



N9 Series Network Camera

User Manual




Foreword

Revision History

Revision	Content	Release Date
1	Initial Release	July 2025

Safety Instructions

The following symbols might appear in the manual.

Symbol	Definition
	Indicates a risk hazard that, if not avoided, may result in death, injury, property damage, data loss, decreased performance, or unpredictable outcomes.
	Offers methods to help you troubleshoot issues or save time.
	Provides more context and information.

Before You Begin

The deployment and operation of network-based surveillance equipment may be regulated under local or regional laws. Before proceeding, it is the user's responsibility to ensure the legal use of this device in the intended environment.

Prior to installation, confirm that all items listed under the In the Box section are present and undamaged. Refer to the Quick Start Guide for safety notices, and follow the Installation instructions in this manual to avoid improper setup, performance issues, or equipment damage.

This network camera is intended for users with basic knowledge of networking environments. It supports a wide range of applications, such as video monitoring, event detection, and integrated system deployments. Refer to the Configuration chapter for setup guidance to ensure optimal performance.

In the Box

Ensure all of the following items are presented and undamaged prior to installation:

- Screws
- Desiccant bag
- Double-sided tape
- Sunshield
- Alignment sticker
- Rubber pad for mounting bracket
- Waterproof joint
- Quick start guide
- L-shape allen wrench
- Mounting plate



Table of Contents

Foreword 1

 Revision History 1

 Safety Instructions 1

 Before You Begin 1

 In the Box 1

Connecting to the Camera 8

 Log In to the Webpage 8

Main Page 8

 Host Name 8

 Camera Control Area 8

 Profile Mode 8

 Manual Trigger 8

 Configuration Area 9

 Configuration 9

 Language 9

Control Panel Options 9

 Hide Button 9

 Resize Buttons 9

 Snapshot 9

 Stop 9

Volume	9
Mute	9
Full Screen	9
Configuration	9
System Settings	10
General Settings	10
Host Name	10
Turn Off the LED indicator	10
System Time	11
Time Zone	11
Synchronize With Computer Time	11
Manual	12
Synchronize With NTP Server	12
Maintenance	12
Upgrade Firmware	12
Reboot	12
Restore	13
Network	13
Daylight Saving Time	13
Custom Language	13
Import/Export Files	13
Export Language File	14
Update Custom Language File	14
Export Configuration File	14
Update Configuration File	14
Export Server Status Report	14
Media Configuration	14
Image	14
General Settings	15
Video Title	15
Position of Timestamp and Video Title on Image	15
Timestamp and Video Title Font Size	15
Video Font (.ttf)	15
Color	15
Power Line Frequency	15
Day/Night Settings	15
Day/Night Mode	16
IR Cut Filter	16

IR Cut Filter Sensitivity	16
IR Illuminator Control	16
Built-In IR Illuminator in Night Mode	16
Smart IR	16
Image Settings	18
Sensor Mode.....	18
White Balance	19
Image Adjustment	19
Defog	19
Highlight Mask	19
Noise Reduction	19
Exposure	20
Measurement Window.....	21
Exposure Control	21
Profile Mode	22
Privacy Mask	22
Pixel Calculator	23
Lens Alignment	25
Video	26
Stream Settings	26
Audio	26
Audio Settings	26
Mute.....	27
External microphone input.....	27
Audio type.....	27
Media Profiles	28
Network Settings.....	28
General Settings.....	28
Network Type	28
LAN	29
UPnP	30
PPPoE (Point-to-Point over Ethernet)	30
Enable IPv6.....	31
Streaming Protocol.....	31
HTTP Streaming.....	31
Authentication	31
HTTP Port / Secondary HTTP Port.....	31
Access Name for Stream 1 ~ 4.....	31

RTSP Streaming.....	32
Authentication	32
RTSP and RTP/RTCP Port Settings	32
Multicast Settings	33
DDNS	33
Quality of Service (QoS)	34
QoS Models	34
CoS (Class of Service – VLAN 802.1p).....	34
DSCP (DiffServ Code Point – DSCP-ECN Model)	35
Simple Network Management Protocol	35
SNMP Configuration	36
Enable SNMPv1, SNMPv2c	36
Enable SNMPv3.....	36
FTP and SFTP	36
SFTP (Secure File Transfer Protocol).....	37
Bonjour.....	37
Security Settings	37
User Accounts	37
Account Management	38
Editing or Deleting a User	38
Hypertext Transfer Protocol Over SSL (HTTPS).....	38
Access List	39
Enable Access List Filtering.....	39
Filter Type	39
IEEE 802.1X.....	40
To enable IEEE 802.1X:.....	40
Miscellaneous.....	42
Event Management	42
Event Settings Interface	43
Schedule	43
Trigger.....	43
Action.....	45
Add Server	45
Email.....	46
FTP.....	47
SFTP.....	48
HTTP	49
Network Storage	49

Add Media.....	51
Snapshot	52
Video Clip.....	53
System Log	54
SD Card and Network Storage Controls	54
Final Setup	54
Application Features	55
Motion Detection	55
Window Settings	56
Tampering Detection	56
Configurable Conditions	57
Trigger Threshold	57
Tampering Condition Descriptions.....	57
Integration With Event Rules.....	57
Audio Detection	58
Typical Use Cases	58
How to Configure Audio Detection.....	58
Important Notes	58
Best Practices	59
Profile-Based Audio Detection.....	59
Shock Detection.....	60
How It Works	60
Configuration	61
Technical Details	61
Integration With Events	61
Recording Settings	61
Initial Setup.....	62
Creating a Recording Profile.....	62
Pre-Event Recording / Post-Event Recording:.....	63
Adaptive Recording Behavior.....	63
Setup Steps	63
Capacity and Storage Behavior	65
Recording File Management	65
Managing Recording Settings	65
Final Steps.....	65
Storage Settings.....	66
Local Storage (SD Card Management)	66
NAS Management.....	66

NAS Setup.....66

SD Card Control Options67

NAS Storage Settings67

Content Management.....67

Searching and Viewing the Records67

Available Functions68



Connecting to the Camera

Log In to the Webpage

This section explains how to log in to the webpage using Chrome as an example. Follow the steps below to log in to the camera's web interface.

1. Navigate to the Device's IP address using the browser's address bar.
2. Enter the Device's login credentials.
3. Hit **Login**.

Main Page

This section introduces the main interface layout and its key elements. The main page includes the following components: Logo, Host Name, Camera Control Area, Configuration Area, Menu, and Live View Window.



Host Name

The displayed host name can be modified to match deployment requirements, particularly in multi-camera environments.

Camera Control Area

Profile Mode

This area provides access to three pre-configured streaming profiles: Max. View, Recording View, and Live View. Each profile uses a distinct video stream with its own resolution, encoding parameters, multicast settings, and metadata configuration.

These profiles can be managed under **Configuration → Media → Media profiles**.

Manual Trigger

Use this control to manually activate or deactivate event triggers. Ensure event settings are configured in the Application section prior to use. Up to three event types can be defined.



To show or hide this control on the homepage, go to **Configuration → System → Homepage Layout → General settings → Customized** button, then adjust the “Show manual trigger button” checkbox.

Configuration Area

Configuration

Click this button to access the system’s configuration page. It is recommended that administrative access be secured with a password to prevent unauthorized changes.

Language

Select this option to choose the interface language. Supported languages include: English, Deutsch, Español, Français, Italiano, 日本語, Português, 简体中文, and 繁體中文.

Language preferences can also be updated from within the Configuration page.

Control Panel Options

Hide Button

Use this button to show or hide the control panel on the main interface.

Resize Buttons

The resize buttons adjust the display scale of the homepage:

1. **Auto:** Automatically fits the video cell to your display.
2. **100%:** Displays the homepage at its original size.
3. **50%:** Reduces the homepage view to 50% of its original size.
4. **25%:** Reduces the homepage view to 25% of its original size.

Snapshot

Click the **Snapshot** button to capture the current video frame. A pop-up window will display the snapshot. Right-click the image and choose **Save Picture As** to store it. File formats include **JPEG (.jpg)** and **BMP (.bmp)**.

Stop

Click the **Stop** button to end the video stream. Click **Resume** to restart it.

Volume

Adjust playback volume with the **slider bar** if audio is enabled.

Mute

Click the **Mute** button to turn off audio. The button label will change to **Audio On**.

Full Screen

Click the **Full Screen** button to enter full-screen mode. Press the **Esc** key to return to normal view.

Configuration

The Configuration section provides access to all system settings required for device setup, customization, and management. Use the navigation menu to access different configuration categories, such as system, media, network, security, and event settings.

LUMINYS

Home Configuration Language

System > General settings

Navigation Area

System

General settings

Maintenance

Media

Network

Security

Event

Applications

Recording

Storage

System

Host name: N9P-8RB2

☐ Turn off the LED indicator

System time

Time zone: GMT-05:00 Eastern Time, New York, Toronto

☐ Enable daylight saving time

☒ Keep current date and time

☐ Synchronize with computer time

☐ Manual

☐ Synchronize with NTP Server

Configuration List

Save

Version: LUMI-1.0.2.20241212

Firmware Version

System Settings

This section provides configuration options for system identity, date and time settings, and general administrative tools.

General Settings

Menu Path: Configuration → System → General settings

System

Host name: N9P-8RB2

☐ Turn off the LED indicator

This page allows administrators to define the device name and installation location for identification purposes.

Host Name

Specify a name for the device. This name will be displayed in the system interface.

Turn Off the LED indicator



Enable this option to switch off the device's status LED. This may be useful in environments where indicator lights are not desired, such as discreet monitoring setups.

System Time

Menu Path: Configuration → System → System time

System time

Time zone:

GMT-05:00 Eastern Time, New York, Toronto ▼

☐ Enable daylight saving time

☒ Keep current date and time

☐ Synchronize with computer time

☐ Manual

☐ Synchronize with NTP Server

Save

The system time must be accurately configured to ensure proper event logging and video timestamping. You can set the time manually or synchronize it with a time server.

Time Zone

Select the appropriate time zone for the installation site.

