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# Configuration and User Guide

Illustra Pro 5MP & Pro LT 5MP

Fisheye Cameras

# Table of Contents

# Introduction

## Overview

The Illustra Pro 5MP and Pro LT 5MP Fisheye cameras, 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 Network Video Recorders (NVRs), and the built-in web server allows you to configure the camera and stream video using a web browser.

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

The cameras are available in the following configurations:

| Illustra Pro 5MP Fisheye Model Description | Product Codes |
|---|---|
| Illustra Pro 5MP Fisheye, indoor, white, vandal | ADCi825-F311 |
| Illustra Pro 5MP Fisheye, indoor, white, non-vandal | ADCi825-F312 |
| Illustra Pro LT 5MP Fisheye, indoor, white, vandal | ADCi825LT-F311 |
| Illustra Pro LT 5MP Fisheye, indoor, white, non-vandal | ADCi825LT-F312 |

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

# Installation

This chapter provides detailed instructions on how to install the Illustra Pro 5MP Fisheye Camera. You can 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 Illustra Sales Representative for more information on the various mounts and accessories that can be used with the Illustra Pro 5MP Fisheye camera.

## Browser support

The Illustra Pro 5MP  Fisheye camera supports the following operating systems and Internet browsers:

| Operating system | Browser |
|---|---|
| Microsoft Windows 7 | Chrome, Firefox, Safari, Internet Explorer (up to version 11) |
| Microsoft Windows XP | Chrome, Firefox, Safari, Internet Explorer (up to version 11) |

## Network settings

The following provides the default network settings for the Illustra Pro 5MP Fisheye camera.

| Setting | Default |
|---|---|
| Camera Name | Illustra825fe-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 |

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# Illustra Connect

Illustra Connect is an Illustra camera discovery tool and is supplied with the Illustra Pro 5MP 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 using 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 5MP 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 only discovers devices on the same subnet as its host computer. Therefore the camera and the computer used to configure it must be on the same subnet.

## Procedure 2-1 Installing the Illustra Pro 5MP Fisheye camera using Illustra Connect

| Step | Action |
|------|--------|
| 1 | Using the Quick Start Guide instructions, install and connect the camera to the computer  or network  that is used for the configuration and power on.<br><br>The camera begins its initial boot up sequence which takes approximately 1 to 2  minutes. |
| 2 | When using a DHCP Server, the camera is automatically 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. For more information, see the Illustra Connect User Guide. |
| 4 | When the installation is complete, run Illustra Connect. It searches the network and displays all compliant devices, including the Illustra Pro 5MP Fisheye Camera. |
| 5 | Select the camera you want to configure, locating it by its unique MAC address. Illustra Connect allows basic configuration of the camera.<br><br>For more information, see the Illustra Connect User Guide. |
| 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 5MP Fisheye Camera using DHCP Server Logs

## Procedure 2-2  Installing the Illustra Pro 5MP  Fisheye Camera using DHCP Server Logs

| Step | Action |
|------|--------|
| 1 | Using the Quick Start Guide instructions, install and connect the camera to the computer or network  that is used for the configuration and power on.<br><br>The camera begins its initial boot up sequence which takes approximately 1 to 2 minutes. |
| 2 | When using a DHCP Server, the camera is automatically assigned a Network IP Address. |
| 3 | View the DHCP Server system logs and make note of the IP address assigned to the camera. |

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| 4 | Open Microsoft Internet Explorer and enter the URL of the camera as shown in the DHCP Server log. |
|---|---|

**Note**

The computer you use 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 is 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.

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 5MP Fisheye camera when a DHCP Server is not available

| Step | Action |
|---|---|
| 1 | Using the Quick Start Guide instructions, install and connect the camera to the computer or network that you are using 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. For more information, see Procedure 2-1 Installing the Illustra Pro 5MP Fisheye camera using Illustra Connect and step 3.

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

**- End -**

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# Web Configuration

This section details how to configure the camera using the built-in Web Configuration feature. Depending on user access and camera type 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   Web Configuration sessions timeout after a period of inactivity.
3   Only users with administrative rights can access all the areas of the Web Configuration pages.

## Security Mode profiles for first time connection

The Illustra Pro 5MP Fisheye Fixed Dome camera now has Enhanced Security features that allow for operation in a Standard Security mode or in an Enhanced Security mode.

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

# Accessing the Illustra Pro 5MP Fisheye Camera Web User Interface

## Logging in to the camera

Use the following procedure to access the camera Web User Interface.

### Procedure 3-1  Log in to the camera

| Step | Action |
|------|--------|
| **1** | Refer to the installation procedures 2-1, 2-2, and 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 displays |
| **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.<br>**Note**<br>Security Profile: The first time you access the camera, you are prompted to use either the Standard Security or Enhanced Security. If you are keeping Standard Security, best practice is to use the Change Password check box to immediately change the default password to one unique to your surveillance system. |
| **6** | If you select the Enhanced Security option, you will be required and instructed to create a complex password. |

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**Note:**

The password must meet the following requirements:

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

**7**    Select **Log in**.

The Live view page displays.

Depending on the access rights of the user account, there can 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, change the password on the admin account. Refer to Procedure 9-5  Change User Password

## Logging out of the camera

Use the following procedure to log off the camera Web User Interface.

### Procedure 3-2  Log off the camera

- Select **Log Off** in the upper right hand corner of the Web User Interface.

    You are logged off the camera and the sign in page displays.

**- End -**

## Changing the Camera Web User Interface language

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

### Procedure 3-3  Change the camera Web User Interface language

| Step | Action |
|------|--------|
| 1 | Open the camera sign in page. If you are already logged in to the User Interface, 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 User Interface displays 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 9-4  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.

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- **PTZ (when supported):** Full access to Presets, Sequences, Patterns and scans. However patterns cannot be deleted.
- **Events:** Full access to all Event settings.
- **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 (when supported):** 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 User Interface

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

Refer to Web User Interface Icons Web User Interface Icons on for information on the icons used throughout the Web User Interface.

### Figure 3-1 Live View Page
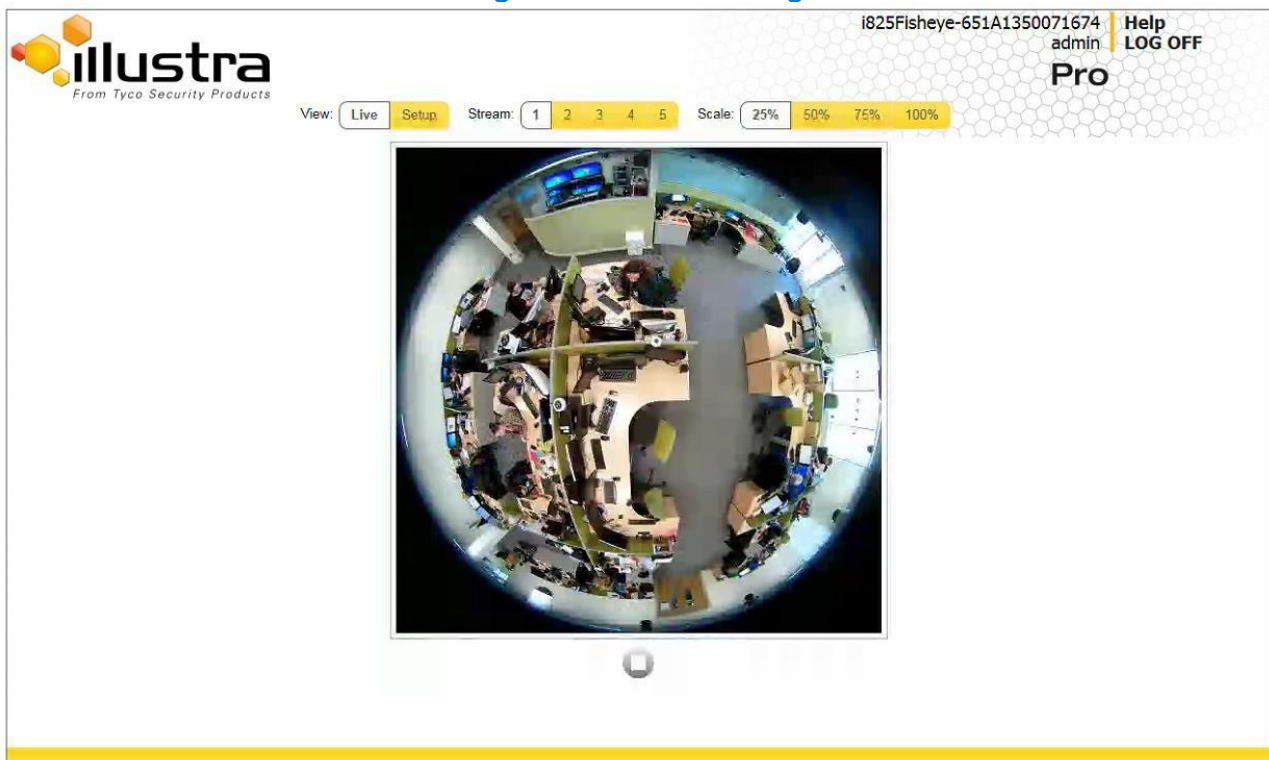


## Accessing the Setup Menus from Live View

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

For more information, see 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

When displaying full screen live video select **Setup** on the Web User Interface banner to access the setup menus. The Model page displays.

> **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 displays.

# 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 displays. Refer to Configuring the web video stream 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**
>
> Streams 1 to 5 are applicable to the Pro 5MP Fisheye camera. Streams 1 to 2 are applicable to the Pro LT 5MP Fisheye camera.

> **Note**
>
> Depending on the stream configuration, stream 3, and 4 are no longer available since 1.3 FW. 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 '25%'.

**- End -**

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# Overview of the Web User Interface

Figure 3-2 The Camera Web User Interface provides an overview of the Illustra Pro 5MP Fisheye Camera Web User Interface.

**Figure 3-2 Camera Web User Interface**
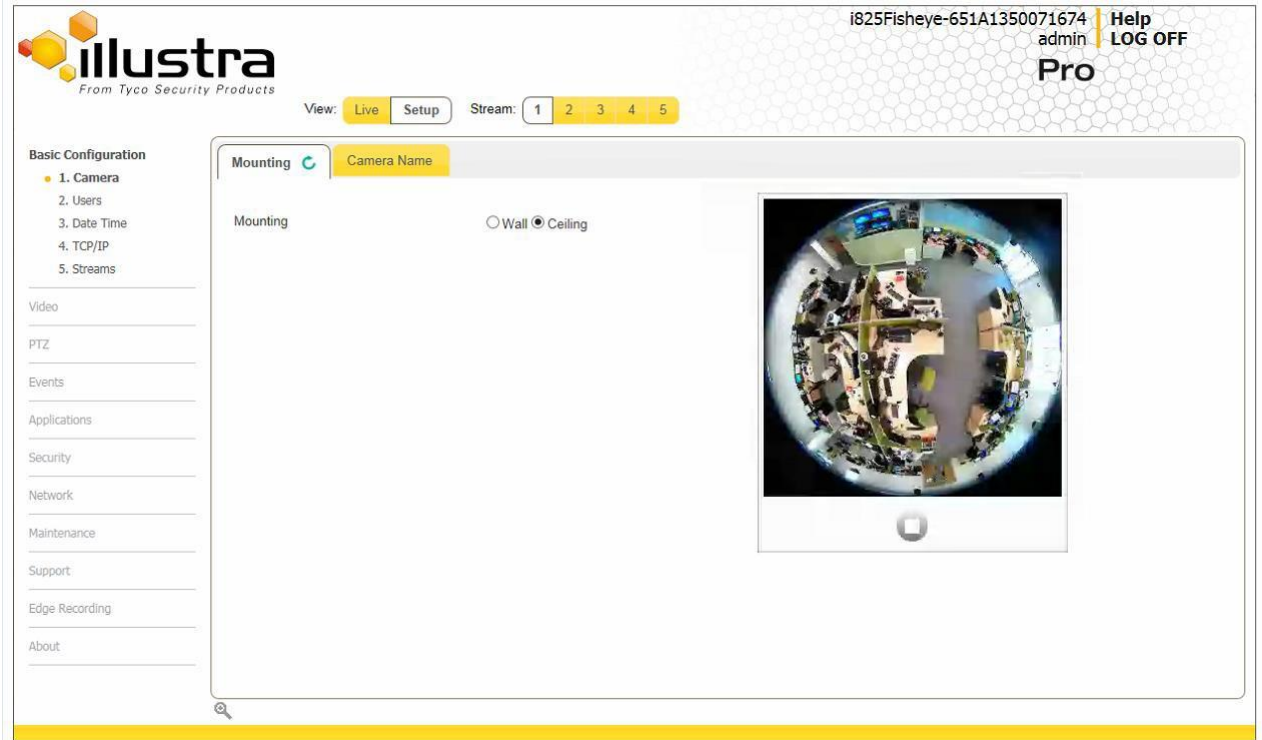
# Web User Interface Icons

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 User Interface. 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 through the Video Pane

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

### Procedure 3-6  Viewing live video through the Video Pane

| Step | Action |
|------|--------|
| 1 | The video stream starts automatically when a page is opened. |
|   | Refer to Configuring the web video stream 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 an Active Tab

The maximize 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 or minimize the Video Pane

| Step | Action |
|------|--------|
| 1 | Select a tab to display from the menu. |
|   | The selected tab displays. |
| 2 | Select 🔍 to maximize the video pane. |
| 3 | Select 🔍 to minimize the video pane. |

# Controlling the Pro 5MP Fisheye camera using Pan Tilt Zoom (PTZ)

This section is not applicable to the Pro LT 5MP Fisheye camera. The new line camera can 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, or Active Image 2.

