Configuration and User Guide

Illustra Pro Fisheye Fixed Dome Camera

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Introduction

Overview

The Illustra Pro Fisheye Camera (hereafter referred to as the camera) is a high definition fisheye camera 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.

The camera can operate as a standalone camera on a network however it is intended to be integrated into sophisticated security solutions.

The camera is available in the following configurations:

Illustra Pro Fisheye Model Description	Product Codes
illustra Pro Fisheye 5MP, indoor, white, vandal	ADCi825-F311
illustra Pro Fisheye 5MP, indoor, white, non-vandal	ADCi825-F312
illustra Edge Fisheye indoor, white, non-vandal	IQS05FFACWCY

Please refer to the Illustra 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 which will document any known limitations not covered in this user guide.

Configuration and User Guide

Installation

This chapter provides detailed instructions on how to install the Illustra Pro Fisheye Camera. You may also refer to the printed Quick Installation Guide provided with the camera.

Camera Mounts

Refer to the Attach the Mounting Bracket supplied with the camera for installation instructions.

Please refer to the Illustra website or contact your Tyco Security Products Sales Representative for more information on the various mounts and accessories that can be used with the Illustra Pro Fisheye Camera.

Browser Support

The Illustra Pro Fisheye camera supports the following operating systems and Internet browsers:

Operating System	Browser
Microsoft Windows 7	Internet Explorer 10
Microsoft Windows XP	Internet Explorer 10

Network Settings

The following provides the default network settings for the Illustra Pro Fisheye camera.

Setting	Default
Camera Name	IllustraPro-Serial number
DHCP	Enabled
IP Address	192.168.1.168
Subnet Mark	255.255.255.0
Default Gateway	0.0.0.0
DNS	0.0.0.0
HTTP Port	80

Illustra Connect

Illustra Connect is the camera discovery tool created by Tyco Security Products and is supplied with the Illustra Pro Fisheye Camera on the CD.

Connecting to IP cameras and configuring them can be a time-consuming and error-prone process. Typing static IP addresses, or naming cameras without seeing where they are pointed, often results in longer installations. Illustra Connect eliminates all of these issues with a unique feature set that includes a one-touch IP conflict resolver and snapshot tool. Simply bring up all of the cameras out of the box, enter the IP range provided by the customer's IT department and click "OK."

Key functions of Illustra Connect are:

- "Resolve All Conflicts" button instantly alerts you to all IP addresses that are the same and provides a number of options to fix issues

- Greatly reduces installation time by automatically supplying static IP addresses from a configurable range of IP addresses

- Snapshot views of all of the cameras

- "Save Device List" allows you to create a '.csv' file of all information regarding the camera settings

- Set IP addresses via DHCP

- Configure IP settings and rename cameras

- Upload firmware to individual or a selectable group of cameras

- Set date and time or direct the cameras to a specific NTP server

- Assign user name and password

- Uses icons common to victor unified client to display camera status

- Compatible with Illustra IP cameras

Install and Detect the Illustra Pro Fisheye Camera

The following provides detailed information for installing and accessing the camera.

Installation using DHCP and Illustra Connect

The following provides information for installing the camera on your network using the Illustra Connect discovery tool.

Illustra Connect enables automatic discovery of compliant devices on IP networks and is the recommended method for installation and detection of the camera on the network.

Note

Illustra Connect will only discover devices on the same subnet as it's host computer. Therefore the camera and the computer being used to configure it must be on the same subnet.

Procedure 2-1 Installing the Illustra Pro Fisheye Camera using Illustra Connect

Step	Action
1	Using the Quick Start Guide install and connect the camera to the computer or network which will be used for the configuration and power on.
	The camera will begin its initial boot up sequence which will take approximately 1 to 2 minutes.
2	When using a DHCP Server the camera will automatically be assigned a Network IP address.
3	Using a computer which is connected to the same network and subnet, install the Illustra Connect software that is provided with the camera. Refer to the Illustra Connect manual for more information.
4	When the installation is complete, run Illustra Connect. It will search the network and display all compliant devices, including the Illustra Pro Fisheye Camera.
5	Select the camera you wish to configure, locating it by it's unique MAC address. Illustra Connect allows basic configuration of the camera.
	Refer to the Illustra Connect manual for more information.
6	Right-click the camera and select **Launch Web GUI Configuration**.
7	Refer to the Web Configuration chapter for details on how to log in to the camera, view live video and modify the configuration.

- End -

Installing the Illustra Pro Fisheye Camera using DHCP Server Logs

Procedure 2-2 Installing the Illustra Pro Fisheye Camera using DHCP Server Logs

Step	Action
1	Using the Quick Start Guide install and connect the camera to the computer or network which will be used for the configuration and power on.
	The camera will begin its initial boot up sequence which will take approximately 1 to 2 minutes.
2	When using a DHCP Server the camera will automatically be assigned a Network IP Address.
3	View the DHCP Server system logs and make note of the IP address assigned to the camera.
4	Open Microsoft Internet Explorer and enter the URL of the camera as shown in the DHCP Server log.

Note

The computer being used to configure the camera must have an IP address on the same subnet.

5	Refer to the Web Configuration chapter for details on how to log in to the camera and modify the configuration.

- End -

Installation without a DHCP Server using a Static IP Address

The following provides information for installing the camera on your network when no DHCP Server is available. In this situation the camera will be assigned a Static IP Address.

Note

1   We recommend that once you are logged into the Web Configuration pages you change the Static IP Address of the camera so that conflicts can be avoided when using the same Static IP Address to setup additional cameras. Refer to TCP/IP on page 9-102 for information on changing the IP address of the camera.

2   In a situation where IP address conflicts arise, Illustra Connect can be used to discover the device. Refer to IP Address Conflicts in the Illustra Connect User Guide for further information.

Procedure 2-3 Installing the Illustra Pro Fisheye Camera when a DHCP Server is not available

Step	Action
1	Using the Quick Start Guide install and connect the camera to the computer or network which will be used for the configuration and power on.

The camera will begin its initial boot up sequence which will take approximately 1 to 2 minutes.

2 The camera will attempt to obtain an IP Address from the DHCP Server. When no DHCP Server is available the camera will be assigned a Static IP address of 192.168.1.168.

3 Open Microsoft Internet Explorer and enter the URL of the camera as 192.168.1.168.

Note

1   The computer being used to configure the camera must have an IP address on the same subnet.

2   Illustra Connect can also be used to discover the camera when using a Static IP Address. Refer to Installing the Illustra Pro Fisheye Camera using Illustra Connect on page 2-5 and begin at Step 3.

4 Refer to the Web Configuration chapter for details on how to log in to the camera and modify the configuration.

- End -

Web Configuration

This section details how to configure the camera using the built-in Web Configuration feature. Depending on user access you can view Live video and control the camera through Virtual PTZ (vPTZ) controls as well as changing the settings for the camera environment.

Note

1   Adobe Reader must be installed to view the online help.

2   To view the video pane the latest version of QuickTime must be installed and enabled on the computer running the browser session.

3   To use Motion Detection Java must be installed and enabled on the browser running the session.

4   Web Configuration sessions timeout after a period of inactivity.

5   Only users with administrative rights can access all the areas of the Web Configuration pages.

Accessing the Illustra Pro Fisheye Camera Web GUI

Logging in to the Camera

Use the following procedure to access the camera Web GUI.

Procedure 3-1 Log in to the Camera

Step	Action

1   Refer to the Installation on page 2-3 for details on how to connect the camera to your network or computer.

2   When the camera is selected the sign in page will be displayed.

3   Select your preferred language from the drop-down menu.

         The default language is 'English'.

4   Enter the username in the **Username** text box.

5   Enter the password in the **Password** text box.

6   Select **Log in**.

         The Live view page will be displayed.

         Depending on the access rights of the user account, there may be specific camera functions that are unavailable. All camera functions are described in this manual.

         Note

         The default Username is **admin** and the default Password is **admin**. To maintain security the password on the admin account should be changed. Refer to Procedure 9-2 Change User Password on page<$chapnum>-98.

- End -

Logging out of the Camera

Use the following procedure to log off the camera Web GUI.

Procedure 3-2 Log off the Camera

Step	Action

1   Select **Log Off** in the upper right hand corner of the Web GUI.

         You will be logged off the camera and sign in page will be displayed.

- End -

Changing the Camera Web GUI Language

Use the following procedure to change the language used in the camera Web GUI.

Procedure 3-3 Change the Camera Web GUI Language

Step	Action

1   Open the camera sign in page. If you are already logged in to the Web GUI, select Log Off to display the sign in page.

2   Select your preferred language from the drop-down menu:

- **English**

- **Arabic**

- **Czech**

- **Danish**

- **German**

- **Spanish**

- **French**

- **Hungarian**

- **Italian**

- **Japanese**

- **Korean**

- **Dutch**

- **Polish**

- **Portuguese**

- **Swedish**

- **Turkish**

- **Chinese Simplified**

- **Chinese Traditional**

The default language is 'English'.

3   Enter the username in the **Username** text box.

4   Enter the password in the **Password** text box.

5   Select **Log in**.

The camera Web GUI will be displayed in the selected language.

- End -

User Accounts

There are three types of user account that can be used to access the camera:

• Administrator

• Operator

• User

Refer to Appendix A: User Account Access for a breakdown of features which can be accessed by each user.

To add a new user refer to Procedure 9-1 Add a User.

Administrator Access

The administrator account provides full access to the camera. This user account has access to all of the cameras functions and information.

Operator Access

The operator account provides the following access:

• **Video:** Full access to Picture Settings. Video Streams can be edited. Mounting options and camera name can be modified. Privacy Zones can be created, edited and activated.

• **PTZ:** Full access to Presets, Sequences, Patterns and scans. However patterns cannot be deleted.

• **Network:** Operator account password can be changed. Access to Advanced Settings.

• **Support:** Current Faults, Current Events, Environmental and Statistics can be viewed.

• **About:** Model information can be viewed.

User Access

The user account provides the following access:

• **PTZ:** Presets, Sequences, Patterns and scans can be viewed and activated.

• **Network:** User account password can be changed.

• **About:** Model information can be viewed.

The Camera Web GUI Interface

When logged into the camera the screen will display the live video feed full screen as seen in Figure 3-1 Live View Page.

Refer to GUI Icons on page 3-16 for information on the icons used throughout the Web GUI.

Figure 3-1 Live View Page

Accessing the Setup Menus from Live View

Setup menus within the Web GUI are restricted by user account access levels.

Refer to Appendix A: User Account Access for details on the features which are available to each role.

Procedure 3-4 Access Setup Menus from Live View

Step	Action
1	When displaying full screen live video select **Setup** on the GUI banner to access the setup menus.

The Model page 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 Model page will be displayed.

- End -

Displaying the Live View Page

Display the live camera view page.

Procedure 3-5 Display Live View Page

Step	Action

1   Select **Live** in the GUI banner.

The live view page will be displayed. Refer to Procedure 5-1 Configure the Video Stream
settings to edit display settings.

2   Select a video stream from **Stream** to view:

- 1

- 2

- 3

- 4

- 5

The default setting is 'Stream 1'

Note

Depending on the stream configuration, stream 3, 4 and 5 may be unavailable.
Refer to Streams for further information.

3   Select a percentage from **Scale** to change the display size of the video pane:

- **25%**

- **50%**

- **75%**

- **100%**

The default setting is '50%'

- End -

Overview of the Web GUI

Figure 3-2 The Camera Web GUI provides an overview of the Illustra Pro Fisheye Camera Web GUI.
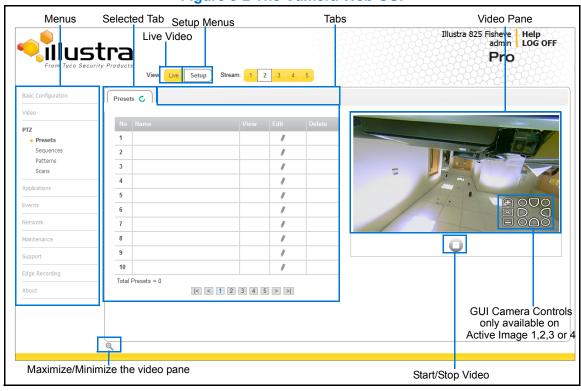
Figure 3-2 The Camera Web GUI

GUI Icons

The following provides information on the icons used throughout the camera interface. These icons will be referenced throughout this manual:

	Select to start streaming video to the video pane.		Select to stop streaming video to the video pane.
	Check box, deselected.		Check box, selected.
	Delete the corresponding function.		Refresh the current tab.
	View or activate the corresponding function.		Edit the corresponding function.
	Hide the active tab details.		Unhide the active tab details
20%		Slider bar - The slider bar can be moved left or right using the mouse. For fine adjustments, select the slider bar with the mouse and use the left and right arrow keys on the PC keyboard to adjust the slider.	
|< < 1 2 3 4 5 > >|		Select the page number or arrows to navigate through the corresponding pages.	

Video Pane

The video pane provides a simple way to view the live video stream from the camera when using the Web GUI. The live viewing page however is not intended to be the primary way of viewing the video on the camera; this should be performed using the Network Video Recording device.

Viewing Live Streams via the Video Pane

The video pane is accessible to any authorized user and is displayed when accessing the Web GUI menus. It is not displayed on the following pages; Current Faults, Current Events, Logs and Scheduled Tasks.

Procedure 3-6 Viewing Live Video via the Video Pane

Step	Action
1	The video stream will start automatically when a page is opened.
	Refer to Configuring the Video Stream on page<$chapnum>-40 to edit display settings.
2	Select ⬜ to stop the video stream.
3	If the video has been stopped, select ▶ to start the video stream.

- End -

Maximize the Video Pane on a Active Tab

The maximise and minimize icon allows you to switch between a normal active tab layout and one where the video pane has been maximized.

Procedure 3-7 Maximize/Minimize the Video Pane

Step	Action
1	Select a tab to display from the menu.
	The selected tab will be displayed.
2	Select 🔍 to maximize the video pane.
	The maximised video pane can be seen in Figure 3-3 Video Pane Maximized.