System time

Time zone:

GMT-05:00 Eastern Time, New York, Toronto ▼

GMT-11:00 Midway Island, Samoa

GMT-10:00 Hawaii

GMT-09:00 Alaska

GMT-08:00 Las Vegas, San Francisco, Vancouver

GMT-07:00 Mountain Time, Denver

GMT-07:00 Arizona

GMT-06:00 Central Time (US and Canada)

GMT-06:00 Mexico City

GMT-06:00 Saskatchewan

GMT-05:00 Eastern Time, New York, Toronto

GMT-05:00 Bogota, Lima, Quito, Indiana

GMT-04:00 Caracas

GMT-04:00 Atlantic Time(Canada), La Paz

GMT-04:00 Santiago

GMT-03:30 Newfoundland

GMT-03:00 Brasilia, Buenos Aires, Georgetown, Greenland, Sao Paulo

GMT-02:00 Mid-Atlantic

GMT-01:00 Azores, Cape Verde Is.

GMT Casablanca, Greenwich Mean Time:Dublin, Edinburgh, Lisbon, London

GMT+01:00 Amsterdam, Berlin, Rome, Stockholm, Vienna, Madrid, Paris, Warsaw, Budapest, Bern ▼

Synchronize With Computer Time



Use this option to align the camera's date and time with the local computer. The system will display the current time of the PC as a read-only reference once synchronization is applied.

Manual

Manually adjust the system's date and time.

Synchronize With NTP Server

Choose whether to synchronize the time with an NTP server. Enter the NTP server address if applicable.

Maintenance

Menu Path: Configuration → System → Maintenance

This section provides tools for firmware upgrades, system reboot, and configuration file management.

Upgrade Firmware

Upload a firmware file to update the device. Ensure that the firmware is correct and compatible with the model before proceeding with the upgrade.

— Upgrade firmware

Firmware file:

Choose File

 No file chosen

Upgrade

To upgrade the firmware, follow the steps below:

1. Download the latest firmware file from your provider.
2. Click **Browse...** and locate the firmware file on your computer.
3. Click **Upgrade**. The camera will begin the upgrade process and automatically restart once the upgrade completes.

If the upgrade is successful, the following message will appear:

Reboot system now!!
This connection will close.

At this point, reconnect to the camera interface once the system restarts.

If an invalid firmware file is selected, the system may display a message such as:

Starting firmware upgrade...
Do not power down the server during the upgrade.
The server will restart automatically after the upgrade is completed.
This will take about 1 - 5 minutes.
Wrong PKG file format
Unpack fail

Reboot

Restarts the device without altering current configuration settings.



This feature allows you to reboot the network camera. The reboot process typically takes about one minute. Once completed, the live view page will automatically reload in your browser.

During the reboot, the system will display the following message:

The device is rebooting now. Your browser will reconnect to
<http://192.168.5.151:80/>
If the connection fails, please manually enter the above IP
address in your browser.

If the browser does not automatically reconnect after the reboot, manually enter the IP address of the network camera in the address bar to restore the connection.

Restore

Restore

Restore all settings to factory default except settings in

☐ Network ☐ Daylight saving time ☐ Custom language

☐ Smart Analysis

Restore

The Restore function resets the device to its factory default settings. Before proceeding, you can choose to retain specific configuration items by selecting from the available options:

Network

Keeps the current network configuration (e.g., IP address, subnet mask, gateway).

Daylight Saving Time

Retains the current Daylight Saving Time setting.

Custom Language

Preserves any custom language files uploaded to the system. If no options are selected, all configuration data will be erased, and the system will return to factory default settings.

During the restore process, the following message is displayed:

The device is rebooting now. Your browser will reconnect to
<http://192.168.5.151:80/>
If the connection fails, please manually enter the above IP
address in your browser.

Import/Export Files

This feature allows you to export or update configuration files, custom language files, and daylight saving time settings.

General settings
Import/Export files

Export files

Export language file:
Export

Export configuration file:
Export

Export server status report:
Export

Upload files

Update custom language file:
Choose File
No...sen
Upload

Upload configuration file:
Choose File
No...sen
Upload

Export Language File

Click to export the current language strings. Supported languages include: English, Deutsch, Español, Français, Italiano, 日本語, Português, 简体中文, and 繁體中文.

Update Custom Language File

Click **Choose File...** and select your custom language file to upload.

Export Configuration File

Click to download all current device parameters and user-defined scripts as a configuration file.

Update Configuration File

Click **Choose File...** to upload a saved configuration file.

Note: The configuration file must match the model and firmware version of the device. Uploading an incompatible file is not recommended, especially if the device has static IP settings or custom configurations.

Export Server Status Report

Click to download a report containing server-related data such as system time, logs, process status, memory usage, file system status, network status, and kernel messages.

If an incorrect file format is selected during upload (e.g., a file without a .xml extension), the system will display the following warning:

The file must have a .xml filename suffix.

Media Configuration

Image

Menu Path: Configuration → Media → Image

General Settings

The screenshot shows the 'General settings' tab selected in a top navigation bar. Below it, the 'Video settings' section is expanded. It contains the following controls:

- Video title:** A text input field.
- Show timestamp and video title in video and snapshots:** An unchecked checkbox.
- Position of timestamp and video title on image:** A dropdown menu set to 'Top'.
- Timestamp and video title font-size:** A dropdown menu set to '30'.
- Video font (.ttf):** A dropdown menu set to 'Default' and an 'Upload' button.
- Color:** Radio buttons for 'B/W' and 'Color' (selected).
- Power line frequency:** Radio buttons for '50 Hz' and '60 Hz' (selected).

Video Title

Enter a label to display in the video stream. The zoom level will also be shown when zooming in or out in the live view. Use the mouse scroll wheel to zoom, up to 12x magnification.

Position of Timestamp and Video Title on Image

Choose whether the timestamp and video title appear at the top or bottom of the video frame.

Timestamp and Video Title Font Size

Set the font size for the timestamp and video title overlays.

Video Font (.ttf)

Upload a TrueType Font (.ttf) file for use in video overlay text.

Color

Select whether the video should be shown in color or black and white.

Power Line Frequency

Choose the appropriate setting (50Hz or 60Hz) based on your region's electrical frequency to help reduce flicker in certain lighting environments.

Note: After changing this setting, you must unplug and reconnect the device's power source for the update to take effect.

Day/Night Settings

This section configures how the camera switches between color and black-and-white modes based on lighting conditions.

The screenshot shows the 'Day/Night settings' section. It includes:

- Switch to B/W in night mode:** A checked checkbox.
- IR cut filter:** A dropdown menu set to 'Auto mode'.
- Day/Night sensitivity:** A slider control with 'Darkest' on the left and 'Brightest' on the right. The slider is positioned towards the 'Brightest' end.
- Warning message:** A yellow box at the bottom states 'Select auto mode will disable profile of exposure settings.'

Day/Night Mode

Select the camera's operating mode based on lighting conditions:

- **Auto:** Switches between day and night modes automatically.
- **Day:** Keeps the camera in color mode.
- **Night:** Keeps the camera in black-and-white mode.

IR Cut Filter

Select the operation mode for day and night behavior:

- **Auto:** Automatically switches between day and night based on scene brightness.
- **Day:** Forces the camera to remain in color mode.
- **Night:** Forces the camera to operate in black-and-white mode.

IR Cut Filter Sensitivity

Adjusts how responsive the IR cut filter is to changes in lighting. Higher sensitivity causes the filter to switch states more quickly when lighting conditions fluctuate.

IR Illuminator Control

Built-In IR Illuminator in Night Mode

Enable this option to activate the camera's onboard IR illuminator when low-light conditions are detected and night mode is triggered.

Smart IR

Anti-Overexposure: When enabled, the camera dynamically adjusts infrared output to prevent nearby objects from becoming overexposed in night mode.

The Smart IR function is most effective when subjects are close to the lens and IR light source. For example, if an object or person is within 3 meters of the camera, Smart IR helps reduce brightness distortion. However, at greater distances (such as 5 meters or more), the benefit of Smart IR becomes less significant.





Smart IR disabled; 5 M distance	Smart IR enabled; 5 M distance
	
Smart IR disabled; 3 M distance	Smart IR enabled; 3 M distance
	



Image Settings

General settings

Illuminators

Image settings

Exposure


Privacy mask

Pixel calculator

Lens alignment

Auto

100%



Normal light mode

Profile mode

White balance

Panorama

Image adjustment

Brightness: 50%

Contrast: 50%

Saturation: 50%

Sharpness: 50%

Gamma curve: Optimize

Restore

Save

Sensor Mode

By default, the firmware uses Panorama mode to create a continuous 180° panoramic image.



If Regional mode is selected, the camera presents four segmented views based on individual lighting conditions, without stitching them together.

White Balance

Adjust the camera's color temperature setting for accurate image coloration. You can follow these steps to set white balance for optimal color accuracy:

1. Hold a white or cool-colored object (such as white or light blue paper) in front of the lens. Allow the camera to auto-detect the white balance.
2. When the correct color temperature is displayed, click **On** to lock the current value.

You may also adjust the color tone manually by using the RGain and BGain sliders.

Use Snow mode in snowy or shaded environments where higher white balance values are often needed. This setting helps maintain color accuracy in conditions where traditional white balance tuning might fail.

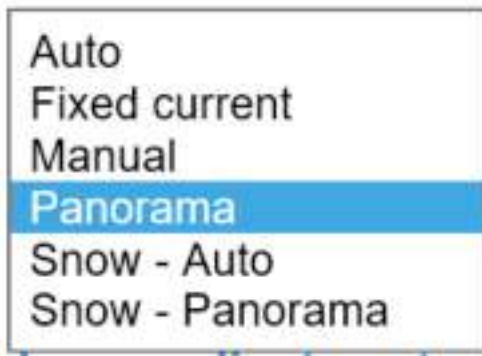


Image Adjustment

- **Brightness:** Adjusts the overall brightness of the image. Range: 0% to 100%.
- **Contrast:** Adjusts the contrast between dark and light areas. Range: 0% to 100%.
- **Saturation:** Adjusts the color intensity. Range: 0% to 100%.
- **Sharpness:** Enhances the clarity of edges and fine detail. Range: 0% to 100%.
- **Gamma Curve:** Adjusts tonal distribution between shadows and highlights. Range: 0.0 to 0.45. You may select a value or use firmware-optimized display settings to adjust contrast and luminance across bright and dark areas.
Note: This option is disabled when WDR is enabled.

Defog

Improves image visibility in low-clarity conditions such as fog, smoke, or smog.