**Figure 3-5 Camera control overlay**
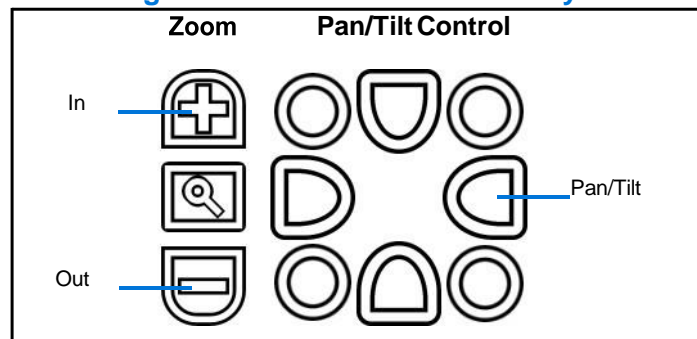


**Note**

It is possible for two users to access live viewing at the same time. However, only one user can 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 loses their camera control session.

## Controlling the camera through camera controls

The camera can 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, or Active Image 2.

## Procedure 3-8  Controlling the camera through the Video Pane

| Step | Action |
|------|--------|
| 1 | Select ▶ to start the video stream if it is not already active.  The video pane displays 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  for further information. |

- End -

# Controlling the Camera using keyboard shortcuts

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

## Figure 3-6 Keyboard Shortcuts

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

# Controlling the camera using keyboard shortcuts

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

### Note

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

## Procedure 3-9  Controlling the camera using the keyboard shortcuts

| Step | Action |
|------|--------|
| 1 | Select ▶ to start the video stream if it is not already active. The video pane displays 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 for further information.

**- End -**

# Basic Configuration Menu

When the Basic Configuration menu is selected Figure 4-1 Basic Configuration Menu displays.

**Note**

When an admin user logs in for the first time the Basic Configuration page displays. After this, on each login the Model page displays.

**Figure 4-1 Basic Configuration Menu**
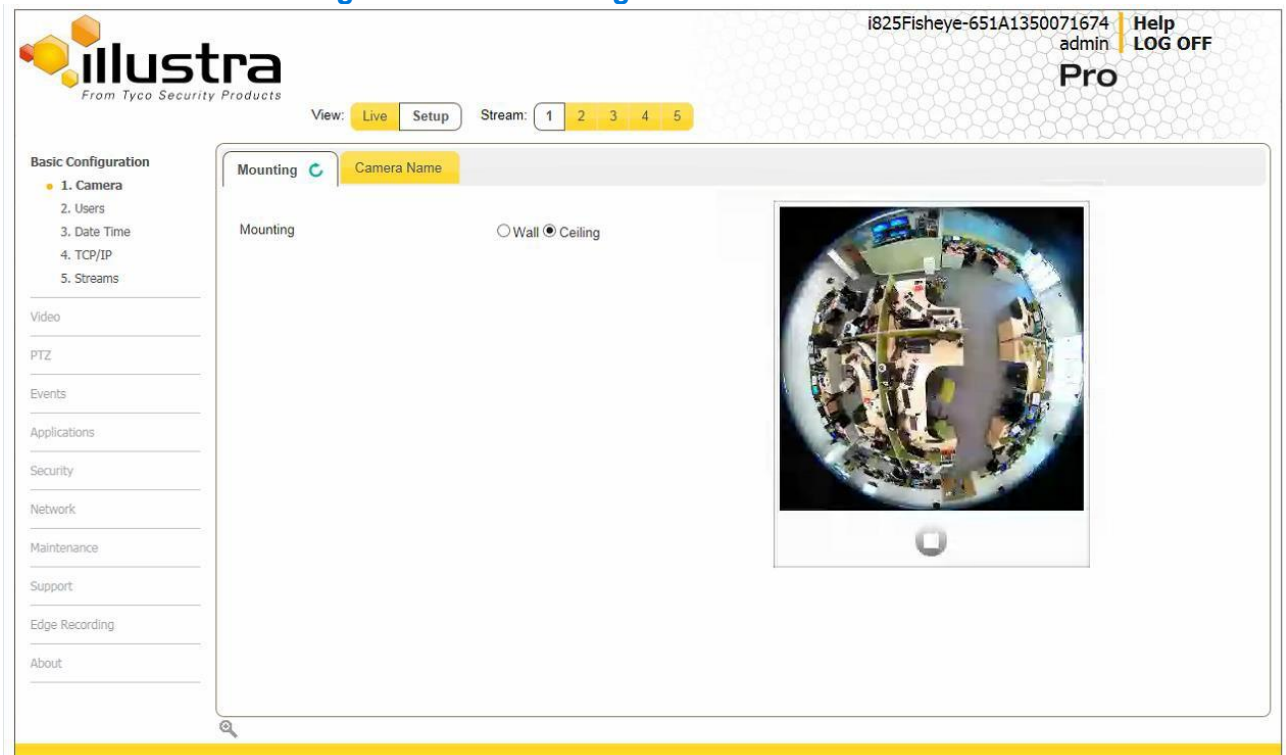


The Basic Configuration menu provides access to the most common features required when setting up a camera for the first time and is only available to an 'admin' user.

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 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 displays. |
| 3 | Select the required **Mounting** by selecting the radio buttons: |

- **Wall**

- **Ceiling**

The default setting is 'Ceiling'.

You are 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  to log back into the camera  Web User Interface |
|   | Or |
|   | Select **Cancel**. |

| Note |
|------|
| The Pro LT 5MP model does not require a reboot after the **Mounting** selection is changed. |

**- End -**

## Camera Name

The camera name displayed on the Web User Interface 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 Web User Interface banner to display the setup menus. |
| 2 | Select **1. Camera** from the **Basic Configuration** menu. |
| 3 | Select the **Camera Name** tab. |

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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 Web User Interface 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 are displayed in the Users list on the **Users** tab.

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**- 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 -**

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## 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 are 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 using 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'.

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| | |
|---|---|
| 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 Web User Interface 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

On initial camera startup, and after a hardware factory reset, Dynamic Host Configuration Protocol (DHCP) is enabled by default and remains enabled until the camera receives either a DHCP address or is assigned a Static IP address.

### Procedure 4-9 Enable DHCP

**Step   Action**

1       Select **Setup** on the Web User Interface 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.

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

        The camera will search for a DHCP server. If one is found, it will connect to the server. If no connection is made to a DHCP server within two minutes, the camera goes to the default IP address 192.168.1168, but continues to search for a DHCP address. If the camera is assigned a Static IP address prior to DHCP being enabled, the camera first reboots for approximately 30 seconds and then remains accessible at its Static IP until a connection is made to a DHCP server.

**- End -**

### Procedure 4-10 Disable DHCP

**Step   Action**

1       Select **Setup** on the Web User Interface banner to display the setup menus.

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

        The IPv4 tab displays.

3       Clear the **Enable DHCP** check box 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.

        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.

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

**- End -**

### IPv6

Enable or disable IPv6 on the camera.

#### Procedure 4-11  Enable/Disable IPv6

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 -**

## 5. Streams

The camera allows the configuration of five independent video streams. These streams can be configured using the Web User Interface, as detailed  here or using the Illustra API or Network Video Recorder.

## Configuring the web video stream

Adjust the settings for video displayed on the video pane.

#### Procedure 4-12  Configure the video stream settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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. |
| | **Note** |
| | Stream 3, 4 and 5 are not applicable to the Pro LT 5MP Fisheye camera. |
| 4 | Select the required **Image Source** from the drop-down menu: |

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- **Fisheye**

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

- **Active Image 1**

- **Active Image 2**

- **Active Image 3**

- **Active Image 4**

- **Quad Image**
**Note:**
Wall/Ceiling Panorama, Active Image 1, Active Image 2, Active Image 3, Active Image 4 and Quad are not applicable to the Pro LT 5MP Fisheye camera.

**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 depend on the Image Source selected:

**Pro LT 5MP Fisheye Stream.**

| Pro LT 5MP Fisheye Stream Table | | | | |
|---|---|---|---|---|
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | MJPEG |
| | | | 640x640 | MJPEG |
| | | | 480x480 | MJPEG |
| | | | 320x320 | MJPEG |
| | | | 176x176 | MJPEG |

Note: The Primary and secondary streams are locked to the same frame rate.

**Wall Mode.**

In this mode, the camera can stream a wall panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Wall Mode | | | | |
|---|---|---|---|---|
| Wall Panorama | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x260 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Wall Mode | | | | |
|---|---|---|---|---|
| Active Image (1-4) | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

| Wall Mode | | | | |
|---|---|---|---|---|
| Quad Image | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

**Ceiling Mode.**

In this mode, the camera can stream a ceiling panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Ceiling Mode | | | | |
|---|---|---|---|---|
| **Ceiling Panorama** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x360 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| **Active Image (1-4)** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| **Quad Image** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

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**LT Model Streams.**

The LT model camera has no Edge Dewarp capability. Two Fisheye streams are supported as shown in the table below:

| Stream 1 | | | Stream 2 | | |
|---|---|---|---|---|---|
| Resolution | Max Frame Rate | Codec | Resolution | Max Frame Rate | Codec |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | 14 | H.264/MJPEG |
| | | | 640x640 | | |
| | | | 480x480 | | |
| | | | 320x320 | | |
| | | | 176x176 | | |

Use the slider bar to select the **Frame Rate (ips)**. The default settings are:

- **Fisheye -** 14 ips
- **Wall/Ceiling Panorama** - 15 ips
- **Active Images -** 12 ips
- **Quad View -** 12 ips

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

The default setting is 50.

OR

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

- **VBR (Variable Bit Rate)**

- **CBR (Constant Bit Rate)**

The default setting is 'VBR'.


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

- **Highest**

- **High**

- **Medium**

- **Low**

- **Lowest**
  The default setting is 'Highest'.

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.

---

**- End -**

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# Video Menu

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

**Figure 5-1 Video Menu**
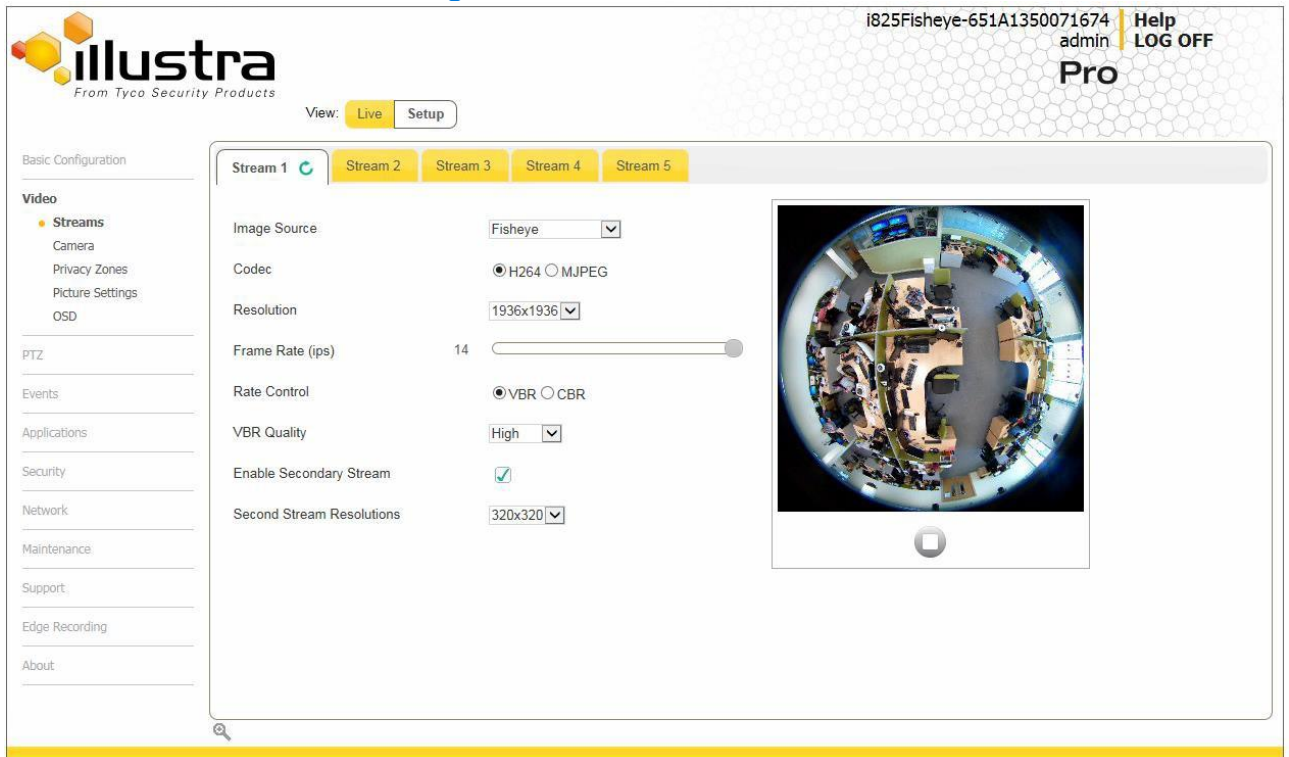


The Video Menu provides access to the following camera settings and functions:

• Streams

• Camera

• Privacy Zones

• Picture Settings

• On-Screen Display (OSD)

# Pro 5MP Fisheye 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 through the Web User Interface, as detailed here or through the Illustra API.

