User's Guide

TRENDnet®

Multi-Sensor H.265 1080p PoE+ PTZ Camera

TV-IP460PI

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Product Overview

Features

TRENDnet's Multi-Sensor H.265 1080p PoE+ PTZ Camera, model TV-IP460PI, provides day and night surveillance with a night vision range of up to 10m (33 ft.). This multi-sensor HD surveillance camera features one 2MP PTZ lens with 4x optical zoom and three 2MP fixed lenses, surrounding the camera base to provide 360° of video coverage. With one surveillance camera effectively working as if it were four, the multi-sensor HD surveillance camera is best placed in the center of a room. Each camera sensor records up to 2MP HD video at 20 fps in space saving H.265 compression format. View live video of the multi-sensor HD surveillance camera from your mobile device using our free mobile apps, or from your Windows® PC with our complimentary and pro-grade desktop camera management software.

Specifications

Multi-Sensor Camera

This multi-sensor HD surveillance camera features one 2MP PTZ lens with 4x optical zoom and three 2MP fixed lenses, surrounding the camera base to provide 360° of video coverage.

Optical Zoom PTZ

The built-in 4x optical zoom PTZ lens allows you to adjust the field of view from 120° – 56.6 ° to achieve the ideal viewing field for your installation.

Power over Ethernet (PoE+)

PoE+ offers cost savings and the flexibility to install this IR network camera up to 100m (328 ft.) from the PoE+ source equipment.

Multi-Sensor HD Surveillance Camera

This multi-sensor HD surveillance camera features one 2MP PTZ lens with 4x optical zoom and three 2MP fixed lenses, surrounding the camera base to provide 360° of video coverage

Optical Zoom Lens

Built-in 4x optical zoom PTZ lens allows you to adjust the field of view from 120° – 56.6 °

Smart IR

Smart IR dynamically adjusts the infrared (IR) LEDs by lowering IR intensity when objects are near, and increasing IR intensity when objects are farther away. Night-time viewing up to 10m (33 ft.) away

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PoE+

Save installation costs with Power over Ethernet (PoE+)

Storage

Record video to a network storage device or to a Micro SD card (up to 256GB, not included)

Advanced Playback

Multi-sensor-HD surveillance camera features advanced in-camera archived video playback functionality

Event Triggers

Create custom motion detection, intrusion detection, and crossing line detection zones to record video and send email notifications when an event is triggered

Digital Wide Dynamic Range (DWDR)

Adjustable DWDR setting improves image quality when a camera is exposed to high contrast lighting environments by enhancing the dark areas of the image to make them more visible

Recording Flexibility

Define custom schedules using continuous (24/7) and event-based recording modes

ONVIF

ONVIF Profile S

Complimentary Software

Complimentary pro-grade software to manage TRENDnet cameras

Complimentary Apps

Stream live video to a mobile device with free iOS® and Android™ apps

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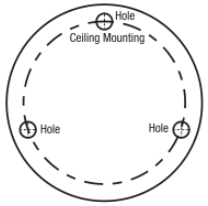
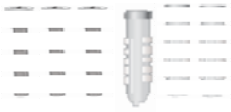
Package Contents

TV-IP460PI package includes:

- TV-IP460PI
- Quick installation guide
- Camera mounting hardware



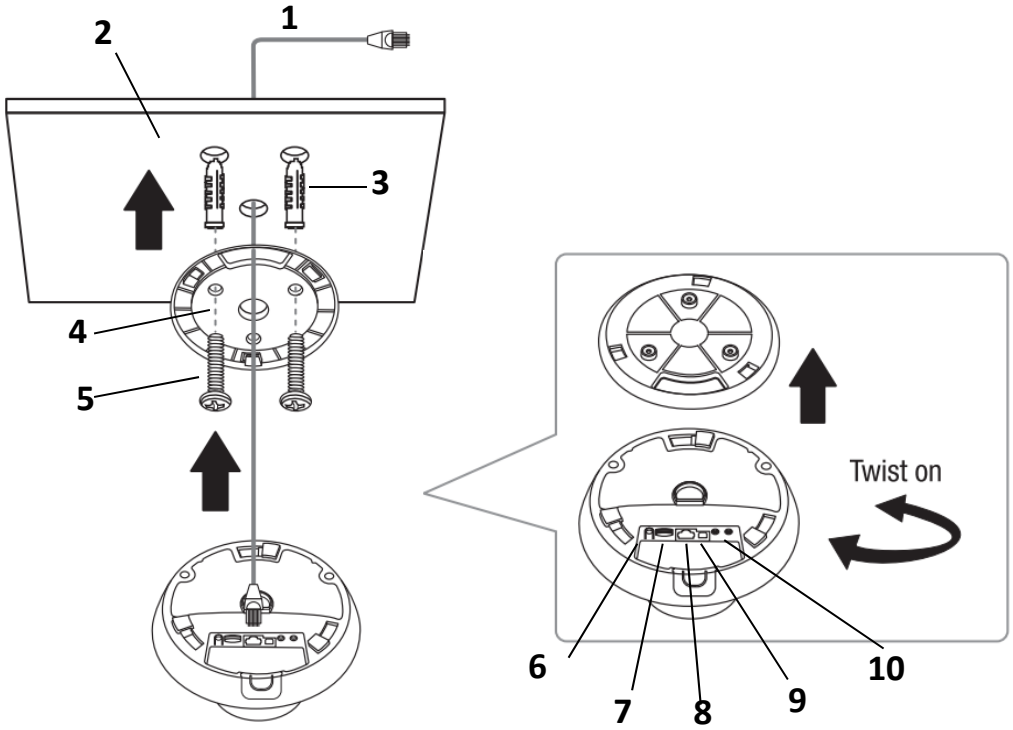
Drilling Template



Mounting Screws

If any package content is missing or damaged, please contact the retail store, online retailer, or reseller/distributor from which the product was purchased.

Front View



1. Ethernet Cable
2. Ceiling
3. Mounting Screw Base
4. Mounting Base
5. Mounting Screw
6. Hardware Rest Button
7. Micro SD Card Slot
8. 10/100 PoE+ Ethernet Port
9. 12VDC Power Port (Optional)
10. 3.5mm Audio in/out

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Hardware Reset Button

The hardware reset button is located next to the Micro-SD card slot. To reset the camera to factory default settings using the hardware reset button:

1. Disconnect the camera from its power source.
2. Press and hold the reset button **BEFORE** you connect the camera to its power source.
3. Continue to hold the reset button for at-least 15seconds.
4. Your camera should now be reset to factory settings.

Warnings

Serious injury or death may be caused if any of these warnings are neglected. Follow these safety guards to prevent serious injury or death.

- If using the power adapter, please choose the power adapter that meets the safety extra low voltage (SELV) standard or IEC60950-1 and Limited Power Source standard.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. Disassembling the product will void the warranty and may cause harm or injury.
- To reduce the risk of fire or electrical shock, do not expose this product to rain or water.
- The installation should be done by a qualified service person and should conform to all construction and electric regulations and other local codes.

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Cautions

Injury or equipment damage may be caused if any of these cautions are neglected. Follow these precautions to prevent potential injury or material damage.

- Make sure the power supply voltage is correct before using the Camera.
- Do not drop the camera or subject to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.
- Do not aim the camera lens at the strong light such as the Sun or an incandescent lamp. Strong light can damage the camera sensor.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor will not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold temperatures (the operating temperature should be between -10°C to 50°C), dusty nor damp environments, and do not expose it to areas with high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Keep out of water and any liquid.
- While shipping, the camera should be packed in its original packaging.

Plan for installation location

Viewing angle

The TV-IP460PI is a Multi Sensor Camera. The main sensor is a PTZ (Pan-Tilt-Zoom) camera with an adjustable viewing angle (56.6-120°) that provides non-distorted and detailed images. The 3x surrounding multi sensors with a fixed viewing angle (128.5° each) together provide a panoramic 360° image. Choose a location that has good vantage point for shooting the surrounding area in a method you expect to see. The motion detection area should also be considered when installing the camera.

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Hardware Installation

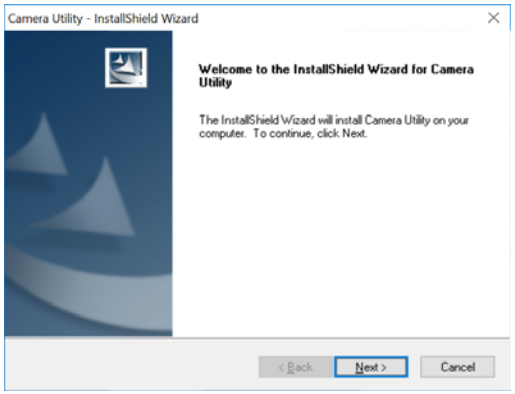
Cabling

It's recommended that the wiring of the cables in your home or office be done by an installation professional. If you already have the cable deployed, make sure the cable and the connectors meet the category 5 Ethernet cable standards. At least 2 pairs of twisted lines are required for power and data. Poor cable quality may cause unexpected problems. Testing your cable or running a new cable is suggested for new camera installation.

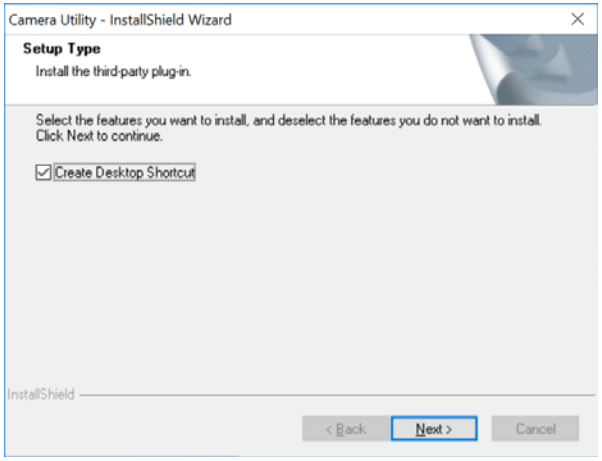
Setup Your Camera with Camera Utility

1. Please download the utility at http://www.trendnet.com/camerautility

2. Extract the downloaded file and double click on the camera utility file to install



3. Last, click Next to finish the installation.



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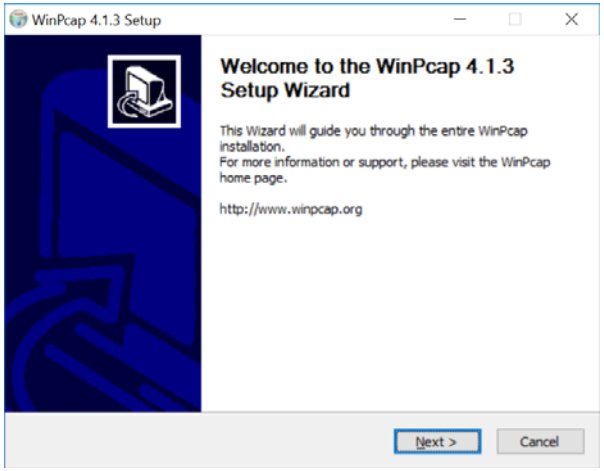
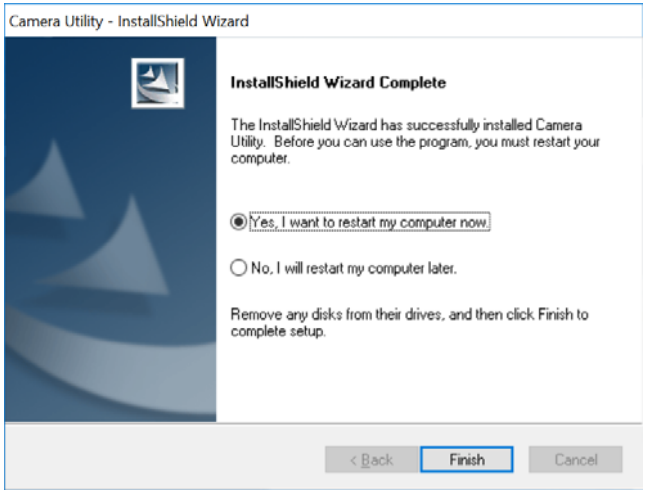
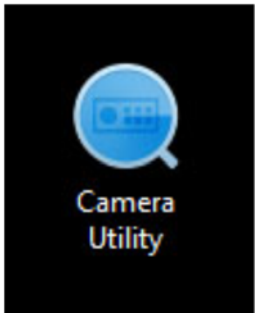
4. This will also require you to Install WinPcap program if you don't have this installed before, please follow the on screen Instructions to Install It.



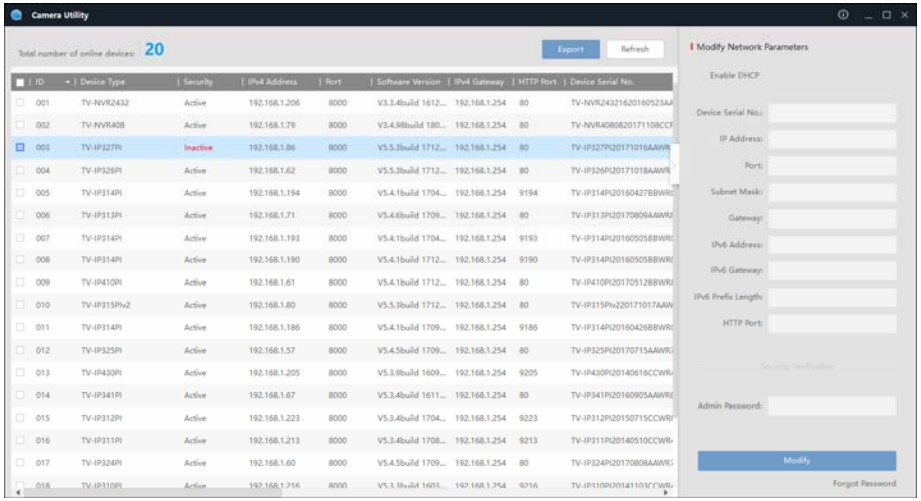
5. Restart the computer after the Installation.



6. After the computer has restarted, double click on the Camera Utility icon to launch the program.



7. Find the camera you would like to access and configure then double click on the IP address.



8. Continue to the next section **Access your Camera with the Web Browser** for detail configurations of the camera.

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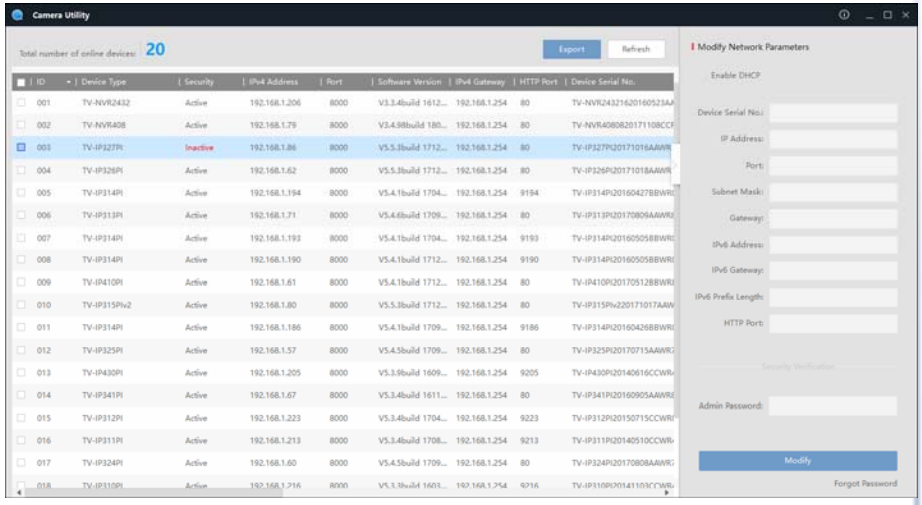
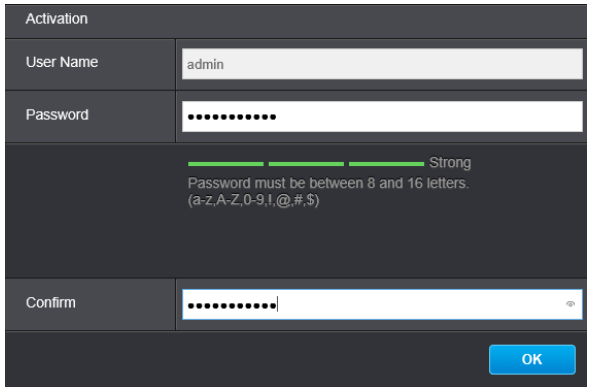
Logging-in to the Camera for the First Time (Windows)

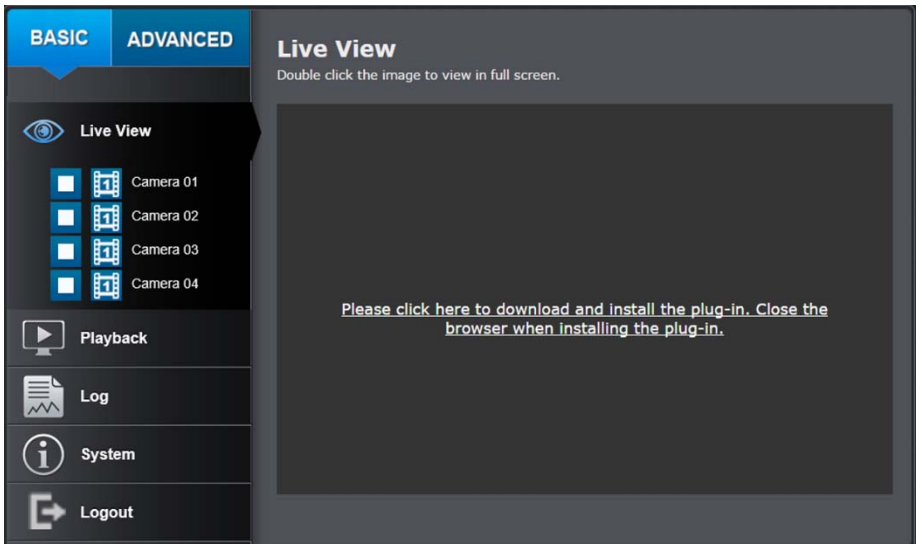
1. Find the camera from the Utility and double click on the IP address to open the browser. (Example in image may not be your specific model)



2. Activate the **admin** User Account by entering your desired password, and then click **OK.**



3. The camera management page will detect if you installed the camera video streaming plug-in or not. . Click the link to download the plug-in from the camera. (For Internet Explorer and Safari only) Google and Firefox users, skip to step 9.



4. Download the plug-in to your computer and then and close your browser. Launch the plug-in installation to install the plug-in.

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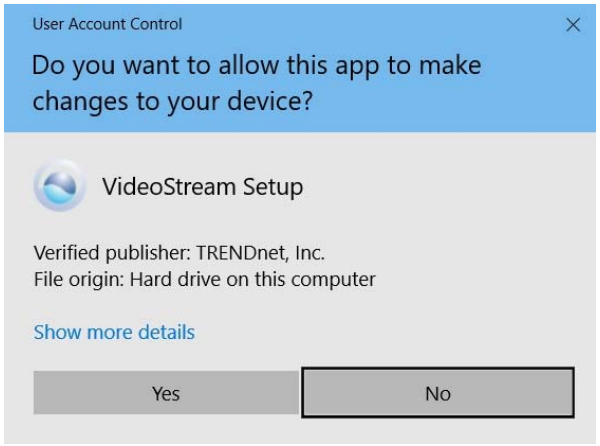
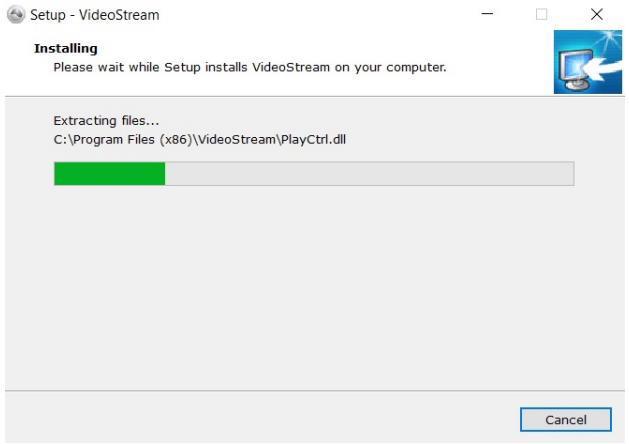
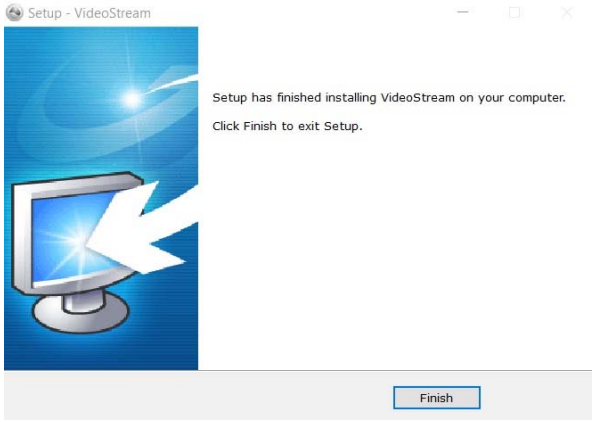
5. Permission request may show up depends on the Internet security settings on your computer. Click **Yes** to install the plug- in.



6. Click **Next** to install the plug-in.



7. Click **Finish** to finish the installation.



8. Open the browser and login again, enter the user name **admin** and new password again to start secured session.

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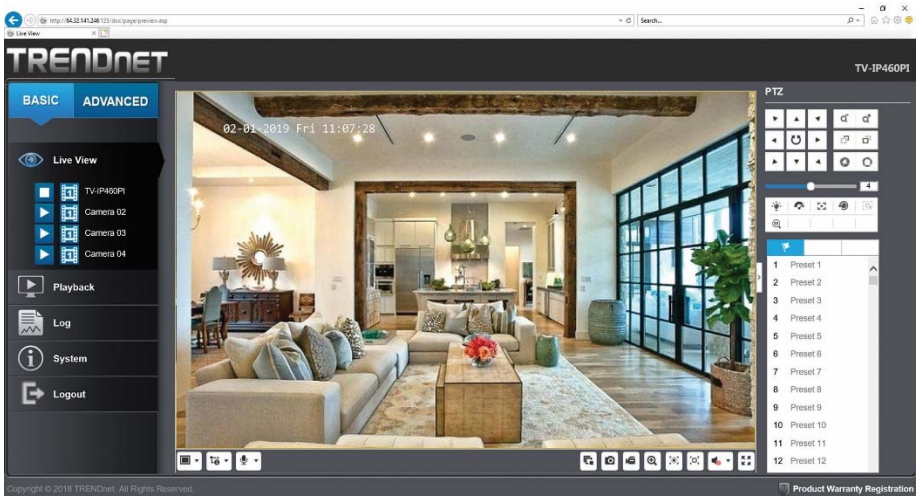
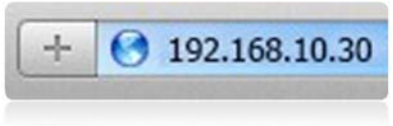
9. Refresh the browser and the Live View page will show up and begin streaming video

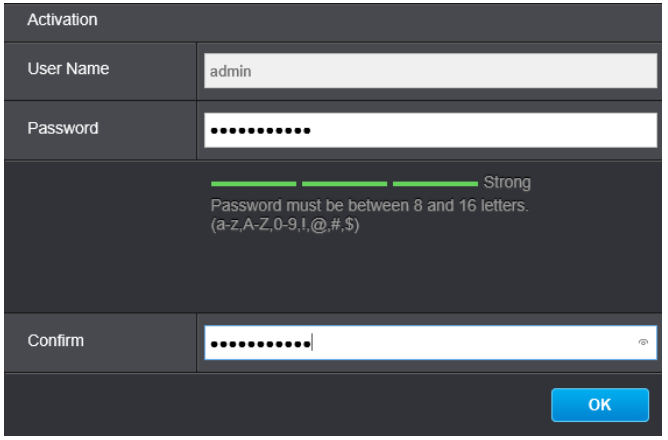


Logging-in to the Camera for the First Time (OS X)

1. Open the web browser on your computer**.** In the address bar, enter the default IP address of the camera 192.168.10.30. If the camera is connected to a router/network with a DHCP server it may have a different IP address than its default, please use a windows machine to setup the camera with Camera Utility or identify the camera's IP address through your DHCP sever.



