



Illustra Pro LT 2MP Bullet
Illustra Pro Compact Mini-Bullet
Illustra Pro 2MP Micro

Configuration Guide

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Introduction

This Configuration Guide is for use with all models of the following cameras:

- Illustra Pro LT 2MP Bullet
- Illustra Pro Mini-Bullet
- Illustra Pro Compact Mini-Dome
- Illustra Pro 2MP Micro

The Configuration Guide should be used to configure the camera using the camera's web interface. For information on installation and connection to the camera refer to the camera's specific Quick Start Guide.

Live Page Configuration

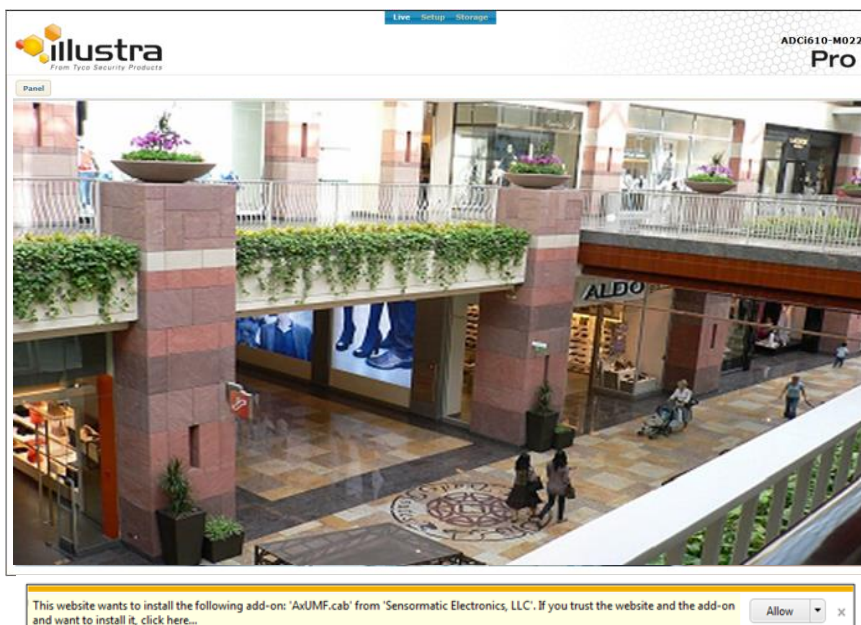
When the device is accessed through the web browser, the live image of the device appears on the window. To go back to the Live page either from the Storage or Setup page, click Live on the upper left corner of the web page.

ActiveX Installation (AxUMF.cab)

After the network and power connection are established, access the web browser to view the live streaming of the connected device. Installation of the ActiveX is required to see the live page and access full controls in Microsoft® Internet Explorer.

For full control of a device through a web browser, installation of the ActiveX control is required. Refer to the following steps to install the ActiveX. Disable the Pop-up blocker or run “Add-on” notice in a browser to install the ActiveX and Installation file.

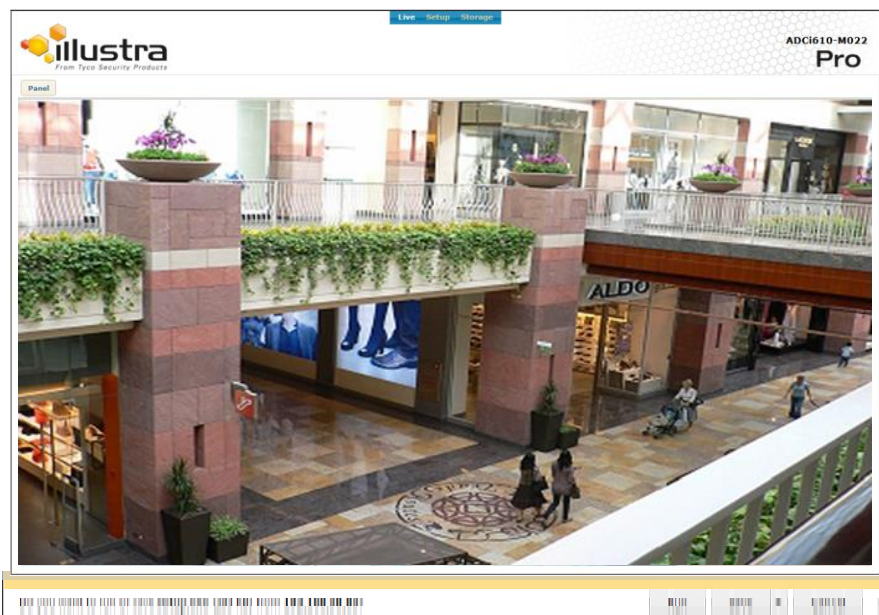
1. Click the installation warning message on the view page like below. Jpeg snapshot is displayed every 1 second before you install AxUMF.cab



2. Click the Install button on the warning message box. If the page is not responding after the installation, refresh the page.



3. Install the setup.exe file by clicking the link shown on the main page. Jpeg snapshot is displayed every 1 second before you install setup.exe.



4. Follow the instructions of the dialog boxes and complete the installation.



5. Refresh the page and check if the live image is displayed successfully.

If the live image is not shown,

1. Check if the camera is powered on and connected properly.
2. When using the Internet Explorer, check if the ActiveX control is installed. For other types of web browsers, the live image is displayed via QuickTime Player.

Note

If Direct3D Acceleration is disabled, you may not see the view page. In case of the blue screen appears instead of the proper video, please type 'dxdiag' from **Start > Run** on your computer, and check the DirectX Features.

Log In

To access the device on the web browser:

1. Enter “admin” for the user name and “admin” for the password on the pop-up window.
2. Click the OK button to access the main page.



Live Page Menus



- **Panel:** Clicking the Panel button enables users to hide/show the menu tab.
- **Stream:** The drop-down box displays available streams of the camera for users to select wanted stream channel.
- **Size:** Users may select the size of image that is displayed on a web page.
 - **Fit:** Image size is reduced/enlarged to “fit” into the current web window.
 - **25%:** Image size is reduced to a quarter of original resolution.

- **50%:** Image size is reduced to a half of original resolution.
- **75%:** Image size is reduced to three quarters of original resolution
- **100%:** Image size is displayed as its original resolution size.
- **150%:** Image size is 50% larger than its original resolution size.
- **Full:** The image is shown on a full screen mode.
-

If the live image is not shown,

1. Check if the camera is powered on and connected properly.
2. When using the Internet Explorer, check if the ActiveX control is installed. For other types of web browsers, the live image is displayed via QuickTime Player.

Note

If Direct3D Acceleration is disabled, you may not see the view page. In case of the blue screen appears instead of the proper video, please type “dxdiag” from **Start > Run** on your computer and check the DirectX Features.

-

Storage and Recording Configuration

The information in this storage and recording section will be applied only when you use the camera's own recording program. If you use the exacqVision edge storage instead of the camera's standard storage, refer to exacqVision edge in the Applications section in this manual.

Storage device settings

SD Storage

To search mounted SD storage devices and check the device information, click **Storage > Storage > SD**.

Storage > Storage > SD

SD Storage List

Choose a storage device

Detail storage information

Disk

Size

MMC	7638MB
-----	--------

Disk : MMC

Type : vfat

Total capacity : 7638MB

Free space : 1649MB

Status : connected

Refresh SD Device List

Record Device Control

Format(vfat)

Format(ext3)

Mount

Eject

- **Device List:** The mounted devices are listed by clicking the Refresh button or F5.
- **Device Information:** The detailed information of the selected storage device is displayed. The information includes device name, type, total capacity, free space, and device status.
- **Record Device Control:** Control allows users to format, mount, or eject storage device that is available from the device list.

To start the recording, the device must be connected. If the connected device does not appear, try to reboot the device and check its status again.

Note

Ex3 file system is recommended due to its resilience against data loss in case the card is ejected or if there is an abrupt power loss. Class 4 or higher Class SD card is recommended when recording high resolution video.

FTP

To specify the FTP server to record the video, click **Storage > Storage > FTP**.

Storage > Storage > **FTP**

Configuration

Name :	<input type="text"/>
IP Address :	<input type="text" value="."/> <input type="text" value="."/> <input type="text" value="."/>
Port(1 ... 65535) :	<input type="text" value="21"/>
Target Directory :	<input type="text"/>
Account :	<input type="text"/>
Password :	<input type="password"/>
File name format :	<input type="text" value="U15150000010000"/> _YYYYMMddhhmmssXXX.dat

- **Name:** Specify the FTP server name.
- **IP Address:** Enter the FTP server address.
- **Port:** Enter the server port number. The default is 21.
- **Target Directory:** Enter the directory to store the data. e.g. /test
- **Account:** Enter the login user name of the FTP server.
- **Password:** Enter the password of the FTP server.
- **File name format:** Relevant name that will be used as the recorded file. For easier recognition of duplicate files, the end of every recording file name includes the serial number of the device which uploads the recording file, date/time, and index information as a default.

Note

The date and time in the recorded file name is based on UTC time.

Recording

Recording file format

Storage > Recording > Configuration

Recording Format

☐ Continuous ☐ Event ☒ None

Apply

Cancel

- **Continuous:** It records the video stream as Standard AVI format that is a multimedia container format.
- **Event:** The camera's own recording file format that can be used for the event recording.
- **None:** It disables the recording.

Continuous Recording

For the continuous recording configuration, click **Storage > Recording > Configuration**, and select Continuous as the recording format. On this page, users can configure the recording storage option and recording conditions and perform instant recording.

Recording storage Options

- **Storage device:** SD memory card is used as default.
- **Recycling options:** Users can select one of the options when the storage is full.
 - **Stop recording:** It stops recording and keeps the recorded data.
 - **Delete files and recycle (oldest first):** It replaces oldest files with the latest files (based on dates).

Recording Setting

- **Prefix of filename:** Give relevant name that will be used as the recorded file. For easier recognition of duplicate files, the end of every recording file name includes the date and time information as a default.
- **Recording resource:** 'Video only' is pre-selected.
- **Rule of segmentation:**
 - (by) Size: The range of the file size is from 100 to 1440 Megabyte(s).
 - (by) Time: The range of the recording length is from 5 to 20 minute(s).
- **Stream source:** Users may choose primary recording source from either first stream or second stream. If it is a single stream, the second stream option is unavailable.

Instant Recording

If the Start button is pushed, the recording will be started immediately. Before pressing the start button, input recording time (seconds) in the box next to the start button. The system default is 60 seconds, and available recording time is from

10 to 600 seconds. (10 minutes) While the recording is in progress, the button label changes from “Start” to “Stop”; Users can manually stop the recording while it is being progressed.

When the recording is complete, click the Download button on far right; Click the button to download the recording as a file.

Note

If Instant Recording does not show on the page, make sure to select Continuous, and click Apply.

Event Recording

For the event recording configuration, click **Storage > Recording > Configuration**, and select Event as the recording format. On this page, users can configure the recording storage option and the event recording conditions.

Storage > Recording > Configuration

Recording Format

☐ Continuous ☒ Event ☐ None

Recording Storage Options

Storage device : sd ▼

Recording Setting

Recording resource : Video only ▼

Event hold off time : 10 (0 ... 60 sec)

Stream source : Stream 1 ▼

Apply

Cancel

Recording Storage Options

- **Storage:** Select the storage device type. When FTP is selected, the SD memory is used as the buffer to transfer the data file stably.

Recording Setting

- **Recording resource:** ‘Video only’ is pre-selected.
- **Event hold off time:** Specify the time between the successive triggered events so to ignore the often repeated event.
- **Stream source:** Users may choose primary recording source from either first stream or second stream. If it is a single stream, the second stream option is unavailable.

Search and file-download

Download of Continuous Recording

To view and download the recorded files, click **Storage > Search & Download > Continuous**.

Storage > Search & Download > **Continuous**

Search : x

Num	FileName	DateTime	Size	Download
1	REC-C20141022-155156-0000000010.avi	10/22/2014 15:51:56	196.6M	[Download]
2	REC-C20141022-154656-0000000009.avi	10/22/2014 15:46:56	255.7M	[Download]
3	REC-C20141022-154156-0000000008.avi	10/22/2014 15:41:56	255.7M	[Download]
4	REC-C20141022-153656-0000000007.avi	10/22/2014 15:36:56	255.7M	[Download]
5	REC-C20141022-153155-0000000006.avi	10/22/2014 15:31:55	255.7M	[Download]
6	REC-C20141022-152958-0000000005.avi	10/22/2014 15:29:58	100.0M	[Download]
7	REC-I20141022-152948-0000000004.avi	10/22/2014 15:29:48	8.6M	[Download]
8	REC-C20141022-152754-0000000003.avi	10/22/2014 15:27:54	96.6M	[Download]
9	REC-C20141022-152557-0000000002.avi	10/22/2014 15:25:57	100.0M	[Download]
10	REC-I20141022-152547-0000000001.avi	10/22/2014 15:25:47	8.5M	[Download]

All of the recorded files are listed on the page. A file currently being recorded is displayed as [Recording] on the Download column. Users can select the desired file from the list or search for it by date. To list up the files which are recorded on a specific date, click on the Search box. A calendar appears under the search box. Then, select the desirable date. To go back to the original list, click the 'x' button next to the Search box.

