



Configuration & User Guide

Illustra Pro PTZ 30x

Illustra 625 PTZ 20x

Notice

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Introduction

The Illustra Pro PTZ and Illustra 625 PTZ 20x Cameras (hereafter referred to as the camera) are PTZ high definition cameras utilizing the latest in IP technologies. ONVIF-compatibility allows interoperability with other ONVIF-compliant third party NVRs. A built-in web server allows you to configure the camera and stream video using Internet Explorer version 8 and higher.

Although the camera can operate as a standalone camera on a network, it is intended to be integrated into sophisticated security solutions. The Feature Plus version of the camera features audio and alarms.

The camera is available in the following configurations:

Illustra Pro PTZ Indoor Model Description	Product Codes
illustra 2MP High Performance PTZ, 30x indoor, no bubble, non-vandal, black	IPS02P6ANBTT
illustra 2MP High Performance PTZ, Feature Plus, 30x indoor, no bubble, non-vandal, black	IPP02P6ANBTT

Illustra Pro PTZ Outdoor Model Description	Product Codes
illustra 2MP High Performance PTZ, 30x outdoor, clear, vandal, white	IPS02P6OCWTT
illustra 2MP High Performance PTZ, 30x outdoor, clear, non-vandal, white	IPS02P6BCWTT
illustra 2MP High Performance PTZ, 30x outdoor, smoked, vandal, white	IPS02P6OSWTT
illustra 2MP High Performance PTZ, 30x outdoor, smoked, non-vandal, white	IPS02P6BSWTT
illustra 2MP High Performance Feature Plus PTZ, 30x outdoor, clear, vandal, white	IPP02P6OCWTT
illustra 2MP High Performance Feature Plus PTZ, 30x outdoor, clear, non-vandal, white	IPP02P6BCWTT
illustra 2MP High Performance Feature Plus PTZ, 30x outdoor, smoked, vandal, white	IPP02P6OSWTT
illustra 2MP High Performance Feature Plus PTZ, 30x outdoor, smoked, non-vandal, white	IPP02P6BSWTT

Illustra 625 PTZ Outdoor Model Description	Product Codes
Illustra 625 PTZ, 1080p, 20x indoor, no bubble, non-vandal, black	ADCi625-P132
Illustra 625 PTZ, 1080p, 20x indoor, Feature Plus, no bubble, non-vandal, black	ADCi625-P232
Illustra 625 PTZ, outdoor, Feature Plus, clear, non-vandal, white	ADCi625-P222
Illustra 625 PTZ, outdoor, Feature Plus, clear, vandal, white	ADCi625-P221
Illustra 625 PTZ, outdoor, Feature Plus, smoked, vandal, white	ADCi625-P223
Illustra 625 PTZ, outdoor, Feature Plus, smoked, non-vandal, white	ADCi625-P224
Illustra 625 PTZ, outdoor, smoked, vandal, white	ADCi625-P123

Illustra 625 PTZ Outdoor Model Description	Product Codes
Illustra 625 PTZ, outdoor, smoked, non-vandal, white	ADCi625-P124
Illustra 625 PTZ, outdoor, clear, vandal, white	ADCi625-P121
Illustra 625 PTZ, outdoor, clear, non-vandal, white	ADCi625-P122

Please refer to the Illustra Cameras website (www.illustracameras.com) to ensure that you have the most current version of this Configuration and User Guide. Release Notes are also available on the website for each software release to document any known limitations not covered in this user guide.

Security Mode Profiles for First Time Connection

This Illustra Pro PTZ Camera now has Enhanced Security features that allow for operation in a Standard Security mode or in Enhanced Security mode.

The Enhanced Security mode of operation is used to control changes to the camera communication protocols HTTP, HTTPS, FTP, and SMTP. When the camera is in Enhanced Security mode, a complex seven character Administrator password is required to make changes to these protocols.

Procedure 1-1 Connecting to the Camera for the First Time

Step	Action
1	<p>Make appropriate network and power connection (typically PoE).</p> <p>The camera will automatically get an IP address if connected to a DHCP network. If DHCP addressing is not available, the camera will use its default fixed address: 192.168.1.168.</p>
2	<p>Find camera(s) on the network using Illustra Connect or another utility; or if using fixed addresses, connect to the camera on its default address.</p>
3	<p>Enter the default ID and password when prompted—ID: admin, Password: admin.</p>

Note:

Security Profile:

The first time you access the camera, you will be prompted to use either Standard Security or Enhanced Security. If you are keeping Standard Security, best practice is to use the Change Password check-box to immediately change the default password to one unique to your surveillance system.

- 4 If you select the Enhanced Security option, you will be required and instructed to create a complex password.

Note:

The password must meet the following requirements:

- Be a minimum of seven characters long.
- Have at least one character from at least three of the following character groups:
 - Upper-case letters

- Lower-case letters
- Numeric characters
- Special characters

- End -

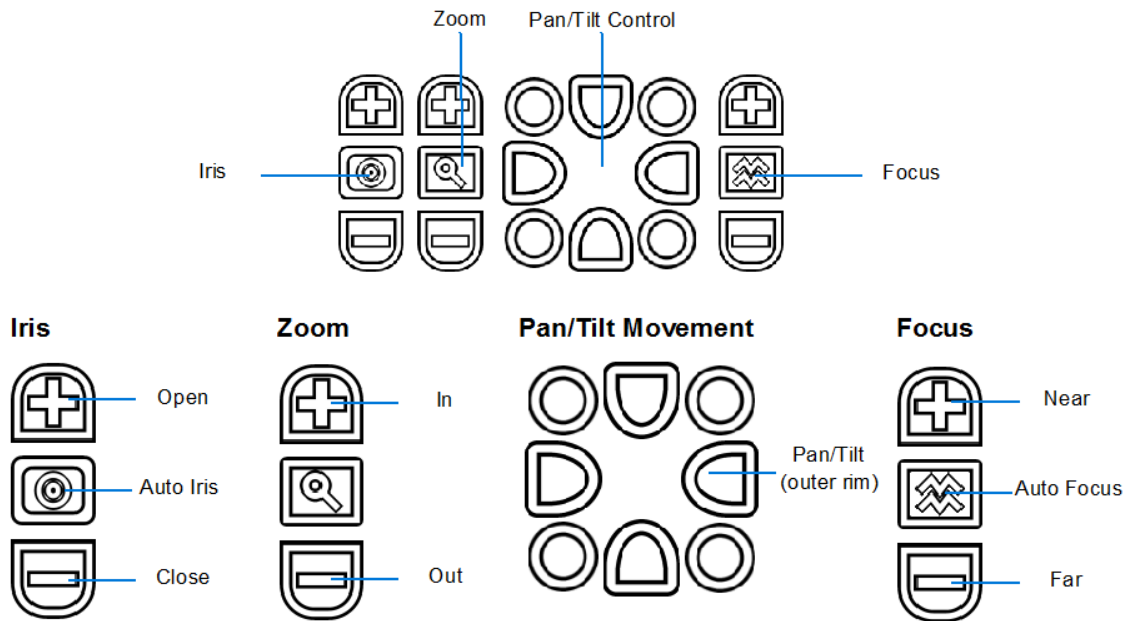
For additional information on Enhanced Security, refer to [Security](#) on [Page 79](#).

Using the Camera Controls

You can use the on-screen controls in the Live Video Pane to control the camera.

GUI Camera Controls

The following diagram provides information on the controls available for on-screen camera control. The camera control overlay is visible when video is displayed on the Live Video Pane.









Note:

It is possible for two users to access live viewing at the same time. However only one user may control the camera at any time. Camera control operates on a "last come, first served" basis. Therefore, when a new user logs into the camera from a different browser and starts a camera control session, the original user will lose their camera control session.

Controlling the Camera via Keyboard Shortcuts

You can use the following keyboard shortcuts to control the camera.


	Pan Left		Pan Right
	Tilt Up		Tilt Down
	Zoom In		Zoom Out

Controlling the Camera via Camera Controls

You can use the on-screen controls in the Live Video Pane to control the camera.

Procedure 1-2 Controlling the Camera via the Live Video Pane

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select  to start the live web video.
The live video pane will display the current camera view. |
| 2 | Select the camera control item on the overlay to activate the control.
Refer to GUI Camera Controls on Page 5 for information on specific camera controls. |


- End -


Controlling the Pan/Tilt Control via Click and Drag

You can use the mouse to control the camera, allowing slower camera movement and maximum accuracy.

Procedure 1-3 Controlling Pan/Tilt via Click and Drag using the Live Video Pane

Step	Action
------	--------

- | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select  to start the live web video.
The live video pane will display the current camera view. |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- 2 Move the cursor to the pan and tilt quick control icon  in the center of the video pane control.
- 3 Click and drag the cursor to set the direction and speed of the camera.
 - A red arrow will appear showing the direction of camera movement.
 - The camera's movement speed increases as the arrow is moved further from the cursor origin mark.


- End -

Zooming Using the Mouse Scroll Wheel

You can control the zoom function using a scroll wheel mouse.

Procedure 1-4 Zooming via the Mouse Scroll Wheel Using the Live Video Pane

Step	Action
------	--------

- 1 Select  to start the live web video.
The live video pane will display the current camera view.
- 2 Point the camera at the target as described in [Controlling the Camera via Camera Controls](#) on [Page 6](#) or [Controlling the Pan/Tilt Control via Click and Drag](#) on [Page 6](#).
- 3 Scroll the mouse wheel upwards (zoom in) and downwards (zoom out).


- End -

Double-click to Center Using the Mouse

Click on the live video pane to automatically center the camera display.

Procedure 1-5 Activate Double-click to Center Using the Mouse

Step	Action
------	--------


- 1 Select  to start the live web video.
The live video pane will display the current camera view.
- 2 Using the mouse, double-click on the area of interest in the live video pane.
The PTZ will adjust to display the area of interest in the center of the live video pane.
- 3 Repeat Step 2 to select a new area of interest.

- End -

PTZ to a Selected Area Using the Mouse

Draw a rectangle on the live video pane to have the camera PTZ adjust to the selected area of interest.

Procedure 1-6 Activate PTZ to a Selected Area Using the Mouse

Step	Action
1	Select  to start the live web video. The live video pane will display the current camera view.
2	Click and drag on the live video pane to highlight the area to display. A red outline will appear to show the selected area of interest.
3	Release the mouse button. The PTZ will adjust to display the area of interest in the center of the live video pane.
4	Repeat Step 2 to select a new area of interest.

- End -

Quick Start Menu

When the Quick Start menu is selected, Figure 2-1 Basic Configuration Menu will be displayed.

Note:

When an admin user logs in for the first time the Basic Configuration page will be displayed. After this, on each login the Video > Video Stream Settings page will be displayed.

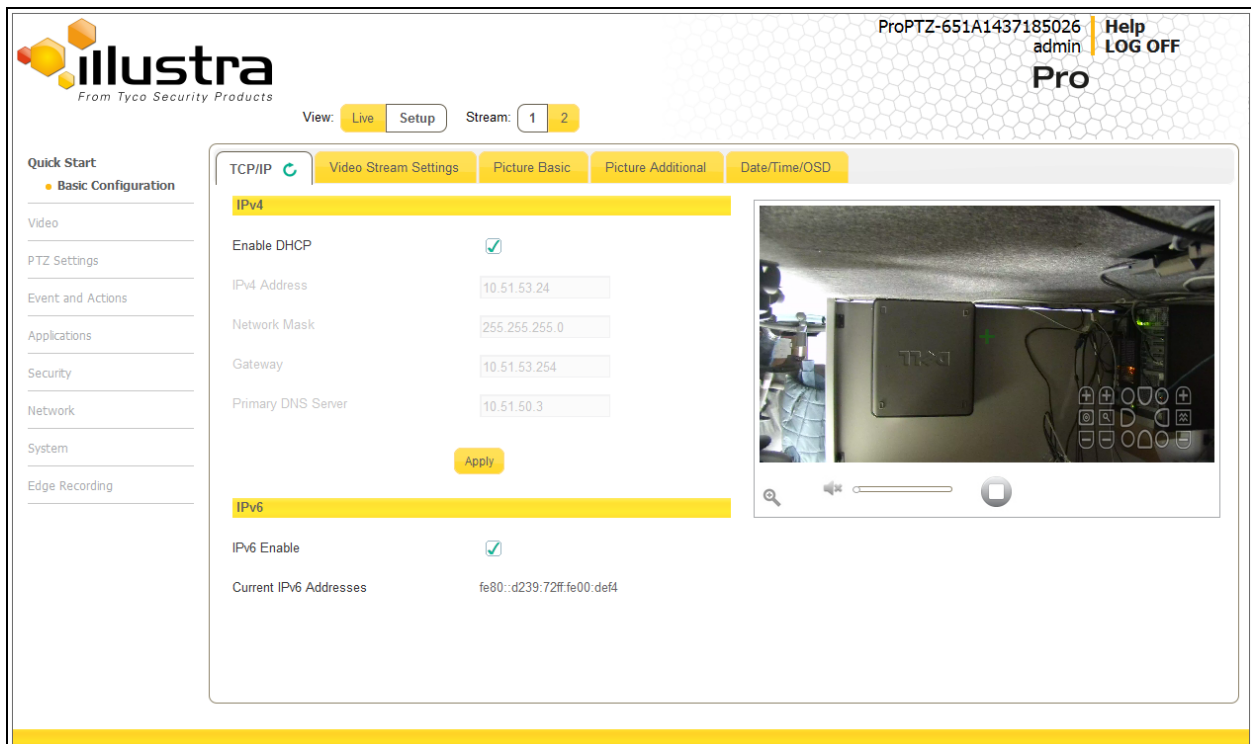


Figure 2-1 Basic Configuration Menu

The Basic Configuration menu provides access to the most common features required when setting up a camera for the first time and is only available to an 'admin' user. The following tabs are displayed:

- TCP/IP
- Video Stream Settings
- Picture Basic
- Picture Additional
- Date/Time/OSD

TCP/IP

Configure the IPv4 and IPv6 network settings on the camera.

IPv4

Configure the IPv4 network settings for the camera.

Procedure 2-1 Configure the IPv4 Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the TCP/IP tab in the Basic Configuration menu.
3	Select the Enable DHCP check box to enable DHCP (Dynamic Host Configuration Protocol) and disable manual settings. OR Deselect Enable DHCP to disable DHCP and allow manual settings to be entered. The default setting is 'Enabled'.
4	If Enable DHCP has been disabled: <ol style="list-style-type: none"> Enter the IPv4 Address in the IPv4 Address text box in the form xxx.xxx.xxx.xxx. The default setting is '192.168.1.168'. Enter the Network Mask in the Network Mask text box xxx.xxx.xxx.xxx. The default setting is '255.255.255.0'. Enter the Gateway IP address in Gateway text box xxx.xxx.xxx.xxx. Enter the Primary DNS Server in the Primary DNS Server text box xxx.xxx.xxx.xxx.
5	Select Apply to save the settings.

- End -

IPv6

Enable or disable IPv6 on the camera.

Procedure 2-2 Enable/Disable IPv6

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the TCP/IP tab in the Basic Configuration menu.
3	Select the IPv6 Enable check box to enable IPv6 on the camera. OR Deselect the IPv6 Enable check box to disable IPv6 on the camera. The default setting is 'Enabled'.

If IPv6 is enabled the Link Local and DHCP address will be displayed beside 'Current IPv6 Addresses', if available.

- End -

Video Stream Settings

The camera allows the configuration of two video streams; Stream 1 and Stream 2. These streams can be configured via the Web GUI, as detailed here, or via the Illustra API.

Opening the Web GUI live video will allow the stream to be shared with the Illustra API and will minimize the impact on camera resources.

Configuring the Web Video Stream

Adjust the settings for each video stream.

Procedure 2-3 Configure the Video Stream Settings

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Video Streams Settings tab in the Basic Configuration menu. |
| 3 | Select either Stream 1 or 2 from the Stream Number drop-down menu. |
| 4 | Select the required Codec by selecting the radio buttons: <ul style="list-style-type: none"> • H264 • MJPEG The default setting is 'H264'. |
| 5 | Select the required Resolution from the drop-down menu.
The resolutions available will depend on the Image Source selected: |

Stream 1	Stream 2
1920x1080	1920x1080
1600x900	1600x900
1280x720	1280x720
1024x576	1024x576
960x540	960x540
800x450	800x450
640x360	640x360
480x270	480x270
320x180	320x180
160x90	160x90

Video Stream Settings

- 6 Use the slider bar to select the **Frame Rate (fps)**.

The settings are:

- **Stream 1** - 1 - 30 fps, default 30.
- **Stream 2** - 1 - 30 fps, default 30.

The settings are 1-30, default 30.

- 7 If MJPEG has been selected, MJPEG Quality will be enabled. Use the slider bar to select the **MJPEG Quality**.

The default setting is 50%.

MJPEG has a higher bandwidth requirement than H264; the following provides a recommendation for quality settings when using MJPEG:

- Maximum possible Quality setting: 100
- Recommended Maximum setting: 90
- Recommended High Quality setting: 75
- Recommended Medium Quality setting: 55

For high resolution we recommend the following reduced limits:

Resolution	FPS	Recommended Maximum Quality
1920x1080	30	60
1920x1080	15	70
1920x1080	7	80
1600x900	30	65
1600x900	15	75
1600x900	7	85
1280x720	30	70
1280x720	15	80
1280x720	7	90

OR

- 8 If H264 has been selected in step 4, Rate Control will be enabled. Select the required **Rate Control** by selecting the radio buttons:

- **VBR (Variable Bit Rate)**
- **CBR (Constant Bit Rate)**

The default setting is 'VBR'.

- a If VBR has been selected, VBR Quality will be enabled. Select the required **VBR Quality** from the drop-down menu.
- Highest
 - High
 - Medium

- Low
- Lowest

The default setting is 'High'.

OR

- b If CBR has been selected, CBR Bit Rate will be enabled. Use the slider bar to select the **CBR Bit Rate**.

The default setting is 1000.

- End -

Picture Basic

Configure the Auto Focus, Auto Iris, Exposure, Wide Dynamic Range (WDR); Defog, and Enhanced Intensity settings on the camera.

Note:

Defog, and Enhanced Intensity are only available on Illustra Pro cameras

When Auto Focus and Iris are enabled, the camera automatically compensates for scene changes that affect focal length (focus) and light levels (iris).

Setting Auto Focus and Auto Iris

Enable or disable auto focus and auto iris.

Procedure 2-4 Enable/Disable Auto Focus and Auto Iris

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select the Auto Focus check box to enable auto focus. OR Deselect the Auto Focus check box to disable auto focus. The default setting is 'Enabled'.
4	Select the Auto Iris check box to enable auto iris. OR Deselect the Auto Iris check box to disable auto iris. The default setting is 'Enabled'.

- End -

Setting Exposure

Configure the exposure settings for the camera. Automatic Gain Control (AGC) and Open Shutter provide additional functionality to help compensate for low-light scenes

Automatic Gain Control (AGC)

AGC amplifies the video signal in scenes when there is not enough light to produce full video levels. The maximum level of AGC is controlled by the Max Gain control. It is adjustable from 0dB (off) to 37dB. As gain is increased, the sensor noise is also amplified, which can result in more noticeable noise in the image.


Open Shutter

This is a technique that is used for really low light performance applications. It allows the shutter speed to be slowed down further than normal to allow the sensor to collect more light. The maximum level of Open Shutter is controlled by the Shutter Speed control. It is adjustable from 1/30 down to ½ second. The slower the Shutter Speed, the higher the chance for image blur which may affect moving object identification. It is only in effect during low-light situations where an image would not be obtainable otherwise and does not affect the camera performance in normal or bright light situations.

Max Gain

The Max Gain setting is an upper limit for how much gain can be increased when AGC is enabled. The trade-off between picture level (brightness) and noise may be adjusted by setting the Max Gain value. Lower values for Max Gain setting may result in a darker picture, but with less noise. Higher values for Max Gain setting may result in a brighter picture, but with more noise.

Procedure 2-5 Configure Exposure Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select  to start the video stream if it is not already active.
4	Select a AGC/Shutter Setting from the drop-down menu. <ul style="list-style-type: none"> • AGC off - produces the cleanest image with the least noise but the worst low-light performance. • AGC on - good low-light performance with the chance for some noise. • openshutter - best for low-light performance. However there is a chance for some noise and some image blur. <p>The default setting is 'openshutter'.</p> <p>Note:</p> <p>If you require "Real Time" video, open shutter must be turned off to ensure that the resulting video quality is acceptable for prosecution purposes.</p>
5	If openshutter has been selected in Step 4, Max Exposure will be enabled. Select Max Exposure (sec) from the drop-down menu: <ul style="list-style-type: none"> • 1/2 • 1/4 • 1/8

- 1/15
- 1/30

- 6 If AGC on or openshutter has been selected in Step 4, Max Gain Exposure will be enabled. Use the slider bar to select the **Max Gain (dB)**:
The settings are 0-37.
The video pane will update to display the new settings.

- End -

Wide Dynamic Range

WDR is a feature that allows viewing of high contrast scenes that include both bright and low light areas in the same field of view (FOV).

WDR Level allows you to adjust the WDR level to favour a underexposed or overexposed image. By selecting the lower end of the control the image is underexposed; this provides more detail in areas of brightness, but less detail in areas of darkness. On the other hand, selecting the higher end of the control overexposes the image which provides more detail in the dark areas but less detail in the bright areas.

A typical use for this feature would be viewing a scene with both indoor and outdoor lighting conditions simultaneously, such as a warehouse area with an open bay door.

Procedure 2-6 Enable/Disable Wide Dynamic Range (WDR)

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select a setting from the Enable WDR drop-down menu . <ul style="list-style-type: none">• Off - .• Auto - .• True WDR - .• Advanced WDR - The default setting is 'Off'.

- End -

Defog

This is a feature on Illustra Pro models that provides clear images even in environments with low visibility due to fog or heavy rain. It can be used in a wide range of installation locations for monitoring foggy areas such as shipping, airports, highways and at high altitudes.

Procedure 2-7 Enable/Disable Defog

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select a setting from the Enable Defog drop-down menu .

- **Off** - .
- **Auto** - .
- **Low** - .
- **Medium** - .
- **High** - .

The default setting is 'Off'.

- End -

Enhanced Intensity

The Enhanced Intensity feature on Illustra Pro models allows the camera to produce clear images when there is normally dark shadows in low light conditions or when there are bright sources of light such as headlights. The **Emphasise Dark** option will brighten dark areas while leaving the bright areas untouched enabling clearer images of shadows. The **Ignore Bright** option reduces peak light levels when bright light and reflections are detected that would normally result in white out areas in the image

Procedure 2-8 Enable/Disable Enhanced Intensity

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Picture Basic tab from the Basic Configuration menu. |
| 3 | Select a setting from the Enhanced Intensity drop-down menu . |

- **None** - .
- **Emphasise Dark** - .
- **Ignore Bright** - .

The default setting is 'None'.

- End -

Picture Additional

Configure IR/DayNight Mode; Picture Adjustment including Brightness, Contrast, and Saturation; and White Balance displayed in the video pane, as well as Electronic Image Stabilization and Frame Noise Reduction.

Note:

Electronic Image Stabilization and Frame Noise Reduction features are only available on Illustra Pro models.

IR/Day Night Mode

IR/DayNight Mode utilizes a series of specific camera functions to dramatically enhance low light performance.

One of these camera functions, the True TDN mechanism, used when needed, removes an IR Cut Filter (IRCF) from in front of the imager; this allows the camera to see in black and white (BW) and utilize additional near-infrared energy found in many lighting sources such as halogen, moonlight, etc.

The preceding, in conjunction with slowing down another camera function, shutter speed, significantly improves low-light performance—rendering clear images where none could be viewed previously.

IR Mode

When the camera is in B/W mode, it can utilize, or 'see', near-IR illumination—something the human eye cannot do. This can be extremely powerful when the camera is paired with 850~950nm IR illuminators. With this combination a scene can be well lit with IR light that the camera can see but people cannot. This is great for areas where external lighting is not allowed or there is a need for covert security.

Normal, or visible light, and IR light have different focal points. The camera has 3 IR modes to help optimize focus capabilities and achieve sharper IP pictures when using these light sources. See the following table for recommended settings for corresponding IR Switching with IR illumination.

IR Curve	For Lighting Sources	Visibility
Visible	Normal Lighting – Florescent, Incandescent, Sunlight, etc	Both the camera (in Color and BW) and the human eye can utilize these types of illumination sources.
850nm	850nm IR illuminators.	Only the camera (in BW) can utilize this type of illumination source. The human eye cannot.
950nm	950nm IR illuminators.	Only the camera (in BW) can utilize this type of illumination source. The human eye cannot.

Day Night Mode

The camera provides a black-and-white (B/W) mode to improve camera performance when the light level falls below certain thresholds. This allows clear images to be obtained under low-light conditions. There are six Day/Night settings: Auto High, Auto Mid, Auto Low, Manual, Forced Color, and Forced B/W.

Procedure 2-9 Configuring IR Mode and Day Night Mode

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Additional tab from the Basic Configuration menu.
3	Select an IR Mode setting from the drop-down menu: <ul style="list-style-type: none"> • visible - Most common, visible lighting sources. • 850nm - Ideal for 850nm IR Illuminators. • 950nm - Ideal for 950nm IR Illuminators. The default setting is 'visible'.
4	Select a Day Night Mode setting from the drop-down menu: <ul style="list-style-type: none"> • Off - enables full-time color mode. • On - enables full-time black and white mode. • Auto High - increases the chance of switching to BW mode as light levels drop. • Auto Mid - camera will give a good balance of Color and BW depending on the scene. • Auto Low- camera will adjust between BW and Color depending on light levels. . The default setting is 'Auto Low'.


- End -

Picture Adjustment

Adjust brightness, contrast and saturation of the image displayed on the video pane.