2. Enter the user name, **admin**, and the default password, **admin**, and then click **OK.**



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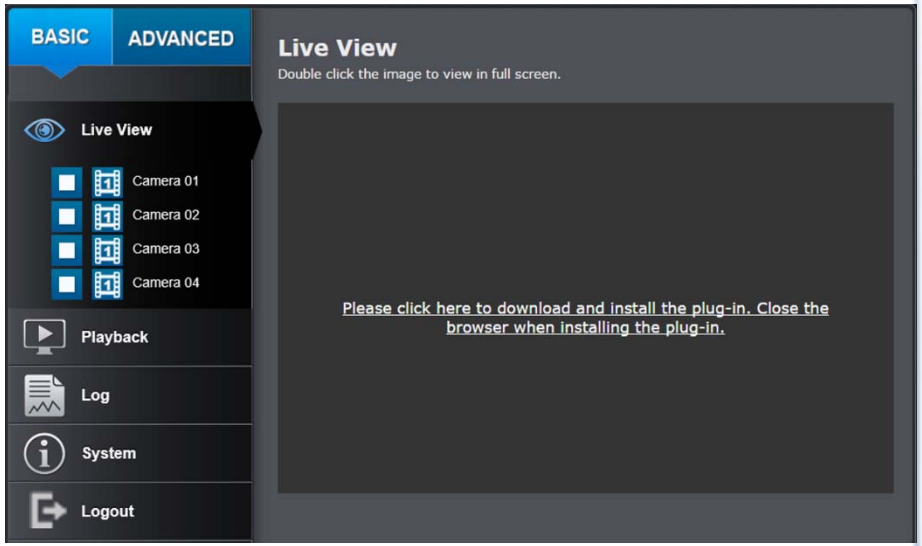
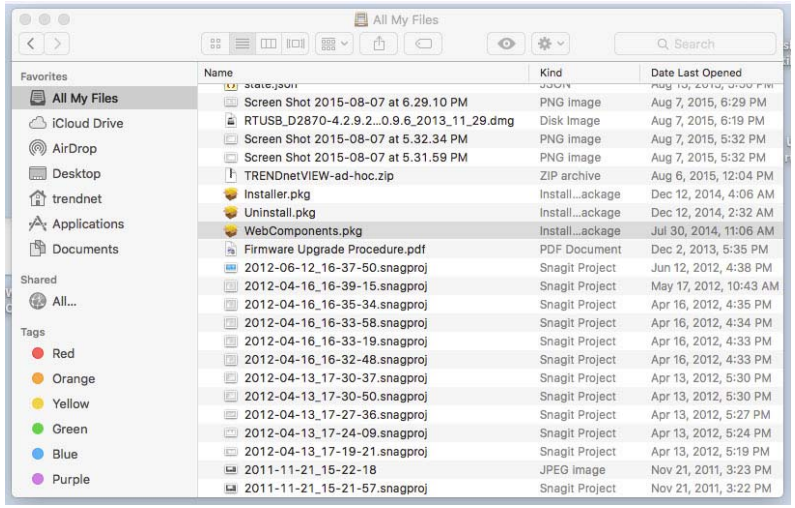
3. The camera management page will detect if you installed the camera webcomponent plug-in or not. Click the link to download the plug-in from the camera.

   *Note: Internet connection is required to download the plug-in. If you do not have Internet access, you can find the plug-in on the CD comes with the package under **/Mac** folder.*

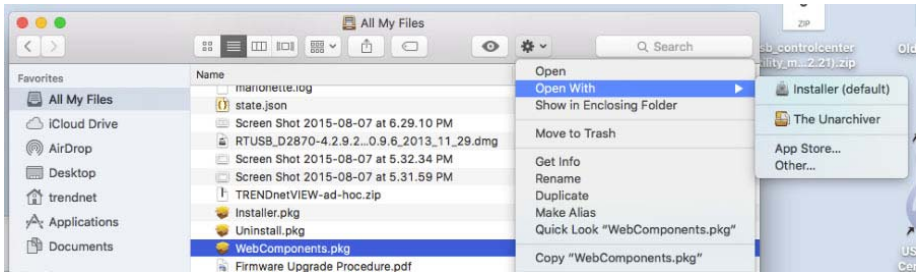


4. Quit your browser completely by **command-Click** on the browser icon and then click **Quit** before installing the plug-in.

5. Go to the **Finder** and navigate to the **Download** folder. **Command-Click** the **WebComponents.pkg** and then click **Open**. (If you are install the plug-in from the CD when you don't have internet connection, just browse to /Mac folder and double click the **WebComponents.pkg** file.)



6. Click **Open with → Installer** to start installation.



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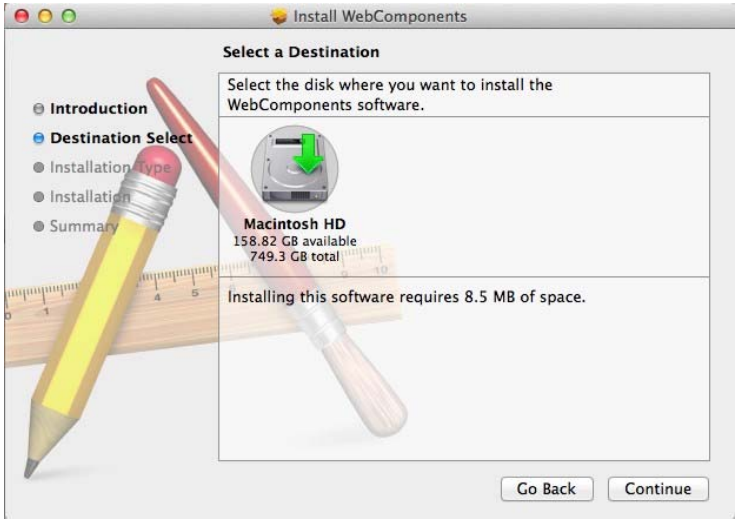
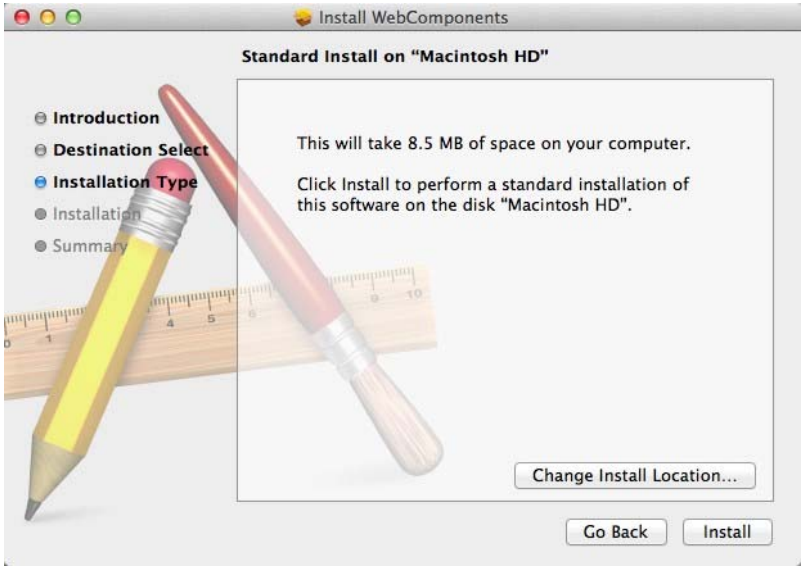
7. Click **Continue** to install the plug-in.

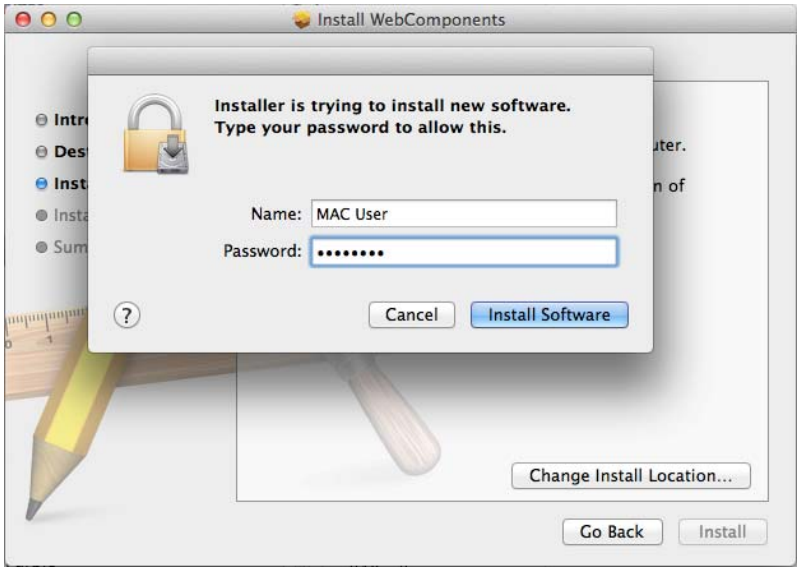
8. Select a destination to install the plug-in. Then click **Continue.**



9. Use the default location and click **Install.**



10. Enter your password and click **Install Software**



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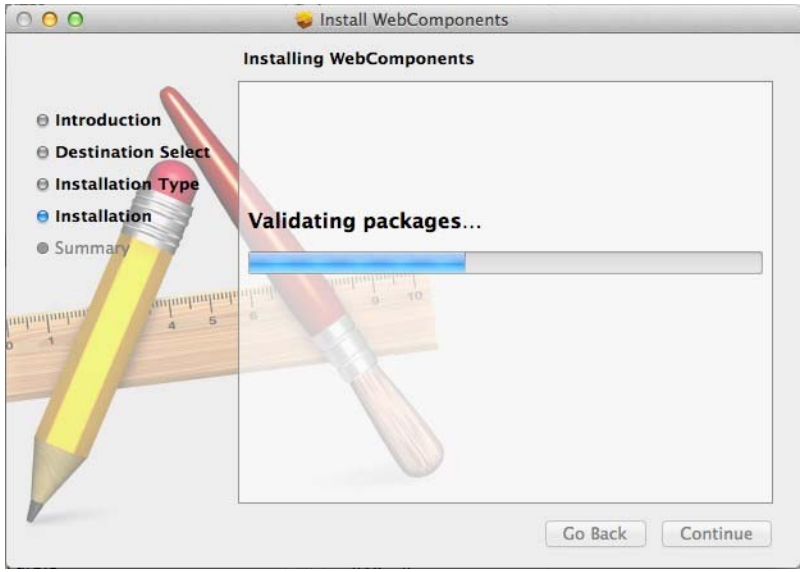
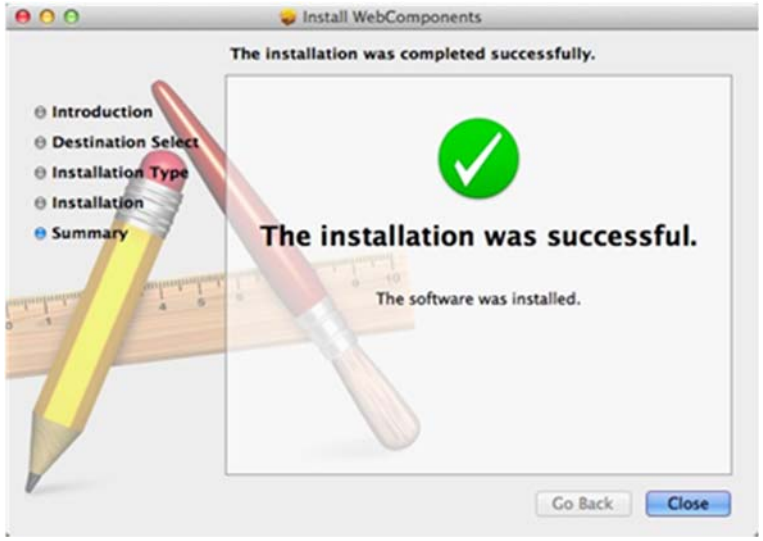
11. Installation will process automatically.

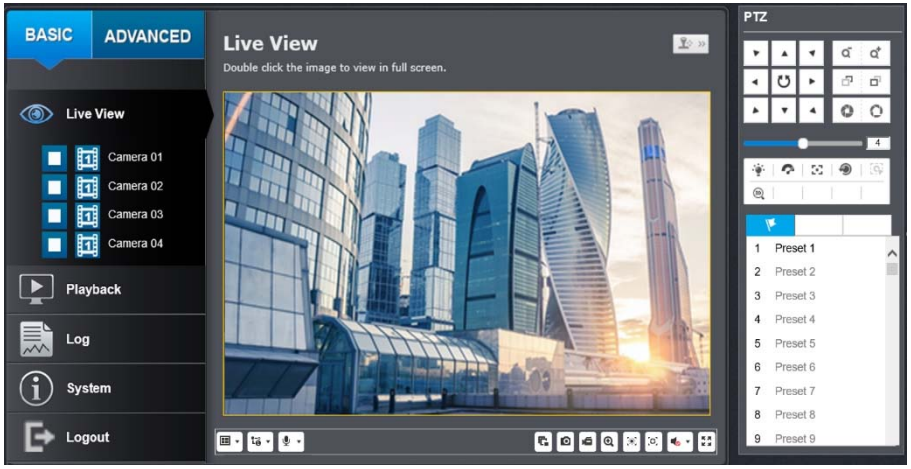


12. Click **Close** to exit the installation.



13. Open the browser and login again with the default IP 192.168.10.30 or the IP that was dynamically assigned by your router. Enter the user name, **admin**, and the default password, **admin,** and then click **OK.**

14. The Live View page shows up and the video starts to stream.



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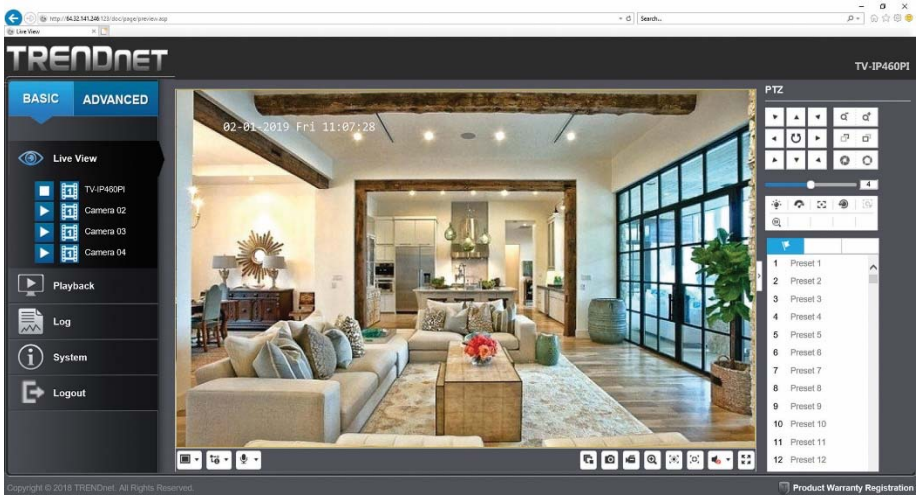
Basic

Live View

After you log-in into the camera management page, you'll see the Live View page.



Multi-View	Click this icon to select the layout of viewing.
Video Stream	The camera has two video streams: H.264 and MJPEG. Switch to view the different video streams by clicking this icon
2-way Audio	Click to enable 2-way audio
Start/Stop All	Click to start/stop all live views
Snapshot	Click this icon to take a video snapshot
Recording	Click once to start recording. Click it again to stop recording. The status bar will indicate if it is in recording state or not
Zoom	Click once to enable zoom. Then, click and drag the area on the picture to zoom in. Click once on picture for 100% zoom. Click the icon again to disable zoom. The zoom function works in full screen mode as well
Regional Exposure	Click this button to enable/disable regional exposure
Regional Focus	Click this button to enable/disable regional focus
Mute/Volume	Use this to adjust the volume of the live view feed
Full Screen Mode	Double click the picture or click this button to view in full screen mode. Double click again or press escape key

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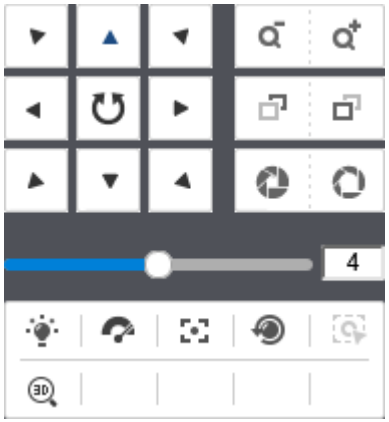
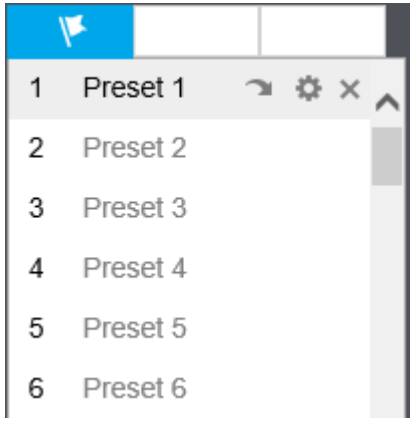
	on your keyboard to exit full screen mode
Expand PTZ (on right)	The icon expands the PTZ control panel
Pan/Tilt/Zoom: 	Pan / Tilt / Zoom control panel >>Zoom in / out >>Focus close / far >>Iris open / close >>Speed of pan/tile movement Functions for external accessories >>3D Zoom
Presets	Use the presets panel to move to previously saved locations

Presets

Configure a Preset position

A preset is a predefined image position. For the defined preset, you can click the Call button to quickly view the desired image position.

1. In the PTZ control panel, select a preset number from the preset list.



2. Use the PTZ control buttons to move the lens to the desired position.
   - Pan the speed dome to the right or left.
   - Tilt the speed dome up or down.
   - Zoom in or out.
   - Refocus the lens.
3. Click to finish the setting of the current preset.
4. You can click to delete the preset. You can configure up to 293 presets.

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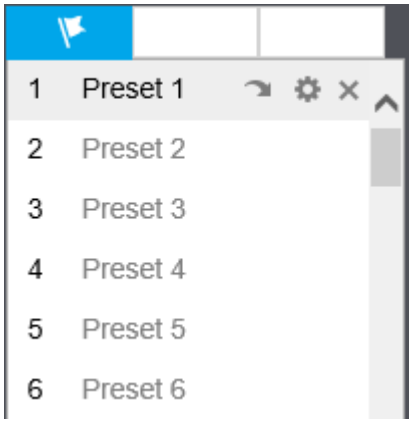
Calling a Preset position

In the PTZ control panel, select a defined preset from the list and click to call the preset.



The following presets are predefined with special commands. You can only call them but not configure them. For instance, preset 94 is "Remote reboot". If you call preset 94, the camera will powercycle.

Preset		Function	Preset	Function
34		Back to origin	92	Set manual limits
39		Day mode	93	Set manual limits
40		Night mode	94	Remote reboot

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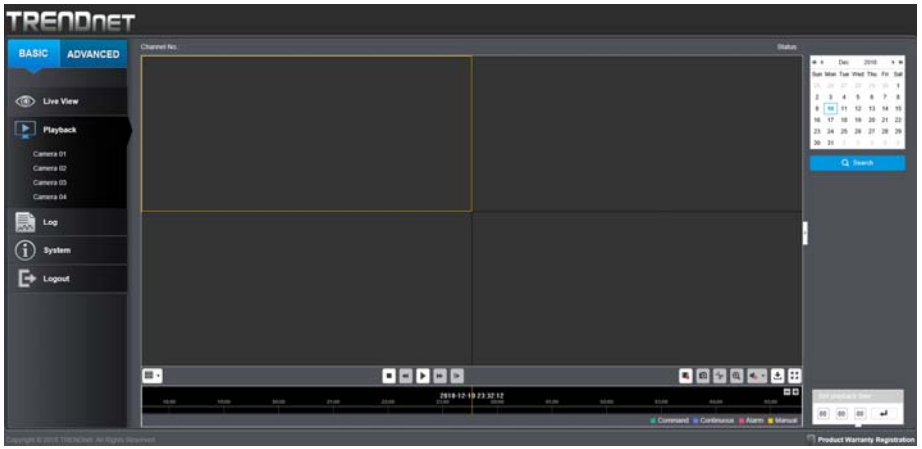
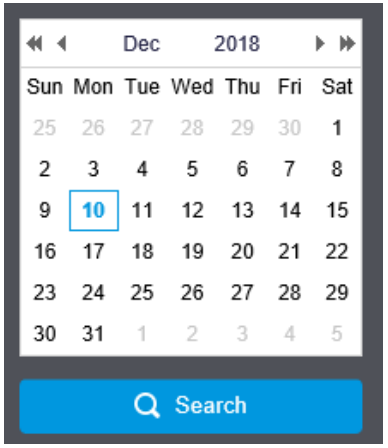
Playback

You can playback the video recording on the network storage and download the video clip and snapshots to your local computer.



Search for video recordings

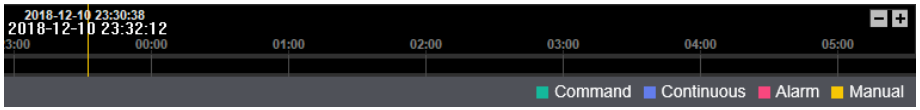
Click the date selection, and then choose a date as the date range of searching. Click **Search** to start searching.



Time Line

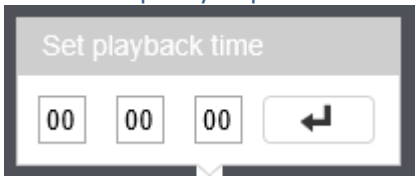
There is a play back head in the center of the time line represented in a yellow vertical line. To look for a specific video recording, move the time line by clicking and dragging it. If the recording is short, zoom in by clicking + button. Click − to zoom out the time scale.