To download a file, click [\[Download\]](#). Then, the pop up window appears for the file download.

Download of Event Recording

Users can download the recording files in the SD memory card at **Storage > Search & Download > Event**.

Storage > Search & Download > **Event**

☐ Today
 ☐ a Week
 ☐ 15 Days
 ☐ 1 Month
 ☐ 3 Month
 ☐ All

~

Search

☐ All
 ☐ Motion
 ☐ DI

Num	Event Rule Name	Type	Rule Time	Description	Download
1	Rule 1	md	2015-02-12 02:02:44	zone1	
2	Rule 1	md	2015-02-12 02:01:45	zone1	
3	Rule 1	md	2015-02-12 01:58:24	zone1	

- **Period:** Select the period to search for events. If you want to select a specific period, click the radio button of 'All'. Then, clicking on the text box will bring a pop-up calendar to define the dates and the times.

- **Event type:** Select the event type to search for events. If you want to select or deselect all types, check or uncheck the checkbox of 'All'. Otherwise, select an individual event type between Motion and DI.
 - All: All of the available event types
 - Motion: Motion detection event
 - DI: DI event (IPL02B2BNWIY only)
- **Search result list:** If you click the Search button with the specific event type and period, you can get the event list here. It shows the event rule name which is defined by Event Rule, the event type, the rule time which the event is raised at, some description and the download link.
- **Download:** When you have a search result list, you can find the floppy disk icon on the rightmost side of each event. Then, click the icon that you want to download the recording.

Setup

To configure the setting values of the device, click the Setup button on the main page. To access the Setup page, ID and passwords are required.

Basic Configuration

The Basic Configuration provides the menus required for the basic settings that a user must configure after the camera installation.

Users

To create/remove/modify a user group, go to **Setup > Basic Configuration > Users**.

Setup > Basic Configuration > **Users**

User List

admin	Administrator
-------	---------------

Add... Modify... Remove...

User Authentication

☒ Enable anonymous viewer login (no user name or password required)

Apply Cancel

How to add a user

To add a user for the webpage,

1. Go to **Setup > Basic Configuration > Users**.
2. Click the Add button below the User List.
3. When the pop-up window appears, type a user name and password.

Add User X

User name : admin1

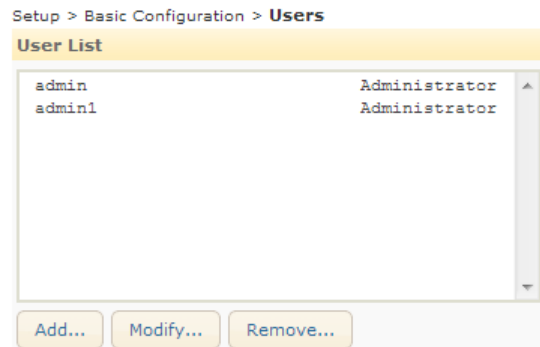
Password :

Confirm password :

Apply Cancel

- **Limitation on user name:** The user name can consist of alphabets from “a” through “z”, numbers from 0 to 9, and the underscore symbol; the user name must begin with an alphabet letter.
 - Length: The length of user name must be between 4 and 32.

- Character range: All upper or lower case letters, numbers from 0 to 9, and underscores
 - **Limitation on password:** A password can contain from 4 to 32 characters with a combination of alphabet and numbers.
 - Length: The length of password must be between 4 and 32.
 - Character range: All upper or lower case letters and numbers from 0 to 9
4. Click the OK button to save the changes.
 5. Check if the user name is added to the list.



How to modify a user

To change your password or user name,

1. Go to **Setup > Basic Configuration > Users**.
2. On the User List, highlight the user name.
3. Click the Modify button below the User List.
4. When the pop-up window appears, type the new password.
5. Re-type the same password again on the 'Confirm password' text box.
6. Click the OK button to save the changes.

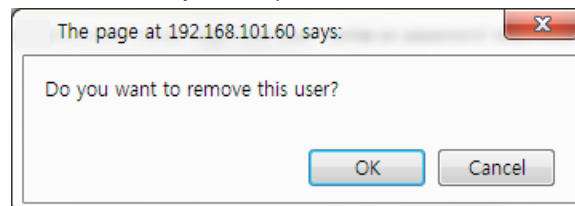
Note

Once the user name is set, it cannot be modified. Simply remove the user name, and add a new user with desired name

How to remove a user

To remove a user name from the User List,

1. Go to **Setup > Basic Configuration > Users**.
2. Select the user name to remove on the User List.
3. Click the **Remove** button below the User List.
4. When the dialog box appears to confirm your request, click the **OK** button.



5. Check if the user name is removed from the list on the page.

Note

The default account – “admin” cannot be removed.

User Authentication

Enable or disable for anonymous viewers to connect to the Live page.

TCP/IP

Refer to the TCP/IP (DHCP, Static IP, DNS setting) section for the TCP/IP configuration.

Date and Time

Time setting is very significant for all parts of the product server because it affects the log of streaming and OSD of video. To configure the date and time, go to **Setup > Basic Configuration > Date & Time**.

Setup > Basic Configuration > **Date & Time**

Current Camera/Encoder Time

2015/02/12 21:19:14

Configuration

Time zone : (UTC-05:00) Eastern Time (US & Canada) ▼

Sync source : ☒ NTP server [Go to NTP Configuration](#)
NOTE: This feature will be applied after reboot.

Date & Time format : Predefined : YYYY-MM-DD ▼ ☒ 24-Hour

Apply Cancel

Set Time

Source : ☒ This computer's Date & Time
 2015/02/13 11:18:40

☐ NTP server
 NTP server : pool.ntp.org

☐ Manual

Date : 02-13-2015 MM-DD-YYYY
 Time : 11:18:38 HH:MM:SS(24-Hour)

Apply

- **Current Camera/Encoder Time:** It shows the camera's recognized time.
- **Time zone:** Select the proper time zone of where the camera is installed from the drop-down box. Daylight saving time applies automatically.
- **Sync source:**
 - **NTP server** – Time setting relies on designated NTP server. Users can configure available NTP servers at **Setup > Network Configuration > NTP**. Four NTP server lists can be added, and the first top list is the default source of the time (time.windows.com).
- **Date and time format:** Select the desired date and time format from the drop-down list box.
- **Set Time:** Select one of the three options below to set date/time.
 - Synchronize the camera with the computer that the camera is connected.
 - Synchronize the camera with the NTP server.
 - Set date/time of the camera manually.

Stream

The Stream configuration page at **Setup > Basic Configuration > Stream** works the same way as the page at **Setup > Video > Stream**. Refer to the Stream section for the details.

Setup > Basic Configuration > Stream

Stream 1 Stream 2

Stream

☒ Enable streaming

Video codec : H.264 ▼

Resolution : 1280x720 ▼

Max. FPS : 30 (1 ... 30 fps)

GOP : 30 (1 ... 30)

Profile : High ▼

Bit rate control

☒ Variable bitrate (VBR)

Image quality : High ▼

☐ Constant bitrate (CBR)

Target bitrate : 4000 (128 ... 8000 kbps)

The expected codec usage : 45%

Show profile list Apply Cancel

Video

To change the setting for video input, OSD, encoder profile, and stream, go to the Video page by selecting **Setup > Video**. This menu is configured with the five sub menus: Picture Settings, OSD, Encoder Profile, Stream, and Privacy Zone.

Note:

The IPL02B2BNWIY camera has six sub menus: Picture Settings, **Zoom/Focus**, OSD, Encoder Profile, Stream, and Privacy Zones

Picture Settings

This section is under the Video menu that enables users to modify the characteristics of the camera image.

The Picture Settings page provides the options to:

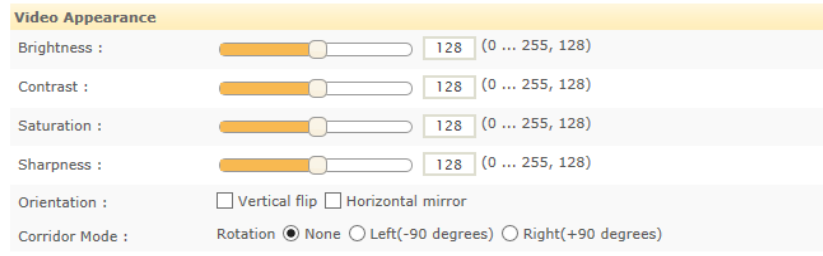
- Name a channel for the camera
- Set the image attributes
- Adjust the image exposure
- Adjust IR Power output
- Configure Day & Night mode
- Configure the image signal processing
- Rotate the image for corridor mode
- Preview the current setting

Click the Apply button to save the changes, or click the Reset button to return to the previous settings. Click the Apply button to save the changes, or click the Reset button to return to the previous settings. .

- **Camera Name/Camera Friendly Name:** Users may provide a friendly name to each individual camera for utilizing multiple channels and cameras. Using alias is recommended to distinguish a device from the others in the environment with multiple image feedbacks from multiple monitoring devices.

General	
Camera Name/Camera Friendly Name :	Illustra Pro 2MP Compact Mini-Bullet

- **Video Appearance:** Brightness, contrast, saturation, sharpness, orientation, and corridor mode are adjusted.
 - Brightness: The range is from 0 to 255, and the default is 128.
 - Contrast: The range is from 0 to 255, and the default is 128.
 - Saturation: The range is from 0 to 255, and the default is 128.
 - Sharpness: The range is from 0 to 255, and the default is 128.
 - Orientation: Select vertical flip or horizontal mirror for an object.
 - Corridor mode: It rotates the video image to 90 degrees in an area that is more vertical than horizontal in shape such as staircase, hallway, and aisle to show a vertically oriented video stream to contain the areas of the interest more visibly. The options are 'Normal', 'Left (-90°)', and 'Right (+90°)'.



Video Appearance

Brightness : 128 (0 ... 255, 128)

Contrast : 128 (0 ... 255, 128)

Saturation : 128 (0 ... 255, 128)

Sharpness : 128 (0 ... 255, 128)

Orientation : ☐ Vertical flip ☐ Horizontal mirror

Corridor Mode : Rotation ☒ None ☐ Left(-90 degrees) ☐ Right(+90 degrees)

Note

Sharpness is affected by characteristics of the image on the camera. Therefore, the right value for sharpness is comparative, so configure the sharpness appropriately according to your discretion.

Note

Image rotation using high resolution(1080p) may lower the frame rate.

- **Exposure mode:** Selecting the right option in Exposure mode depends on the installation site's environment. Three modes are available like below.
 - Auto: It automatically adjusts the shutter speed within the range (Range: 1/60 ~ 1/10,000) from the user defining minimum shutter speed to the pre-defined maximum shutter speed(1/10,000) depending on the lighting condition.

*The shutter speed will vary from 1/60 per second to the degree the user sets as the maximum shutter speed.
 - Manual: The shutter speed is fixed by a user.
 - Flickerless: It automatically adjusts the shutter speed depending on the flickering frequency. If you intend to reduce light flicker on the image, select this mode between the two options(50Hz or 60Hz) depending on country.
- **Maximum AGC:** It maintains appropriate exposure on the image by automatically adjusting gain under low light condition. When gain is increased, noise and bitrate are elevated as well. Thus, users may need to set the maximum AGC (Range: 0 ~ 100) while considering the prevention of the excessive increase of noise and data size.
- **Exposure adjustment:** Correct exposure value should be selected from the list box to adjust the target brightness for the automatic exposure setting. The high value makes the image brighter, and the low value makes the image darker (Options: +1.0, +0.6, +0.3, 0, -0.3, -0.6, -1.0 (EV)).
- **Back light compensation (BLC):** This feature allows the camera to control the exposure level of the entire image to properly expose the subject of interest in the foreground.
- **Digital slow shutter (DSS):** It allows the proper exposure in low light condition even if the frame rate may be dropped. Turn on or off the digital slow shutter depending on your needs.
- **IR:** It enables users to adjust the IR power output depending on the surrounding light conditions.
 - Manual: Users can determines an appropriate level of IR power output and adjusts it manually.

The available IR range is from 0 to 255.
 - Off: This mode makes the camera's IR LEDs turned off.

Exposure

Exposure mode : ☒ Auto
 Minimum shutter speed : 1 / 2000 sec

☐ Manual
 Shutter speed : 1 / 30 sec

☐ Flickerless
☒ 50Hz ☐ 60Hz

Maximum AGC : 50 (0 ... 100)

Exposure adjustment : 0 EV

Back light compensation : ☐ On ☒ Off center

Digital slow shutter : off

IR : ☐ Off ☒ Manual 128 (0 ... 255, 128)

- **Wide Dynamic Range (WDR):** When there are both a very dark spot and a very bright spot on the image, you can enable the Digital Wide Dynamic Range function. The level of Wide Dynamic Range can be manually adjusted with the slide bar.