## Defining video streams

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

**Stream Combinations.**

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|
| **Dual Stream** | **Dual Stream** | **Dual Stream** | **Dual Stream** | **Dual Stream** |
| 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 |
| Fisheye | Quad Image | Not Available | Not Available | Not Available |
| 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 |
| Quad Image | Quad Image | Not Available | Not Available | Not Available |

### 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.

## 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.
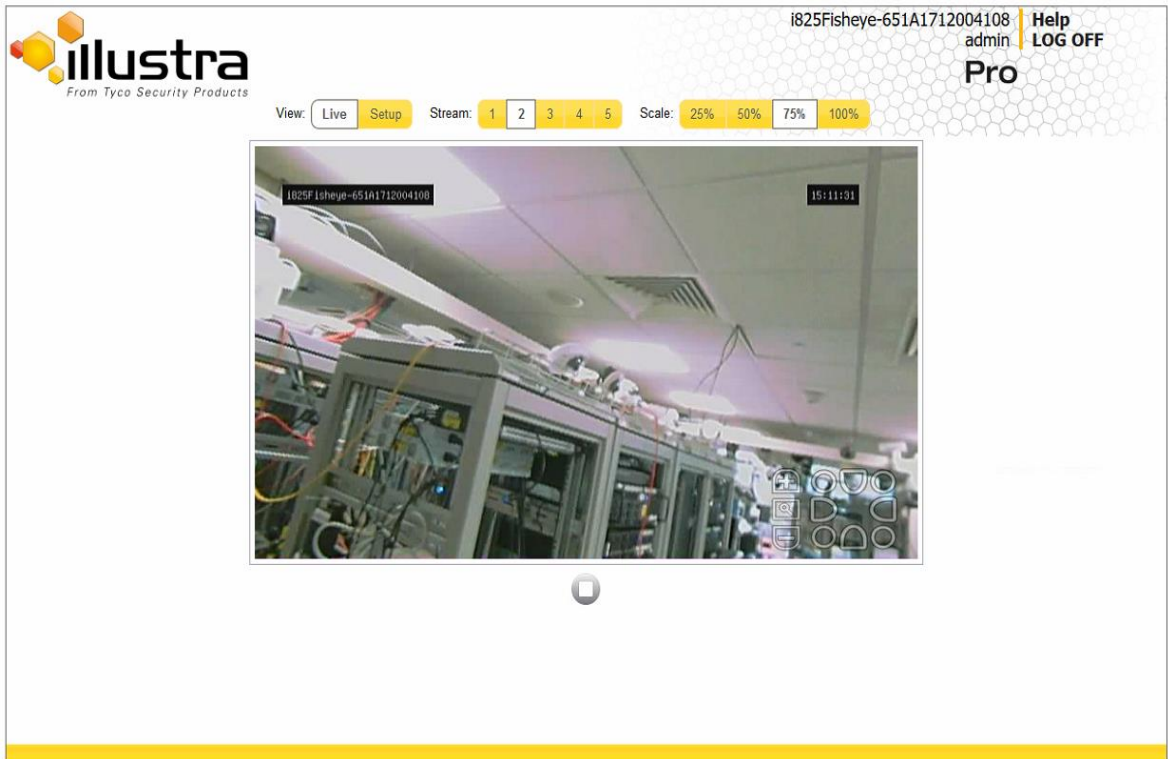


**Quad View**

This provides 4 different fields of view at once.
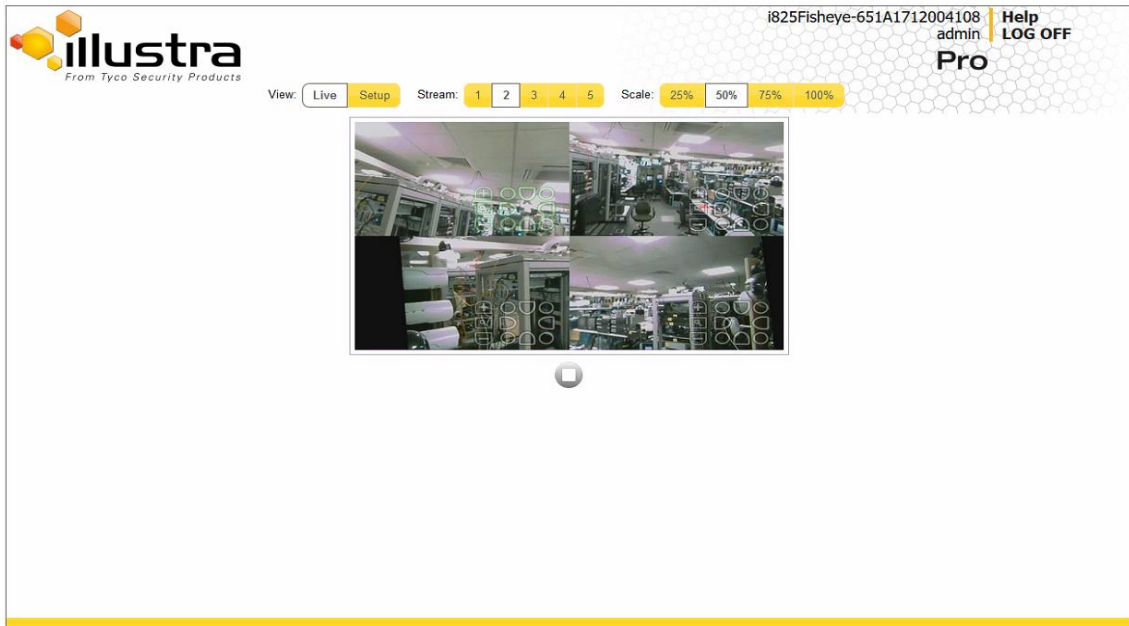
# Pro LT 5MP Fisheye Streams

The camera allows the configuration of a dual streaming Fisheye image which can be configured independently through Stream 1 and Stream 2. These streams can be configured through the Web User Interface, as detailed here or through the Illustra API.

## Image source

The image source is a Fisheye, no other image sources are available

## 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  Fault Actions 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 User Interface 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 using the Web User Interface, as detailed here or using the Illustra API interface. Changes made to the streams using either method are applied and the video is displayed according to the configuration. Opening the Web User Interface live video allows the stream to be shared with the Illustra API  and minimizes 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 Web User Interface banner to display the setup menus.

**2**  Select **Streams** from the **Video** 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:
- **Fisheye**
- **Wall/Ceiling Panorama** (panorama option depends on mounting selection) Fisheye **Active Image 1**
- **Active Image 2**
- **Active Image 3**
- **Active Image 4**
- **Quad Image**

**Note:**

Wall/Ceiling Panorama, Active Image 1, Active Image 2, Active Image 3, Active

Image 4 and Quad are not applicable to the Pro LT 5MP Fisheye camera

The default setting for Stream 1 is 'Fisheye' and Stream 2 is 'Ceiling Panorama'.

Refer to Streams for further information.

### Note

If motion detection has been enabled and the image source is modified motion detection will be disabled and you will have to be re-enable. Refer to Procedure Enable or Disable a Motion Detection Alert, for more 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:

**Pro LT 5MP Fisheye Stream.**

| Pro LT 5MP Fisheye Stream Table | | | | |
|---|---|---|---|---|
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | MJPEG |
| | | | 640x640 | MJPEG |
| | | | 480x480 | MJPEG |
| | | | 320x320 | MJPEG |
| | | | 176x176 | MJPEG |

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Note: The Primary and secondary streams are locked to the same frame rate.

**Wall Mode.**

In this mode, the camera can stream a wall panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Wall Mode | | | | |
|---|---|---|---|---|
| **Wall Panorama** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x260 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Wall Mode | | | | |
|---|---|---|---|---|
| **Active Image (1-4)** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

| Wall Mode | | | | |
|---|---|---|---|---|
| **Quad Image** | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

![illustra From Tyco Security Products]

**Ceiling Mode.**

In this mode, the camera can stream a ceiling panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Ceiling Panorama | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x360 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Active Image (1-4) | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Quad Image | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

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**LT Model Streams.**

The LT model camera has no Edge Dewarp capability. Two Fisheye streams are supported as shown in the table below:

| Stream 1 | | | Stream 2 | | |
|---|---|---|---|---|---|
| Resolution | Max Frame Rate | Codec | Resolution | Max Frame Rate | Codec |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | 14 | H.264/MJPEG |
| | | | 640x640 | | |
| | | | 480x480 | | |
| | | | 320x320 | | |
| | | | 176x176 | | |

7      Use the slider bar to select the **Frame Rate (ips)**. The default setting are.

- **Fisheye -** 14 ips
- **Wall/Ceiling Panorama** - 15 ips
- **Active Images -** 12 ips
- **Quad View -** 12 ips

8      If MJPEG has been selected, MJPEG Quality is 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 is 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 is 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.

---

**- 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
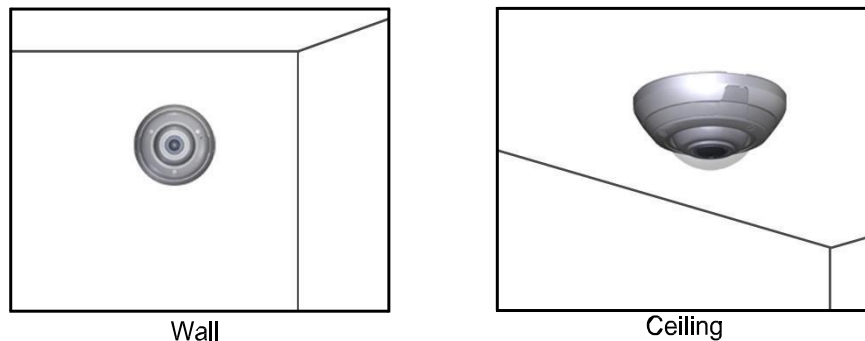
### Procedure 5-2  Set Mounting Position for the camera

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Camera** from the **Video** menu. <br><br>The Mounting tab displays. |
| 3 | Select the required **Mounting** by selecting the radio buttons: <br><br>• **Wall** <br><br>• **Ceiling** <br><br>The default setting is 'Ceiling'. <br><br>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. <br><br>Refer to Procedure 3-1 Log in to the Camera to access the camera Web User Interface. <br><br>Or <br><br>Select **Cancel**. |

**Note**

The Pro LT 5MP model does not require a reboot after the **Mounting** selection is changed.

**- End -**

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# Camera Name

The camera name is displayed on the Web User Interface banner and the on-screen display for the camera.

### Note

Refer to Procedure 5-15 Display or Hide the Camera Name  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 -**

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# Privacy Zones

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

### 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  an **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. |

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| 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, is displayed the video pane will update to display the activated privacy zone centered on the video pane.

**- End -**

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## 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 Web User Interface 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 are 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 using 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 Web User Interface banner to display the setup menus.

**2**  Select **Picture Settings** from the **Video** menu.  The White Balance tab displays.

**3**  Select [▷] to start the video stream if it is not already active.

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**4**        The video pane displays 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 56.

<div align="center">

**- End -**

</div>

## Manually select White Balance

Adjust the white balance manually.

### Procedure 5-8  Manually select White Balance

| Step | Action |
|------|--------|
| **1** | Select **Setup** on the Web User Interface banner to display the setup menus. |
| **2** | Select **Picture Settings** from the **Video** menu.  The White Balance tab displays. |
| **3** | Select ▶ to start the video stream if it is not already active.  The video pane displays the current camera view. |
| **4** | Select **Manual** from the White Balance drop-down menu. The Red and Blue slider bars will be displayed. |
| **5** | Use the slider bars to adjust the **Red** and **Blue** balance. The live video pane will update to display the new settings. The red and blue values range from 1% to 100%. The default settings are Red 30% and Blue 30%. |

<div align="center">

**- End -**

</div>

# 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 Web User Interface banner to display the setup menus. |
| **2** | Select **Picture Settings** from the **Video** menu. |

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**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 updates 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 Web User Interface 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 an 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 detail in the bright areas.