Figure 3-3 Video Pane Maximized

3   Select [🔍] to minimize the video pane and return to a normal active tab layout.

The normal active tab layout can be seen in Figure 3-4 Normal Active Tab Layout.

Figure 3-4 Normal Active Tab Layout

- End -

Controlling the Camera via PTZ
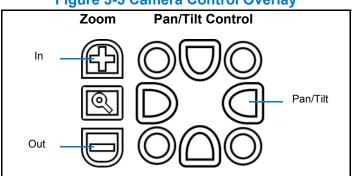
The camera may be controlled using the on-screen controls in the video pane. Virtual PTZ (hereafter referred to as vPTZ) camera controls are available for smooth and accurate motion control.

vPTZ Camera Controls

The following provides information on the controls that are available for the on-screen camera control.

Note

The camera control overlay is only visible when viewing an Active Image; either Active Image 1, Active Image 2, Active Image 3 or Active Image 4.

Figure 3-5 Camera Control Overlay

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 Camera Controls

The camera may be controlled using the on-screen controls displayed on the Active Image in the video pane.

Note

The camera control overlay is only visible when viewing an Active Image; either Active Image 1, Active Image 2, Active Image 3 or Active Image 4.

Procedure 3-8 Controlling the Camera via the Video Pane

Step	Action

1 Select [▶] to start the video stream if it is not already active.

The video pane will display the current camera view.
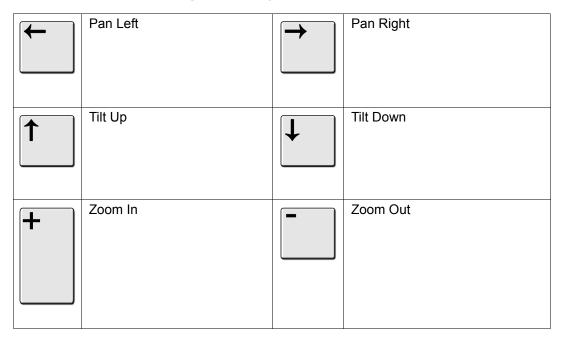
2 Select an Active Image as the video stream.

3 Select the camera control item on the overlay to activate the vPTZ control.

Refer to Figure 3-5 Camera Control Overlay on page<$chapnum>-19 for further information.

- End -

Controlling the Camera via Keyboard Shortcuts

The following keyboard shortcuts can be used to control the camera via vPTZ.

Figure 3-6 Keyboard Shortcuts

←	Pan Left		→	Pan Right
↑	Tilt Up		↓	Tilt Down
+	Zoom In		−	Zoom Out

Controlling the Camera via Keyboard Shortcuts

The camera may be controlled via vPTZ using specific keys on the keyboard.

Note

Keyboard controls can only be used when viewing an Active Image; either Active Image 1, Active Image 2, Active Image 3 or Active Image 4.

Procedure 3-9 Controlling the Camera via the Keyboard Shortcuts

Step	Action

1   Select ▷ to start the video stream if it is not already active.

The video pane will display the current camera view.

2   Select an Active Image as the video stream.

3   Select the appropriate key on the keyboard to camera to activate the vPTZ control.

Refer to Figure 3-6 Keyboard Shortcuts on page<$chapnum>-21 for further information.

- End -
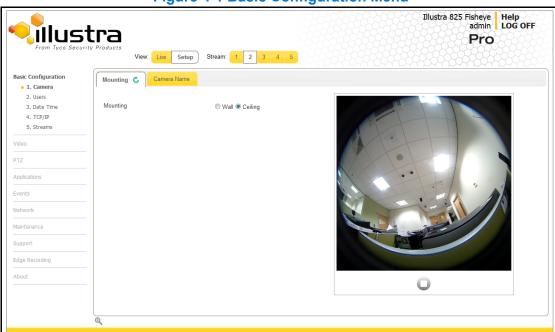
Basic Configuration Menu

When the Basic Configuration menu is selected Figure 4-1 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 Model page will be displayed.

Figure 4-1 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 a 'admin' user.

Basic Configuration includes the following settings and functions:

- 1. Camera
- 2. Users
- 3. Date Time
- 4. TCP/IP
- 5. Streams

1. Camera

This section provides access to the camera mounting options and allows you to add a camera name.

Refer to Streams on page 36 for additional information.

Mounting

Procedure 4-1 Set Mounting Position for the camera

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **1. Camera** from the **Basic Configuration** menu. The Mounting tab will display.
3	Select the required **Mounting** by selecting the radio buttons: • **Wall** • **Ceiling** The default setting is 'Ceiling'. You will be prompted to confirm the update.
4	Select **OK** to save the change and reboot the camera. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled. Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI. Or Select **Cancel**.

- End -

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 4-2 Edit the Camera Name

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **1. Camera** from the **Basic Configuration** menu.
3	Select the **Camera Name** tab. The Camera Name tab displays.
4	Enter the name of the camera in the **Camera Friendly Name** text box.

5   Select **Apply** to save the changes.

- End -

---

2. Users

In this section you are able to add a user, change a user password and a delete user account. There are three levels of access: admin, operator and user.

Refer to Appendix A: User Account Access for details on the features which are available to each role.

Note

The default Username is **admin** and the default Password is **admin**. To maintain security the password on the admin account should be changed.

Add User

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

Procedure 4-3 Add a User

Step	Action

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

2   Select **2. Users** from the **Basic Configuration** menu.

3   Select the **Add User** tab.

The Add User tab displays.

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**:

- **admin**

- **operator**

- **user**

Refer to Appendix A: User Account Access for details on the features which are 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.

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 4-4 Change User Password

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **2. Users** from the **Basic Configuration** menu. The 2. Users tab displays.
3	Select the **Change Password** tab. The Change Password tab displays.
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 -

View Current User Accounts

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

Procedure 4-5 View User Accounts

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **2. Users** from the **Basic Configuration** menu. The Users tab displays.
3	The current user accounts assigned to the camera will be displayed.

- End -

Delete a User Account

Delete a user account from the camera.

Note

The default 'admin' account cannot be deleted.

Procedure 4-6 Delete a User Account

Step	Action

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

2 Select **2. Users** from the **Basic Configuration** 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

   Select **Cancel**.

- End -

3. Date Time

Set the date and time for the camera manually or via NTP.

Setting Date Time

Set the date and time on the camera.

Procedure 4-7 Configuring the Date and Time

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **3. Date Time** from the **Basic Configuration** menu. The Date Time 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: • **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 the radio buttons: • **Manually** • **via NTP** The default setting is 'Manually'.
7	If you select Manually in step 5: **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 5: **a** Enter the **NTP Server Name** in the text box.
9	Select **Apply** to save the settings.

- End -

4. TCP/IP

Configure the IPv4 and IPv6 network settings on the camera.

IPv4

Configure the IPv4 network settings for the camera.

Procedure 4-8 Configure the IPv4 Settings

Step	Action

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

2   Select **4. TCP/IP** from the **Basic Configuration** menu.

The IPv4 tab displays.

3   Select the **Enable DHCP** check box to enable DHCP 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:

    a   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'

    b   Enter the **Network Mask** in the Network Mask text box xxx.xxx.xxx.xxx.
The default setting is '255.255.255.0'

    c   Enter the **Gateway** IP address in Gateway text box xxx.xxx.xxx.xxx.

    d   Enter the **Primary DNS Server** in the Primary DNS Server text box xxx.xxx.xxx.xxx.

    e   Enter the **Secondary DNS Server** in the Secondary DNS Server text box
xxx.xxx.xxx.xxx.

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

- End -

DHCP

DHCP can be enabled or disabled on the camera depending on your network requirements.

Procedure 4-9 Enable/Disable DHCP

Step	Action

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

2   Select **4. TCP/IP** from the **Basic Configuration** menu.

The IPv4 tab displays.

3   Select the **Enable DHCP** check box to enable DHCP and disable manual settings.

Or

Deselect **Enable DHCP** to disable DHCP and allow manual settings to be entered.

The default setting is 'Enabled'.

- End -

IPv6

Enable or disable IPv6 on the camera.

Procedure 4-10 Enable/Disable IPv6

Step	Action

---

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

2   Select **4. TCP/IP** from the **Basic Configuration** menu.

3   Select the **IPv6** tab.

The IPv6 tab displays.

4   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 -

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5. Streams

The camera allows the configuration of five independent video streams, Stream 1, Stream 2, Stream 3, Stream 4 and Stream 5. These streams can be configured via the Web GUI, as detailed here or via the Illustra API or Network Video Recorder.

There are limitations imposed when using combinations of streams, refer to Streams on page 36 for additional information.

Configuring the Web Video Stream

Adjust the settings for video displayed on the video pane.

Procedure 4-11 Configure the Video Stream settings

Step	Action

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

2 Select **5. Streams** from the **Basic Configuration** menu.

The Stream 1 tab displays.

3 Select either the **Stream 1**, **Stream 2**, **Stream 3**, **Stream 4** or **Stream 5** tab to configure the settings.

4 Select the required **Image Source** from the drop-down menu:

• **Active Image 1**

• **Active Image 2**

• **Active Image 3**

• **Active Image 4**

• **Fisheye**

• **Wall/Ceiling Panorama** (panorama option depends on mounting selection)

Refer to Streams on page 36 for additional information.

5 Select the required **Codec** by selecting the radio buttons:

• **H264**

• **MJPEG**

The default setting is 'H264'.

6 Select the required **Resolution** from the drop-down menu. The resolutions available will depend on the Image Source selected:

Active Image 1 - 4	Wall panorama Ceiling panorama	Fisheye
• 960x540	• 1920x1080	• 1936x1936
• 800x450	• 1600x900	
• 640x360	• 1280x720	
• 480x270	• 1024x576	
• 320x180	• 960x540	
	• 800x450	

- 640x360
- 480x270
- 320x180

7   Use the slider bar to select the **Frame Rate (ips)**.

The default settings are:

• **Active Image 4 -** 12 ips

• **Fisheye -** 14 ips

• **Wall/Ceiling Panorama -** 15 ips

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

The default setting is 50.

OR

9   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

     a   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.

10   Select the **Enable Secondary Stream** check box to enable this feature.

Note

If Fisheye is selected as Image Source and the Secondary Stream is changed from the default you will be prompted to perform a camera reboot. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled. Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

a If the Secondary Stream has been enabled select the required Secondary Resolution from the drop-down menu.The resolutions available will depend on the Image Source selected:

Active Image 1 - 4	Wall panorama Ceiling panorama	Fisheye
• 960x540	• 960x540	• 736x736
	• 800x450	• 640x640
	• 640x360	• 480x480
	• 480x270 (default)	• 320x320 (default)
	• 320x180	• 176x176

- End -

Video Menu

When the view menu is selected Figure 5-1 Video Menu will be displayed
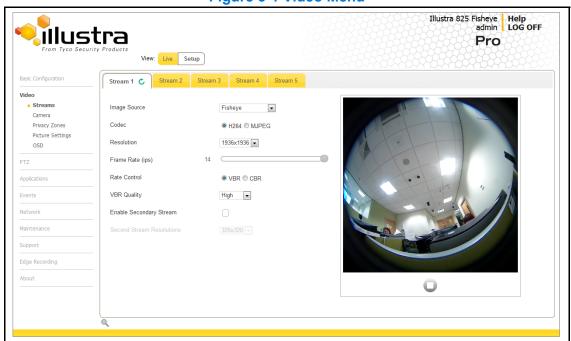
Figure 5-1 Video Menu

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

• Streams

• Camera

• Privacy Zones

• Picture Settings

• On-Screen Display (OSD)

Streams

The camera allows the configuration of up to five independent video streams, Stream 1, Stream 2, Stream 3, Stream 4 and Stream 5. These streams can be configured via the Web GUI, as detailed here or via the Illustra API.

Defining Video Streams

Video displayed on the video pane will use the settings configured in the selected stream, either Stream 1, Stream 2, Stream 3, Stream 4 or Stream 5.

Image Source

The image source for each video stream can be configured depending on the type of view required from the camera. There are five types of image source, the selections can be made from Fisheye, Ceiling or Wall Panorama and Active Image 1, 2 3 and 4.

Video Stream Combinations

There are restrictions when selecting video streams, for example:

• If Fisheye is selected as stream 1 and Ceiling/Wall Panorama is selected as stream 2 you will be unable to select further streams and Stream 3, 4 and 5 will be disabled.

• Stream 3, 4 and 5 can only be configured as an Active Image if either Stream 1 or Stream 2 is also an Active Image.

• Active Images will share the same video settings.

• If Stream 1 and Stream 2 are set to the same image source the video settings for both streams will be identical.