Procedure 2-10 Adjust the Brightness, Contrast and Saturation

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Picture Additional tab from the Basic Configuration menu. |
| 3 | Select  to start the video stream if it is not already active.
The video pane will display the current camera view. |
| 4 | Use the slider bars to adjust: <ul style="list-style-type: none"> • Brightness • Contrast • Saturation (color level) The live video pane will update to display the new settings.
The values range from 0% to 100%.
The default values are 50%. |

- End -

Procedure 2-11 Restore Picture Adjustment Defaults

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Picture Additional tab from the Basic Configuration menu. |
| 3 | Select Defaults to restore picture settings to the factory defaults.
The default values are settings are 50%. |

- End -


White Balance

White balance (the ability to keep whites looking white) is normally compensated for automatically via the default Auto White Balance setting.

Manual White Balance is available when specific color temperature settings want to be set and preserved. This can be done using the red and blue slider adjustments set for optimal viewing.

Procedure 2-12 Configure White Balance


Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select the **Picture Additional** tab from the **Basic Configuration** menu.
- 3 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 4 Select the required **White Balance Mode** from the drop-down menu:
 - **Auto**: Suitable for a normal range of lighting conditions
 - **Manual**: Adjustable red and blue balance (The Red and Blue slider bars will be displayed).
 - **Sodium**: (Illustra Pro only)
 - **Mercury**: (Illustra Pro Only)The default setting is 'Auto'.

- End -

Procedure 2-13 Manually Select White Balance

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Picture Additional tab from the Basic Configuration menu. |
| 3 | Select  to start the video stream if it is not already active.
The video pane will display the current camera view. |
| 4 | Select Manual from the White Balance Mode drop-down menu.
The Red and Blue slider bars will be displayed. |
| 5 | Use the slider bars to adjust the Red and Blue balance.
The live video pane will update to display the new settings.
The red and blue values range from 1% to 100%. |

Note:

When Automatic White Balance is first switched from enabled to disabled, the red and blue values displayed are based on the current feedback values from the camera.

- End -

Electronic Image Stabilization

Electronic Image Stabilization (EIS) on Illustra Pro models can reduce the effect of image shake caused by strong winds or vehicle vibrations. This ensures a stable picture even at high levels of zoom.

Procedure 2-14 Enable/Disable Electronic Image Stabilization (EIS)

Step	Action
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- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Picture Settings** from the **Video** menu.
- 3 Select the **Picture Additional** tab.
- 4 Select the **Enable EIS** check box to enable Electronic Image Stabilization.
OR
Deselect the **Enable EIS** check box to disable auto focus.
The default setting is 'Off'.

- End -

Frame Noise Reduction

On Illustra Pro models, the brightness of the object (AGC) in auto mode changes the level of Frame Noise Reduction.

Procedure 2-15 Enable/Disable Frame Noise Reduction

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Picture Settings from the Video menu. |
| 3 | Select the Picture Additional tab. |
| 4 | Select the Enable Frame Noise Reduction check box to enable Frame Noise Reduction.
OR
Deselect the Enable Frame Noise Reduction check box to disable Frame Noise Reduction.
The default setting is 'On'. |

- End -

Date/Time/OSD

Change the camera name and date and time and enable OSD.

Note:

Date and Time can also be configured in the **System** menu. Refer to [Date/Time](#) on [Page 107](#).

Camera Name

The camera name will be displayed on the GUI banner and the on-screen display for the camera. This name will also be displayed when using Illustra Connect or ONVIF.

Procedure 2-16 Change the Camera Name

Step	Action
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- 1 Select **Setup** on the GUI banner.
- 2 Select the **Date/Time/OSD** tab in the **Basic Configuration** menu.
- 3 Enter the name of the camera in the **Camera Friendly Name** text box.

- End -

Date Time

Set the date and time on the camera.

Procedure 2-17 Configuring the Date and Time

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Date/Time/OSD from the Basic Configuration menu.
3	Select the Time 24-hour check box to enable the 24-hour clock. Or Deselect the Time 24-hour check box to enable the 12-hour clock. The default setting is '24-hour'.
4	Select the Date Display Format from the drop-down menu: <ul style="list-style-type: none">• DD/MM/YYYY• MM/DD/YYYY• YYYY/MM/DD The default setting is 'YYYY/MM/DD'.
5	Select the Time Zone from the drop-down menu. The default setting is '(GMT-05:00) Eastern Time (US & Canada)
6	Select the Set Time setting by selecting a radio button: <ul style="list-style-type: none">• Manually• via NTP The default setting is 'Manually'.
7	If you select 'Manually' in step 6: <ol style="list-style-type: none">a Select the Date (DD/MM/YYYY) using the drop-down menus.b Select the Time (HH:MM:SS) using the drop-down menus.
8	If you select 'via NTP' in step 6: <ul style="list-style-type: none">• Enter the NTP Server Name in the text box.

- End -

OSD (On-Screen Display)

Within OSD you can choose whether to enable or disable the camera name and/or time in the on-screen display.

Procedure 2-18 Display or Hide the Camera Name/ Camera Time OSD

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Date/Time/OSD tab in the Basic Configuration menu.
3	In the Enable OSD , select the Camera Name check box to display the camera name in the OSD. OR Deselect the Camera Name check box to hide the camera name in the OSD. The default setting is 'Disabled'.
4	In the Enable OSD , select the Time check box to display the camera time in the OSD. OR Deselect the Time check box to hide the camera time in the OSD. The default setting is 'Disabled'.
5	In the Text Attributes , select the Translucent check box to enable the text attribute in the OSD. OR Deselect the Translucent check box to disable the text attribute in the OSD. The default setting is 'Disabled'.

- End -

When the video menu is selected, Figure 3-1 Video Menu will be displayed.

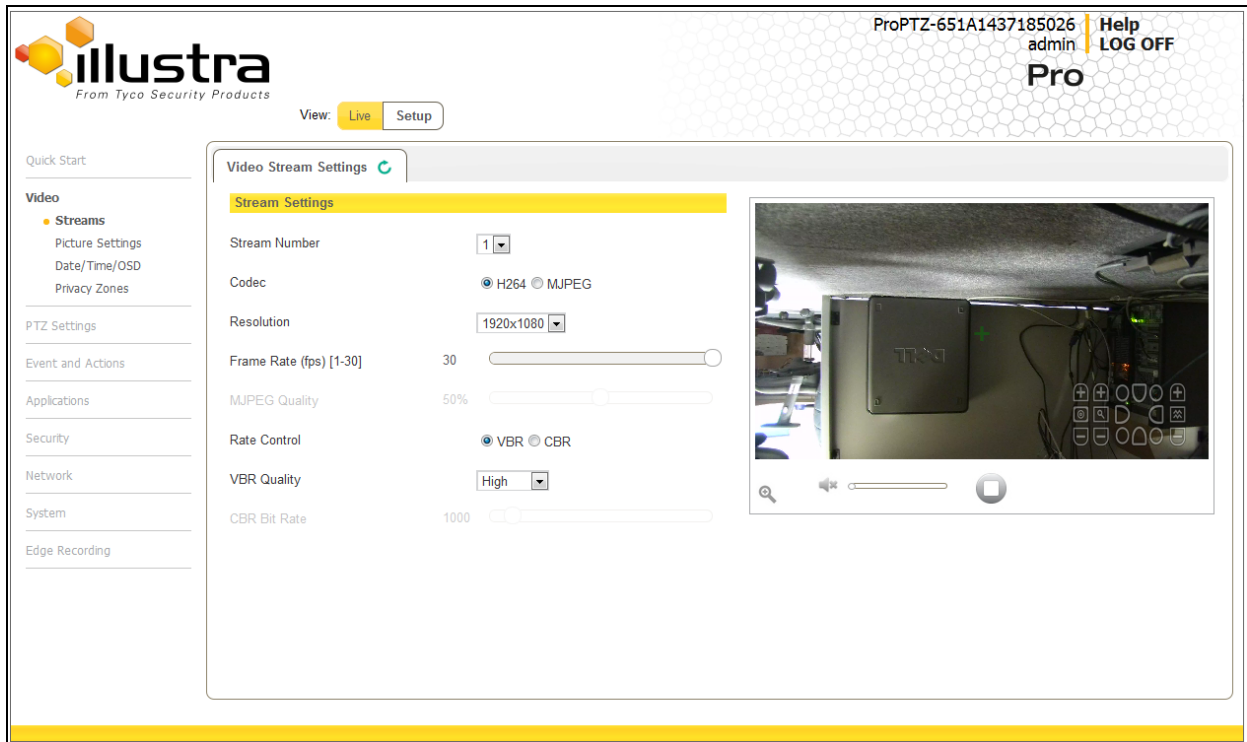


Figure 3-1 Video Menu

The Video Menu provides access to the following camera settings and functions:

- Streams
- Picture Settings
- Date/Time/OSD
- Privacy Zones

Streams

The camera allows the configuration of two video streams; Stream 1 and Stream 2. These streams can be configured via the Web GUI, as detailed here or via the Illustra API.

Opening the Web GUI live video will allow the stream to be shared with the Illustra API and will minimize the impact on camera resources.

Video displayed on the live video pane will use the settings configured in Stream 1.

Alarm Video

It is possible to use either Stream 1 or Stream 2 for the on-board recording of alarm video.

Integration with American Dynamics Network Video Recorders

Stream 1 and Stream 2 can be configured via the Web GUI, as detailed here or via the Network Video Recorder interface. Changes made to the streams via either method will be applied and the video will be displayed according to the configuration

Opening the Web GUI live view while the Network Video Recorder is recording video will allow the stream to be shared and will minimize the impact on camera resources.

Integration with other Illustra API Clients

Stream 1 and Stream 2 can be configured via the Web GUI, as detailed here, or via the Illustra API interface. Changes made to the streams via either method will be applied and the video will be displayed according to the configuration.

Opening the Web GUI live video will allow the stream to be shared with the Illustra API and will minimize the impact on camera resources.

Configuring the Video Stream

Adjust the settings for each video stream.

Procedure 3-1 Configure the Video Stream settings

Step	Action
------	--------

- | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Streams from the Video menu.
The Video Stream Settings tab displays. |
| 3 | Select either Stream1 or 2 from the Stream Number drop-down menu . |
| 4 | Select the required Codec by selecting the radio buttons: <ul style="list-style-type: none">• H264• MJPEG The default setting is 'H264'. |
| 5 | Select the required Resolution from the drop-down menu.
The resolutions available will depend on the Image Source selected: |

Stream 1	Stream 2
1920x1080	1920x1080
1600x900	1600x900
1280x720	1280x720

Configuring the Video Stream

Stream 1	Stream 2
1024x576	1024x576
960x540	960x540
800x450	800x450
640x360	640x360
480x270	480x270
320x180	320x180
160x90	160x90

6 Use the slider bar to select the **Frame Rate (fps)**.

The settings are:

- **Stream 1** - 1 - 30 fps, default 30.
- **Stream 2** - 1 - 30 fps, default 30.

7 If MJPEG has been selected, MJPEG Quality will be enabled. Use the slider bar to select the **MJPEG Quality**.

The default setting is 50%.

MJPEG has a higher bandwidth requirement than H264, the following provides a recommendation for quality settings when using MJPEG:

- Maximum possible Quality setting: 100
- Recommended Maximum setting: 90
- Recommended High Quality setting: 75
- Recommended Medium Quality setting: 55

For high resolution we recommend the following reduced limits:

Resolution	FPS	Recommended Maximum Quality
1920x1080	30	60
1920x1080	15	70
1920x1080	7	80
1600x900	30	65
1600x900	15	75
1600x900	7	85
1280x720	30	70
1280x720	15	80
1280x720	7	90

OR

8 If H264 has been selected in step 4, Rate Control will be enabled. Select the required **Rate Control** by selecting the radio buttons:

- **VBR (Variable Bit Rate)**

- **CBR (Constant Bit Rate)**

The default setting is 'VBR'.

- a If VBR has been selected, VBR Quality will be enabled. Select the required **VBR Quality** from the drop-down menu.

- Highest
- High
- Medium
- Low
- Lowest

The default setting is 'High'.

OR

- b If CBR has been selected, CBR Bit Rate will be enabled. Use the slider bar to select the **CBR Bit Rate**.

The default setting is 1000.

- End -

Picture Settings

Picture Basic

Configure the Auto Focus, Auto Iris, Exposure, Wide Dynamic Range (WDR); Defog, and Enhanced Intensity settings on the camera.

Note:

Defog, and Enhanced Intensity are only available on Illustra Pro cameras

When Auto Focus and Iris are enabled, the camera automatically compensates for scene changes that effect focal length (focus) and light levels (iris).

Setting Auto Focus and Auto Iris

Enable or disable auto focus and auto iris.

Procedure 3-2 Enable/Disable Auto Focus and Auto Iris

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Picture Settings from the Video menu. |
| 3 | Select the Picture Basic tab. |
| 4 | Select the Auto Focus check box to enable auto focus. |

OR

Deselect the **Auto Focus** check box to disable auto focus.

The default setting is 'Enabled'.

- 5 Select the **Auto Iris** check box to enable auto iris.

OR

Deselect the **Auto Iris** check box to disable auto iris.

The default setting is 'Enabled'.

- End -

Setting Exposure

Configure the exposure settings for the camera. Automatic Gain Control (AGC) and Open Shutter provide additional functionality to help compensate for low-light scenes

Automatic Gain Control (AGC)

AGC amplifies the video signal in scenes when there is not enough light to produce full video levels. The maximum level of AGC is controlled by the Max Gain control. It is adjustable from 0dB (off) to 37dB. As gain is increased, the sensor noise is also amplified which can result in more noticeable noise in the image.


Open Shutter

This is a technique that is used for really low-light performance applications. It allows the shutter speed to be slowed down further than normal to allow the sensor to collect more light. The maximum level of Open Shutter is controlled by the Shutter Speed control. It is adjustable from 1/30 down to 1/2 second. The slower the Shutter Speed, the higher the chance for image blur which may affect moving object identification. It is only in effect during low-light situations where an image would not be obtainable otherwise and does not affect the camera performance in normal or bright light situations.

Max Gain

The Max Gain setting is an upper limit for how much gain can be increased when AGC is enabled. The trade-off between picture level (brightness) and noise may be adjusted by setting the Max Gain value. Lower values for Max Gain setting may result in a darker picture, but with less noise. Higher values for Max Gain setting may result in a brighter picture, but with more noise

Procedure 3-3 Configure Exposure Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Basic tab.
4	Select  to start the video stream if it is not already active.
5	Select a ACC/Shutter Setting from the drop-down menu. <ul style="list-style-type: none"> • AGC off - produces the cleanest image with the least noise but the worst low-light performance. • AGC on - good low-light performance with the chance for some noise. • openshutter - best for low-light performance. However there is a chance for some noise and some image blur.

The default setting is 'openshutter'.

Note:

If you require "Real Time" video, open shutter must be turned off to ensure that the resulting video quality is acceptable for prosecution purposes.

- 6 If openshutter has been selected in Step 5, Max Exposure will be enabled.. Select **Max Exposure (sec)** from the drop-down menu:
 - 1/2
 - 1/4
 - 1/8
 - 1/15
 - 1/30
- 7 If AGC on or openshutter has been selected in Step5, Max Gain Exposure will be enabled. Use the slider bar to select the **Max Gain (dB)**:
The settings are 0-37.
The video pane will update to display the new settings.

- End -

Wide Dynamic Range

WDR is a feature that allows viewing of high contrast scenes that include both bright and low light areas in the same field of view (FOV).

WDR Level allows you to adjust the WDR level to favour a underexposed or overexposed image. By selecting the lower end of the control the image is underexposed; this provides more detail in areas of brightness, but less detail in areas of darkness. On the other hand, selecting the higher end of the control overexposes the image which provides more detail in the dark areas but less detail in the bright areas.

A typical use for this feature would be viewing a scene with both indoor and outdoor lighting conditions simultaneously, such as a warehouse area with an open bay door.

Procedure 3-4 Enable/Disable Wide Dynamic Range (WDR)

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Picture Basic tab from the Basic Configuration menu. |
| 3 | Select a setting from the Enable WDR drop-down menu . <ul style="list-style-type: none">• Off - .• Auto - .• True WDR - .• Advanced WDR - |
- The default setting is 'Off'.

- End -

Defog

This is a feature on Illustra Pro models that provides clear images even in environments with low visibility due to fog or heavy rain. It can be used in a wide range of installation locations for monitoring foggy areas such as shipping, airports, highways and at high altitudes.

Procedure 3-5 Enable/Disable Defog

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select a setting from the Enable Defog drop-down menu . <ul style="list-style-type: none">• Off - .• Auto - .• Low - .• Medium -• High - The default setting is 'Off'.

- End -

Enhanced Intensity

The Enhanced Intensity feature on Illustra Pro models allows the camera to produce clear images when there is normally dark shadows in low light conditions or when there are bright sources of light such as headlights. The **Emphasise Dark** option will brighten dark areas while leaving the bright areas untouched enabling clearer images of shadows. The **Ignore Bright** option reduces peak light levels when bright light and reflections are detected that would normally result in white out areas in the image.

Procedure 3-6 Enable/Disable Enhanced Intensity

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Picture Basic tab from the Basic Configuration menu.
3	Select a setting from the Enhanced Intensity drop-down menu . <ul style="list-style-type: none">• None - .• Emphasise Dark - .• Ignore Bright - . The default setting is 'None'.

- End -

Picture Additional

Configure IR/DayNight Mode; Picture Adjustment including Brightness, Contrast, and Saturation; and White Balance displayed in the video pane, as well as Electronic Image Stabilization and Frame Noise Reduction.

Note:

Electronic Image Stabilization and Frame Noise Reduction are only available on Illustra Pro models.

Wide Dynamic Range

Wide Dynamic Range (WDR) is a feature that allows viewing of high contrast scenes that include both bright and low light areas in the same field of view (FOV).

WDR Level allows you to adjust the WDR level to favour a underexposed or overexposed image. By selecting the lower end of the control the image is underexposed; this provides more detail in areas of brightness, but less detail in areas of darkness. On the other hand, selecting the higher end of the control overexposes the image which provides more detail in the dark areas but less detail in the bright areas.

A typical use for this feature would be viewing a scene with both indoor and outdoor lighting conditions simultaneously, such as a warehouse area with an open bay door.

Procedure 3-7 Enable/Disable Wide Dynamic Range (WDR)

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Picture Settings from the Video menu. |
| 3 | Select the Picture Additional tab. |
| 4 | Select the Enable WDR check box to enable wide dynamic range. |
| | OR |
| | Deselect the Enable WDR check box to disable wide dynamic range. |
| | The default setting is 'Disabled'. |
-

- End -

IR/Day Night Mode

IR/DayNight Mode utilizes a series of specific camera functions to dramatically enhance low light performance.

One of these camera functions, the True TDN mechanism, used when needed, removes an IR Cut Filter (IRCF) from in front of the imager; this allows the camera to see in black and white (BW) and utilize additional near-infrared energy found in many lighting sources such as halogen, moonlight, etc.

The preceding, in conjunction with slowing down another camera function, shutter speed, significantly improves low-light performance—rendering clear images where none could be viewed previously.

IR Mode

When the camera is in B/W mode, it can utilize, or 'see', near-IR illumination—something the human eye cannot do. This can be extremely powerful when the camera is paired with 850~950nm IR illuminators. With this

combination a scene can be well lit with IR light that the camera can see but people cannot. This is great for areas where external lighting is not allowed or there is a need for covert security.

Normal, or visible light, and IR light have different focal points. The camera has 3 IR modes to help optimize focus capabilities and achieve sharper IP pictures when using these light sources. See the following table for recommended settings for corresponding IR Switching with IR illumination.

IR Curve	For Lighting Sources	Visibility
Visible	Normal Lighting – Florescent, Incandescent, Sunlight, etc	Both the camera (in Color and BW) and the human eye can utilize these types of illumination sources.
850nm	850nm IR illuminators.	Only the camera (in BW) can utilize this type of illumination source. The human eye cannot.
950nm	950nm IR illuminators.	Only the camera (in BW) can utilize this type of illumination source. The human eye cannot.

Day Night Mode

The camera provides a black-and-white (B/W) mode to improve camera performance when the light level falls below certain thresholds. This allows clear images to be obtained under low-light conditions. There are six Day/Night settings: Auto High, Auto Mid, Auto Low, Manual, Forced Color, and Forced B/W.

Procedure 3-8 Configuring IR Mode and Day Night Mode


Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Additional tab.
4	Select an IR Mode setting from the drop-down menu: <ul style="list-style-type: none"> • visible - Most common, visible lighting sources. • 850nm - Ideal for 850nm IR Illuminators. • 950nm - Ideal for 950nm IR Illuminators. The default setting is 'visible'.
5	Select a Day Night Mode setting from the drop-down menu: <ul style="list-style-type: none"> • Off - enables full-time color mode. • On - enables full-time black and white mode. • Auto High - increases the chance of switching to BW mode as light levels drop. • Auto Mid - camera will give a good balance of Color and BW depending on the scene. • Auto Low - camera will adjust between BW and Color depending on light levels. . The default setting is 'Auto Low'.

- End -

Picture Adjustment

Adjust brightness, contrast and saturation of the image displayed on the video pane.

Procedure 3-9 Adjust the Brightness, Contrast and Saturation

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Additional tab.
4	Select  to start the video stream if it is not already active. The video pane will display the current camera view.
5	Use the slider bars to adjust: <ul style="list-style-type: none"> • Brightness • Contrast • Saturation (color level) The live video pane will update to display the new settings. The values range from 0% to 100%. The default values are 50%.
- End -	

Procedure 3-10 Restore Picture Adjustment Defaults

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Additional tab.
4	Select Defaults to restore picture settings to the factory defaults. The default values are settings are 50%.
- End -	


White Balance

White balance (the ability to keep whites looking white) is normally compensated for automatically via the default Auto White Balance setting.

Manual White Balance is available when specific color temperature settings want to be set and preserved. This can be done using the red and blue slider adjustments set for optimal viewing.

Procedure 3-11 Configure White Balance


Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Picture Settings** from the **Video** menu.
- 3 Select the **Picture Additional** tab.
- 4 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 5 Select the required **White Balance Mode** from the drop-down menu:
 - **Auto**: Suitable for a normal range of lighting conditions
 - **Manual**: Adjustable red and blue balance (The Red and Blue slider bars will be displayed).
 - **Sodium**: (Illustra Pro only)
 - **Mercury**: (Illustra Pro only)The default setting is 'Auto'.

- End -

Procedure 3-12 Manually Select White Balance

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Picture Settings** from the **Video** menu.
- 3 Select the **Picture Additional** tab.
- 4 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 5 Select **Manual** from the **White Balance Mode** drop-down menu.
The Red and Blue slider bars will be displayed.
- 6 Use the slider bars to adjust the **Red** and **Blue** balance.
The live video pane will update to display the new settings.
The red and blue values range from 1% to 100%.

Note:

When Automatic White Balance is first switched from enabled to disabled, the red and blue values displayed are based on the current feedback values from the camera.

- End -

Electronic Image Stabilization (EIS)

Electronic Image Stabilization (EIS) on Illustra Pro models can reduce the effect of image shake caused by strong winds or vehicle vibrations. This ensures a stable picture even at high levels of zoom.

Procedure 3-13 Enable/Disable Electronic Image Stabilization (EIS)

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Additional tab.
4	Select the Enable EIS check box to enable Electronic Image Stabilization. OR Deselect the Enable EIS check box to disable auto focus. The default setting is 'Off'.

- End -

Frame Noise Reduction.

The brightness of the object (AGC) in auto mode changes the level of Frame Noise Reduction.

Procedure 3-14 Enable/Disable Frame Noise Reduction

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Picture Settings from the Video menu.
3	Select the Picture Additional tab.
4	Select the Enable Frame Noise Reduction check box to enable Frame Noise Reduction. OR Deselect the Enable Frame Noise Reduction check box to disable Frame Noise Reduction. The default setting is 'On'.

- End -

Date/Time/OSD

Change the camera name and date and time and enable OSD.

Camera Name

The camera name will be displayed on the GUI banner and the on-screen display for the camera. This name will also be displayed when using Illustra Connect or ONVIF.

Procedure 3-15 Change the Camera Name

Step	Action
1	Select Setup on the GUI banner.
2	Select Date/Time/OSD from the Video menu. The Date/Time/OSD tab displays.

- 3 Enter the name of the camera in the **Camera Friendly Name** text box.

- End -

Date Time

Set the date and time on the camera.

Procedure 3-16 Configuring the Date and Time

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Date/Time/OSD from the Video menu.
The Date/Time/OSD tab displays. |
| 3 | Select the Time 24-hour check box to enable the 24-hour clock.
Or
Deselect the Time 24-hour check box to enable the 12-hour clock.
The default setting is '24-hour'. |
| 4 | Select the Date Display Format from the drop-down menu: <ul style="list-style-type: none"> • DD/MM/YYYY • MM/DD/YYYY • YYYY/MM/DD The default setting is 'YYYY/MM/DD'. |
| 5 | Select the Time Zone from the drop-down menu.
The default setting is '(GMT-05:00) Eastern Time (US & Canada)' |
| 6 | Select the Set Time setting by selecting a radio button: <ul style="list-style-type: none"> • Manually • via NTP The default setting is 'Manually'. |
| 7 | If you select Manually in step 6: <ol style="list-style-type: none"> a Select the Date (DD/MM/YYYY) using the drop-down menus. b Select the Time (HH:MM:SS) using the drop-down menus. |
| 8 | If you select via NTP in step 6: <ul style="list-style-type: none"> • Enter the NTP Server Name in the text box. |

- End -

OSD (On-Screen Display)

Within OSD you can choose to whether to enable or disable the camera name and/or time in the on-screen display.