A typical use for this feature would be viewing a scene with both indoor and outdoor lighting

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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 Web User Interface 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 -**

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## Procedure 5-12  Configure Exposure Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Picture Settings** from the **Video** menu. |
| 3 | Select the **Flicker Control** tab. |
| 4 | Select the **Frequency** radio button for either 50Hz or 60 Hz.<br><br>The default setting is 60Hz. |
| 5 | Select or clear the check for **Flickerless Mode**.<br><br>This feature is not selected by default.<br><br>• When you select **Flickerless Mode**, the minimum and maximum exposure times are locked to 1/100 and 1/50 respectively (PAL) or 1/120 and 1/60 respectively (NTSC). This applies to all cameras referenced in this guide. |

**- End -**

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# 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 return to the last saved settings. If picture settings have not been saved, upon restart the camera uses the default picture settings.

### Procedure 5-13  Save current picture settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 Web User Interface 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.

| | |
| --- | --- |
| 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 Web User Interface 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 Web User Interface 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. |

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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 Web User Interface 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 -**

---

# PTZ Menu

This section in only applicable to the Pro 5MP Fisheye camera. 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 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 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 Web User Interface 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 15 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  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 Web User Interface 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 displays the current camera view. |
| **4** | Select [◉] to activate the corresponding preset. |
|  | The video pane updates to display the selected preset. The preset displays 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  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 Web User Interface 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 displays the current camera view.

4    Select [◉] to activate the corresponding preset.

The video pane 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 Web User Interface 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 are 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 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, 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 Web User Interface 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.<br>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. |

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**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, 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 Web User Interface 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 displays the current camera view.

**4**        Select ⊙ to activate the corresponding sequence.

The video pane updates 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, 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.

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### Procedure 6-7  Edit a sequence

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 Web User Interface 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 -**

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# 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 Web User Interface 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, 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 Web User Interface 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 Web User Interface 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 |

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Select **Cancel**.

---

**- End -**

---

## 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 Web User Interface 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'.

---

**- End -**

---

# Scans

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

## Setting Scan Limits

Set left and right scan limits on the camera.

---

**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, 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 Web User Interface banner to display the setup menus.

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**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, 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 Web User Interface 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 -**

---

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# 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, 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 Web User Interface banner to display the setup menus.

**2**      Refer to Procedure 6-13 Set Scan Limits on page 6-68 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 -**

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When the Event Menu is selected Figure 7-1 Events Menu will be displayed

**Figure 7-1 Events Menu**
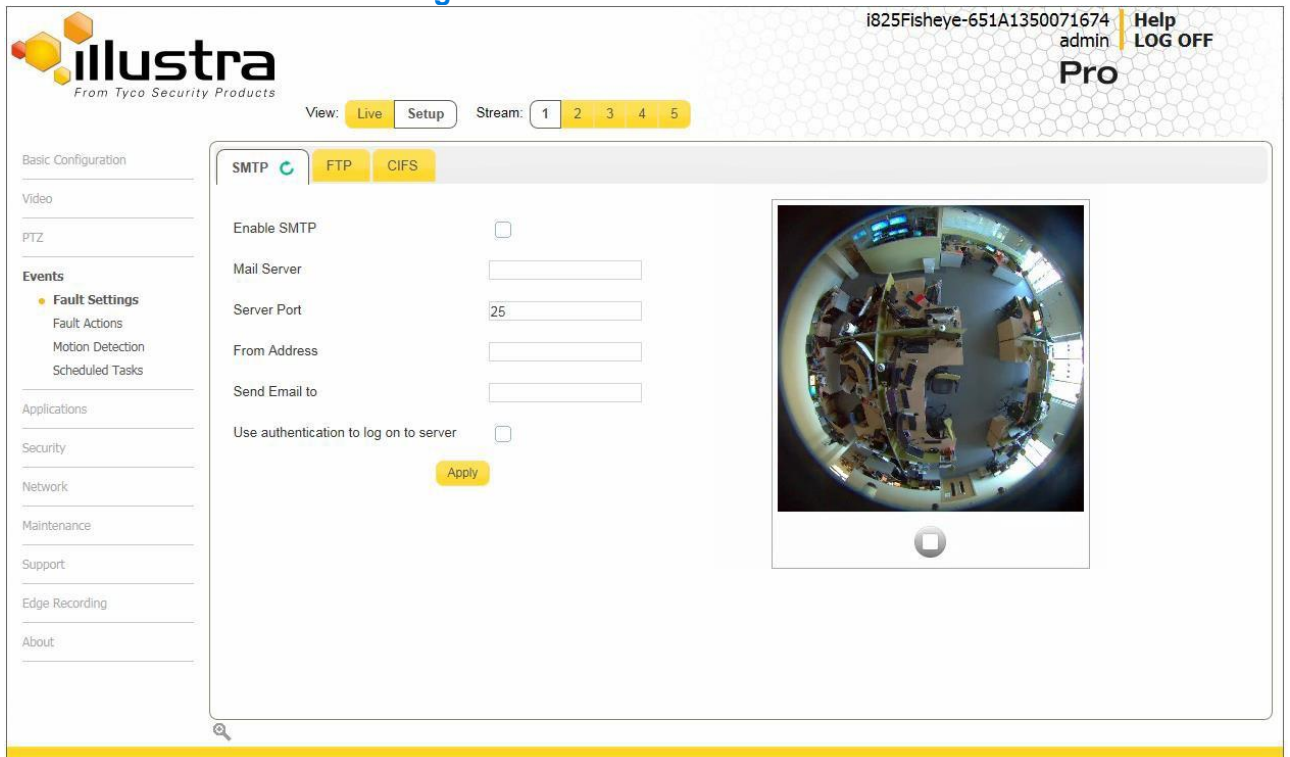


The Event Menu provides access to the following camera settings and functions:

• Fault Settings

• Fault Actions

• Motion Detection

• Scheduled Tasks

# Fault Settings

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

# SMTP

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

## Configure SMTP

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

**Note**

SMTP settings can also be configured through the Network menu.

### Procedure 7-2  Configure SMTP settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Fault Settings** from the **Events** menu. |
| 3 | Select the **SMTP** tab. |
| | The SMTP tab displays. |
| 4 | Enter the IP Address of the mail server in the **Mail Server** text box. |
| 5 | Enter the server port in the **Server Port** text box. |
| | The default setting is '25'. |
| 6 | Enter the from email address in the **From Address** text box. |
| 7 | Enter the email address to send email alerts to in the **Send Email to** text box. |
| 8 | Select the **Use authentication to log on to server** check box to allow authentication details to be entered. |

Or

Deselect the **Use authentication to log on to server** to disable authentication.

The default setting is 'Disabled'.

**Note:**

When in Enhanced Security mode, enabling SMTP requires the admin account password.

| 9 | 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. |
| 10 | Select **Apply** to save the settings. |

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**- End -**

## Test SMTP Settings

Test the SMTP settings that have been configured in Procedure 7-2 Configure SMTP Settings.

### Procedure 7-3  Test the SMTP Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Fault Settings** from the **Events** menu. |
| 3 | Select the **SMTP** tab.  The SMTP tab displays. |
|  | If Procedure 7-2 Configure SMTP Settings have been configured a Test button will be   displayed. |
| 4 | Select **Test**. |
|  | A test 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 through the Network menu.

### Procedure 7-4  Configure FTP Server Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Fault Settings** from the **Events** menu. |
| 3 | Select the **FTP** tab. |

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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'.

**Note:**

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

**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 7-5 Test the FTP Settings, to confirm that the FTP settings are working as expected.

**- End -**

## Test FTP Settings

Test the SMTP settings that have been configured in Procedure 7-4 Configure FTP Server Settings.

### Procedure 7-5  Test the FTP Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 7-4 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

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directed to network attached file storage using the Common Internet File System protocol. This supplements existing distribution methods such as FTP, SFTP and email.

### Procedure 7-4  Configure CIFS server settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Event Settings** from the **Events and Actions** menu. |
| 3 | Select the **CIFS** tab. |
| 4 | Select the **Enable** check box to enable CIFS<br>OR<br>Deselect the **Enable** check box to disable CIFS.<br>The default setting is 'Enabled'. |

> **Note:**
>
> When in Enhanced Security mode, enabling CIFS requires the admin account password.

| Step | Action |
| --- | --- |
| 5 | Enter the network path in the **Network Path** text box. |
| 6 | Enter the domain name in the **Domain Name** text box. |
| 7 | Enter the username in the **Username** text box. |
| 8 | Enter the password in the **Password** text box. |

**- 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 7-6  Create a Fault Action

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface 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 7-1 Configure Record Settings. |
| 5 | Select the **Email** check box to send an e-mail to the email address configured in Procedure 7-2 Configure SMTP Settings. |
| 6 | Select the **FTP** check box to send a video file to the FTP details configured in Procedure 7-4 Configure FTP Server Settings. |
| 7 | Select the **CIFS** check box to send a video file to the SFTP details configured in the Configure CIFS Server Settings procedure. |

**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 7-7  Edit an Alarm

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Fault Actions** from the **Events** menu. |
| | The Fault Actions tab displays. |

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**3**      Select an 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 7.2 Motion Detection Configuration Pane

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**Figure 7-2 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 7-8  Create a Motion Detection Alert

**Step   Action**

**1**        Select **Setup** on the Web User Interface banner to display the setup menus.

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

Actions tab displays.

**3**        On FW 1.04 or older
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 7-3   Security Warning for Motion Detection.

Figure 7-3 Security Warning for Motion Detection



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

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**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 , to change  settings for the  video 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.

**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 7-6  Create a Fault Action,  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.

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### Procedure 7-9  Enable or Disable a Motion Detection Alert

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface 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 authorize the Motion Detection   Configuration Pane applet, a Security Warning window will display as seen in Figure 7-3   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

This section is only applicable to the Pro 5MP Fisheye camera. 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,  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, to change settings for the video stream.

### Procedure 7-10  Create a Scheduled Task

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Scheduled Tasks** from the **Events** menu. |

| Step | Action |
|---|---|
| 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 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.

| Step | Action |
|---|---|
| 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.

| Step | Action |
|---|---|
| 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 7-11  Edit a Scheduled Task

| Step | Action |
|---|---|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Scheduled Tasks** from the **Events** menu.  The  Scheduled |

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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 7-12  Delete a Scheduled Task

---
| Step | Action |
---

**1** Select **Setup** on the Web User Interface 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
Clear 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 -**
---

Applications support allow for the upload of binary files that add custom functionality and value to the camera. Applications are uploaded through the Web User Interface. These applications are licensed by Tyco Security Products using a licensing facility.

## Applications

Procedures relating to applications are included below.

### Procedure 8-1 Upload an Application

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select the **Applications** menu. |
|  | The Application tab displays. |
| 3 | Select **Browse.** |
|  | The Choose file dialog displays. |
| 4 | Navigate to the location where the application is saved. |
| 5 | Select the application file, then select **Open**. |
| 6 | Select **Upload**. |
|  | The upload process begins. |

**- End -**

## Available Applications

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

### Procedure 8-2  Start, stop, or remove an application

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select the **Applications** menu. |
|  | The Applications tab displays. |
| 3 | Select the corresponding Application check box to start, stop, or remove an application. |
| 4 | Select one of the following options: |
|  | a. **Start** to start the application running. |
|  | b. **Stop** to stop the application running. |
|  | c. **Remove** to remove the application. |

**- End -**

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# License

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

## Procedure 8-3 Upload a license file

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **License** from the **Applications** menu. |
| 3 | Select **Browse**. |
| | The Choose file dialog displays. |
| 4 | Navigate to the location where the license file is saved. |
| 5 | Select the license file, and then select **Open**. |
| 6 | Select **Upload**. |
| | The upload process begins. |

**- End -**

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# Security

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



## Figure 9-1 Security Menu

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

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

## Security Status

This section explains how to configure security features for the camera and modify the communication protocols that are used.

# Enhanced Security

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

## Procedure 9-1  Enable Enhanced Security

| Step | Action |
|------|--------|
| | |

1   Select **Setup** on the Web User Interface banner to display the setup menus.

2   Select **Security Status** from the **Security** menu.

3   Select the **Security Overview** tab.

4   Check the **Enable Enhanced Security** check box to enable enhanced security

OR

Clear the **Enable Enhanced Security** check box to disable enhanced security.

Enhanced Security is disabled by default.

The Security Warning dialog appears.