Possible Video Stream Combinations

Secondary Stream Disabled

When the secondary stream on the Fisheye is disabled the following stream combinations are possible:

Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Fisheye	Fisheye	Not Available	Not Available	Not Available
Fisheye	Ceiling Panorama	Not Available	Not Available	Not Available
Fisheye	Wall Panorama	Not Available	Not Available	Not Available
Fisheye	Active Image X	Active Image X	Active Image X	Active Image X
Ceiling Panorama	Fisheye	Not Available	Not Available	Not Available
Ceiling Panorama	Ceiling Panorama	Not Available	Not Available	Not Available
Wall Panorama	Fisheye	Not Available	Not Available	Not Available
Wall Panorama	Wall Panorama	Not Available	Not Available	Not Available
Active Image X	Fisheye	Active Image X	Active Image X	Active Image X
Active Image X	Active Image X	Active Image X	Active Image X	Active Image X
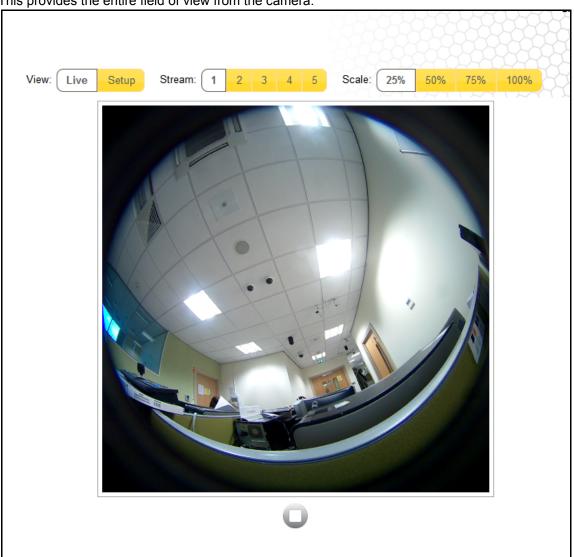
Secondary Stream Enabled

When the secondary stream on the Fisheye is enabled the following stream combinations are possible:

Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Fisheye	Fisheye	Not Available	Not Available	Not Available
Fisheye	Ceiling Panorama	Not Available	Not Available	Not Available
Fisheye	Wall Panorama	Not Available	Not Available	Not Available
Fisheye	Active Image X	Active Image X	Not Available	Not Available
Ceiling Panorama	Fisheye	Not Available	Not Available	Not Available
Wall Panorama	Fisheye	Not Available	Not Available	Not Available
Active Image X	Fisheye	Active Image X	Not Available	Not Available

Fisheye
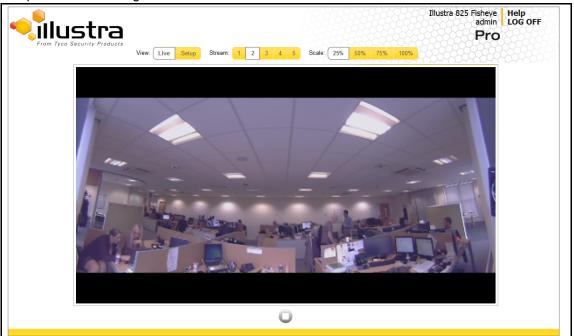
This provides the entire field of view from the camera.
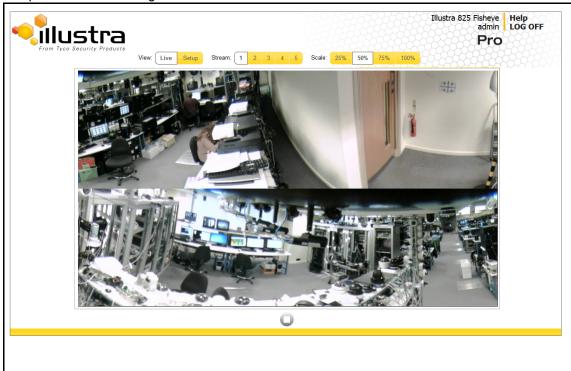
Wall Panorama

This provides a 180 degree view from the camera.
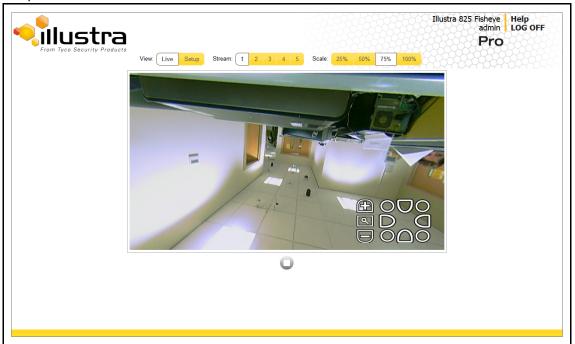
Ceiling Panorama

This provides two 180 degree views which cover the field of view from the camera.

Active Image 1, 2, 3 and 4

This provides a selected view within the cameras field of view which utilizes Virtual PTZ controls.

Alarm Video

When setting up motion detection on the camera any of the pre-configured video streams can be used for the recording of alarm video. Refer to CIFS on page 8-86 for more information on selecting a video stream for a motion detection alarm.

Integration with American Dynamics Network Video Recorders

The video stream image sources will have to be configured using the camera Web GUI prior to adding the camera to the Network Video Recorder interface. Depending on the image sources selected the camera will add as two or up to five individual streams.

If changes are made to the image source (selecting Fisheye, Ceiling/Wall Panorama and Active Stream) while the camera is configured on the Network Video Recorder the change will not be updated on the recorder and it may be necessary to remove the camera and add it again to pick up the image source change.

Integration with other Illustra API Clients

The five video streams 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 the video streams.

Procedure 5-1 Configure the Video Stream settings

Step	Action

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

2   Select **5. Streams** from the **Basic Configuration** menu.

The Stream 1 tab displays.

3   Select either the **Stream 1**, **Stream 2**, **Stream 3**, **Stream 4** or **Stream 5** tab to configure the settings.

4   Select the required **Image Source** from the drop-down menu:

• **Active Image 1**

• **Active Image 2**

• **Active Image 3**

• **Active Image 4**

• **Fisheye**

• **Wall/Ceiling Panorama** (panorama option depends on mounting selection)

Refer to Streams on page 36 for additional information.

5   Select the required **Codec** by selecting the radio buttons:

• **H264**

• **MJPEG**

The default setting is 'H264'.

6   Select the required **Resolution** from the drop-down menu. The resolutions available will depend on the Image Source selected:

Active Image 1 - 4	Wall panorama Ceiling panorama	Fisheye
• 960x540	• 1920x1080	• 1936x1936
• 800x450	• 1600x900	
• 640x360	• 1280x720	
• 480x270	• 1024x576	
• 320x180	• 960x540	
	• 800x450	
	• 640x360	
	• 480x270	
	• 320x180	

7   Use the slider bar to select the **Frame Rate (ips)**.

The default settings are:

- **Active Image 4 -** 12 ips

- **Fisheye -** 14 ips

- **Wall/Ceiling Panorama -** 15 ips

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

The default setting is 50.

OR

9   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

a   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.

10   Select the **Enable Secondary Stream** check box to enable this feature.

a   If the Secondary Stream has been enabled select the required Secondary Resolution from the drop-down menu.

Note

If Fisheye is selected as Image Source and the Secondary Stream is changed from the default resolution you will be prompted to perform a camera reboot. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled. Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

The resolutions available will depend on the Image Source selected:

Active Image 1 - 4	Wall panorama Ceiling panorama	Fisheye
• 960x540	• 960x540	• 736x736
	• 800x450	• 640x640
	• 640x360	• 480x480
	• 480x270 (default)	• 320x320 (default)
	• 320x180	• 176x176

- End -

Camera
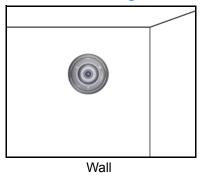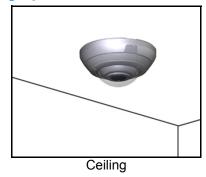
This section provides access to the camera mounting options and allows you to designate a camera name.

Mounting Position of Camera

Select the mounting position for the camera, this will depend on whether the camera has been wall mounted or ceiling mounted.

Figure 5-2 Mounting Options

Wall   Ceiling

Procedure 5-2 Set Mounting Position for the camera

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Camera** from the **Video** menu. The Mounting tab will display.
3	Select the required **Mounting** by selecting the radio buttons:

• **Wall**

• **Ceiling**

The default setting is 'Ceiling'.

You will be prompted to confirm the update.

•

4	Select **OK** to save the change and reboot the camera. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled.
	Refer to Procedure 3-1 Log in to the Camera on page 3-10 to access the camera Web GUI.
	Or
	Select **Cancel**.

- End -

Camera Name

The camera name will be displayed on the GUI banner and the on-screen display for the camera.

Note

Refer to Procedure 5-16 Display or Hide the Camera Name on page 5-55 for information on how to display the camera name on the OSD.

Procedure 5-3 Edit the Camera Name

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Camera** from the **Video** menu.
3	Select the **Camera Name** tab.
	The Camera Name tab displays.
4	Enter the name of the camera in the **Camera Friendly Name** text box.
	The default setting is 'i825Fisheye-serial number'.
5	Select **Apply** to save the changes.

- End -

Privacy Zones

Note

A privacy zone can only be created when using a Fisheye image source. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

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 pan/tilt position.

In addition, 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.

Up to 4 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.

Note

A privacy zone can only be created when using a Fisheye image source. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

Procedure 5-4 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.

3   Select the **Add Zone** tab.

The Add Zone tab displays.

4   Select ▶ to start the video stream if it is not already active.

The video pane will display the current camera view.

5   Enter the privacy zone name in the **Privacy Zone Name** text box.

6   Select **Draw**.

The image will freeze and a still image will be displayed. The Add page updates to display a **Add** and **Cancel** button.

7   Using the cursor locate the start point for the privacy zone, 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.

8　　　Release the mouse button.

The selected privacy area will turn red.

9　　　To reselect an alternative area for the privacy zone repeat steps 7 and 8.

10　　Select **Add** to save the current privacy zone.

Or

Select **Cancel**.

Note

When a new privacy zone is created it is automatically enabled, refer to Procedure 5-5 Enable/Disable a Privacy Zone to modify this setting.

- End -

Enabling or Disabling a Privacy Zone

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

Procedure 5-5 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.

The video pane will display the current camera view.

4　　　Select the corresponding **Enabled** check box to enable the privacy zone.

Or

Deselect the corresponding **Enabled** check box to disable the privacy zone.

5　　　Select ⊙ to view the corresponding privacy zone.

Note

When an Active Image 1, 2, 3, or 4 is displayed the video pane will update to display the activated privacy zone centered on the video pane.

- End -

Deleting a Privacy Zone

Delete a privacy zone from the camera.

Procedure 5-6 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.

3 Select the corresponding **Delete** check box to mark the privacy zone for deletion.

Note

More than one privacy zone can be deleted at a time. The **Select All** check box can also be used.

4 Select **Delete** to delete the selected privacy zones.

You will be prompted to confirm the deletion.

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

Or

Select **Cancel**.

- End -

Picture Settings

Adjust settings for White Balance, Picture Balance, WDR and save and restore Picture Settings.

White Balance

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

Manual White Balance (MWB) 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.

Configuring White Balance

Adjust the white balance.

Procedure 5-7 Configure Auto 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 **White Balance**. The White Balance tab displays.
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** from the drop-down menu: • **Auto Normal** • **Auto Wide** • **Manual** The default setting is 'Auto Normal'. If Manual is selected refer to Procedure 5-8 Manually Select White Balance on page 5-48.

- End -

Manually Select White Balance

Adjust the white balance manually.

Procedure 5-8 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 **White Balance**. The White Balance tab displays.
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 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%. The default settings are Red 30% and Blue 30%.

- End -

Picture Balance

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

Adjusting Picture Balance

Configure brightness, contrast and saturation.

Procedure 5-9 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 Balance** tab.

         The Picture Balance tab displays.

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:

- **Brightness**
- **Contrast**
- **Saturation (color level)**

         The video pane will update to display the new settings.

         The values range from 0% to 100%.

         The default values are 50%.

- End -

Restoring Picture Balance Defaults

Use this procedure to restore picture balance settings to factory default settings.

Procedure 5-10 Restore Picture Balance 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 Balance** tab.

         The Picture Balance tab displays.

4   Select **Defaults** to restore the default settings.

The default settings are 50%.

- End -

Wide Dynamic Range

Configuring WDR

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 which provides more detail in areas of bright but less details in areas of darkness. Selecting the higher end of the control the image is overexposed which provides more detail in the dark areas but less details in the bright areas.

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

Procedure 5-11 Disable/Enable 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 **WDR** tab.
	The WDR tab displays.
4	Select the **WDR** check box to enable WDR.
	Or
	Deselect the **WDR** check box to disable WDR.
	The default setting is 'Disabled'.
5	Use the slider bar to adjust the **WDR Level**.
	The video pane will update to display the new settings.
	The values range from 0% to 100%.
	The default value is 50%.

- End -

Flicker Control

Configuring Flicker Control

Procedure 5-12 Configure Flicker Control

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 **Flicker Control** tab.
	The flicker control tab displays.
4	Select the required flicker control setting:
	• **50Hz**
	• **60Hz**

- End -

Picture Settings

The picture options allow you to save the current settings, restore saved settings or restore to factory default settings.

Saving Picture Settings

Save the current picture settings to the camera.

Note

If the camera is rebooted or powered off, upon restart the picture settings will return to the last saved settings. If picture settings have not been saved, upon restart the camera will use the default picture settings.

Procedure 5-13 Save Current Picture 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 Settings** tab.
	The Picture Settings tab displays.
4	Select **Save** to save and retain the current picture settings.

- End -

Restoring Saved Picture Settings

Restore previously saved picture settings.

Procedure 5-14 Restore Saved Picture 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 Settings** tab.
	The Picture Settings tab displays.
4	Select **Restore** to restore the previously saved picture settings.

Note

Restore will only be enabled if picture settings have been previously saved.

Step	Action
5	You will be prompted to confirm the overwrite of the current camera settings.

6 Select **OK** to confirm the overwrite.

OR

Select **Cancel**.

- End -

Restoring Factory Default Picture Settings

Restore the factory default picture settings.

Procedure 5-15 Restore Factory Picture 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 Settings** tab.

The Picture Settings tab displays.

4 Select **Defaults** to restore the factory picture settings.

5 You will be prompted to confirm the overwrite of the current camera settings with the factory defaults.

6 Select **OK** to confirm the overwrite.

OR

Select **Cancel**.

- End -

On-Screen Display (OSD)

Within OSD you can set the display options for camera name and time.

Displaying the Camera Name

The camera name will be shown on the on-screen display (OSD) if the option is enabled.

Procedure 5-16 Display or Hide the Camera Name

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **OSD** from the **Video** menu.
	The name tab displays.
3	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'.

- End -

Displaying the Camera Time

The camera time will be shown on the on-screen display (OSD) if the option is enabled.

Procedure 5-17 Display or Hide the Camera Time

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **OSD** from the **Video** menu.
3	Select the **Time** tab.
	The Time tab displays.
4	Select the **Time** check box to display the camera name in the OSD.
	Or
	Deselect the **Time** check box to hide the camera name in the OSD.
	The default setting is 'Disabled'.