Different types of recordings are identified differently. The scheduled recordings are marked in blue, the recordings triggered by motion detection are marked in red, recordings triggered by commands in green, and manual recordings in amber.



	Click and drag the time line to move your time manually.
+	Click this button to zoom in the scale
−	Click this button to zoom out of the scale

Click this button to specify a specific time of the day.



then click ↵ to confirm selection.

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Playback

Use playback controls to play back the video recording.

	Click this button to play/pause the video.
	Click this button to stop playback.
	Click this button increase playback speed*.
	Click this button decrease playback speed*.
	Click to playback video frame by frame. Click again for the next frame.

** Note: There are 5 steps of playback speed you can choose from: 1/4, 1/2, 1, 2, and 4 times of original speed.*

Slice images from video playback

You can take snapshots from playback video or make new video clips from the video you are playing back.

	Click this button to start/stop all recordings.
	Click this button to take a snapshot of current playback.
	Click this button to clip a video from playback.
	Click this button to enable zoom. Then click and drag on the video to define the area you want to zoom in. Click again to get back to 100% zoom. Double click to show video in full screen and press **ESC** on keyboard to exit full screen mode.
	Use this to adjust the volume of the live view feed
	Click this to download the footage
	Click this button to full-screen the playback

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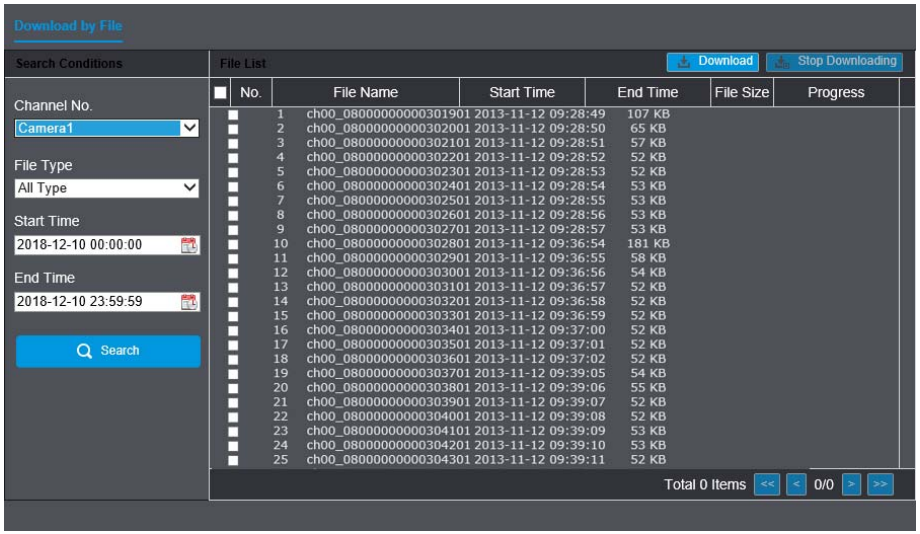
Download snapshots

Click button to list snapshots to download



Log

The log of the TV-IP460PI will be saved on the network storage. You can search the relevant records and save to your local computer. (See

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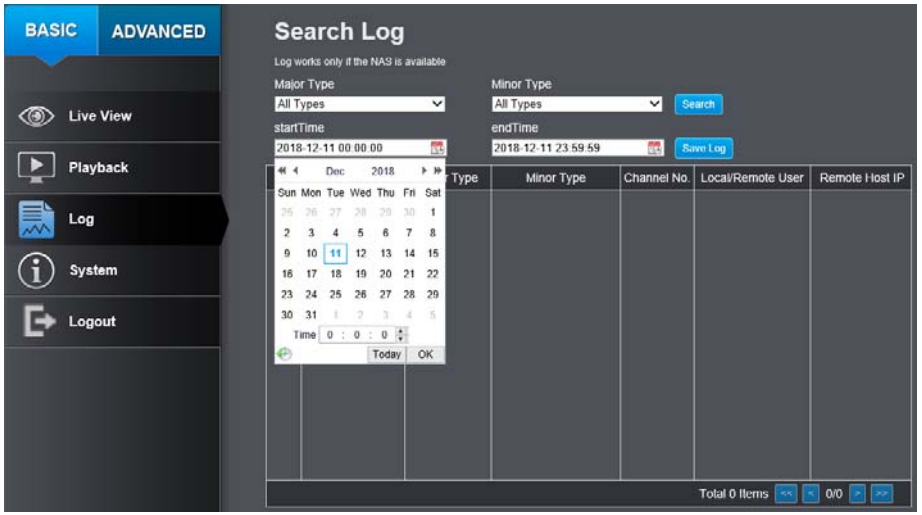
Storage on page 58 to setup the storage.)



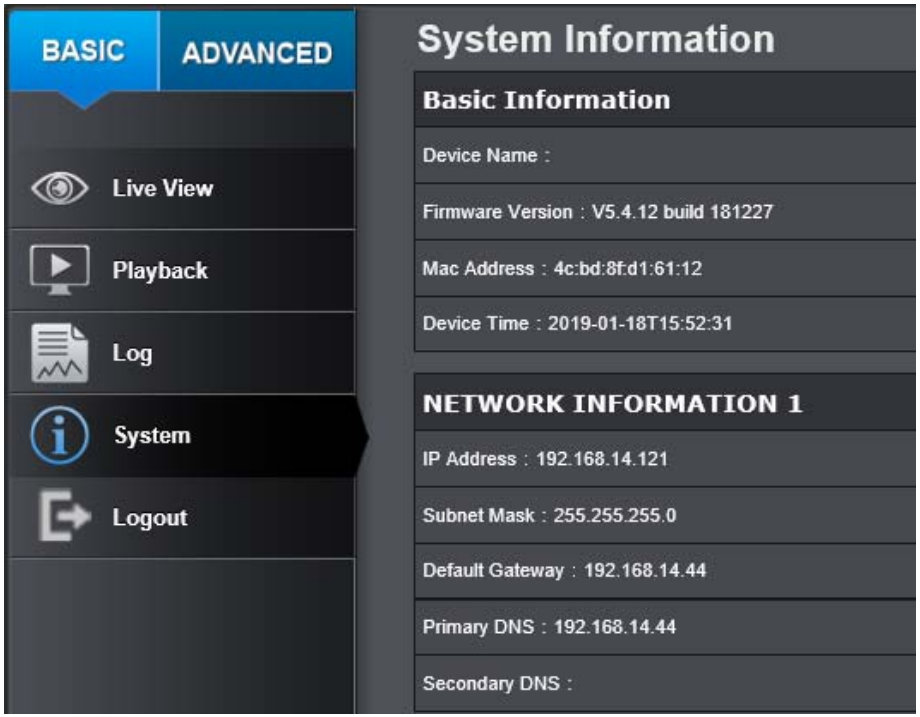
Search for logs

Click the type of log and then the Start Time and End Time. Click **Search** to start searching.

Click **First Page** , **Prev Page** , **Next Page** , and **Last Page** to show the logs. Click **Save Log** to save the logs to your computer.

System Information

System Information page shows the camera's basic information.



Basic Information	
Device Name:	Human readable device name for easy identification.
Firmware Version:	Firmware version
MAC Address:	The MAC address of Ethernet Interface
Device Time:	The system time setup in the camera. Keeping this time correct is important for recording, scheduled control and logging accurately.

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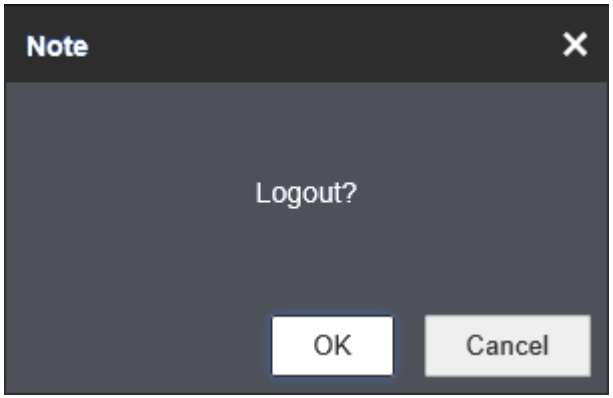
Network Information	
IP Address:	IP address of the TV-IP460PI
Subnet Mask:	Network range of IP address
Default Gateway:	The default route going from the TV-IP460PI subnet.
Primary DNS:	Primary DNS server address
Secondary DNS:	Secondary DNS server address

Logout

Logging out of the camera configuration page



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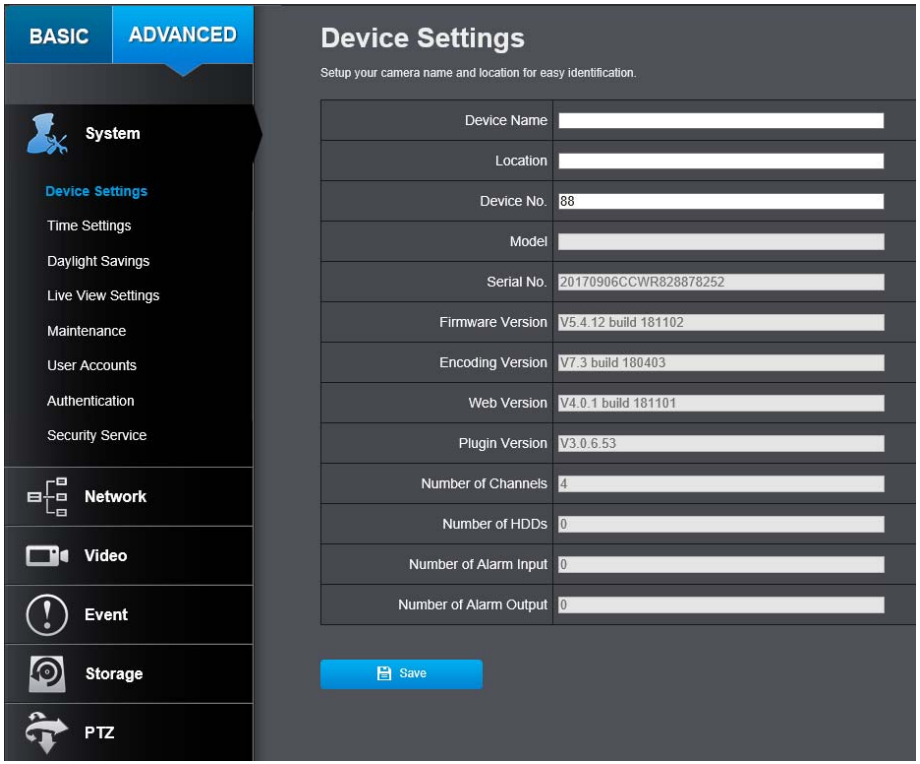
System Configuration

Device Settings

Setup your camera name and location for easy identification. This camera name will also be recognized by other network camera software as the name of this camera. OSD, On Screen Display, camera name is referring to this setting as well.



Names	
Device Name:	Name of the camera. The camera name setup here can be discovered by other network camera software and OSD, On Screen Display. The default camera name is the model number: TV-IP460PI
Location:	Label where you installed this camera for reference
Device Number	The number you assigned to the device
Model	Model of the device
Serial No.	Serial Number of this device
Firmware Version	The version of the FW currently applied to the camera
Encoding Version	The encoding version used by the camera
Web Version	The web version of the camera
Plugin Version	The version of the plugin used
Number of Channels	Number of camera channels on this camera
Number of HDDs	Number of HDDs added to this camera
Number of Alarm Input	Number of Alarm Inputs
Number of Alarm Output	Number of Alarm output

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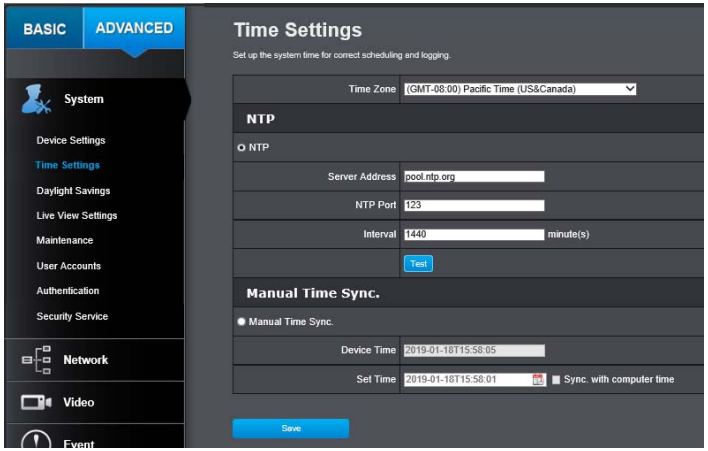
Time Settings

The accuracy of the system clock is important for scheduling and accurate logging. You can synchronize the system time with your computer, or automatically check the time accuracy with a network time server (NTP server).



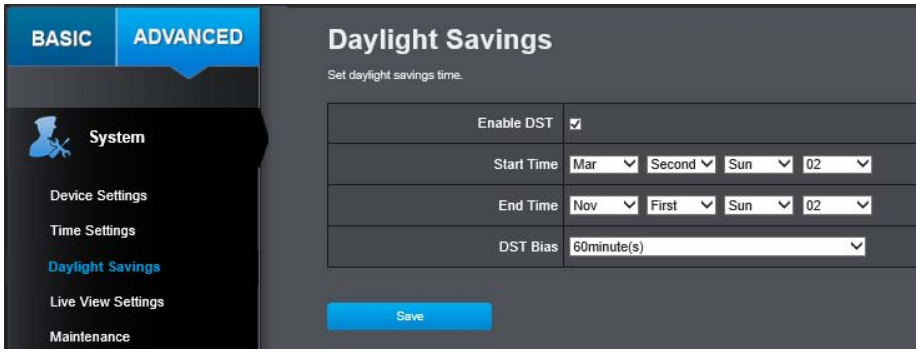
Automatic Update	
NTP Server:	Specify a time server (NTP server) to synchronize with. (e.g. pool.ntp.org)
NTP Port:	Specify the port for the NTP server specified above.
Interval:	The time interval that the TV-IP460PI will synchronize the time with NTP server. Default: 1440 minutes (24 hours)

Manual Time Sync	
Device Time:	The system time of this camera.
Set Time:	Click the calendar icon and manually select the date. Check the **Sync. with computer time** to copy the time from your computer.

*Click **Save** to save the changes*

Daylight Savings

Setup daylight savings.



Automatic Update	
Enable DST:	Check this box if your time zone has daylight savings.
Start Time:	Enter the date that daylight savings starts
End Time:	Enter the date that daylight savings ends
DST Bias	Enter how much time the daylight saving adjusted by daylight savings.

*Click **Save** to save the changes*

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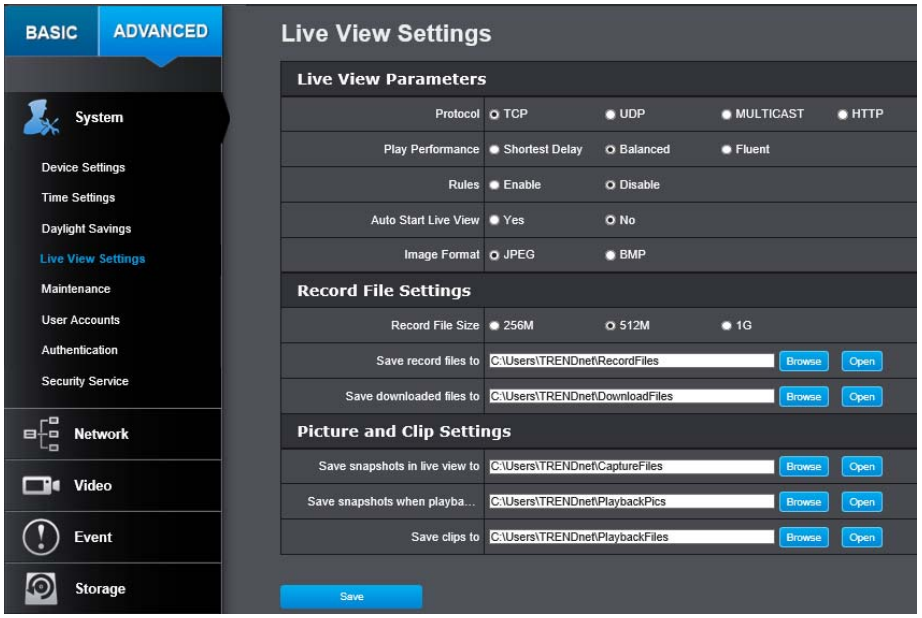
Live View Settings

Setup the live view video quality, file size and file saving directories.



Live View Parameters	
Protocol:	Select the check box you would like the camera's live view feed to use.
Play Performance:	Select the quality of the feed from the predetermined selections. **Shortest Delay** for lowest quality but as close to live as possible, and **Fluent** for a bias toward quality.
Rules:	Select **Enable** if you would like to set and enforce rules for the live view.
Auto Start Live View	Select **Yes** to automatically start live view upon log-in.
Image Format:	Select the format you would like to save snapshots as.

Record File Settings	
Record file size:	This size of live view video recording. You can choose 256MB, 512MB, or 1GB a file. Smaller file size is good for many short recordings.
Save record files to:	Click **Browse** and then choose a new destination if you want to save the file somewhere else.
Save downloaded files to:	Click **Browse** and then choose a new destination if you want to save the file somewhere else.

Picture and Clip Settings	
Save snapshots in live view to:	Click **Browse** and then choose a new destination if you want to save the file somewhere else.
Save snapshots when playback to:	Click **Browse** and then choose a new destination if you want to save the file somewhere else.
Save clips to:	Click **Browse** and then choose a new destination if you want to save the file somewhere else.

*Click **Save** to save the changes*

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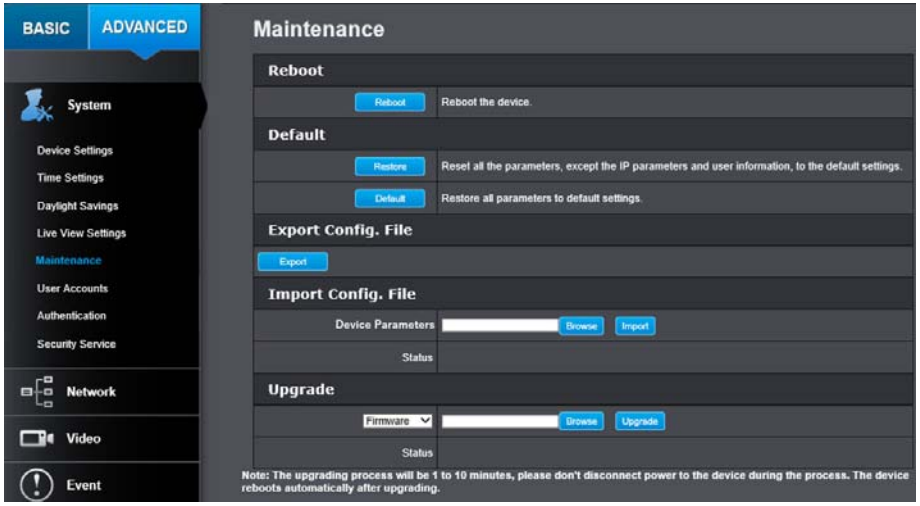
Maintenance

You can restart, load camera settings and upgrade the camera firmware on this page.



Reboot	
Reboot:	Click this button to reboot this camera.

Reset	
Restore:	Reset all camera parameters, **except the IP parameters and user information.**
Default:	Load complete factory default to the camera.
Export Config. File	
Export:	Click Export to download configuration file. The file will be downloaded to browser's default download folder.

Import Config. File	
Config File:	To load previously saved settings, click **Browse** to find the configuration file and then click **Import**.
Status:	Shows the status in loading configuration file.

Upgrade	
Firmware:	Click Browse to find the latest firmware and then click Upgrade.
Status:	Shows the status in firmware upgrade.

TRENDnet may periodically release firmware upgrades that might add features or fix problems associated with your camera. To find out if there is a firmware upgrade available for your device, please check your TRENDnet model and version using the link.

http://www.trendnet.com/downloads/

1. If a firmware upgrade is available, download the firmware to your computer.
2. Unzip the file to a folder on your computer.
3. Read the firmware upgrade instruction for specific version update information.
4. Log into the TV-IP460PI.

Getting to this Maintenance page to upgrade firmware.

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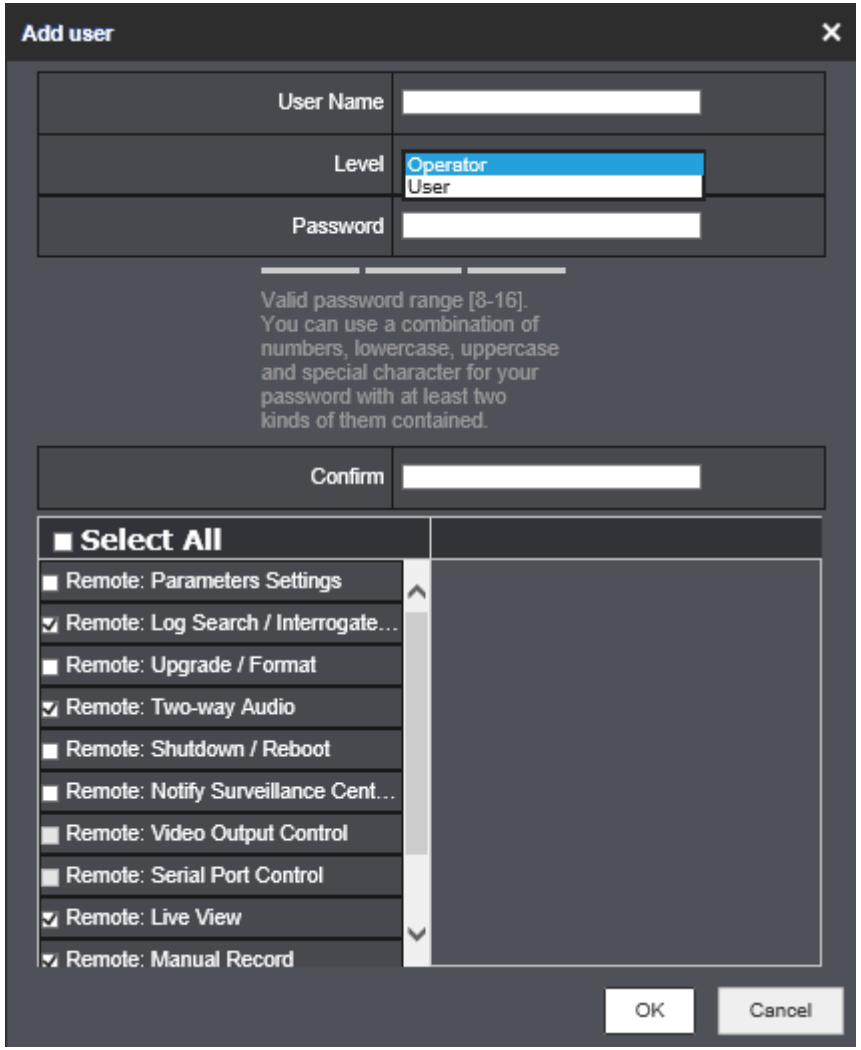
User Accounts

You can setup up to 16 user accounts to access the camera's video stream with a web browser or real time video stream (RTSP). Only one administrator account can be setup to configure the TV-IP460PI and cannot be deleted.