Wide Dynamic Range

☐ Enable

Level : 1 (1 ... 16, 8)

- **Day & Night:** Three different day/night modes are supported: Auto, Day, and Night with the slide bar. The default value is Auto

Day & Night

Day & Night mode : ☒ Auto ☐ Day ☐ Night

Day to Night level : 4 (0 ... 63, 0)

Night to Day level : 12 (1 ... 64, 3)

- **White Balance:** A couple of white balance modes are available in the drop down menu.
 - atw1: It automatically adjusts color balance in image depending on the variation of color temperature. It is more appropriate for indoor environment.
 - atw2: It operates the same as atw1 but with a wider color adjustment range. It is more appropriate for outdoor environment.
 - push: It maintains the same color balance once this option is selected.
 - manual: users can manually adjust red and blue hues

White Balance

White balance mode : atw1

Red : 128 (0 ... 255)

Blue : 128 (0 ... 255)

- **Dynamic 2D DNR:** This feature controls noise filter. When the value is set to 0, it means that the noise filter is off. The noise suppression is gradually performed to the configured level depending on the current noise level. However, note that the video quality may suffer when the value is set to the highest (Range: 0 to 15, Default: 3).

Image Signal Processing

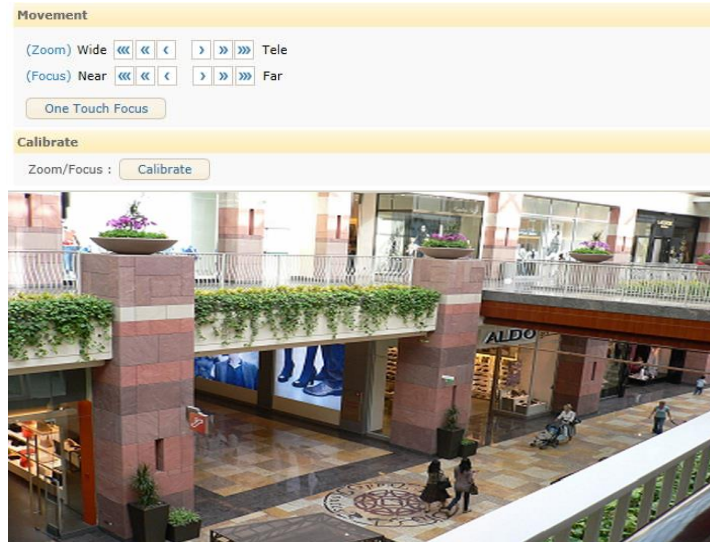
Dynamic 2D DNR : 15 (0 ... 15)

- **Preview button:** The preview window appears with the current setup visuals. When settings are applied, the preview window displays the user's latest modification.

Zoom/Focus (IPL02B2BNWIY & IPL02B2BNWIY)

To change the zoom/focus settings, go to **Setup > Video > Zoom/Focus**.

Setup > Video > **Zoom/Focus**



- **Movement:** Users can adjust zoom and focus manually or automatically under this tab.
 - Manual: There are three levels of movement available for wide, tele, near and far respectively. Clicking the buttons move the lens more extensively than the buttons .
 - One Touch focus: Clicking this button automatically sets the lens focus.
- **Calibrate(Zoom/Focus):** This function rectifies misalignment by rebooting to a zero point and then aligning to a correct position.

OSD

To change the OSD setting, go to **Setup > Video > OSD**.

What is OSD?

OSD burns information into streaming visuals before it gets compressed, thus it prohibits manipulation of the event time. It allows the file to become a reliable evidence as it discourages intentional manipulation of the date and time for an alibi.

Setup > Video > **OSD**

Configuration

☐ Enable OSD

Include text : ☒ Date ☒ Time ☒ Name

Text format

Name : (Max 48 characters)

☒ Enable milliseconds for time display

Text position

Date position :	Predefined :	<input type="text" value="Percentage X,Y"/>	X :	<input type="text" value="6"/>	% , Y :	<input type="text" value="12"/>	%
Time position :	Predefined :	<input type="text" value="Percentage X,Y"/>	X :	<input type="text" value="6"/>	% , Y :	<input type="text" value="16"/>	%
Name position :	Predefined :	<input type="text" value="Percentage X,Y"/>	X :	<input type="text" value="6"/>	% , Y :	<input type="text" value="20"/>	%

The settings of the OSD is applied to stream 1. To add OSD, select the Enable OSD checkbox after the setting, and click the Apply button.

- **Text configuration:** Select the items (Date, time and name) to be included in OSD. To include a specific name or info, type the desired text in the text box. To display millisecond (time), check the 'Enable milliseconds for time display' checkbox.
- **Text position:** Set the position of OSD on the image. Predefined positions are provided as the options as well as the manual configuration of the position.

Note

It is recommended to use normalized X, Y instead of predefined positions (left-top, left-bottom, right-top, right-bottom). Selecting the same predefined positions on all three categories may cause text overlapping depending on the image resolution or the position of each text. Utilizing PREVIEW is highly encouraged to review if the configured positions are placed appropriately in OSD.

- **Preview:** Clicking the Preview button unfolds or folds the Preview window. However, you need to press the Apply button to view the applied settings on the preview window.

Encoder profile

To create pre-defined encoder profiles, go to **Setup > Video > Encoder Profile**. The created encoder profiles can be loaded at **Setup > Video > Stream**.

Setup > Video > **Encoder Profile**

Stream Profile List

Name	Description	Stream1	Stream2
default		h264-1280x720	mjpeg-480x270

[Add...](#) [Copy...](#) [Modify...](#) [Remove](#)

Information

Profile name : default

Description :

Stream 1 : h264, 1280x720@30FPS, GOP-30, Profile-high, vbr, Image quality-high

Stream 2 : jpeg, 480x270@7FPS, Quality-75

The expected codec usage : **45%**

You can check the defined profile list on the main page, and add, copy, modify, or remove a profile.

- **Stream Profile List:** The list shows the defined encoder profiles.
- **Add:** Click this button to add a new profile.
- **Copy:** Select a desired profile to make a copy, click this button to copy the existing profile, and create a new profile by modifying a few options.
- **Modify:** Select the desired profile to modify and click this button to change the current settings of the profile.
- **Remove:** To remove a profile, select the desired profile and click this button. The default profile cannot be removed.
- **Information:** The detailed information of the highlighted profile is shown.

If you click either one of Add, Copy, or Modify button, the profile configuration page appears as shown on the next page. On this page, users can configure the settings for each stream separately.

Modify to Profile

Basic Configuration

Profile name : default (Max 32 characters)

Description : (Max 100 characters)

Stream 1Stream 2

Stream

☒ Enable streaming

Video codec : H.264

Resolution : 1280x720

Max. FPS : 30 (1 ... 30 fps)

GOP : 30 (1 ... 30)

Profile : High

Bit rate control

☒ Variable bitrate (VBR)

Image quality : High

☐ Constant bitrate (CBR)

Target bitrate : 4000 (128 ... 8000 kbps)

The expected codec usage : 45%

OK

Cancel

Please refer to 0 about the configuration of Stream1 and Stream2.

Stream

To apply one of the predefined encoder profiles to the actual streams, go to Setup > Video > Stream. The camera supports two video stream types: H264 and MJPEG. H264 is a coding standard that highly compresses the video to efficiently use the bandwidth, but still provides considerably good video quality. MJPEG uses JPEG still images in the video to give an excellent image quality, but it consumes considerable amounts of bandwidth. MJPEG also consumes more storage space than H264. You should configure the codec settings according to your needs while considering the bandwidth of your network and the available storage space.

Setup > Video > **Stream**

Stream 1 **Stream 2**

Stream

☒ Enable streaming

Video codec : H.264

Resolution : 1280x720

Max. FPS : 30 (1 ... 30 fps)

GOP : 30 (1 ... 30)

Profile : High

Bit rate control

☒ Variable bitrate (VBR)

Image quality : High

☐ Constant bitrate (CBR)

Target bitrate : 4000 (128 ... 8000 kbps)

The expected codec usage : 45%

Show profile list Apply Cancel

- **The expected codec usage:** The expected codec usage is calculated automatically according to your configuration parameters. Do not exceed the usage over 100%.
- **Enable streaming:** Check the 'Enable streaming' box to enable streaming on the selected stream. Always keep unused streams disabled.
- **Video codec:** Select the video codec between MJPEG and H.264.
- **Resolution:** The supported resolution in pixels for the current stream profile is listed on the drop down box. Select the desired resolution. If one of the video streams is set to 1080P, the other video stream resolution cannot have more than 1088 resolution pixels horizontally.
- **Maximum FPS:** Define the desired frame rate per second.

H.264 CODEC Configuration

- **GOP:** This parameter defines the length of the group of pictures. If this value is set to 1, the video stream will only have one I-frame. Keep this value high to minimize bandwidth.
- **Profile Identification:** This option allows the user to select between three different H.264 profiles. This directly affects the quality of the video due to the amount of compression applied. Baseline profile provides maximum compression to the video. High profile gives the best quality. Selecting the Main profile gives the balance between the other two.
- **Rate Control:** Choose a bit rate control to manage your bandwidth usage.

- **Variable bitrate (VBR):** VBR allows a higher bitrate (and therefore more storage space) to be allocated to the more complex segments of media files while less space is allocated to less complex segments. It is used when the system has enough storage and a high quality image is required. Image quality can be configured as highest, high, normal, low and lowest.
- **Constant Bitrate (CBR):** CBR mode maintains the defined bitrate level all the time.

MJPEG CODEC Configuration

- **JPEG quality:** Enter a value from 1 to 100 to set the quality of the image. The higher the number, the better the image quality.

Loading the encoder profile

- Clicking the 'Show profile list' will display the profile with currently activated stream information
- Highlight the profile from the list and click the 'Load profile into settings' button to bring up the profile that a user wishes to configure.
- Click this button to apply all changes to the currently loaded profile.

Privacy Zones


To set up the privacy zones, go to **Setup > Video > Privacy Zones**.

How to configure the Privacy zones

1. Under the Information panel, configure privacy zones; Check or uncheck the Show checkbox to display or hide the created zone.
2. On the display window, click the left mouse button on the upper section of the zone where four directional arrows appear. Then, drag the mouse to the desired position.
3. On the display window, click the left mouse button at the boundary of the zone where a bi-directional arrow appears. Then, drag the mouse diagonally until the desired size is made.
4. Provide a relevant name and a description of the privacy zone on its text box.
5. Click the Save button to save changes.

Setup > Video > Privacy Zones

Privacy Zones



Information

Show	Zone ID	Name
<input checked="" type="checkbox"/>	01	zone
<input type="checkbox"/>	02	zone
<input type="checkbox"/>	03	zone
<input type="checkbox"/>	04	zone

SAVE

Event Configuration

Event Configuration allows users to set up notifications about the events that will be occurred. The event sources such as motion detection can publish event messages when an event is generated. The events can be notified via email, FTP, and HTTP.

Note

Before you create an event profile, go to the desired configuration page for various notification methods(E-Mail Recipient, FTP Notification, or HTTP Notification) for the proper configuration.

Event Rules

After the configuration of the event notification method, you can configure the event rules at Setup > Event > Configuration > Event Rules. Go to **Setup > Event Configuration > Event Rules** to manage the event profile. The two event rules are pre-defined as Rule 1 and Rule 2, and users need to configure the details of each event rule on the page.

Setup > Event Configuration > **Event Rules**

Event Rule List		
Use	Name	Description
yes	Rule 1	
yes	Rule 2	

[Modify...](#)

Information	
Enable profile :	yes
Name :	Rule 1
Event action :	Active alarm(DO1)-no, Recording-no, Save event log=yes, Send e-mail notification-no, Upload notification to FTP-no, Send HTTP notification-no, Send TCP notification-no, Send notification via TCP event server-no, Send IP multicast notification-no

You can check the pre-defined profile list on the main page, and modify a profile.

- **Event Rule List:** It lists all the predefined event rules.
- **Modify:** Highlight the desired profile to modify, and click this button to modify the current settings of the profile. When the pop-up window appears, modify the profile information as needed.
- **Information:** It displays the detailed information of the highlighted profile.

If you click the Modify button, the profile configuration page appears as shown on the next page. On this page, you can configure the settings for event source and event action.

Basic Configuration

Check the Enable rule checkbox to activate the profile. Specify the profile name for easier identification of the functions and enter a brief description of the profile.

Event Source Configuration

To configure the event sources, click the **Event Source** tab.

Modify to Event Rule List

Configuration

☒ Enable rule

Name :

Description :

Event Sources **Event Action**

Triggered by

☒ Sensor(DI1) [Go to DI/DO Configuration](#)

☒ Active ☐ Inactive ☐ Both

☐ Motion detection [Go to Motion Detection Configuration](#)

OK Cancel

- **Sensor(DI)**

Select Sensor(DI) to enable DI as the event source. There are three modes. There is also a hyperlink to access the DI/DO configuration page.

