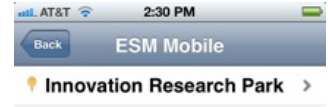
Click on the appropriate sub-location that houses the camera you would
like to view. For this demo, **ipConfigure 5th Floor** is chosen.

Next, chose the camera you wish to view. **Office Entry- AXIS**   **P3344** is
chosen here.
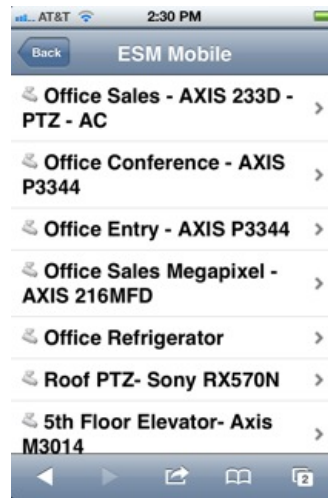
Once you have chosen a particular camera, a live stream of the camera's
recording will appear on your device. From here, you can pause the recording and
select to view the recording in a full screen mode.

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