Highlight Mask

Strong light sources will be masked to reduce glare and improve contrast. This feature is helpful in high dynamic scenes to reduce spotlight effects. Note: Color fringing may occur around the edges of intense light sources.

Noise Reduction

Enable this setting to reduce image noise and flicker, especially in low-light conditions. This applies the onboard 3D Noise Reduction function. Use the dropdown to select the desired reduction level.

3D Noise Reduction is most effective in low-light environments. In fast-moving scenes, it may produce motion trails or after-images. Lower the strength level or disable the function as needed.

Exposure

On this page, you can configure the exposure measurement window, exposure level, exposure mode, exposure time, gain control, and day/night mode settings.

General settings

Illuminators

Image settings

Exposure


Privacy mask

Pixel calculator

Lens alignment

Auto

100%



Normal light mode

Profile mode

Select auto mode will disable profile of exposure settings.

Exposure strategy

Measurement window: ☒ Full view ☐ Custom ☐ Center

Metering mode: ☒ Auto ☐ BLC ☐ HLC

Exposure control

Exposure level: 0

☐ Flickerless

Exposure time: 1/32000 - 1/30

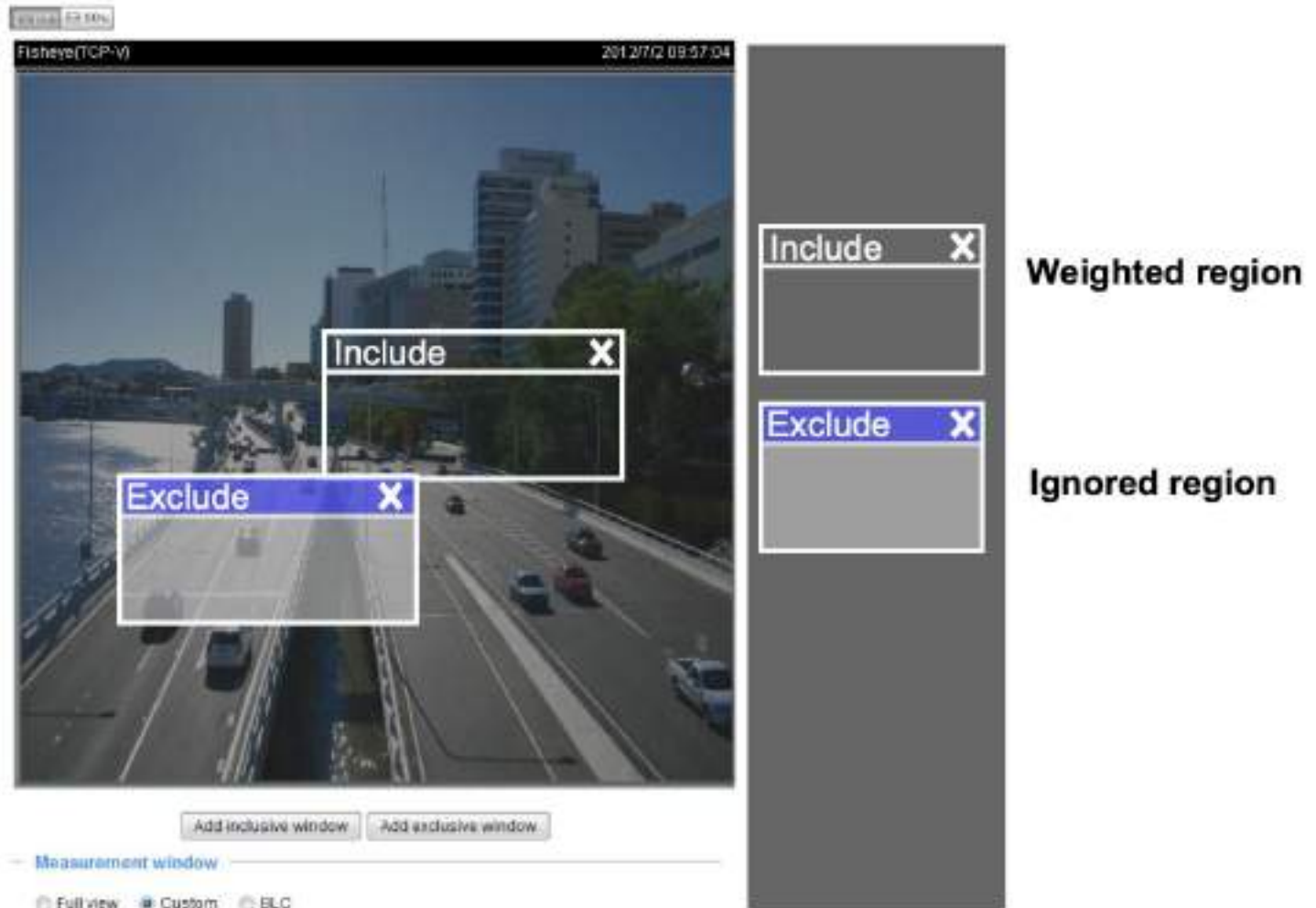
Restore

Save

Measurement Window

You can configure specific areas of the screen where the camera prioritizes light measurement. This helps avoid improper exposure caused by strong lighting, such as sunlight through windows.

- Full view: The entire scene is used to calculate exposure.
- Custom: Define up to 10 custom windows to include or exclude from exposure calculation.



Exposure Control

Exposure Level

Allows you to manually adjust the exposure from -0.7 to +0.7. A lower value makes the image darker; a higher value makes it brighter.

Exposure Time / Gain Control

Use the semi-circular sliders to define a range of shutter speeds and gain values. The system will automatically select the optimal combination. Shorter shutter speeds are useful for capturing motion but require higher gain for brightness. Longer shutter speeds provide more light but may result in blur from movement.

Flickerless

In fluorescent lighting, fixed iris cameras may display image flickering caused by mismatched power frequencies. Enabling this feature limits exposure time to 1/120 to 1/5 second to avoid this issue.

- In auto iris models, the iris adjusts automatically.
- In fixed iris models, brightness is adjusted digitally.

If overexposure is observed, consider disabling this option.

AE Speed Adjustment

This feature adjusts how quickly the system responds to changes in lighting. It is useful in environments like:

- Roadways or tunnels
- Parking entrances at night
- Vehicle-mounted installations

It allows the camera to quickly adapt to light level shifts when entering or exiting areas with different illumination.

WDR Pro

WDR (Wide Dynamic Range) helps maintain detail in scenes with both bright and dark areas. Use the checkbox to enable WDR Pro. Use the slider to select intensity based on contrast in your environment. Higher settings are recommended for strong backlighting or mixed lighting conditions.

WDR Enhanced

This function also improves detail in high-contrast scenes. When enabled, it balances brightness across dark and light regions of the image. Adjust the enhancement level using the slider based on your installation environment.

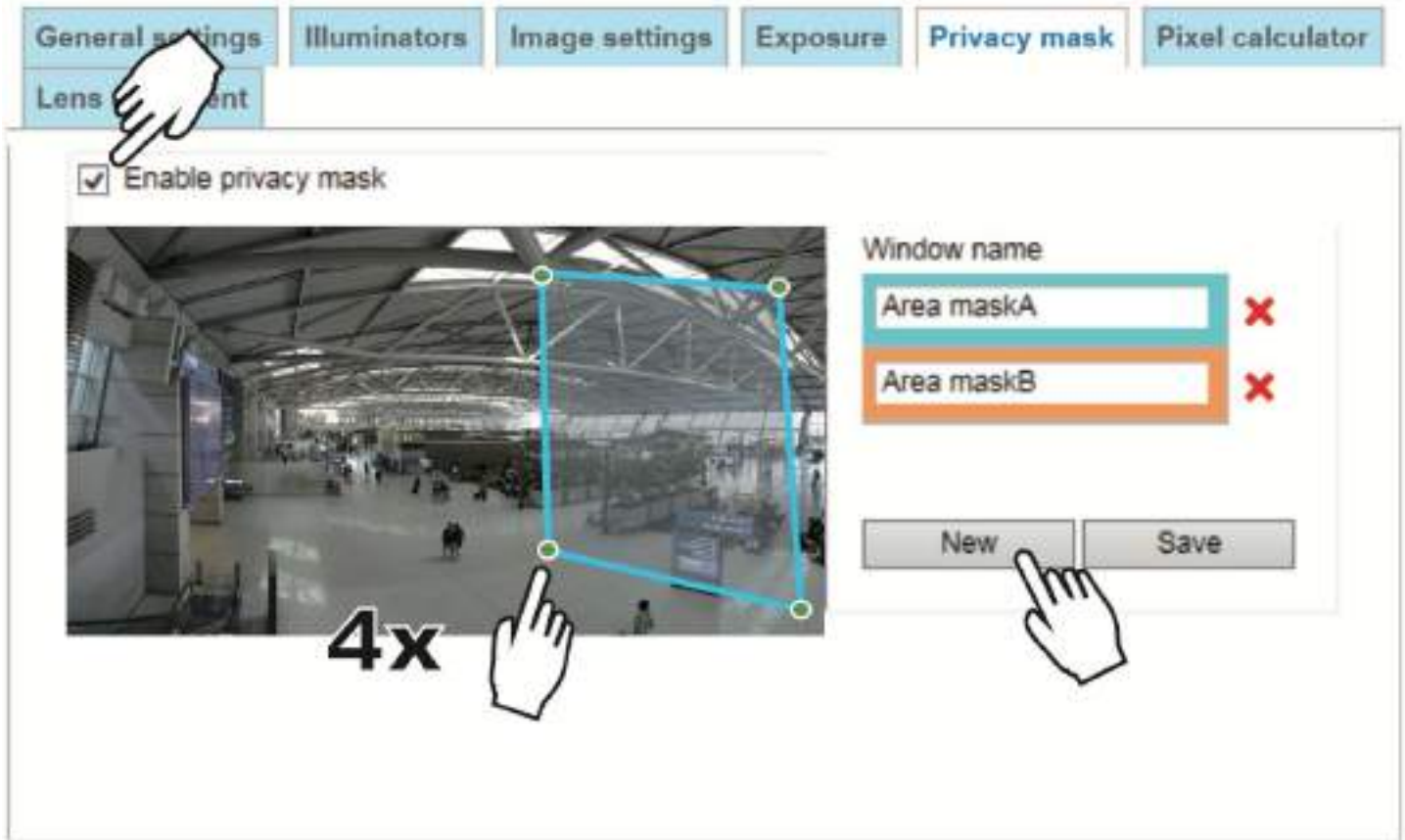
Profile Mode

Follow the steps below to set when the exposure settings should be applied.