- Active: Selecting **Active** enables detection of digital input.
- Inactive: Selecting **Inactive** enables detection of the ending moment of digital input.
- Both: Combination of **Active** and **Inactive**.

- **Motion detection**

Select motion detection as the event source. Then, click the hyperlink to go to the Motion Detection configuration page. Refer to the Motion Detection section for the detailed information.

Modify to Event Rule List

Configuration

☒ Enable rule

Name :

Description :

Event Sources **Event Action**

Triggered by

☐ Sensor(DI1) [Go to DI/DO Configuration](#)

☒ Motion detection [Go to Motion Detection Configuration](#)

OK Cancel

Event Action Configuration

To configure the event actions, click the **Event Action** tab.

Modify to Event Rule List

Configuration

☒ Enable rule

Name :

Description :

Event Sources | **Event Action**

When Triggered

☐ Active alarm(DO1) [Go to DI/DO Configuration](#)

☐ Recording [Go to Storage Configuration](#)

☐ Send e-mail notification [Go to E-Mail Recipient Configuration](#)

☐ Upload notification to FTP [Go to FTP Notification Configuration](#)

☐ Send HTTP notification [Go to HTTP Notification Configuration](#)

☐ Send TCP notification [Go to TCP Notification Configuration](#)

- **Active alarm(DO1):** Select the check box to activate the DO of the event publisher. Specify the alarm duration. Duration indicates how long the DO works. For example, if you input '0', a DO device keeps working until you turn it off manually. If you input '10', a DO device will work for 10 seconds and finish the operation.
- **Recording:** Enable the checkbox to record the video data to the preconfigured FTP or SD storage when the event is triggered. To use this event action, the recording file format should be Event at **Storage > Recording > Configuration**. To set the FTP site information, go to **Storage > Storage > FTP**. Pre interval and Post interval specifies the recording duration before and after the event occurs.
- **Send E-mail notification:** Enable the check box to send E-mail to designated recipients. To attach a snapshot image, select the Attach a snapshot check box. Up to three snapshots can be taken before the triggered moment (defined as pre-image on the webpage) can be selected while one snapshot at the triggered moment (defined as post image on the webpage) can be attached. From the recipient list, select the recipient to send the notification. To create a new recipient that is not on the list, go to **Setup > Event Configuration > E-Mail Recipient**, and create the new recipient. Once the desired recipient is selected, write the subject for the email.
- **Upload notification to FTP:** Enable the check box to activate the FTP notification method. To attach a snapshot image, select the Attach a snapshot check box. From the FTP server list, select the FTP server to send the notification. To create a new FTP server that is not on the list, go to **Setup > Event Configuration > FTP Notification** and create a new FTP server information.
- **Send HTTP Notification:** Enable the check box to activate HTTP notification method. From the HTTP notification list, select the HTTP server to send the notification. To create a new HTTP server that is not on the list, go to **Setup > Event Configuration > HTTP Notification** and create the new HTTP server information.
- **Send TCP Notification:** Enable the check box to activate TCP notification method. To configure a new TCP server, go to **Setup > Event Configuration > TCP Notification** and configure TCP server information.

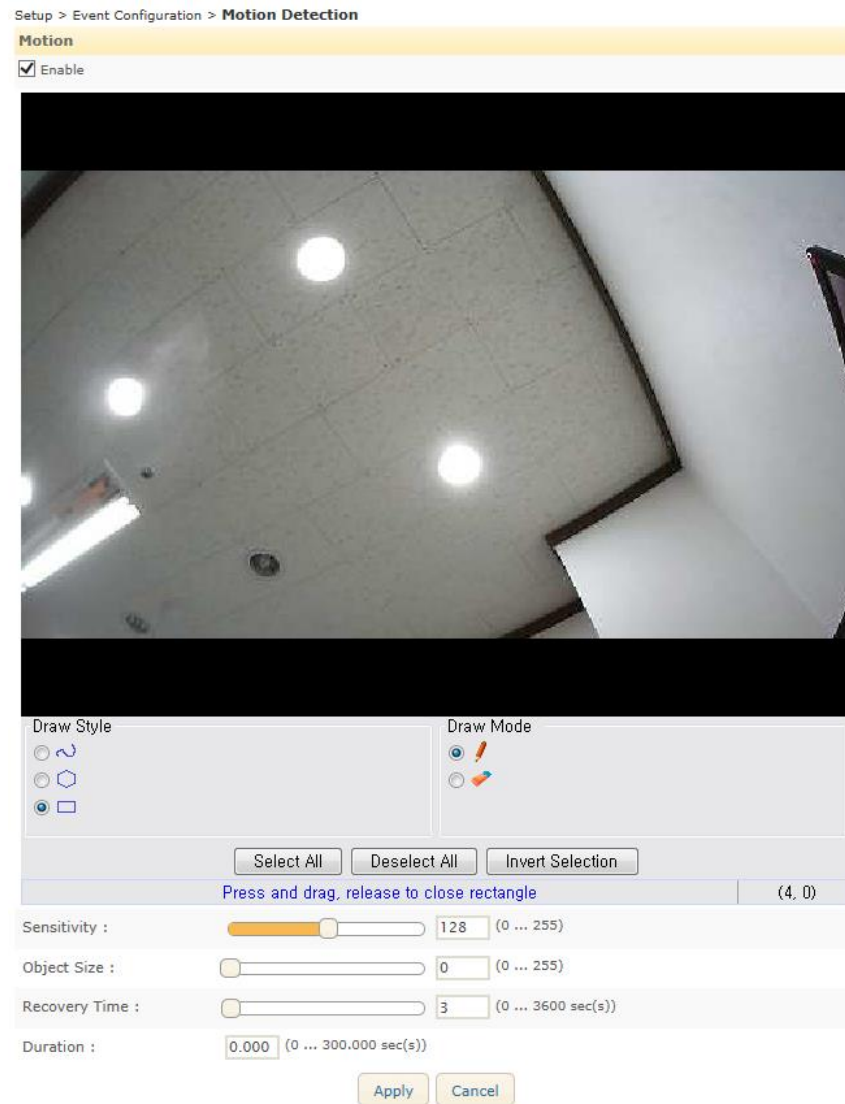
Note

To attach a snapshot image on the configuration of E-mail Recipient or FTP notification, make sure the snapshot setting from Setup > Video > Encoder Profile has been enabled.

After the configuration, click the OK button to save the changes.

Motion Detection

To set up motion detection, go to **Setup > Event Configuration > Motion Detection**.



Note

Java is necessary to view and modify the motion detection zones. If Java is not installed on your PC, go to the link <http://java.com/en/download/index.jsp>, and install Java.

How to set the motion detection zones

1. Select the pencil icon in the Draw Mode.
2. Select the Draw style.
3. Click the left mouse button and drag the mouse diagonally until the desired size is made.
4. Enter the sensitivity value and object size on its text box.
5. Click the Save button to save changes.

If you want to select entire image, just click Select All.

How to remove the motion detection zones

1. Select the eraser icon in the Draw Mode.
2. Select the Draw style.
3. Click the left mouse button and drag the mouse diagonally until the desired size is erased.
4. Click the Save button to save changes.

If you want to select or unselect entire image, just click Select All or Deselect All button.

- **Sensitivity:** Every motion detection zone is divided into multiple squares, which are called 'Macro blocks.' Each macro block consists of groups of 16 x 16 pixels. The value of sensitivity means the sensitivity of each macro block. To configure the zone less sensitive than the factory default (128), set the number value lower; to configure the zone more sensitive than the factory default, set the number value higher.
- **Object size:** The object size value means the proportion of the macro blocks which have exceeded the configured sensitivity. If you want to configure the zone less sensitive than the factory default (128), set the number value lower; to configure the zone more sensitive than the factory default, set the number value higher.
- **Recovery time:** The minimum duration that a motion is detected as one event and it will not be considered as another new event within the recovery time even if the motion is continuous.
- **Duration:** The duration required for a movement to be detected as a motion.

E-mail Recipient

To configure the email recipient list for event notification, go to **Setup > Event Configuration > E-Mail Recipient**.

Setup > Event Configuration > E-Mail Recipient

E-Mail Recipient List		
Id	Name	Description
1	default	

Modify... [Go to SMTP \(E-Mail\) Configuration](#)

Information	
Name :	default
Description :	
E-Mail address :	

- **E-mail Recipient List:** It lists all the defined e-mail recipient names.
- **Modify:** Select an e-mail recipient name and click this button to modify the current information of the e-mail recipient.
- **Go to SMTP Configuration:** If you want to receive notification messages via e-mail, you need to configure the SMTP server information first. Go to **Setup > Network Configuration > SMTP(E-Mail)**, and complete the required settings.
- **Information:** It displays the detailed information of the selected e-mail recipient from the list.

Clicking the Modify button will display the configuration window of the email recipient as shown on the next page.

- **Name:** Specify the e-mail recipient name.
- **Description:** Input a brief description of the e-mail recipient for easy recognition..

- **E-Mail Address:** Enter the e-mail address of the e-mail recipient. If you use host name, a valid DNS server must be specified in TCP/IP network settings.
- **Send Test E-Mail:** To test the entered e-mail address, click the Send Test E-Mail button. If the e-mail address is available, 'Send okay' message appears next to the test button.

Note

After setting, make sure to click the OK button to save changes.

FTP Notification

To configure the FTP server for event notification, go to **Setup > Event Configuration > FTP Notification**.

Setup > Event Configuration > **FTP Notification**

FTP Notification List		
Id	Name	Description
1	default	

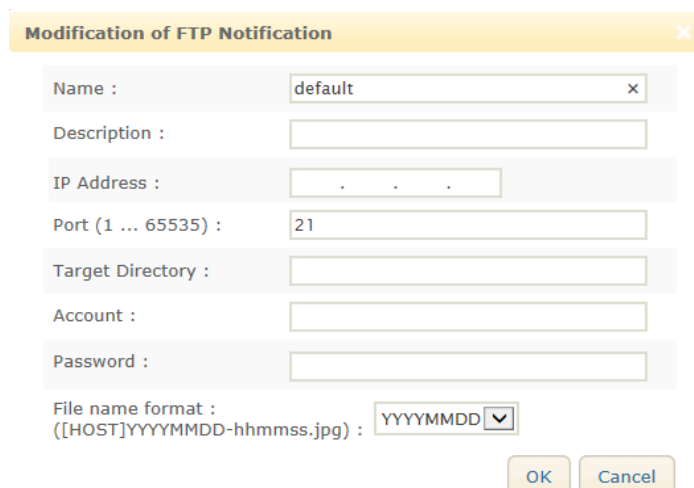
Modify...

Information	
Name :	default
Description :	
IP Address :	
Port (1 ... 65535) :	21
Target Directory :	
Account :	
File name format :	mmddyyyy

You can check the defined FTP server list on the main page and modify the FTP server information.

- **FTP Notification List:** It lists all the defined FTP server names.
- **Modify:** Select an FTP server name and click this button to modify the current information of the FTP server.
- **Information:** It displays the detailed information of the selected FTP server from the list.

Clicking the Modify button will display the configuration page shown on the next page.



The dialog box titled "Modification of FTP Notification" contains the following fields and controls:

- Name :** A text box containing "default" with a clear (X) button.
- Description :** An empty text box.
- IP Address :** A text box with three dots (.) as placeholders.
- Port (1 ... 65535) :** A text box containing "21".
- Target Directory :** An empty text box.
- Account :** An empty text box.
- Password :** An empty text box.
- File name format :** A label followed by a dropdown menu showing "YYYYMMDD". Below the label is the example format "([HOST]YYYYMMDD-hhmmss.jpg)".
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

- **Name:** Specify the FTP server name.
- **Description:** Input a brief description of the server for easy recognition.
- **IP Address:** Enter the IP address of the FTP server.
- **Port:** Enter the server port number. The default is 21.
- **Target Directory:** Enter the folder name where the created files will be placed. If the folder does not exist on the server, the specified folder name will be automatically created on the FTP server.
- **Account and password:** Enter the login user name and password of the FTP server. The account and password information must be entered even for anonymous FTP.
- **File name format:** Select the desired date format.

Note

After the setting, make sure to click the OK button to save changes.

HTTP Notification

To configure the HTTP server for event notification, go to **Setup > Event Configuration > HTTP Notification**.

Setup > Event Configuration > HTTP Notification

HTTP Notification List

Id	Name	Description
1	default	

Modify...

Information

Name : default

Description :

Address :

Port : 80

Account :

Message : NULL

Enable option : no

You can check the defined HTTP server list on the main page and modify the HTTP server information.

- **HTTP Notification List:** It lists the defined HTTP server names.
- **Modify:** Select an HTTP server name and click this button to modify the current information of the FTP server.
- **Information:** It displays the detailed information of the selected HTTP server from the list.

Clicking the Modify button will display the configuration page shown below.