Procedure 3-17 Display or Hide the Camera Name/ Camera Time OSD

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Date/Time/OSD from the Video menu. The Date/Time/OSD tab displays.
3	In the Enable OSD , select the Camera Name check box to display the camera name in the OSD. OR Deselect the Camera Name check box to hide the camera name in the OSD. The default setting is 'Disabled'.
4	In the Enable OSD , select the Time check box to display the camera time in the OSD. OR Deselect the Time check box to hide the camera time in the OSD. The default setting is 'Disabled'.
5	In the Text Attributes , select the Translucent check box to enable the text attribute in the OSD. OR Deselect the Translucent check box to disable the text attribute in the OSD. The default setting is 'Disabled'.

- End -

Privacy Zones

Privacy Zones are “masked” sections of the camera’s viewing area. These masks prevent operators of the surveillance system who do not have access to the camera password from viewing these designated zones. Each zone has four sides, and the zones may overlap to form irregular shapes. The Privacy Zones move in relation to the camera’s pan/tilt position.

The apparent size of the Privacy Zone adjusts automatically as the zoom level is adjusted. Privacy Zones are useful for high security areas. For example, you might establish a privacy Zone around a safe’s combination, but still view people approaching or opening the safe. When Privacy Zones are active, the camera’s firmware automatically disables text transparency.

Up to 32 rectangular privacy zones can be used on the camera.



Note:

Areas of the Privacy Zone may be exposed during rapid pan/tilt movements of the camera. To compensate for this limitation, you may want to program the Privacy Zone to be 20 to 25% larger than the area you want to mask.

Defining a Privacy Zone

Create a privacy zone on the camera.

Procedure 3-18 Define a Privacy Zone

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Privacy Zones from the Video menu. The Privacy Zones tab displays.
3	Select  to start the video stream if it is not already active. The video pane will display the current camera view.
4	Select  . The page updates to display an Add and Cancel button. Enter the privacy zone name in the privacy zones Name text box.
5	Use the cursor to locate the start point for the privacy zone and then click and drag on the still image to define the privacy zone area. As the cursor is moved, a red shape will appear on the image which highlights the privacy zone.
6	Release the mouse button. The selected privacy area will turn yellow.
7	Select Add to save the current privacy zone.
8	To re-select an alternative area for the privacy zone, select Cancel and repeat from step 4.

Note:


When a new privacy zone is created, it is automatically enabled, refer to [Enable/Disable a Privacy Zone](#) on [Page 37](#) to modify this setting.

- End -

Enabling or Disabling a Privacy Zone

Select a privacy zone to hide or display on the camera.

Procedure 3-19 Enable/Disable a Privacy Zone


Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Privacy Zones from the Video menu. The Privacy Zones tab displays.
3	Select  to start the video stream if it is not already active.
4	The video pane will display the current camera view.
5	Select the corresponding Enabled check box to enable the privacy zone. OR
6	Deselect the corresponding Enabled check box to disable the privacy zone.

- End -

Deleting a Privacy Zone

Delete a privacy zone from the camera.

Procedure 3-20 Delete a Privacy Zone

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Privacy Zones from the Video menu. The Privacy Zones tab displays. Select  to delete the corresponding privacy zone.
3	You will be prompted to confirm the deletion.
4	Select OK to confirm the deletion. Or Select Cancel .

- End -

PTZ Settings Menu

When the video menu is selected, Figure 4-1 PTZ Settings Menu will be displayed.

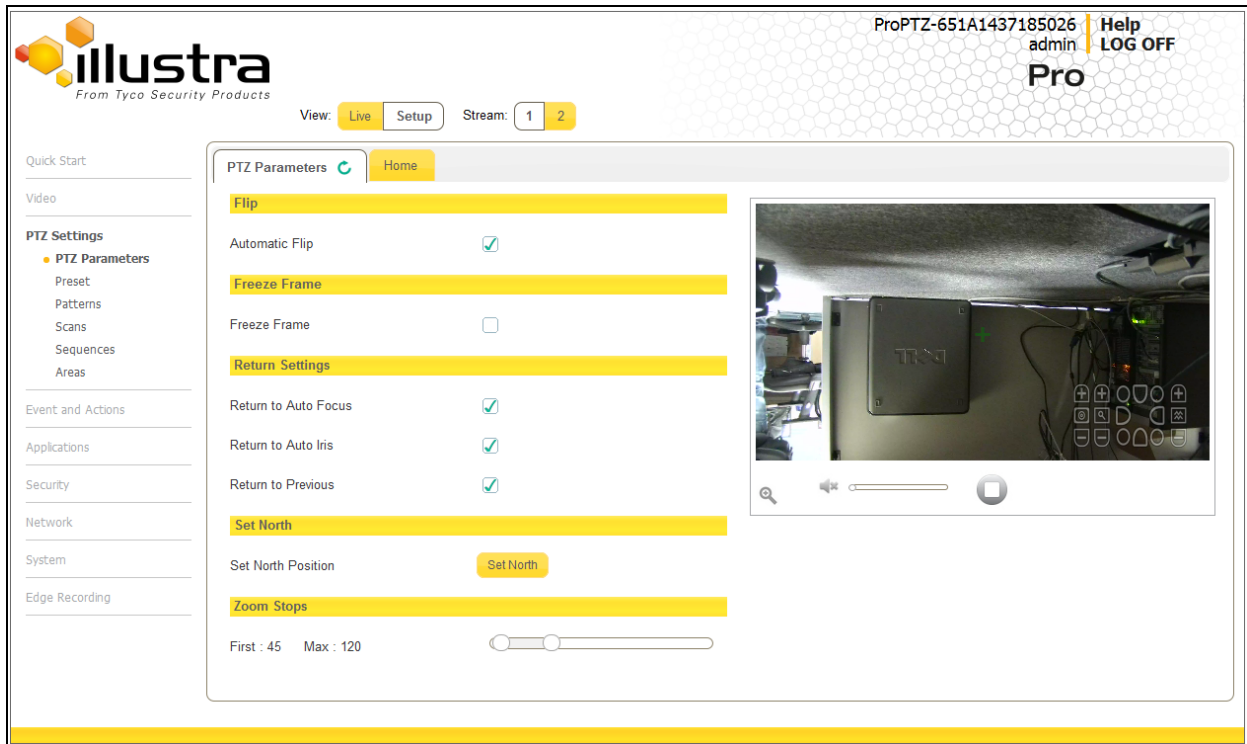


Figure 4-1 PTZ Settings Menu

The PTZ Settings Menu provides access to the following camera settings and functions:

- PTZ Parameters
- Preset
- Patterns
- Scans
- Sequences
- Areas

PTZ Parameters

PTZ Parameters

PTZ Parameters allows you to adjust Automatic Flip, Freeze Frame, Return Settings, Set North Position, Zoom Stops, and Home Position Type.

Automatic Flip

Use the automatic (proportional) “flip” feature when you need to track someone who walks directly under the camera and continues on the other side. You start the flip by moving the tilt control to its lower limit and holding for a brief period. When the flip engages, the camera automatically rotates 180°. You may then continue to track the person as long as the tilt control stays in its lower limit. Once the tilt control is released, the camera resumes normal operation.

Procedure 4-1 Enable/Disable Automatic Flip

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu. Select the PTZ Parameters tab.
3	Select the Automatic Flip check box to enable automatic flip. OR Deselect the Automatic Flip check box to disable automatic flip. The default setting is ‘Enabled’.

- End -

Freeze Frame

If you need to maintain a static image when calling automatic functions, such as presets or patterns, use the Freeze Frame setting. This prevents the camera movement and lens adjustments being displayed on-screen while the preset or pattern is being found.

When the Freeze Frame setting is enabled, the scene currently displayed on the video pane will be preserved (frozen) on-screen until the preset is ready for display. The image then switches smoothly to the new scene. This may help reduce bandwidth utilization when presets or patterns are used often

Procedure 4-2 Enable/Disable Freeze Frame

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu. Select the PTZ Parameters tab.
3	Select the Freeze Frame check box to enable the freeze frame function. OR Deselect the Freeze Frame check box to disable the freeze frame function. The default setting is ‘Disabled’.

- End -

Return Settings

When calling a Preset, the camera adopts the settings uniquely created for that Preset. When an operator moves the camera from its Preset position, the camera can return to global settings only if programmed to do so through the Return Settings page.


Procedure 4-3 Enable/Disable Return Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu. Select the PTZ Parameters tab.
3	Select the corresponding check box to enable the return settings for: <ul style="list-style-type: none"> • Return to Auto Focus • Return to Auto Iris • Return to Previous OR Deselect the corresponding check box to disable the setting. The default setting is 'Enabled'.
- End -	

Set North

Direction Indicators permit you to understand the approximate pointing position of the camera to an established reference point. This reference point is called "North" and may correspond to magnetic north (if it is known) or some other landmark or fixture. When the camera is initially installed, "North" defaults to a pre-defined position (0° pan/tilt). You may program the "North" position to be any point along the camera's pan axis.

Procedure 4-4 Set North Position

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu. Select the PTZ Parameters tab.
3	Select  to start the video stream if it is not already active. The video pane will display the current camera view.
4	Adjust the camera view as required to locate the north position. Refer to GUI Camera Controls on Page 5 to make the necessary adjustments.
5	Click Set North to save the current view as the north position.
- End -	

Zoom Stops

The Zoom Stops define how the digital zoom function is partitioned.

Note:

The Zoom Stop will not be used if EIS is enabled.

For example the Illustra Pro PTZ 30X Dome has a 30x optical zoom with a 12X digital zoom allowing a maximum possible zoom of 360X. The camera default setting for the First Stop is 45X and 120X for the Max stop. If the current zoom level is less than 45X, pressing Zoom In continuously causes the zoom to stop at 45X. If the zoom level is 45X or greater, pressing Zoom In continuously causes the zoom to stop at the maximum setting of 120X. The second zoom stop remains in effect until the zoom function is reduced to less than the first zoom stop setting (45X) and the zoom button is released for one second or longer. To achieve higher zoom levels, change the maximum zoom setting.

Procedure 4-5 Setting the Zoom Stops

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu.
3	In the Zoom Stops section use the slider to change the First Zoom Stop setting. The slider bar can be moved left or right using the mouse or for fine adjustments using the left and right arrow keys on the PC keyboard. The default first stop zoom setting is 45X.
4	Use the slider to change the Max Total Zoom X setting. The Max Zoom setting should always be higher than the First Zoom setting. The maximum zoom setting is 360X.

- End -

Home

Home allows you to adjust the Home Position Type. The home position is a preset, pattern or scan/sequence that automatically runs after a designated period of camera inactivity. Use this option if you want to keep a specific area under surveillance when the camera is not moving or to resume an Intelligent Guard Tour.

Procedure 4-6 Configure the Home Position

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select PTZ Parameters from the PTZ Settings menu. Select the Home tab.
3	Select the Home Position Type : <ul style="list-style-type: none"> • Preset • Pattern • Sequence • Scan • None

Preset

The default is None.

If an action is selected, choose the type of action to perform from the **Parameter** drop-down menu that is enabled.

- 4 Use the slider bar to select the **Return Time (mins)**.

The default is 5.

- 5 Select **Apply** to save the settings.

- End -

Procedure 4-7 Clear the Home Position

Step	Action
6	Select Setup on the GUI banner to display the setup menus.
7	Select PTZ Parameters from the PTZ Settings menu. Select the Home tab.
8	Select None from Home Position Type .
9	Select Apply to save the settings.

- End -

Preset


A Preset is a pre-positioned camera scene that you program using the pan, tilt and zoom options. Up to 96 presets can be programmed on the camera.

Adding a new Preset

Create a new preset position on the camera.

Procedure 4-8 Add a Preset

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Presets from the PTZ menu. The Preset tab displays.
3	Select  to start the video stream if it is not already active. The video pane will display the current camera view.
4	Adjust the camera view as required. <ul style="list-style-type: none">• Pan, Tilt and Zoom.• Focus Mode and Iris Mode. Refer to Using the Camera Controls on Page 5 to make the necessary adjustments.

- 5 The following camera controls can be modified and saved as part of the preset and accessed via the Picture Settings menu:
- **White Balance**
 - **Picture Balance**
 - **Wide Dynamic Range (WDR)**
 - **IR/DayNight**
 - **Shutter Limit**
- 6 In a numbered slot on the preset table, select  to add the new preset.
- 7 Enter the preset name in the **Preset Name** text box.
- 8 Select **Add** to save the preset.
- OR
- Select **Cancel**.



- End -

Viewing a Preset

View an existing preset position.

Procedure 4-9 View a Preset

Step	Action
------	--------

- | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Preset from the PTZ menu.
The Preset tab displays. |
| 3 | Select  to start the video stream if it is not already active.
The video pane will display the current camera view. |
| 4 | Select  to activate the corresponding preset.
The video pane will update to display the selected preset. The preset will display until interrupted by a camera command, pattern or scan. |

- End -

Editing a Preset




Edit an existing preset position.

Procedure 4-10 Edit an existing Preset

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
|---|-------------------------------------------------------------------|


Preset

- 2 Select **Preset** from the **PTZ** menu.
The Preset tab displays.
- 3 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 4 Select  to activate the corresponding preset.
The video pane will update to display the selected preset.
- 5 Select  to edit the corresponding preset.
- 6 Edit the preset name in the **Preset Name** text box if required.
- 7 Adjust the camera view as required.
 - **Pan, Tilt and Zoom.**
 - **Focus Mode and Iris Mode.**Refer to [Using the Camera Controls](#) on [Page 5](#) to make the necessary adjustments.
- 8 The following camera controls can be saved as part of the preset and accessed via the Picture Settings menu:
 - **White Balance**
 - **Picture Balance**
 - **Wide Dynamic Range (WDR)**
 - **IR/DayNight**
 - **Shutter Limit**
- 9 Select **Add** to save the updated preset.
You will be prompted to confirm the update.
- 10 Select **OK** to save the changes.
OR
Select **Cancel**.

Deleting a Preset

Delete an existing preset position from the camera.

Procedure 4-11 Delete a Preset

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Preset from the PTZ menu. The Preset tab displays.
3	Select  to delete the corresponding preset. You will be prompted to confirm the deletion.

Note:

You cannot delete a preset while it is associated with another camera function. To remove the preset, refer to the associated camera function.

- 4 Select **OK** to confirm the deletion.
OR
Select **Cancel**.

- End -

Patterns

A pattern is a series of pan, tilt and zoom movements which can be saved to the camera. A maximum of 16 user programmable patterns can be programmed for the camera with an unlimited duration.

Note:

- 1 The Illustra Pro PTZ provides Apple Peel, which is a predefined pattern stored on the camera by default that covers the entire viewing area. This pattern slowly pans 360° starting at the ceiling line. It then tilts 30° and pans 360° again, repeating until the entire viewing area is covered. The pattern will repeat continuously until interrupted by a camera command, preset, scan or alarm.
- 2 There are two Apple Peel patterns on the camera by default. Apple Peel pattern one is read only and cannot be edited or deleted. Apple Peel pattern two can be edited and if necessary deleted from the camera.

Adding a Pattern


Create a new pattern.

Note:

A 15 minute time-out period is implemented when adding a pattern. If no command is received within the time-out period, the Add a Pattern procedure will automatically terminate.

Procedure 4-12 Add a Pattern

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Patterns from the PTZ menu. |
| 3 | Select the Record tab.
The Record tab displays. |
| 4 | Select  to start the video stream if it is not already active.
The video pane will display the current camera view. |

Patterns



- 5 Enter the **Pattern Name**.
- 6 Select **Start**.
The Record page will update with an **Add** and **Cancel** button.
- 7 Adjust the camera view as required.
 - **Pan, Tilt and Zoom**.Refer to [Using the Camera Controls](#) on [Page 5](#) to make the necessary adjustments.
- 8 Select **Add** to save the pattern.
The pattern name is entered in the table on the Patterns tab.
Or
Select **Cancel**.

- End -

Running a Pattern

Activate an existing pattern.

Procedure 4-13 Run a Pattern


Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Patterns from the PTZ menu. The Patterns tab displays. Select  to start the video stream if it is not already active. The video pane will display the current camera view.
3	Select  to activate the corresponding pattern.
4	The video pane will update to display the selected pattern. The pattern will run continuously until interrupted by a camera command, pattern, scan or alarm.

- End -

Deleting a Pattern

Delete an existing pattern.

Procedure 4-14 Delete a Pattern

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Patterns from the PTZ menu. The Patterns tab displays.
3	Select  to delete the corresponding pattern.

You will be prompted to confirm the deletion.

Note:

You cannot delete a pattern while it is associated with another camera function. To remove the pattern, refer to the associated camera function.

- 4 Select **OK** to confirm the deletion.
OR
Select **Cancel**.

- End -

Repeating a Pattern

Use this procedure to have a pattern repeat until interrupted by a camera command.

Procedure 4-15 Enable/Disable Repeat a Pattern

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Patterns from the PTZ menu. |
| 3 | Select the Repeat tab.
The Repeat tab displays. |
| 4 | Select the Repeat Pattern check box to allow the selected pattern to repeat continuously.
OR
Deselect the Repeat Pattern check box to allow the selected pattern to run only once.
The default setting is 'Enabled'. |

- End -

Scans

A scan allows you to program left and right scan limits to automate surveillance activities. Once these scan limits are programmed, you can choose to run a smooth scan, stepped scan, or random scan. When active, the scan repeats until interrupted by a camera command, preset, pattern or alarm.


Setting Scan Limits

Set left and right scan limits on the camera.

Procedure 4-16 Set Scan Limits

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
|---|-------------------------------------------------------------------|

- 2 Select **Scans** from the **PTZ** menu.
The Scans tab displays.
- 3 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 4 Adjust the camera view as required to locate the left scan limit.
Refer to [Using the Camera Controls](#) on [Page 5](#) to make the necessary adjustments.
- 5 Select **Set Left** to set the displayed position as the left limit.
- 6 Adjust the camera view as required to locate the right scan limit.
- 7 Select **Set Right** to set the displayed position as the right limit.
The scan limits have been set and the selected scan will now run within the scan limits set.
- 8 Select the pause time for a Stepped Scan from the **Pause** drop-down menu.
The settings are 2-10. The default is 2.

- End -

Set Scan Limits to Default Settings

Return the camera to the default scan settings.

Procedure 4-17 Set Scan Limits to Default Settings

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Scans from the PTZ menu. |
| 3 | Select the Scans tab.
The Scans tab displays. |
| 4 | Select Defaults .
The scan limits will default to Left: 0 and Right: 359. |


- End -

Activating a Scan

Activate a scan on the camera, this will run using the scan limits saved in Setting Scan Limits.


Procedure 4-18 Activate a Scan

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Scans from the PTZ menu.
The Scans tab displays. |
| 3 | Select  to start the video stream if it is not already active. |

The video pane will display the current camera view.

(Before activating a scan, refer to [Set Scan Limits to Default Settings](#) on [Page 49](#).)

- 4 Select  to activate the corresponding scan.
 - **Smooth** - slowly pans between the left and right scan limits, starting at the left scan limit. When the right scan limit is reached, the scan reverses
 - **Stepped** - pans slowly, pausing briefly every 10° between the left and right scan limits. Once the right scan limit is reached, the scan reverses.
 - **Random** - pans randomly between the left and right scan limits. For example, the scan may start at 10°, then pan right 40° and pause, pan right 20° and pause, pan left 30° and pause, and pan right until it reaches the right scan limit.
- 5 The video pane will update to display the selected scan.
- 6 The scan will run continuously until interrupted by a camera command, pattern, preset or alarm.

- End -

Motion Tracking

The Motion Tracking feature enables the camera to detect motion in the field of view and once detected track the motion using the PTZ functionality of the camera. The Duration setting allows the configuration of the time an object is tracked once it is detected.

Note:

Any changes to the Motion Tracking configuration applies to both Scans and Sequences.

Motion Tracking together with Stepped Scans or Sequences can be used to complete **Intelligent Guard Tours**. For more information on Intelligent Guard Tours refer to [Appendix A- Intelligent Guard Tour](#) on [Page 131](#).

Motion Tracking can be used with or without Motion Detection enabled.

Note:

It is recommended that Motion Detection is enabled with Intelligent Guard Tour to allow the camera to raise a Motion Detection Alert to the Network Video Recorder allowing recording of the object being tracked.

To enable Motion Detection refer to [Enable or Disable a Motion Detection Alert](#) on [Page 68](#)

If Motion Detection is enabled and motion tracking is disabled:

- When a motion start alarm is sent and the camera initiates a PTZ movement, whether manual or by a Program (e.g. Preset, Pattern, Sequence or Scan), a stop alarm will be forced to “close” the alarm.

If motion detection is enabled, motion tracking is enabled, and a Sequence or Scan started:

- When there is motion, a motion start alarm is sent, motion tracking starts (camera starts using PTZ functionality to follow the motion). Only when there are 3 seconds of no motion, or the motion tracking duration expires, is there a motion stop alarm sent. The camera will then resume to the next set point of the Sequence or Scan.

If motion detection is disabled, motion tracking is enabled, and a Sequence or Scan started:

- When there is motion, motion tracking starts (camera starts using PTZ functionality to follow the motion). When there are 3 seconds of no motion, or the motion tracking duration expires, the camera will then resume to the next set point of the Sequence or Scan.

Enable or Disable Motion Tracking

Motion Tracking can be turned on and turned off when required.

Procedure 4-19 Enable or Disable Motion Tracking

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Scans from the PTZ menu.
3	In the Motion Tracking section select the Enabled check box to enable Motion Tracking on the camera. OR
4	In the Motion Tracking section deselect the Enabled check box to disable Motion Tracking on the camera.
5	Select the required Motion Tracking duration from the Duration (Seconds) drop-down menu.
- End -	

Sequences

A Sequence is a sequential display of multiple camera Presets. Sequences provide a methodical and effective way to monitor multiple areas of interest by switching to different Presets automatically.

Sequences are created by identifying Preset views to include in the Sequence and specifying a dwell time that controls how long each Preset remains on-screen before switching to another Preset.

Up to 16 Sequences can be created, each with 16 steps (Presets)

Adding a Sequence

Create a new sequence on the camera using defined presets. Refer to [Add a Preset on Page 43](#) if no presets have yet been added to the camera.

Procedure 4-20 Add a Sequence

Step	Action
1	Select Setup on the GUI banner to display the setup menus. If no presets have been created, refer to Add a Preset on Page 43 before continuing to the next step.
2	Select Sequences from the PTZ menu.
3	Select the Add Sequence tab.
4	Enter the Sequence Name .
5	Select a preset from the Preset Name drop-down menu.

Sequences

- 6 Enter a dwell time in seconds in the **Dwell Time (sec)** text box.
The settings are 5-500.
- 7 Select **Add**.
The preset is now listed as part of the sequence.
- 8 Repeat steps 5 to 7 to add further presets to the sequence.

Note:

Up to 16 presets can be added to a sequence.

- 9 Select **Apply** to save the sequence.



- End -

Activating a Sequence

Activate a selected sequence.

Procedure 4-21 Activate a Sequence

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Sequences** from the **PTZ** menu.
The Sequences tab displays.
- 3 Select  to start the video stream if it is not already active.
The video pane will display the current camera view.
- 4 Select  to activate the corresponding sequence.
The video pane will update to display the selected sequence. The sequence will run continuously until interrupted by a camera command, pattern, preset, scan or alarm.

- End -




Editing a Sequence

Edit an existing sequence.

Procedure 4-22 Edit a Sequence

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Sequences** from the **PTZ** menu.
The Sequences tab displays.


- 3 Select  to edit the corresponding sequence.
The sequence will open in the Edit Sequence tab.
- 4 Edit the sequence name in the **Sequence Name** text box if required.
- 5 Select  to edit the corresponding preset. The following can be edited:
 - **Preset Name**: To add a new preset to the sequence, move to the next available free slot and select a preset from the **Preset Name** drop-down menu.
 - **Dwell time**
- 6 If required, select  to remove the corresponding preset from the sequence.
- 7 Select **Add** to save the changes
OR
Select **Cancel**.
- 8 Select **Apply** to save the changes.

- End -

Deleting a Sequence

Delete an existing sequence.

Procedure 4-23 Delete a Sequence

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Sequences from the PTZ menu. The Sequences tab displays.
3	Select  to delete the corresponding sequence. You will be prompted to confirm the deletion.
4	Select OK to delete the sequence. Or Select Cancel .

- End -

Motion Tracking

The Motion Tracking feature enables the camera to detect motion in the field of view and once detected track the motion using the PTZ functionality of the camera. The Duration setting allows the configuration of the time an object is tracked once it is detected.

Note:

Any changes to the Motion Tracking configuration applies to both Scans and Sequences.

Motion Tracking together with Stepped Scans or Sequences can be used to complete **Intelligent Guard Tours**. For more information on Intelligent Guard Tours refer to [Appendix A- Intelligent Guard Tour](#) on [Page 131](#).

Motion Tracking can be used with or without Motion Detection enabled.

Note:

It is recommended that Motion Detection is enabled with Intelligent Guard Tour to allow the camera to raise a Motion Detection Alert to the Network Video Recorder allowing recording of the object being tracked.

To enable Motion Detection refer to [Enable or Disable a Motion Detection Alert](#) on [Page 68](#)

If Motion Detection is enabled and motion tracking is disabled:

- When a motion start alarm is sent and the camera initiates a PTZ movement, whether manual or by a Program (e.g. Preset, Pattern, Sequence or Scan), a stop alarm will be forced to “close” the alarm.

If motion detection is enabled, motion tracking is enabled, and a Sequence or Scan started:

- When there is motion, a motion start alarm is sent, motion tracking starts (camera starts using PTZ functionality to follow the motion). Only when there are 3 seconds of no motion, or the motion tracking duration expires, is there a motion stop alarm sent. The camera will then resume to the next set point of the Sequence or Scan.

If motion detection is disabled, motion tracking is enabled, and a Sequence or Scan started:

- When there is motion, motion tracking starts (camera starts using PTZ functionality to follow the motion). When there are 3 seconds of no motion, or the motion tracking duration expires, the camera will then resume to the next set point of the Sequence or Scan.

Enable or Disable Motion Tracking

Motion Tracking can be turned on and turned off when required.