1. Click the **Profile** mode tab.
2. Select one of the following modes: day mode, night mode, or schedule mode (requires manual input of start and end times).
3. Configure the exposure settings as needed.
4. Click **Save** to enable the setting and click Close to exit the page.

Privacy Mask

Click **Privacy Mask** to access the configuration page. This feature allows you to mask specific areas of the video feed to protect sensitive zones and maintain privacy.



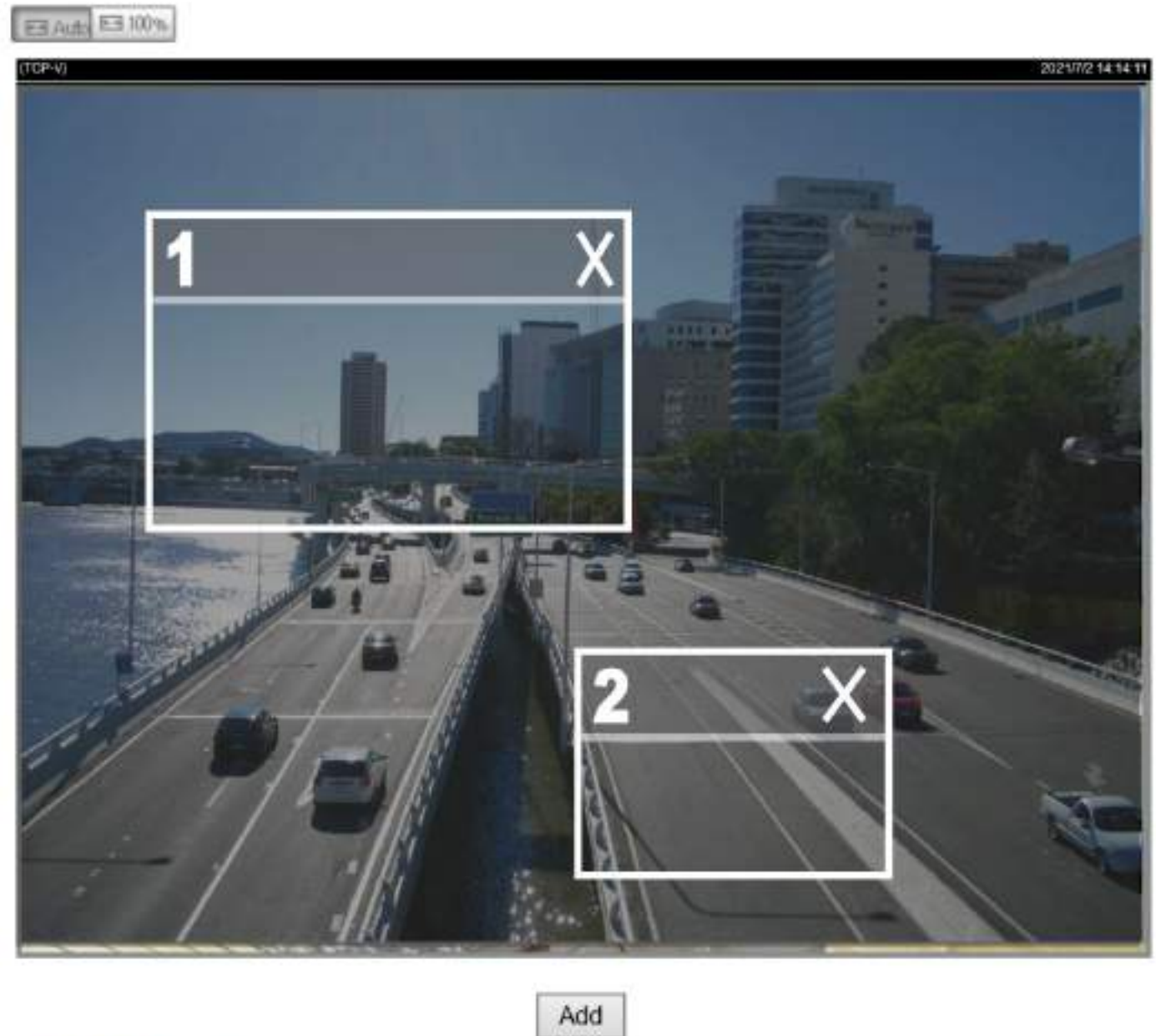
To create a privacy mask:

1. Click **New** to add a mask window.
2. Click four points in the image to define the shape of the mask area.
3. Enter a name for the mask window and click **Save** to apply the configuration.
4. Enable the privacy mask feature by checking the **Enable privacy mask** option.

Pixel Calculator

Click the **Add** button at the bottom of the screen to create a pixel calculator window. You can move and resize the window to align it with the area of interest.

Once added, the number of pixels along the edges of the window will be displayed. This helps determine whether the current image configuration meets certain requirements—such as the resolution needed for face recognition. For example, facial recognition typically requires a minimum of 130 pixels per meter.



Pixel calculator

Window1 (H)x(V)

Stream1: 365x218

Stream2: 365x218

Stream3: 183x109

The pixel values are shown per stream, depending on the resolution configured for each stream.

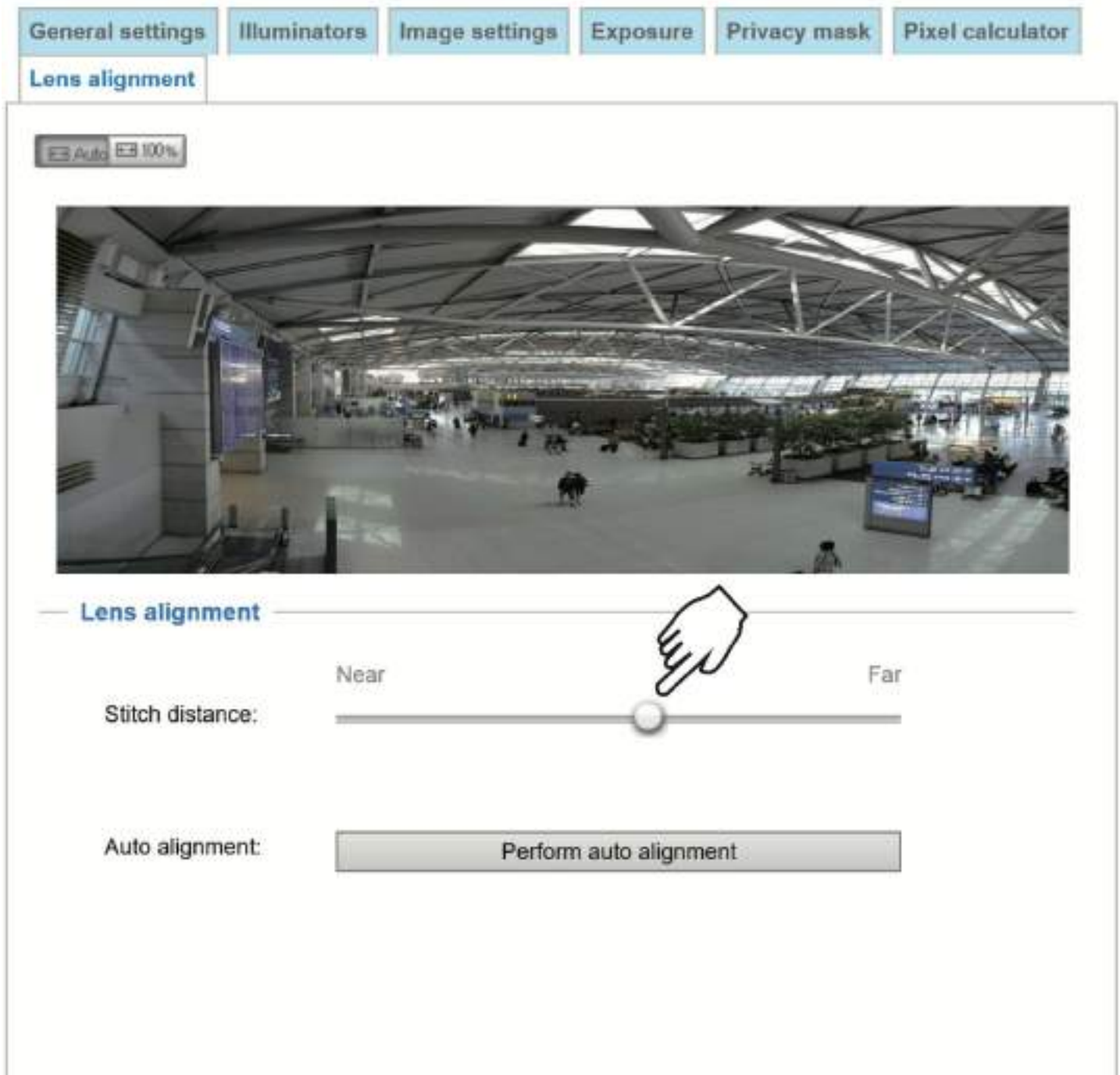
Lens Alignment

The default alignment distance is set to 10 meters. You can configure the distance between three (3) and 20 meters.

Because the fields of view (FOVs) from the dual lenses overlap slightly, the image stitching is optimized based on the distance to your intended area of interest. Use the slider to select the appropriate distance between the camera and your target scene for the most accurate stitched image.

The auto alignment option allows the system to automatically align and stitch the two image streams based on the current video feed. This process takes approximately one second to complete.

It is strongly recommended that there are no moving objects in the scene during the alignment process.