- End -

Configuration and User Guide

PTZ Menu

When the view menu is selected Figure 6-1 View Menu will be displayed.
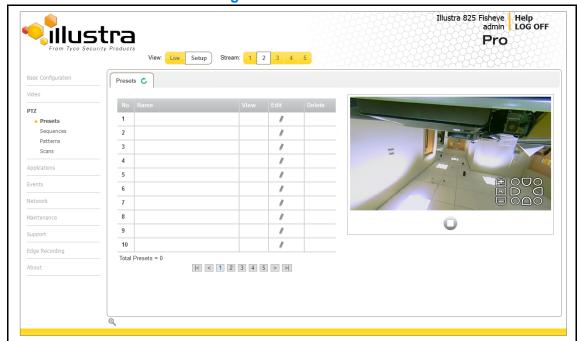
Figure 6-1 View Menu

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

• Presets

• Sequences

• Patterns

• Scans

Note

1   The selected Stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to complete functions in the PTZ section. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

3   Preset, Patterns and Sequences are unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which they are defined.

Presets

A Preset is a pre-positioned camera scene that you program using the pan, tilt and zoom options. A preset is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it is defined. Up to 96 presets can be programmed for each active image source on the camera.

Adding a new Preset

Create a new preset position on the camera.

Note

1 The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2 A preset is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it is defined. Up to 96 presets can be programmed for each Active Image source on the camera.

Procedure 6-1 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.
	• Pan, Tilt and Zoom.
	Refer to Procedure 3-8 Controlling the Camera via the Video Pane on page 3-19 to make the required 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)
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.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   A preset is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it was defined.

Procedure 6-2 View 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   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.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   A preset is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it was defined.

Procedure 6-3 Edit an existing 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   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.

Refer to Controlling the Camera via PTZ on page 19 to make the required 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)

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**.

- End -

Deleting a Preset

Delete an existing preset position from the camera.

Procedure 6-4   Delete 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 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 -

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.

Adding a Sequence

Create a new sequence on the camera using defined presets. Refer to Procedure 6-1 Add a Preset on page 6-59 if no presets have yet been added to the camera.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the sequence function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

3   A Sequence is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it is defined.

Procedure 6-5 Add a Sequence

Step	Action

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

2   If no presets have been created refer to Procedure 6-1 Add a Preset before continuing to step 2.

3   Select **Sequences** from the **PTZ** menu.

4   Select the **Add Sequence** tab.

The Add Sequence tab displays.

5   Enter the sequence name in the **Sequence Name** text box.

6   Select a preset from the **Preset Name** drop-down menu.

7   Enter a dwell time in seconds in the **Dwell Time (sec)** text box.

8   Select **Add**. The preset is now listed as part of the sequence.

9   Repeat steps 5 to 7 to add further presets to the sequence.

Note

Up to 16 presets can be added to a sequence.

10   Select **Apply** to save the sequence.

- End -

Activating a Sequence

Activate a selected sequence.

Note

---

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

3   A Sequence is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it is defined.

Procedure 6-6   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.

Note

---

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-7 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 6-8 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 -

Patterns

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

Adding a Pattern

Create a new pattern.

Note

1   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.

2   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the patterns function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

3   A Pattern is unique to the Active Image source (either Active Image 1, 2, 3 or 4) on which it is defined.

4   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-9 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.

5   Enter the pattern name in the **Pattern Name** text box.

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 Controlling the Camera via PTZ on page 19 to make the required adjustments.

8   Select **Add** to save the pattern.

Or

Select **Cancel**.

- End -

Running a Pattern

Activate an existing pattern.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the preset function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-10 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.

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 pattern.

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 6-11 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**.

<div align="center">

- End -

</div>

Repeating a Pattern

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

Procedure 6-12 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 selected pattern to run only once.

The default setting is 'Enabled'.

<div align="center">

- End -

</div>

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.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the scans function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-13 Set Scan Limits

Step	Action

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

2   Select **Scans** from the **PTZ** menu.

3   Select the **Scan Limits** tab.

The Scans Limits tab displays.

4   Select ▶ to start the video stream if it is not already active.

The video pane will display the current camera view.

5   Adjust the camera view as required to locate the left scan limit.

Refer to Controlling the Camera via PTZ on page 19 to make the necessary adjustments.

6   Select **Set Left** to set the displayed position as the left limit.

7   Adjust the camera view as required to locate the right scan limit.

8   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.

- End -

Set Scan Limits to Default Settings

Return the camera to the default scan settings.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the scans function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-14 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 **Scan Limits** tab.

The Scans Limits 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.

Note

1   The selected stream must use an Active Image source (either Active Image 1, 2, 3 or 4) to use the scans function. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   Patterns, Sequences and Scans can only be run on one Active Image source at a time. Other Active Image sources configured on the camera can utilize vPTZ if required.

Procedure 6-15 Activate a Scan

Step	Action

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

2   Refer to Procedure 6-13 Set Scan Limits on page 6-70 before activating a scan.

3   Select **Scans** from the **PTZ** menu.

The Scans tab displays.
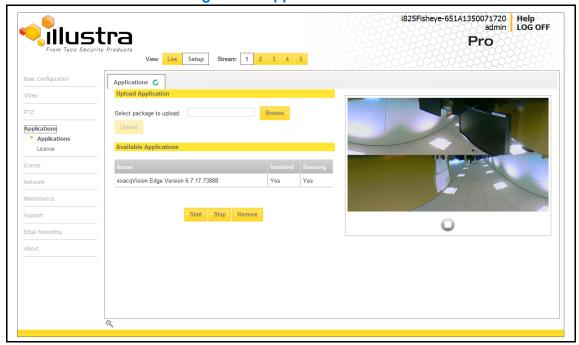
4   Select [▶] to start the video stream if it is not already active.

The video pane will display the current camera view.

5   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.

6   The video pane will update to display the selected scan.

The scan will run continuously until interrupted by a camera command, pattern, preset or alarm.

- End -

Applications

When the applications menu is selected Figure 7-1 Applications Menu will be displayed.

Figure 7-1 Applications Menu

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

- License
- exacqVision Edge

Applications

Applications support allow 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 Illustra.

⚠ Caution

You should only use application files that have been provided by Tyco Security Products.

exacqVision Edge

exacqVision Edge (also referred to as edge server) is an Illustra application 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'.

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 7-1 Install exacqVision Edge Server using Purchased micro 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 7-2   Install exacqVision Edge Server using the Camera GUI

Step	Action
1	Insert a blank micro 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 micro SD Card is not detected for example when there is no micro 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 exacqVsion Server.

Procedure 7-3 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 7-4 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 micro 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.

License

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

Adding a License

Add a license to the camera.

Procedure 7-5 Adding a License

Step	Action
1	Select Setup on the GUI banner to display the setup menus.
2	Select **License** from the Applications menu.
	The License tab displays.
3	Select **Browse** in the Upload License area.
	The File Upload dialog will display.
4	Navigate to the location where the license file has been saved.
5	Select the license file then select **Open**.
6	Select **Upload** in the Upload License area.
7	The application file will be uploaded to the camera.

- End -

Available Licenses

View licences which have been uploaded to the camera. Each can be started, stopped and removed.

Procedure 7-6 View Licenses

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **License** from the Applications menu.
	The License tab displays.
3	Available licences will list all licenses available on the camera along with their expiry date.

- End -

Uploading an Application

Add a application to the camera.

Procedure 7-7 Upload an Application

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Applications**.
	The Applications tab displays.
3	Select **Browse** in the Upload Application area.
	The File Upload dialog will display.
4	Navigate to the location where the application file has been saved.
5	Select the application file then select **Open**.
6	Select **Upload** in the Upload Application area.
	The application file will be uploaded to the camera.

- End -

Available Applications

View applications which have been uploaded to the camera. Each can be started, stopped and removed.

Procedure 7-8 Start, Stop or Remove an Application

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Applications**.
	The Applications tab displays.
3	Available Application will list all applications available on the camera:
4	Select the corresponding Application checkbox to Start, Stop or Remove.
	• Select **Start** to start the application running.
	• Select **Stop** to stop the application running.
	• Select **Remove** to remove the application.

- End -

Configuration and User Guide

Events Menu

When the Event Menu is selected Figure 8-1 Events Menu will be displayed
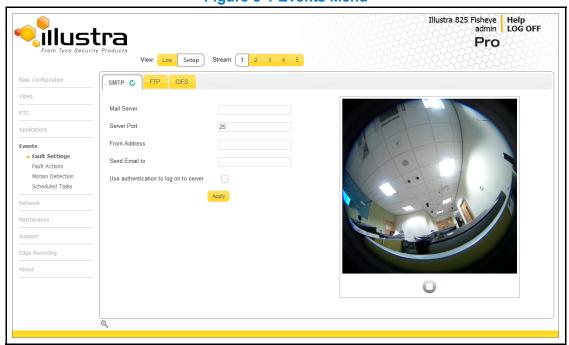
Figure 8-1 Events Menu

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

• Fault Settings

• Fault Actions

• Motion Detection

• Scheduled Tasks

Fault Settings

Configure the SMTP, FTP and CIFS details which are required when setting Fault Actions for Motion Detection alerts.

SMTP

Configure the SMTP settings to allow e-mail alerts to be sent from the camera when a motion detection alert is triggered.

Note

SMTP settings can also be configured via the Events > Fault Settings menu.

Configure SMTP

SMTP settings must be configured to enable email alerts when using motion alerts.

Procedure 8-1 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	Enter the IP Address of the mail server in the **Mail Server** text box.
4	Enter the server port in the **Server Port** text box.
	The default setting is '25'.
5	Enter the from email address in the **From Address** text box.
6	Enter the email address to send email alerts to in the **Send Email to** text box.
7	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'.
8	If 'Use authentication to log on to server' check box has been selected:
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.

9   Select **Apply** to save the settings.

Note

Refer to Procedure 8-2 Test the SMTP Settings on page 8-83 to confirm that the SMTP settings are working as expected.

- End -

Test SMTP Settings

Test the SMTP settings that have been configured in Procedure 8-1 Configure SMTP Settings.

Procedure 8-2 Test the 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.

If Procedure 8-1 Configure SMTP Settings have been configured a Test button will be displayed.

3   Select **Test**.

A sample email will be sent to the specified email address to confirm that SMTP settings are correct.

The camera will display a message confirming that the transfer was either successful or failed.

- End -

FTP

Configure the FTP settings for the FTP server. This is required to send video files from triggered motion detection alerts.

Configuring FTP Server Settings

FTP must be configured to enable FTP video alerts when using motion detection.

Note

FTP settings can also be configured via the Network menu.

Procedure 8-3 Configure FTP Server Settings

Step	Action

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

2 Select **Fault Settings** from the **Events** menu.

3 Select the **FTP** tab.

The FTP tab displays.

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 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'.

7 If Use authentication to log on to server check box has been selected:

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

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

8 Select **Apply** to save the settings.

Note

Refer to Procedure 8-4 Test the FTP Settings on page 8-85 to confirm that the FTP settings are working as expected.

- End -

Test FTP Settings

Test the SMTP settings that have been configured in Procedure 8-3 Configure FTP Server Settings.

Procedure 8-4 Test the FTP Settings

Step	Action

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

2   Select **Fault Settings** from the **Events** menu.

3   Select the **FTP** tab.

The FTP tab displays.

If Procedure 8-3 Configure FTP Server Settings have been configured a Test button will be displayed.

4   Select **Test**.

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

- End -

CIFS

The CIFS feature permits files generated from the camera such as alarm related video to be directed to network attached file storage via the Common Internet File System protocol. This supplements existing distribution methods such as FTP, SMTP and email.

Procedure 8-5 Configure CIFS Server Settings

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Fault Settings** from the **Events** menu.
3	Select the **CIFS** tab.
	The CIFS tab displays.
4	Select the **Enable** check box to enable CIFS.
	OR
	Deselect the **Enable** check box to disable CIFS.
	The default setting is 'Enabled'.
5	Enter the **Network Path i**n the text box. Use the following format, //<IP>/foldername.
6	Enter the **Domain Name** in the Domain Name in the text box.
7	Enter the **Username** in the text box.
8	Enter the **Password** in the text box.

- End -

Fault Actions

The camera can be commanded to carry out a specified operation when a motion detection alert is triggered these triggers are defined using fault actions. Up to 5 fault actions can be configured on the camera.

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 the other.

Fault Actions

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

• Record a clip to 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 to send an SMTP email, video files and images from triggered motion detection alerts.

Creating a Fault Action

Configure a fault action which can be triggered by a motion detection alert.

Procedure 8-6 Create a Fault Action

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Fault Actions** from the **Events** menu. The Fault Actions tab displays.
3	Select an entry on the fault action list and enter a fault action name in the **Name** text box.
4	Select the **Record** check box to enable the Record Settings configured in Procedure 8-3 Configure FTP Server Settings.
5	Select the **Email** check box to send an e-mail to the email address configured in Procedure 8-1 Configure SMTP Settings.

6   Select the **FTP** check box to send a video file to the FTP details configured in Procedure 8-3 Configure FTP Server Settings.

Note

1   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.

2   AVI clips can only be sent via FTP if a microSD card has been installed and FTP has been selected.

3   The selected pre and post event duration buffer will be included in any video clips sent via FTP.

- End -

Editing a Fault Action

Modify the details of an existing fault action.

Procedure 8-7 Edit an Alarm

Step	Action

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

2   Select **Fault Actions** from the **Events** menu.

The Fault Actions tab displays.

3   Select a entry on the fault action list, the following can be edited:

• Name

• Record - Enable/Disable

• Email - Enable/Disable

• FTP - Enable/Disable

• CIFS - Enable/Disable

- End -

Motion Detection

Motion detection will allow you to define a region of interest in the camera's field of view which can be used to trigger a Fault Action. Multiple areas of interest can be selected in the field of view but only one Fault Action may be triggered.

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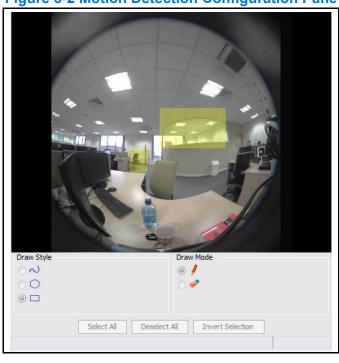
To ensure you get the highest quality results when using Motion Detection on the camera it is recommended that you adhere to the following:

• An object exhibiting motion needs to be at least 8x8 pixels in size to be detected.

• The color of the object (in grayscale) should be approximately 10-15% different than the background.