Procedure 4-24 Enable or Disable Motion Tracking

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Sequences from the PTZ menu.
3	In the Motion Tracking section select the Enabled check box to enable Motion Tracking on the camera. OR
4	In the Motion Tracking section deselect the Enabled check box to disable Motion Tracking on the camera.
5	Select the required Motion Tracking duration from the Duration (Seconds) drop-down menu.

- End -

Areas



Areas allow sections within the field of view to be labeled. These labels may then be turned on within the Overlay Settings option. Areas may not overlap. The zoom level affects the size areas may appear.

You may program up to 16 areas on the camera.

Programming an Area

Set an area on the camera.

Procedure 4-25 Program an Area


Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Areas from the PTZ menu. The Areas tab displays.
3	Select  to start the video stream if it is not already active. The video pane will display the current camera view.
4	In a numbered slot on the areas table, select  to add the new area.
5	Enter the area name in the Name text box
6	Adjust the camera view as required to locate the left boundary. Refer to Using the Camera Controls on Page 5 to make the necessary adjustments.
7	Select Set in the Left column to set the displayed position as the left boundary.
Note: This must not be less than the right boundary of the previous area.	
8	Adjust the camera view as required to locate the right boundary.
9	Select Set in the Right column to set the displayed position as the right boundary.
Note: This must not be greater than the next area's left boundary.	
10	Select Add to save the area. OR Select Cancel .

- End -

Editing an Area

Edit the details for an existing area on the camera.

Procedure 4-26 Edit an Area

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Areas from the PTZ menu. The Areas tab displays.
3	Select  to edit the corresponding area.
4	You can make changes to the following: <ul style="list-style-type: none"> • Name • Left Boundary • Right Boundary
5	Select Add to save the changes to the area. OR Select Cancel .

- End -

Deleting an Area

Delete an existing area from the camera.

Procedure 4-27 Delete an Area

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Areas from the PTZ menu. The Areas tab displays.
3	Select the corresponding Delete check box to mark the area for deletion. OR
4	Deselect the corresponding Delete check box to keep the area.
	Note: Select the Select All check box to mark all areas for deletion.
5	Select Delete to delete the selected areas. You will be prompted to confirm the deletion.
6	Select OK to confirm the deletion.

Areas

OR

Select **Cancel**.

- End -

Events and Actions Menu

When the Events and Actions menu is selected, Figure 5-1 Events and Actions Menu will be displayed.

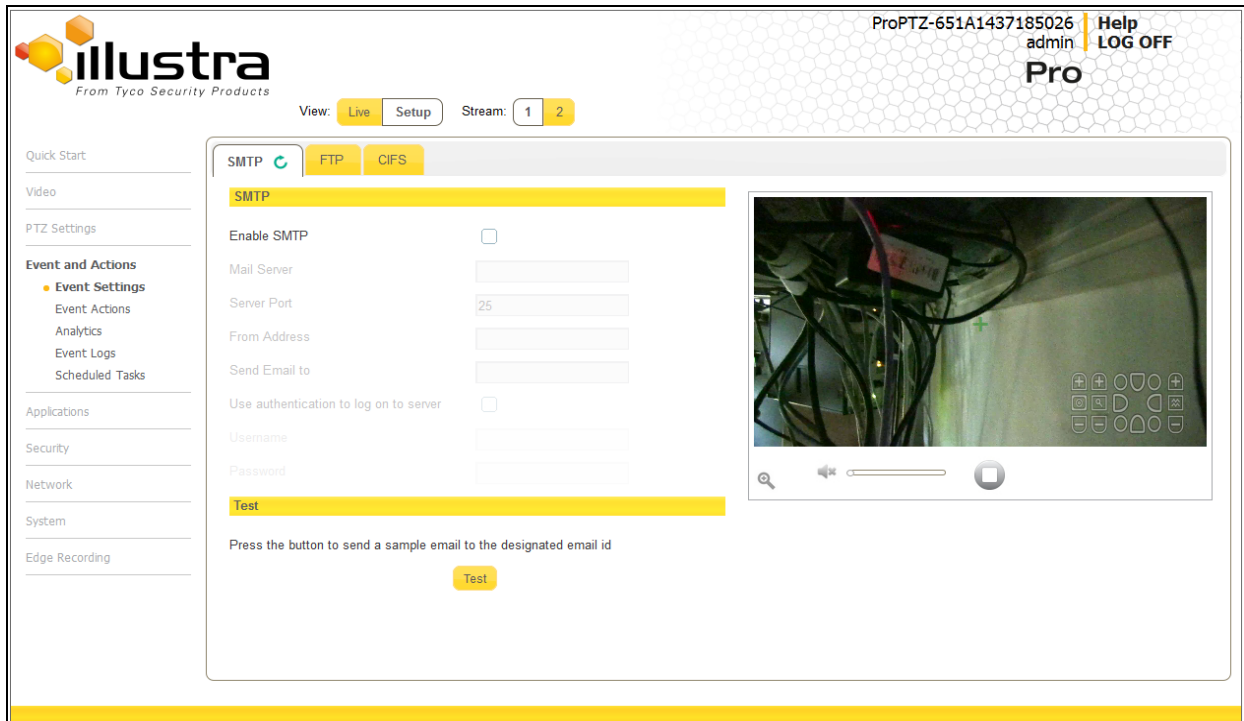


Figure 5-1 Events and Actions Menu

The Event and Actions Menu provides access to the following camera settings and functions:

- Event Settings
- Event Actions
- Alarms I/O
- Analytics
- Event Logs
- Scheduled Tasks

If using a Feature Plus camera, it will be possible to configure and trigger alarms. All of the preceding menu options will be available. For a non-Feature Plus camera, only Event Logs and Scheduled Tasks will be available on the Event and Actions Menu.

Event Settings

Configure the SMTP, FTP, and CIFS details required when setting Event Actions for alarms and analytic alerts. (This menu option is available only for Feature Plus cameras.)

SMTP

Configure the SMTP settings to allow e-mail alerts to be sent from the camera when an alarm or analytic alert is triggered. SMTP settings must be configured to enable email alerts when using alarms and analytic alerts.

Note:

SMTP settings can also be configured via the Network menu. Refer to [SMTP](#) on [Page 97](#)

Procedure 5-1 Configure SMTP Settings

Step	Action
------	--------

- | | |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Event Settings from the Events and Actions menu. |
| 3 | Select the SMTP tab. |
| 4 | Select the Enable SMTP check box to enable SMTP.
Text boxes on the tab become available for entry.
OR
Deselect the Enable check box to disable SMTP.
The default setting is 'Disabled'. |
| Note: | |
| When in Enhanced Security mode, enabling SMTP will require the admin account password. | |
| 5 | Enter the IP Address of the mail server in the Mail Server text box. |
| 6 | Enter the server port in the Server Port text box.
The default setting is '25'. |
| 7 | Enter the from email address in the From Address text box. |
| 8 | Enter the email address to send email alerts to in the Send Email to text box. |
| 9 | Select the Use authentication to log on to server check box to allow authentication details to be entered.
OR
Deselect the Use authentication to log on to server to disable authentication.
The default setting is 'Disabled'. |
| 10 | If 'Use authentication to log on to server' check box has been selected: <ol style="list-style-type: none"> Enter the username for the SMTP account in the Username text box. Enter the password for the SMTP account in the Password text box. |
| 11 | Select Apply to save the settings. |

Note:

Refer to [Test SMTP Settings](#) on [Page 60](#) to confirm that the SMTP settings are working as expected.

- End -

Test SMTP Settings

Test that the settings set in [Configure SMTP Settings](#) on [Page 59](#) have been configured correctly.

Procedure 5-2 Test the SMTP Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Settings from the Events and Actions menu.
3	Select the SMTP tab.
4	Select Test .
	A sample email will be sent to the specified email address to confirm that SMTP settings are correct.

- End -

FTP

Configure the FTP settings for the FTP server. This is required to send video files from triggered analytic alerts. FTP must be configured to enable FTP video alerts when using alarms and analytic alerts.

Note:

FTP settings can also be configured via the Network menu. Refer to [FTP](#) on [Page 96](#).

Procedure 5-3 Configure FTP Server Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Settings from the Events and Actions menu.
3	Select the FTP tab.
4	Select the Enable check box to enable FTP. Text boxes on the tab become available for entry. OR Deselect the Enable check box to disable FTP. The default setting is 'Disabled'.
	Note: When in Enhanced Security mode, enabling FTP will require the admin account password.
5	If required, select the Secure FTP check box.

The default setting is 'Disabled'.

6 Enter the IP address of the FTP Server in the **FTP Server** text box.

7 Enter the FTP port in the **FTP Port** text box.

The default setting is 21.

8 Enter the FTP username in the **Username** text box.

9 Enter the FTP password in the **Password** text box.

10 Enter the FTP upload path in the **Upload Path** text box.

Note:

When entering the upload path the following format should be used '//<name of ftp directory>/<folder>'

Note:

Refer to [Test FTP Settings](#) on [Page 61](#) to confirm that the FTP settings are working as expected.

- End -

File Transfer Rate

The File Transfer Rate can be limited and a max transfer rate assigned to manage the amount of FTP bandwidth used.

Procedure 5-4 Configure the FTP Transfer Rate

Step	Action
------	--------

1	Select Setup on the GUI banner to display the setup menus.
---	-------------------------------------------------------------------

2	Select FTP from the Network menu.
---	-------------------------------------------------

3	Select the Limit Transfer Rate check box to limit the FTP transfer rate.
---	---------------------------------------------------------------------------------

OR

Deselect the **Limit Transfer Rate** check box to disable limited FTP transfer.

The default setting is 'Enabled'.

4	Enter the Max Transfer Rate in the Max Transfer Rate (Kbps) text box.
---	------------------------------------------------------------------------------

The default setting is 50.

- End -

Test FTP Settings

Test that the settings set in [Configure FTP Server Settings](#) on [Page 60](#) have been configured correctly.

Procedure 5-5 Test the FTP Settings

Step	Action
------	--------

1	Select Setup on the GUI banner to display the setup menus.
---	-------------------------------------------------------------------

- 2 Select **Event Settings** from the **Events and Actions** menu.
- 3 Select the **FTP** tab.
- 4 Select **Test**.

A sample text file will be sent to the specified FTP destination to confirm that FTP settings are correct.

- End -

CIFS

Configure the CIFS settings to allow files generated from the camera to be directed to network attached file storage via the Common Internet File System (CIFS) protocol. This supplements existing distribution methods such as FTP, SMTP, and email.

Note:

CIFS settings can also be configured via the Network menu. Refer to [CIFS](#) on [Page 100](#)

Procedure 5-6 Configure CIFS Settings

Step	Action
------	--------

- | | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Event Settings from the Events and Actions menu. |
| 3 | Select the CIFS tab. |
| 4 | Select the Enable CIFS check box to enable CIFS.
Text boxes on the tab become available for entry.
OR
Deselect the Enable check box to disable CIFS.
The default setting is 'Enabled'. |

Note:

When in Enhanced Security mode, enabling CIFS will require the admin account password.

- | | |
|---|-------------------------------------------------------------|
| 5 | Enter the network path in the Network Path text box. |
| 6 | Enter the domain name in the Domain Name text box. |
| 7 | Enter the username in the Username text box. |
| 8 | Enter the password in the Password text box. |
| 9 | Select Apply to save the settings. |

Note:

Refer to [Test CIFS Settings](#) on [Page 63](#) to confirm that the CIFS settings are working as expected.

- End -

Test CIFS Settings

Test that the settings set in [Configure CIFS Settings](#) on [Page 62](#) have been configured correctly.

Procedure 5-7 Test the CIFS Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Settings from the Events and Actions menu.
3	Select the CIFS tab.
4	Select Test .
A sample text file will be sent to the specified CIFS destination to confirm that CIFS settings are correct.	
- End -	

Event Actions

The camera can be commanded to carry out a specified operation when an Alarm input or analytic alert is triggered. These are defined using event actions. Up to five event actions can be configured on the camera. (This menu option is available only for Feature Plus cameras.)

Note:

Scheduled tasks, alarms and manual camera control will always begin when they are selected or scheduled to start. None of these camera actions have a priority over any of the others.

The event action can be used to configure any combination of the following actions:

- Record a clip to a microSD Card.
- Send an external alarm via email that includes alarm detail, where to retrieve the AVI video file and one JPEG picture of the event if recording MJPEG to microSD Card. (If MJPEG is not being recorded on microSD Card, then no JPEG picture will be sent.)
- Send an AVI video file to a pre-configured external FTP server. The video file will contain pre and post alarm video buffer.

Note:

A microSD Card must be inserted in order to send SMTP email, video files and images from triggered analytic alerts.

- PTZ action: none or a stored preset, pattern, sequence or scan.
- The result of this PTZ action will continue until another PTZ, scheduled task or return home command is received. A PTZ command from the Web GUI or ONVIF will be responded to immediately, possibly interrupting the programmed PTZ action. A PTZ action from a different digital input will also be done immediately. PTZ commands originating from a scheduled task only interrupt the alarm PTZ action if more than 30 seconds has passed since the triggering. Otherwise, they get delayed.

Creating an Event Action

Configure an event action which can be triggered by an analytic alert.

Note:

To have an alert trigger a recording, send an Email or a video file to an FTP server, you must have already configured the Record, SMTP and FTP settings. Refer to the related configuration sections.

Procedure 5-8 Create an Event Action

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Actions from the Events and Actions menu.
3	Select an entry on the event actions list and enter a descriptive event action name in the Name text box.
4	Select the Record check box to enable the Record Settings configured in the Configure Record Settings on Page 119 .
5	Select the Email check box to send an e-mail to the email address configured in the Configure SMTP Settings on Page 59 .
6	Select the FTP check box to send a video file to the FTP details configured in the Configure FTP Server Settings on Page 60 .
7	Select the CIFS check box to send a video file to the SFTP details configured in the Configure CIFS Settings on Page 62 .
8	Select the recorded audio clip to be played back from the Audio Playback drop-down menu.
	<h3>Note:</h3> <ol style="list-style-type: none"> If Record is selected, the AVI clip will be saved to the microSD card and it will have to be removed from the camera to view the video file. AVI clips can only be sent via FTP if a microSD card has been installed and FTP has been selected. The selected pre and post event duration buffer will be included in any video clips sent via FTP.
9	Select a PTZ Action: <ul style="list-style-type: none"> • None • preset • pattern • scan • sequence The default setting is 'None'.
10	If an action is selected, choose the specific PTZ action to perform from the PTZ Parameter drop-down menu.

- End -

Editing a Event Action

Modify the details of an existing event action.

Procedure 5-9 Edit an Event Action

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Actions from the Events and Actions menu.
3	Select an entry in the event actions list; the following can be edited: <ul style="list-style-type: none"> • Name • Record - Enable/Disable • Email - Enable/Disable • FTP - Enable/Disable • Audio Playback - select the required audio clip • PTZ Action - select the required action.

- End -

Alarms I / O

(This menu option is available only for Feature Plus cameras.)

The camera provides four alarm inputs. By connecting alarm devices, such as smoke alarms, twilight sensors, or motion sensors, to these inputs, you can enhance the usability of your video surveillance system.

- For 15 seconds after being triggered, any additional individual input changes on that alarm source will only be logged and not generate any other action. This is to reduce the likelihood that any oscillating alarm source—such as a door simply vibrating in the wind—cause a series of alarms to be generated.
- Input alarms are triggered upon change of state—either from opened to closed or from closed to open. The camera will report the current state of each input alarm (open or closed) as well as an active or inactive status in the alarm configuration page. Active alarms will also be visible in the Event Log. Refer to [Event Log](#) on [Page 68](#).
- The triggering of any input alarm will affect scheduled tasks and delay them until at least 30 seconds has passed since the last digital alarm input was triggered.

Alarm Actions

The following alarm actions can be triggered by any alarm input:

- Activate the digital output contact. This stays active until the alarm is acknowledged and cleared by an operator.
- Send an external alarm WS-Event that includes alarm details.
- Send an external alarm via email that includes alarm detail, where to retrieve the AVI video file and one JPEG picture of the event if recording MJPEG to local storage. (If MJPEG is not being recorded on local storage, then no JPEG picture will be sent.)
- Send an audio file via the camera. If a speaker has been connected to the audio output on the camera, the file can be played as the alarm is triggered.

- Send an AVI video file to a pre-configured external FTP server. The video file will contain pre and post alarm video buffer and audio if enabled and supported, as outlined above.

Note:

1. An active internal alarm only resets when the input state changes to “normal.” A manual reset is not available.
2. A microSD Card must be inserted to send an SMTP email, video files, audio and images from triggered alarms.

Procedure 5-10 Creating an Alarm

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Alarm I/O from the Event and Actions menu.
3	Enter the alarm name in the Alarm Input Name text box.
4	Select the Enabled check box to enable the alarm OR De-select the Enabled check box to disable the alarm.
5	Select when the alarm is required to be activated from the Normal drop down menu—when the dry contact is open or closed .
6	Select the Output check box to enable alarm output. OR Deselect the Output check box to disable alarm output.
7	Select the required configured fault action from the Action drop down menu.
- End -	

Procedure 5-11 Enable/Disable an Alarm

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Alarm I/O from the Event and Actions menu.
3	Select the Enabled check box to enable the corresponding alarm. OR Deselect the Enabled check box to disable the corresponding alarm.
- End -	

Enable or Disable Alarm Output

Alarm Output allows the alarm to activate a digital output as an action. For example, this digital output could be linked to an electrical device, such as a security light or siren.

Procedure 5-12 Enable/Disable Alarm Output

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Alarm I/O from the Event and Actions menu.
3	Select the Output check box to enable alarm output. OR Deselect the Output check box to disable alarm output.
- End -	

Procedure 5-13 Clearing Alarm Output

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Alarm I/O from the Event and Actions menu.
3	Under Alarm Ouput , select the Apply button to Clear Active Output. The Alarm Output will be cleared.
- End -	

Analytics

Analytics is a feature which detects and tracks objects in video. Analytics supported are Motion Detection and Motion Tracking.

Motion Detection

Motion detection can be used to trigger an Event Action. When enabled, motion detection is applied to the full-screen field of view. When the camera is moving for PTZ operations, motion detection is suppressed.

Motion Detection Best Practices

To ensure you get the highest quality results when using Motion Detection on the camera it is recommended that you adhere to the following:

- An object exhibiting motion needs to be at least 8x8 pixels in size to be detected.
- The color of the object (in gray scale) should be approximately 10-15% different than the background.
- Try not to point cameras into sunlight, because high brightness will prevent detection of movement of bright objects such as a person with a white shirt.

- Avoid areas with persistent motion, such as trees, blinking lights, or spinning signs, by using an appropriate region of interest. For scenes like these it is recommended to lower the motion sensitivity level.

Enable or Disable a Motion Detection Alert

Motion detection can be turned on and turned off when required.

Procedure 5-14 Enable or Disable a Motion Detection Alert

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Analytics from the Events and Actions menu.
3	Select the Motion Detection tab.
4	Select the Enable motion detection check box to enable Motion Detection on the camera. OR Deselect the Enable motion detection check box to disable Motion Detection on the camera.
5	Select the sensitivity from the Sensitivity drop-down menu: <ul style="list-style-type: none">• Highest• High• Medium• Low• Lowest The default setting is 'High'.
6	Select the fault (Event) action from the Action drop-down menu. This Event action will be activated when motion is detected in the field of view. See Create an Event Action on Page 64 if a fault action has not yet been defined.
7	Select Apply to save the configuration.

- End -

Event Logs

Event Log

When events are triggered the resulting alarms are displayed in the Event Log with the following information:

- **#** - details the event index.
- **Event** - this will be listed as 'MotionDetected'.
- **Date created** - the time and date when the motion detection was triggered.

- **Component** - internal software component that raised the fault for a motion detection alert. This will be listed as ANALYTICS.
- **Severity** - indicates how serious the fault is. Motion detection alerts are listed as 'Warning'.
- **Detail** - extra information that supplements the motion detection alert.
- **Delete** - remove the motion detection alert notification from the fault table.

Procedure 5-15 Display Event Log

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Logs from the Events and Actions menu. The Event Log tab displays. Triggered motion detection alerts will be displayed.

- End -

Procedure 5-16 Delete Current Events

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Event Logs** from the **Event and Actions** menu.
- 3 Select the **Event Log** tab.
- 4 Select the corresponding **Delete** check box to mark the motion detection alert for deletion.
OR
Deselect the corresponding **Delete** check box to keep the motion detection alert.

Note:

You can select the **Select All** check box to mark all motion detection alerts displayed in the list for deletion.

- 5 Select **Delete** to delete the selected motion detection alerts.
You will be prompted to confirm the deletion.
- 6 Select **OK** to confirm the deletion.
OR
Select **Cancel**.

- End -

Fault Log

Any system or environmental faults experienced by the camera are displayed in the Fault Log with the following information:

- **#** - details the fault index.
- **Fault** - a description of the fault.

- **Date created** - the time and date when the fault occurred.
- **Component** - internal software component that raised the fault.
- **Severity** - indicates how serious the fault is. The following are supported, in increasing order of severity: Clear, Warning, Critical and Error.
- **Detail** - extra information that supplements the fault description.
- **Delete** - remove the fault from the fault table.

System Faults

The following system faults may be raised:

- **DiskUsage(Warning)** - this warning is raised when the disk utilisation rises above the threshold value “threshold2” held in SYSM.conf. Once an alarm is generated and the disk utilization decreases 1% below the threshold value, the fault is then automatically cleared. The default threshold value is 80%.
- **PowerSupplyAlarm(Error)** - this fault is raised when one or more of the internal DC power supplies voltage level is either too high or too low. Once an alarm is generated and the DC power voltage goes back into the proper range, the fault is automatically cleared.

ENVM (Environmental Monitor) Component

The following environmental faults can be raised by the ENVM (Environmental Monitor) component:

- **TemperatureTooHigh (Warning)** - this fault is raised when the internal temperature of the enclosure is equal to or exceeds the value MAX_TEMPERATURE held in ENVM.conf. Once an alarm is generated and the temperature drops to a level 1 degree below the MAX_TEMPERATURE value, the fault is automatically cleared. This is to avoid transient changes in temperature around the threshold.
- **TemperatureTooLow (Warning)** - a fault is raised when the internal temperature of the enclosure is equal to or is below the value MIN_TEMPERATURE held in ENVM.conf. Once an alarm is generated and the temperature drops to a level 1 degree above the MIN_TEMPERATURE value, the fault is automatically cleared. This is to avoid transient changes in temperature around the threshold.

Procedure 5-17 Display Current Faults

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Event Logs from the Event and Actions menu. |
| 3 | Select the Fault Log tab. |

- End -

Procedure 5-18 Delete Current Faults

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Event Logs from the Events and Actions menu. |

Scheduled Tasks

- 3 Select the **Fault Log** tab.
- 4 Select the corresponding **Delete** check box to mark the fault for deletion.
OR
Deselect the corresponding **Delete** check box to keep the fault.

Note:

You can select the **Select All** check box to mark all faults displayed in the list for deletion.

- 5 Select **Delete** to delete the selected faults.
You will be prompted to confirm the deletion.
- 6 Select **OK** to confirm the deletion.
OR
Select **Cancel**.

- End -

Scheduled Tasks

Schedule tasks to include specific situations or events; you can set up a regular schedule or a custom schedule. Schedules could be set for the camera to perform a task from Monday to Friday with a different task for weekend or holiday operation.

Note:

Scheduled tasks, alarms and manual camera control will always begin when they are selected or scheduled to start. None of these camera actions have a priority over any of the others. If a camera action is in progress and a new action is selected or activated, the previous action will stop before the new action is started.

Creating a Scheduled Task

Create a new scheduled task.

Procedure 5-19 Create a Scheduled Task

Step	Action
------	--------

- | | |
|---|------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Scheduled Tasks from the Events and Actions menu. |
| 3 | Select the Add Task tab. |
| 4 | Enter a task name in the Name text box. |
| 5 | Select a start time from the Start Time (HH:MM) drop-down menu.
Use 24hr clock. |
| 6 | Select the Task Frequency : |

- **Every day**
- **Week days** - If week days is selected, you will be required to choose the days on which the task will run.
From **Select week days**, select the check box beside the day to add that day to the task frequency.
- **Days of month** - If Days of month is selected, you will be required to enter a numerical value for the day separated by a comma. For example, to run on the 4th, 10th, 21st and 25th days of the month enter 4,10,21,25.
Enter the days in the **Enter days (1,2,3)** text box.

The default setting is 'Every day'.

7 Select the **Action**:

- Preset
- Pattern
- Sequence
- Scan
- None

The default setting is None'.

If an action is selected, choose the specific action to perform from the **Action Parameter** drop-down menu.

8 Select **Apply**.

9 The **Scheduled Tasks** tab displays with the list of tasks currently set on the camera.


- End -

Editing a Scheduled Task

Edit the details for an existing scheduled task.

Procedure 5-20 Edit a Scheduled Task

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Scheduled Tasks from the Events and Actions menu. |
| 3 | Select the Scheduled Tasks tab. |
| 4 | Select  to edit the corresponding task
The task will open in the Edit Task tab. |
| 5 | You can make changes to the following: <ul style="list-style-type: none">• Task Name• Start Time (HH:MM)• Task Frequency• Action |

- 6 Select **Apply** to save the changes

- End -

Deleting a Scheduled Task

Delete an existing scheduled task.

Procedure 5-21 Delete a Scheduled Task

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Scheduled Tasks from the Events and Actions menu. |
| 3 | Select the Scheduled Tasks tab. |
| 4 | Select the corresponding Delete check box to mark the scheduled task for deletion.
OR
Deselect the corresponding Delete check box to keep the scheduled task. |

Note:

Select the **Select All** check box to mark all tasks for deletion.

- | | |
|---|--------------------------------------------------------------------------------------------------------------|
| 5 | Select Delete to delete the selected scheduled tasks
You will be prompted to confirm the deletion. |
| 6 | Select OK to confirm the deletion.
OR
Select Cancel . |

- End -

When the Applications menu is selected, Figure 6-1 Applications Menu will be displayed.