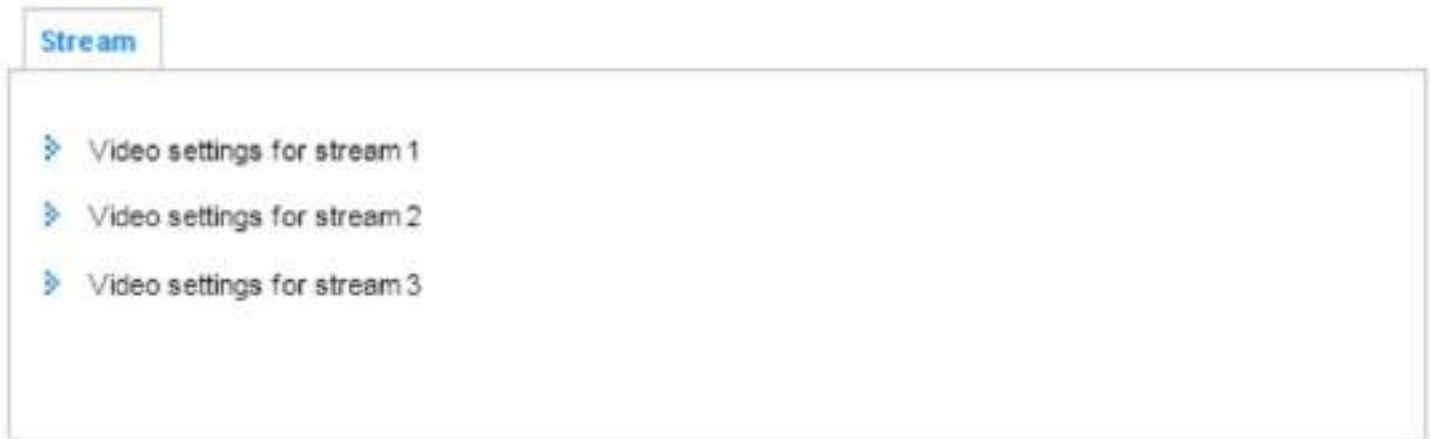


Once you are satisfied with the result, click **Save** to store the stitching configuration. If needed, click **Restore** to revert to the previous settings.

If your area of interest is located at a different distance, adjust the slider accordingly, and then perform the Auto alignment function again.

Video

Stream Settings



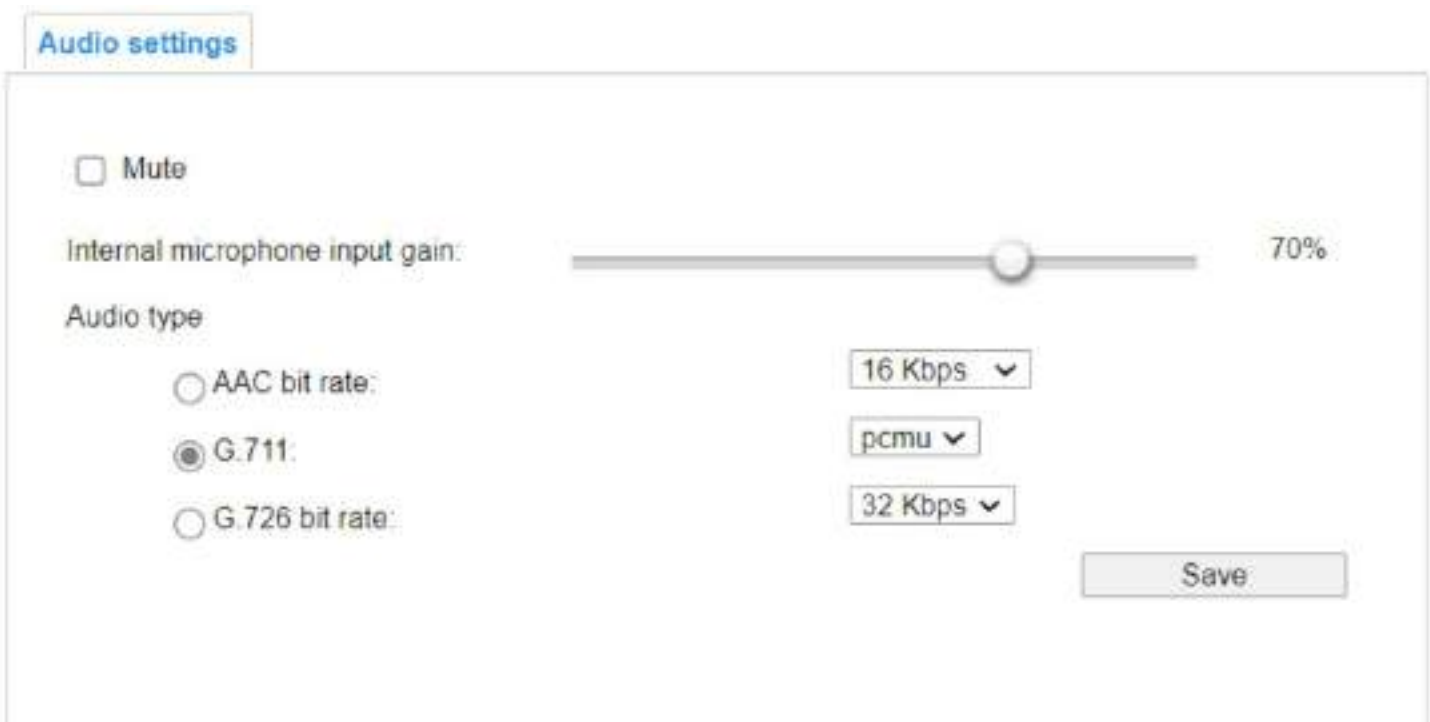
This network camera supports multiple video streams with configurable resolutions.

- Stream 1: Default frame size is 4864 x 1632
- Stream 2: Default frame size is 2432 x 816
- Stream 3: Default frame size is 1216 x 416

Click on a stream item to view its configuration details. The maximum frame size for each stream depends on your settings under the Viewing Window configuration.

Audio

Audio Settings



Mute

Enable this option to disable audio transmission from the camera to all connected clients. When mute is active, no audio will be transmitted—even if the client has enabled audio reception. In such cases, a notification message will appear on the client interface.

External microphone input

Adjust the gain level of the external microphone according to the surrounding environment. Available gain values range from +21 dB (highest sensitivity) to -33 dB (lowest sensitivity).

Audio type

Select the audio codec and sampling bitrate to be used:

- AAC: Widely compatible with modern devices. A typical setting is 32 kbps (AAC) or 64 kbps (MP3) for general voice transmission.
- G.711: Delivers good audio quality at approximately 64 kbps. Choose from PCMU (μ-Law) or PCMA (A-Law) encoding.
- G.726: A codec optimized for voice communication, supporting bitrates of 16, 24, 32, and 40 kbps.

After configuring these options, click **Save** to apply the audio settings.

Media Profiles

> Stream profiles setup

Profile name:

☒ Always multicast for this stream profile

Video configuration

☒ Setup a video configuration

Source

Stream No:

Codec:

Resolution:

Frame rate:

Bit rate (kbit/s):

Multicast

Port:

Address:

RTCP Port:

Multicast TTL [1~255]:

Audio configuration

☒ Setup an audio configuration

Source

Codec:

Multicast

You can configure a dedicated video stream for each of the following default profiles:

- Max. View
- Recording
- Live View

Each profile supports independent stream settings such as resolution, frame rate, and codec. This allows you to optimize video performance for different use cases, including live monitoring and recording.

Network Settings

General Settings

This section describes how to configure a wired network connection for the camera.

Network Type



LAN

Select this option when the camera is installed on a local area network (LAN) for internal access. This is the default setting. Click **Save** after configuration.

5. Get IP address automatically: The camera will request a dynamic IP from the DHCP server every time it connects to the network.
6. Use fixed IP address: Manually assign a static IP address. To set a fixed IP address, enter the static IP address, subnet mask, default gateway, and DNS server information provided by your network administrator or ISP.

Network type | Port

☒ LAN

☐ Get IP address automatically

☒ Use fixed IP address

IP address: 172.16.168.10

Subnet mask: 255.255.0.0

Default router: 172.16.0.1

Primary DNS: 192.168.0.21

Secondary DNS: 192.168.0.22

Primary WINS server: 192.168.0.21

Secondary WINS server: 192.168.0.22

☒ Enable UPnP presentation

☐ Enable UPnP port forwarding

☐ PPPoE

☐ Enable IPv6

Save

7. **Subnet mask:** Defines whether the destination address is in the same subnet. Default: 255.255.255.0
8. **Default router:** The gateway address used to reach other subnets. Incorrect values may prevent connectivity.
9. **Primary DNS:** Translates domain names to IP addresses.
10. **Secondary DNS:** Serves as a fallback DNS server.
11. **Primary WINS server:** Maps NetBIOS names to IP addresses in a Windows environment.
12. **Secondary WINS server:** Backup WINS server.

UPnP

13. **Enable UPnP presentation:** When enabled, the camera appears in My Network Places on Windows systems that support UPnP.
14. **Enable UPnP port forwarding:** Allows the camera to automatically open required ports on a UPnP-enabled router for external access. Your router must support and have UPnP activated.

PPPoE (Point-to-Point over Ethernet)

Use this option if your camera connects directly to the internet through a DSL connection that requires a PPPoE account.



Network type

☐ LAN

☒ PPPoE

User name:

Password:

Confirm password:

☐ Enable IPv6

Save

To configure:

1. Set up the camera on the LAN.
2. Navigate to Configuration → Event → Event settings → Add server to configure an email or FTP server.
3. Go to Add media and select System log to receive the camera's public IP address via email or FTP.
4. Navigate to Configuration → Network → General settings → Network type. Select PPPoE, enter the credentials provided by your ISP, and click **Save**.
5. The camera will restart.
6. After reboot, disconnect it from the LAN.

Enable IPv6

Network type

☐ LAN

☒ PPPoE

User name:

Password:

Confirm password:

☒ Enable IPv6

IPv6 information

☐ Manually setup the IP address

Select this option and click **Save** to activate IPv6 functionality. Please ensure that your network infrastructure and devices support IPv6. Supported browsers include Internet Explorer 6.5, Mozilla Firefox 3.0, or newer versions.

When IPv6 is enabled, the camera listens for router advertisements and automatically obtains a link-local IPv6 address.

Streaming Protocol

HTTP Streaming

To enable HTTP authentication for streaming, make sure the camera has an administrator password configured. Refer to Security → User Account for setup instructions.

Authentication

Two authentication methods are supported for HTTP transactions:

- **Basic:** Transmits the password in plain text. This carries a risk of interception.
- **Digest:** Encrypts the credentials using MD5 for enhanced protection against unauthorized access.

HTTP Port / Secondary HTTP Port

- Default HTTP port: 80
- Secondary HTTP port: 8080

These can be reassigned to a value between 1025 and 65535.