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

6   Enter the new password in the **New Password** text box.
    **Note:**

The password for enhanced security must meet the following requirements:

a. Be a minimum of seven characters long

b. Have at least one character from at least three of the following character groups:

    i.   Upper-case letters

    ii.  Lower-case letters

    iii. Numeric characters

    iv.  Special characters

7   Re-enter the new password in the **Confirm Password** text box.

8   Click **Apply**.

**- End -**

### Procedure 9-2  Disable Enhanced Security Mode

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Security Status** from the **Security** menu. |
| 3 | Select the **Security Overview** tab. |
| 4 | Clear the **Enable Enhanced Security** check box to disable enhanced security. |

**Note:**

When in Enhanced Security mode, changing the security mode requires the admin account password.

| Step | Action |
|------|--------|
| 5 | Click **Apply**. |

**- End -**

## Setting Communication Protocols

This section explains how to modify the communication protocols that are used. The following communication protocols can be enabled: HTTP, FTP, CIFS, Dyn DNS, SMTP, HTTPS, SNMP V3, and SFTP.

### Procedure 9-3  Enable/Disable Communication Protocols

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Security Status** from the **Security** menu. |
| 3 | Select the **Security Overview** tab. |
| 4 | Click **Edit** on the Communication Protocol you want to modify. You are redirected to the individual protocol page to enable or disable the Communication Protocol. |

**Note:**

• When in Enhanced Security, enabling/disabling individual protocols requires the admin  account password.

**- End -**

# 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 9-4  Add a User

| Step | Action |
|---|---|
| **1** | Select **Setup** on the Web User Interface 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. |

 **Note:**

The password for enhanced security must meet the following requirements:

 • Be a minimum of seven characters long

 • Have at least one character from at least three of the following character groups:

> • Upper-case letters
>
> • Lower-case letters
>
> • Numeric characters
>
> • Special characters

| Step | Action |
|---|---|
| **7** | Enter the same password in the **Confirm Password** text box. |
| **8** | Select **Apply** to save the settings. |

**- End -**

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# Changing the User Accounts Password

Change the password of an existing user account.

## Procedure 9-5  Change User Password

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Users** from the **Security** 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 9-6  View User Accounts

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Users** from the **Security** 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.

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### Procedure 9-7  Delete a User Account

| Step | Action |
|------|--------|

**1**     Select **Setup** on the Web User Interface banner to display the setup menus.

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

The Users tab displays.

**3**     Select ▥ to delete the corresponding user account.

You will be prompted to confirm the deletion.

**4**     Select **OK** to delete.

Or

Select **Cancel**.

**- End -**

# HTTP/HTTPS

## Upload a HTTP/HTTPS Certificate

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 9-8  Add a HTTP/HTTPS Certificate

| Step | Action |
|------|--------|

**1**     Select **Setup** on the Web User Interface banner to display the setup menus.

**2**     Select **HTTP/HTTPS** from the **Security** menu.

**3**     Select the **HTTPS Certificate** tab.

The HTTP/HTTPS Certificate tab

displays.

**4**     Select **Browse**.

The Choose file dialog will be displayed.

**5**     Navigate to the location where the HTTP/HTTPS certificate has been

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

**Note**

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

**6**     Select **Upload**.

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

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

83

Or

Select **Cancel**.

---

**- End -**

---

## Delete a 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 User Interface.

### Procedure 9-9  Delete a HTTP/HTTPS Certificate

---

| Step | Action |
|------|--------|

---

1   Select **Setup** on the Web User Interface banner to display the setup menus.

2   Select **HTTP/HTTPS** from the **Security** menu.

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

The HTTP/HTTPS tab displays.

4   Select **Delete**.

The camera will display a "Restarting HTTPS Service" page with a progress bar showing the deletion progress.

5   When complete the camera will return to the log in page.

6   Refer to Procedure 3-1  Log in to the camera, for information on logging in to the camera.

---

**- 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.

## Upload a HTTP/HTTPS Certificate

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 9-10  Configure IEEE 802.1x Security

---

| Step | Action |
|------|--------|

---

1    Select **Setup** on the Web User Interface banner to display the setup menus.
2    Select **IEEE 802.1x** from the **Security** menu.

The General tab displays.

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| 3 | Select the **Enable IEEE 802.1x** check box to enable IEEE802.1x security |
|---|---|
| | OR |
| | Clear the Enable **IEEE 802.1x** check box to disable IEEE802.1x security |

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

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

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

7    Select Upload to navigate to the CA Certificate location.

     The Choose file dialog will be displayed.

8    Navigate to the location where the certificate has been saved. Select the file and select **Open.**
9    Select **Upload.** The upload process will start**.**
10   If **PEAP** is selected:
         Enter the required PEAP password.
     OR
     If TLS is selected:
     **a**   Select Upload to navigate to the Client certificate location.
             The Choose file dialog will be displayed.

     **b**    Navigate to the location where the certificate has been saved.
     **c**   Select the file and select **Open**.
     **d**   Select Upload. The upload process will start.
     **e**   Enter the required Private Key Password.

**- End -**

# Firewall

Configure the Basic Filtering and Address Filtering for the Firewall.

## Basic Filtering

Enable or disable basic filtering for the camera this includes:

- ICMP (Internet Control Message Protocol) Blocking

- RP (Reverse Path) Filtering

- SYN Cookie Verification.

### Procedure 9-11  Enable/Disable Basic Filtering

| Step | Action |
|---|---|
| **1** | Select **Setup** on the Web User Interface banner to display the setup menus. |
| **2** | Select **Firewall** from the **Security** 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. |

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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 access to the camera.

### Procedure 9-12  Enable/Disable and configure Address Filtering

| Step | Action |
| --- | --- |

1 Select **Setup** on the Web User Interface banner to display the setup menus.

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

3 Select the **Address Filtering** tab.

The Address Filtering tab displays.

4 Select the **Address Filtering** check box to enable address filtering.

Or

Deselect the **Address Filtering** check box to disable address filtering.

The default setting is 'Disabled'.

5 If address filtering has been enabled:

 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 9-13  Edit an Address Filter

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Firewall** from the **Security** menu. |
| 3 | Select the **Address Filtering** tab. |
| | The Address Filtering tab displays. |
| 4 | Select ⌗ to edit the corresponding address filter. |
| 5 | Select **Apply** to save the changes to the address filter. |
| 6 | Edit the IP or MAC Address in the **IP or MAC Address** text box. |
| 7 | Select **Add** to save the changes. |
| | Or |
| | Select **Cancel**. |

**- End -**

# Deleting an Address Filter

Delete an existing address filter.

## Procedure 9-14  Delete an Address Filter

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Firewall** from the **Security** menu. |
| 3 | Select the **Address Filtering** tab. |
| | The Address Filtering tab displays. |
| 4 | Select 🗑 to delete the corresponding address filter. |

- End

# Remote Access

## SSH Enable

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

**Note**

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

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## Procedure 9-15  Configure SSH

| Step | Action |
| --- | --- |

**1**  Select **Setup** on the Web User Interface banner to display the setup menus.

**2**  Select **Security**, and then select **Remote Access.**

The Remote Access tab displays.

**3**  Select the **SSH Enable** check box to enable SSH.

Or

Deselect **SSH Enable** check box to disable SSH.

The default setting is 'Disabled'.

**- End -**

# ONVIF

The Web User Interface 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 9-16  Enable/Disable ONVIF Discovery Mode

| Step | Action |
| --- | --- |

**1**  Select **Setup** on the Web User Interface banner to display the setup menus.

**2**  Select **Remote Access** from the **Security** menu.

The Remote Access tab displays.

**3**  Select the **ONVIF Discovery Mode** check box to enable ONVIF Discovery Mode.

Or

Deselect **ONVIF Discovery Mode** check box to disable ONVIF Discovery Mode.

The default setting is 'Enabled'.

**- End -**

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### ONVIF User Authentication

**Note**

To utilize ONVIF User Authentication, there must be at least one admin level user in the ONVIF service.

When in Enhanced Security mode, editing ONVIF User Authentication requires the admin account password.

### Procedure 9-17  Enable/Disable ONVIF User Authentication

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Remote Access** from the **Security** menu.<br>The Remote Access tab displays. |
| 3 | Select the **ONVIF User Authentication** check box to enable ONVIF User Authentication.<br>Or<br>Deselect **ONVIF User Authentication** check box to disable ONVIF User Authentication.<br>The default setting is 'Enabled'. |

**- End -**

## Session Timeout

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

### Procedure 9-18  Set a Session Timeout time

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Session Timeout** from the **Security** menu.<br>The Session Timeout tab displays. |
| 3 | Use the slider bar to select the **Session Timeout (mins)**.<br>The default setting is 60 minutes. |

**- End -**

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

**Figure 10-1 Network Menu**
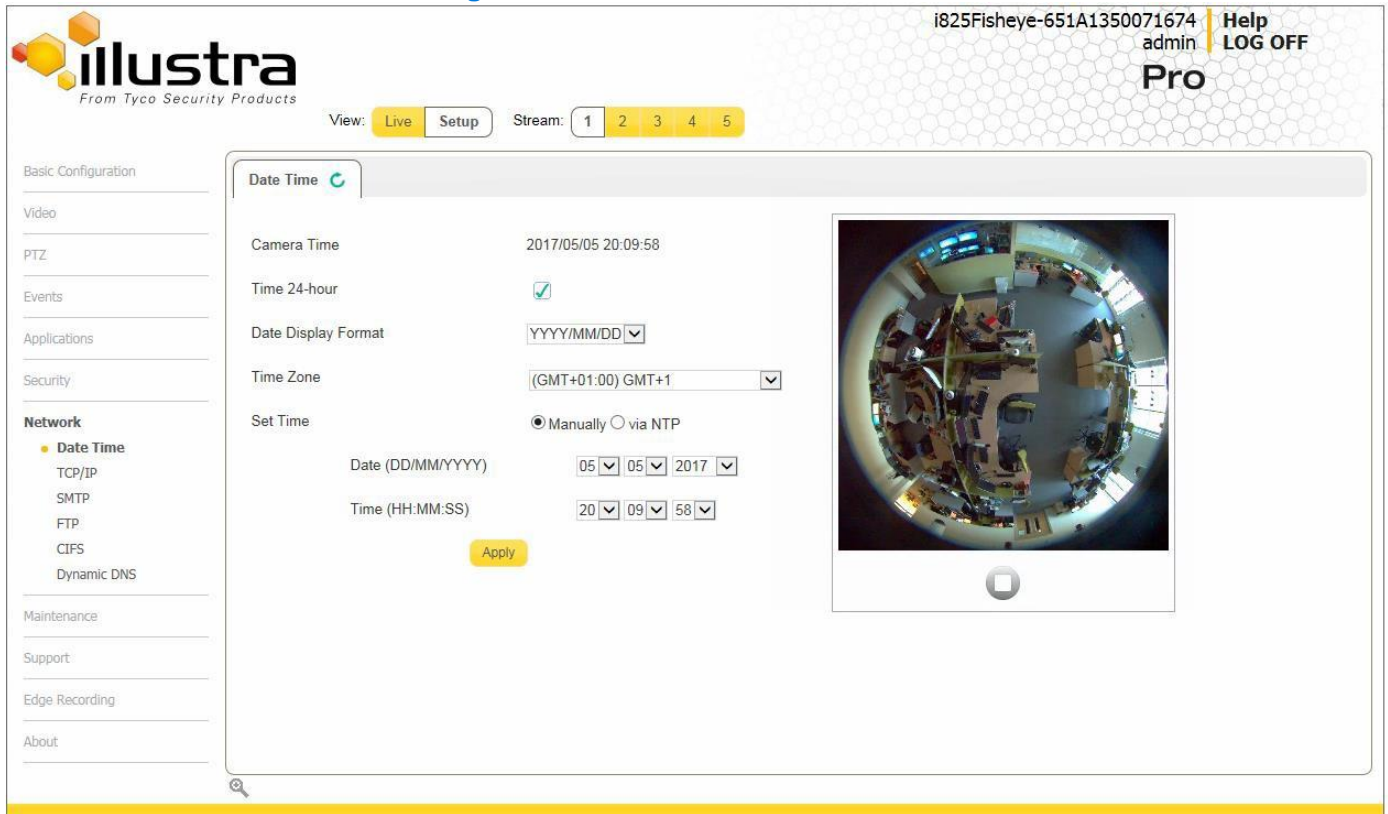


The Network Menu provides access to the following camera settings and functions:

• Date Time

• TCP/IP

• SMTP

• FTP

• CIFS

• Dynamic DNS

# 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 10-1  Configuring the Date and Time

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface 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 -**

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# TCP/IP

Configure the IPv4 and IPv6 settings on the camera.

## IPv4

Configure the IPv4 settings for the camera.

### Procedure 10-2  Configure the IPv4 Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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. |
| 5 | Select **Apply** to save the settings |

**- End -**

## IPv6

Enable IPv6 on the camera.

### Procedure 10-3  Enable/Disable IPv6

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **TCP/IP** from the **Network** menu. |
| 3 | Select the **IPv6 Enable** check box to enable IPv6 on the camera. Or |
|  | Deselect the **IPv6 Enable** check box to disable IPv6 on the camera. |

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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

On initial camera startup, and after a hardware factory reset, Dynamic Host Configuration Protocol (DHCP) is enabled by default and remains enabled until the camera receives until the camera receives either a DHCP address or is assigned a Static IP address.