User Accounts	
Add:	Click **Add** button to add one user or operator account.
Modify:	To change an account's name and password or permissions, highlight the account by clicking on it. Then, click **Modify** button. You can change the account's name and password. You can also change the administrator's password here. But, the administrator's name is fixed, you cannot change that.



Add/Modify user	
User Name:	Enter the **Username** you would like to assign
Level:	Select **User** to limit control of the camera, **Operator** to allow more privileges to the account

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Password	Enter the **Password** you would like to set. *Valid password range [8-16]. You can use a combination of numbers, lowercase, uppercase and special character for your password with at least two kinds of them contained.*
Confirm	Reenter your **password** to confirm the password
Remote: Parameters Settings	Allows this account to configure camera parameters.
Remote: Log Search / Interrogate Working Status	Enables this account's access to the Logs
Remote: Upgrade / Format	Allows this account to upgrade or restore this cameras firmware.
Remote: Two-way Audio	Allows this account to utilize the two way audio function.
Remote: Shutdown / Reboot	Allows this account to shut down or power cycle the camera
Remote: Notify Surveillance Center / Trigger Alarm Output	Allows this account access to the events and alarms.
Remote: Video Output Control	Allows this account to configure video output
Remote: Serial Port Control	Allows this account to access the serial port
Remote: Live View	Allows this account to access the live view stream
Remote: Manual Record	Allows this account to manually record
Remote: PTZ Control	Allows this account to adjust the PTZ
Remote: Playback	Allows this account to view the camera's playback

Click **OK** to save the changes**.**

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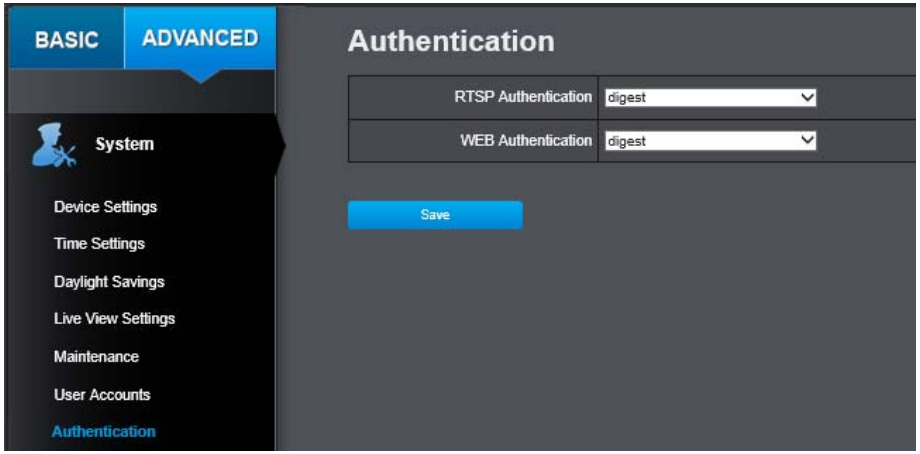
Authentication

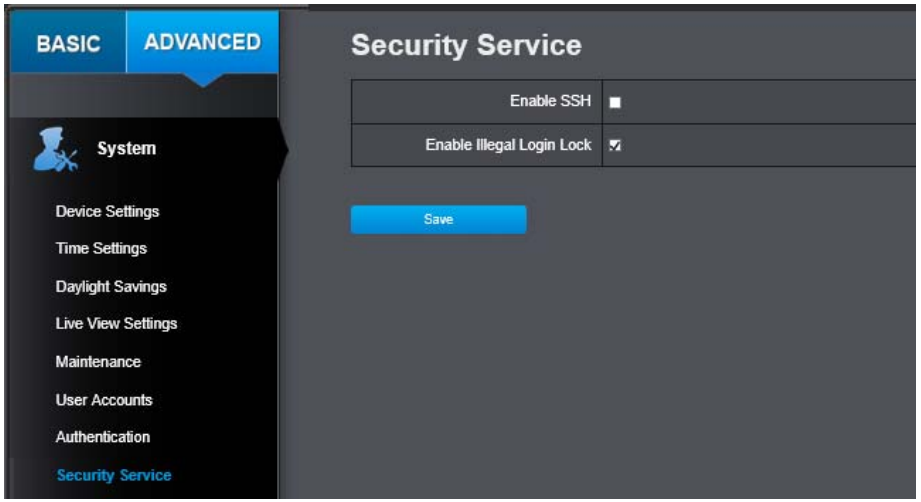
You can adjust the RTSP/WEB Authentication here.



Authentication	
RTSP Authentication	Click the dropdown to select **digest** or **digest/basic** authentication.
WEB Authentication	Click the dropdown to select **digest** or **digest/basic** authentication.

Security Service

You can enable or disable the IR Light and the Face Detection functions here.



Security Service	
Enable SSH	Select the check box to enable SSH (Secure Shell) Access.
Enable Illegal Login Lock	Select the check box to enable the lockout feature upon 6 consecutive failed log-in attempts.

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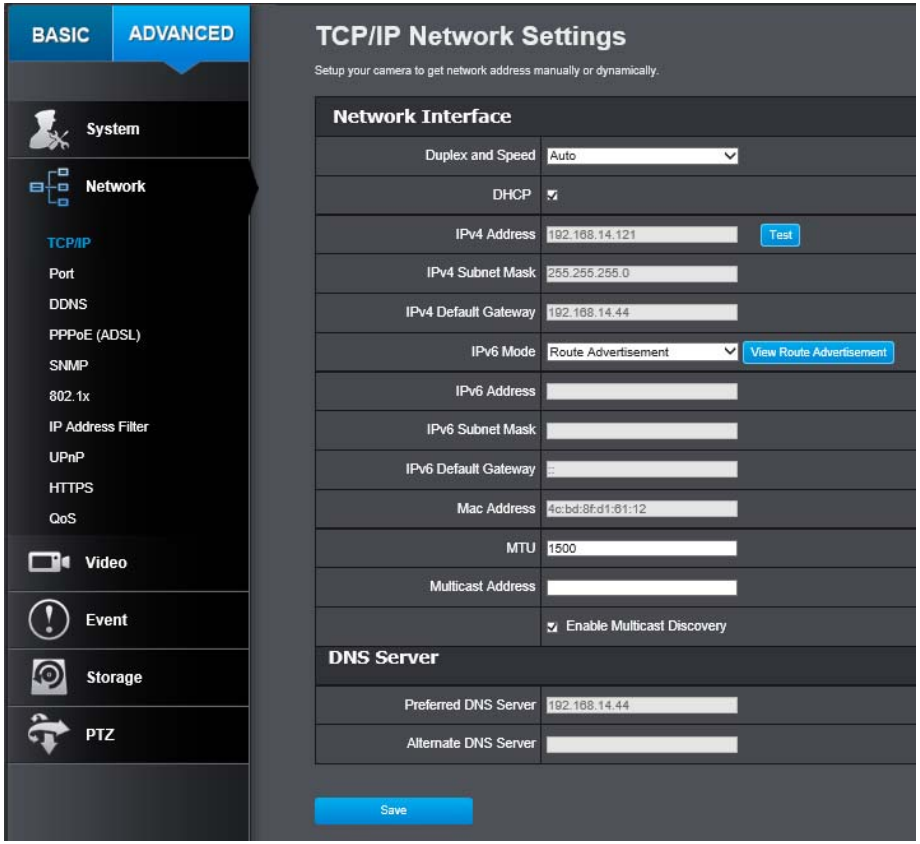
Network Settings

TCP/IP

Setup your basic IPv4 and IPv6 network settings on this page.



Network Interface	
Duplex and Speed:	Choose one of the Ethernet duplex and speed to match your network. Default: auto.
DHCP	Check this box to enable DHCP auto configuration.
IPv4 Address:	The IPv4 dynamic or static address.
IPv4 Subnet Mask:	Network range of the subnet.
IPv4 Default Gateway:	The default route going further from TV-IP460PI IPv4 subnet.
IPv6 Mode:	Choose Manual, DHCP, or Route Advertisement. Click View Route Advertisement to find a route advertisement.
IPv6 Address:	IPv6 address of TV-IP460PI.
IPv6 Subnet Mask:	Length of network prefix.
IPv6 Default Gateway:	The default route going further from TV-IP460PI IPv6 subnet.
MAC Address	The MAC Address of this camera.
MTU:	Maximum transmission unit. The maximum field size in the Ethernet packet.
Multicast Address:	*Sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. **Note: Multicast function needs to be supported by your Local Area Network.*
Enable Multicast Discovery:	Check this box if you would like to allow this device's multicast address to be discoverable.
DNS Server	
Preferred DNS Server:	Enter your first IPv4 or IPv6 DNS server address.
Alternate DNS Server:	Enter your second IPv4 or IPv6 DNS server address.

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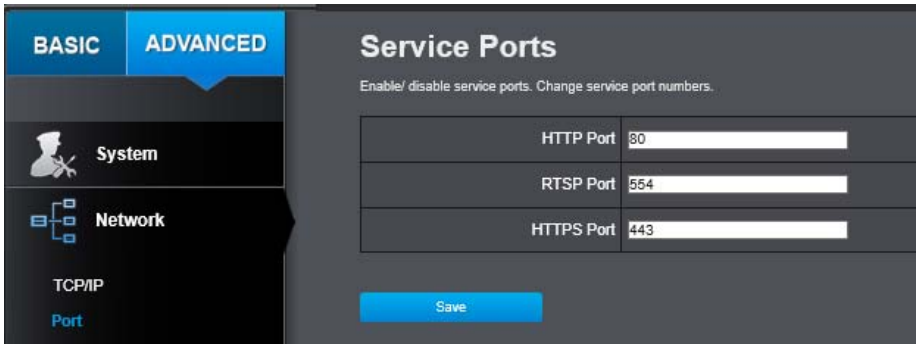
Port

You can change the service port numbers of TV-IP460PI and enable/disable RTSP or HTTPS services.

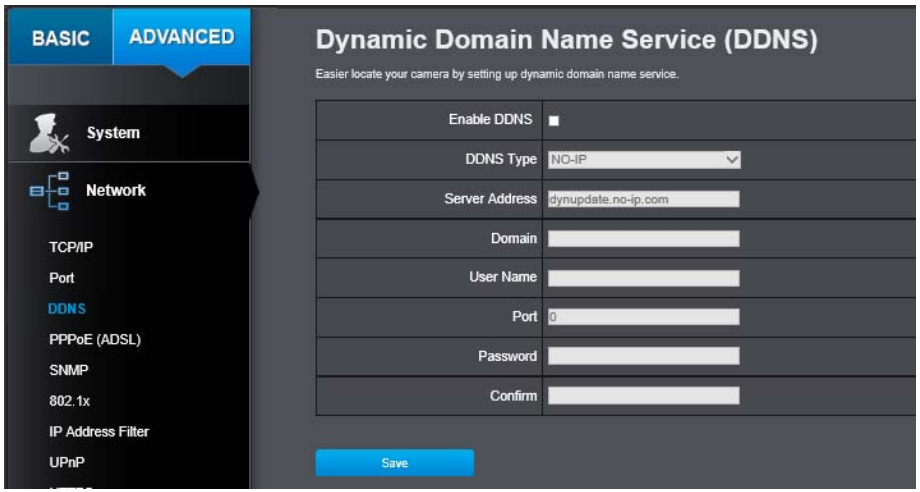


Port Numbers	
HTTP Port:	The default web access port. You can change the port number. However, you cannot disable the web service. The default port number is 80.
RTSP Port:	The Real-Time Streaming Protocol port for video streaming. You can change the port number or disable the service by uncheck the box. The default port number is 554.
HTTPS Port:	The secured web service port. You can change the port number, or you can disable the service by uncheck the box. The default port number is 443.

*Click **Save** to save the changes.*

DDNS

Dynamic Domain Name Service, DDNS, allows you to find your camera from the Internet with an easy to remember domain name.



DDNS	
Enable DDNS:	Check this box to enable DDNS Service.
DDNS Type: NO-IP (IPServer, DynDNS, NO-IP, HiDDNS)	Select a DDNS service provider.
Server Address:	Enter the DDNS server address.
Domain:	Enter your registered domain/host name on selected DDNS service.
User Name:	Enter the account name.
Port	Enter the port number.
Password:	Enter the password.
Confirm:	Enter the password again.

*Click **Save** to save the changes*

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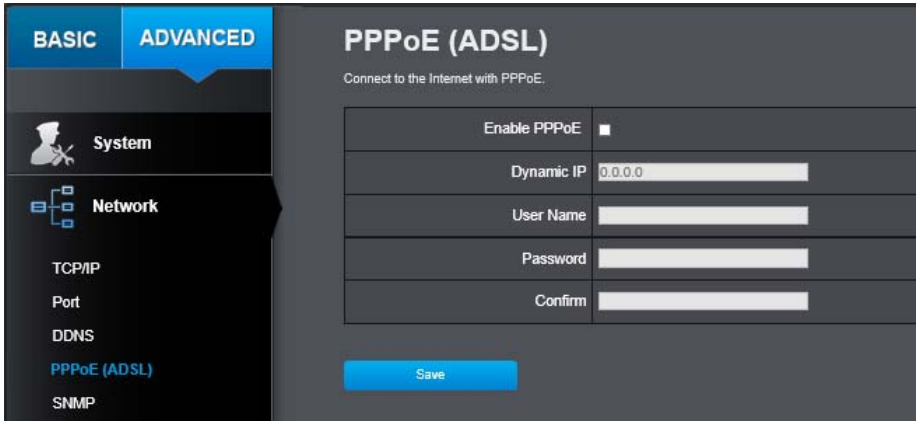
PPPoE (ADSL)

Setup PPPoE (ADSL) connection to connect your camera with your ISP, Internet Service Provider.



PPPoE (ADSL)	
Enable PPPoE:	Check this box to enable PPPoE connection.
Dynamic IP:	The IP address assigned by ISP
User Name:	Enter the account name.
Password:	Enter the password.
Confirm:	Enter the password again.

*Click **Save** to save the changes*

Note: To view the camera remotely, please make sure the HTTP and RTSP ports are opened (port forwarded) on your network/router.

SNMP

SNMP Settings allows you to assign the contact details, location, community name and trap settings of SNMP. This is a networking management protocol used to monitor network-attached devices. SNMP allows messages (called protocol data units) to be sent to various parts of a network. Upon receiving these messages, SNMP compatible devices (called agents) return data stored in their Management Information Bases.

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SNMP V1/V2	
Enable SNMPv1:	Check this box to enable SNMP v1 management.
Enable SNMPv2c:	Check this box to enable SNMP v2c management.
Read SNMP Community:	Specify the password to access the SNMP community for read only access.
Write SNMP Community:	Specify the password for access to the SNMP community with read/write access.
Trap Address:	Specify the IP address for the SNMP trap community.
Trap Port:	Specify the port number for the SNMP trap community.
Trap Community:	Specify the name of SNMP trap community.

SNMP V3	
Enable SNMPv3:	Check this box to enable SNMP v3 management.
Read User Name:	SNMP v3 member user name.
Security Level:	Choose one of the security levels. Authentication and Privacy Authentication only Privacy only
Authentication Algorithm:	Choose the authentication method to verify the source of information: MD5 or SHA.
Authentication Password:	Specify the authentication password between 8 to 32 letters.
Private-key Algorithm:	Choose the privacy key to encrypt SNMP messages: DES or AES.
Private-key Password:	Specify the privacy key between 8 to 32 letters.
Write User Name:	SNMP v3 manager user name.
Security Level:	Choose one of the security levels. Authentication and Privacy Authentication only Privacy only
Authentication Algorithm:	Choose the authentication method to verify the source of information: MD5 or SHA.
Authentication Password:	Specify the authentication password between 8 to 32 letters.
Private-key Algorithm:	Choose the privacy key to encrypt SNMP messages: DES or AES.
Private-key Password:	Specify the privacy key between 8 to 32 letters.

SNMP Other Settings	
SNMP Port:	SNMP service port number.

*Click **Save** to save the changes*

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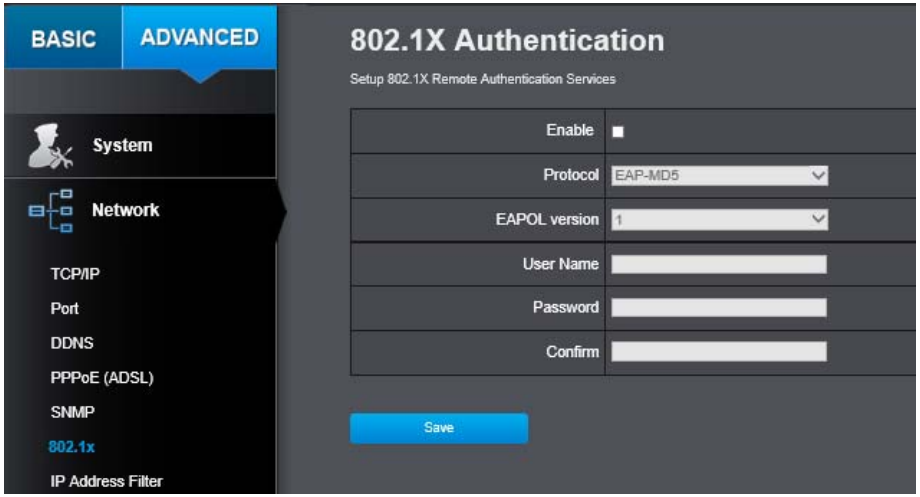
802.1X

Setup 802.1X for remote authentication service.

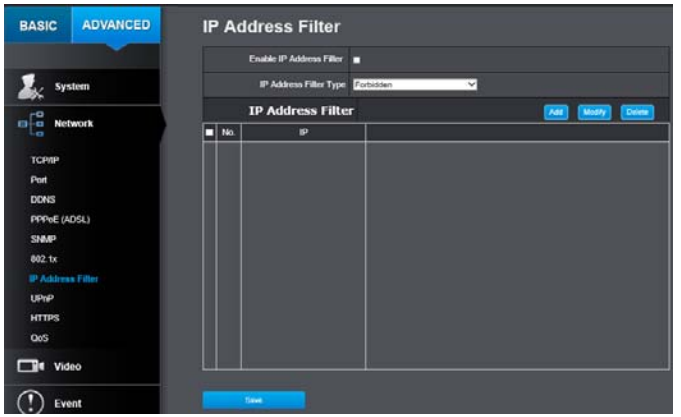


802.1X Authentication	
Enable:	Check this box to enable 802.1X authentication service.
Protocol	Select the 802.1X Protocol.
EAPOL version:	Extensible Authentication Protocol (EAP) over LAN (EAPoL). Choose version 1 or 2. This version number has to match to your 802.1X service EAPOL version.
User Name:	Enter the account name.
Password:	Enter the password.
Confirm:	Enter the password again.

*Click **Save** to save the changes*

IP Address Filter

Set up a list of clients allow only the clients on the list to access this camera or to reject clients on the list from access this camera.



IP Address Filter	
Enable IP Address Filter:	Check this box to enable IP address filtering service.
IP Address Filter Type:	Choose Forbidden to ban the listed IP addresses or Allowed to allow listed host to access this camera.
Add:	Click Add to add a user account
Modify:	To modify an entry on the list, highlight the entry by clicking on it. Then, click the Modify button. Enter the IP address then click OK
Delete:	To delete an entry on the list, highlight the entry by clicking on it. Then, click Delete
Clear:	To clear all entries, click Clear

*Click **Save** to save the changes*

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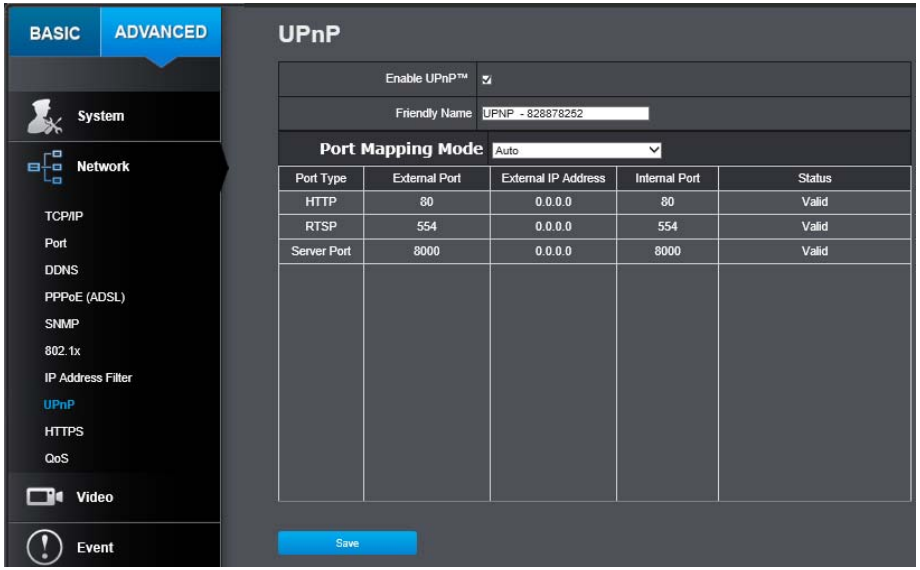
UPnP

Universal Plug-and-Play is a device discovery protocol set. It allows your camera to easily be found, for example, on a Windows operation system.



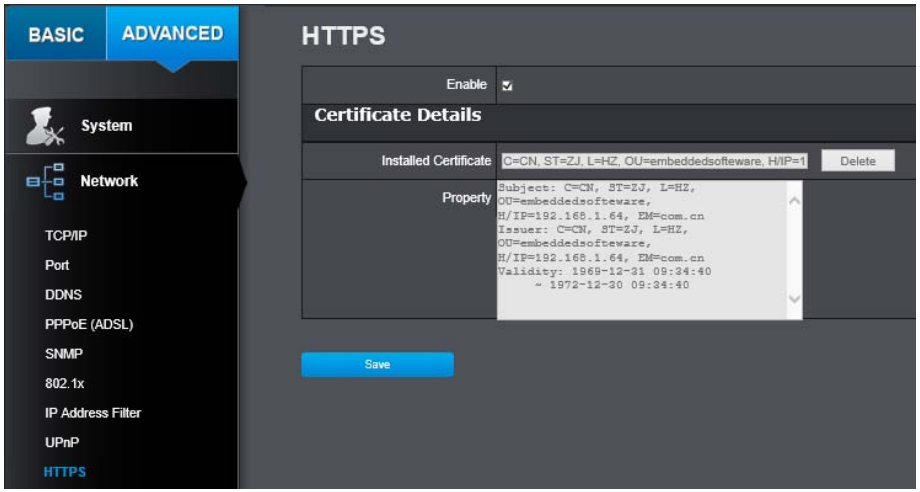
UPnP	
Enable UPnP:	Check this box to enable UPnP connection.
Friendly Name:	The name that will be appeared when searched.