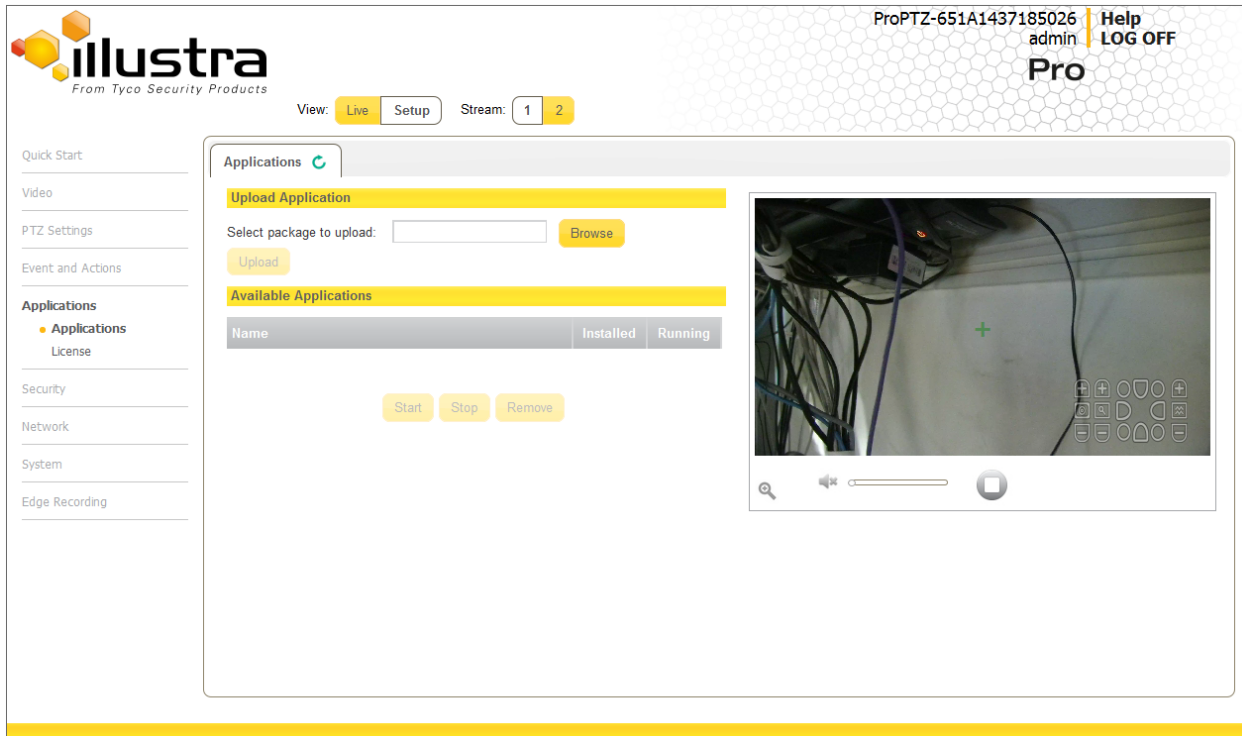


Figure 6-1 Applications Menu

The Applications Menu provides access to the following and functions:

- Applications
- License

Applications support allows for the upload of binary files that will add custom functionality and value to the camera. Applications are uploaded through the web GUI.

These applications will be licensed by American Dynamics using a licensing facility.

Applications

Procedure 6-1 Upload an Application

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select the Applications menu. The Applications tab displays.
3	Select the Browse button for the Select package to upload text box to navigate to the application file.

- The Choose file dialog will be displayed.
- 4 Navigate to the location where the application has been saved.
 - 5 Select the application file and then select the **Open** button.
 - 6 Select **Upload**.
- The upload process will start.

- End -

Available Applications

A list of applications currently installed and running are displayed. Each can be started, stopped and removed.

Procedure 6-2 Start, Stop or Remove an Application

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select the Applications menu.
The Applications tab displays. |
| 3 | Select the corresponding Application check box to Start, Stop, or Remove. |
| 4 | Select one of the following options: <ol style="list-style-type: none">a Start to start the application running.b Stop to stop the application running.c Remove to remove the application. |
-

- End -

License

License files for applications are uploaded using the licensing webpage. Available licenses are listed displaying their application ID and their license expiry date.

Procedure 6-3 Upload a License File

Step	Action
------	--------

- | | |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select License from the Applications menu. |
| 3 | Select the Browse button for the Select package to upload text box to navigate to the license file.
The Choose file dialog will be displayed. |
| 4 | Navigate to the location where the license file has been saved. |
| 5 | Select the license file then select the Open button. |
| 6 | Select Upload .
The upload process will start. |
-

- End -

exacqVision Edge (also referred to as edge server) is used for recording video to the edge storage of exacqVision. If you use the camera's own recording program this feature would not be required.

The exacqVision Edge features can be accessed by selecting **Setup** then **Applications** via the web GUI.

Checking if exacqVision Edge is Installed via the GUI

When the exacqEdge server is installed the following image will be displayed. When the Record Settings tab is selected a dialog will display alerting you that 'Recording is disabled because of some apps running in the camera'.

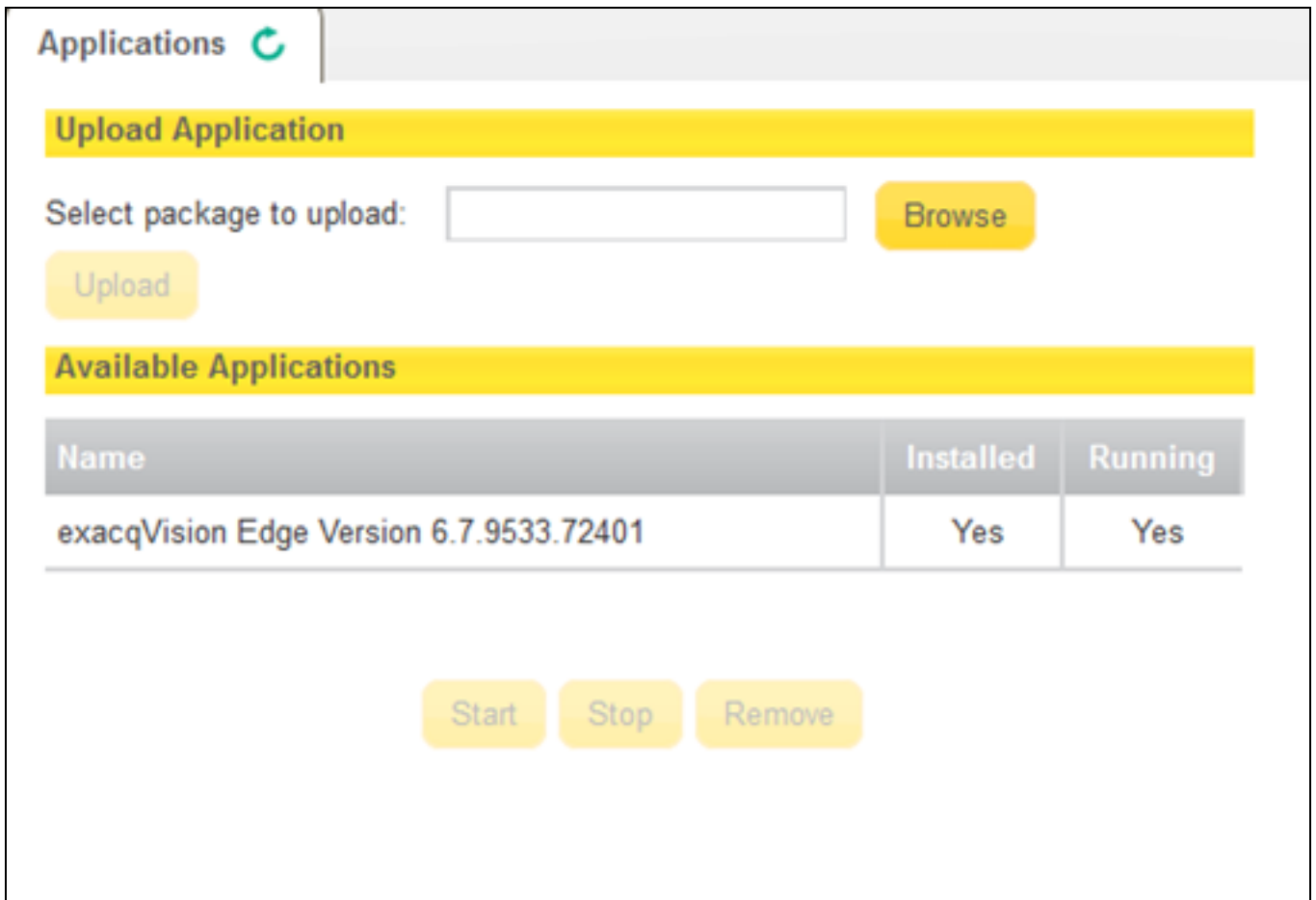


Figure 6-2

Install exacqVision Edge

exacqVision Edge can be installed by purchasing an SD card with the exacqVision server and license. Please speak to your Tyco Security integrator to purchase this card.

Procedure 6-1 Install exacqVision Edge Server using Purchased SD Card with exacqVision Server

Step	Action
------	--------

- 1 Insert the SD card before powering up your camera.
 - 2 The edge server will automatically be installed when the camera starts for the first time.
 - 3 Select **Setup** then **Applications** to confirm the exacqVision Edge Version.
-

- End -

Procedure 6-2 Install exacqVision Edge Server using the Camera GUI

Step	Action
------	--------

- 1 Insert a blank SD card into the camera.
- 2 Select **Setup** then **Applications**.
- 3 Select **Browse** and navigate to the selected file required for the upload.
- 4 Select **Upload** this will install the edge server on the PC.

Note:

You will have to select Start under the Stop/Start tab to run the edge server even if the edge server has been installed.

- End -

How to use the Edge Server

When selected via **Setup** and **Applications** the exacq server will be listed as seen in Figure 1-1. Both the Installed and Running state will be listed as Yes.

Note:

When the SD card is not detected for example when there is no SD card in the camera, it has been improperly mounted, or a error has been found on the SD card itself, there will be an error message displayed when you click the Start button to run the edge server. If this happens, insert the SD card or format and properly mount the card on the camera.

The edge server can be started by selecting **Start** and stopped by selecting **Stop**.

Note:

If the camera reboots when the status of the edge server is listed as Stopped, it will be necessary to select **Start** as the edge server cannot automatically run unless manually started.

Update the exacqVision Server

When a new version is released you can update your existing exacqVision Server.

Procedure 6-3 Update an Application

Step	Action
1	Select Setup, Applications then Upload Application . The Upload tab will display.
2	Select Browse . Navigate to where the new firmware files has been saved.
3	Select the new firmware file and select Start . The existing firmware will be replaced by the new firmware version.

- End -

Uninstall the exacqVision Server

The exacqVision Server can be uninstalled if required.

Procedure 6-4 Uninstall the exacqVision Server

Step	Action
1	Select Setup, Applications .
2	Select the eqacqVision Edge Version.
3	Select Remove .
4	You will be prompted to confirm the removal, select Yes . The exacqVision server will be removed and the camera will reboot.

Note:

You must unmount or remove the SD card if the edge server files are on the SD card otherwise when the camera reboots the edge sever files will be re-installed.

- End -

Formatting the SD Card

If the SD Card which has the files for the edge server is in use and requires formatting you must first Stop the edge server and then format the card. When the camera reboots the edge server files will be installed and operational.

When the Security menu is selected, Figure 7-1 Security Menu will be displayed.

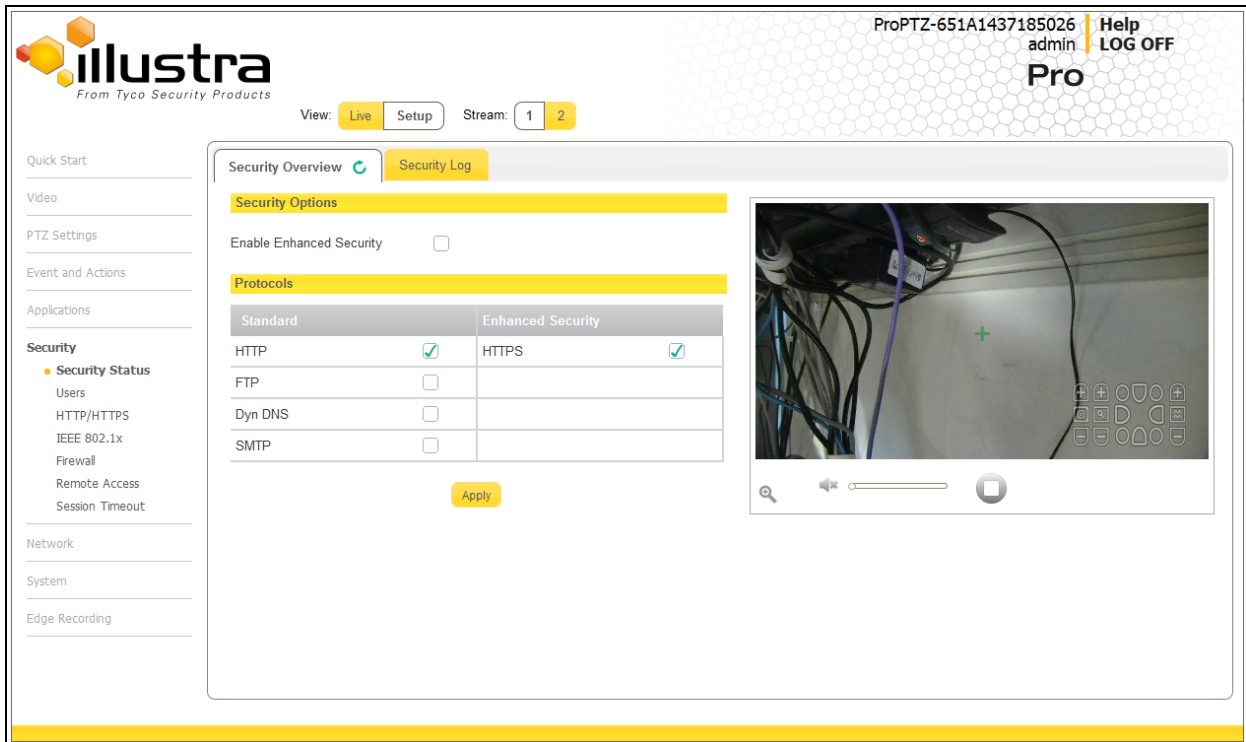


Figure 7-1 Security Menu

The Security Menu provides access to the following camera settings and functions:

- Security Status
- Users
- HTTP/HTTPS
- IEEE 802.1x
- Firewall
- Remote Access
- Session Timeout

Security Status

In this section you are able to configure security features for the camera and modify the communication protocols that are used.

Note:

Any changes in the Security section, either changes to the Security Mode or individual protocol, are logged in the Security Log.

Enhanced Security

Admin users may change the Security Mode of the camera from Standard Security to Enhanced Security.

Procedure 7-1 Enable Enhanced Security

Step	Action
------	--------

- | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Security Status from the Security menu. |
| 3 | Select the Security Overview tab. |
| 4 | Select the Enable Enhanced Security check box to enable this option.
OR
Deselect the Enable check box to disable enhanced security.
The default setting is 'Disabled'.
The Security Warning dialog box displays. |
| 5 | Enter the current password in the Current Password text box. |
| 6 | Enter the new password in the New Password text box. |

Note:

The password for enhanced security must meet the following requirements:

- Be a minimum of seven characters long.
 - Have at least one character from at least three of the following character groups:
 - Upper-case letters
 - Lower-case letters
 - Numeric characters
 - Special characters
-

- | | |
|---|-------------------------------------------------------------------|
| 7 | Reenter the new password in the Confirm Password text box. |
| 8 | Click Apply . |

Note:

Any changes to the Security Mode are logged in the Security Log.

- End -

Procedure 7-2 Disable Enhanced Security

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Security Status from the Security menu.
3	Select the Security Overview tab.
4	Deselect the Enable Enhanced Security check box to disable enhanced security.
	Note: When in Enhanced Security, changing the security mode will require the admin account password.
5	Click Apply .
	Note: Any changes to the Security Mode are logged in the Security Log.
- End -	

Setting Communication Protocols

This section allows you to modify the communication protocols that are used.

Procedure 7-3 Enable/Disable Communication Protocols

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Security Status from the Security menu.
3	Select the Security Overview tab.
4	Select the HTTP check box to enable HTTP. The default setting is 'Enabled'.
5	Select the HTTPS check box to enable HTTPS. The default setting is 'Enabled'.
6	Select the FTP check box to enable FTP. The default setting is 'Disabled'.
7	Select the Dyn DNS check box to enable Dyn DNS . The default setting is 'Disabled'.
8	Select the SMTP check box to enable SMTP. The default setting is 'Disabled'.
9	Click Apply .

Note:

- When in Enhanced Security, changes to individual protocols will require the admin account password.
- Any changes to individual protocol are logged in the Security Log.

- End -Sec

Security Log

The security log records any changes made to the security mode or to individual protocol.

Procedure 7-4 Display Security Log

Step	Action
------	--------

- | | |
|---|----------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Security Status from the Security menu.
Select the Security Log tab. |
| 3 | Select Refresh to refresh the log for the most up-to-date information. |

- End -

Procedure 7-5 Filter the Security Log

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Security Status from the System menu.
Select the Security Log tab. |
| 3 | Enter the number of lines of the log file you would like to view in the Lines (from the end of the log file) text box. |
| 4 | Enter the word or phrase that you would like to search for in the Filter (only lines containing text) text box. |
| 5 | Select Refresh to refresh the log for the most up-to-date information that meets the filter parameters. |
| 6 | Select Clear to empty the log of its current entries. (You will be required to enter your password to do this.) |

- End -

Users

In this section you are able to add a user, change a user password and delete a user account. There are three levels of access: admin, operator and user. (Refer to [Appendix C: User Account Access](#) on [Page 135](#) for details on the features that are available to each role.)

Note:

The default Username and Password are both **admin**. To maintain security, you should change the password on the admin account.

View Current User Accounts

View a list of the current user accounts assigned to the camera.

Procedure 7-6 View User Accounts

Step	Action
------	--------

1	Select Setup on the GUI banner to display the setup menus.
---	-------------------------------------------------------------------

2	Select Users from the Security menu.
---	----------------------------------------------------

The current user accounts assigned to the camera will be displayed on the **User** tab.

- End -

Add User

Add a new user account to allow access to the camera.

Procedure 7-7 Add a User

Step	Action
------	--------

1	Select Setup on the GUI banner to display the setup menus.
---	-------------------------------------------------------------------

2	Select Users from the Security menu.
---	----------------------------------------------------

3	Select the Add User tab.
---	---------------------------------

4	Enter a User Name in the Name text box.
---	------------------------------------------------

The username must start with a letter and can be followed by any alphanumeric values (a-z, A-Z, 0-9) and the following special characters, underscore(_), dash(-), or dot(.

5	Select a Role from the drop-down menu:
---	-----------------------------------------------

- **admin**
- **operator**
- **user**

The default setting is 'admin'.

Refer to [Appendix C: User Account Access](#) on [Page 135](#) for features available to each role.

6	Enter a password in the Password text box.
---	---------------------------------------------------

The password must start with an alphanumeric character and is case sensitive; it can contain alphanumeric characters with a length of between 4 and 32 characters.

Note:

When the system is in enhanced security mode, the password must meet the following requirements:

- Be a minimum of seven characters long.
 - Have at least one character from at least three of the following character groups:
 - Upper-case letters
 - Lower-case letters
 - Numeric characters
 - Special characters.
-

- 7 Enter the same password in the **Confirm Password** text box.
 - 8 Select **Apply** to save the settings.
The new user account will now be displayed in the Users list on the **Users** tab.
-

- End -

Changing the User Accounts Password

Change the password of an existing user account.

Procedure 7-8 Change User Password

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Users from the Security menu.
3	Select the Change Password tab.
4	Select the user account from the Name drop-down menu.
5	Enter the current password for the user account in the Current Password text box.
6	Enter the new password for the user account in the New Password text box. The password is case sensitive and can contain alphanumeric characters with a length of between 4 and 32 characters.
7	Enter the same new password in the Confirm New Password text box.
8	Select Apply to save the settings.

- End -


Delete a User Account

Delete a user account from the camera.

Note:

The default 'admin' account cannot be deleted.

Procedure 7-9 Delete a User Account

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Users from the Security menu. The Users tab displays.
3	Select  to delete the corresponding user account. You will be prompted to confirm the deletion.
4	Select OK to delete. OR
5	Select Cancel .

- End -

HTTP/HTTPS

You can select this option to use HTTP, HTTPS or both. The camera will automatically create an SSL certificate file to use for HTTPS. It is possible to upload a custom SSL certificate if validation is required.

Procedure 7-10 Specify HTTP Method

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select HTTP/HTTPS from the Security menu. The HTTP/HTTPS tab displays.
3	Select the HTTP Method using the radio buttons <ul style="list-style-type: none"> • HTTP • HTTPS • Both The default is Both.

- End -

Procedure 7-11 Add a HTTPS Certificate

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select HTTP/HTTPS from the Security menu. The HTTP/HTTPS tab displays.
3	Select the Browse button for the Select certificate file text box to navigate to the certificate location. The Choose file dialog will be displayed.

- 4 Navigate to the location where the HTTP/HTTPS certificate has been saved.
Select the file and select **Open**.

Note:

The certificate needs to match the camera 'host name'.

- 5 Select **Upload**.
You will be prompted to confirm that you would like to upload the HTTP/HTTPS certificate.
- 6 Select **OK** to confirm the upload.
OR
Select **Cancel**.

- End -

Delete a HTTPS Certificate

If you delete the existing certificate, it will be replaced by a temporary substitute. The current browser session will be lost and you will be required to log back in to the camera Web GUI.

Procedure 7-12 Delete a HTTPS Certificate

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select HTTP/HTTPS from the Security menu. The HTTP/HTTPS tab displays.
3	Select Delete . The camera will display a "Restarting HTTPS Service" page with a progress bar showing the deletion progress.
4	When the deletion has completed, the camera will return to the log in page.

- End -

IEEE 802.1x

The IEEE 802.1x security feature provides port based network access control—i.e., securing corporate networks from the attachment of unauthorized devices.

Authentication is carried out through use of the Extensible Authentication Protocol (EAP). Both PEAP and TLS methods are supported.

Procedure 7-13 Configure IEEE 802.1x Security

Step	Action
------	--------

Firewall

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **IEEE 802.1x** from the **Security** menu.
The **EAP Settings** tab is displayed.
- 3 Select the **Enable IEEE802.1x** check box to enable IEEE802.1x security .
OR
- 4 De-select the **Enable IEEE802.1x** check box to disable IEEE802.1x security.
The default is 'enabled'.
- 5 Select the **EAPOL Version** from the drop-down menu.
- 6 Select the **EAP Method** using the radio buttons.
- 7 Enter the EAP identity name in the **EAP Identify** textbox.
- 8 Select **Upload** to navigate to the **CA Certificate** location.
The Choose file dialog will be displayed.
- 9 Navigate to the location where the certificate has been saved.
Select the file and select **Open**.
- 10 Select **Upload**.
The upload process will start.
(Select **View** to review the certificate or **Delete** to remove it.)
- 11 If **PEAP** is selected:
 - Enter the required PEAP **Password**.OR
 - If **TLS** is selected -
 - a Select **Upload** to navigate to the **Client Certificate** location.
The Choose file dialog will be displayed.
 - b Navigate to the location where the certificate has been saved.
 - c Select the file and select **Open**.
 - d Select **Upload**.
The upload process will start.
(Select **View** to review the certificate or **Delete** to remove it.)
 - e Enter the required **Private Key Password**.

- End -

Firewall

Configure the Basic Filtering and Address Filtering for the firewall.

Basic Filtering

Enable or disable basic filtering for the camera including:

- ICMP (Internet Control Message Protocol) Blocking

- RP (Reverse Path) Filtering
- SYN Cookie Verification.

Procedure 7-14 Enable/Disable Basic Filtering

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Firewall from the Security menu. Select the Basic Filtering tab.
3	Select the ICMP Blocking check box to enable ICMP blocking. OR Deselect the ICMP Blocking check box to disable ICMP blocking. The default setting is 'Disabled'.
4	Select the RP Filtering check box to enable the RP filtering. OR Deselect the RP Filtering check box to disable. The default setting is 'Disabled'.
5	Select SYN Cookie Certification check box to enable SYN cookie certification. OR Deselect the SYN Cookie Certification check box to disable. The default setting is 'Disabled'.
- End -	

Address Filtering

Configure the IP or MAC addresses that are denied access to the camera.

Procedure 7-15 Enable/Disable and Configure Address Filtering

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Firewall from the Security menu.
3	Select the Address Filtering tab.
4	Select Off to disable address filtering completely. OR Select Allow to allow address filtering for specified addresses OR Select Deny to deny address filtering for specific addresses. The default setting is 'Off'.

- 5 If address filtering has been set to **Allow** or **Deny**:
 - a Enter an IP or MAC Address to allow/deny in the **IP or MAC Address** text box in the following format xxx.xxx.xxx.xxx.

Note:

CIDR (Classless Inter-Domain Routing) is supported when using address filtering. If using a CIDR address use the following format xxx.xxx.xxx.xxx/xx.

- b Select **Add**.
- 6 Select **Apply** to save the settings.

- End -

Editing an Address Filter

Edit an existing address filter.

Procedure 7-16 Edit an Address Filter

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Firewall** from the **Security** menu.
- 3 Select the **Address Filtering** tab.
- 4 Edit the IP or MAC Address in the **IP or MAC Address** text box.
- 5 Select **Add** to save the IP or MAC Address in the table.
- 6 Select **Apply** to turn address filtering on.


- End -

Deleting an Address Filter

Delete an existing address filter.