### Procedure 10-4  Enable DHCP

| Step | Action |
|------|--------|

**1**     Select **Setup** on the Web User Interface banner to display the setup menus.

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

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

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

The camera will search for a DHCP server. If one is found it will connect to that

server. If no connection is made to a DHCP server within two minutes, the camera

goes to the default IP address 192.168.1.168, but continues to search for a DHCP

address.

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'.

**Note**

If the camera is assigned a Static IP address prior to DHCP being enabled, the camera first reboots for approximately 30 seconds and then remains accessible at its Static IP until a connection is made to a DHCP server.

---

**- End -**

---

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## Procedure 10-5  Disable DHCP

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select the **TCP/IP** tab from the **Network** menu. |
| 3 | Clear the **Enable DHCP** check box 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. |
| 5 | Select **Apply** to save the settings. |

**- 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 through the Events > Fault Settings menu.

## Configure SMTP

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

### Procedure 10-6  Configure SMTP Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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'. |

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| 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'.

**Note:**

When in Enhanced Security mode, enabling SMTP requires the admin account password.

| 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 Test SMTP Settings, to confirm that the SMTP settings are working as expected.

**- End -**

## Test SMTP Settings

Test the SMTP settings that have been configured. For more information, see Procedure 10-6 Configure SMTP Settings.

### Procedure 10-7 Test the SMTP Settings

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **SMTP** from the **Network** menu. The SMTP tab displays. |
|   | I f Procedure 10-6 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 -**

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# 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 10-8  Configure FTP Server Settings

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **FTP** from the **Network** menu. |
| | The FTP tab displays. |
| 3 | Enter the IP address of the FTP Server in the **FTP Server** text box. |
| 4 | Enter the FTP port in the **FTP Port** text box. |
| | The default setting is 21. |
| 5 | 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'. |

#### Note:

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

| Step | Action |
| --- | --- |
| 6 | 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. |
| 7 | Select **Apply** to save the settings. |

#### Note

Refer to Procedure 10-7 Test the SMTP Settings to confirm that the  FTP settings are working as expected.

**- End -**

## Test FTP Settings

Test the FTP settings that have been configured.

### Procedure 10-9 Test the FTP Settings

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **FTP** from the **Network** menu. |
| | The FTP tab displays. |
| | If Procedure 10-8 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 -**

# 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 user interface. 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 10-10  Configure Dynamic DNS

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface 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'. |

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**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.

Select **Apply** to save the settings.

---

**- End -**

---

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

**Figure 11-1 Maintenance Menu**
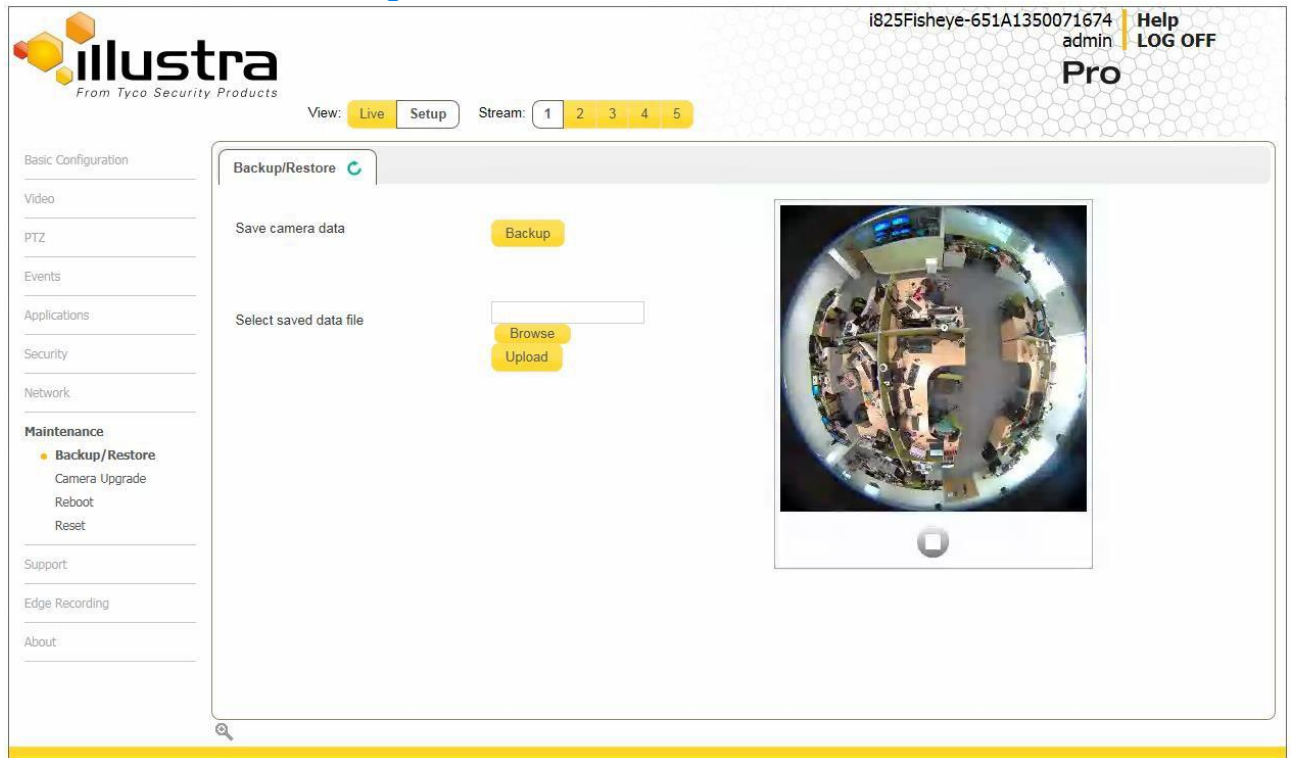


The Maintenance Menu provides access to the following camera settings and functions:

- 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 11-1  Backup Camera Data

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 11-2  Restore Camera Data

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Backup/Restore** from the **Maintenance** menu. |
|  | The Backup/Restore tab displays. |
| 3 | Select **Browse**. |

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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 for information on logging back into the camera  Web User Interface.

---
**- End -**

---

# Camera Upgrade

## Upgrade Camera Firmware

The camera can be upgraded using firmware provided by American Dynamics. 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 American Dynamics. Using any other firmware may cause a malfunction and damage the camera.

### Procedure 11-3  Upgrade Camera Firmware

| Step | Action |
| --- | --- |

**1**      Select **Setup** on the Web User Interface 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.

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**6**    The Log in page will be displayed.

Refer to Procedure 3-1  Log in to the camera for information on logging back into the camera  Web User Interface.

**- End -**

# Reboot

To perform a physical reboot of the camera, refer to Procedure 16-1  Reboot the camera using the Reboot/Reset Switch.

## Rebooting the Camera

Perform a reboot of the camera.

### Procedure 11-4  Reboot the Camera

| Step | Action |
| --- | --- |

**1**    Select **Setup** on the Web User Interface 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 User Interface 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 for information on logging back into the camera  Web User Interface.

**- End -**

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# Reset

To perform a physical reset of the camera, refer to .

## 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 11-5  Resetting the Camera

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 the **Preserve applications** check box to retain the current  applications during the camera reset. |
| | Or |
| | Deselect the **Preserve applications check box** to remove applications during the camera reset. |
| | The default setting is 'Enabled'. |
| 6 | Select **Reset** |
| | You will be prompted to confirm the camera reset. |
| 7 | Select **OK** to confirm. The Web User Interface 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**. |
| 8 | The Log in page will be displayed. |

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Refer to Procedure 3-1  Log in to the camera for information on logging back into the camera  Web User Interface.

**- End -**

When the Support menu is selected Figure 12-1 Support Menu will be displayed.

**Figure 12-1 Support Menu**
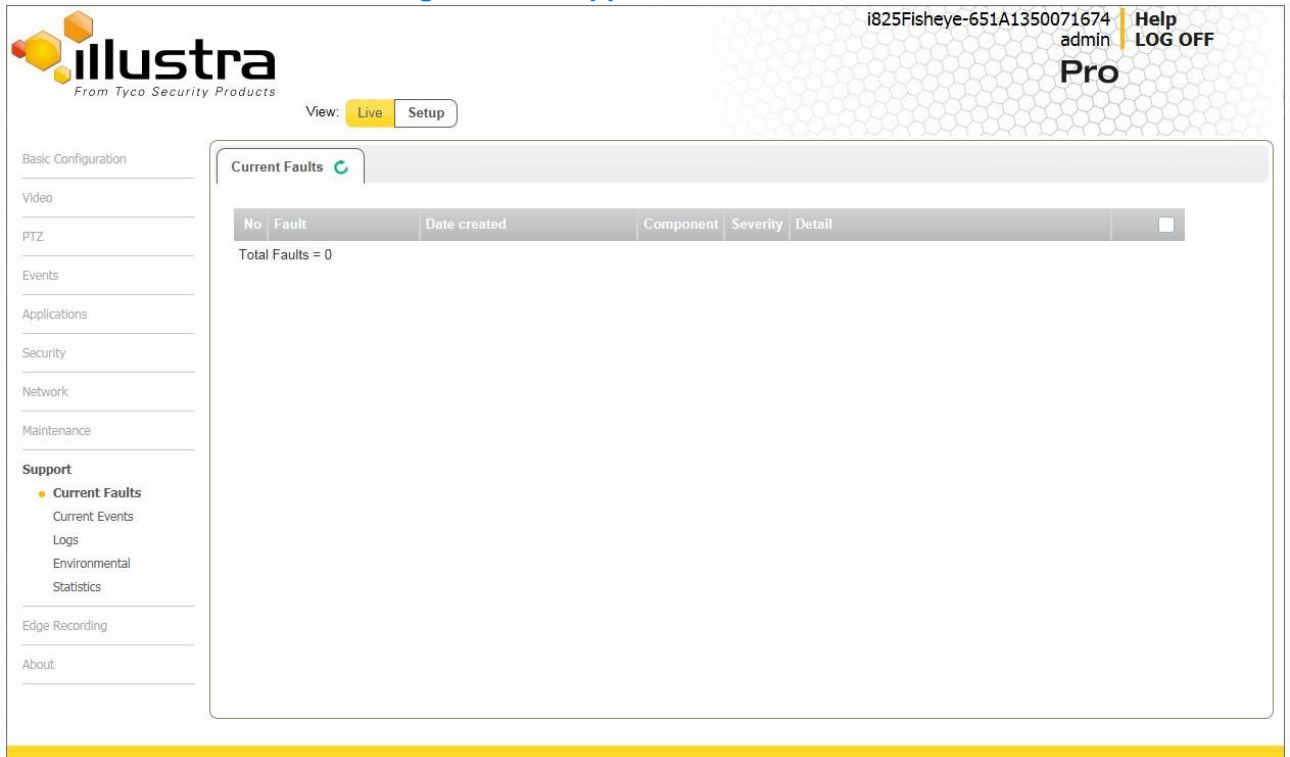


The Support Menu provides access to the following camera information:

- 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 12-1  Display Current Faults

| Step | Action |
| --- | --- |

**1**      Select **Setup** on the Web User Interface banner to display the setup menus.

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

         The current faults tab displays.

**- End -**

## Procedure 12-2  Delete Current Faults

| Step | Action |
| --- | --- |

**1**      Select **Setup** on the Web User Interface 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 12-3  Display Current Events

| Step | Action |
|------|--------|
| **1** | Select **Setup** on the Web User Interface 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 12-4  Delete Current Events

| Step | Action |
|------|--------|
| **1** | Select **Setup** on the Web User Interface 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.

| Step | Action |
|------|--------|
| **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 12-5  Display System Log

---

| Step | Action |
| --- | --- |

---

| 1 | Select **Setup** on the Web User Interface 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 12-6  System Log Filter

---

| Step | Action |
| --- | --- |

---

| 1 | Select **Setup** on the Web User Interface 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 -**

---

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## Boot Log

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

### Procedure 12-7  Display Boot Log

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the vbanner 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 12-8  Boot Log Filter

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface 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 -**

# Environmental

## Environmental Information

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

• InternalTemperature

### Procedure 12-9  Display General Information

| Step | Action |
| --- | --- |
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |

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**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 12-10  Display General Information

---

| Step | Action |
|------|--------|

**1**     Select **Setup** on the Web User Interface banner to display the setup menus.

**2**     Select **Statistics** from the **Information** menu.

The general information tab displays.

---

**- End -**

---

When the Edge Recording menu is selected the Figure 13-1 Edge Recording Menu displays.