Modification of HTTP Notification ✕

Name :

Description :

Address :

Port (1 ... 65535) :

Authentication details (if required)

Account :

Password :

Message :

☐ Append detailed information

OK Cancel

- **Name:** Specify the HTTP server name.
- **Description:** Input a brief description of the server.
- **Address:** Enter the IP address of the HTTP server.
- **Port:** Enter the server port number. The default is 80.

- **Account and password:** Enter the login user name and password of the HTTP server. If you want to skip the login authentication process, leave the text boxes blank.
- **Message:** Enter the message that you want to send. Clicking the 'Append detailed information' checkbox will enable the detailed event message to be added.

Note

After setting, make sure to click the OK button to save changes.

TCP Notification

To configure the TCP push for event notification, go to **Setup > Event Configuration > TCP Notification**.

Setup > Event Configuration > TCP Notification

Configuration

IP Address: . .

Port : (1 ... 65535)

Connect Timeout : (1 ... 300 sec)

Send Timeout : (1 ... 300 sec)

Alive Type : ☐ Once ☐ Unlimited ☒ Timeout

Alive Time : (1 ... 86400 sec)

- **IP Address, port:** Type the configuration of TCP server.
- **Connect Timeout:** TCP push tries to connect to a TCP server during the setting time, but if a connection is not made during the setting time, TCP push will stop to trying to connect.
- **Send Timeout:** Holding time for data transmission when event occurs.
- **Alive Type:** You can configure the condition of connection and the default value is *Timeout*.
 - **Once:** Only one connection is made for each event. There is no confirmation whether the connection is succeeded or not.
 - **Unlimited:** The connection continues for data transmission whether an event occurs or not.
 - **Timeout:** If there is no event during the configured alive time after the last data transmission, the connection will be disconnected.
- **Alive Time:** When Alive type is configured as Timeout, the connection will be continued during Alive Time..

Heart Beat

To configure the heartbeat, go to **Setup > Event Configuration > Heart Beat**. This is useful to check the alive status of the camera from the client.

Setup > Event Configuration > Heart Beat

Configuration

☒ Enable

Interval : 60 (1 ... 300 sec(s))

☐ TCP Server

☐ TCP Notification

☐ Multicast

2.

Applications

exacqVision Edge

exacqVision Edge is used for recording video to the edge storage of exacqVision. If you use the camera's own recording program, skip this section. You will be given how to use exacqVision Edge on your camera in this section.

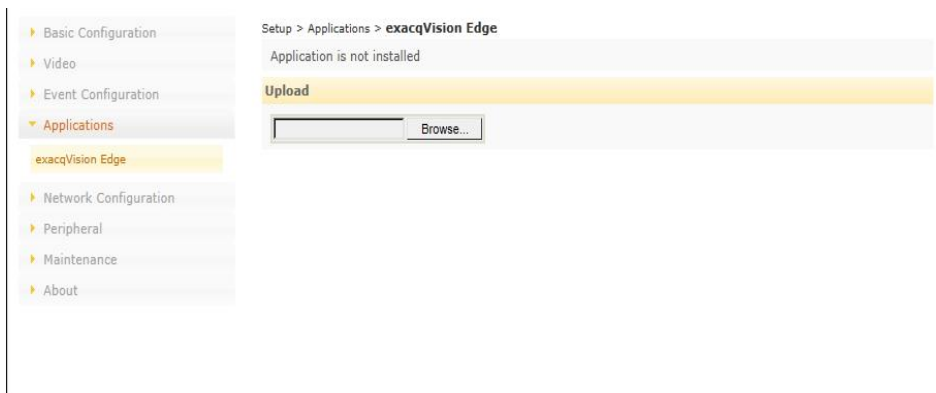
The features of exacqVision Edge is found at **Setup > Applications > exacqVision Edge** on the camera's webpage. exacqVision Edge may be referred as the edge server in some paragraphs.

Checking the existence of exacqVision Edge via the webpage

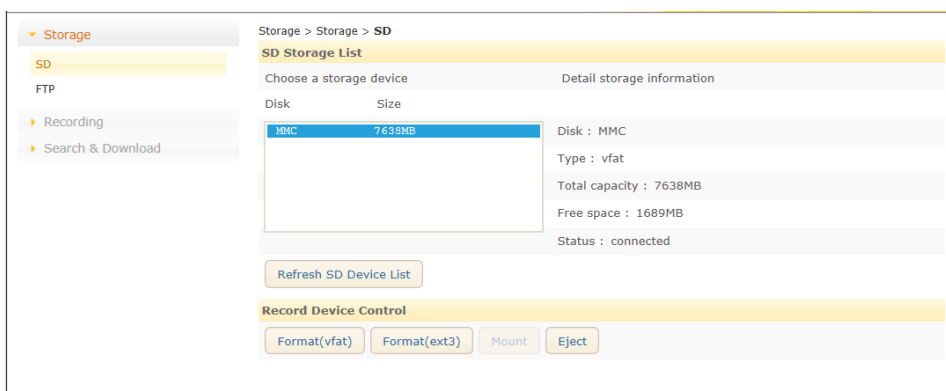
When the edge server is not installed yet:

1) If the edge server is not installed on your camera, the status will be described as follows:

'Application is not installed'

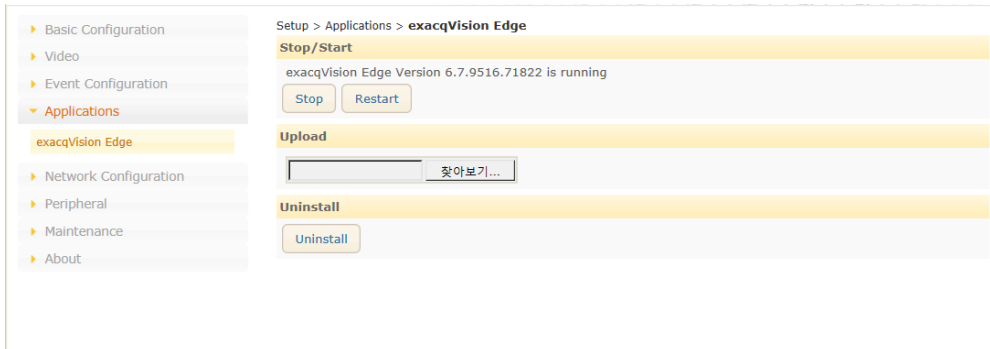


2) When the edge server is not installed on your camera, the menus of Recording and Search & Download at the storage configuration section appear like the image below.



When the edge server is installed:

1) If the edge server is already installed on your camera, the status will be described as follows:
'exacqVision Edge version x.x.x.x is running'



2) When the edge server is installed, the menus of Recording and Search & Download at the storage configuration section do not appear like the image below.



How to install exacqVision Edge

on SD card

- The edge server files existing on SD card: If the installation file and the license file for the edge server are already in the SD card, the edge server will be automatically installed and started when the camera boots for the first time.
- Saving the edge server files on SD card: If you want to save the edge server files to an SD card, save the installation file and the license file on the SD card, and mount the SD card to the camera. Then, the camera will reboot, and edge server will automatically run.

via the camera's web page

Go to **Setup > Applications > exacqVision Edge**. Click the Browse button, and select the file to upload. Then, click the Start button under the Upload tab to install the edge server on your PC.

NOTE

Users need to click the Start button under the Stop / Start tab to run the edge server even if the edge server is installed.

How to use edge server

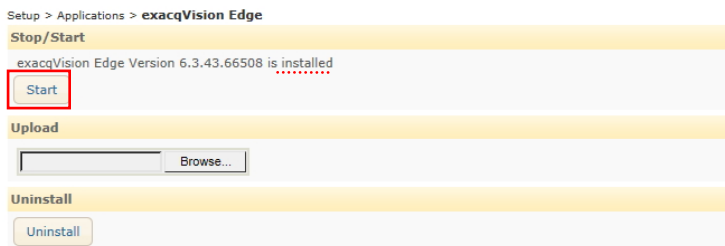
The features of exacqVision Edge is found at **Setup > Applications > exacqVision Edge**.



- **Operating Status:** There are four different operating statuses appearing under the Stop/Start tab as follows:
 - **initializing:** It means that the edge server is initializing to prepare for the operation. Users can run the edge server by pressing the Start button under the Stop/Start tab after the operating status becomes 'installed' or 'stopped'.

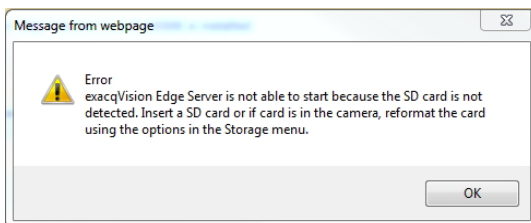


- **installed:** It means that exacqVision Edge is installed but not running. Users can run the edge server by pressing the Start button under the Stop/Start tab.



Note

When the SD card is not detected due to such cases as no SD card on the camera, improper mount, or any error on the SD card even, there will be an error message like below when you click the Start button to run the edge server. Then, insert the SD card, or format the SD card to properly mount the SD card.



- **running:** It means that exacqVision Edge is running.

Users can stop the edge server by pressing the Stop button under the Stop/Start tab.



- **stopped:** It means that exacqVision Edge is stopped.

Users can start the edge server by pressing the Start button under the Stop/Start tab.



Note

In case the camera reboots when the status of the edge server is 'stopped', the edge server cannot automatically run unless you press the Start button to run the edge server.

How to update firmware



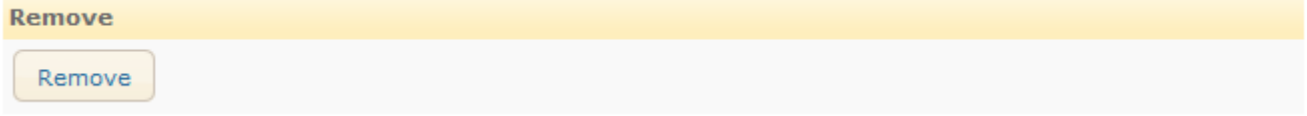
Firmware can be updated under the Upload tab at **Setup > Applications > exacqVision Edge** in the same way as when you upload the edge server files to install the edge server on the webpage.

- 1) Click the Browse button, and select a higher version edge server firmware.
- 2) Press the Start button next to the Browse button to update the firmware. Then, the existing lower version firmware file will be overwritten by the newly uploaded higher version firmware file.



How to uninstall edge server

Go to **Setup > Maintenance > exacqVision Server**. Click the Remove button, and click the Yes button on the pop-up window to allow the removal.

A screenshot of a web interface showing a yellow header bar with the word "Remove" in bold. Below the header is a light gray rectangular area containing a single button with the word "Remove" in blue text.

CAUTION

When the camera reboots, the edge server will be automatically reinstalled if the firmware file still remains on the SD card even after the remove the edge server is performed via the webpage.

Formatting SD card

- 1) When you need to format your SD card which has the files for the edge server and the edge server is in use, you need to stop the edge server first by pressing the Stop button before formatting the SD card.
- 2) When the camera reboots after the SD card is formatted, the exacqVision edge server is automatically restored.

Network Configuration

TCP/IP(DHCP, Static IP, DNS setting)

To change the TCP/IP settings, go to **Setup > Basic Configuration > TCP/IP**.

Setup > Network Configuration > TCP/IP

IP Address Configuration

☒ Enable DHCP

IP address : 10 . 10 . 0 . 15

Subnet mask : 255 . 255 . 0 . 0

Gateway address : 10 . 10 . 1 . 254

☐ Use the following IP address

IP address : 192 . 168 . 1 . 168

Subnet mask : 255 . 255 . 255 . 0

Gateway address : 0 . 0 . 0 . 0

DNS Configuration

Primary DNS server : 0 . 0 . 0 . 0

Secondary DNS server : 0 . 0 . 0 . 0

Host Configuration

Device Name/Device Configuration : ProLtBulletU15150000010000

Link-Local Address

☐ Enable Auto-Configuration link-local address

IP Address Configuration

IP Configuration by DHCP

If you want to get your IP address from a DHCP server automatically, check this option, and click the Apply button. When the dialog box appears on the screen, click the OK button.

Use the static IP address

If you want to use your device with a static IP address, select the Use the following IP address button, and input the following information:

- **IP address:** The IP address of your device. The test button shows if the typed IP address is occupied or not. If the typed address is available, "Okay" appears next to the Test button. If the typed address has been taken already, "Fail" appears next to the button.
- **Subnet mask:** The address of subnet mask of your device.
- **Gateway address:** The gateway address of your device.
- **Broadcast address:** It is automatically fixed by the subnet mask and IP address of your own. For example, if you use B class (255.255.0.0) of mask, the broadcast address will be 192.168.255.255.

DNS Configuration

Type the IP address of the DNS server you use.

Link-Local Address

This is a built-in function that assigns an additional IP address to the device, which can be used to access the unit from other hosts on the same segment of the local network. An IP address is automatically assigned when the camera boots up.