Procedure 7-17 Delete an Address Filter

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Firewall** from the **Security** menu.
- 3 Select the **Address Filtering** tab.
- 4 Select  to delete the corresponding address filter.

- End -

Remote Access

SSH Enable

Enables Secure Shell access into the camera if remote access is permitted by the camera network. This will also enable American Dynamics Level 3 Technical Support to diagnose any problems on the camera.

Note:

It is recommended to keep SSH Enable disabled. This function should only be enabled when it is requested by American Dynamics Level 3 Technical Support.

Procedure 7-18 Configure SSH

Step	Action
------	--------

- | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Remote Access from the Security menu.
The Remote Access tab displays. |
| 3 | Select the SSH Enable check box to enable SSH.
OR
Deselect SSH Enable check box to disable SSH.
The default setting is 'Disabled'. |

- End -

ONVIF

The Web GUI allows ONVIF functionality to be managed at a high level. ONVIF Discovery Mode and User Authentication can be enabled or disabled.

- ONVIF Discovery Mode allows enabling or disabling discovery of the camera via ONVIF.
- ONVIF User Authentication allows the camera to accept ONVIF commands from all users or only authenticated users. Enabling User Authentication ensures the camera will only execute commands from authenticated users.

The separation of Discovery Mode and User Authentication allows the camera to be set up in a configuration that suits requirements for the network and users. The preferred discovery method for the camera is Illustra Connect, and this utilizes ONVIF discovery. It is therefore recommended that ONVIF Discovery Mode always be enabled.

ONVIF Discovery Mode

Enable or disable ONVIF discovery on the camera.

Procedure 7-19 Enable/Disable ONVIF Discovery Mode

Step	Action
------	--------

Remote Access

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Remote Access** from the **Security** menu.
The Remote Access tab displays.
- 3 Select the **ONVIF Discovery Mode** check box to enable ONVIF Discovery Mode.
OR
Deselect **ONVIF Discovery Mode** check box to disable ONVIF Discovery Mode.
The default setting is 'Enabled'.

- End -

ONVIF User Authentication

Note:

- To utilize ONVIF User Authentication, there must be at least one admin level user in the ONVIF service.
- When in Enhanced Security mode, editing ONVIF User Authentication will require the admin account password.

Procedure 7-20 Enable/Disable ONVIF User Authentication

Step	Action
------	--------

- | | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Remote Access from the Security menu.
The Remote Access tab displays. |
| 3 | Select the ONVIF User Authentication check box to enable ONVIF User Authentication.
OR
Deselect ONVIF User Authentication check box to disable ONVIF User Authentication.
The default setting is 'Enabled'. |

- End -

Session Timeout

Session timeout specifies the number of minutes that a web session can remain idle before it is automatically terminated.

Procedure 7-21 Set a Session Timeout time

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Session Timeout from the Security menu. The Session Timeout tab displays.
3	Use the slider bar to select the Session Timeout (mins) . The default setting is 15 minutes.

- End -

When the Network menu is selected, Figure 8-1 Network Menu will be displayed.

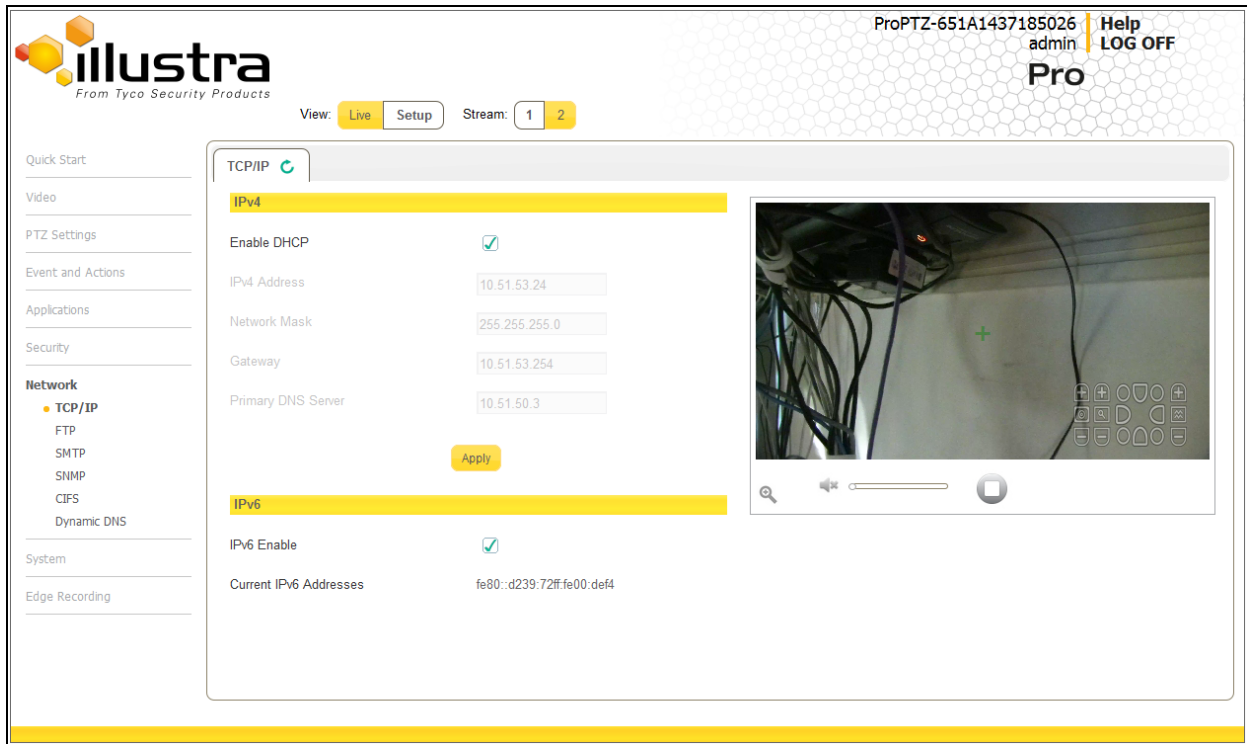


Figure 8-1 Network Menu

The Network Menu provides access to the following camera settings and functions:

- TCP/IP
- FTP
- SMTP
- SNMP
- CIFS
- Dynamic DNS

TCP/IP

Configure the IPv4 and IPv6 settings on the camera.

IPv4

Configure the IPv4 settings for the camera.

Procedure 8-1 Configure the IPv4 Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select TCP/IP from the Network menu.
3	Select the Enable DHCP check box to enable DHCP (Dynamic Host Configuration Protocol) and disable manual settings. OR Deselect Enable DHCP to disable DHCP and allow manual settings to be entered. The default setting is 'Enabled'.
4	If Enable DHCP has been disabled: <ol style="list-style-type: none"> Enter the IPv4 Address in the IPv4 Address text box in the form xxx.xxx.xxx.xxx. The default setting is '192.168.1.168'. Enter the Network Mask in the Network Mask text box xxx.xxx.xxx.xxx. The default setting is '255.255.255.0'. Enter the Gateway IP address in Gateway text box xxx.xxx.xxx.xxx. Enter the Primary DNS Server in the Primary DNS Server text box xxx.xxx.xxx.xxx.
5	Select Apply to save the settings.

- End -

IPv6

Enable or disable IPv6 on the camera.

Procedure 8-2 Enable/Disable IPv6

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select TCP/IP from the Network menu.
3	Select the IPv6 Enable check box to enable IPv6 on the camera. OR Deselect the IPv6 Enable check box to disable IPv6 on the camera. The default setting is 'Enabled'. If IPv6 is enabled, the Link Local and DHCP address will be displayed beside 'Current IPv6 Addresses', if available.

- End -

FTP

Configure the FTP settings for the FTP server. This is required to send video files from triggered analytic alerts. FTP must be configured to enable FTP video alerts when using alarms and analytic alerts.

Note:

FTP settings can also be configured via the Events and Actions menu. Refer to [FTP](#) on [Page 60](#).

Procedure 8-3 Configure FTP Server Settings

Step	Action
------	--------

1	Select Setup on the GUI banner to display the setup menus.
---	-------------------------------------------------------------------

2	Select FTP from the Network menu.
---	-------------------------------------------------

The **FTP** tab displays.

3	Select the Enable check box to enable FTP.
---	---------------------------------------------------

Text boxes on the tab become available for entry.

OR

Deselect the **Enable** check box to disable FTP.

The default setting is 'Disabled'.

Note:

When in Enhanced Security mode, enabling FTP will require the admin account password.

4	Enter the IP address of the FTP Server in the FTP Server text box.
---	---------------------------------------------------------------------------

5	Enter the FTP port in the FTP Port text box.
---	-----------------------------------------------------

The default setting is 21.

6	Enter the FTP username in the Username text box.
---	---------------------------------------------------------

7	Enter the FTP password in the Password text box.
---	---------------------------------------------------------

8	Enter the FTP upload path in the Upload Path text box.
---	---------------------------------------------------------------

Note:

When entering the upload path the following format should be used '//<name of ftp directory>/<folder>'

Note:

Refer to [Test FTP Settings](#) on [Page 97](#) to confirm that the FTP settings are working as expected.

- End -

File Transfer Rate

The File Transfer Rate can be limited and a max transfer rate assigned to manage the amount of FTP bandwidth used.

Procedure 8-4 Configure the FTP Transfer Rate

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select FTP from the Network menu.
3	Select the Limit Transfer Rate check box to limit the FTP transfer rate. OR Deselect the Limit Transfer Rate check box to disable limited FTP transfer. The default setting is 'Enabled'.
4	Enter the Max Transfer Rate in the Max Transfer Rate (Kbps) textbox. The default setting is 50.

- End -

Test FTP Settings

Test that the settings set in [Configure FTP Server Settings](#) on [Page 96](#) have been configured correctly.

Procedure 8-5 Test the FTP Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select FTP from the Network menu. The FTP tab displays.
3	Select Test . A sample text file will be sent to the specified FTP destination to confirm that FTP settings are correct.

- End -

SMTP

Configure the SMTP settings to allow e-mail alerts to be sent from the camera when an alarm or analytic alert is triggered.

Note:

SMTP settings must be configured to enable email alerts when using alarms and analytic alerts. SMTP can also be configured via the Events and Actions menu. Refer to [SMTP](#) on [Page 59](#).

Procedure 8-6 Configure SMTP Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select SMTP from the Network menu. The SMTP tab displays.
3	Select the Enable SMTP check box to enable SMTP. Text boxes on the tab become available for entry. OR Deselect the Enable check box to disable SMTP. The default setting is 'Disabled'.
Note:	
When in Enhanced Security mode, enabling SMTP will require the admin account password.	
4	Enter the IP Address of the mail server in the Mail Server text box.
5	Enter the server port in the Server Port text box. The default setting is '25'.
6	Enter the from email address in the From Address text box.
7	Enter the email address to send email alerts to in the Send Email to text box.
8	Select the Use authentication to log on to server check box to allow authentication details to be entered. OR Deselect the Use authentication to log on to server to disable authentication. The default setting is 'Disabled'.
9	If 'Use authentication to log on to server' check box has been selected: <ul style="list-style-type: none"> a Enter the username for the SMTP account in the Username text box. b Enter the password for the SMTP account in the Password text box.
10	Select Apply to save the settings.
Note:	
Refer to Test SMTP Settings on Page 98 to confirm that the SMTP settings are working as expected.	

- End -

Test SMTP Settings

Test that the settings set in [Configure SMTP Settings](#) on [Page 97](#) have been configured correctly.

Procedure 8-7 Test the SMTP Settings

Step	Action
------	--------

SMTP

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **SMTP** from the **Network** menu.
The **SMTP** tab displays.
- 3 Select **Test**.
A sample email will be sent to the specified email address to confirm that SMTP settings are correct.

- End -

SNMP

The camera introduces support for the Simple Network Management Protocol making it easier to manage on an IP network.

The SNMP support includes support for V2 and V3. Using V2 means no authentication is required to access the data and results are unencrypted. V3 offers enhanced encryption and authentication security features.

Procedure 8-8 Configure SNMP Settings

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select SNMP from the Network menu. |
| 3 | Enter a location reference in the Location text box. |
| 4 | Enter an SNMP managing contact reference in the Contact text box. |
| 5 | If using V2 : <ol style="list-style-type: none">a Select the Enable V2 check box.b Enter the authorized ID for reading SNMP data in the Read Community text box.c Enter the Trap Community.d Enter the Trap Address.e Select Apply. OR
If using V3 : <ol style="list-style-type: none">a Select the EnableV3 check box.b Enter the Read User.c Select the Security Level from the drop down menu:<ul style="list-style-type: none">- noauth: No authentication / no encryption.- auth: Authentication / no encryption. A user password is required. It is symmetrically encrypted using either MD5 or SHA.- priv: Authentication / encryption. A user password is required, symmetrically encrypted using either MD5 or SHA. A data encryption password is required, symmetrically encrypted using either DES or AES.d Select the Authentication Type using the radio buttons: MD5 or SHA.e Enter the Authentication Passwordf Select the EncryptionType using the radio buttons: DES or AES.g Enter the Encryption Password |

- h Select **Apply**.

- End -

SNMP Heartbeat

Enable or disable the SNMP Heartbeat.

Procedure 8-9 Configure SNMP Heartbeat

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select SNMP from the Network menu.
3	Select the Heartbeat tab.
4	Select the Enable Heartbeat check box to enable Heartbeat. OR Deselect the Enable Heartbeat check box to disable Heartbeat.
5	Drag the Heartbeat Interval (secs) slider to set the heartbeat interval.

- End -

CIFS

Configure the CIFS settings to allow files generated from the camera to be directed to network attached file storage via the Common Internet File System (CIFS) protocol. This supplements existing distribution methods such as FTP, SMTP, and email.

Note:

CIFS settings can also be configured via the Events and Actions menu. Refer to [CIFS](#) on [Page 62](#)

Procedure 8-10 Configure CIFS Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Settings from the Events and Actions menu.
3	Select the CIFS tab.
4	Select the Enable CIFS check box to enable CIFS. Text boxes on the tab become available for entry. OR Deselect the Enable check box to disable CIFS. The default setting is 'Enabled'.

Note:

When in Enhanced Security mode, enabling CIFS will require the admin account password.

- 5 Enter the network path in the **Network Path** text box.
- 6 Enter the domain name in the **Domain Name** text box.
- 7 Enter the username in the **Username** text box.
- 8 Enter the password in the **Password** text box.
- 9 Select **Apply** to save the settings.

Note:

Refer to [Test CIFS Settings](#) on [Page 101](#) to confirm that the CIFS settings are working as expected.

- End -

Test CIFS Settings

Test that the settings set in [Configure CIFS Settings](#) on [Page 100](#) have been configured correctly.

Procedure 8-11 Test the CIFS Settings

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Event Settings from the Events and Actions menu.
3	Select the CIFS tab.
4	Select Test .

A sample text file will be sent to the specified CIFS destination to confirm that CIFS settings are correct.

- End -

Dynamic DNS

Dynamic DNS (Domain Name System) is supported for updating, in real time, a changing IP address on the Internet to provide a persistent domain name for a resource that may change location on the network. In this situation, the camera talks only to the DHCP server, and the DHCP server is responsible for updating the DNS server. The camera sends its hostname to the DHCP server when requesting a new lease and the DHCP server updates the DNS records accordingly. This is suitable for an intranet style configuration where there is an internal DHCP and DNS service and the user wants to access their camera only within their own network.

By default, when making a DHCP request the camera will transmit its hostname as part of the DHCP request. This option is not user configurable. The camera's hostname matches the configurable parameter "camera name" on the web GUI. Any DHCP request will contain the camera's hostname for the DHCP server to use to forward to an appropriate DNS server.

Dynamic DNS

Configure the Dynamic DNS settings for the camera.

Procedure 8-12 Configure Dynamic DNS

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Dynamic DNS from the Network menu. The Dynamic DNS tab displays.
3	Select the Service Enable check box to enable Dynamic DNS. Other text boxes on the tab become available for entry. OR Deselect Service Enable check box to disable Dynamic DNS. The default setting is 'Disabled'.
4	If DNS has been enabled: a Enter the Camera Alias in the text box. b Select a Service Provider from the drop-down list: <ul style="list-style-type: none">• dyndns.org• easydns.com• no-ip.com• zerigo.com• dynsip.org• tzo.com c Enter a Username in the text box. d Enter a Password in the text box. e Enter Service Data in the text box.
5	Select Apply to save the settings.

- End -

When the System menu is selected, Figure 9-1 System Menu will be displayed.

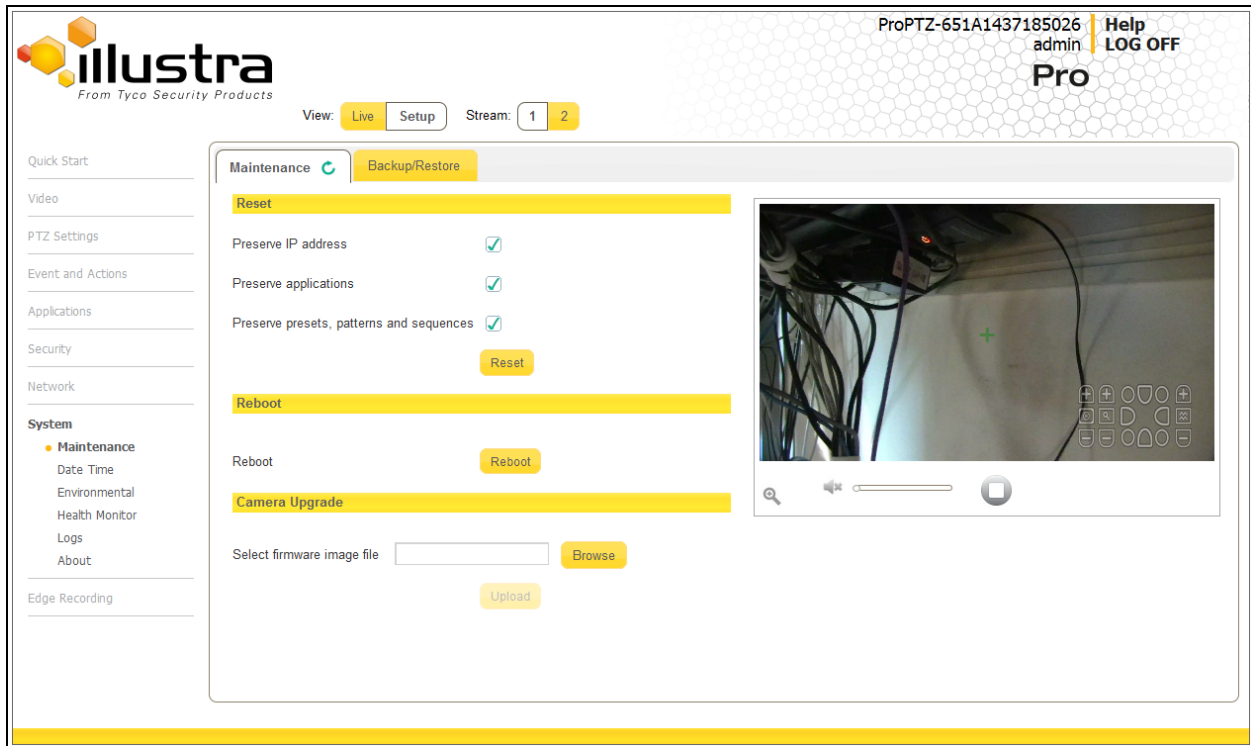


Figure 9-1 System Menu

The System Menu provides access to the following camera settings and functions:

- Maintenance
- Date Time
- Audio
- Environmental
- Health Monitor
- Logs
- About

Note:

Audio will be available only for Feature Plus models.

Maintenance

The Maintenance menu allows you to restore the camera settings to factory default, reboot the camera and apply a firmware upgrade.

Reset

To perform a physical reset of the camera, refer to [Resetting the Camera to Factory Default Settings Using the Reboot/Reset Switch](#) on [Page 134](#).

Note:

Network settings, presets, patterns and sequences can be retained if required.

Procedure 9-1 Resetting the Camera

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Maintenance from the System menu.
3	Select the Maintenance tab.
4	Select the Preserve IP address check box to retain the current network settings during the camera reset. OR Deselect the Preserve IP address check box to restore the default networking settings. The default setting is 'Enabled'.
5	Select the Preserve applications check box to retain the current applications installed on the camera during the camera reset. OR Deselect the Preserve applications check box to remove existing applications. The default setting is 'Enabled'.
6	Select the Preserve presets, patterns and sequences check box to retain the current presets, patterns and sequences during the camera reset. OR Deselect the Preserve presets, patterns and sequences check box to remove existing presets, patterns and sequences. The default setting is 'Enabled'.
7	Select Reset You will be prompted to confirm the camera reset.
8	Select OK to confirm. The Web GUI will display a "Camera Resetting" page with a progress bar showing the reset progress. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled. OR

Select **Cancel**.

- 9 The Log in page will be displayed.

- End -

Reboot

To perform a physical reboot of the camera, refer to [Rebooting the Camera Using the Reboot/Reset Switch](#) on [Page 133](#).

Procedure 9-2 Reboot the Camera

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Maintenance from the System menu.
3	Select the Maintenance tab.
4	Select Reboot . You will be prompted to confirm the camera reboot.
5	Select OK to confirm. The Web GUI will display a “Camera Rebooting” page with a progress bar showing the reboot progress. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled. OR Select Cancel .
6	The Log in page will be displayed.

- End -

Camera Upgrade

The camera can be upgraded using firmware provided by Illustra. Alternatively, the camera can also be upgraded using Illustra Connect. Refer to the Illustra Connect User Guide for further information.

Note:

All existing camera settings are maintained when the firmware is upgraded.



Caution

You should only use firmware that has been provided by Illustra. Using any other firmware may cause a malfunction and damage the camera.

Procedure 9-3 Upgrade Camera Firmware

Step	Action
------	--------

Backup/Restore

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Maintenance** from the **System** menu.
- 3 Select the **Maintenance** tab.
- 4 Select **Browse** next to the **Select firmware image file** text box.
The Choose file to Upload dialog will be displayed.
- 5 Navigate to the location where the firmware file has been saved.
- 6 Select the firmware file and then select the **Open** button.
- 7 Select **Upload**.
The file transfer will begin.
Do not disconnect power to the camera during the upgrade process. The camera restarts automatically after the upgrade has been completed, which can take from 1 to 10 minutes.
The Log in page will be displayed.

- End -

Backup/Restore

Back up the camera data and restore from a previously saved data file. The configuration settings of the camera can be saved to a data file in a specified location and then used to restore the camera configuration.

Note:

A saved backup data file created on a camera is camera specific and cannot be used to restore the settings on a different camera.

Procedure 9-4 Back up Camera Data

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Maintenance from the System menu. |
| 3 | Select the Backup/Restore tab. |
| 4 | Select Backup .
You will be prompted to save the backup file. |
| 5 | Select the location to save the backup file. |
| 6 | Select Save . |

- End -

Procedure 9-5 Restore Camera from Backup

Step	Action
------	--------

Date/Time

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Maintenance** from the **System** menu.
- 3 Select the **Backup/Restore** tab.
- 4 Select the **Browse** button next to the **Select saved data file** text box.
The Choose file to Upload dialog will be displayed.
- 5 Navigate to the location where the backup file has been saved.
- 6 Select the backup file and then select the **Open** button.
- 7 Select **Upload**.
You will be prompted to confirm that you would like to upload the backup file.
- 8 Select **OK** to confirm the backup .
Or
Select **Cancel**.
Do not disconnect power to the camera during the restore process. The camera restarts automatically after the restore has been completed, which can take from 1 to 10 minutes.
The Log in page will be displayed.

- End -

Date/Time

Set the date and time on the camera.

Note:

Date and Time can also be configured in the **Quick Start** menu. Refer to [Date Time](#) on [Page 21](#).

Procedure 9-6 Configuring the Date and Time

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Date Time from the System menu. |
| 3 | Select the Time 24-hour check box to enable the 24-hour clock.
Or
Deselect the Time 24-hour check box to enable the 12-hour clock.
The default setting is '24-hour'. |
| 4 | Select the Date Display Format from the drop-down menu: <ul style="list-style-type: none">• DD/MM/YYYY• MM/DD/YYYY• YYYY/MM/DD The default setting is 'YYYY/MM/DD'. |

- 5 Select the **Time Zone** from the drop-down menu.
The default setting is '(GMT-05:00) Eastern Time (US & Canada)
- 6 Select the **Set Time** setting by selecting a radio button:
 - **Manually**
 - **via NTP**The default setting is 'Manually'.
- 7 If you select 'Manually' in step 6:
 - a Select the Date (**DD/MM/YYYY**) using the drop-down menus.
 - b Select the Time (**HH:MM:SS**) using the drop-down menus.
- 8 If you select 'via NTP' in step 6:
 - Enter the **NTP Server Name** in the text box.

- End -

Audio

This option on the Feature Plus models allows you to configure the audio input, audio output, upload audio and stored audio clips.

Procedure 9-7 Configure Audio Input

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Audio from the System menu. |
| 3 | Select the Audio tab. |
| 4 | Select the Input Enable check box to enable the audio input settings.
Or
Deselect the Input Enable check box to disable audio input settings.
The default setting is 'Disabled'. |
| 5 | Use the slider bar to select the Input Volume .
Values range from 1 to 100.
The default setting is 71. |

- End -

Procedure 9-8 Configuring Audio Output

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Audio from the System menu. |
| 3 | Select the Audio tab. |

- 4 Select the **Output Enable** check box to enable the audio output settings.
Or
Deselect the **Output Enable** check box to disable audio input settings.
The default setting is 'Disabled'.
- 5 If Output Enable has been enabled, use the slider bar to select the Output Volume.
Values range from 1 to 100.
The default setting is 50.

- End -

Configuring Stored Audio

When connected to an appropriate device, the camera is capable of playing back stored audio when an alarm has been triggered. A maximum of five audio files can be uploaded to the camera.

Note:

Audio clips can only be used if a microSD Card has been installed. Refer to the relevant Quick Reference Guide for information on installing the microSD Card.