If either port is incorrectly configured, warning messages will be displayed. You may use either the HTTP port or secondary port to access the camera locally. Example (assuming HTTP port is 80 and secondary port is 8080):

- <http://192.168.4.160>
- <http://192.168.4.160:8080>

Access Name for Stream 1 ~ 4

Each video stream has a unique access name. This is used to identify and retrieve each stream individually. You can assign or change these access names under Media → Video → Stream settings.

RTSP Streaming

To enable RTSP streaming with authentication, make sure a password has been configured for stream access. For setup details, refer to Security → User Account.

HTTP

RTSP

SIP

Authentication:

digest ▾

RTSP port:

554

RTP port for video:

5556

RTCP port for video:

5557

RTP port for metadata:

6556

RTCP port for metadata:

6557

RTP port for audio:

5558

RTCP port for audio:

5559

— Video

Multicast settings for

Stream 1 ▾

IP version:

IPv4 ▾

Multicast video address:

239.240.7.99

Multicast video port:

15560

Multicast video TTL [1~255]:

15

— Audio

Multicast settings:

Authentication

RTSP streaming supports the following modes:

- **Disable:** No authentication required
- **Basic:** Transmits credentials in plain text
- **Digest:** Encrypts credentials using MD5 for enhanced security

Digest mode is recommended for protected network environments.

RTSP and RTP/RTCP Port Settings

- **RTSP Port:** Default is 554
- **RTP Port for Video:** Default is 5556
- **RTP Port for Audio:** Default is 5558

- RTCP Port for Video: Default is 5557
- RTCP Port for Audio: Default is 5559

RTP handles the transport of video and audio streams. RTCP monitors and provides feedback on streaming performance.

RTP port values must be even numbers; each RTCP port must be the next higher odd number. All ports must be in the range of 1025–65535. If invalid values are entered, warning messages will appear.

Multicast Settings

Click a stream number (#1–#3) to access multicast configuration for that stream. Always multicast: When enabled, the stream is continuously transmitted via multicast to the assigned multicast group.

Video

Multicast settings for

Stream 1 ▾

IP version:

IPv6 ▾

Multicast video address:

239.240.7.99

Multicast video port:

15560

Multicast video TTL [1~255]:

15

Audio

Multicast settings:

IP version:

IPv4 ▾

Multicast audio address:

239.240.7.99

Multicast audio port:

15562

Multicast audio TTL [1~255]:

15

Metadata

Multicast settings:

IP version:

IPv4 ▾

Multicast metadata address:

239.240.7.99

Multicast metadata port:

16560

Multicast metadata TTL [1~255]:

15

DDNS

This section describes how to configure Dynamic Domain Name Service (DDNS) for the network camera. DDNS allows a camera assigned with a dynamic IP address to be accessed using a consistent hostname and domain, instead of relying on the changing IP.

DDNS: Dynamic domain name service

☐ Enable DDNS:

Provider: Dyndns.org(Dynamic) ▼

Host name:

User name:

Password:

- Enable DDNS: Check this option to activate DDNS functionality.
- Provider: Select your DDNS provider from the available list in the drop-down menu.

Quality of Service (QoS)

Quality of Service (QoS) refers to a resource management mechanism that helps ensure consistent performance for different services across a network. This is especially important in networks with limited bandwidth, where real-time applications like streaming video require stability and low latency.

QoS helps to:

- Prioritize network traffic and ensure performance levels for specific data flows
- Regulate bandwidth usage by application, improving network reliability and stability

Requirements for QoS and to use QoS features effectively:

- All routers and switches on the network must support QoS
- All video devices on the network must be QoS-enabled

QoS Models

CoS (Class of Service – VLAN 802.1p)

This method applies QoS at Layer 2 (Data Link Layer) of the OSI model. A 3-bit priority field is added to the VLAN MAC header to classify traffic with priority values from 0 (lowest) to 7 (highest). These values are interpreted by the switch, which uses them to queue packets accordingly.

- Input the VLAN ID (range: 0–4095) and select a priority value (range: 0–7) for each application.
- For example, assigning the highest priority to video ensures that those packets are transmitted first.

CoS

☒ Enable CoS

VLAN ID:

1

Live video:

0 ▼

Live audio:

0 ▼

Event/Alarm:

0 ▼

Management:

0 ▼

Note:

- A VLAN switch with 802.1p support is required
- Incorrect CoS settings may cause browser access failures
- CoS provides “best-effort” delivery and does not guarantee exact bandwidth or delivery timing
- CoS is easier to manage but does not scale well and lacks end-to-end assurance due to its L2 design

DSCP (DiffServ Code Point – DSCP-ECN Model)

This method operates at Layer 3 (Network Layer). Differentiated Services (DiffServ) mark packets using a 6-bit field in the IP header called DSCP. This field defines how routers treat each packet (known as Per Hop Behavior, or PHB).

QoS/DSCP

☒ Enable QoS/DSCP

Live video:

0

Live audio:

0

Event/Alarm:

0

Management:

0

The DSCP tag indicates priority levels and influences queuing, bandwidth allocation, and packet handling at each network hop.

Enter a DSCP value (0–63) for each application based on your desired traffic behavior.

Simple Network Management Protocol

SNMP consists of three main elements:

1. Manager – The network management station (NMS) responsible for monitoring and controlling devices
2. Agent – The software module installed on the device that reports status to the NMS
3. Managed device – A networked device such as a switch, router, printer, or IP camera that is monitored through SNMP

Before enabling SNMP on this page, make sure your NMS is already configured and active.

SNMP Configuration

Enable SNMPv1, SNMPv2c

Select this option to activate SNMPv1 or SNMPv2c. Enter the Read/Write community and Read Only community names as defined in your NMS.

☒ Enable SNMPv1, SNMPv2c

SNMPv1, SNMPv2c Settings

Read/Write community:	<input type="text" value="Private"/>
Read only community:	<input type="text" value="Public"/>

Enable SNMPv3

SNMPv3 provides enhanced security through authentication and encryption.

- **Security name:** Choose the security profile (Read/Write or Read Only) and enter the associated name
- **Authentication type:** Select either MD5 or SHA
- **Authentication password:** Enter the password for authentication (minimum 8 characters)
- **Encryption password:** Enter the encryption password (minimum 8 characters)

☒ Enable SNMPv3

SNMPv3 Settings

Read/Write Security name:	<input type="text" value="Private"/>
Authentication Type:	<input type="button" value="MD5"/> ▼
Authentication Password:	<input type="text"/>
Encryption Password:	<input type="text"/>
Read only Security name:	<input type="text" value="Public"/>
Authentication Type:	<input type="button" value="MD5"/> ▼
Authentication Password:	<input type="text"/>
Encryption Password:	<input type="text"/>

FTP and SFTP

The newer firmware disables the FTP port by default for security reasons. To use FTP, go to Configuration → Network → FTP and manually enable the port. If the FTP port is closed, the camera will not be able to upload images or logs to an FTP server.

Ensure your FTP server is accessible and properly configured. Use correct login credentials and directory paths to ensure successful uploads.



SFTP (Secure File Transfer Protocol)

SFTP provides a secure method for transferring files using SSH encryption.

To use this feature, enter the following information:

- **Host:** The IP address or domain name of the SFTP server
- **Port:** The port used for SFTP (default is 22)
- **Username and Password:** Your SFTP login credentials
- **File path:** The target directory on the server
- **Public key:** Optional field for key-based authentication

SFTP
☒ Enable SFTP server
SFTP port:
Host Key:

MD5:b0:fd:64:28:36:fe:80:2b:26:e4:e1:45:96:22:2e:42 (RSA)
MD5:0e:ac:24:ba:0f:4b:03:09:70:a4:56:2b:db:e6:03:2e (ED25519)

Save

Bonjour

Bonjour allows the camera to be discovered on Mac-based networks. This service simplifies the process of locating the camera by name rather than IP address.

The camera will appear in the Bonjour tab of the Safari browser using its designated device name.

Security Settings

User Accounts

This section explains how to configure user account access for the camera.

The administrator account name is **admin**, which is permanent and cannot be deleted. Before adding new users, a password must first be set for the **admin** account. The administrator can create up to twenty (20) user accounts.

To create a new user:

1. Click the **New User** option from the drop-down menu.
2. Enter the new user's name and password. Type the password in both fields for confirmation.

① You may include certain special characters in the password, such as !, \$, %, -, ., @, ^, _, and ~. The strength of your password will be indicated as you type.

3. Select a privilege level for the new account from the following:
 - **Administrator:** Full access to all camera settings and features, including the **Configuration** page.
 - **Operator:** Access to live video and control of snapshot, screen, audio, and PTZ functions. Cannot access the **Configuration** page. However, Operators can send URL commands to retrieve or change parameters.
 - **Viewer:** View-only access to the live video stream via the main page. Cannot control PTZ or access configuration.
4. Click the **Add** button to save the new account.

Editing or Deleting a User

1. Select an existing user account from the list.
2. Make necessary changes, then click **Update** to apply changes or **Delete** to remove the account.

Hypertext Transfer Protocol Over SSL (HTTPS)

This section explains how to enable encrypted communication using HTTPS. Enabling HTTPS secures the camera's data transmission and prevents unauthorized access to the video stream and settings. Check **Enable HTTPS Secure Connection**, then choose one of the connection modes:

- **HTTP & HTTPS:** Allows both secure and non-secure access
- **HTTPS Only:** Forces secure access only

HTTPS

☒ Enable HTTPS secure connection

HTTPS port:

Mode:

☒ HTTP & HTTPS ☐ HTTPS only

TLS version:

☐ Allow TLS v1.3

☒ Allow TLS v1.2

☐ Allow TLS v1.2 or v1.3

Certificate:

Certificate information	
Status:	Active
Method:	
Country:	US
State or province:	California
Locality:	Irvine
Organization:	embeddedsoftware
Organization unit:	embeddedsoftware
Common name:	www.luminys.com

[Certificate properties](#) [Remove certificate](#)

[Save](#)

Access List

This section allows you to control which IP addresses are permitted to access the camera.

Enable Access List Filtering

Check this option and click **Save** to activate access list filtering.

Filter Type

- **Allow:** Only the IP addresses listed will be granted access. All others will be blocked.
- **Deny:** IP addresses listed will be blocked. All others will be allowed access.

① The **IPv6** access list field is visible only when **IPv6** is enabled under **Network → General Settings**.