The camera can have both a Link-Local IP and a static/DHCP-supplied IP address at the same time. The IP address block is from 169.254.1.0 to 169.254.254.255.

To change the IP address, click the Renew button.

Web Server

To change the HTTP server setting, go to **Setup > Network Configuration > Web Server**.

Setup > Network Configuration > **Web Server**

Configuration

☐ HTTPS

☒ HTTP

TCP/IP port number of HTTP : (1 ... 65535)

TCP/IP port number of HTTPS : (1 ... 65535)

Authentication Type : ▼

Set the appropriate port number that is being utilized.

NTP Server

To change the NTP server setting, go to **Setup > Network Configuration > NTP**.

Setup > Network Configuration > **NTP(SNTP)**

NTP Server Lists

NTP Server 1 :

NTP Server 2 :

NTP Server 3 :

NTP Server 4 :

- **NTP Server Lists:** Users can set up to four NTP servers. To enable the NTP servers, the DNS server setting must be completed at **Setup > Network Configuration > TCP/IP**.

UPnP

To change the Universal Plug & Play configuration, go to **Setup > Network configuration > UPnP**.

Setup > Network Configuration > **UPnP****Configuration**☒ Enable

Friendly name :

ADCi610-M022-D10076667

Apply

Cancel

UPnP allows IP devices to connect seamlessly and simplify the implementation of network in remote PC environments. On this page, users can enable or disable UPnP by clicking the Enable checkbox and apply the desired name (friendly name).

RTSP/RTP (multicast or unicast)

For the RTSP/RTP setting, go to **Setup > Network Configuration > RTSP/RTP**.

Setup > Network Configuration > **RTSP/RTP****RTSP Configuration**

Port :

554

(1 ... 65535)

☐ Enable RTSP Authentication

Authentication Type :

digest

Stream 1

Stream 2

IP Unicast RTSP Streaming☒ Enable stream

Session

Name :

ufirststream

☐ Enable ONVIF metadata☐ Enable QoS DSCP

Video DSCP :

0

(0 ... 63)

ONVIF Meta DSCP :

0

(0 ... 63)

IP Multicast RTSP Streaming☐ Enable stream☐ Enable always multicast

Video IP address :

0 . 0 . 0 . 0

(Enter 0.0.0.0 for automatic configuration)

Video port :

18888

(1 ... 65535)

ONVIF Meta IP address :

0 . 0 . 0 . 0

(Enter 0.0.0.0 for automatic configuration)

ONVIF Meta port :

18894

(1 ... 65535)

TTL :

1

Session

Name :

mfirststream

☐ Enable ONVIF metadata☐ Enable QoS DSCP

Video DSCP :

0

(0 ... 63)

ONVIF Meta DSCP :

0

(0 ... 63)

Apply

Cancel

The product supports multicast and unicast for both stream channels. Click the appropriate stream tab and configure the RTP session as required by your network system.

RTSP Configuration

Set the port number for RTSP streaming.

The RTSP Authentication option is available for those who have implemented the authentication process. It has two methods.

- **Basic:** It uses a simple way of encryption of ID and Password with a plain text.
- **Digest:** It uses a more enhanced way of encryption.

RTSP Configuration for IP Unicast RTSP Streaming

- **Session name:** Type the appropriate session name. The allowed range for the session name is 64 characters with alphabets, Arabic numbers, and underscore bar(_).
- **Enable ONVIF metadata:** Check this box to add the ONVIF metadata.
- **Enable QoS DSCP:** By enabling the Quality of Service (QoS) feature, you can specify the priority level of network traffic for video and metadata (motion detection). For each traffic type, determine the DSCP (Differentiated Services Codepoint) value, which represents a QoS class in the Differentiated Services (DiffServe) model. For the details about the DiffServ standard, refer to RFC2474 and RFC2475.

RTSP Configuration for IP Multicast RTSP Streaming

- **IP Address:** In order to receive the streaming data from the device, set the IP address of the group which is used for PC to be joined. '0,0,0,0' is configured as a factory default and it enables router program to generate the available IP for the device automatically. If you want to use specific address, type the address in the blank.
- **Port:** Set the port number used for router to receive the streaming data from the product (No need for unicast). '18888' is set for video data of 1st stream and '28888' is for video data of 2nd stream.
- **TTL:** Set the TTL value. If you set 1 for TTL, it means the packet will pass only in a subnet (No need for unicast).

Note

RTP multicast is not allowed for streaming even if the address and the port information are known.

How does auto configuration of IP address work?

As the session name for each RTP session is defined already on the server, your PC can get the stream by the 'rtsp://rtsp server ipaddress : port / rtp session name' without the manual decision of IP address on the webpage.

What is TTL?

It's the abbreviation of Time to Live. If data is sent out from the encoder via network and all of the packets are alive permanently on the network, it will cause a big network load. TTL helps reduce the network load by controlling the time of staying on network. For example, if you set TTL as 50, the data will be deleted after passing by 50 routers.

Note

All other options are the same as Unicast.

mDNS (Multicast DNS)

For the multicast DNS setting, go to **Setup > Network Configuration > mDNS**.

Setup > Network Configuration > mDNS

Configuration

☒ Enable

Friendly name :

- **Configuration** :If you check the box of 'Enable,' mDNS is activated and the camera can be discovered via mDNS protocol.

SMTP

To change the SMTP setting, go to **Setup > Network Configuration > SMTP(E-Mail)**.

Setup > Network Configuration > SMTP (E-Mail)

Email Sender

Sender's name :

From email address :

SMTP

Mail server address :

Mail server port : (1 ... 65535)

☐ Enable encrypted connection (SSL)

☐ Use authentication to log in this server

You can set the user's email account and server to apply this SMTP for the event subscriber or any other SMTP required purpose.

Configuring user information

- **Sender's name**: Type the name of the sender depending on its purpose; it can be either a general notification title, the name of the administrator, or the specific camera device. (Input range: 40 characters limit)
- From email address: **Type the e-mail address of a sender. (Input range: 128 characters limit)**

Configuring server information

- **Mail server address**: In order to send an email, the product needs the information of user's mail server. Type the host name or the IP address of the mail server. If you use the host name, it requires the DNS registration. Check the DNS configuration at **Network Configuration > TCP/IP**, and see if your DNS configuration is correct. If you use a host name, a valid DNS server must be specified in the TCP/IP network settings.
- **Input range**: 128 characters limit
- **Mail server port**: Type the mail server's port number within the range from 0 to 65535.
- **Enable encrypted connection (SSL)**: If your email server requires encryption process of SSL and TLS, select the 'Enable encrypted connection (SSL)' check box. TLS (Transport Layer Security) and SSL (Secure Sockets Layer) algorithm can be required for the security of communication over networks. It depends on your email server and you should check the communication protocol of the SMTP server.

- **Use authentication to log in this server:** If login information is mandatory before connecting to the server, check the box. Once the box is checked, the user name and password boxes appear for user to type.
 - User name input range: 128 characters limit
 - Password input range: 32 characters limit

DDNS (Dynamic DNS)

To change the Dynamic DNS setting, go to **Setup > Network Configuration > DDNS**.

Setup > Network Configuration > **DDNS**

Configuration

☐ Enable DDNS

DDNS Protocol Type

Type : DynDNS ▼

DDNS Setting

Domain name :

Update time : 600 (1 ... 864000 sec, 10days)

Logon Information

User name :

Password :

Apply
Cancel

- **Configuration:** Enable or disable DDNS by selecting the check box.
- **DDNS Protocol Type:** Select the desired protocol type. The options are DynDNS / No-IP / FreeDNS.
- **DDNS Setting:** Type the domain name you want to use for the product and define the update time. The factory default for update time is 600 seconds, and it enables the product to notify the DDNS of the current domain name in a given length interval.
- **Logon Information:** Type the user name and password of your DDNS account.

Note

8 asterisks cannot be used for the password

SNMP

Simple Network Management Protocol (SNMP) is used in network management environment to monitor network-attached devices for their conditions. By retrieving the system information, it allows for the management of network architecture, performance, device, and security. To enable SNMP, select the Enable check box. The encoder supports SNMP version 1 and 2.

Setup > Network Configuration > **SNMP**

Configuration

☐ Enable

SNMP Description

Location :

Contact :

Read Community :

Trap Setting

Trap Ver1.0 :

Trap Ver2.0 :

* One white space must be inserted between ip address and community at trap parameter. (192.168.0.1 public)

- **SNMP Description**

- **Location:** Provide description of SNMP location
- **Contact:** Provide SNMP managing contact
- **Read Community:** Input the community name, which is the authorized ID for reading SNMP data.
- **Trap Setting:** Trap Setting provides information including changed DI, DO, or VCA to notify the manager. Select the SNMP Trap version to receive Trap event, and input the IP address and community on the text box.

IP Filtering

If you want to control the network traffic to your camera, go to **Setup > Network Configuration > IP Filtering**.

Setup > Network Configuration > **IP Filtering**

Configuration

☐ Enable

☒ Always allow ping request

Allow admin IP :

Policy

☐ Allow ☒ Deny

Filtered IP Addresses

Configuration

Enable: Tick the checkbox if you want to use IP filtering function.

Always allow ping request: This allows users to ping the camera even if the IP addresses are blocked.

Allow admin IP: The IP address in the IP address box is always allowed to the camera. The address will be an admin user's IP.

Policy

Allow: In the Allow mode, the other IP addresses except the ones specified in the list are denied.

Deny: In the Deny mode, the other IP addresses except the ones specified in the list are allowed.

How to configure IP filtering

1. Tick the checkbox of 'Enable'.
2. Specify the admin IP(if needed).
3. Choose the policy between the Allow mode and the Deny mode.
4. Add the IP addresses according to your policy mode.
5. Click the Apply button.

Peripheral

DI/DO

To configure the digital input and output to control external devices such as sensors or alarms, go to **Setup > Peripheral > DI/DO**. Please refer to the section, Connections in this manual to know more about the electrical characteristic of these ports.

Setup > Peripheral > **DI / DO**

Sensor(DI) Configuration

Resource type : ☒ Relay ☐ Voltage (max. 5V)

DI1

Trigger type : ☒ Normally open ☐ Normally closed

Interval between triggers
(0: trigger for every detection) : (0 ... 600 sec)

Duration : (0 ... 600 sec)

Alarm (DO)

Trigger

DO1 : ☐ Active ☒ Inactive

Sensor (DI) Configuration

- **Resource type:** Select the type of the sensor module. It can be either voltage[maximum 5 volts] or relay.
- **Trigger type:** Select between 'Normally open' and 'Normally closed'.
- **Interval between triggers:** Set the detection time interval for event notification. For example, if you input '0', it generates events whenever DI is activated. When the value is set to '10', then only one event will be triggered every 10 seconds even if multiple DI events are detected within 10 seconds.
- **Duration:** This function is used when a DI is combined with other events. Setting duration virtually extends the interval to make the combined several events within the same time frame to trigger an alarm. The duration has a range of 0 ~ 600.

Alarm (DO)

Select 'Active' or 'Inactive'.

Maintenance

Users

The Users configuration page at **Setup > Maintenance > Users** works the same way as the page at **Setup > Basic Configuration > Users**. Refer to *Users* section for the details.

Date & Time

The Date & Time configuration page at **Setup > Maintenance > Date & Time** works the same way as the page at **Setup > Basic Configuration > Date & Time**. Refer to *Date & Time* section for the details.

API/ONVIF

ONVIF is a standard that ensures interoperability between IP-based physical security products regardless of manufacturer. This camera is ONVIF compliant and you can configure whether the camera can be found by other ONVIF compliant products and the related settings.

The screenshot shows the 'API/ONVIF' configuration page. At the top, the breadcrumb 'Setup > Maintenance > API/ONVIF' is visible. Below it is a yellow header bar labeled 'Configuration'. The main content area contains the following settings:

- ☒ Enable ONVIF
 - ONVIF address :http://192.168.167.152/onvif/device_service
- ☒ Enable ONVIF discovery (ws-discovery)
- ☒ Enable ONVIF authentication
- ☐ Enable replay attack protection

At the bottom right of the configuration area are two buttons: 'Apply' and 'Cancel'.

Enable ONVIF

If checked, the camera is allowed to accept commands to change the camera's functionality by the ONVIF compliant device.

- **Enable ONVIF discovery (ws-discovery)**

This function enables users to browse all the ONVIF supported cameras on the network.

- **Enable ONVIF authentication**

If an ONVIF compliant device needs authentication for communication, you should enable this option.

- **Enable replay attack protection**

This feature reinforces authentication by preventing replay attack.

Language

The languages below are supported in the web interface with English as the default language.

- English
- Chinese-simplified
- Chinese-traditional
- Czech
- Danish
- Dutch
- French

- German
- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Spanish
- Swedish
- Turkish

Firmware Upgrade

To update firmware, go to **Setup > Maintenance > Firmware Upgrade** and follow the directions below.

Setup > Maintenance > **Firmware Upgrade**

Upload Firmware Image

Installed firmware : 2.0.8 (build: 1042)

Select firmware image file: No file selected.