Refer to [Upload an Audio File](#) on [Page 109](#) for the requirements that must be met by an audio file that is being uploaded.

Procedure 9-9 Play Stored Audio

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Audio** from the **System** menu.
- 3 Select the **Audio Clips** tab.
- 4 Select to play back the corresponding audio file.

- End -

Procedure 9-10 Upload an Audio File

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Audio** from the **System** menu.
- 3 Select the **Audio Clips** tab.
- 4 Select **Upload** next to the corresponding audio file.
The Choose file dialog will be displayed.
- 5 Navigate to the location where the audio file has been saved.
Select the audio file and then select the **Open** button.

Environmental

An audio file must meet the following requirements to be uploaded:

- Its filename cannot contain spaces.
- It must be a 'wav' file with a '.wav' extension.
- It must be a 'single channel mono file with a bit depth of 16kHz.
- Its sample rate must be 8kHz.
- Its duration must be no longer than 20 seconds.

6 Select **Upload**.

7 You will be prompted to confirm that you would like to upload the audio file.

Select **OK** to confirm the upload.

Or

Select **Cancel**.

- End -


Procedure 9-11 Delete a Stored Audio file

Step	Action
------	--------

1 Select **Setup** on the GUI banner to display the setup menus.

2 Select **Audio** from the **System** menu.

3 Select the **Audio Clips** tab.

4 Select  to delete the corresponding audio file.
You will be prompted to confirm the deletion.

5 Select **OK** to confirm the deletion.

Or

Select **Cancel**.

- End -

Environmental

The Environmental option displays information on the following:

- Internal Temperature
- Blower
- Heater
- Environmental Firmware Version

Procedure 9-12 Display General Information

Step	Action
------	--------

Health Monitor

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Environmental** from the **System** menu.
- 3 The **Environmental** tab displays.
- 4 View the information.

- End -

Health Monitor

The Health Monitor option provides visibility on the health status of popular device parameters as well as PTZ statistics information.

Health Monitor

The Health Monitor option provides visibility on the health status of popular device parameters. Each parameter can be enabled or disabled. The refresh frequency of the health monitor can be determined by selecting a duration from the Reporting Period drop-down menu.

Procedure 9-13 Configure Health Monitor Settings

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select the **Health Monitor** from the **System** menu.
- 3 Select the **Reporting Period** from the drop-down menu.
- 4 Select the corresponding check box to enable health monitoring on a parameter.
OR
De-select the corresponding check box to disable health monitoring on a parameter.
The default setting for all parameters is 'Enabled'.

- End -

PTZ Summary

The Health Monitor option displays the following PTZ statistics information:

- Pan Rights
- Pan Lefts
- Tilt Down
- Tilt Up
- Zoom Out
- Zoom In

Procedure 9-14 Display PTZ Summary Information

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Health Monitor** from the **System** menu.
- 3 Select the **PTZ Summary** tab.
- 4 View the information.

- End -

Logs

Information is provided on system, boot, and audit logs created by the camera.

System Log

The system log gives the most recent messages from the `unix/var/log/messages` file. Information will include the following:

- Messages about system behavior such as process startup/shutdown.
- Warnings about recoverable problems that processes encounter.
- Error messages where processes encounter problems they cannot fix. (This does not mean that the process will not continue to work, only that it encountered an issue it could do nothing about.)

Procedure 9-15 Display System Log

Step	Action
------	--------

- | | |
|---|--------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Logs from the System menu.
Select the System Log tab. |
| 3 | Select Refresh to refresh the log with the most up-to-date information. |

- End -

Procedure 9-16 Filter the System Log

Step	Action
------	--------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------|
| 1 | Select Setup on the GUI banner to display the setup menus. |
| 2 | Select Logs from the System menu.
Select the System Log tab. |
| 3 | Enter the number of lines of the log file you would like to view in the Lines (from the end of the log file) text box. |
| 4 | Enter the word or phrase that you would like to search for in the Filter (only lines containing text) text box. |
| 5 | Select Refresh to refresh the log for the most up-to-date information that meets the filter parameters. |

- End -

Boot Log

The Boot log is a log of the Linux operating system boot processes and will only be useful to American Dynamics support engineers who require additional information on the device.

Procedure 9-17 Display Boot Log

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Logs from the System menu.
3	Select the Boot Log tab.
4	Select Refresh to refresh the log for the most up-to-date information.

- End -

Procedure 9-18 Filter the Boot Log

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select Logs from the System menu.
3	Select the Boot Log tab.
4	Enter the number of lines of the log file you would like to view in the Lines (from the end of the log file text box) .
5	Enter the word or phrase that you would like to search for in the Filter (only lines containing text) text box.
6	Select Refresh to refresh the log for the most up-to-date information that meets the filter parameters.

- End -

Audit Log

The Audit Log will log details of all changes made in the areas of the GUI outlined in the following list. The details logged are source, class, result, user and a description of the change.

- Changes in FTP, SMTP, CIFS, IPV4, IPV6, SNMP, and DNS are logged under class NETWORK.
- Changes in Stream are logged under class VIDEO.
- Changes in Reboot, Reset and Upgrade are logged under class MAINTENANCE.
- Changes in DIO and ROI are logged under EVENT.

Procedure 9-19 Display Audit Log

Step	Action
------	--------

About

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Logs** from the **System** menu.
- 3 Select the **Audit Log** tab.
- 4 Select **Refresh** to refresh the log for the most up-to-date information.

- End -

Procedure 9-20 Filter the Audit Log

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **Logs** from the **System** menu.
- 3 Select the **Audit Log** tab.
- 4 Select the search by criteria by selecting a radio button:
 - **text**
 - **date**The default is text.
 - a If you selected text, enter the word or phrase that you would like to search for in the **Filter Text 1)** text box, select an AND/OR operator from the drop-down menu and then select the word or phrase that you would like to search for in the **Filter Text 2)** text box.
 - b If you selected date, enter a Start date and an End date in the format DD/MM.
- 5 Select **Refresh** to refresh the log for the most up-to-date information that meets the filter parameters.

- End -

About

The About menu provides the following camera information:

- Camera Name
- Model
- Product Code
- Manufacturing Date
- Serial Number
- MAC Address
- Firmware Version
- Hardware Version
- iAPI Version

Procedure 9-21 Display Model Information

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select About from the System menu. The model tab displays.
3	View the information.

- End -

Procedure 9-22 Edit Camera Name

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select About from the System menu. The model tab displays.
3	Edit the name in the Camera Name textbox.

- End -

When the Edge Recording menu is selected, Figure 10-1 Edge Recording Menu will be displayed.

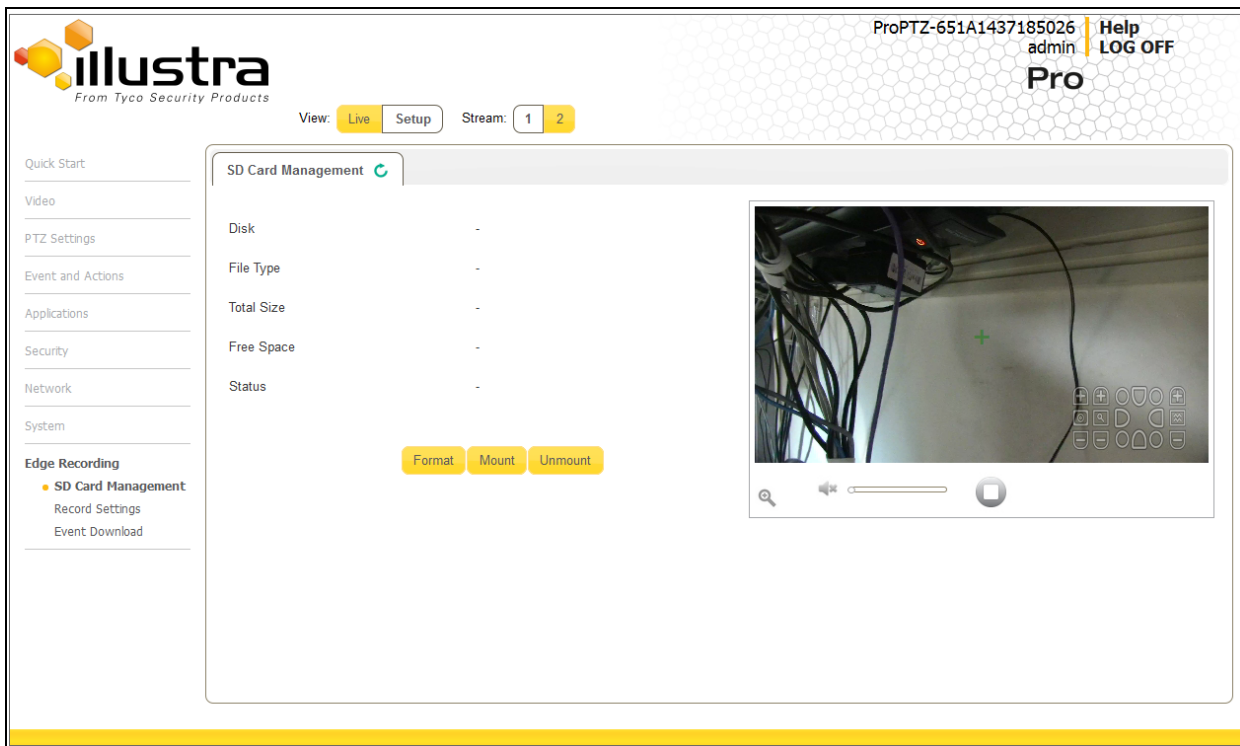


Figure 10-1 Edge Recording Menu

The Edge Recording Menu provides access to the following camera settings and functions:

- SD Card Management
- Record Settings
- Event Download

SD Card Management

Edge recording provides the ability to save recorded video to a microSD Card. Video can be configured to be recorded based on an event. The following provides details of functions available without an microSD Card and when using one.

Features Available With/Without an SD Card

With a microSD Card

- Current faults notifications are displayed on camera if an alarm is triggered.
- Video/Audio and screenshot are saved to the SD card.
- SMTP notifications can be sent.
- FTP uploads of video can be sent.
- Audio can be played via the Audio Out port.

Without a microSD Card

- Current faults notifications are displayed on camera if an alarm is triggered.

Verifying and Formatting the microSD Card

When inserting a microSD card, the SD card should mount automatically. To verify that the mount was successful, check the Status field on the SD Card Management tab.

Procedure 10-1 Verify the microSD Card Mount Was Successful

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select SD Card Management menu from the Edge Recording menu.
3	View the Status field.

- End -

Procedure 10-2 Format the Mounted microSD Card

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select SD Card Management menu from the Edge Recording menu.
3	Select Format . A Format SD card dialog box will warn you that formatting the SD card will delete all information on the card.
4	Select OK to confirm. OR
5	Select Cancel .

- End -

Removing the microSD Card

If at any stage you need to remove the microSD card from the camera, one of the following two procedures should be used:

- Remove the microSD Card by powering down the camera - Use this procedure if you don't have access to the web GUI and are unable to unmount the microSD card before removal.

- Unmount the microSD Card for Removal - Use this procedure when you are unable to access the power supply to the camera.

Note:

Refer to the Quick Reference Guide supplied with the product for details on how to remove the housing assembly and gain access to the camera.

Procedure 10-3 Remove the microSD Card by Powering down the Camera

- 1 Turn off the camera by disconnecting the power supply.
- 2 Remove the microSD card from the camera.

Note:

AVI clips will not be available on the camera until the microSD card has been inserted and the camera rebooted.

- 3 Reconnect the power supply and power up the camera.
When the camera is restarted, it checks its functionality by performing a homing routine during which the camera pans and then either goes to the start point of the 'apple peel' pattern or if powered up once before, to the last position in memory. Once the camera stops, it is online and ready to be accessed and controlled.

- End -

Procedure 10-4 Unmount the microSD Card for Removal

Step	Action
------	--------

- 1 Select **Setup** on the GUI banner to display the setup menus.
- 2 Select **SD Card Management** menu from the **Edge Recording** menu.
- 3 Select **Unmount**.
You will be prompted to confirm the unmounting.
- 4 Select **OK** to confirm.
OR
- 5 Select **Cancel**.
Remove the microSD card from the camera.
AVI clips will not be available on the camera until the microSD card has been inserted and mounted.

- End -

Record Settings

Select which video stream to use for alarm video and configure pre and post event durations for the playable video clip. The camera can record video generated from MD, face detection and DIO events.

Procedure 10-5 Configure Record Settings

Step	Action
1	Select Setup on the GUI Banner to display the setup menus.
2	Select Record Settings from the Edge Recording menu.
3	Select Enable Event Record to allow the camera to create a playable video clip. OR Deselect Enable Event Record to disable the feature.
4	If Enable Event Record has been enabled: a Select the required video stream from the Record Source drop-down menu. Refer to Configure the Video Stream settings on Page 24 . b Select the Pre Event seconds from the Pre Event (secs) drop-down menu. Values range from 0 to 10. The default setting is 5 seconds. c Select the Post Event seconds from the Post Event (secs) drop-down menu. Values range from 0 to 10. The default setting is 5 seconds.
5	Select Apply to save.

- End -

Event Download

If an event action has record mode enabled, when it is triggered, the associated video will be logged in the event download table. From there it can later be downloaded from a microSD Card using the specified upload protocol.

Note:

An event action must have record mode enabled to be logged and downloaded. This is configured in **Event Actions** under the **Events and Actions** menu. Refer to [Create an Event Action](#) on [Page 64](#).

Illustra Pro PTZ Technical Specifications

This section provides information on the technical, environmental and operating specifications for the Illustra Pro PTZ camera. For the Technical Specifications of the Illustra 625 PTZ refer to the Illustra 625 PTZ User Manual 8200-0999-06.

Basic Summary of Features

- Mega pixel HD 1080p Resolution 30fps, 30X Optical zoom
- 12X Digital Zoom
- Motion Detection
- Motion Tracking
- Intelligent Guard Tour
- Progressive scan with square pixels
- Camera set-up
 - Automatic white balance (AWB) or adjustable Manual White Balance (MWB)
 - AGC On/off and limit
 - True day night (TDN) automatic or manual
 - Image freeze selectable for moving to presets
 - Real Time Continuous Auto Focus
 - Open Shutter (DSS) to extend low light performance
 - Wide Dynamic Range Mode (WDR)
 - Frame Noise Reduction (FNR)
 - Electronics Image Stabilization (EIS)
 - Defog
 - Enhanced Intensity
 - Whiteout Reduction

Technical Specifications

Video

Specification	Details
Imager	1/2.86" Progressive CMOS
Scanning area	5,346(H) mm x 3,003(V) mm

Technical Specifications

Specification	Details
Pixel size	2.75 um square
Output Pixel Format	1920(H) x 1080(V) 2.07MP
Effective pixels	1944(H) x 1092(V) 2.12M
Scanning System	Progressive
Rate	1 to 30 ips
Wide Dynamic Range	On/Off
Day/Night	Yes, True day nigh with mechanical cut filter removal mechanism
Auto Tracing White Balance	Yes
Automatic Gain Control	Selectable AGC On/off and limit
Freeze frame	Compliant
Digital Zoom	12 X
Shutter Speed	1/2 - 1/30,000 sec (Auto)
Lens	30X optical zoom, 835 pixels per degree (telephoto)
Lens Design	Aspherical
Horizontal Field of View	63.4° (wide); 2.3° (telephoto)
Vertical Field of View	37.3° (wide); 1.3° (telephoto)
Aperture (Aspherical Design)	F1.4~F4.6 (wide~telephoto)
Focal Length	4.4mm~132mm (wide~telephoto)
Minimum Scene Illumination	0.4 Lux Color, AGC on, 1/30s 0.1 Lux Color, AGC on, 1/8s 0.04 Lux B&W, AGC on, 1/8s
Supported Codecs	H.264 and MJPEG up to 1080p 30ips
Codec Streams	2 any codec, resolution quality/bit rate settings
IP Video Streams	4 maximum including codec sharing duplicate streams Resolutions (1920 x 1080) 1080p (1600 x 900) HD+ (1280 x 720) 720p (1024 x 576) PAL+

Technical Specifications

Specification	Details
	(960 x 540) qHD (800 x 450) (640 x 360) nHD (480 x 270) (320 x 180) (160 x 90)
MJPEG	Quality: 1-100
H.264:	
Profile:	High level 4.2
GOP:	1-150
Rate Control	CBR, VBR
Frame Skip:	With CBR
Bit Rate (CBR)	Selectable: 16 kbps to 10 Mbps
Quality (VBR)	Highest, High, Medium, Low, Lowest

Operational

Manual Pan/Tilt Speed	0.25° to 100° per second scaled in proportion to zoom position
Preset Pan/Tilt Speedn	512° per Second Maximum
Pan Travel	360° continuous, no end stop
Tilt Travel	105°; 210° with the Tilt auto flip feature
Tilt and Pan Accuracy	+/- 0.25°
Zoom and Focus Accuracy	+/- 0.5%
Preset access Time	Less than 1 second to position. Full zoom position in < 4 seconds. Focus on dome saved presets is < 1 second
Presets	96
Patterns	16
Sequences	16
Areas	16
Privacy Zones	32
External Storage	Micro SD/SDHC card slot for up to 32 GB card

Technical Specifications

Feature Plus Models: Alarm Inputs Auxiliary Output Audio Compression	4 One form 1-C relay PCM, G711A, G711U
Language selection	Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hungarian, Italian, Japanese, Korean, Dutch, Polish, Portuguese (Brazilian), Spanish, Swedish, Turkish.
Program Storage	256 M Bytes of electrically programmable Flash Memory
Data Storage	1 GB Bytes of DDR3 RAM
Programmable Logic	FPGA with 24,051 logic cells

Network

Specification	Details
Base Protocol	TCP/IP - RFC4614
Internet Layer Addressing	IPv4 - RFC791 IPv6 - RFC2460
Transport Layer	TCP - RFC973 UDP - RFC768
Data Transmission	HTTP - RFC2616 FTP - RFC959
Network Address Configuration	DHCP - RFC2131 Zeroconf - RFC3927 Static IP address
Network Name Resolution	DNS - RFC5395 DDNS - RFC 2136
Time Synchronization	NTP - RFC1305 IETF NTP Working Group 1 minute poll rate
Email	SMTP - RFC5321 Authenticated SMTP - RFC4954
Authentication and Security	TLS - RFC5346 HTTPS (HTTP over TLS) - RFC2818

Specification	Details
	WS-Security Multi-level password protection User access log
Discovery	WS-discovery - ws-discovery.pdf
Streaming	RTP - RFC3550 RTSP - RFC2326 Unicast Streaming Multicast Streaming - RFC1112 level 1
External Interface Protocol	Illustra API 3.0 B0 SOAP - SOAP 1.2 ONVIF WS-Addressing WS-Eventing

Electrical

For Illustra Pro PTZ indoor models, power can be provided by PoE Plus or by a 24 VAC power line. Local powering is possible for indoor models, with the capability to have both sources connected at any time. The local powering option will always be available, whatever the POE status. If both power sources are connected, the first power source connected will provide all power until power goes away. The power source connected second will serve as backup power and power the dome if the first source fails

The Illustra Pro PTZ outdoor models use 24V AC power.

PoE+

Ethernet Plus and be compliant to POE IEEE 802.3atTM
Class 4
Up to 100m (300 feet)
Compliance verification

24 VAC

Specification	Details
Input Voltage	22 to 30 VAC, Class 2 LPS
Line Frequency	50/60 Hz
Max Current Indoor	1.4 amps RMS
Max Current Outdoor	2.8 amps RMS
Power on in rush current	18 Amps for 5 ms

Specification	Details
Connector	Pluggable Euro-style 3 pin 3.5mm terminal block connector
Design Tolerance	Input minimum: 19 VAC RMS without dropout Input Maximum: Voltage >35 VAC RMS may damage equipment Line Frequency: 47-63 Hz Allowable drop out: 30 ms

Surge Protection

Specification	Details
Power Line	TVS rated at 60V, 250A, 1.5 Joules, 8/20us impulse
IP	Data lines isolation transformer coupled
Audio	TVS rated at 5V, 300 watts, 8/20us impulse Gas discharge tube impulse rated at ten 8/20 us 5kA Impulses
Alarm Input	TVS rated at 3.3V, 500 watts, 8/20us impulse Gas discharge tube impulse rated at ten 8/20 us 5kA Impulses Optocoupled with 500V isolation
Auxiliary output	Dry contact relay with 1, 500 volt galvanic isolation

Mechanical

Indoor Model:
) Height (Includes Base) 178mm (7.01") Diameter 154 mm (6.06")
) Weight 2.06 kg (4.5 lb) add 0.50Kg (1.1 lb) for indoor housing with bubble
Outdoor Model:
) Height (Includes Pendant Adaptor) 372mm (14.65") Diameter 257 mm (10.12")
) Weight Fully Assembled (Includes Pendant Adaptor): 6.45kg (14.22lbs)
) Die cast Aluminum inner housing (Aluminum alloy LM6 or ADC12)
) Reinforced fiberglass high impact polycarbonate trim ring
) UV stabilized sun shade and trim ring (Lexan 503R-73083)

	Ceiling Surface Mount without Bubble	Ceiling Surface Mount with Bubble	Recessed Ceiling Mount without Bubble	Recessed Ceiling Mount with Bubble	Indoor Pendant Mount with Bubble	Outdoor with Bubble and Sun shade
Diameter	154mm (6.06in)	210mm (8.27in)	180mm (7.09in) (body)	245mm (9.65in) (flange)	257mm (10.12)	257mm (10.12)
Total Height	178mm (7.01in)	213mm (8.39in)	165mm (6.50in)	280mm (11.02in)	320mm (12.60)	372mm (14.65)
Height Below Ceiling	191mm (7.52in)	213mm (8.39in)	5mm (0.20in)	116mm (4.57in)	NA	NA

Environmental

Specification	Details
Operating Temperature	Indoor:-10°C to 50°C (14°F to 122°F) Outdoor:-40°C to 50°C (-40°F to 122°F)
Humidity	95% non-condensing
Storage Temperature	-20°C to 65°C (-4°F to 149°F)

Regulatory

Specification	Details
Emissions	FCC: Part 15 Class A CE: EN55022 Class A AS/NZS CISPR 22 Class A ICES-003/NMB-003 Class A
Immunity	CE: EN50130-4 CE: EN55024 CE: EN61000-6-1
Safety	UL 60950-1 CSA-C22.2 No. 60950 CE EN60950-1 Outdoor: UL 50 (Type 4) Outdoor: EN60529 (IP66)
Environmental	RoHS

Base Protocol and Underlying Layers

- The camera is an IP camera compatible with TCP/IP protocol.
- The camera supports both IPv4 and IPv6, running either in single stack mode or dual stack mode (supporting both IP versions at the same time).
- TCP is used for two way communication and UDP will be used for broadcasting protocols.

- HTTP is used for the ONVIF protocol as transport mechanism for SOAP calls.
- FTP can be used to push alarm buffer video clips to a specified remote FTP server. The camera can use anonymous FTP or a specified username and password. There is no incoming FTP service.

IP multicast RFC 1112 level 1 support for sending but not receiving multicast IP datagrams to a group of interested receivers in single transmissions is supported for audio, video and metadata stream types. The streams can be controlled using the two methods described below:

- 1 A client can request a multicast stream using RTSP. When the client requests a stream the server will respond with a multicast address in the 'c=' field of the describe response (RFC 4566). The client will then respond with a Setup request with the Transport Type set to multicast, the device shall stop sending packets for a multicast configuration when no more RTSP sessions are using the same multicast configuration.
- 2 An RTP multicast UDP stream can be started by an ONVIF 'StartMulticastStreaming' request with a specified media profile. Streaming continues until 'StopMulticastStreaming' is called for the same profile

Multicast RTSP sessions support the same authentication methods as unicast RTSP sessions.

- Network Address Configuration
- **DHCP (Dynamic Host Configuration Protocol)** will be enabled by default on the camera. During the boot process, the camera will attempt to acquire a network address via DHCP. The DHCP client will be configured to do 3 attempts with a 20 second timeout.
- **Static IP** can be used if the camera cannot be found on the network using DHCP. In this mode, the a static IP address, subnet mask, default router and a primary and secondary DNS server can be configured. This will be used by the camera when turned on. It is possible to assign a static IPv4 address while still allowing the IPv6 addressing to be Link Local (automatically assigned).
- **Dynamic DNS or DDNS Dynamic Domain Name System** is supported for updating, in real time a changing IP address on the Internet to provide a persistent domain name for a resource that may change location on the network. RFC 2136 Dynamic Updates in the Domain Name System. In this situation the camera talks only to the DHCP server and the DHCP server is responsible for updating the DNS server. The camera sends its hostname to the DHCP server when requesting a new lease and the DHCP server updates the DNS records accordingly. This is suitable for an intranet style configuration where there is an internal DHCP and DNS service and the user wants only to access their camera within their own network.

By default, when making a DHCP request the camera will transmit its hostname as part of the DHCP request. This option is not user configurable. The cameras hostname matches the configurable parameter "camera name" on the web GUI. Any DHCP request will contain the cameras hostname for use of the DHCP server to forward to an appropriate DNS server.

Network Name Resolution

The camera uses DNS protocol to resolve network names. DNS server address will be acquired via DHCP or manually set for static IP configuration. Camera configuration supports symbolic names for all remote end-points (except DNS servers) but in this mode will depend on a working and correctly configured remote DNS server.

Email

The camera can send email alerts via SMTP to one specified mailbox using a specified SMTP server. Support is provided for basic authenticated SMTP using username and password for login on the SMTP server.

Discovery

The product supports WS-Discovery for discovery purpose.

A copy of Illustra Connect is supplied with the camera, this is a MS-Windows based discovery application, which will allow discovering any illustra camera on a network; OS Compatibility: MS-Windows XP, MS-Windows Vista, MS-Windows 7 & 8.