Port Mapping	
Port Mapping Mode:	Choose **Manual** or **Auto** port mapping.

*Click **Save** to save the changes*

HTTPS

HTTPS is an alternative/more secure method of accessing the management page.



HTTPS	
Enable:	Check this box to enable HTTPS connection.

Certificate Details	
Installed Certificate:	Displays information regarding the currently installed certificate. Press **Delete** to delete the certificate.

*Click **Save** to save the changes*

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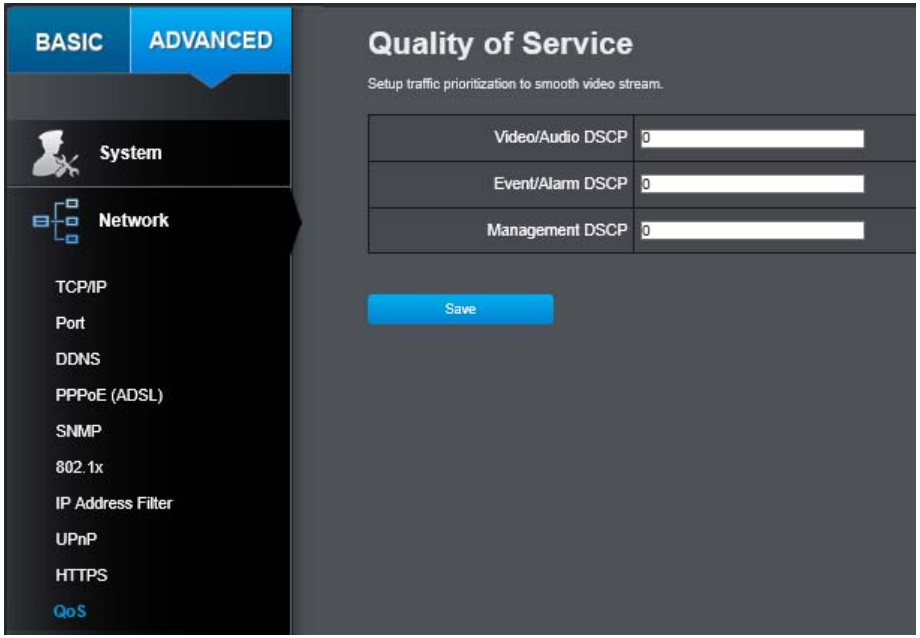
Quality of Service (QoS)

Setup traffic prioritization tags the video packets to go through network switches and routers with assigned priority. You can set the Differentiated Services Code Point (DSCP) bits on outgoing data streams. The QoS capable network device will forward different data in different priorities. The meaning of the value is different in different DiffServ domains. Consult your network manager for the setup details.



IP Address Filter	
Video/Audio DSCP:	Enter Video/Audio DSCP. Default: 0.
Event/Alarm DSCP:	Enter Event/Alarm DSCP. Default: 0.
Management DSCP:	Enter Management DSCP. Default: 0.

*Click **Save** to save the changes*

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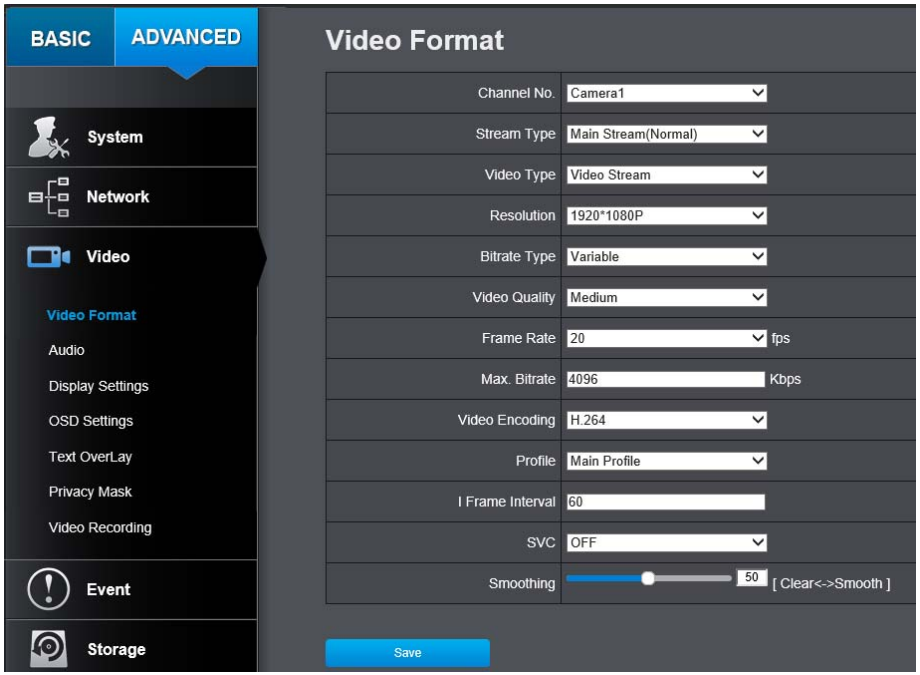
Video Settings

Video Format



Channel No.:	Choose the camera channel you would like to configure from the drop down. **Camera 1** is the center PTZ camera, and **Camera 2,3,4** are the surrounding cameras.
Stream Type:	Select the video **stream** you would like to configure from the drop down menu.
Video Type:	Select **Video Stream** from the drop down for the previously selected channel/stream type to only be a video stream. Select **Video&Audio** for the stream to also support audio (external audio device)

Resolution:	Main Stream 1280*720P 1280*960 1920*1080P	Second/Sub Stream 352*240 640*480 704*480
Bitrate Type:	Choose between variable bit rate or constant bit rate for video compression. The default is variable rate.	
Video Quality:	Choose the video quality. The default is medium quality.	
Frame Rate:	Choose the capturing frame rate. The default value is 20 frames per second. Reduce the frame rate to reduce the capture file size.	
Max. Bitrate:	Choose the maximum video sampling bit rate. Default: 4096	
Video Encoding: H.264 H.265	Choose the video stream you want to modify. H.264 and H.265 videos are always streaming and can be configured separately.	
Profile:	Select **Main Profile** or **High Profile**.	
I Frame Interval	An I Frame is a frame that records a complete picture. Frames between I frames, (P frame or B frame) only records the image differences between two frames. Choose the I Frame Interval here. The default is 60.	
SVC:	**Scalable Video Coding** or **SVC** is an extension of the H.264/AVC standard. Select **OFF/ON** to disable/enable the SVC function. Select **Auto**, and the device will automatically extract frames from the original video when the network bandwidth is insufficient.	
Smoothing:	Drag the slider to set the image smoothing. Left for higher quality, right for performance.	

*Click **Save** to save the changes*

Sub stream can be used for lower resolution needed application, for example mobile app streaming or NVR streaming.

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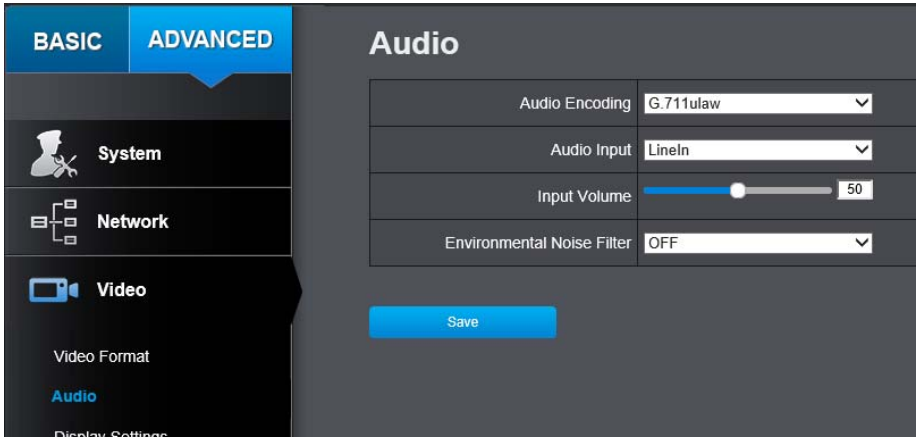
Audio

Configure the camera's Audio



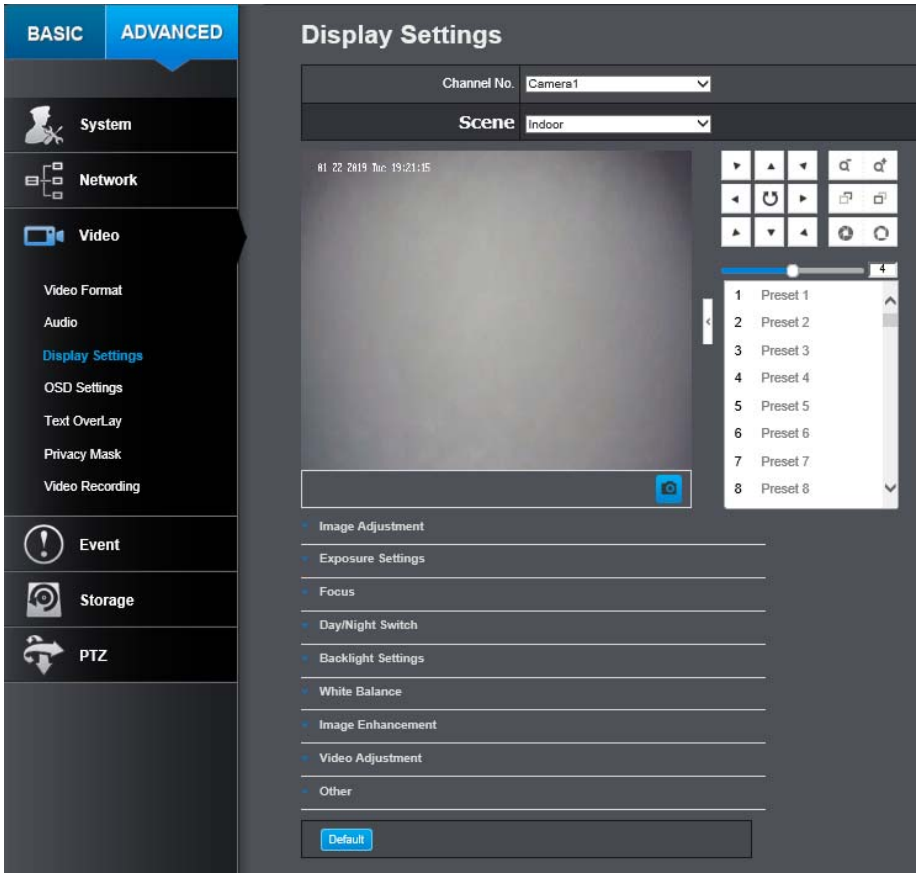
Audio Encoding:	Select the format to be used for audio encoding.
Audio Input:	When an intercom is connected to the camera, you need to set this option to **LineIn**. When a microphone is connected to the camera, you need to set this option to **MicIn**.
Input Volume:	Drag the slider to adjust the input volume.
Environmental Noise Filter:	Click the dropdown and select **ON** to turn on the environmental noise filter.

Click **Save** to save the changes.

Display Settings

Adjust video image quality, lightness, and color settings here. **Settings here are automatically saved upon selection.**

Note:** PTZ functions and menu options "Focus" and "Other" only available on Channel No. Camera 1.



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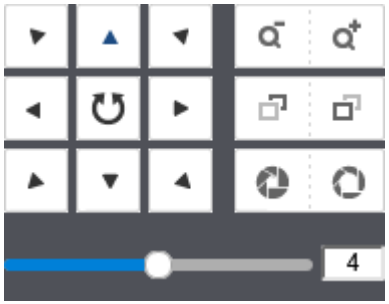
Channel No.	Choose the camera channel you would like to configure from the drop down. **Camera 1** is the center PTZ camera, and **Camera 2,3,4** are the surrounding cameras.
Scene:	Select if this camera is pointed at an **Indoor** or **Outdoor** location.
	Click this button to save a Snapshot of the currently displayed image.
Pan/Tilt/Zoom: 	Pan / Tilt / Zoom control panel >>Zoom in / out >>Focus close / far >>Iris open / close >>Speed of pan/tilt movement
Presets:	Use the presets panel to move to or create a saved locations
	Click this button to reset all settings on this page back to their default values.

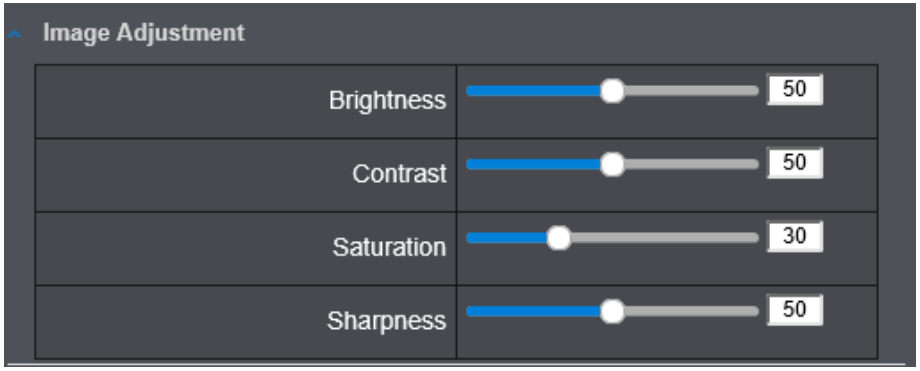


Image adjustments	
Brightness:	Drag the slider to adjust the **brightness** of the image.
Contrast:	Drag the slider to adjust the **contrast** (the difference in color and light between parts of an image).
Saturation:	Drag the slider to adjust the color **saturation** of the image.
Sharpness:	Drag the slider to adjust the **sharpness** by sharpening the edges of the image.

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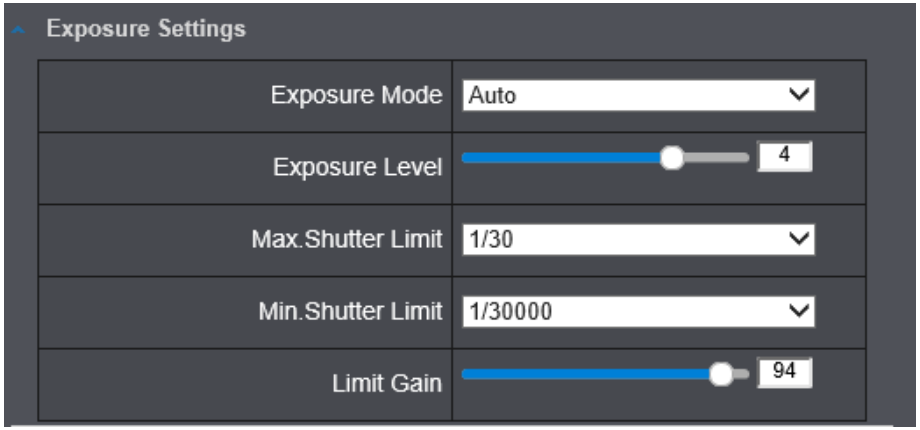
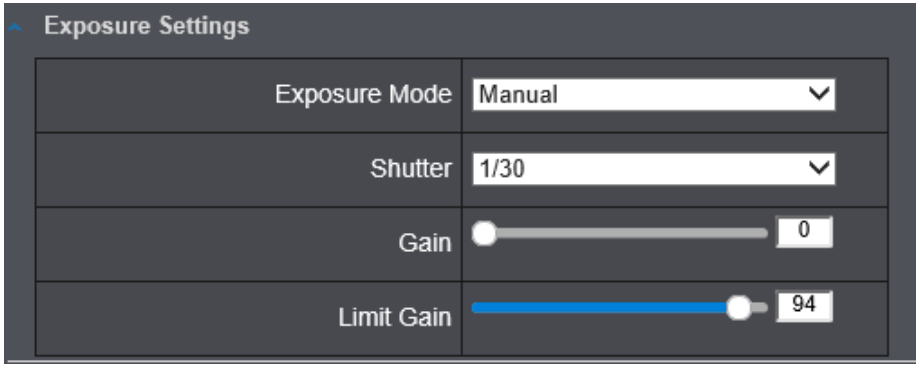
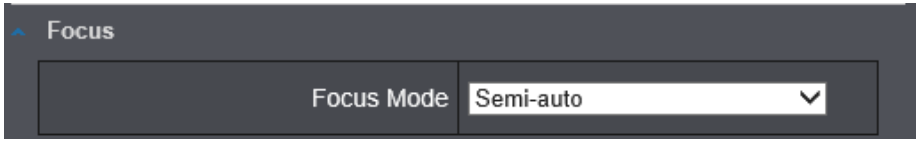


Exposure Setting Auto	
Exposure Mode:	The **Exposure Mode** can be set to **Auto** or **Manual**. In manual mode, you can adjust additional values.
Exposure Level:	Drag the slider to adjust the **exposure level**
Max. Shutter Limit:	Adjust the maximum value for exposure time for each picture. You can choose a value between 1/30000 second to 1/30 second. The default value is 1/30 second exposure time for each picture.
Min. Shutter Limit:	Adjust the minimum value for exposure time for each picture. You can choose a value between 1/30,000 second to 1/30 second. The default value is 1/30,000 second exposure time for each picture.
Limit Gain:	Drag the slider to adjust the **Limit Gain** of the image.



Exposure Setting Manual	
Exposure Mode:	The **Exposure Mode** can be set to **Auto** or **Manual**. In manual mode, you can adjust additional values.
Shutter:	Adjust the value for exposure time for each picture. You can choose a value between 1/30000 second to 1/30 second. The default value is 1/30 second exposure time for each picture.
Gain:	Drag the slider to adjust the **Gain** of the image.
Limit Gain:	Drag the slider to adjust the **Limit Gain** of the image.



Focus	
Focus Mode:	Click the dropdown and select **Semi-auto** or **Auto** for the **Focus Mode.**

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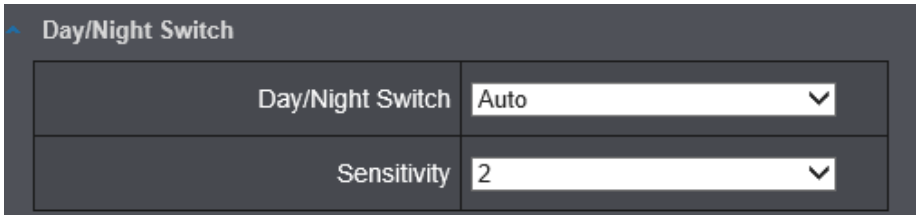
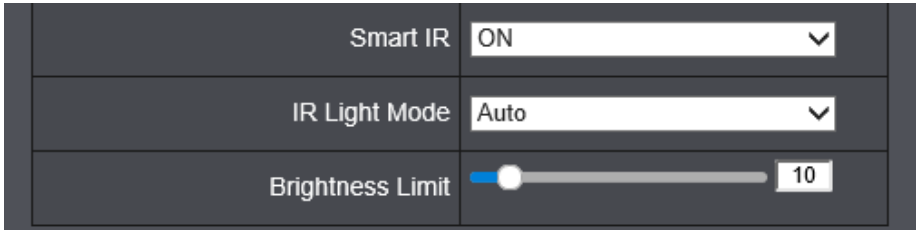
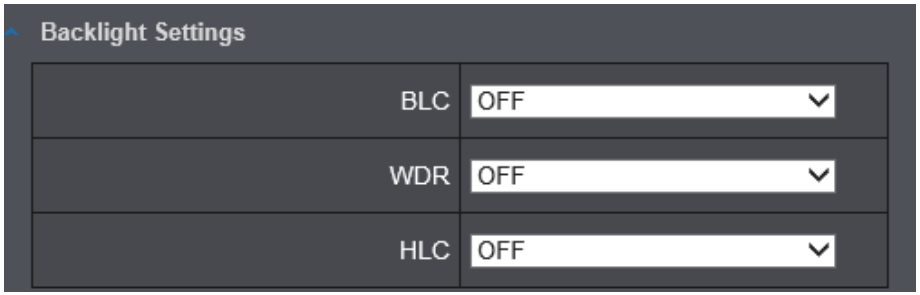


Day/Night Switch	
Day/Night Switch: Day Night Auto Scheduled-Switch	Choose whether you want the camera to be set to the **Day** mode (color video) or **Night** mode (IR enhanced black/white video). You can manually set it to **Day** mode or **Night** mode, adjust by lighting (**Auto**), or pre-defined **Scheduled-Switch**. **Auto:** **Sensitivity:** The light sensor sensitivity. **Scheduled-Switch:** Use quick selection or enter the time down below. Click **OK** to confirm the time you want to set. **Start Time:** The start time for day mode. **End Time:** The start time for day mode.

Channel 2, 3, and 4 have these additional options:



Smart IR:	Click the dropdown and select **ON** or **OFF.**
IR Light Mode:	Click the dropdown and select the option.
Brightness Limit:	Drag the slider to adjust. Default: 10



Backlight Settings	
BLC:	If there's a bright backlight, the subject in front of the backlight may appear silhouetted or dark. Enabling **BLC** (**back light compensation**) function can correct the exposure of the subject, but the backlight environment will washed out to white. Click the dropdown and select the position of the backlight or select auto.
WDR:	**WDR** (**Wide Dynamic Range**) assists in providing clear images even under backlit environments by balancing the brightness level of the image. • **Wide Dynamic Level:** The level of compensation. Range: 0-100%, default: 50%.
HLC:	**HLC** (**High Light Compensation**) allows the camera to identify and suppress strong light sources of which often causes lens-flares.

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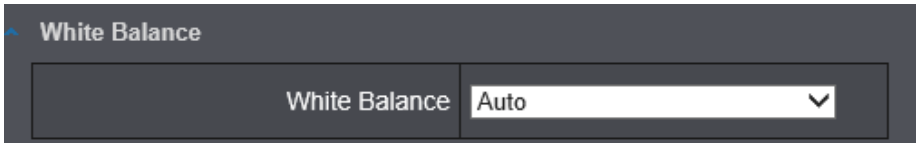
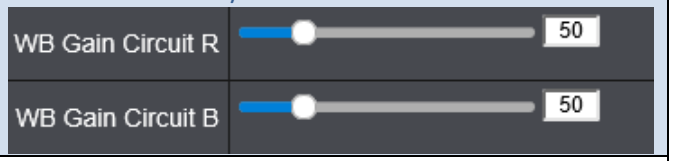


White Balance	
White Balance:	Click the drop down to select the **white balance** mode you would like to use: **Auto**, **MWB**, **Outdoor**, **Indoor**, **Fluorescent Lamp**, **Sodium Lamp** and **Auto-tracking**.
Auto:	The camera will automatically color balance according to the **current** color temperature.
MWB:	**Manual White Balance** (**MWB**) allows you to manually set the white balance using the below sliders. Default: 50/50 
Outdoor:	For **outdoor** environments.
Indoor:	For **indoor** environments
Fluorescent Lamp:	Used when image is illuminated by a **fluorescent lamp** light source.
Sodium Lamp:	Used when image is illuminated by a **sodium lamp** light source.
Auto-Tracking:	The camera will automatically adjust in real time according to the color temperature of the scene illumination.