• The frame rate of the video should be high enough to capture the object in one or more captured frames.

• Exclude the Time Stamp region from motion detection, because the time stamp changes constantly and could register as motion.

• 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.

• The Frames per Second rate for recordings must be 7fps or higher.

Motion Detection Configuration Pane

The regions of interest within the camera's field of view are defined using the Motion Detection Configuration Pane. The regions of interest are set by drawing/highlighting an area on the pane. This is done by using the drawing tools on the Motion Detection Configuration Pane as seen in .

Figure 8-2 Motion Detection Configuration Pane

○ ∿	Draw using free draw by clicking on the window and dragging to draw a shape. The area of detection is highlighted in yellow.
○ ⬡	Draw a polygon by clicking once in the window, and use the lines to form the region of interest. Click again to confirm the line. Double click when the shape is complete to finalise the detection area. The detection area is highlighted in yellow.
◎ ▭	Draw a rectangle by clicking once in the window and dragging the cursor over the camera view to highlight the area of interest. The detection area is highlighted in yellow when the mouse button is released.
◎ ✏	Select Draw when you want the draw style to draw a detection area.
○ ✏	Select Erase when you want the draw style to erase sections of a detection area.
Select All	Select when you want to select end entire camera view.

Deselect All	This will remove the active selections.
Invert Selection	This will invert the current active selection.

Creating a Motion Detection Alert

Create a motion detection alert on the camera.

Note

1   If the motion detection video stream is changed after the region of interest has been drawn it will be necessary to re-draw a new region.

2   If the stream settings are modified the motion detection will be disabled and it will be necessary to enable motion detection again if required.

3   Motion detection can only be enabled on a video stream that uses H.264.

Procedure 8-8 Create a Motion Detection Alert

Step	Action

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

2   Select **Motion Detection** from the **Events** menu.

The Fault Actions tab displays.

3   When this tab is accessed you will be prompted to authorise the Motion Detection Configuration Pane applet, a Security Warning window will display as seen in Figure 8-3 Security Warning for Motion Detection.

Figure 8-3 Security Warning for Motion Detection

4 Select the **I accept the risk and want to run this app** check box.

Note

To prevent this applet appearing for future motion detection, change security settings in the browser.

5 Select **Run**.

The Motion Detection Configuration pane will be displayed.

6 Select **Enable motion detection** to enable Motion Detection on the camera.

OR

Deselect **Enable motion detection** to disable Motion Detection on the camera.

7 Select the video stream to set the motion detection alert on from the **Stream** drop-down menu. The Motion Detection Configuration Pane will update to display the selected stream.

Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

Note

If the motion detection video stream is changed after the region of interest has been drawn it will necessary to re-draw a new region on the new stream.

8 Select **Edit** to enable the drawing tools on the Motion Detection Configuration Pane.

9 Use the drawing tools as described in Motion Detection Configuration Pane to draw the region of interest on the pane. Multiple selections can be made.

Note

If the motion detection video stream is changed after the region of interest has been drawn it will be necessary to re-draw a new region on the new stream.

10 Select the fault action from the **Action** drop-down menu.

This fault action will be activated when motion is detected in the selected region of interest.

Refer to Procedure 8-6 Create a Fault Action on page 8-87 if a fault action has not yet been defined.

11   Select the sensitivity from the Sensitivity drop-down menu:

- Highest
- High
- Medium
- Low
- Lowest

12   Select **Apply** to save the changes.

- End -

Enable or Disable a Motion Detection Alert

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

Procedure 8-9 Enable or Disable a Motion Detection Alert

Step	Action

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

2   Select **Motion Detection** from the **Events** menu.

The Fault Actions tab displays.

3   When this tab is accessed you will be prompted to authorise the Motion Detection Configuration Pane applet, a Security Warning window will display as seen in Figure 8-3 Security Warning for Motion Detection.

4   Select the **I accept the risk and want to run this app** check box.

5   Select **Run**.

The Motion Detection Configuration pane will be displayed.

6   Select **Enable motion detection** to enable Motion Detection on the camera.

OR

Deselect **Enable motion detection** to disable Motion Detection on the camera.

7   Select **Apply** to save.

- 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, Monday to Friday with a different task for weekend or holiday operation.

Note

1   Scheduled Tasks must use an Active Image source either Active Image 1, 2, 3 or 4. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

2   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 the other.

Creating a Scheduled Task

Create a new scheduled task.

Note

Scheduled Tasks must use an Active Image source either Active Image 1, 2, 3 or 4. Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40 to change settings for the video stream.

Procedure 8-10 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** menu.

3   Select the **Add Task** tab.

The Add Task tab displays.

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**

• **Days of Month**

If week days is selected you will be required to choose the days on which days the task will run. Select the check box beside the day to add that day to the task frequency.

If days of month is selected you will be required to enter the 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.

7   Select the pre-configured active image source from the **Image Source** drop-down menu.

Refer to Streams on page 5-36 for further information.

8   Select the required **Action**:

- **Preset**

- **Pattern**

- **Sequence**

- **Scan**

- **None**

Note

Preset, Pattern, Sequence and Scans will only be available if the selected image source is an Active Image.

9   If an action is selected choose type of action to perform from the **Action Parameter** drop-down menu.

10   Select **Apply**.

Select the **Scheduled Tasks** tab to display a list of tasks currently set on the camera.

- End -

Editing a Scheduled Task

Edit the details for an existing scheduled task.

Procedure 8-11 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** menu.

The Scheduled Tasks tab displays.

3   Select ⟋ to edit the corresponding task.

The task will open in the Edit Task tab.

4   Changes can be made to the following:

- Task Name

- Start Time (HH:MM)

- Task Frequency

- Action

5   Select **Apply** to save the changes.

- End -

Deleting a Scheduled Task

Delete an existing scheduled task.

Procedure 8-12 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** menu.

The Scheduled Tasks tab displays.

3   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.

4   Select **Delete** to delete the selected scheduled tasks.

You will be prompted to confirm the deletion.

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

Or

Select **Cancel**.

- End -

Network Menu

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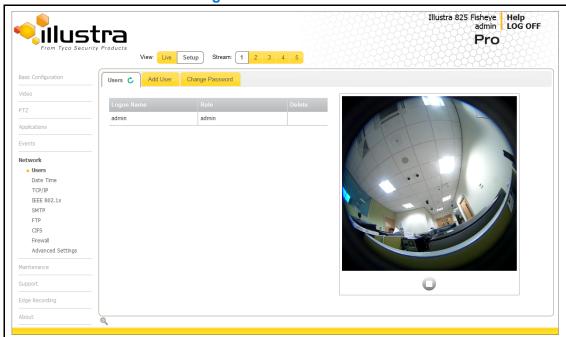
Figure 9-1 Network Menu

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

• Users

• Date Time

• TCP/IP

• IEEE 802.1x

• SMTP

• FTP

• CIFS

• Firewall

• Advanced Settings

Users

In this section you are able to add, change passwords and delete user accounts. There are three levels of access: admin, operator and user.

Refer to Appendix A: User Account Access for details on the features which are available to each role.

Add User

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

Procedure 9-1 Add a User

Step	Action

1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Users** from the **Network** menu.
3	Select the **Add User** tab.
	The Add User tab displays.
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**:
	• **admin**
	• **operator**
	• **user**
	Refer to Appendix A: User Account Access for details on access areas for 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.
7	Enter the same password in the **Confirm Password** text box.
8	Select **Apply** to save the settings.

- End -

Changing the User Accounts Password

Change the password of an existing user account.

Procedure 9-2 Change User Password

Step	Action

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

2   Select **Users** from the **Network** menu.

3   Select the **Change Password** tab.

        The Change Password tab displays.

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 -

View Current User Accounts

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

Procedure 9-3 View User Accounts

Step	Action

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

2   Select **Users** from the **Network** menu.

        The Users tab displays.

3   The current user accounts assigned to the camera will be displayed.

- End -

Delete a User Account

Delete a user account from the camera.

Note

The default 'admin' account cannot be deleted.

Procedure 9-4 Delete a User Account

Step	Action

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

2   Select **Users** from the **Network** 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

            Select **Cancel**.

<div align="center">

- End -

</div>

Date Time

Set the date and time for the camera manually or via NTP.

Setting Date Time

Configure the date and time settings on the camera.

Procedure 9-5 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 **Network** menu.

The Date Time 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:

- **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 the radio buttons:

- **Manually**
- **via NTP**

The default setting is 'Manually'.

7 If you select Manually in step 5:

    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 5:

    a Enter the **NTP Server Name** in the text box.

9 Select Apply to save the settings.

- End -

TCP/IP

Configure the IPv4 and IPv6 settings on the camera.

IPv4

Configure the IPv4 settings for the camera.

Procedure 9-6 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.

       The IPv4 tab displays.

3   Select the **Enable DHCP** check box to enable DHCP and disable manual settings.

       Or

       Deselect E**nable DHCP** to disable DHCP and allow manual settings to be entered.

       The default setting is 'Enabled'.

4   If Enable DHCP has been disabled:

       a   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'

       b   Enter the **Network Mask** in the Network Mask text box xxx.xxx.xxx.xxx. The default setting is '255.255.255.0'

       c   Enter the **Gateway** IP address in Gateway text box xxx.xxx.xxx.xxx.

       d   Enter the **Primary DNS Server** in the Primary DNS Server text box xxx.xxx.xxx.xxx.

       e   Enter the **Secondary DNS Server** in the Secondary DNS Server text box xxx.xxx.xxx.xxx.

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

IPv6

Enable IPv6 on the camera.

Procedure 9-7 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** tab.

       The IPv6 tab displays.

4   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 -

DHCP

DHCP can be enabled or disabled on the camera depending on your network requirements.

Procedure 9-8 Enable/Disable DHCP

Step	Action

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

2   Select **TCP/IP** from the **Network** menu.

The IPv4 tab displays.

3   Select the **Enable DHCP** check box to enable DHCP and disable manual settings.

Or

Deselect **Enable DHCP** to disable DHCP and allow manual settings to be entered.

The default setting is 'Enabled'.

- 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 or EAP. Both PEAP and TLS methods are supported.

Procedure 9-9 Configure IEEE 802.1x Security

Step	Action

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

2   Select **IEEE 802.1x** from the **Network** menu.

The EAP Settings tab displays.

3   Select the **Enable IEEE802.1x** checkbox to enable IEEE802.1x security.

OR

De-select the **Enable IEEE802.1x** checkbox to disable IEEE802.1x security.

4   Select the **EAPOL Version** from the drop-down menu.

5   Select the **EAP Method** using the radio buttons:

• **PEAP**

• **TLS**

6   Enter the **EAP Identity** name in the textbox.

7   Select **Upload** to navigate to the CA Certificate location.

  a   The Open file dialog will be displayed.

  b   Navigate to the location where the certificate has been saved.

  c   Select the file and select **Open**.

8   Select **Upload**.

The upload process will start.

9   If PEAP has been selected:

  a   Enter the **Password** in the text box.

10   If TLS has been selected:

  a   Select **Upload**.

  b   Navigate to the location where the Client Certificate has been saved.

  c   Select the file and select **Open**.The upload will start.

  d   Enter the **Private Key Password** in the textbox.

- End -

SMTP

Configure the SMTP settings to allow e-mail alerts to be sent from the camera when a motion detection alert is triggered.

Note

SMTP settings can also be configured via the Events > Fault Settings menu.

Configure SMTP

SMTP settings must be configured to enable email alerts when using motion alerts.

Procedure 9-10 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   Enter the IP Address of the mail server in the **Mail Server** text box.

4   Enter the server port in the **Server Port** text box.

         The default setting is '25'.

5   Enter the from email address in the **From Address** text box.

6   Enter the email address to send email alerts to in the **Send Email to** text box.

7   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'.

8   If 'Use authentication to log on to server' check box has been selected:

         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.

9   Select **Apply** to save the settings.

         Note

         Refer to Procedure 9-11 Test the SMTP Settings on page 9-106 to confirm that the SMTP settings are working as expected.

- End -

Test SMTP Settings

Test the SMTP settings that have been configured in Procedure 9-10 Configure SMTP Settings.

Procedure 9-11 Test the 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.

   If Procedure 9-10 Configure SMTP Settings have been configured a Test button will be displayed.

3   Select **Test**.

   A sample email will be sent to the specified email address to confirm that SMTP settings are correct.

   The camera will display a message confirming that the transfer was either successful or failed.

- End -

FTP

Configure the FTP settings for the FTP server. This is required to send video files from triggered motion detection alerts.

Note

FTP settings can also be configured via the Events > Fault Settings menu.

Configuring FTP Server Settings

FTP must be configured to enable FTP video alerts when using motion detection.

Procedure 9-12 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 FTP** checkbox to enable FTP settings.
	OR
	De-select the **Enable FTP** checkbox to disable FTP settings.
4	Select the **Secure FTP** checkbox to enable Secure FTP settings.
	OR
	De-select the **Secure FTP** checkbox to Secure FTP settings.
5	Enter the IP address of the FTP Server in the **FTP Server** text box.
6	Enter the FTP port in the **FTP Port** text box.
	The default setting is 21.

Note

If Secure FTP has been enabled the default port setting is 22.

Step	Action
7	Enter the FTP username in the **Username** text box.
8	Enter the FTP password in the **Password** text box.
9	Enter the required **Upload Path** in the text box.
10	If required you can limit the file transfer rate:
a	Select the **Limit Transfer Rate** checkbox to enable a transfer limit on the FTP sever.
b	Enter a **Max Transfer Rate (Kbps)** in the text box.

11   Select **Apply** to save the settings.

Note

Refer to Procedure 9-13 Test the FTP Settings on page 9-108 to confirm that the FTP settings are working as expected.

- End -

Test FTP Settings

Test the SMTP settings that have been configured in Procedure 9-12 Configure FTP Server Settings.

Procedure 9-13 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.

If Procedure 9-12 Configure FTP Server Settings have been configured a Test button will be displayed.

3   Select **Test**.

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

- End -

CIFS

The CIFS feature permits files generated from the camera such as alarm related video to be directed to network attached file storage via the Common Internet File System protocol. This supplements existing distribution methods such as FTP, SMTP and email.