Filter

☐ Enable access list filtering

Filter type: ☐ Allow ☒ Deny

IPv4 access list

Administrator IP Address

To ensure continuous administrator access, check **Always allow the IP address to access this device** and enter the administrator's IP address in the field provided.

Administrator IP address

☐ Always allow the IP address to access this device

IEEE 802.1X

Enable this setting if your network uses IEEE 802.1X, a port-based access control protocol designed to secure local area networks (LAN). To successfully use this feature, your switch/access point and RADIUS server must support IEEE 802.1X authentication.

IEEE 802.1X uses the Extensible Authentication Protocol (EAP) to validate credentials between network clients and the server. If authentication is successful, a secure point-to-point connection is established. If not, access through the port is denied.

① The IEEE 802.1X architecture includes:



1. **Supplicant:** The client device (e.g., the camera) requesting network access.
2. **Authenticator:** The intermediary device (e.g., a network switch or access point) that controls access to the network based on authentication results.
3. **Authentication Server:** Typically a RADIUS server, which validates the credentials and determines whether access is granted.

To enable IEEE 802.1X:

1. **Obtain a Certificate:** Acquire a digital certificate for the camera from your Certificate Authority (CA). This certificate must be verifiable by the RADIUS server.

2. **Configure Settings Outside the Protected Network:** Temporarily connect the camera to a computer that is not inside the IEEE 802.1X-secured network. Open the configuration interface and select either **EAP-PEAP** or **EAP-TLS**. Input your **user ID** and **password** (issued by the CA), and upload the required certificate(s).

IEEE 802.1x

☒ Enable IEEE 802.1x

EAP method: EAP-PEAP ▼

Identity:

Password:

CA certificate: Browse... Upload

Status: no file Remove

IEEE 802.1x

☒ Enable 802.1x

EAP method: EAP-TLS ▼

Identity:

Private key password:

CA certificate: Browse... Upload

Status: no file Remove

client certificate: Browse... Upload

Status: no file Remove

Client private key: Browse... Upload

Status: no file Remove

3. **Deploy the Camera:** Once settings are configured, connect the camera to the secured network (via a switch or access point with IEEE 802.1X enabled). Authentication will begin automatically.

① Authentication Flow:

1. The CA provides signed certificates to both the camera and the RADIUS server.
2. The camera (supplicant) initiates a connection via the switch (authenticator), presenting its credentials.
3. The switch forwards this information to the RADIUS server.
4. Upon successful verification, the switch updates the camera's status to "authorized" and permits network access.

Miscellaneous

The embedded security utility includes protection against Cross-Site Request Forgery (CSRF) attacks. CSRF—also known as a one-click attack or session riding—is a type of malicious exploit where unauthorized commands are transmitted from a trusted user session.

This type of attack takes advantage of the user's browser, using mechanisms such as specially crafted image tags, hidden forms, or JavaScript XMLHttpRequests, to transmit unwanted requests. These actions can occur without the user's knowledge or interaction.

The screenshot shows a web interface for the 'Miscellaneous' settings. At the top, the word 'Miscellaneous' is in blue. Below it, there is a checkbox labeled 'Enable Cross-Site Request Forgery(CSRF) protection.' which is checked. A yellow warning box contains the text: 'We strongly recommend not to disable this protection. Disabling this feature will expose your camera to risks.' At the bottom right, there is a 'Save' button.

① Enabling CSRF protection is recommended to mitigate risks associated with forged requests and unauthorized camera control.

Event Management

This section explains how to configure the camera to respond to specific conditions—called **events**—by capturing and sending snapshots or video clips. The captured media can be delivered to external destinations such as **FTP**, **SFTP**, **HTTP**, or **Email** servers, or stored locally on an **SD card** or **network storage**. The instructions below outline how to create and manage event rules.

The screenshot shows the 'Event' management interface. At the top, the word 'Event' is in blue. Below it is a table with the following columns: Name, Status, Sun, Mon, Tue, Wed, Thu, Fri, Sat, Time, and Trigger. Below the table, there are two buttons: 'Add' and 'Help'. To the right of the buttons is a diagram illustrating the event rule structure. The diagram shows 'Event Trigger' leading to 'Action (What to do)', which then branches into 'Media (What to send)' and 'Server (Where to send)'. Examples are provided for each component.

```
graph TD
    ET[Event Trigger  
Ex. Motion detection, Periodically,  
Digital input, System boot] --> A[Action (What to do)]
    A --> M[Media (What to send)  
Ex. Snapshot, Video Clip, System log]
    A --> S[Server (Where to send)  
Ex. Email, FTP, HTTP Server,  
Network storage]
```

To begin configuration, you must first define the **server** and **media settings**. These determine what action the camera takes and where the media is sent when a trigger occurs. Click the **Add** button in the **Event** column to set up an event.

Each event rule includes the following components:

- **Schedule**

- **Trigger**
- **Action**

You may configure up to **three (3)** event rules.

Event Settings Interface

The screenshot displays the 'Event' settings interface. At the top, there is a table with columns: Name, Status, Sun, Mon, Tue, Wed, Thu, Fri, Sat, Time, and Trigger. Below the table, an 'Add' button and a 'Help' link are highlighted with an orange box. Below this, a detailed configuration window is shown. It includes fields for 'Event name', a checkbox for 'Enable this event', a 'Priority' dropdown (set to 'Normal'), and a 'Detect next motion detection or digital input after' field (set to '10' seconds). A flowchart on the left side of the window, also highlighted with an orange box, shows three steps: '1. Schedule', '2. Trigger', and '3. Action'. The 'Event Schedule' section on the right allows selecting days of the week (all are checked) and setting a time range. The 'Time' section has two options: 'Always' (selected) and 'From 00:00 to 24:00 [hh:mm]'. At the bottom of the window are 'Save event' and 'Close' buttons.

- **Event Name:** Enter a descriptive name for the event rule.
- **Enable This Event:** Check this option to activate the event rule.
- **Priority:** Select from **High**, **Normal**, or **Low**. Higher-priority events are processed first.
- **Detection Delay:** Enter the number of seconds to delay before the next trigger can be detected. This prevents rapid re-triggering.

Schedule

Choose the days of the week and define time ranges using 24-hour format. The rule will only be active during the specified schedule.

Trigger

Select the condition that activates the event rule. Available options:

- **Video Motion Detection:** Detects movement using a preconfigured detection window.

☒ Video motion detection

Normal: ☐ door

Profile: ☐ hallway

Note: Please configure Motion detection first

- **Periodically:** Triggers at fixed intervals, between **1 and 999 minutes**.

☒ Periodically

Trigger every other minutes

- **System Boot:** Triggers when the camera restarts.
- **Recording Notify:** Triggers when storage becomes full or begins overwriting.
- **Camera Tampering Detection:** Activates when tampering (e.g., lens covering) is detected. Must be preconfigured.

Camera tampering detection

☐ Tampering detection

Trigger duration seconds [10~600]
Trigger threshold [0~100]

☐ Image too dark detection

Trigger duration seconds [1~10]
Trigger threshold [0~100]

☐ Image too bright detection

Trigger duration seconds [1~10]
Trigger threshold [0~100]

☐ Image too blurry detection

Trigger duration seconds [1~10]
Trigger threshold [0~100]

Save

- **Audio Detection:** Triggers on unexpected sounds.
- **Manual Trigger:** Allows users to activate an event from the camera's homepage. Up to **three (3)** manual triggers may be created.

Manual Trigger



- **Shock Detection:** Uses built-in sensors to detect physical vibration or impact.

Action

Select the action the camera performs once triggered:

- **Trigger Digital Output for (X) Seconds:** Activates the digital output port.
- **Backup Media If the Network Is Disconnected:** Saves media locally if the network is unavailable.
- **Configure CameraLink:** Sends a signal to another camera to trigger an action (e.g., preset movement).

Action

☐ Backup media if the network is disconnected

☐ Configure [CameraLink](#)

	Server	Media	Extra parameter
<input type="checkbox"/>	SD	-----None----- ▾	SD test
<input type="checkbox"/>	NAS0	-----None----- ▾	Note: Please configure NAS management

Add server ▾

Add media ▾

Add Server

Click the **Add Server** button to configure where the media will be sent. Up to **five (5)** server settings can be defined.

Add server
Add media

Server name: Email

Server type

☒ Email

Sender email address: product@luminyscorp.com

Recipient email address: product@luminyscorp.com

Server address: Mr.Test

User name: user

Password: *****

Server port: 25

☐ This server requires a secure connection

☐ FTP

☐ SFTP

☐ HTTP

Test Save server Close

Email

- **Server Name**
- **Sender Email / Recipient Email**
- **Server Address**
- **Port:** Default is **25**, range is **1025–65535**
- **Username / Password**
- **This Server Requires a Secure Connection (SSL):** Enable if required by the SMTP server

① Click the **Test** button to verify that email settings are correct. If successful, a confirmation email will be sent and a pop-up window will confirm the result.

Click **Save Server** to save the settings.

① After the first server is added, it will appear in the Server list. To add more servers, click **Add Server** again.

Server	Media	Extra parameter
<input type="checkbox"/> SD	-----None----- ▾	SD test View
<input type="checkbox"/> Email	-----None----- ▾	
Add server ▾		Add media ▾

FTP

Server name:

Server Type

☐ Email

☒ FTP

☐ HTTP

☐ Network storage

Server address:

Server port:

User name:

Password:

FTP folder name:

☒ Passive mode

- **Server Name / Server Address**
- **Port:** Default is **21**, range **1025–65535**
- **Username / Password**
- **Passive Mode:** Check this if the FTP server uses passive mode for file transfers

Server type

☐ Email

☐ FTP

☒ SFTP

Server address:

192.168.5.114

Server port:

22

Host key MD5:

Scanning... please wait

Get

Folder name:

Login mode:

☐ Password ☒ Publickey

User name:

admin


Pairing mode:

☒ Auto ☐ Download ☐ Upload

Password:

Pairing

- **Server Name / Server Address**
- **Port:** Default is 22
- **Username / Password**
- **Host Key MD5:** This optional feature lets you use key-based authentication. Click the **Get** button to retrieve the server's MD5 fingerprint. The fingerprint is stored by the camera and used to verify the identity of the SFTP server.
① Maximum fingerprint length is **47 characters**.