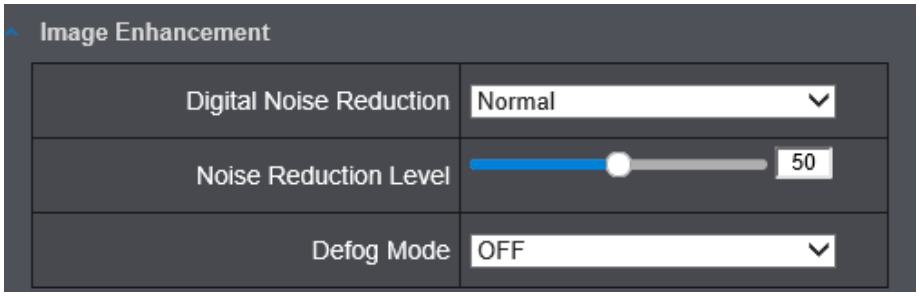


Image Enhancement	
Digital Noise Reduction:	Choose the mode of 3d digital noise reduction. **Normal Mode** **Noise Reduction Level:** Adjust the effect of digital noise reduction. Range: 0-100%, default : 50% **Expert Mode** **Space DNR Level:** Adjust the special digital noise reduction with adjacent pixels. Change the range (0-100%) to change the adjacency effect, default : 50% **Time DNR Level:** Adjust the 3D digital noise reduction. Compare and reduce noise between video frames. Range: 0-100%, default : 50%
Defog Mode:	Click the dropdown and select **On** or **Off** if necessary.

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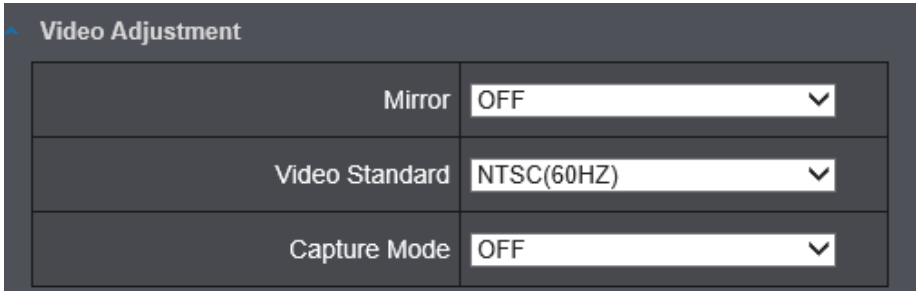
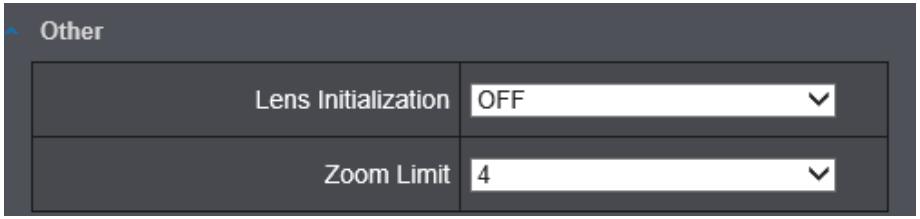


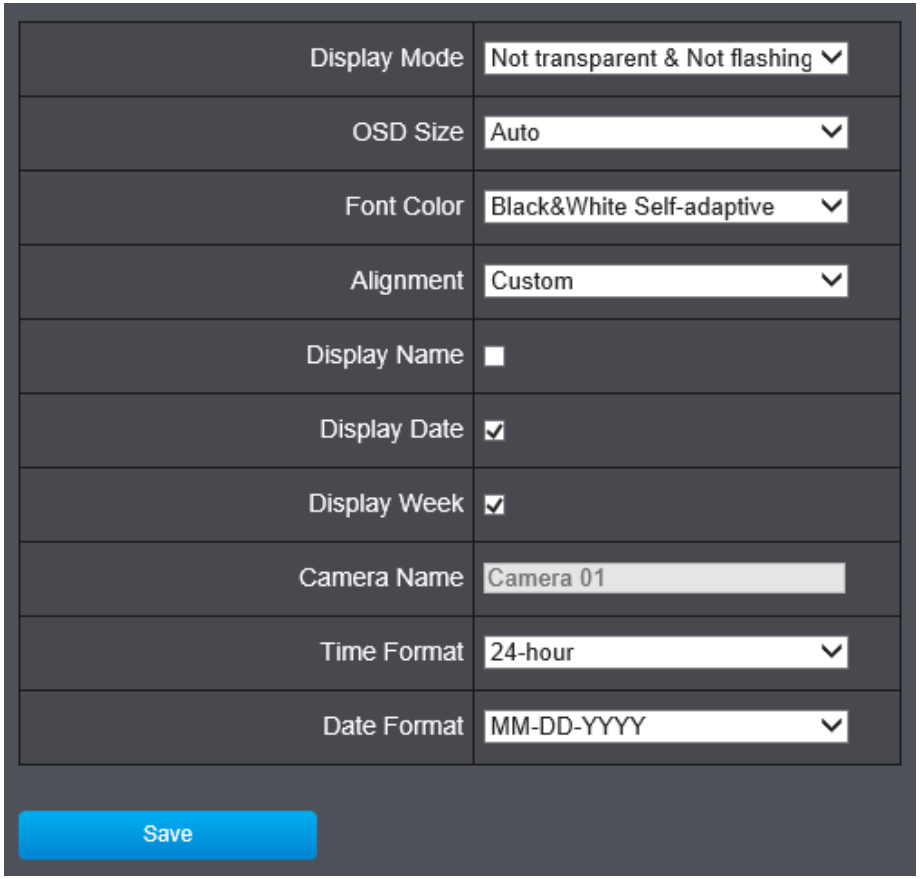
Video Adjustment	
Mirror:	Setting this option to **Center** will cause the image to rotate 180 degrees.
Video Standard:	**Video Standard** may be set to 50 Hz (PAL) or 60 Hz (NTSC) according to the video system in your country. Default: 60Hz.
Capture Mode: (only channel 1)	If you would like to enable this functions, click the drop down and select your chosen capture mode.



Other	
Lens Initialization:	The lens will move during initialization when you **enable Lens Initialization.**
Zoom Limit:	Select the **Zoom Limit** you would like to apply from the drop down menu. Default: 4

OSD Settings

On Screen Displays the camera name and the time the video is shooting on the screen. You may separately configure each camera's OSD settings



Display Mode:	Choose how the text will show on the screen.
OSD Size:	Select the text size from 16 to 96 or adjusted by screen size automatically.
Font Color:	Select the color you would like the font to be.

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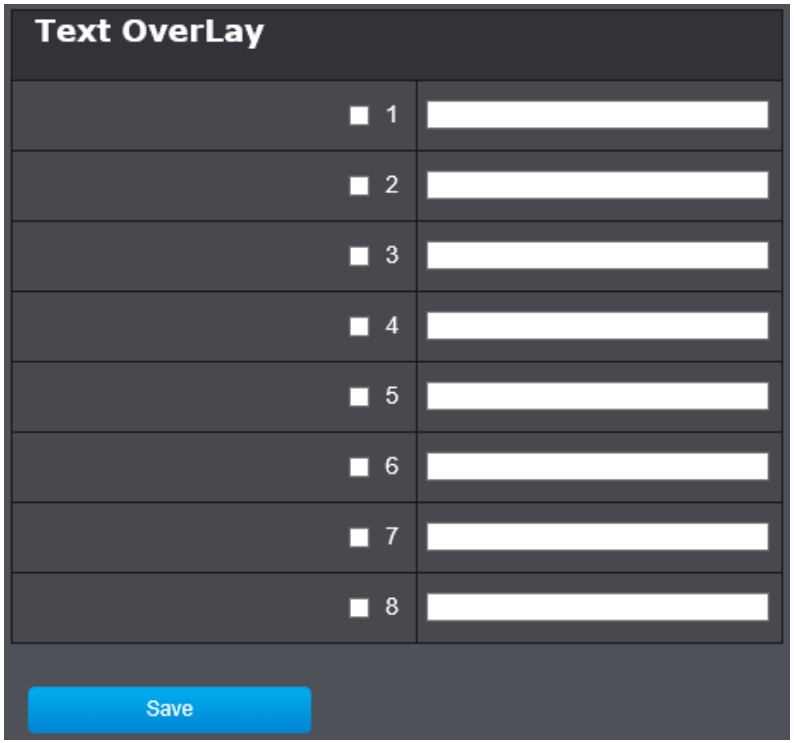
Alignment:	Select where you would like the text to be aligned. If using **Custom**, move the red box to position the text.
Display Name:	Check this box to display the product name that was setup in the device settings
Display Date:	Check this box to display system date and time.
Display Week:	Check this box to display time of the week.
Camera Name:	Displays the name assigned to this camera/channel.
Time Format:	Select 12 or 24-hour time format.
Date Format:	Select the date format

*Move the red box to position the text. Click **Save** to save the changes.*

Text Overlay

Display extra information on the screen over the image. You may separately configure each camera's Test Overlay settings



Check Box:	Check this box to enable this text overlay.
Text Field:	Enter the text you want to display. You can enter your local language if you want. The text field allows maximum 44 English letters or 20 non-English characters.

Move the red box to position the text.
*Click **Save** to save the changes*

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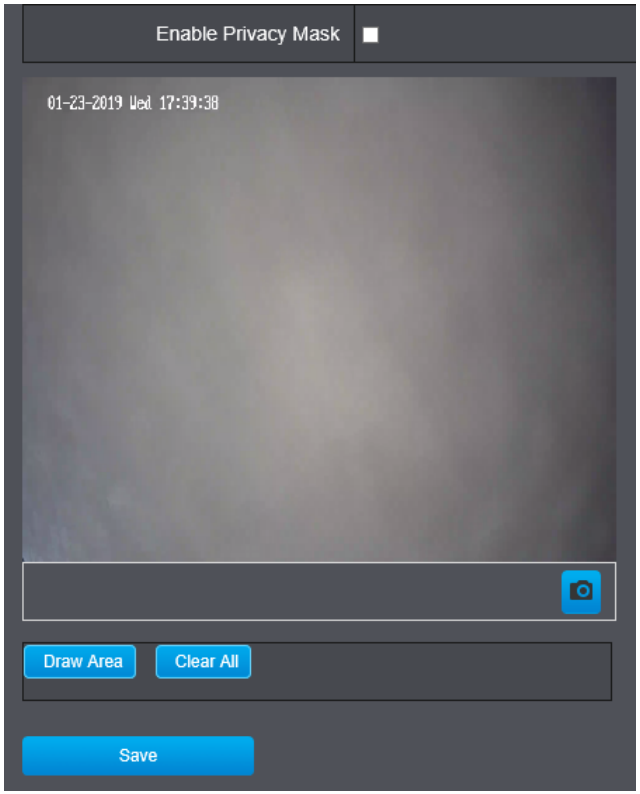
Privacy Mask

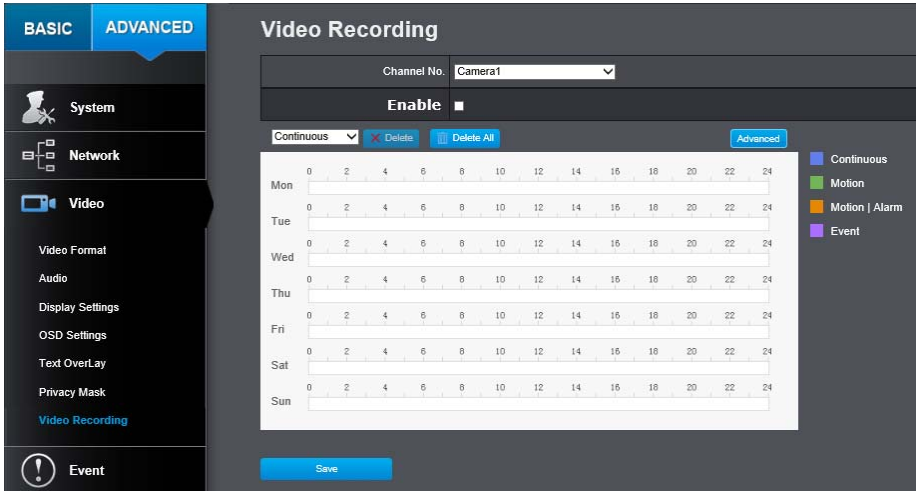
Create a masking area to keep your privacy. You can create up to four independent masking areas by clicking and dragging on the screen. You may separately configure each camera's Privacy Mask settings



Enable Privacy Mask:	Check this box to enable privacy masking.
Draw Area/ Stop Drawing:	Click this button to start/stop drawing.
Clear All:	Click this button to clear all the masking areas.

*Click **Save** to save the changes*

Video Recording



Channel No.:	Select the channel you would like to configure.
Enable:	Check the box to **enable** recording on this channel.
Drop Down: Continuous / Motion / Motion | Alarm / Event	Click the drop down to select the recording conditions, then click and drag on the scheduler below to configure the desired recording schedule.
Delete:	Delete the selected segment on the scheduler below.
Delete All:	Delete all configured recording conditions and schedules.
Advanced:	Click this to configure advanced options.

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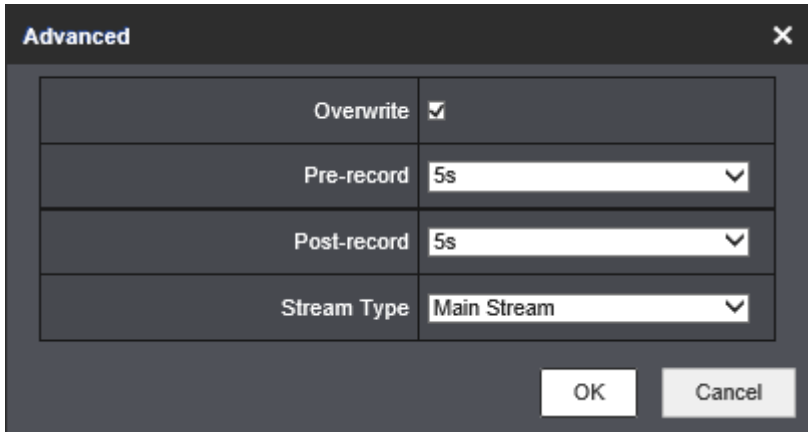

Overwrite:	Select the check box to allow older recordings to be automatically overwritten.
Pre-record:	Recording time before trigger event.
Post-record:	Recording time after trigger event.
Stream Type:	Specify to record from the main stream or sub stream.

*Click **Save** to save the changes*

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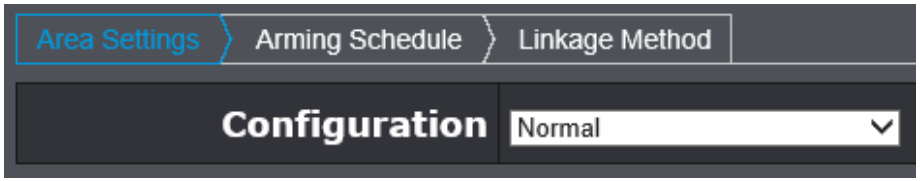
Event

Motion Detection

Set up how the motion detection event will be triggered and what actions will be triggered.

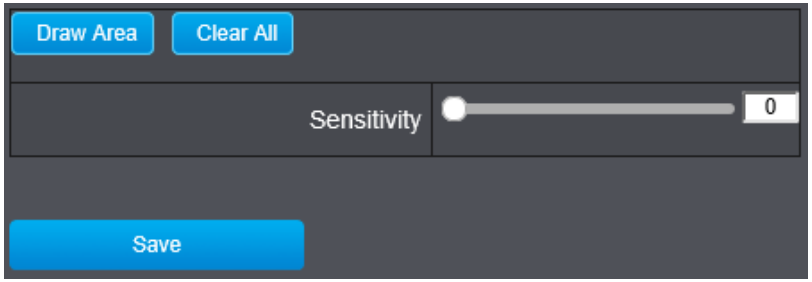
Motion Detection	
Channel No.:	Select the channel you would like to configure.
Enable Motion Detection:	Check this box to enable motion detection. Click **Save** to save the choice.
Enable Dynamic Analysis for Motion:	Check this box to enable dynamic motion analysis that shows the current status of motion detection. The motion tracking is displayed with grids. The grid area represents the camera motion is happening. Click **Save** to save the choices.

Area Settings



Area Settings	
Configuration:	Click the drop down and select **Normal** or **Expert**. Configure the corresponding motion detection parameters.

Normal Configuration



Normal Configuration	
Draw Area/ Stop Drawing:	Click this button to start/stop drawing directly on the image.
Clear All:	Click this button to clear all the masking areas.
Sensitivity:	Move the slider to adjust sensitivity. The greater the value, the more sensitive. Default: 0

*Click **Save** to save the changes*

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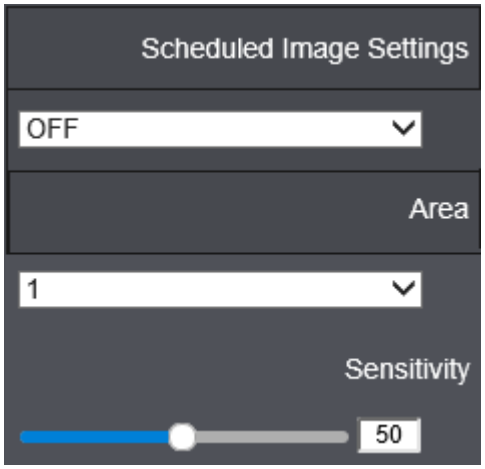
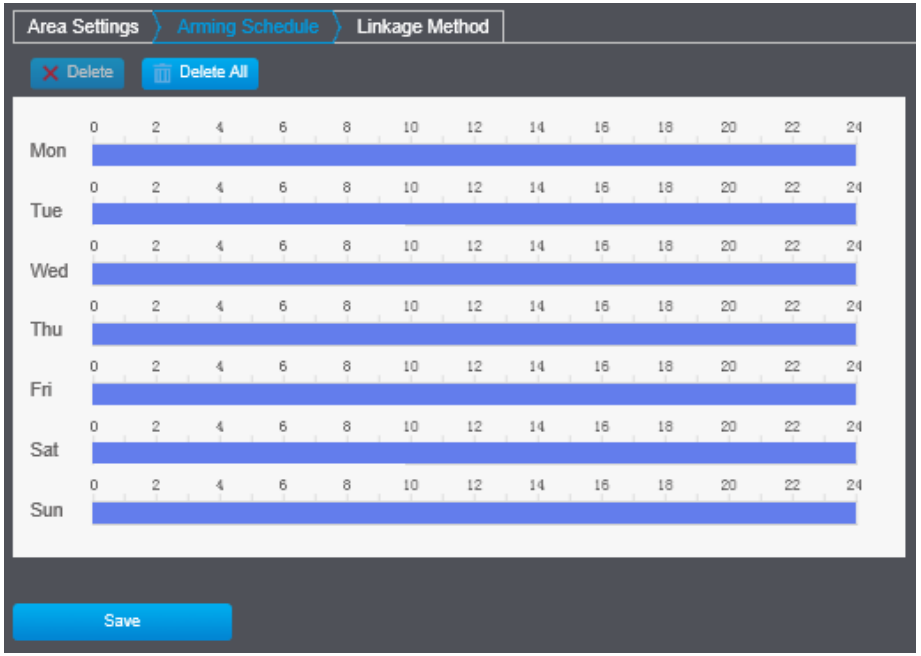
Expert Configuration



Expert Configuration	
Draw Area/ Stop Drawing:	Click this button to start/stop drawing directly on the image.
Clear All:	Click this button to clear all the masking areas.
Scheduled Image Settings:	From the dropdown menu select **OFF**, **Auto-Switch** and **Scheduled-Switch**. If **Scheduled Image Settings** is enabled, you may configure the rules for day/night separately. **OFF:** Disable the day and night switch. **Auto-Switch:** Automatically switch between the configured rules for day and night time based on illumination. **Scheduled-Switch:** Switch between the configured rules for day and night time based on user configured time.
Area:	Select the **area** for the rule to be configured.
Sensitivity:	Move the slider to adjust sensitivity. The greater the value, the more sensitive. Default: 50
Percentage: (schedule on)	Move the slider to adjust the **size proportion** (expressed as a **percentage** of the total area) that the moving object must exceed before triggering the motion detection.

*Click **Save** to save the changes*

Arming Schedule



Arming Schedule	
Delete/Delete All:	Delete the selected segment/all segments on the scheduler below.

*Click **Save** to save the changes*

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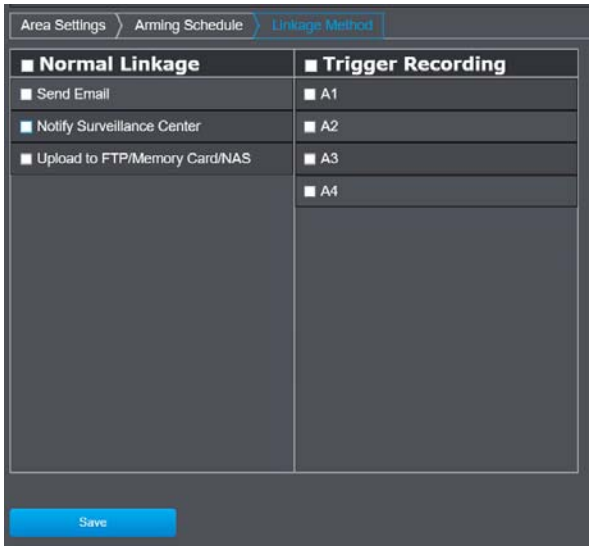
Linkage Method

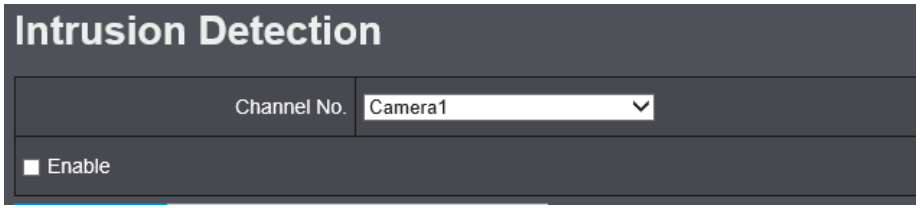


Linkage Method	
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon motion detection. • **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs. • **Upload to FTP/Memory/NAS**: Check the box to capture and upload the image when an alarm is triggered.
Trigger Recording:	Check the box to trigger recording to the selected storage device(s).
PTZ Linkage:	Also known as **Panoramic Linkage**. Check the box to have the PTZ camera track motion detected by the panoramic sensors.