Firmware update via the tool

You can use the IllustraConnect tool to view the current firmware version and if necessary, perform a firmware update. For additional information about using the IllustraConnect tool, please refer to the Help tab within the tool.

Firmware update on the web browser

To update the firmware on the web browser, click the Browse button and search the firmware file. If you select the file to upload, the Upload button appears next to the Browse button. Click the Upload button to update the firmware.

Then, messages according to the update progress will appear. The message below appears at the moment when the progress has reached 80 percent indicating the camera is still being rebooted.

Firmware Upgrade

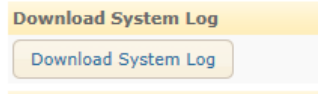
Please wait! Rebooting is in progress to complete the firmware update.

```
start: Tue May 16 02:55:30 GMT 2000
Firmware version: 1.6.1.3
[Images]
bootloader: 1.1.96
kernel: 1.0.33
rootfs: 1.6.0
ubl: 1.5.3
encmp: 1.0.2
package: 1.1.3
```

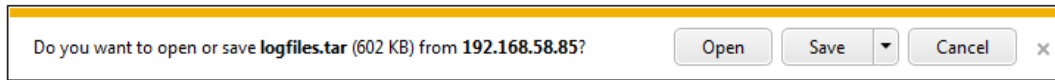


System Log

To download the system log, go to **Setup > Maintenance > System Log**, and follow the directions like below.



Click the Download System Log button. Then, the file download dialog box will appear.



FTP Log Backup

 A screenshot of the 'FTP Log Backup Mode' configuration window. It has a yellow header bar with the title 'FTP Log Backup Mode'. Below the header, there is a checkbox labeled 'Enable auto backup' and a 'Backup' button. The next section is 'FTP Log Backup Configuration' with a yellow header. It contains several input fields: 'Name', 'IP Address', 'Port (1 ... 65535)' (with '21' entered), 'Target Directory', 'Account', 'Password', and 'File name format' (with '_YYYYMMddhhmmssXXX.log' entered). At the bottom, there are three buttons: 'Apply', 'Cancel', and 'Show notification list'.

- **Backup Mode**
 - **Enable auto backup:** Ticking the checkbox enables automatic backup to the FTP server configured in FTP Log Backup Configuration.
 - **Backup:** Manual backup. Clicking the button enables users to back up the system logs to the client PC.
- **FTP Log Backup Configuration**
 - **Name:** Specify the FTP server name.
 - **IP Address:** Enter the FTP server address.
 - **Port:** Enter the server port number. The default is 21.
 - **Target Directory:** Enter the directory to store the data. (e.g. /test)
 - **Account:** Enter the login user name of the FTP server.
 - **Password:** Enter the password of the FTP server.
 - **File name format:** Input a relevant name that will be used as the recorded file. For the easier recognition of the duplicated files, the end of every recording file name includes the serial number of the device which uploads the recording file, date/time, and index information as a default.

Event Search

To search for all the recorded events, go to **Setup > Maintenance > Event Search**.

This feature enables a search of all kinds of events.

Setup > Maintenance > **Event Search**

☐ Today
 ☐ a Week
 ☐ 15 Days
 ☐ 1 Month
 ☐ 3 Month
 ☐ All

~

☐ All
 ☐ Motion
 ☐ Config

Num	Event Rule Name	Type	Rule Time	Description
1	Motion Rule	md	2000-05-16 03:56:13	zone1
2	-	config	2000-05-16 02:44:30	
3	-	config	2000-05-16 02:44:25	
4	-	config	2000-05-16 02:44:24	
5	-	config	2000-05-16 02:44:22	
6	-	config	2000-05-16 02:44:18	
7	-	config	2000-05-15 23:50:33	
8	-	config	2000-05-15 04:16:47	

Configuration Import/Export

For backup or application of the same settings to other devices, configuration file can be imported or exported at **Setup > Maintenance > Config Import/Export**.

Click the Backup Start button to save the latest settings as a file. Within a few seconds, there will be a dialog box to ask a user to save or open the configure.dat file.

To overwrite the latest settings, click the Browse button, and load the configure.dat file.

Factory default

On the camera

To reset the system settings to the factory default on the camera, follow the instructions below.

1. Press the reset button for 10 seconds while the device is in use.
2. Wait for the system to reboot.

On the webpage

To reset the system settings to the factory default on the webpage, go to **Setup > Maintenance > Factory Default**, and follow the instructions below.

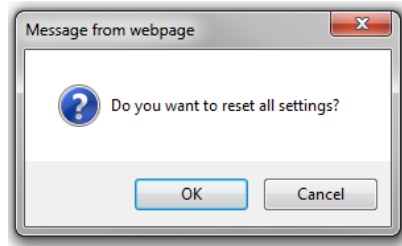
Setup > Maintenance > **Factory Default**

Factory Default

Reset all configuration settings, but:

☒ Preserve network settings
☒ Preserve user account information
☒ Preserve timezone setting

1. Select the items among network settings, user account information and time zone setting to keep them preserved from the initialization.
2. Click the Factory Default button. Then, the dialog box appears like on the next page.



3. Click the OK button to reset all the settings. When a dialog box appears to ask if you allow rebooting the system, click the OK button.
4. The reboot will start automatically. Then, count for 120 seconds after “Initializing.....” displays.

Setup > Maintenance > **Factory Default**

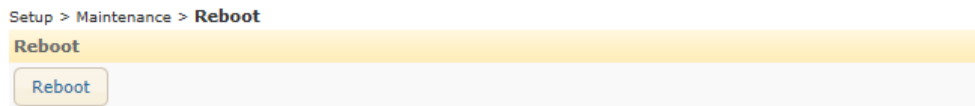
Factory Default

Please re-connect to the device after reboot..... 114 Sec

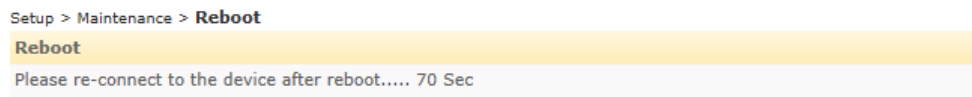
5. Check if all the settings except the preserved items are returned to the factory default values.

Reboot

To reboot the system on the web browser, go to **Setup > Maintenance > Reboot**.



Click the Reboot button to reboot the device.



Safe Mode

What is Safe Mode?

Your IP camera or encoder could encounter an unexpected issue such as broken firmware file or uncompleted loading of firmware file during system booting. To restore the device from these issues, the device provides emergency firmware as a factory default. Your device will get restarted with safe mode when there is any error with your booting system files.

Why does your IP camera or encoder boot in Safe Mode?

Normally, the cause of 'safe mode' is classified into two types.

- * When the power supply is unplugged in the middle of system booting.
- * When the firmware files required for system booting are damaged.

IMPORTANT: Your device will boot up in safe mode when it fails to boot ten times.

How to recover your system from Safe Mode

Safe Mode

Your device has entered safe mode now. Device is usually forced to safe mode when device recognizes itself not operating normally over times.
In most cases, repeated unstable power connection during the boot is the main cause for safe mode.
If you have seen your device in safe mode for the first time, just follow the instructions below to reboot the device.

1. Click 'Start Reboot' on the current page.
2. Wait until the device completely reboots. (*It may take a few seconds to several minutes.)
3. Refresh the webpage to check if it appears normal.

If the device is not recovered after you have done the above instructions, it may indicate that settings in device may have been corrupted.
Then, try the instructions as follows to reset all settings.

1. Click 'Reset All Settings' on the current page.
2. Wait until the device resets all settings. (*It may take a few seconds to several minutes.)
3. Check if the webpage appears normal.

If the device is still in safe mode after you have done the above procedure, it may indicate that there may be a corruption on the firmware of the device.
In this case, the device cannot be booted normally.
Thus, perform the firmware update according to the instructions below.

1. Click 'Browse', and select the appropriate firmware file.
2. Click 'START' to restore the firmware to the device. (*You will see the relevant messages during the firmware update.)
3. Check if the webpage appears normal.

If you are still on this page even after the above procedure, your device may have encountered the worst situation. Certain part of the hardware on the device may have been broken. Thus, you should contact your local agency for further assistance.

Reboot

Start Reboot

Reset All Settings

Reset All Settings

Upload Firmware Image

Choose a firmware image to upload:

The messages above will appear on the webpage when your device has been rebooted in 'safe mode'. Then, you should follow the instructions on the webpage accordingly.

Note

If your device is still in safe mode after trying to update firmware, please contact your local dealer to get further assistance.

About

Information

To find the product information including the hardware specification and software version, go to **Setup > About > Information**.

Setup > About > Information

USN :	U15150000010000
Full name :	Illustra Pro 2MP Compact Mini-Bullet
Short name :	ADCi610-M022
Firmware version :	2.0.8
Manufacturer :	Tyco Security Products
MAC address :	00:30:46:07:A7:E8
Day/Night :	TDN
IR Illumination :	SMART-IR
DI/DO :	1/1
SD :	1

License

To find license information of the open source code that is used in the camera, click the 'View licenses' button.

Appendix A: Factory Defaults

Storage Settings

Storage	SD			-		
	FTP	Friendly name				
		URL				
		Port		21		
		Target directory				
		ID				
		Password				
		File name format		(USN Data Load)		
Recording	Configuration	Recording format	Continuous / Event / None		none	
			Continuous	Storage device		SD Card
				Recycling		Delete files and recycle (oldest first)
				Prefix of filename		REC
				Recording resource		Video only
				Rule of segmentation		Size
				Rule of segmentation : size		100
				Rule of segmentation : time		10
				Stream source		Stream 1
			Event	Storage device		SD
				Recording resource		Video only
				Event hold off time		10
				Stream source		Stream 1
Search & Download	Continuous			-		
	Event			-		

Video Settings

Picture Settings

Friendly name	ADCi610-M022	ADCi600-M111 ADCi610-M111	IPL02B1BNWIY IPL02B2BNWIY	IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3
	Illustra Compact Mini Bullet	720P: Illustra 600 Indoor Compact Mini Dome 1080P: Illustra 610 Indoor Compact Mini Dome	Illustra Pro LT 2MP Bullet	Illustra Pro 2MP Micro

Brightness	128			
Contrast	128			
Saturation	128			
Sharpness	128			
Orientation	none			
Corridor Mode	none			
Exposure mode	Auto / Manual / Flickerless	Auto		
	Auto	2000		
	Manual	30		
	Flickerless	50		
Maximum AGC	50			
Exposure adjustment	0			
Back light compensation	On / Off	Off		
	On	Center		
Digital slow shutter	ADCi610-M022	ADCi600-M111 ADCi610-M111	IPL02B1BNWIY IPL02B2BNWIY	IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3
	off	8x	Off	8x
IR	Off /Manual	Manual		
	Manual	128		
Wide Dynamic Range	Disable			
	Wide Dynamic Range Level		8	
Day & Night mode	Auto / Day / Night		Auto	
	Auto	Day to Night level	4	
		Night to Day level	12	
White balance mode	atw1 / atw2 / push / manual		atw1	
	manual	Red	128	
		Blue	128	
Dynamic 2D DNR	3			

OSD

Enable OSD	Disable			
Include text	Date, Time, Name			
Name	ADCi610-M022	720P: ADCi600-M111 1080P: ADCi610-M111	IPL02B2BNWIY	IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3
Enable milliseconds for time display	Enable			
Date position	Percentage X, Y: 6,12			
Time position	percentage X, Y: 6,16			

Name position	percentage X, Y: 6, 20
---------------	------------------------

Encoder Profile

Profile name		default								
Description										
Stream 1	Enable streaming	Enabled								
	Video codec	H.264 / MJPEG	H.264							
		H.264	Resolution ADCi610-M022	1920x1080						
			Resolution ADCi600-M111 ADCi610-M111	1280x720 (ADCi600-M111) 1920x1080(ADCi610-M111)						
			Resolution IPL02B2BNWIY IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3	1920x1080						
			Max. FPS	30						
			GOP	30						
			Profile identification	high						
			Bit rate control	VBR / CBR	VBR					
				VBR	Image quality		high			
				CBR	Target bit rate		4000			
		MJPEG	Resolution ADCi610-M022	1920x1080						
			Resolution ADCi600-M111 ADCi610-M111	1280x720 (ADCi600-M111) 1920x1080(ADCi610-M111)						
			Resolution IPL02B2BNWIY IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3	1920x1080						
			Max. FPS	30						
			JPEG quality	75						
			JPEG quality	75						
	Stream 2	Enable streaming	Enabled							
		Video codec	H.264 / MJPEG	MJPEG						
				Resolution		480x270				
H.264			Max. FPS ADCi610-M022 ADCi600-M111 ADCi610-M111	7						
			Max. FPS IPL02B2BNWIY	30						

			IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3			
			GOP	30		
			Profile identification	high		
			Bit rate control	VBR / CBR	VBR	
				VBR	Image quality	high
				CBR	Target bit rate	5120
		MJPEG	Resolution	480x270		
			Max. FPS ADCi610-M022 ADCi600-M111 ADCi610-M111	7		
			Max. FPS IPL02B2BNWIY IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3	30		
			JPEG quality	75		

Stream

Stream 1	Enable Streaming	Enable					
	Video codec	H.264 / MJPEG	H.264				
		H.264	Resolution ADCi610-M022	1920x1080			
			Resolution ADCi600-M111 ADCi610-M111	1280x720 (ADCi600-M111) 1920x1080(ADCi610-M111)			
			Resolution IPL02B2BNWIY IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3	1920x1080			
			Max. FPS	30			
			GOP	30			
			Profile identification	High			
			Bit rate control	VBR / CBR			
			Bit rate control Resolution ADCi610-M022	VBR	VBR		
				CBR	Image quality	High	
				1920x1080	Target bit rate	4000	
		MJPEG	Resolution ADCi600-M111 ADCi610-M111	1280x720 (ADCi600-M111) 1920x1080(ADCi610-M111)			
			Resolution IPL02B2BNWIY IPS02HFANWSY1 IPS02HFANWSY2	1920x1080			

			IPS02HFANWSY3					
			Max. FPS		30			
			JPEG quality		75			
			JPEG quality		75			
			MJPEG					
Stream 2	Enable Streaming	Enable					Res	
	Video codec	H.264 / MJPEG	Max. FPS				7	
		H.264	GOP		30			
			Profile identification		high			
			Bit rate control		VBR / CBR			
			Bit rate control Resolution		VBR			
			Bit rate control Resolution Max. FPS	CBR		VBR		
				480x270		Image quality	high	
				7		Target bit rate	4000	
			MJPEG	JPEG quality		75		

Privacy Zone

Privacy Zone	Zone 01	Show	Disable				
		Name	zone				
	Zone 02	Show	Disable				
		Name	zone				
	Zone 03	Show	Disable				
		Name	zone				
	Zone 04	Show	Disable				
		Name	zone				

Event Settings ADCi610-M022, IPL02B1BNWIY, IPL02B2BNWIY, IPS02HFANWSY1, IPS02HFANWSY2 & IPS02HFANWSY3

Event Rules	Enable Rules	Enabled					
	Name	Rule 1					
		Rule 2					
	Description						
	Event Sources	Motion detection	Disabled				
		Sensor(DI1)	Inactive				
	Event Action	Active alarm(DO1)	Disabled				

				Duration	1		
		Recording			Disable		
				Pre interval	3		
				Post interval	10		
		Send e-mail notification			Disabled		
				Attach a snapshot	Disabled		
				Number of pre image	2		
				Number of post image	1		
				Subject			
				To	Disabled		
				Enable List			
		Upload notification to FTP			Disabled		
				Attach a snapshot	Disabled		
				Attach a text message	Disabled		
				Default	Disabled		
		Send HTTP Notification			Disabled		
				Default	Disabled		
		Send TCP notification		Disabled			
		Send IP multicast notification		Disabled			
		Motion Detection		Enable	Unselected		
				Sensitivity	128		
				Object Size	0		
				Recovery Time	3		
Duration	0.000						
E-Mail Recipient		Name	default				
		Description					
		E-Mail address					
FTP Notification		Name	default				
		Description					
		Address					
		Port	21				
		Path					
		Account					
		Password					
HTTP Notification		File name format	yyyymmdd				
		Name	default				
		Description					

	Address		
	Port	80	
	Authentication details (if required)	Account	
		Password	
	Message	NULL	
	Append detailed information	no	
TCP Notification	IP Address		
	Port		
	Connect Timeout	2	
	Send Timeout	2	
	Alive Type	Timeout	
	Alive Time	2	
Heart Beat	Enable	Enabled	
	Interval	60	
	TCP Server	Disabled	
	TCP Notification	Disabled	
	Multicast	Disabled	

Event Settings ADCi600-M111 / ADCi610-M111

Event Rules	Enable Rules	Enabled		
	Name	Rule 1		
	Description			
	Event Sources	Motion detection	Disabled	
	Event Action	Recording	Disable	
			Pre interval	3
			Post interval	10
		Send e-mail notification	Disabled	
			Attach a snapshot	Disabled
			Number of pre image	2
			Number of post image	1
			Subject	
			To	
			Enable List	
		Upload notification to FTP	Disabled	
			Attach a snapshot	Disabled
			Attach a text message	Disabled

			Enable List	
		Send HTTP Notification	Disabled	
		Send TCP notification	Disabled	
		Send IP multicast notification	Disabled	
Motion Detection	Enable	Disabled		
	Sensitivity	128		
	Object Size	0		
	Recovery Time	3		
	Duration	0.000		
E-Mail Recipient	Name	default		
	Description			
	E-Mail address			
FTP Notification	Name	default		
	Description			
	Address			
	Port	21		
	Path			
	Account			
	Password			
	File name format	yyyymmdd		
HTTP Notification	Name	default		
	Description			
	Address			
	Port	80		
	Authentication details (if required)	Account		
		Password		
	Message	NULL		
	Append detailed information	no		
TCP Notification	IP Address			
	Port			
	Connect Timeout	2		
	Send Timeout	2		
	Alive Type	Timeout		
	Alive Time	2		
Heart Beat	Enable	Enabled		

	Interval	60
	TCP Server	Disabled
	TCP Notification	Disabled
	Multicast	Disabled

Network Settings

TCP/IP	IP Address Configuration	Enable DHCP / Use the following IP address		Enable DHCP	
		Enable DHCP	IP address	0.0.0.0	
			Subnet mask	0.0.0.0	
			Gateway address	0.0.0.0	
		Use the following IP address	IP address	192.168.1.168	
			Subnet mask	255.255.255.0	
			Gateway address	0.0.0.0	
	Primary DNS server		0.0.0.0		
	Secondary DNS server		0.0.0.0		
	Host Configuration ADCi610-M022		192.168.1.168		
	Host Configuration ADCi600-M111 ADCi610-M111		720P: ADCi600-M111-<serial no> 1080P: ADCi610-M111-<serial no>		
	Host Configuration IPL02B2BNWIY		ProLtBulle(+USN)		
	Host Configuration IPS02HFANWSY1 IPS02HFANWSY2 IPS02HFANWSY3		IllustraProMicro – S/N		
	Link-Local Address		Unselected		
Web Server	Configuration	HTTP/HTTPS		HTTP	
	TCP/IP port number of HTTP		80		
	TCP/IP port number of HTTPS		443		
	Authentication Type		basic		
NTP	NTP Server 1		us.pool.ntp.org		
	NTP Server 2		clock.isc.org		
	NTP Server 3		ntp.shoa.cl		
	NTP Server 4		time.bora.net		
UPnP	Enable		Enable		
	Friendly name	ADCi610-M022			
		720P: ADCi600-M111 1080P: ADCi610-M111			
		ProLtBullet(+ USN)			
		IllustraProMicro – S/N			
RTSP/RTP	Port		554		

	Enable RTSP Authentication		Disable	
	Authentication Type		digest	
	Privilege (IPL02B2BNWIY)		administrator	
	Bandwidth (IPL02B2BNWIY)		0(Automatic)	
	Stream 1	IP Unicast RTSP Streaming	Enable Stream	Enable
			Session name	ufirststream
			Enable ONVIF meta data	Enable
			Enable QoS DSCP	Disable
			Video DSCP	0
			ONVIF Meta DSCP	0
		IP Multicast RTSP Streaming	Enable stream	Disable
			Enable always multicast	Disable
			Video IP address	0.0.0.0
			Video port	18888
			ONVIF Meta IP address	0.0.0.0
			ONVIF Meta port	18894
			TTL	1
			Session name	mfirststream
			Enable ONVIF metadata	Disable
			Enable QoS DSCP	Disable
			Video DSCP	0
			ONVIF Meta DSCP	0
	Stream 2	IP Unicast RTSP Streaming	Enable Stream	Enable
			Session name	usecondstream
			Enable ONVIF metadata	Disable
			Enable QoS DSCP	Disable
			Video DSCP	0
			ONVIF Meta DSCP	0
		IP Multicast RTSP Streaming	Enable stream	Disable
			Enable always multicast	Disable
			Video IP address	0.0.0.0
			Video port	28888
			ONVIF Meta IP address	0.0.0.0
			ONVIF Meta port	28894
			TTL	1
			Session name	msecondstream
			Enable ONVIF	Disable

			metadata	
			Enable QoS DSCP	Disable
			Video DSCP	0
			ONVIF Meta DSCP	0
mDNS	Enable		Enable	
	Friendly name	ADCi610-M022		
		720P: ADCi600-M111		
		1080P: ADCi610-M111		
		IPL02B1BNWIY		
	IPS02B3BNWIY			
	IllustraProMicro – S/N			
SMTP (E-Mail)	Sender's name			
	From email address			
	Mail server address			
	Mail server port		25	
	Enable encrypted connection (SSL)		Disable	
	Use authentication to log in this server		Disable	
	User name			
	Password			
DDNS	Enable DDNS		Disable	
	Type		DynDNS	
	Domain name			
	Update time		600	
	User name			
	Password			
SNMP	Enable		Diable	
	Location			
	Contact			
	Read Community		public	
	Trap Ver1.0			
	Trap Ver2.0			
IP Filtering	Enable		Disable	
	Always allow ping request		Enable	
	Allow admin IP			
	Policy		Deny	
	Filtered IP Addresses			

Peripheral

DI/DO	Sensor(DI)	Resource type	Relay
		Trigger type	Normally open
		Interval between triggers	5
		Duration	5
	Alarm(DO)	Trigger	Inactive

Maintenance Settings

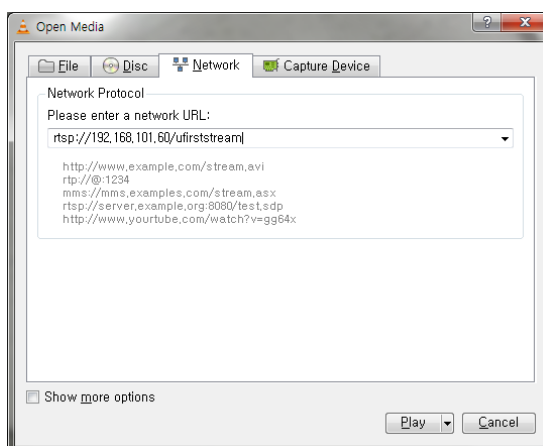
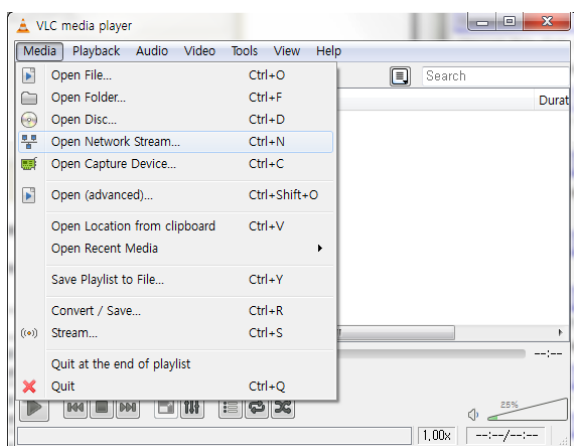
Users	User List	User name	admin	
		Password	admin	
	Enable anonymous viewer login (no user name or password required)		Enable	
Date & Time	Time zone		GMT-05:00(Eastern Time(US & Canada))	
	Sync source		NTP server	
	Date & time format		Date	YYYY-MM-DD
			Time	24-Hour
API/ONVIF	Enable ONVIF		Enabled	
	Enable ONVIF discovery (ws-discovery)		Enabled	
	Enable ONVIF authentication		Enabled	
			Enable replay attack protection	Disabled
Language	Language		English	
Firmware Upgrade			-	
System Log	Backup mode		Manual	
	FTP Log Backup Configuration		Name	
			Address	
			Port	21
			Target Directory	
			Account	
			Password	
			File name format	
Event Search				
Conf. Import/Export			-	
Factory Default	Preserve network settings		Selected	
	Preserve user account information		Selected	
	Preserve timezone setting		Selected	
Reboot			-	

Appendix B: Using VLC Player to View RTSP Streaming

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

Please follow the procedures below:

1. Download and install VLC Player from <http://www.videolan.org/vlc/>.
2. Launch VLC Player.
3. Click **Media > Open Network Stream**.



4. On the '**Network**' tab, choose **RTSP** under the '**Protocol**' menu.
5. Enter the IP address of the stream that you want to view in the '**Address**' field.
6. Click **Play** and you will see the image streaming.

Default URL & port is as follows:

Stream	Port	CODEC	RTSP Request Command
Primary A/V stream	554	Video & Audio	rtsp://<IP Address>:[primary A/V codec port]/ufirststream
Second A/V stream	554	Video & Audio	rtsp://<IP Address>:[primary A/V codec port]/usecondstream