For each camera found on the network, the discovery tools will report:

- Serial number.
- Model Name.
- Product Code (HardwareID).
- MAC address.
- Current IP address.
- Firmware version.

This tool will allow configuration of:

- DHCP
- Static IP configuration
- Select a number of cameras and push a firmware update via ONVIF

ONVIF Video and Control Interface

The primary video and control interface to the camera is the Open Network Video Interface Forum global standard for the interface of network video products. This uses SOAP over HTTP. The camera provides ONVIF for integration to internal and external systems.

Interface Technical Specifications

Specification	Details
Description Language	WSDL
Web Services Specification	DPWS
Web Services Tool Kit	WS4D
Web Services Protocol	SOAP

Specification	Details
Message Format	XML
Discovery	WS-Discovery
Security	WS-Security
Video Transport	RTP/RTSP
Audio Transport	RTP/RTSP
Event Handling (alarms)	WS-Eventing WS-Base Notification WS-Topics
Service Connection	WS-Addressing
Security Permissions	WS-Policy (ken to think about)
Data Object Exchange Spec.	WS-Transfer

ONVIF Functions Supported

The following ONVIF functions are supported on the camera:

Device Management

Return List of Capabilities

Network Management

- Discovery
- DHCP hostname
- DNS
- NTP

System Management

- Device information
- Backup
- Restore
- Get/set system date and time
- Set camera to factory defaults
- Get system logs
- Get support information
- Reboot
- Get/set/remove scope (assigns ID data)
- Fault codes

Security

Configure Video and Audio

- Video Source

microSD Card

- Snapshot JPEG

Event Handling Basic Notification Interface

ONVIF Extensions Supported

No ONVIF extensions are anticipated for the initial release.

ONVIF Functions Not Supported

The following ONVIF functions are not supported on the camera:

- Audio configuration
- Video compression standards other than H.264, and MJPEG.
- PTZ control including ePTZ, presets and home position.

microSD Card

External access is provided for a microSD for video alarm storage and audio output pre-recorded clips. The maximum size of microSD card that can be used with the camera is 128GB.

Refer to the Quick Reference Guide provided with the camera for information on how to remove and install the microSD Card.

Appendix A- Intelligent Guard Tour

Intelligent Guard Tour

A traditional guard tour uses a series of Scans or Sequences which the PTZ camera follows in order to show different areas covered by the camera's field of view or a Security Guard using the PTZ controls to watch different areas. In the mode of operation the Security Guard must monitor the camera view looking for objects of interest, which can easily be missed.

The Illustra Pro PTZ combines Stepped Scans or Sequences and Motion Tracking to introduce the **Intelligent Guard Tour** feature. This feature allows the camera to monitor different fields of view, configured using a stepped scan or a sequence, for motion. If motion is detected the camera will track the motion keeping the object center frame and in focus by automatically adjusting the PTZ settings. The camera will track the motion until either there is no motion is detected in the Field Of View or the Motion Tracking Duration timer limit has been reached. Once the camera finishes tracking it will return to the programmed Scan or Sequence it was performing before the motion was detected.

Note:

It is recommended that Motion Detection is enabled with Intelligent Guard Tour to allow the camera to raise a Motion Detection Alert to the Network Video Recorder allowing recording of the object being tracked.

In this mode of operation when there is motion, a motion start alarm is sent, motion tracking starts (camera starts using PTZ functionality to follow the motion). Only when there are 3 seconds of no motion in the field of view, or the motion tracking duration expires, is there a motion stop alarm sent. The camera will then resume to the next set point of the Sequence or Scan.

To configure the Intelligent Guard Tour the following steps should be followed:

Procedure 10-1 Configuring a Intelligent Guard Tour with Motion Detection Alarms

Step	Action
1	Configure any Privacy Zones required in the camera's view. Refer to Privacy Zones on Page 36 .
2	Configure Motion Detection to raise alarms and to start and stop recording on the NVR. Refer to : <ul style="list-style-type: none"> • Event Settings on Page 58 • Event Actions on Page 63 • Motion Detection on Page 67
3	Configure a Stepped Scan or Sequence to define the views required for the Intelligence Guard Tour. Refer to Scans on Page 48 or Sequences on Page 51 .
4	Configure the Home position with the Scan or Sequence created in Step 3.
5	If a different Intelligent Guard Tour is required at different times a Schedule can be used to start the different Stepped Scans or Sequences at the required times. Refer to Scheduled Tasks on Page 71

Note:

An Intelligence Guard Tour can be manually started at any time by starting the associated Scan or Sequence from the GUI.

Appendix B: Physical Reboot/Reset of the Camera

It is possible to perform a physical reboot or reset to factory defaults using the reset/reboot switch located on the camera. Refer to Figure 1-1 Reset/Reboot Switch on the Camera.

Note:

To perform a physical reboot or reset, access is required to the camera itself. If the camera is being used in an Outdoor Housing or with the Indoor Housing Assembly, refer to the quick start guides supplied with the products for details on how to remove the bubble and gain access to the camera.

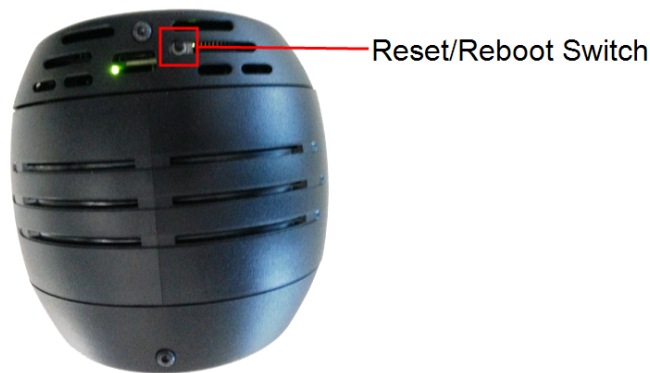


Figure 1-1 Reset/Reboot Switch on the Camera

Rebooting the Camera Using the Reboot/Reset Switch

Perform a reboot of the camera using the reboot/reset switch.

Procedure 1-1 Reboot the Camera Using the Reboot/Reset Switch

Step	Action
1	Locate the reset/reboot switch on the camera. Refer to Figure 1-1 Reset/Reboot Switch on the Camera.
2	Press and hold the reset/reboot switch for at least 10 seconds.
3	Release the reset switch. It may take up to 10 seconds for the camera to restart. When the camera is restarted, it checks its functionality by performing a homing routine. During this routine, the camera pans and then either goes to the start point of the 'apple peel' pattern, or if powered up once before, to the last position in memory. Once the camera stops, it is online and ready to be accessed and controlled.

- End -

Resetting the Camera to Factory Default Settings Using the Reboot/Reset Switch

The reset/reboot switch can be used to restore the camera to the factory default settings.

Note:

It is not possible to retain network settings, presets, patterns or sequences when using this procedure. If you need to maintain these settings it is recommended to reset the camera using the GUI. Refer to [Resetting the Camera](#) on [Page 104](#).

Procedure 1-2 Reset the Camera to Factory Default Settings Using the Reboot/Reset Switch

Step	Action
------	--------

- | | |
|---|---------------------------------------------------------------------------------------------------------|
| 1 | Locate the reset/reboot switch on the camera.
Refer to Figure 1-1 Reset/Reboot Switch on the Camera. |
| 2 | Press and hold the reset/reboot switch for at least 10 seconds. |
| 3 | Release the reset switch. |

It may take up to 10 seconds for camera to restart.

When the camera is restarted, it checks its functionality by performing a homing routine. During this routine, the camera pans and then either goes to the start point of the 'apple peel' pattern or if powered up once before, to the last position in memory. Once the camera stops, it is online and ready to be accessed and controlled.

- End -

Appendix C: User Account Access

Camera Menu	Sub Menu	Tab	Admin	Operator	User
Live View	Live View		X	X	X
Quick Start	Basic Configuration	TCP/IP	X		
		Video Stream Settings	X	X	
		Picture Basic	X	X	
		Picture Additional	X	X	
		Date/Time/OSD	X		
Video	Streams	Video Stream Settings	X	X	
	Picture Settings	Picture Basic	X	X	
		Picture Additional	X	X	
	Date/Time/OSD	Date/Time/OSD	X		
	Privacy Zones	Privacy Zones	X	X	
PTZ Settings	PTZ Parameters	PTZ Parameters	X	X	
		Home	X	X	
	Preset	Preset	X	X	X
	Patterns	Patterns	X	X	X
		Record	X	X	
		Repeat	X	X	
	Scans	Scans	X	X	X
	Sequences	Sequences	X	X	X
		Add Sequence	X	X	
	Areas	Areas	X	X	
Events and Actions	Event Settings	SMTP	X		
		FTP	X		
		CIFS	X		
	Event Actions	Event Actions	X		
	Alarm I/O	Alarm I/O	X		
	Analytics	Motion Detection	X		
	Event Logs	Event Log	X		

Camera Menu	Sub Menu	Tab	Admin	Operator	User
		Fault Log	X		
	Scheduled Tasks	Scheduled Tasks	X		
		Add Task	X		
Applications	Applications	Applications	X		
	License	License	X		
Security	Security Status	Security Overview	X		
		Security Log	X		
	Users	Users	X	X	X
		Add User	X		
		Change Password	X	X	X
	HTTP/HTTPS	HTTP/HTTPS	X		
	IEEE 802.1x	EAP Settings	X		
	Firewall	Basic Filtering	X		
		Address Filtering	X		
	Remote Access	Remote Access	X		
	Session Timeout	Session Timeout	X		
Network	TCP/IP	TCP/IP	X		
	FTP	FTP	X		
	SMTP	SMTP	X		
	SNTP	SNTP	X		
		Heartbeat	X		
	CIFS	CIFS	X		
	Dynamic DNS	Dynamic DNS	X		
System	Maintenance	Maintenance	X		
		Backup/Restore	X		
	Date Time	Date Time	X		
	Audio	Audio	X		
		Audio Clips	X	X	
	Environmental	Environmental	X	X	X
	Health Monitor	Health Monitor	X		
		PTZ Summary.	X		
	Logs	System Log	X		

Camera Menu	Sub Menu	Tab	Admin	Operator	User
		Boot Log	X		
		Audit Log	X		
	About	Model	X	X	X
Edge Recording	SD Card Management	SD Card Management	X		
	Record Settings	Record Settings	X		
	Event Download	Event Download	X		

Appendix D: Using VLC Player to View RTSP Streaming

Note:

This appendix is provided for user instruction only. American Dynamics will not support or be responsible for any error caused during the use of VLC software.

Other media players can be used for RTSP playback.

Viewing RTSP Stream via VLC Player

You can use VLC Player to view live video and audio in real time from the camera.

Procedure 3-1 View RTSP Streaming via VLC Player

Step	Action
1	It will be necessary to install the latest version of VLC Player from the website. <ol style="list-style-type: none">Visit www.videolan.org/vlc/.Select Download VLC. Run the installer and follow the directions on screen to install the software.
2	Launch VLC Player.
3	Select Media and then Open Network Stream . The Open Media window will display.
4	Enter the IP address of the camera stream in the Network URL text box in the following format to view Stream 1 and 2: <ul style="list-style-type: none">• Stream 1: <code>rtsp://<ip address>:554/StreamId=1</code>• Stream 2: <code>rtsp://<ip address>:554/StreamId=2</code> For example: <code>rtsp://192.168.1.168:554/StreamId=1</code>
5	Select Play . The live video stream will be displayed.

- End -

Appendix E: Camera Defaults

Quick Start

Basic Configuration

Tab	Item	Default Setting	
TCP/IP			
	Enable DHCP	on	
	IPv4 Address	192.168.1.168	
	Network Mask	255.255.255.0	
	Gateway	empty or unspecified	
	Primary DNS Server	empty or unspecified	
	Ipv6 Enable	on	
	Current IPv6 Address	empty or unspecified	
Video Stream Settings			
	Stream Number	1 (2MP)	2 (2MP)
	Codec	H264	H264
	Resolution	1920x1080	1920x1080
	Frame Rate(fps)[1-30]	30	15
	GOP Length[1-150]	30	15
	MJPEG Quality	n/a	n/a
	Rate Control	VBR	VBR
	VBR Quality	High	High
	CBR Bit Rate	n/a	n/a
Picture Basic			
	Auto Focus	on	
	Auto Iris	on	
	AGC/Shutter Setting	openshutter	
	Max Exposure (sec)	1/2	
	Max Gain (dB)	15dB	
	Enable WDR	off	
	Enable Defog	off	
	Enhanced Intensity	none	

Video

Picture Additional			
	IR Mode	visible	
	Day Night Mode	Auto Low	
	Brightness	50%	
	Contrast	50%	
	Saturation	50%	
	White Balance Mode	Auto	
	Red	50%	
	Blue	50%	
	Enable EIS	off	
	Enable Frame Noise Reduction	on	
Date/Time/OSD			
	Camera Friendly Name	ProPTZ-<S/N>	
	Camera Time	Today's date/time	
	Time 24-hour	on	
	Date Display Format	YYYY/MM/DD	
	Time Zone	(GMT-05:00) Eastern Time (US and Canada)	
	Set Time	Manually	
	Date(DD/MM/YY)	empty or unspecified	
	Time(HH:MM:SS)	empty or unspecified	
	NTP Server Name	empty or unspecified	
	OSD Camera Name	off	
	OSD Time	off	
	Text Attributes Translucent	off	

Video

Streams

Tab	Item	Default Setting	
Video Stream Settings			
	Stream Number	1 (2MP)	2 (2MP)
	Codec	H264	H264
	Resolution	1920x1080	1920x1080
	Frame Rate(fps)[1-30]	30	15
	GOP Length[1-150]	30	15

	MJPEG Quality	n/a	n/a
	Rate Control	VBR	VBR
	VBR Quality	High	High
	CBR Bit Rate	n/a	n/a

Picture Settings

Tab	Item	Default Setting
Picture Basic		
	Auto Focus	on
	Auto Iris	on
	AGC/Shutter Setting	openshutter
	Max Exposure (sec)	1/2
	Max Gain (dB)	15dB
	Enable WDR	off
	Enable Defog	off
	Enhanced Intensity	none
Picture Additional		
	IR Mode	visible
	Day Night Mode	auto low
	Brightness	50%
	Contrast	50%
	Saturation	50%
	White Balance Mode	auto normal
	Red	50%
	Blue	50%
	Enable EIS	off
	Enable Frame Noise Reduction	on

Date/Time/OSD

Tab	Item	Default Setting
Date/Time/OSD		
	Camera Friendly Name	ProPTZSerialNumber
	Camera Time	Today's date/time
	Time 24-hour	on
	Date Display Format	YYYY/MM/DD
	Time Zone	(GMT-05:00) Eastern Time (US and Canada)
	Set Time	Manually
	Date(DD/MM/YY)	empty or unspecified
	Time(HH:MM:SS)	empty or unspecified
	NTP Server Name	empty or unspecified
	OSD Camera Name	off
	OSD Time	off
	Text Attributes Translucent	off

Privacy Zones

Tab	Item	Default Setting
Privacy Zones		
	Name	empty or unspecified

PTZ Settings

PTZ Parameters

Tab	Item	Default Setting
PTZ Parameters		
	Automatic Flip	off
	Freeze Frame	off
	Return to Auto Focus	on
	Return to Auto Iris	on
	Return to Auto Previous	on
	Zoom Stops	
Home		
	Home Position Type	None

Preset

Tab	Item	Default Setting
Presets		
	Preset 1-96	empty or Unspecified

Patterns

Tab	Item	Default Setting
Patterns		
	Pattern 1-16	empty or Unspecified
Record		
	Pattern Name	empty or Unspecified
Repeat		
	Repeat Pattern	on

Scans

Tab	Item	Default Setting
Scans		
	smooth	empty or Unspecified

Events and Actions

	stopped	empty or Unspecified
	random	empty or Unspecified
	Left	empty or Unspecified
	Right	empty or Unspecified
	Pause	2

Sequences

Tab	Item	Default Setting
Sequences		
	Sequence 1-16	empty or Unspecified
	Motion Tracking: Enabled	off
	Motion Tracking: Duration	10
Add Sequence		
	Sequence Name	empty or Unspecified
	Preset Name	empty or Unspecified
	Dwell Time (secs)	empty or Unspecified

Areas

Tab	Item	Default Setting
Areas		
	Area 1-16	empty or Unspecified

Events and Actions

Event Settings

Tab	Item	Default Setting
SMTP		
	Enable SMTP	off
	Mail Server	empty or unspecified
	Server Port	25
	From Address	empty or unspecified
	Send Email To	empty or unspecified
	Use authentication to log on to server	off
	Username	empty or unspecified
	Password	empty or unspecified
FTP		
	Enable FTP	off
	Secure FTP	off

	FTP Server	empty or unspecified
	FTP Port	21
	Username	empty or unspecified
	Password	empty or unspecified
	Upload Path	empty or unspecified
	Limit Transfer Rate	on
	Max Transfer Rate(Kbps)	50
CIFS		
	Enable	on
	Network Path	empty or unspecified
	Domain Name	empty or unspecified
	Username	empty or unspecified
	Password	empty or unspecified

Event Actions

Tab	Item	Default Setting
Event Actions		
	Fault Action 1	empty or unspecified
	Fault Action 2	empty or unspecified
	Fault Action 3	empty or unspecified
	Fault Action 4	empty or unspecified
	Fault Action 5	empty or unspecified

Alarm I/O

Tab	Item	Default Setting
Alarm I/O		
	Alarm Input 1 (open)	empty or unspecified
	Alarm Input 2 (open)	empty or unspecified
	Alarm Input 3 (open)	empty or unspecified
	Alarm Input 4 (open)	empty or unspecified

Analytics

Tab	Item	Default Setting
Motion Detection		
	Enable Motion Detection	off
	Sensitivity	high
	Action	empty or unspecified

Event Logs

Tab	Item	Default Setting
Event Log		

Applications

	Event Log	empty or unspecified
	Fault Log	empty or unspecified

Scheduled Tasks

Tab	Item	Default Setting
Scheduled Tasks		
	Scheduled Tasks	empty or unspecified
Add Task		
	Name	empty or unspecified
	Start Time (HH:MM)	empty or unspecified.
	Task Frequency	Every day
	Action	None

Applications

Applications

Tab	Item	Default Setting
Applications		
	Select Package to Upload	empty or unspecified

License

Tab	Item	Default Setting
License		
	Select Package to Upload	empty or unspecified

Security

Security Status

Tab	Item	Default Setting
Security Overview		
	Enable Enhanced Security	off
	Current Password	empty or unspecified
	New Password	empty or unspecified
	Confirm Password	empty or unspecified
	HTTP	on
	HTTPS	on

	FTP	off
	Dyn DNS	off
	SMTP	off
Security Log		
	Lines (From The End Of The Log File)	empty or unspecified
	Filter(Only Lines Containing Text)	empty or unspecified

Users

Tab	Item	Default Setting
Users		
	Logon Name	admin
	Role	admin
Add User	Name	empty or unspecified
	Role	admin
	Password	empty or unspecified
	Confirm Password	empty or unspecified
Change Password		
	Name	empty or unspecified
	Current Password	empty or unspecified
	New Password	empty or unspecified
	Confirm New Password	empty or unspecified

HTTP/HTTPS

Tab	Item	Default Setting
HTTP/HTTPS		
	HTTP Method	Both
	Select Certificate File	empty or unspecified

IEEE 802.1x

Tab	Item	Default Setting
EAP Settings		
	Enable IEEE802.1x	off
	EAPOL Version	1
	EAP Method	PEAP
	EAP Identity	empty or unspecified
	CA Certificate	empty or unspecified
	Password	empty or unspecified
	Client Certificate	empty or unspecified
	Private Key Password	empty or unspecified

Firewall

Tab	Item	Default Setting
Basic Filtering		
	ICMP Blocking	off
	RP Filtering	off
	SYN Cookie Verification	off
Address Filtering		
	Address Filtering	off
	IP or MAC Address	empty or unspecified

Remote Access

Tab	Item	Default Setting
Remote Access		
	SSH Enable	off
	ONVIF Discovery Mode	on
	ONVIF User Authentication	on

Session Timeout

Tab	Item	Default Setting
Session Timeout		
	Session Timeout (mins)	15

Network

TCP/IP

Tab	Item	Default Setting
TCP/IP		
	Enable DHCP	on
	IPv4 Address	192.168.1.168
	Network Mask	255.255.255.0
	Gateway	empty or unspecified
	Primary DNS Server	empty or unspecified
	Ipv6 Enable	on
	Current IPv6 Address	empty or unspecified

FTP

Tab	Item	Default Setting
FTP		
	Enable FTP	off

	Secure FTP	off
	FTP Server	empty or unspecified
	FTP Port	21
	Username	empty or unspecified
	Password	empty or unspecified
	Upload Path	empty or unspecified
	Limit Transfer Rate	on
	Max Transfer Rate(Kbps)	50
SMTP		
	Enable SMTP	off
	Mail Server	empty or unspecified
	Server Port	25
	From Address	empty or unspecified
	Send Email To	empty or unspecified
	Use authentication to log on to server	off
	Username	empty or unspecified
	Password	empty or unspecified

SNMP

Tab	Item	Default Setting
SNMP		
	Location	empty or unspecified
	Contact	empty or unspecified
	Enable V2	off
	Read Community	public
	Trap Community	fixedcameras
	Trap Address	empty or unspecified
	Enable V3	off
	Read User	root
	Security Level	noauth
	Authentication Type	MD5
	Authentication Password	empty or unspecified
	Encryption Type	DES
	Encryption Password	empty or unspecified

CIFS

Tab	Item	Default Setting
CIFS		
	Enable	on
	Network Path	empty or unspecified
	Domain Name	empty or unspecified
	Username	empty or unspecified
	Password	empty or unspecified

Dynamic DNS

Tab	Item	Default Setting
Dynamic DNS		
	Service Enable	off
	Camera Alias	empty or unspecified
	Service Provider	dyndns.org
	Username	empty or unspecified
	Password	empty or unspecified
	Service Data	empty or unspecified

System

Maintenance

Tab	Item	Default Setting
Maintenance		
	Preserve IP Address	on
	Preserve presets, patterns and sequences	on
	Select Firmware Image File	empty or unspecified
Backup/Restore		
	Select Saved Data File	empty or unspecified

Date Time

Tab	Item	Default Setting
Date Time	Camera Time	current date/time
	Time 24-hour	on
	Date Display Format	YYYY/MM/DD
	Time Zone	(GMT-05:00) Eastern Time (US and Canada)
	Set Time	Manually
	Date (DD/MM/YYYY)	empty or unspecified
	Time(HH:MM:SS)	empty or unspecified
	NTP Server Name	us.pool.ntp.org

Audio

Tab	Item	Default Setting
Audio		
	Input Enable	off
	Input Volume	71
	Output Enable	off
	Output Volume	50

Audio Clips		
	Audio Clips Table	empty or unspecified

Environmental

Tab	Item	Default Setting
Environmental	Internal Temperature	
	Blower.	.
	Heater.	.
	Environmental Firmware Version	

Health Monitor

Tab	Item	Default Setting
Health Monitor		
	Reporting Period(seconds)	20
	Health Monitor Table	real time information
PTZ Summary		
	PTZ Statistics	real time information

Logs

Tab	Item	Default Setting
System Log		
	Lines (From The End Of The Log File)	
	Filter(Only Lines Containing Text)	
Boot Log		
	Lines (From The End Of The Log File)	
	Filter(Only Lines Containing Text)	
Audit Log		
	Search By	
	Filter Text 1	
	Filter Text 2	
	Start Date(DD/MM)	
	End Date(DD/MM)	

About

Tab	Item	Default Setting
Model		
	Camera Name	factory configuration
	Model	factory configuration

	Product Code	factory configuration
	Manufacturing Date	factory configuration
	Serial Number	factory configuration
	MAC Address	factory configuration
	Firmware Version	factory configuration
	Hardware Version	factory configuration

Edge Recording

SD Card Management

Tab	Item	Default Setting
SD Card Management		
	Disk	empty or unspecified
	File Type	empty or unspecified
	Total Size	empty or unspecified
	Free Space	empty or unspecified
	Status	empty or unspecified

Record Settings

Tab	Item	Default Setting
Record Settings		
	Enable Event Recording	off
	Record Source	Stream 1
	Pre Event(secs)	10 secs
	Post Event(secs)	10 secs

Event Download

Tab	Item	Default Setting
Event Download		
	File Name Table	empty or unspecified

Appendix F- Bubble Cleaning Procedure

Bubble Handling and Cleaning

Dome camera bubbles require special care when handling and cleaning to avoid scratches.

Handling

The bubble is packaged with a protective plastic sheet. It is recommended that the bubble remain stored this way until it is ready to install. Limit handling the bubble, as any scratches can quickly affect visibility. Always handle the dome by the outside edge of the trim ring or flange. Never contact the surface of the bubble.

Cleaning

If cleaning the bubble is required, use the following procedures and comply with all the warnings listed below.

Removing Dust and Dirt

The extremely soft bubble surfaces should not be cleaned by rubbing or dusting with a cloth. Use clean dry compressed air, preferably from a spray can, or Lens Cleaning Rubber Air Dust Blowing Ball to remove any dust from the interior surface.

Cleaning the Bubble

If heavy residue (spots, streaks, stains) or any other contaminants are present first flush with clean water to remove any remaining dust or dirt. Then clean with a solution of a mild liquid dish detergent and water and lint free “soft” paper towels or a microfiber eyeglass cleaning cloth. After cleaning, the affected area of the dome should be blown off with clean, dry air.



Caution

Alcohol or ammonia based solutions should be avoided when cleaning the bubble as they will cause the bubble to cloud and over time cause stress aging, which makes the bubble brittle. However if alcohol is required to remove residue, dilute with water and flush afterward with pure water.

Excessive pressure or rubbing on the dome's surface can cause permanent scratches which may render the dome unusable.

Do not use abrasive or harsh chemical cleaners.

For any gold or silver mirrored metalized bubbles only air dry the inside surface, and avoid any wiping or rubbing of the inside surface.