**Figure 13-1 Edge Recording Menu**
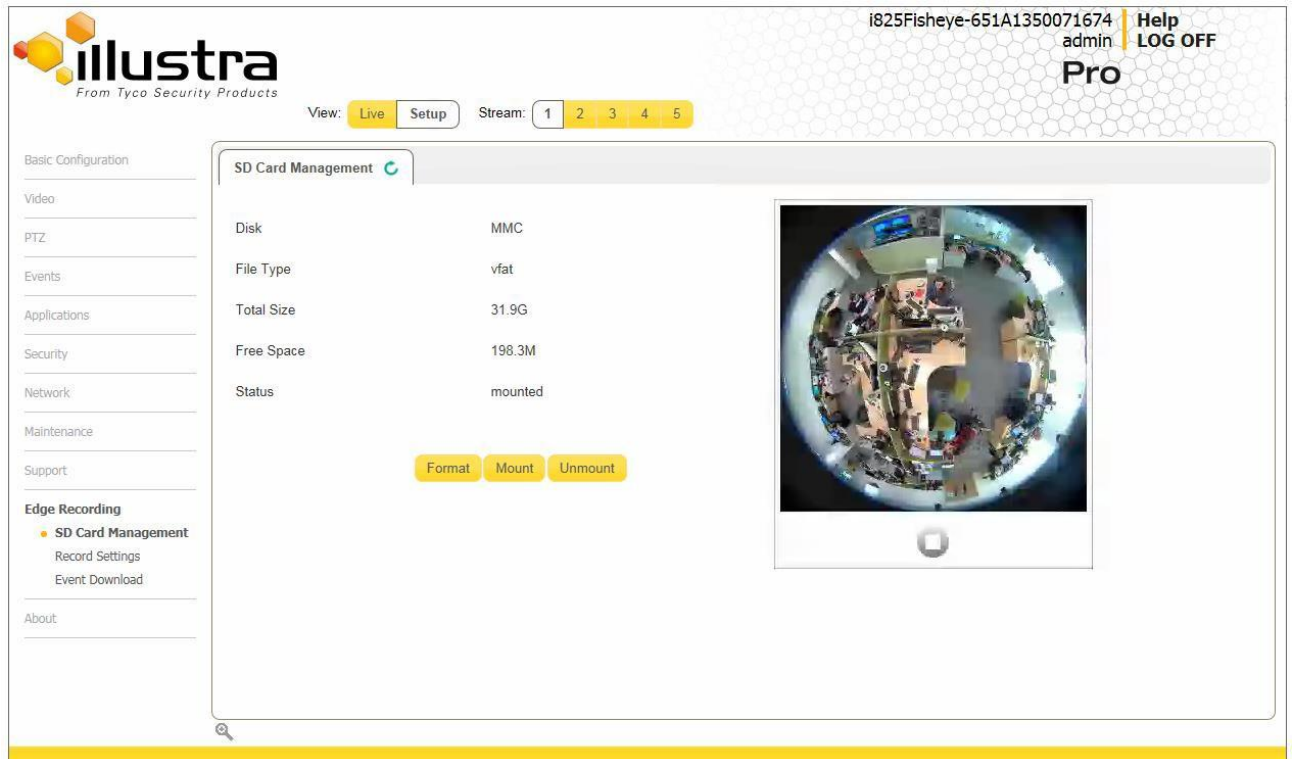


The Edge Recording Menu provides access to the following camera settings and functions:

• SD Card Management

• Record Settings

• Event Download

## SD Card Management

Edge recording provides the ability to save recorded video to a SD card. Video can be configured   to be recorded based on an event. Without a SD card, current faults display on camera if an alarm  is triggered. When Model is selected information will be displayed on the following:

• Current fault notifications displayed on camera if an alarm is triggered

• Video/Audio and screenshots are saved to the SD card

• SMTP notifications can be sent

• FTP uploads of video can be sent

• Audio can be played through the Audio out port

# Inserting the SD Card

When inserting an SD card it is essential that the camera is rebooted. The camera is mounted and unmounted through the Web User Interface.

**Note**

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

### Procedure 13-1  Insert the SD Card by powering down the camera

**Step   Action**

1. Turn off the camera by disconnecting the power supply.
2. Insert the SD card into the camera.
3. Reconnect the power supply and power up the camera.

**- End -**

### Procedure 13-2  Mount the SD Card using the Web User Interface to reboot the camera

**Step    Action**

1   Insert the MicroSD card into the camera.
2   Select **Setup** on the Web User Interface banner to display the setup menus.
3   Select **SD Card Management** menu from the **Edge Recording** menu.
4   Select **Mount**.

**- End -**

## Removing the MicroSD card

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

- Remove the SD Card by powering down the camera. Use this procedure if you don't have access to the Web User Interface and are unable to mount the microSD card before removal.

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

**Note**

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

### Procedure 13-3  Remove the MicroSD card by powering down the camera

| Step | Action |
|------|--------|
| 1. | Turn off the camera by disconnecting the power supply. |

**Note**

AVI clips are not available on the camera until the MicroSD Card has been inserted and the camera rebooted.

| Step | Action |
|------|--------|
| 2. | Reconnect the power supply and power up the camera. |

**- End -**

### Procedure 13-4  Unmount the MicroSD Card for removal

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **SD Card Management** from the **Edge Recording** menu. |
| 3 | Select **Unmount.** <br> You are prompted to confirm the unmounting. |
| 4 | Select **OK** to confirm <br><br> OR <br><br> Select **Cancel**. |
| 5 | Remove the SD card from the camera. <br><br> AVI clips are not available on the camera until the SD card has been inserted and mounted. |

**- End -**

## Record settings

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

### Procedure 13-5 Configure record settings

| Step | Action |
|------|--------|
| 1 | Select **Setup** on the Web User Interface banner to display the setup menus. |
| 2 | Select **Record Settings** from the **Edge Recording** menu. |
| 3 | Select Enable Record to allow the camera to create a playable video clip <br> OR <br> Deselect Enable Record to disable the feature. |
| 4 | If Enable Record has been enabled: |
| a | Select the required video stream from the **Video** list. <br><br> Refer to procedure 5-1 Configure the Video stream settings. |

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b    Select the Pre Event (secs) in seconds from the list. Values range from 0 to 10.

The default setting us 5 seconds.

c    Select the Post Event (secs) in seconds from the list. Values range from 0 to 10.

The default setting is 5 seconds.

5    Select **Apply** to save.

---

**- End -**

---

## Event download

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

---

When the About Menu is selected Figure 14-1 About Menu will be displayed.

**Figure 14-1 About Menu**
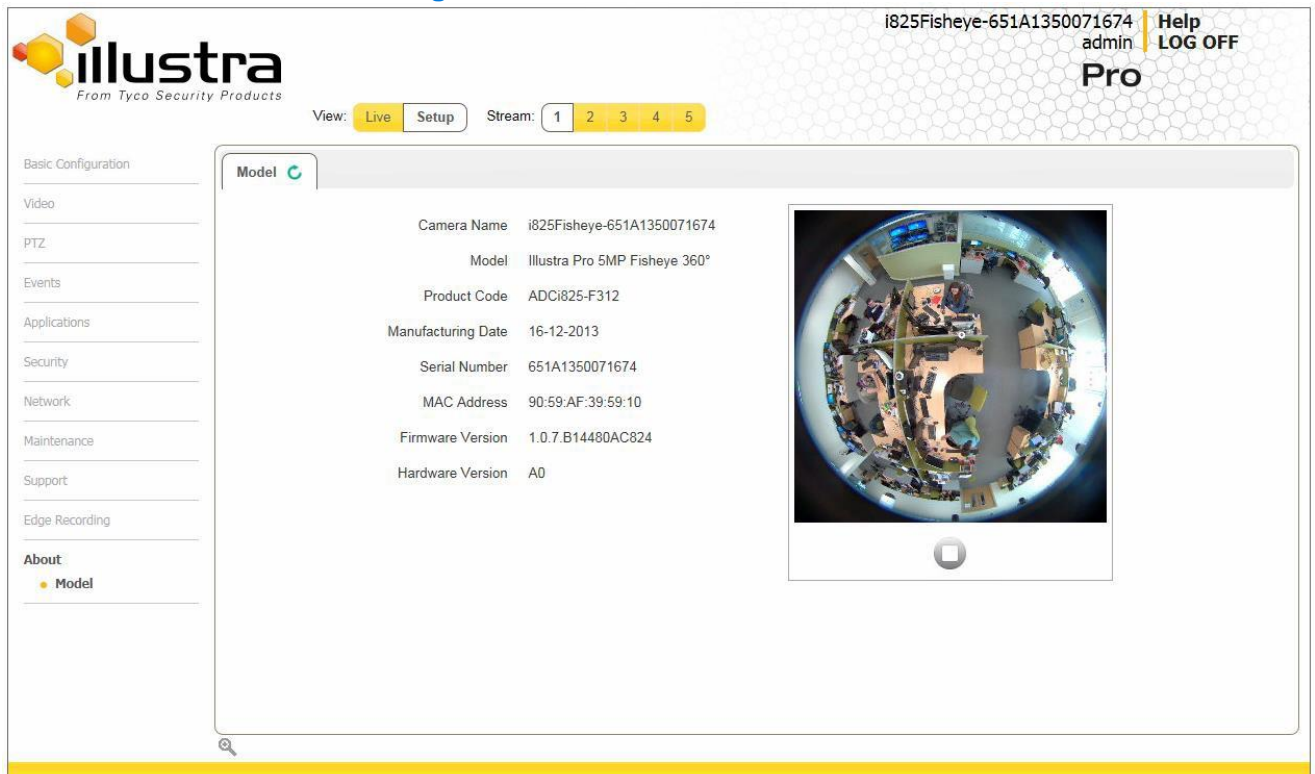


The About Menu provides information on the camera model:

• 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 14-1  Display Model Information

| Step | Action |
| --- | --- |

**1**    Select **Setup** on the Web User Interface 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 5MP 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

**Fisheye Stream.**

| Fisheye Stream Table | | | | |
|---|---|---|---|---|
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | MJPEG |
| | | | 640x640 | MJPEG |
| | | | 480x480 | MJPEG |
| | | | 320x320 | MJPEG |
| | | | 176x176 | MJPEG |

Note: The Primary and secondary streams are locked to the same frame rate.

**Wall Mode.**

In this mode, the camera can stream a wall panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Wall Mode | | | | |
|---|---|---|---|---|
| Wall Panorama | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x260 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Wall Mode | | | | |
|---|---|---|---|---|
| Active Image (1-4) | | | | |
| **Primary Stream** | | | **Secondary Stream** | |
| **Resolution** | **Max Frame Rate** | **Codec** | **Resolution** | **Codec** |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

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| Wall Mode | | | | |
|---|---|---|---|---|
| Quad Image | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

**Ceiling Mode.**

In this mode, the camera can stream a ceiling panorama or 4 PTZ active images or quad image (4 x PTZ active images in the same stream).

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Ceiling Panorama | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 1920x1080 | 15 | H.264/MJPEG | 960x540 | MJPEG |
| 1600x900 | 15 | H.264/MJPEG | 800x450 | MJPEG |
| 1280x720 | 15 | H.264/MJPEG | 640x360 | MJPEG |
| 1024x576 | 15 | H.264/MJPEG | 480x270 | MJPEG |
| 960x540 | 15 | H.264/MJPEG | 320x180 | MJPEG |
| 800x450 | 15 | H.264/MJPEG | | |
| 640x360 | 15 | H.264/MJPEG | | |
| 480x270 | 15 | H.264/MJPEG | | |
| 320x180 | 15 | H.264/MJPEG | | |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Active Image (1-4) | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

| Ceiling Mode | | | | |
|---|---|---|---|---|
| Quad Image | | | | |
| Primary Stream | | | Secondary Stream | |
| Resolution | Max Frame Rate | Codec | Resolution | Codec |
| 960x540 | 12 | H.264/MJPEG | 960x540 | MJPEG |
| 800x450 | 12 | H.264/MJPEG | 800x450 | MJPEG |
| 640x360 | 12 | H.264/MJPEG | 640x360 | MJPEG |
| 480x270 | 12 | H.264/MJPEG | 480x270 | MJPEG |
| 320x180 | 12 | H.264/MJPEG | 320x180 | MJPEG |

1. Primary Stream and Secondary Stream are locked to the same frame rate.
2. Active Image Primary Stream and Active Image Secondary Stream are locked to the same resolution.