*Click **Save** to save the changes*

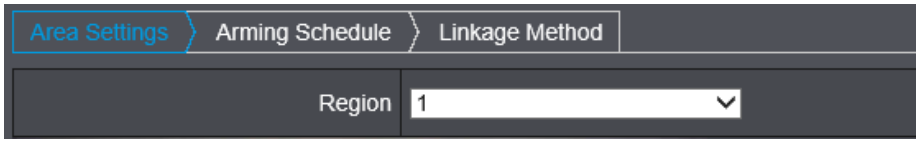
Intrusion Detection

Set up how the intrusion detection event will be triggered and what actions will be triggered.



Intrusion Detection	
Channel No.:	Select the camera you would like to configure.
Enable:	Check this box to enable the intrusion detection feature.

Area Settings



Area Settings	
Region:	Click the drop down and select which **region** you would like to configure.

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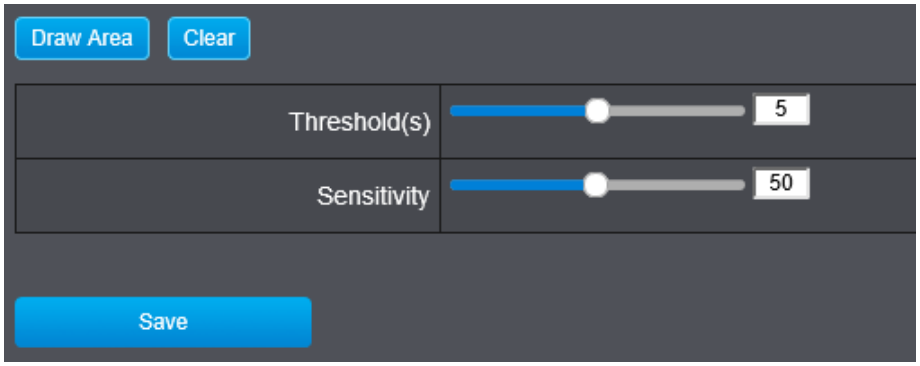

Draw Area/ Stop Drawing:	Click this button to start/stop drawing directly on the image.
Clear:	Click this button to clear all the masking areas.
Threshold:	Move the slider to adjust detection threshold.
Sensitivity:	Move the slider to adjust sensitivity. The greater the value, the more sensitive. Default: 50

*Click **Save** to save the changes*

Arming Schedule

Arming Schedule	
Delete/Delete All:	Delete the selected segment/all segments on the scheduler below.

*Click **Save** to save the changes*

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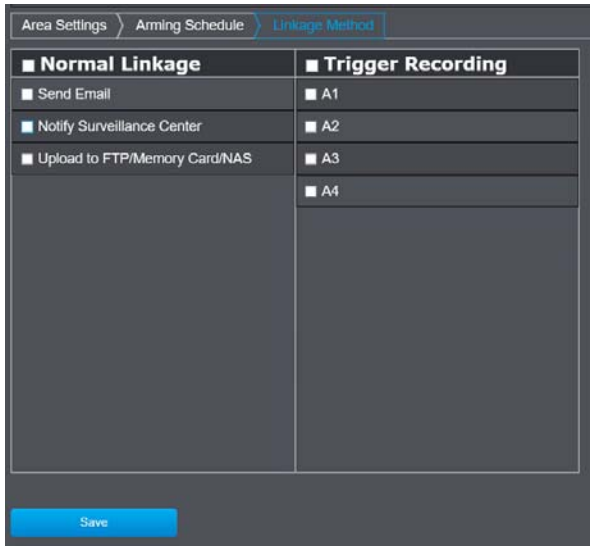
Linkage Method

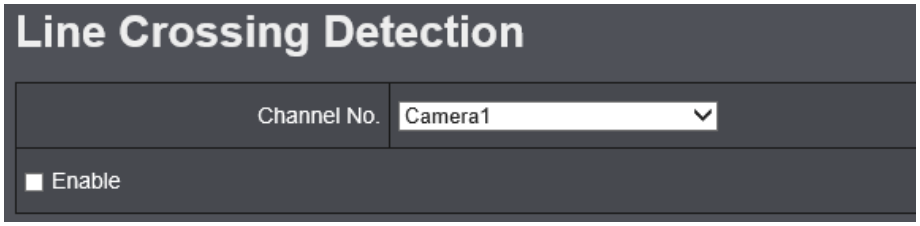


Linkage Method	
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon event detection. • **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs. • **Upload to FTP/Memory/NAS**: Check the box to capture and upload the image when an alarm is triggered.
Trigger Recording:	Check the box to trigger recording to the selected storage device(s).

*Click **Save** to save the changes*

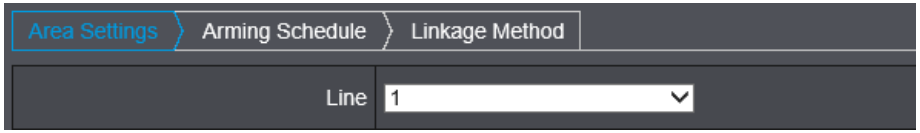
Line Crossing Detection

Set up how the Line Crossing detection event will be triggered and what actions will be triggered.



Line Crossing Detection	
Channel No.:	Select the camera you would like to configure.
Enable:	Check this box to enable the line crossing detection feature.

Area Settings



Area Settings	
Line:	Click the drop down and select which **line** you would like to configure.

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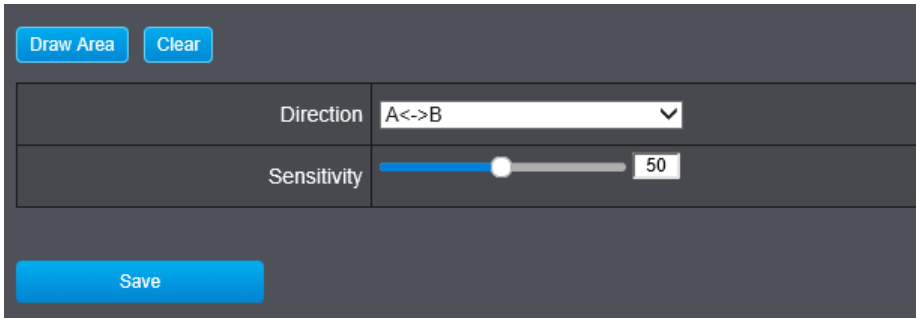

Draw Area/ Stop Drawing:	Click this button to start/stop drawing directly on the image.
Clear:	Click this button to clear all the detection areas.
Direction:	Select the direction for the line crossing detection.
Sensitivity:	Move the slider to adjust sensitivity. The greater the value, the more sensitive. Default: 50

*Click **Save** to save the changes*

Arming Schedule

Arming Schedule	
Delete/Delete All:	Delete the selected segment/all segments on the scheduler below.

*Click **Save** to save the changes*

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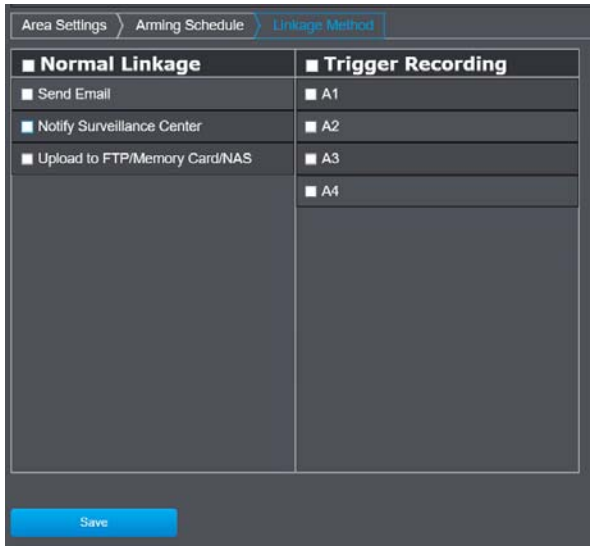
Linkage Method

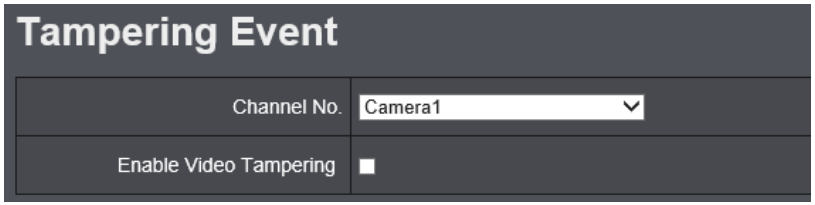


Linkage Method	
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon alarm detection. • **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs. • **Upload to FTP/Memory/NAS**: Check the box to capture and upload the image when an alarm is triggered.
Trigger Recording:	Check the box to trigger recording to the selected storage device(s).

*Click **Save** to save the changes*

Video Tampering

This is to detect if the camera has been tampered with and potential compromised footage. You can set up tamper proof notifications to alert the system manager to check the camera.



Video Tampering	
Channel No.:	Select the camera you would like to configure.
Enable:	Check this box to enable the video tempering detection feature.

Area Settings

Area Settings	
Draw Area/ Stop Drawing:	Click this button to start/stop drawing directly on the image.
Clear All:	Click this button to clear all the tampering areas.
Sensitivity:	Move the slider to adjust sensitivity. The greater the value, the more sensitive. Default: empty

*Click **Save** to save the changes*

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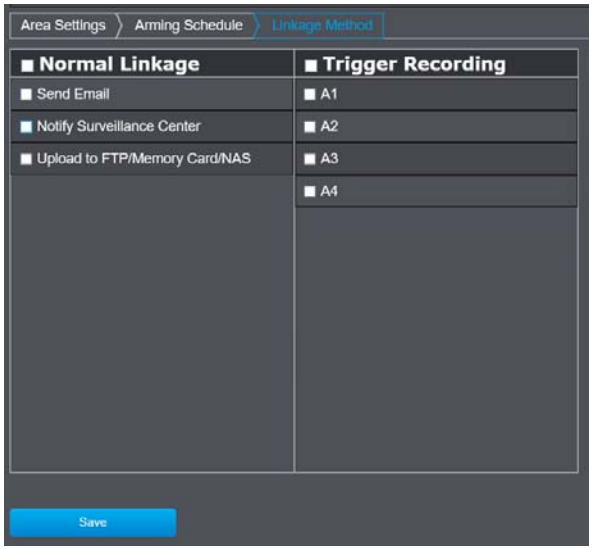
Arming Schedule

Arming Schedule	
Delete/Delete All:	Delete the selected segment/all segments on the scheduler below.

*Click **Save** to save the changes*

Linkage Method



Linkage Method	
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon alarm detection. • **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs. • **Upload to FTP/Memory/NAS**: Check the box to capture and upload the image when an alarm is triggered.

*Click **Save** to save the changes*

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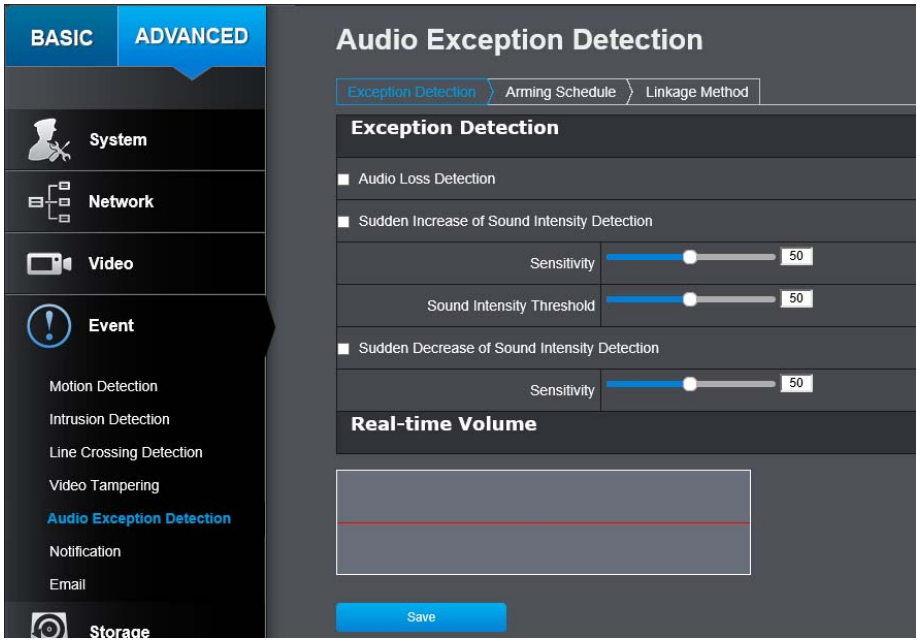
Audio Exception Detection

Set up how the Audio Exception detection event will be triggered and what actions will be triggered.



Audio Exception Detection	
Audio Loss Detection:	Check this box to enable the **Audio Input Exception Detection.**
Sudden Increase of Sound Intensity Detection:	Check this box to enable audio detection for a sudden **increase** in sound.
Sudden Decrease of Sound Intensity Detection:	Check this box to enable audio detection for a sudden **decrease** in sound.
Sensitivity:	Drag this slider to adjust sensitivity. The **lower** the **value**, the **greater** the **intensity of the sound change** would need to be to trigger the detection. Default: 50
Sound Intensity Threshold:	Drag this slider to filter **environmental audio**. The **louder the environment**, the **higher the value** should be set at. Default: 50
Real-time Volume:	Shows a visual chart in real time for the volume of audio detected.

*Click **Save** to save the changes*

Arming Schedule

Arming Schedule	
Delete/Delete All:	Delete the selected segment/all segments on the scheduler below.

*Click **Save** to save the changes*

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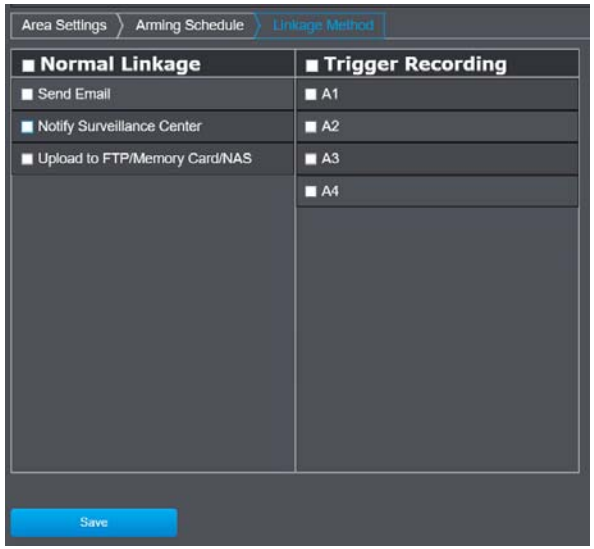
Linkage Method



Linkage Method	
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon alarm detection. • **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs. • **Upload to FTP/Memory/NAS**: Check the box to capture and upload the image when an alarm is triggered.
Trigger Recording:	Check the box to trigger recording to the selected storage device(s).

*Click **Save** to save the changes*

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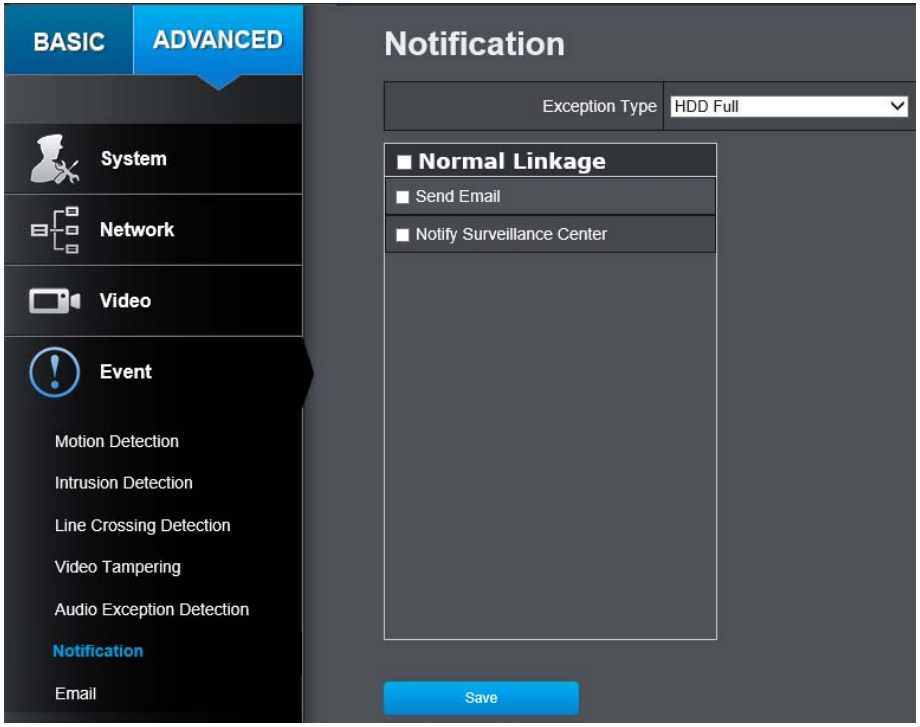
Notification

Provide notifications for other system events, set up your notifications here.



Notification	
Exception Type:	First, choose the exception type, and then choose the corresponding action. HDD Full HDD Error Illegal Login
Normal Linkage:	Check the box to select everything in this category. • **Send Email:** Check the box to enable email to be sent upon alarm detection.
	• **Notify Surveillance Center**: Check the box to send an exception or alarm to the management software when an event occurs.

*Click **Save** to save the changes*

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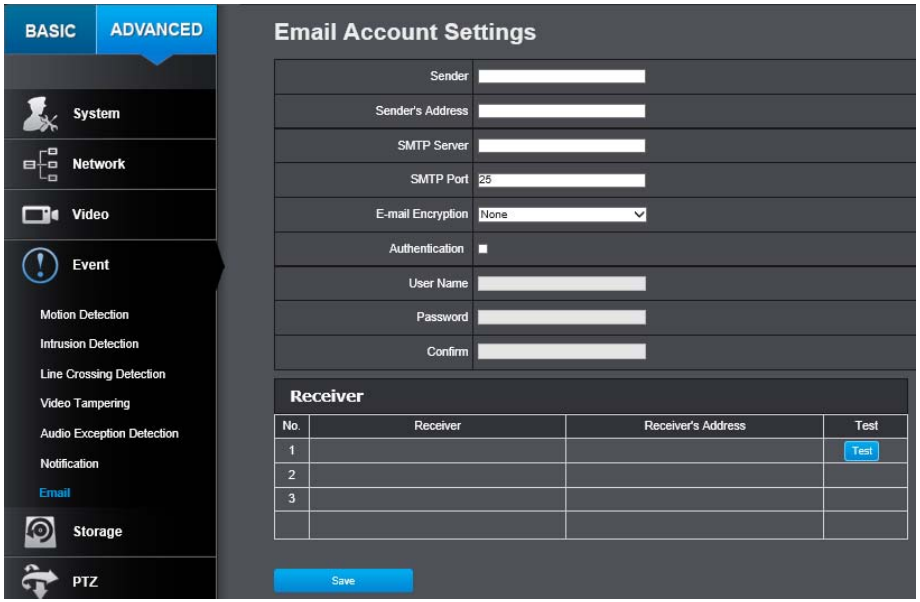
Email

Set up email accounts for notifications.



Email Account Settings	
Sender:	Enter the name to be appeared as the email sender.
Sender's Address:	Enter sender's email address.
SMTP Server:	Simple Mail Transportation Protocol Server address, the outgoing email server address. It may has address as your incoming email server. Please ask your email service provider for detail.
SMTP Port:	Service port number for outgoing email.*
E-mail Encryption:	If your service provider requires SSL or TLS encryption, please specify here.
Authentication:	Check this box if your server requires a password in order to send email. Most email servers require authentication when sending an email.
User name:	Enter the user name of outgoing email account
Password:	Enter the password
Confirm:	Enter the password again to confirm that the password was entered correctly.

Receiver	
Receiver:	This row's receiver's name.
Receiver Address:	This row's receiver's email address.
Test:	Click **Test** to send a test email to the recipient.

*Click **Save** to save the changes*

**Note: Many ISPs does not allow service port 25 going through their network. Other popular ports are 587 and 465. Please consult your email service provider and ISP for detail.*

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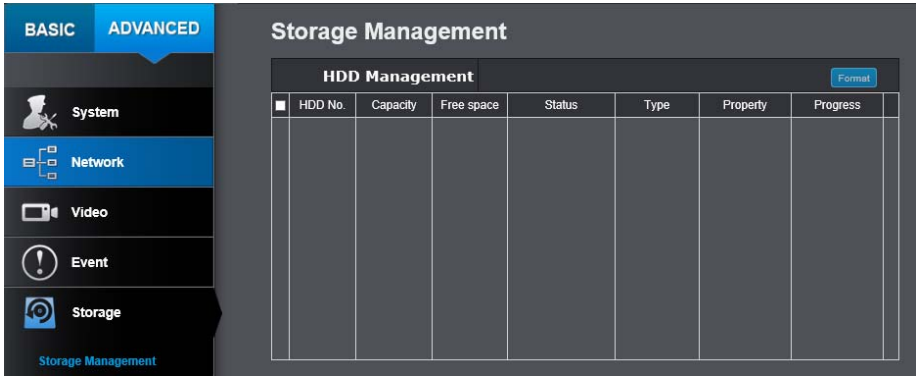
Storage

Storage Management

Network Storage must be setup before it can be managed. To setup storage, please refer to the corresponding section.



Storage Management	
Format:	Select a network storage volume and then click **Format** to format your network storage. This action will format the network volume (shared folder) for video recording. Placeholder files (formatting files) will be created to make sure disk allocation is appropriate and the file searching is optimized. The volume format is a proprietary user space storage format. Meaning that you visit the shared folder and see some structured files. Please do not modify these files manually. Modifying these files may cause recording and playback problems. Access your recording and system log via the web management user interface to download the recording and snapshots.