Note

CIFS settings can also be configured via the Events > Fault Settings menu.

Procedure 9-14 Configure CIFS Server Settings

Step	Action

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

2   Select **Fault Settings** from the **Events** menu.

3   Select the **CIFS** tab.

The CIFS tab displays.

4   Select the **Enable** check box to enable CIFS.

OR

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

The default setting is 'Enabled'.

5   Enter the **Network Path i**n the text box.

6   Enter the **Domain Name** in the Domain Name in the text box.

7   Enter the **Username** in the text box.

8   Enter the **Password** in the text box.

- End -

Firewall

Configure the Basic Filtering and Address Filtering for the Firewall.

Basic Filtering

Enable or disable basic filtering for the camera this includes:

• ICMP (Internet Control Message Protocol) Blocking

• RP (Reverse Path) Filtering

• SYN Cookie Verification.

Procedure 9-15 Enable/Disable Basic Filtering

Step	Action

1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Firewall** from the **Network** menu.
	The Basic Filtering tab displays.
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 which are denied or allowed access to the camera.

Procedure 9-16 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 **Network** menu.

3   Select the **Address Filtering** tab.

The Address Filtering tab displays.

4   Select the type of **Address Filtering** required:

• **Off**

• **Allow**

• **Deny**

5   If Allow or Deny has been selected:

a   Enter an IP or MAC Address to 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 9-17 Edit an Address Filter

Step	Action

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

2   Select **Firewall** from the **Network** menu.

3   Select the **Address Filtering** tab.

The Address Filtering tab displays.

4   Select the type of **Address Filtering** to view:

• **Allow**

• **Deny**

5   Select [/] to edit the corresponding address filter.

6   Select **Apply** to save the changes to the address filter.

7   Edit the IP or MAC Address in the **IP or MAC Address** text box.

8   Select **Add** to save the changes.

Or

Select **Cancel**.

- End -

Deleting an Address Filter

Delete an existing address filter.

Procedure 9-18 Delete an Address Filter

Step	Action

---

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

2   Select **Firewall** from the **Network** menu.

3   Select the **Address Filtering** tab.

The Address Filtering tab displays.

4   Select the type of **Address Filtering** to delete:

• **Allow**

• **Deny**

5   Select ▯ to delete the corresponding address filter.

- End -

Advanced Settings

In this section you can configure Remote Access, HTTPS Certificates, Session Timeout and Dynamic DNS.

Remote Access

SSH Enable

Enables Secure Shell access into the camera, if remote access is permitted by the camera network. This will also enable Tyco Security Products 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 this when it is requested by Tyco Security Products Level 3 Technical Support.

Procedure 9-19 Configure SSH

Step	Action

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

2   Select **Advanced Settings** from the **Network** menu.

3   Select the **Remote Access** tab.

The Remote Access tab displays.

4   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 is always enabled.

ONVIF Discovery Mode

Enable or disable ONVIF discovery on the camera.

Procedure 9-20 Enable/Disable ONVIF Discovery Mode

Step	Action

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

2 Select **Advanced Settings** from the **Network** menu.

3 Select the **Remote Access** tab.

The Remote Access tab displays.

4 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.

Procedure 9-21 Enable/Disable ONVIF User Authentication

Step	Action

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

2 Select **Advanced Settings** from the **Network** menu.

3 Select the **Remote Access** tab.

The Remote Access tab displays.

4 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 -

HTTPS

Upload a HTTPS Certificate

User can select the 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 9-22 Add a HTTP/HTTPS Certificate

Step	Action

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

2   Select **Advanced Settings** from the **Network** menu.

3   Select the **HTTP/HTTPS** tab.

The HTTP/HTTPS tab displays.

4   Select the **HTTP Method** required:

- **HTTP**

- **HTTPS**

- **Both**

5   Select **Browse**.

The Choose file dialog will be displayed.

6   Navigate to the location where the HTTPS certificate has been saved.

Select the backup file then select the **Open** button.

Note

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

7   Select **Upload**.

You will be prompted to confirm that you would like to upload the HTTPS certificate.

8   Select **OK** to confirm the upload.

Or

Select **Cancel**.

- End -

View a HTTP/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 9-23 View a HTTP/HTTPS Certificate

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Advanced Settings** from the **Network** menu.
3	Select the **HTTP/HTTPS** tab.
	The HTTP/HTTPS tab displays.
4	Select **View**.
	A dialog will display the current certificate information.
5	Select **OK** to close the dialog.

- End -

Delete a HTTP/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 9-24 Delete a HTTPS Certificate

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Advanced Settings** from the **Network** menu.
3	Select the **HTTP/HTTPS** tab.
	The HTTP/HTTPS tab displays.
4	Select **Delete**.
	Select **OK** to confirm the deletion or **Cancel**.

- End -

Session Timeout

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

Procedure 9-25 Set a Session Timeout time

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Advanced Settings** from the **Network** menu.

3   Select the **Session Timeout** tab.

The Session Timeout tab displays.

4   Use the slider bar to select the **Session Timeout (mins)**.

The default setting is 60 minutes.

- End -

Dynamic DNS

Dynamic DNS 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.

Dynamic DNS

Configure the Dynamic DNS settings for the camera.

Procedure 9-26 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.

Or

Deselect **Service Enable** check box to disable Dynamic DNS.

The default setting is 'Disabled'.

4   If Service Enable has been enabled:

    a   Enter the Camera Alias in the text box.

    b   Select a Service Provider from the drop-down list:

        •**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.

<div align="center">

- End -

</div>

Configuration and User Guide

Maintenance Menu

When the Maintenance menu is selected Figure 10-1 Maintenance Menu will be displayed.

Figure 10-1 Maintenance Menu

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

- Backup/Restore
- Camera Upgrade
- Reboot
- Reset

Backup/Restore

Backup camera data and restore from a previously saved data file.

Save Camera Data

The configuration settings of the camera can be saved to a data file. The data file can be saved to a specified location and 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 10-1 Backup Camera Data

Step	Action

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

2   Select **Backup/Restore** from the **Maintenance** menu.

    The Backup/Restore tab displays.

3   Select **Backup**.

    You will be prompted to save the backup file.

4   Select a location to save the backup file.

5   Select **Save**.

- End -

Restore Camera Data

The camera has the ability to restore its configuration from a previously saved configuration file.

Note

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

Procedure 10-2 Restore Camera Data

Step	Action

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

2   Select **Backup/Restore** from the **Maintenance** menu.

    The Backup/Restore tab displays.

3   Select **Browse**.

The Choose file dialog will be displayed.

4   Navigate to the location where the backup file has been saved.

Select the backup file then select the **Open** button.

5   Select **Upload**.

The file will transfer to the camera and a "Camera Restore" page with a progress bar will be displayed.

6   The Log in page will be displayed.

Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

- End -

Camera Upgrade

Upgrade Camera Firmware

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 10-3 Upgrade Camera Firmware

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Camera Upgrade** from the **Maintenance** menu.
	The Camera Upgrade tab displays.
3	Select **Browse**.
	The Choose file to Upload dialog will be displayed.
4	Navigate to the location where the firmware file has been saved.
	Select the backup file then select the **Open** button.
5	Select **Upload**.
	The file transfer will begin. Do not disconnect power to the camera during the upgrade process. The camera restarts automatically after the updates have been completed, this can take from 1 to 10 minutes.
6	The Log in page will be displayed.
	Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

- End -

Reboot

To perform a physical reboot of the camera, refer to Procedure 19-1 Reboot the camera using the Reboot/Reset Switch on page 19-178.

Rebooting the Camera

Perform a reboot of the camera.

Procedure 10-4 Reboot the Camera

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Reboot** from the **Maintenance** menu.
	The Reboot tab displays.
3	Select **Reboot**.
	You will be prompted to confirm the camera reboot.
4	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**.
5	The Log in page will be displayed.
	Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

- End -

Reset

To perform a physical reset of the camera, refer to Procedure 19-2 Reset the Camera to Factory Default Settings using the Reset/Reboot Switch on page 19-178.

Reset the Camera to Factory Default Settings

Restore the settings on the camera to factory default.

Note

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

Procedure 10-5 Resetting the Camera

Step	Action

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

2 Select **Reset** from the **Maintenance** menu.

The Reset tab displays.

3 Select the **Preserve networking settings** check box to retain the current network settings during the camera reset.

Or

Deselect the **Preserve networking settings** to restore the default networking settings.

The default setting is 'Enabled'.

4 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** to remove existing presets, patterns and sequences.

The default setting is 'Enabled'.

5 Select **Reset**

You will be prompted to confirm the camera reset.

6 Select **OK** to confirm. The Web GUI will display a "Camera Resetting" 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**.

7 The Log in page will be displayed.

Refer to Procedure 3-1 Log in to the Camera on page 3-10 to log back into the camera Web GUI.

- End -

Support Menu

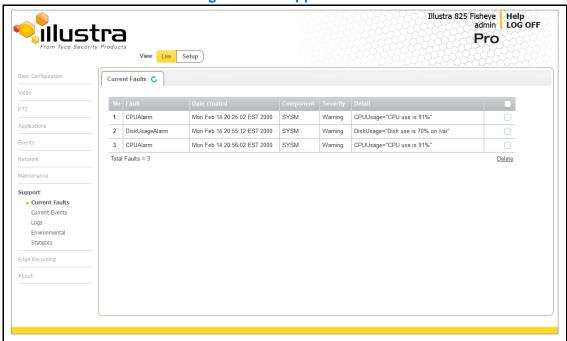When the Support menu is selected Figure 11-1 Support Menu will be displayed.

Figure 11-1 Support Menu

The Support Menu provides access to the following camera information:

• Current Faults

• Current Events

• Logs

• Environmental

• Statistics

Current Faults

Any system or environmental faults experienced by the camera are displayed in current faults.

Current Faults

When Current Faults is selected information will be displayed on the following:

- **#** - 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 either DIOM (Digital Input Output Monitor) or ENVM (Environmental Monitor).
- **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.

Fault Details

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 then 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 then 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 then automatically cleared. This is to avoid transient changes in temperature around the threshold.

Procedure 11-1 Display Current Faults

Step	Action

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

2   Select **Current Faults** from the **Support** menu.

The current faults tab displays.

- End -

Procedure 11-2 Delete Current Faults

Step	Action

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

2   Select **Current Faults** from the **Support** menu.

The current faults tab displays.

3   Select the corresponding **Delete** check box to mark the fault for deletion.

Or

Deselect the corresponding **Delete** check box to keep the fault.

Note

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

4   Select **Delete** to delete the selected faults.

You will be prompted to confirm the deletion.

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

Or

Select **Cancel**.

- End -

Current Events

When motion detection is enabled resulting alarms are displayed in current events. The following will be displayed:

- **#** - 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 11-3 Display Current Events

Step	Action

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

2 Select **Current Events** from the **Support** menu.

The Current Events tab displays.

Triggered motion detection alerts will be displayed.

- End -

Procedure 11-4 Delete Current Events

Step	Action

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

2 Select **Current Events** from the **Support** menu.

The current events tab displays.

3 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

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

4 Select **Delete** to delete the selected motion detection alerts.

You will be prompted to confirm the deletion.

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

Or

Select **Cancel**.

- End -

Logs

Information is provided on system and boot 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; note that this does not mean that the process will not continue to work, only that it encountered an issue it could do nothing about.

Procedure 11-5 Display System Log

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

- End -

Procedure 11-6 System Log Filter

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Logs** from the **Support** menu.
	The System Log tab displays.
3	Enter the number of lines of the log file you would like to view in the **Lines** text box.
4	Enter the word or phrase that you would like to search for in the **Filter** text box.
5	Select **Refresh** to refresh the log for the most up-to-date information.

- End -

Boot Log

The Boot log is a log of the Linux operating system boot processes and will only be useful to Tyco Security Products Level 3 Technical Support who require additional information on the device.

Procedure 11-7 Display Boot Log

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

- End -

Procedure 11-8 Boot Log Filter

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

- End -

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Environmental

Environmental Information

When Environmental is selected information will be displayed on the following:

• Internal Temperature

Procedure 11-9 Display General Information

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Environmental** from the **Support** menu.
	The Environmental tab displays.

- End -

Statistics

This provides statistical information on the camera.

Statistics

When Statistics is selected information will be displayed on the following:

- Operating Time (days-hrs:mins)
- Uptime (days-hrs:mins)
- User Resets
- Power Resets
- Total ROM (MByte)
- Total RAM (MByte)
- Free RAM (MByte)

Procedure 11-10 Display General Information

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Statistics** from the **Information** menu.
	The general information tab displays.

- End -

Configuration and User Guide

Edge Recording

When the Edge Recording Menu is selected Figure 12-1 Edge Recording Menu will be displayed

Figure 12-1 Edge Recording Menu

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

• microSD Card Management

• Record Settings

• Event Download

microSD 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. Without an microSD Card current faults notifications displayed on camera if an alarm is triggered.

Refer to the Quick Start Guide supplied with the camera for details on how to remove the cover to access the microSD card.

Using a microSD Card will allow the following:

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

• Video/Audio and screenshot are saved to the microSD card.

• SMTP notifications can be sent.

• FTP uploads of video can be sent.

• Audio can be played via the Audio Out port.

Using the microSD card

Refer to the Quick Start Guide supplied with the camera for details on how to remove the cover to access the microSD card.

Procedure 12-1 Insert the microSD card

Step	Action

| 1 | Refer to the Quick Start Guide supplied with the camera for details on how to remove the cover to access the microSD card slot. |
| 2 | Push the microSD card into the slot until it clicks into place. The camera will detect the microSD card and the micro SD Card Management details will update to display the card details. |

- End -

Procedure 12-2 Remove the microSD Card

Step	Action

1	Refer to the Quick Start Guide supplied with the camera for details on how to remove the cover to access the microSD card slot.
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**.

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

6 Remove the microSD card into the camera by pressing to release.

- End -

Procedure 12-3 Format the 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**.

You will be prompted to confirm the format. All information on the card will be deleted.

4 Select **OK** to confirm.

OR

5 Select **Cancel**.

6 If OK is selected, the card will be formatted and the micro SD Card Management details will update to display the card details.