**LT Model Streams.**

The LT model camera has no Edge Dewarp capability. Two Fisheye streams are supported as shown in the table below:

| Stream 1 | | | Stream 2 | | |
|---|---|---|---|---|---|
| Resolution | Max Frame Rate | Codec | Resolution | Max Frame Rate | Codec |
| 1936x1936 | 14 | H.264/MJPEG | 736x736 | 14 | H.264/MJPEG |
| | | | 640x640 | | |
| | | | 480x480 | | |
| | | | 320x320 | | |
| | | | 176x176 | | |

## 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<br>VBR |
| Frame Skip | With CBR |
| Bit Rate (CBR) | Selectable 16 kbps to - 10Mbps |
| Quality (VBR) | Highest, High, Medium, Low, Lowest. |

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# 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<br>UDP - RFC768 |
| Data Transmission | HTTP - RFC2616<br>FTP - RFC959 |
| Network Address Configuration | DHCP - RFC2131<br>Zeroconf - RFC3927<br>Static IP address |
| Network Name Resolution | DNS - RFC5395<br>DDNS - RFC 2136 |
| Time Synchronization | NTP - RFC1305<br>IETF NTP Working Group<br>i minute poll rate |
| E-mail | SMTP - RFC5321<br>Authenticated SMTP - RFC4954 |
| Authentication and Security | TLS - RFC5346<br>HTTPS (HTTP over TLS) - RFC2818<br>WS-Security |
| Discovery | WS-discovery - ws-discovery.pdf |
| Streaming | RTP - RFC3550<br>RTSP - RFC2326<br>Unicast Streaming<br>Multicast RFC 1112 level 1 |
| Remote Shell Access | SSH - RFC2326 |
| External Interface Protocol | SOAP - SOAP 1.2<br>ONVIF - 2.4<br>WS-Addressing<br>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 security.

- 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

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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)** is enabled by default on the camera on initial camera startup, and after a hardware factory reset, and remains enabled until the camera receives either a DHCP address or is assigned a Static IP address. If no connection is made to a DHCP server within two minutes, the camera goes to the default IP address192.168.1.168, but continues to search for a DHCP address. If the camera is assigned a Static IP address, prior to DHCP being enabled, the camera first reboots for approximately 30 seconds and then remains accessible at its Static IP until a connection is made to a DHCP server.

• **Static IP** can be used if the camera cannot be found on the network using DHCP. In this mode, 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 User Interface. 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 through 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 User Interface or ONVIF.

# Remote Shell Access

For security reason, remote shell access is limited exclusively to American Dynamics 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 American Dynamics Level 3 Technical Support.

# Authentication and Security

• HTTPS (HTTP over TLS) is used for the Web User Interface. 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<br>• WS-Base Notification<br>• 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:

**DeviceManagement**

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 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 Non-Vandal |
|---|---|---|
| Weight | 0.750kg | 0.730kg |

# Environmental

The product is designed to meet the following environmental conditions:

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**Operatingtemperature:**

| Indoor | -10°C to 45°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<br>Galvanic isolation transformer coupled, 1,500Vrms |

# Regulatory Compliance

The Illustra Pro 5MP Fisheye Camera meets the following regulatory requirements:

| Emissions | FCC: Part 15 Class A<br>CE: EN55022 Class A<br>AS/NZS CISPR 22 Class A<br>ICES-003/NMB-003 Class A |
|---|---|
| Immunity | CE: EN50130-4 |
| Safety | USA (UL): UL 60950-1<br>Canada (cUL): CAN/CSA-C22.2 No. 60950-1<br>CB Scheme: IEC 60950-1<br>European Union: EN 60950-1<br><br>EMC:<br>USA (FCC): CFR 47 Part 15<br>Canada: ICES-003/NMB-003 Issue 5<br>European Union: EN 55022:2010<br>European Union: EN 61000-3-2:2006/A2:2009<br>European Union: EN 61000-3-3:2008<br>Australia/New Zealand: AS/NZS CISPR 22:2009<br><br>Product Assurance Testing:<br>IEC 62599-2<br>EN55024<br>EN50130-4:2011<br>IEC 61000-6-1 |
| Vandal-Resistant | IK10 |
| Environmental | RoHS, EU Directive 2002/95/EC<br>WEEE, EU Directive 2002/96/EC |

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# Appendix A: User Account Access

| Camera Menu | Tab | Function | Admin | Operator | User |
|---|---|---|---|---|---|
| **Basic Configuration** | | | | | |
| Camera | Mounting | | X | X | |
| | Camera Name | List | X | X | |
| | | Edit | X | X | |
| Users | Users | List | X | | X |
| | | Delete | X | | |
| | Add User | | X | | |
| | Change Password | | X | X | X |
| Date Time | Date Time | | X | | - |
| TCP/IP | IPv4 | List | X | | - |
| | | Edit | X | | - |
| | IPv6 | List | X | | - |
| Streams | Stream 1 | | X | X | - |
| | Stream 2 | | X | X | - |
| | Stream 3 | | X | X | - |
| | Stream 4 | | X | X | - |
| | Stream 5 | | X | X | - |
| **Video** | | | | | |
| Streams | Stream 1 | | X | X | - |
| | Stream 2 | | X | X | - |
| | Stream 3 | | X | X | - |
| | Stream 4 | | X | X | - |
| | Stream 5 | | X | X | - |
| Camera | Mounting | | X | X | |
| | Camera Name | List | X | X | |
| | | Edit | 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 | - |
| | Flicker Control | | X | X | |
| | Picture Settings | | X | X | |
| Date/Time/OSD | Date Time | | X | | - |
| | Name | | X | - | - |
| | Time | | X | - | - |

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| Camera Menu | Tab | Function | Admin | Operator | User |
|---|---|---|---|---|---|
| **PTZ (Pro 5MP Fisheye)** | | | | | |
| Presets | Presets | List | X | X | X |
| | | 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 | 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 | SMPT | | X | | |
| | FTP | | X | | |
| | CIFS | | 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 | | |
| **Applications** | Applications | Upload Application | X | | |
| | | Available Applications | X | | |
| | License | Upload License | X | | |
| | | Available Licenses | X | | |

| Camera Menu | Tab | Function | Admin | Operator | User |
|---|---|---|---|---|---|
| **Security** | | | | | |
| Security Status | Security Overview | | X | | |
| Users | Users | List | X | | |
| | | Delete | X | | |
| | Add User | | X | | |
| | Change Password | | X | X | X |
| HTTP/HTTPS | | | | | |
| IEEE 802.1x | EAP Settings | | X | | |
| Firewall | Basic Filtering | List | X | | |
| | | Edit | X | | |
| | Address Filtering | List | X | | |
| | | Edit | X | | |
| Remote Access | Remote Access | | X | | |
| Session Timeout | Session Timeout | | X | | |
| **Network** | | | | | |
| 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 | | |
| FTP | FTP | List | X | | |
| | | Edit | X | | |
| | | Test | X | | |
| CIFS | CIFS | List | X | | |
| | | Edit | X | | |
| Dynamic DNS | Dynamic DNS | List | X | | |
| **Maintenance** | | | | | |
| Backup/Restore | Backup/Restore | | X | | |
| Camera Upgrade | Camera Upgrade | | X | | |
| Reboot | Reboot | | X | | |
| Reset | Reset | | X | | |

| Camera Menu | Tab | Function | Admin | Operator | User |
|---|---|---|---|---|---|
| **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 | |
| **Edge Recording** | | | | | |
| SD Card Management | SD Card Management | | X | | |
| | | | X | | |
| | | | | | |
| Record Settings | Record Settings | List | X | | |
| | | Edit | X | | |
| Event Download | Event Download | List | X | | |
| | | Upload | 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.

# Appendix B: Using VLC Player to View RTSP Streaming

## Note

| | |
|---|---|
| 1 | This appendix is provided for user instruction only. American Dynamics will not support or be responsible for any error caused during the use of VLC software. |
| 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 15-1  View RTSP Streaming via VLC Player

| Step | Action |
|---|---|
| 1 | It will be necessary to install the latest version of VLC Player from the website.<br><br>Visit www.videolan.org/vlc/.<br><br>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:<br><br>• **Stream 1:** rtsp://<ip address>:554/StreamId=1<br><br>• **Stream 2:** rtsp://<ip address>:554/StreamId=2<br><br>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:<br><br>• **Stream 3:** rtsp://<ip address>:554/StreamId=3<br><br>• **Stream 4:** rtsp://<ip address>:554/StreamId=4<br><br>• **Stream 5:** rtsp://<ip address>:554/StreamId=5 |
| 6 | Select **Play**.<br><br>The live video stream will be displayed. |

- End -

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# Appendix C: Camera Defaults

| Page | Field | Default Setting |
|---|---|---|
| Log in | Username | admin |
| | Password | admin |
| | Language | English |
| | | |
| Live View | Stream | 1 |
| | Scale | 25% |
| | 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 | Pro 5MP = Panoramic Pro LT 5MP = Fisheye |
| | Codec | H.264 |
| | Resolution | 1920x1080 (Pro 5MP) 736x736 (Pro LT 5MP) |
| | 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 |

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| 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 | Pro 5MP = Panoramic Pro LT 5MP = Fisheye |
| | 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 |

# Appendix D: 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 16-1 Reset/Reboot Switch.

**Figure 16-1 Reset/Reboot Switch**
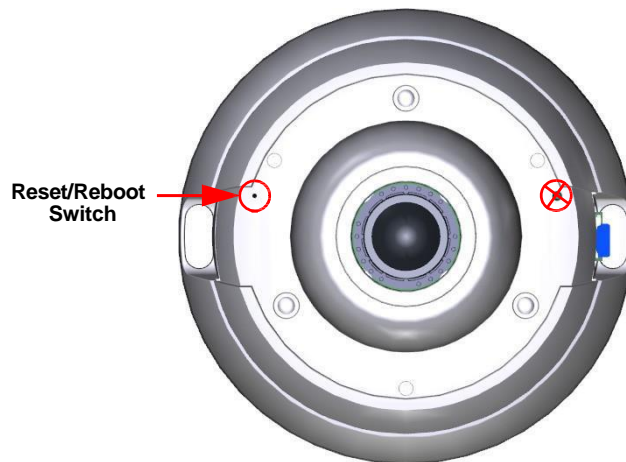


To access the reset switch the cover must be removed from the camera as seen in Figure 16-2 Removing the camera cover. Refer to the Quick Installation Guide supplied with the camera for details on how to remove the camera cover.

**Figure 16-2 Removing the camera cover**
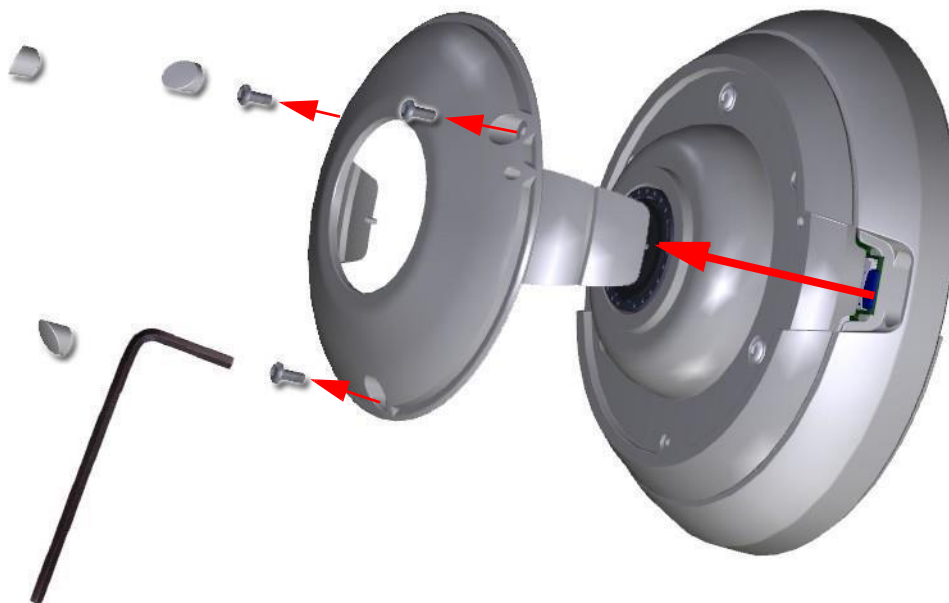
# Rebooting the Camera using the Reboot/Reset Switch

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

### Procedure 16-1  Reboot the camera using the Reboot/Reset Switch

| Step | Action |
| --- | --- |
| 1 | Locate the reset/reboot switch on the camera.<br>Refer to Figure 16-1 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 Web User Interface. For more information, see Reset the Camera to Factory Default Settings.

### Procedure 16-2  Reset the Camera to Factory Default Settings using the Reset/Reboot Switch

| Step | Action |
| --- | --- |
| 1 | Locate the reset/reboot switch on the camera.<br>Refer to Figure 16-1 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.<br>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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# Appendix E: Stream Combinations

## Stream Combinations FW 1.00

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|
| **Single Stream only** | **Single Stream only** | **Single Stream only** | **Single Stream only** | **Single Stream only** |
| 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 |

## Stream Combinations – FW 1.03

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|
| **Dual Stream (manual enabling required)** | **Dual Stream (manual enabling required)** | **Dual Stream (manual enabling required)** | | |
| 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 |

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## Stream Combinations FW 3.00

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|
| **Dual Stream** | **Dual Stream** | **Dual Stream** | **Dual Stream** | **Dual Stream** |
| 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 |
| Fisheye | Quad Image | Not Available | Not Available | Not Available |
| 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 |
| Quad Image | Quad Image | Not Available | Not Available | Not Available |