HDD No.:	The sequential numerical identifier for the specified storage device.
Capacity:	The total capacity this network storage can use.
Free Space:	The free space left for video recording, snapshot and log.
Status:	The connection status to the network storage.
Type:	This specifies the type of storage used.
Property:	This network storage is read only or can be read and write.
Progress:	The progress of ongoing task. *Note: The formatting progress depends on the size of the storage and the network bandwidth. It takes a while if you are formatting a big volume or the network connection is not stable.*

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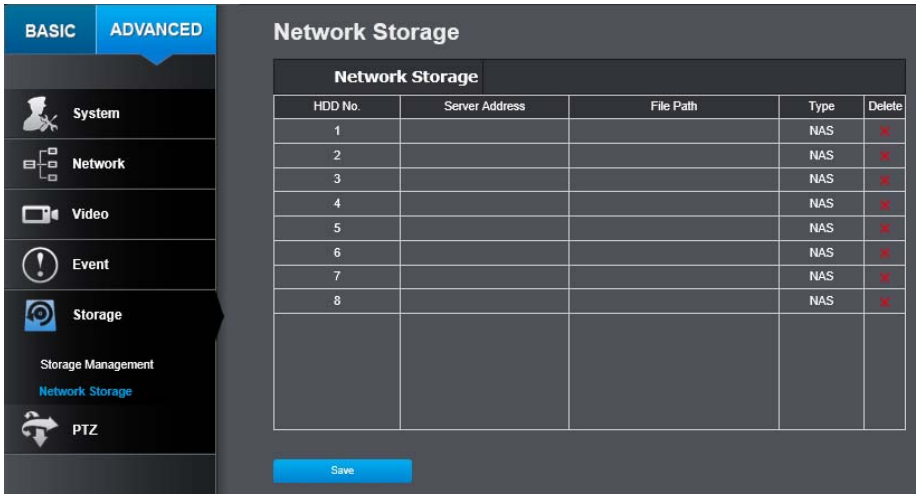
Network Storage

Network Storage must be setup before it can be managed. For storage management, please refer to the previous section.

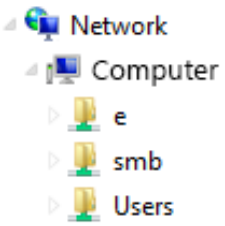
The TV-IP460PI supports two formats of network storage file systems: NFS and CIFS. NFS, Network File System, is natively supported by Linux computers and most NAS, Network Attached Storage. CIFS, Common Internet File System, is natively supported by Windows® systems and now is generally supported by Linux. (OS X® file sharing is not standard SMB and not compatible as a network storage disk here.)

You can add up to 8 network storages for your camera. The recordings will subsequently be stored in these spaces. Save video from the first storage and then the next when the first one is full. Click on the entry to change the settings and click Save to save the settings.



Network Storage	
HDD No:	The sequential number of the network storage.
Server Address:	Enter the IP address of your network storage.
File Path:	Enter the shared folder as file path for network storage. You can create a folder under the shared folder and make it a network volume here. Just create the folder and enter the correct path name here.
Type:	The type of storage.
Delete	Click the red "X" to delete this storage device.

Click **Save** to save the changes. The camera may reboot to make the network storage available. Go to the next section to format and manage your network storage.



Tip: To create a network storage on your Windows® based system, create a shared folder and then test your set up with another computer. Enter the IP address of the computer here and enter the shared folder name with a leading forward slash. For example, if you have a shared folder named "SMB", enter "/SMB" in the **File Path**.

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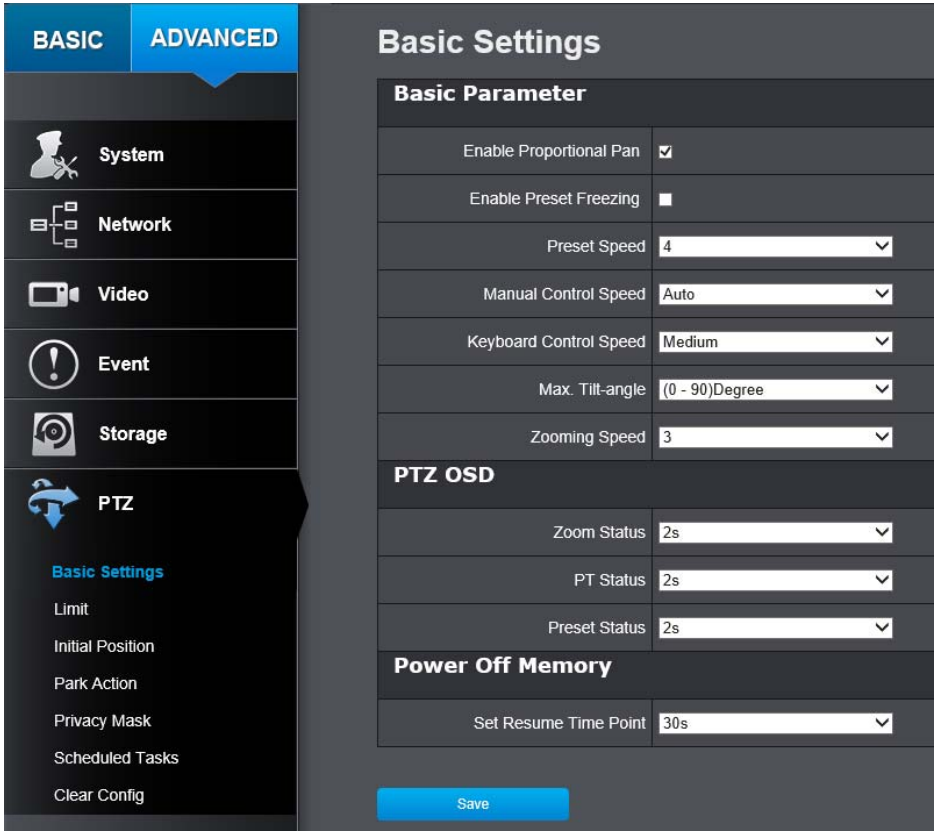
PTZ (Pan/Tilt/Zoom)

Basic Settings

Set up basic settings for PTZ controls.



Basic Parameters	
Enable Proportional Pan:	If you enable this function, the pan/tilt speeds change according to the amount of zoom. More zoom = slower
Enable Preset Freezing:	This function enables the live view to switch directly from one scene, defined by a preset to another, without showing the middle areas between these two, to ensure the surveillance efficiency. It can also reduce the use of bandwidth in a digital network system.
Preset Speed:	You can set the speed of defined preset from 1 to 8. Default: 4
Manual Control Speed:	Select the manual control speed from the drop down menu: **Compatible, Pedestrian, Non-motor vehicle, Motor Vehicle,** and **Auto.** • **Compatible:** The control speed is same as the Keyboard Control Speed. • **Pedestrian:** Choose Pedestrian when monitoring pedestrians. • **Non-motor Vehicle:** Choose the Non-motor Vehicle when monitoring non-motor vehicles. • **Motor Vehicle:** Choose the Motor Vehicle when monitoring motor vehicles. • **Auto:** If the viewport of the camera contains many different objects, selecting **Auto** is recommended.
Keyboard Control Speed:	Define the speed of PTZ control by a keyboard as Low, Medium or High.
Max. Tilt-angle:	The maximum angle that the camera can revolve in the tilt direction is adjustable.
Zooming Speed	The speed at which the camera zooms. Default: 3
PTZ OSD	
Zoom Status:	Set the OSD duration of zooming status as 2 seconds to 10 seconds, NC (Normally Closed) or NO (Normally Open).
PT Status:	Set the angle display duration white panning and tilting as 2 seconds to 10 seconds, NC (Normally Closed) or NO (Normally Open).

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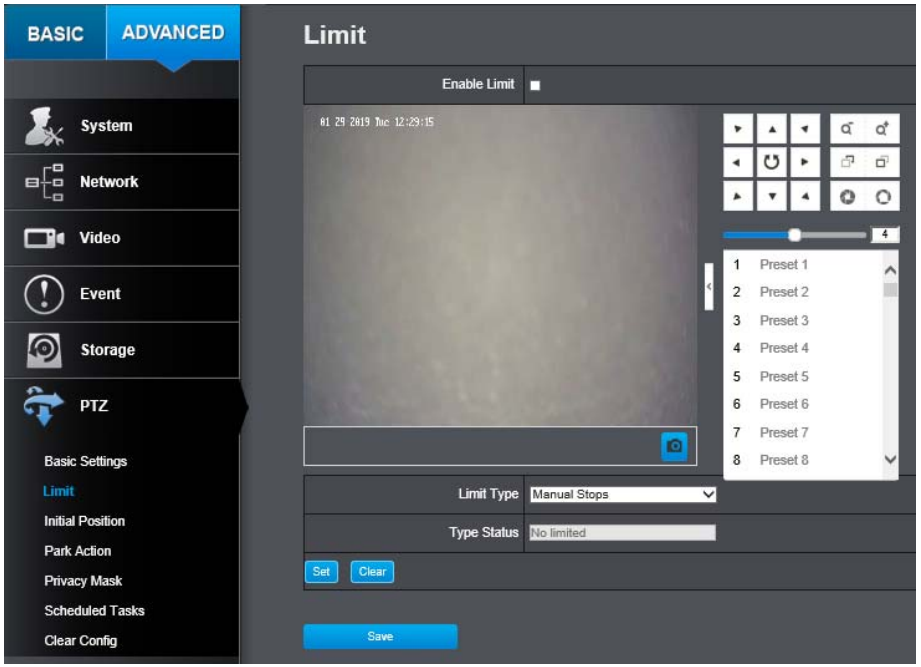
Preset Status:	Set the preset name display duration as 2 seconds to 10 seconds, NC (Normally Closed) or NO (Normally Open).
POWER OFF MEMORY	
Set Resume Time Point:	The camera can resume its previous PTZ status or actions after it is restarted from a power-off. You can set the time point of which the camera resumes its PTZ status from 30 seconds up to 600 seconds or disabled before power-off.

*Click **Save** to save the changes*

Limit

The camera can be programmed to move within the configured stops. (left, right, up or down)



Steps

1. Check the **Enable Limit** box and select Manual Stops or Scan Stops from the Limit Type list.
    a. When manual limit stops re set, you can operate the PTZ control panel manually only in the limited area.
    b. When scan limit stops are set, all the scan actions are performed only in the limited area.
2. Click the PTL control buttons to find the left/right/up/down stop limits, you can also call the presets and set them as the limits for the camera.
3. Click **Set** to save the limits and Clear to clear the limits.

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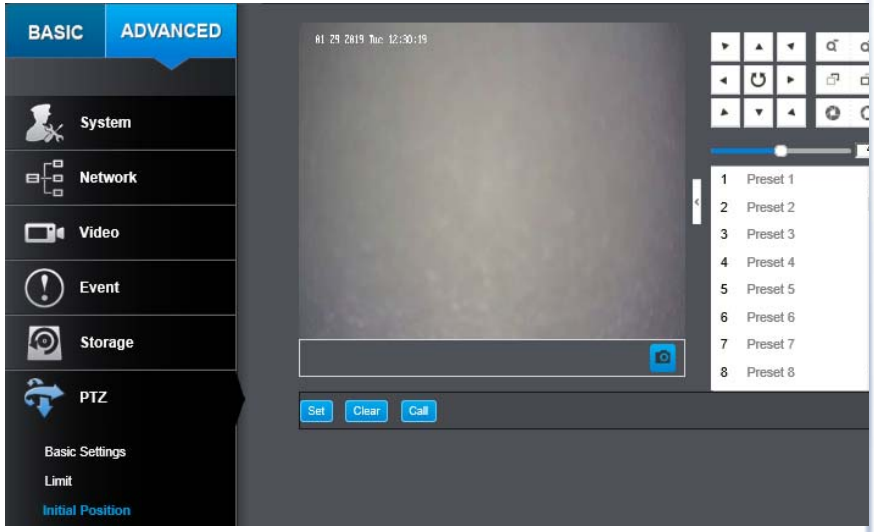
Initial Position

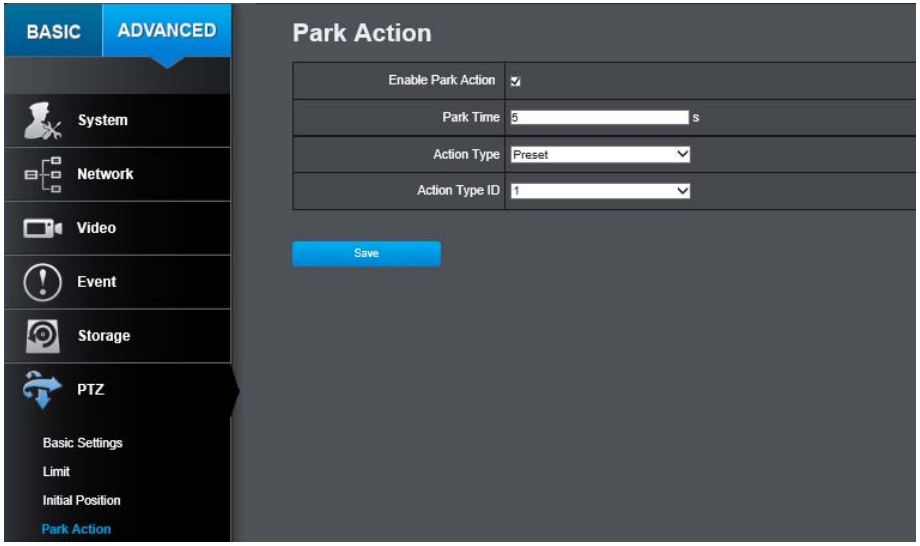
Set the camera initial position, you can also call a preset for the position. Click set to save the limits and Clear to clear the limits.



Park Action

The feature allows the camera to start at a predefined park action. (scan, preset, pattern) automatically after a period of inactivity (park time).

Scheduled Tasks function has higher priority over Park Action function therefore when two functions are set at the same time, Scheduled Tasks function takes effect.



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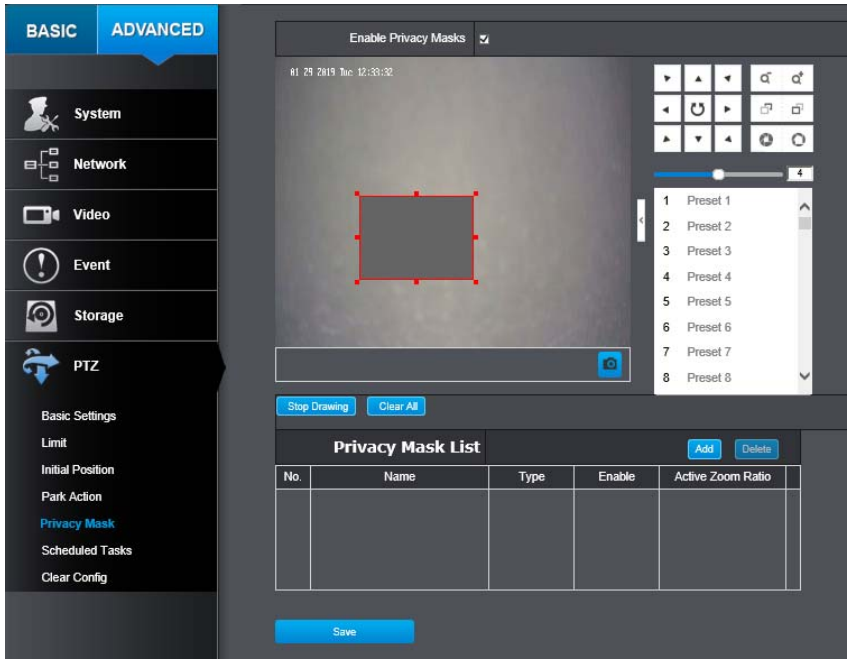
Private Mask

Create masking area to keep your privacy. You can create up to four independent masking areas by clicking and dragging on the screen.

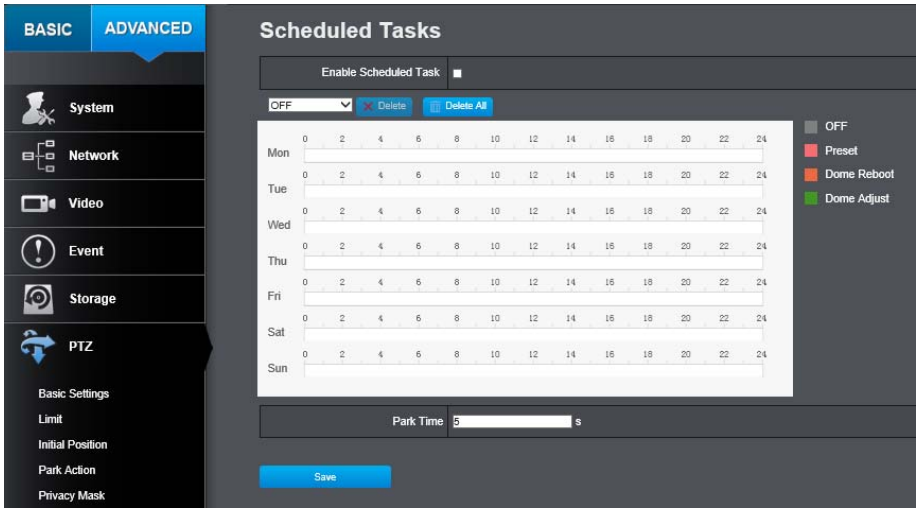


Privacy Mask	
Enable Privacy Mask:	Check this box to enable privacy masking.
Draw/Stop Drawing:	Click this button to start/stop drawing.
Clear All:	Click this button to clear all the masking areas.
Add:	Click this button to add the mask.
Delete:	Click this button to delete the mask.

*Click **Save** to save the changes*

Schedule Tasks

You can configure the camera to perform a certain action automatically in a user-defined time period.



Schedule Tasks	
Enable Scheduled Task:	Check this box to enable scheduled Tasks
Dropdown:	Select the task you would like to schedule from the drop down. Then draw directly onto the scheduler to schedule the task.
Delete/Delete All:	Click this button to delete the selected/all schedules.
Park Time:	Enter the park time in seconds. Default: 5.

*Click **Save** to save the changes*

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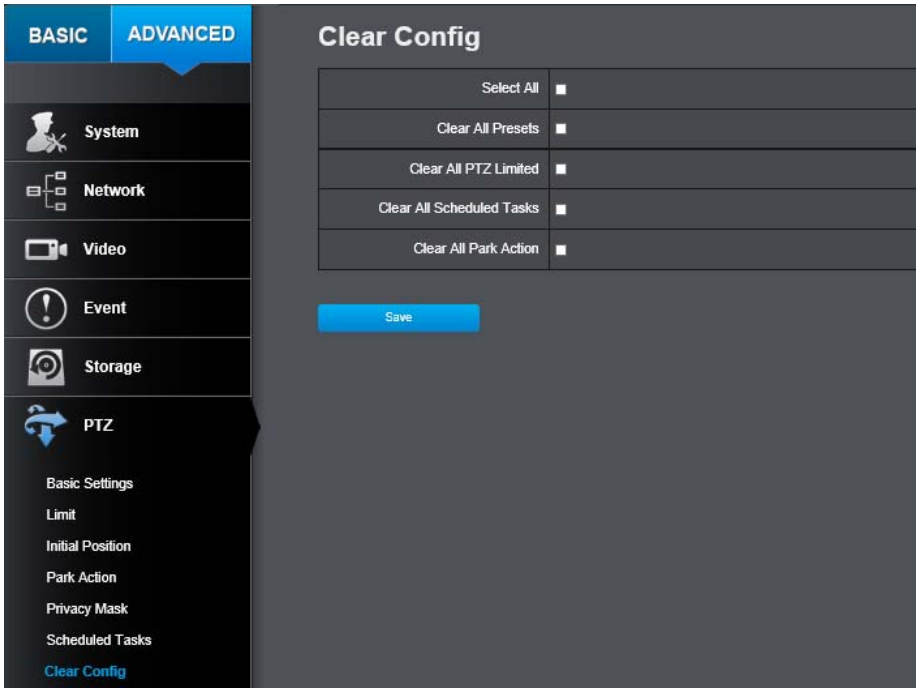
Clear Config

You can clear PTZ configurations all at once in this section, select the desired function and click **Save** to clear.



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Regulations

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

RoHS

This product is RoHS compliant.

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Europe – EU Declaration of Conformity

This device complies with the essential requirements of the Directive 2004/108/EC and 2006/95/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the Directive 2004/108/EC and 2006/95/EC:

Safety /EMC

EN 55022:2010 + AC: 2011 Class A
EN 61000-3-2: 2006 + A1: 2009 + A2: 2009
EN 61000-3-3: 2008
EN 50130-4: 2011 + A1: 2014

Safety /EMC

RoHS Directive 2011/65/EU
WEEE Directive 2012/19/EU | REACH Regulation (EC) No. 1907/2006 | Low Voltage Directive 2014/35/EU

Česky [Czech]	TRENDnet tímto prohlašuje, že tento TV-IP460PI je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2004/108/ES a 2006/95/ES.
Dansk [Danish]	Undertegnede TRENDnet erklærer herved, at følgende udstyr TV-IP460PI overholder de væsentlige krav og øvrige relevante krav i direktiv 2004/108/EF og 2006/95/EF.
Deutsch [German]	Hiermit erklärt TRENDnet, dass sich das Gerät TV-IP460PI in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2004/108/EG und 2006/95/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab TRENDnet seadme TV-IP460PI vastavust direktiivi 2004/108/EÜ ja 2006/95/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, TRENDnet, declares that this TV-IP460PI is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC and 2006/95/EC.
Español [Spanish]	Por medio de la presente TRENDnet declara que el TV-IP460PI cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2004/108/CE y 2006/95/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑTRENDnet ΔΗΛΩΝΕΙ ΟΤΙ TV-IP460PI ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2004/108/ΕΚ, 2006/95/ΕΚ και.
Français [French]	Par la présente TRENDnet déclare que l'appareil TV-IP460PI est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2004/108/CE, 2006/95/CE et.
Italiano[Italian]	Con la presente TRENDnet dichiara che questo TV-IP460PI è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2004/108/CE e 2006/95/CE.
Latviski [Latvian]	AršoTRENDnetdeklarē, ka TV-IP460PI atbilstDirektīvas 2004/108/EK un 2006/95/EK būtiskajāmprasībām un citiemar to saistītajiemnoteikumiem.
Lietuvių [Lithuanian]	Šiuo TRENDnet deklaruoja, kad šis TV-IP460PI atitinka esminius reikalavimus ir kitas 2004/108/EB ir 2006/95/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart TRENDnet dat het toestel TV-IP460PI in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2004/108/EG en 2006/95/EG.
Malti [Maltese]	Hawnhekk, TRENDnet, jiddikjara li dan TV-IP460PI jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2004/108/KE u 2006/95/KE.
Magyar [Hungarian]	Alulírott, TRENDnet nyilatkozom, hogy a TV-IP460PI megfelel a vonatkozó alapvetõ követelményeknek és az 2004/108/EK és a 2006/95/EK irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym TRENDnet oświadcza, że TV-IP460PI jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2004/108/WE i 2006/95/.
Português [Portuguese]	TRENDnet declara que este TV-IP460PI está conforme com os requisitos essenciais e outras disposições da Directiva2004/108/CE e 2006/95/CE.
Slovensko [Slovenian]	TRENDnet izjavlja, da je ta TV-IP460PI v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive2004/108/ES in 2006/95/ES.
Slovensky [Slovak]	TRENDnettýmtovyhlasuje, že TV-IP460PI spĺňazákladnépožiadavky a všetkypríslušnéustanoveniaSmernice 2004/108/ES a 2006/95/ES.
Suomi [Finnish]	TRENDnet vakuuttaa täten että TV-IP460PI tyyppinen laite on direktiivin2004/108/EY ja 2006/95/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar TRENDnet att denna TV-IP460PI står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2004/108/EG och 2006/95/EG.

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