- End -

Record Settings

Configure the Record Settings details which are required when setting Fault Actions for Motion Detection alerts.

Record Settings

Select which video stream to use for alarm video and configure pre and post event durations for the playable video clip.

Note

A microSD card must be inserted to enable record settings.

Procedure 12-4 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.

The Record Settings tab displays.

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 Record has been enabled:

  a   Select the required video stream from the **Record Source** drop-down menu.

      Refer to Procedure 5-1 Configure the Video Stream settings on page 5-40.

Note

1   Ensure the selected stream has a Frame Rate of 7ips or higher.

2   Ensure the selected stream uses the H.264 codec.

  c   Select the **Pre Event (secs)** in seconds from the drop-down menu. Values range from 0 to 10.

      The default setting is 5 seconds.

  d   Select the **Post Event (secs)** in seconds from the drop-down menu. Values range from 0 to 10.

      The default setting is 5 seconds.

- End -

Event Download

If an event action has record mode enabled, when triggered, the associated video will be logged in the event download table where it can later be downloaded to 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.

About Menu

When the About menu is selected Figure 13-1 About Menu will be displayed.
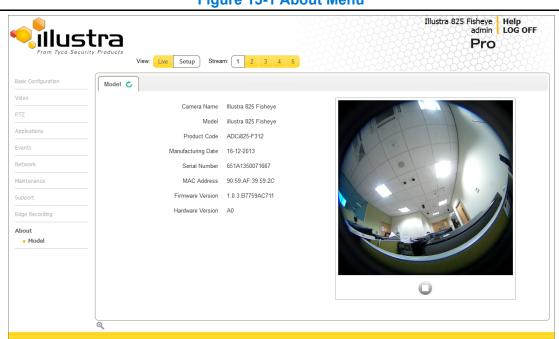
Figure 13-1 About Menu

The About Menu provides information on the camera model:

• Model

Model

Model Information

When Model is selected information will be displayed on the following:

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

Procedure 13-1 Display Model Information

Step	Action
1	Select **Setup** on the GUI banner to display the setup menus.
2	Select **Model** from the **About** menu.
	The model tab displays.

- End -

Technical Specifications

This section provides information on the technical, environmental and operating specifications for the Illustra Pro Fisheye Camera.

Technical Specifications

Specification	Detail
Privacy Zones	4
Language Selection	English (default), Arabic, Czech, Danish, German, Spanish, French, Hungarian, Italian, Korean, Japanese, Netherlands, Polish, Portuguese, Swedish, Turkish, Chinese Traditional, Chinese Simplified.
Motion Detection	Yes

Technical Details

Category	Details
Discernible Resolution	1936x1936
Signal / Noise	38.1db
Scanning System	Progressive
Sync System	Internal Sync
Image Sensor	Type 1/2" SMP CMOS Sensor
Optical Format	1/2.5 inch (4:3)
Output Pixel Format	2592(H) x 1944(V) 5.04 MP
Effective Pixels	1944(H) x 1944(V) 3.78 MP
Pixel Size	2.2 um square
Scanning Area	5.70 (H) mm x 4.28 (V) mm, 7.13 9diagonal) mm
Dynamic Range	82db
Shutter	Electronic rolling shutter (ERS) 1/100000s minimum to 1/30s maximum second
Lens Design	IR corrected, 1.37mm
Aperture Ratio	2.0
Lens Mount	12 mm
FOV	183°
Image Height	4.15 mm
Max Frame Rate	up to 15 ips

Video Compression

Category	Details
Video Compression	H.264, MJPEG
Codec Streams	2 any codec, resolution quality/bit rate settings
IP Video Streams	5 maximum including codec sharing duplicate streams
Resolutions	
Fisheye	1936x1936
Active image 1 - 4	960x540
	800x450
	640x360
	480x270
	320x180
Wall/Ceiling Panorama	1920x1080
	1600x900
	1280x720
	1024x576
	960x540
	800x450
	640x360
	480x270
	320x180

MJPEG/JPEG Compressor Key Functionality

The JPEG codec supports the JPEG baseline DCT encoding process with the following additional configuration option:

- Quality: 1-100

H.264 Compressor Key Functionality

The H.264 codec supports the JPEG baseline DCT encoding process with the following additional configuration options:

Category	Details
Profile	High level 4.2
GOP Length	1-150
Rate Control	CBR VBR
Frame Skip	With CBR
Bit Rate (CBR)	Selectable 16 kbps to - 10Mbps
Quality (VBR)	Highest, High, Medium, Low, Lowest.

Network

This section covers the technical aspects and operation of all the core network related components.

Category	Details
Base Protocol	TCP/IP - RPC4614
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 i minute poll rate
E-mail	SMTP - RFC5321 Authenticated SMTP - RFC4954
Authentication and Security	TLS - RFC5346 HTTPS (HTTP over TLS) - RFC2818 WS-Security
Discovery	WS-discovery - ws-discovery.pdf
Streaming	RTP - RFC3550 RTSP - RFC2326 Unicast Streaming Multicast RFC 1112 level 1
Remote Shell Access	SSH - RFC2326
External Interface Protocol	SOAP - SOAP 1.2 ONVIF - 2.4 WS-Addressing WS-Eventing

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.

Time Synchronization and Configuration

The camera supports NTP for time synchronization. The NTP server will have to be configured by the user. Alternatively, time can be manually configured via the Web GUI or ONVIF.

Remote Shell Access

For security reason, remote shell access is limited exclusively to Tyco Security Products Level 3 Technical Support. This function is not available to the end-user.

It is recommended to keep SSH Enable disabled. This function should only be enabled this when it is requested by Tyco Security Products Level 3 Technical Support.

Authentication and Security

• HTTPS (HTTP over TLS) is used for the Web GUI. HTTP connections to the camera IP will automatically be redirected to the HTTPS login page.

• The camera will automatically create a SSL certificate file to use for HTTPS. It is possible to upload a custom SSL certificate if validation is desired.

• The ONVIF service uses WS-Security Username Token Digest.

Firewall

The camera will provide a firewall, which is disabled by default. The firewall will be able to block ICMP and allow RP filtering and SYN Cookie Verification.The firewall will offer the ability to block selected IP or MAC addresses and allow access exclusively to selected IP and MAC addresses.

Note: Using the "Deny all" mode, could result in a miss-configuration and require resetting the camera via the physical reset button.

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

Category	Details
Description Language	WSDL
Web Services Specification	DPWS
Web Services Tool Kit	WS4D
Web Services Protocol	SOAP
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
- 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 32GB.

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

Dimensions

	ADCi825-F311 Vandal	ADCi825-F312 / IQS05FFACWCY Non-Vandal
Body Diameter	5.85" (149mm)	5.85" (149mm)
Height above Ceiling	1.0" (25.4mm)	1.0" (25.4mm)
Height below Ceiling	2.91" (74mm)	2.36" (60mm)

Weight

	ADCi825-F311 Vandal	ADCi825-F312 / IQS05FFACWCY Non-Vandal
Weight	0.750kg	0.730kg

Environmental

The product is designed to meet the following environmental conditions:

Operating temperature:

Indoor	-10°C to 75°C (14°F to 113°F)
Storage Temperature	-20°C to 65°C (-4°F to 149°F)

Power

Usable with PoE sources with up to 100m (300 feet) of cable; with compliance verification including power over Ethernet compliant to POE IEEE 802.3afTM and power over Ethernet Plus compliant to POE IEEE 802.3atTM. Type 1, Class 3 device. Ethernet 10/100 Base-T.

Power consumption is capped at 12.95Watts.

Surge Protection

The following applies:

Category	Details
IP	TVS rated at 75V, 400A, 8/20us impulse Galvanic isolation transformer coupled, 1,500Vrms

Regulatory Compliance

The Illustra Pro Fisheye Camera meets the following regulatory requirements:

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

Safety	USA (UL): UL 60950-1 Canada (cUL): CAN/CSA-C22.2 No. 60950-1 CB Scheme: IEC 60950-1 European Union: EN 60950-1 EMC: USA (FCC): CFR 47 Part 15 Canada: ICES-003/NMB-003 Issue 5 European Union: EN 55022:2010 European Union: EN 61000-3-2:2006/A2:2009 European Union: EN 61000-3-3:2008 Australia/New Zealand: AS/NZS CISPR 22:2009 Product Assurance Testing: IEC 62599-2 EN55024 EN50130-4:2011 IEC 61000-6-1
Vandal-Resistant	IK10
Environmental	RoHS, EU Directive 2002/95/EC WEEE, EU Directive 2002/96/EC

Appendix A: User Account Access

Camera Menu	Tab	Function	Admin	Operator	User
Basic Configuration					
1. Camera	Mounting		X	X	-
	Camera Name		X	X	-
2. Users	Users	List	X	-	-
		Delete	X	-	-
	Add User		X	-	-
	Change Password		X	X	-
3. Date Time			X	-	-
4. TCP/IP	IPv4	List	X	-	-
		Edit	X	-	-
	IPv6	List	X	-	-
		Edit	X	-	-
5. Streams	Stream 1		X	X	-
	Stream 2		X	X	-
	Stream 3		X	X	-
	Stream 4		X	X	-
	Stream 5		X	X	-
	Alarm Video		X	X	-
Video					
Streams	Stream 1		X	X	-
	Stream 2		X	X	-
	Stream 3		X	X	-
	Stream 4		X	X	-
Camera	Mounting		X	X	-
	Camera Name		X	X	-
Privacy Zones	Privacy Zones	List	X	X	-
		Enable/Disable	X	X	-
		View	X	X	-
		Delete	X	X	-
	Add Zone		X	X	-
Picture Settings	White Balance		X	X	-
	Picture Balance		X	X	-
	WDR		X	X	-
	Picture Settings		X	X	-
OSD	Name		X	-	-
	Time		X	-	-
PTZ					
Presets	Presets	List	X	X	X

illustra
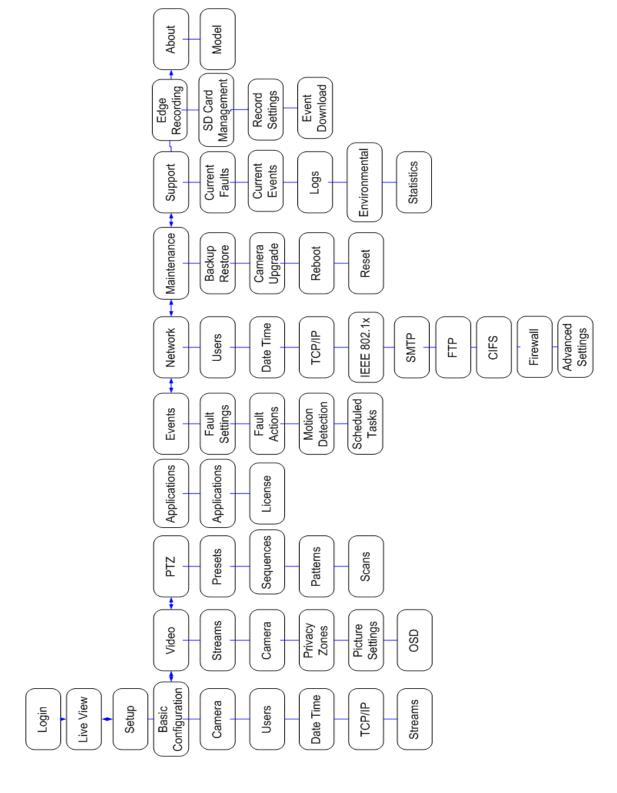
Camera Menu	Tab	Function	Admin	Operator	User
		View	X	X	-
		Edit	X	X	-
		Delete	X	X	-
Sequences	Sequences	List	X	X	X
		View	X	X	X
		Edit	X	X	-
		Delete	X	X	-
	Add Sequence		X	X	-
Patterns	Patterns	List	X	X	X
		View	X	X	X
		Edit	X	X	-
		Delete	X	-	-
	Record		X	X	-
	Repeat		X	X	-
Scans	Scans	List	X	X	X
		View	X	X	X
	Scan Limits	Set	X	X	-
Events					
Fault Settings	Record Settings		X	-	-
	SMTP		X	-	-
	FTP		X	-	-
Fault Actions	Fault Actions	List	X	-	-
		Edit	X	-	-
Motion Detection	Motion Detection	View	X	-	-
		Edit	X	-	-
		Delete	X	-	-
Scheduled Tasks	Scheduled Tasks	List	X	-	-
	Add Task		X	-	-
Network					
Users	Users	List	X	-	-
		Delete	X	-	-
	Add User		X	-	-
	Change Password		X	X	X
Date Time	Date Time	List	X	-	-
		Edit	X	-	-
TCP/IP	IPv4	List	X	-	-
		Edit	X	-	-
	IPv6	List	X	-	-
		Edit	X	-	-
SMTP	SMTP	List	X	-	-
		Edit	X	-	-
		Test	X	-	-

Camera Menu	Tab	Function	Admin	Operator	User
FTP	FTP	List	X	-	-
		Edit	X	-	-
		Test	X	-	-
Firewall	Basic Filtering	List	X	-	-
		Edit	X	-	-
	Address Filtering	List	X	-	-
		Edit	X	-	-
Advanced Settings	Remote Access		X	-	-
	HTTPS Certificate		X	-	-
	Session Timeout		X	-	-
Dynamic DNS	Dynamic DNS	List	X	-	-
Maintenance					
Backup/Restore	Backup/Restore		X	-	-
Camera Upgrade	Camera Upgrade		X	-	-
Reboot	Reboot		X	-	-
Reset	Reset		X	-	-
Support					
Current Faults	Current Faults	List	X	X	-
		Delete	X	X	-
Current Events	Current Events	List	X	X	-
		Delete	X	X	-
Logs	System Log		X	-	-
	Boot Log		X	-	-
Environmental	Environmental		X	X	-
Statistics	General Information		X	X	-
About					
Model	Model		X	X	X

* Admin users are able to change passwords for any user but Operator and User accounts can only change their own password.
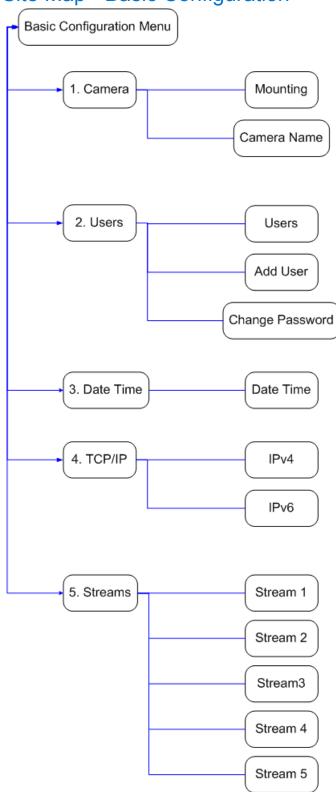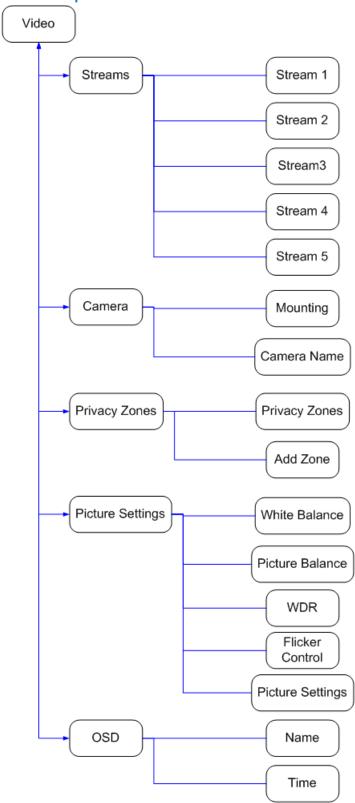
Site Map of the Web GUI

Site Map - Basic Configuration
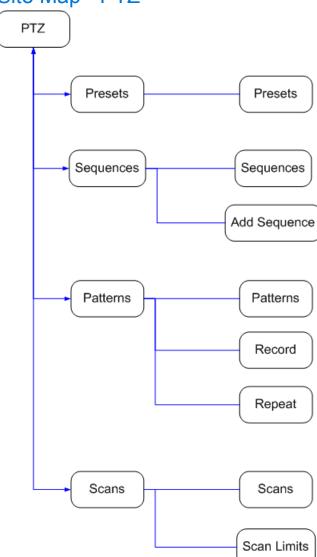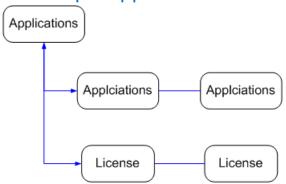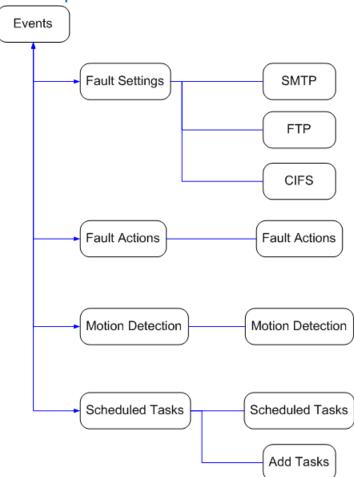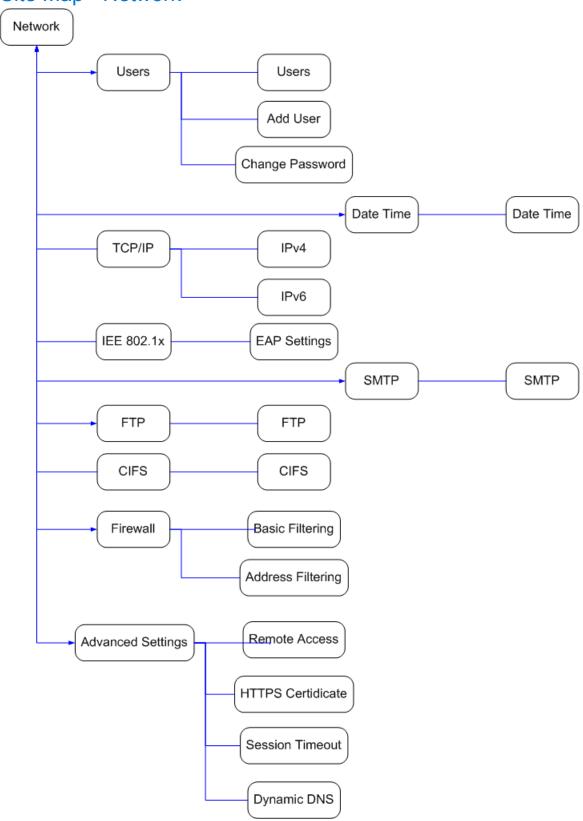
Site Map - Video

Site Map - PTZ

Site Map - Applications

Site Map - Events

Site Map - Network
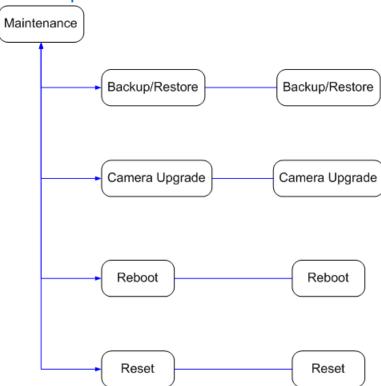
Site Map - Maintenance

```
Maintenance
    │
    ├──────→ Backup/Restore ────── Backup/Restore
    │
    ├──────→ Camera Upgrade ────── Camera Upgrade
    │
    ├──────→ Reboot ────────────── Reboot
    │
    └──────→ Reset ─────────────── Reset
```
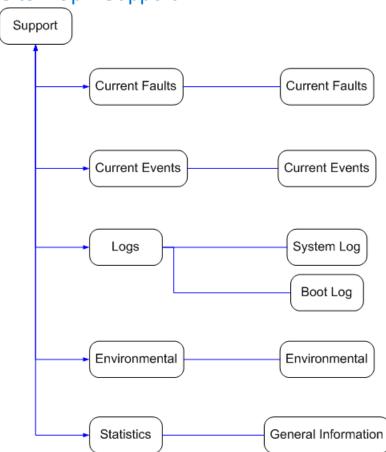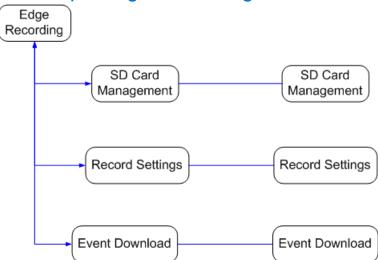
Site Map - Support

Site Map - Edge Recording

```
┌──────────────┐
│    Edge      │
│  Recording   │
└──────────────┘
        │
        ├────────→  ┌──────────────┐          ┌──────────────┐
        │           │   SD Card    │──────────│   SD Card    │
        │           │  Management  │          │  Management  │
        │           └──────────────┘          └──────────────┘
        │
        ├────────→  ┌──────────────┐          ┌──────────────┐
        │           │Record Settings│─────────│Record Settings│
        │           └──────────────┘          └──────────────┘
        │
        └────────→  ┌──────────────┐          ┌──────────────┐
                    │Event Download│──────────│Event Download│
                    └──────────────┘          └──────────────┘
```

Site Map - About

Configuration and User Guide
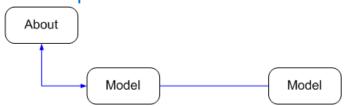
Appendix C: Using VLC Player to View RTSP Streaming

Note

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

2 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 17-1 View RTSP Streaming via VLC Player

Step	Action
1	It will be necessary to install the latest version of VLC Player from the website. 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** 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: • **Stream 1:** rtsp://<ip address>:554/StreamId=1 • **Stream 2:** rtsp://<ip address>:554/StreamId=2 For example: rtsp://192.168.1.168:554/StreamId=1
5	If steam 3, 4 and 5 have been configured. Enter the IP address of the camera stream in the Network URL text box in the following format: • **Stream 3:** rtsp://<ip address>:554/StreamId=3 • **Stream 4:** rtsp://<ip address>:554/StreamId=4 • **Stream 5:** rtsp://<ip address>:554/StreamId=5
6	Select **Play**. The live video stream will be displayed.

- End -

Appendix D: Camera Defaults

Page	Field	Default Setting
Log in	Username	admin
	Password	admin
	Language	English
Live View	Stream	1
	Scale	50%
	Video	On
Basic Configuration / 1. Camera / Mounting	Mounting	Ceiling
Basic Configuration / 1. Camera / Camera Name	Camera Friendly Name	i825Fisheye-serial#
Basic Configuration / 2. Users / Users	Logon Name	admin
	Role	admin
Basic Configuration / 2. Users / Add User	Role	admin
Basic Configuration / 2. Users / Change Password	Name	admin
Basic Configuration / 3. Date Time / 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
Basic Configuration / 4. TCP/IP / IPv4	Enable DHCP	On
	IPv4 Address	192.168.1.168
	Network Mask	255.255.255.0
Basic Configuration / 4. TCP/IP / IPv6	IPv6 Enable	On
Basic Configuration / 5. Streams / Stream 1	Image Source	Fisheye
	Codec	H.264
	Resolution	1936x1936
	Frame Rate	14
	Rate Control	VBR
	VBR Quality	High
Basic Configuration / 5. Streams / Stream 2	Image Source	Ceiling Panorama
	Codec	H.264
	Resolution	1920x1080
	Frame Rate	15
	Rate Control	VBR
	VBR Quality	High
Basic Configuration / 5. Streams / Stream 3		
Basic Configuration / 5. Streams / Stream 4		
Basic Configuration / 5. Streams / Stream 5		
Video/Camera	Mounting	Ceiling

Page	Field	Default Setting
Video/Camera	Camera Friendly Name	i825Fisheye-serial#
Video/Streams/Stream 1	Image Source	Fisheye
	Codec	H.264
	Resolution	1936x1936
	Frame Rate	15
	Rate Control	VBR
	VBR Quality	High
Video/Streams/Stream 2	Image Source	Ceiling Panorama
	Codec	H.264
	Resolution	1920x1080
	Frame Rate	15
	Rate Control	VBR
	VBR Quality	High
Video/Streams/Stream 3		
Video/Streams/Stream 4		
Video/Streams/Stream 5		
Video / Picture Settings / White Balance	Normal	On
Video / Picture Settings / Picture Balance	Brightness	50
	Contrast	50
	Saturation	65
Video / Picture Settings / WDR	WDR	Off
Video / OSD / Name	Camera Name	Off
Video / OSD / Time	Time	Off
PTZ/Presets	Preset	
PTZ/Sequences	Sequences	
PTZ/Patterns	Patterns	
PTZ/Scans	Scan Limits	0-359
Events/Fault Actions	Fault Actions	
Events/Motion Detection	Image Source	Fisheye (stream1)
	Enable Motion Detection	Disabled
	Action	None
	Sensitivity	High
Events/Scheduled Task	Schedule Task	
Network / Users /Users	Logon Name	admin
	Role	admin
Network / Users / Add User	Role	admin
Network / Users / Change Password	Name	admin
Network / Date Time / 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

Page	Field	Default Setting
Network / TCP/IP / IPv4	Enable DHCP	On
	IPv4 Address	192.168.1.168
	Network Mask	255.255.255.0
Network / TCP/IP / IPv6	IPv6 Enable	On
Network / SMTP	Server Port	25
	Use authentication...	Off
Network / FTP	FTP Port	21
	Use authentication...	Off
Network / Firewall / Basic Filtering	ICMP Blocking	Off
	RP Filtering	Off
	SYN Cookie Verification	Off
Network / Advanced Settings	SSH Enable	On
	ONVIF Discovery Mode	On
	ONVIF User Authentication	On
Network/Advanced Settings/Session Timeout	Session Timeout	60
Network/Advanced Settings/Dynamic DNS	Service Enable	Off
	Service Provider	dyndns.org
Maintenance / Reset	Preserve network...	On
	Preserve presets...	On

Configuration and User Guide

Appendix E: 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 19-1 Reset/Reboot Switch.
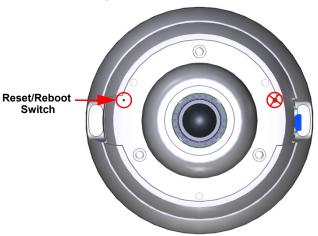
Figure 19-1 Reset/Reboot Switch

To access the reset switch the cover must be removed from the camera as seen in Figure 19-2 Removing the camera cover. Refer to the Quick Installation Guide supplied with the camera for details on how to remove the camera cover.
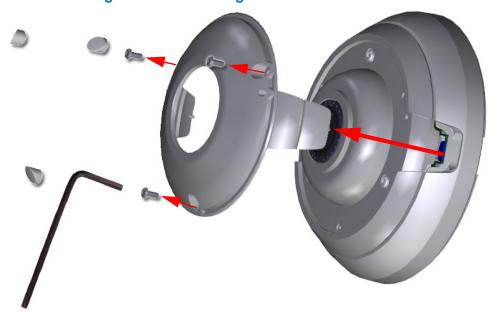
Figure 19-2 Removing the camera cover

Rebooting the Camera using the Reboot/Reset Switch

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

Procedure 19-1 Reboot the camera using the Reboot/Reset Switch

Step	Action
1	Locate the reset/reboot switch on the camera. Refer to Figure 19-1 Reset/Reboot Switch.
2	Using the reset tool supplied with the camera, press and hold the reset/reboot switch for at least 5 seconds.
3	Release the reset switch.
4	When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled.

- End -

Resetting the Camera to Factory Default Settings using the Reset/Reboot 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 Procedure 10-5 Resetting the Camera on page 10-126.

Procedure 19-2 Reset the Camera to Factory Default Settings using the Reset/Reboot Switch

Step	Action
1	Locate the reset/reboot switch on the camera. Refer to Figure 19-1 Reset/Reboot Switch.
2	Using the reset tool supplied with the camera, press and hold the reset/reboot switch for 15 seconds or longer.
3	Release the reset switch. When the camera is restarted it will take 2 - 3 minutes until it is online and ready to be accessed and controlled.

- End -

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