[Add server](#)[Add media](#) 

Server name:

Server type

☐ Email

☐ FTP

☒ HTTP

URL:

User name:

Password:

☐ Network storage

- **Server Name**
- **HTTP URL**
- **Port**
- **Username / Password**

Network Storage


Choose **NAS** to send media to a networked storage device

① Only one (1) NAS server can be configured

Action

☐ Backup media if the network is disconnected

Server	Media	Extra parameter
<input type="checkbox"/> SD	----None----	SD test View
<input type="checkbox"/> Email	----None----	
<input type="checkbox"/> FTP	----None----	
<input type="checkbox"/> HTTP	----None----	
<input type="checkbox"/> NAS	----None----	<input type="checkbox"/> Create folders by date time and hour automatically View

[Add server](#)  [Add media](#) 




[Close](#) [Save event](#)

- SD Test: Click this to verify SD card status. A pop-up message will indicate success or failure. Format the SD card before use if needed.
- View: Opens a file list window.
 - For SD card: Opens the Local Storage page to manage SD-stored files.
 - For Network Storage: Opens a directory window to view NAS-stored data.

15. Create Folders by Date/Time Automatically: Enable this to organize files by timestamp. Each folder will contain:

16. Files labeled with date and hour (YYYYMMDD/HH)

17. Filename prefix + minute (Prefix_MM)

<input type="checkbox"/>		20170120	<p>The format is: YYYYMMDD Click to open the directory</p>
<input type="checkbox"/>		20170121	
<input type="checkbox"/>		20170122	
<p>Delete Delete all</p>			<p>Click to delete all recorded data</p>

The format is: HH (24r)

Click to open the file list for that hour

The interface shows a top bar with hour links from 07 to 17. Below is a table with columns: file name, size, date, and time. Two files are listed: 'Recording1 58.mp4' and 'Recording1 59.mp4'. Below the table are 'Delete', 'Delete all', and 'Back' buttons. An orange box highlights the hour links, and a blue box highlights the time column.

	file name	size	date	time
<input type="checkbox"/>	Recording1 58.mp4	2526004	2017/01/20	07:58:28
<input type="checkbox"/>	Recording1 59.mp4	2563536	2017/01/20	07:59:28

Buttons: Delete, Delete all, Back

Click to delete selected items

Click to delete all recorded data

Click to go back to the previous level of the directory

This screenshot is identical to the one above, but a blue box highlights the 'file name' column, specifically the text 'Recording1 58.mp4' and 'Recording1 59.mp4'.

	file name	size	date	time
<input type="checkbox"/>	Recording1 58.mp4	2526004	2017/01/20	07:58:28
<input type="checkbox"/>	Recording1 59.mp4	2563536	2017/01/20	07:59:28

Buttons: Delete, Delete all, Back

The format is: File name prefix + Minute (mm)

You can set up the file name prefix on Add media page. Please refer to next page for detailed information.

Click **Save Server** after completing the configuration.

Add Media

Click **Add Media** to define what content is generated and sent when the event is triggered. Up to **five (5)** media settings can be created.

Add server
Add media

Media name:

Media type

Attached media:

☒ Snapshot

Source:

Send pre-event image(s) [0~7]

Send post-event image(s) [0~7]

File name prefix:

☒ Add date and time suffix to file name

☐ Video clip

☐ System log

Snapshot

- **Media Name**
- **Source** (select the video stream)
- **Send Pre-Event Images:** Up to **seven (7)** images
- **Send Post-Event Images:** Up to **seven (7)** images

① If both pre- and post-event images are set to seven (7), the system captures a total of **15** images per trigger.

Media name:

Media Type

Attached media:

☐ Snapshot

☒ Video Clip

Source:

Pre-event recording: seconds [0~9]

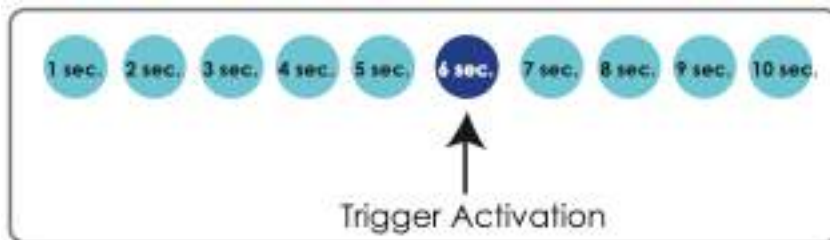
Maximum duration: seconds [1~20]

Maximum file size: Kbytes [50~4096]

File name prefix:

☐ System log

- **Media Name**
- **Source**
- **Pre-Event Buffer:** Up to **nine (9)** seconds
- **Maximum Duration:** Up to **20 seconds**



- **Maximum File Size**
- **File Name Prefix**



- **Add Date and Time Suffix:** Appends a timestamp in the format YYYYMMDD_HHMMSS

System Log

Select this option to generate and send a system log when triggered. Click **Save Media** when done.

Action

☐ Backup media if the network is disconnected

Server	Media	Extra parameter
<input type="checkbox"/> SD	----None----	SD test View
<input type="checkbox"/> mail	<div> <div>----None----</div> <div> <div>None</div> <div>email</div> <div>log</div> <div>snapshot</div> </div> </div>	Add server media

Save event

Close

① You may only delete media or server settings if they are not assigned to an active event rule.

SD Card and Network Storage Controls

- **SD Test:** Click to test SD card functionality. A result window will indicate success or failure.
- **View:** Opens a file browser window.
 - If **SD** is selected: A local storage window opens for browsing saved footage.
 - If **NAS** is selected: A directory listing appears for browsing network footage.
- **Create Folders by Date/Time:** Automatically organizes storage into structured folders based on recording date and time.

Final Setup

Event

Name	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Trigger	
event1	ON	V	V	V	V	V	V	V	00:00~24:00	seq	<button>Delete</button>

Add

[Help](#)

Server settings

Name	Type	Address/Location	
HTTP	http	http://192.168.5.10	<button>Delete</button>

Add

Media

Available memory space: 13000KB

Name	Type	
Snapshot	snapshot	<button>Delete</button>
Video clip	videoclip	<button>Delete</button>
System log	systemlog	<button>Delete</button>

Add

Customized script

Name	Date	Time
------	------	------

Add

Once all components of the event are configured:

1. Set **Status** to **ON**
2. Click **Save Event**
3. Click **Close**

① To delete an event, select it and click **Delete**.

① To disable an event without removing it, switch its status to **OFF**.

Application Features

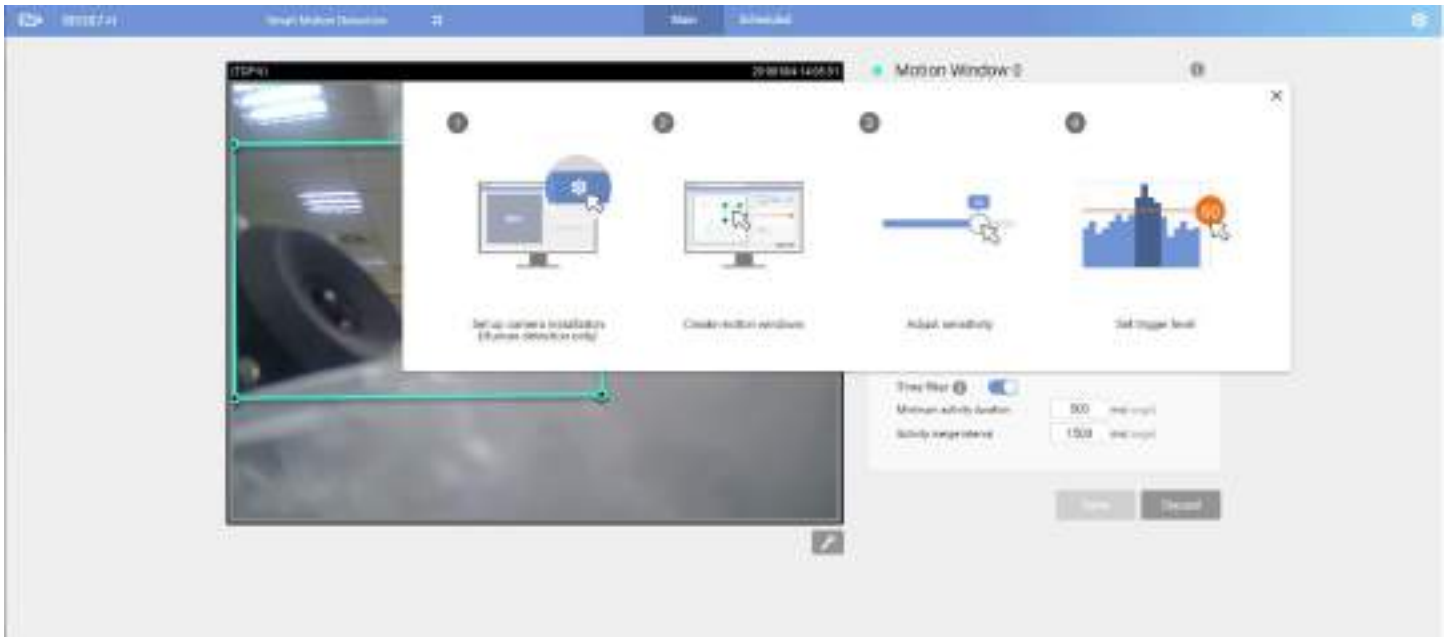
Motion Detection

The Motion Detection feature allows you to monitor specific areas within the camera's field of view and trigger actions when movement is detected. You can configure up to **three (3)** separate motion detection windows. Each window can be resized and repositioned independently to match the surveillance area.

Window Settings

For each motion detection window, configure the following:

- **Sensitivity:** Determines how easily movement is detected. Higher values detect even small motions.
- **Percentage:** Defines the required level of pixel change (as a percentage of the window area) before triggering a motion event.



① When valid motion is detected: The detection window border turns **red**.

① If motion is detected but below the defined threshold: The window briefly flashes **yellow**.

To remove a motion detection window, click the **Delete** icon next to the window label. Click **Save** to apply your motion detection settings

Tampering Detection

Tampering Detection is designed to identify and respond to attempts to interfere with the camera's view—such as blocking, redirection, or deliberate image distortion.

Camera tampering detection

☐ Tampering detection

Trigger duration seconds [10~600]

Trigger threshold [0~100]

☐ Image too dark detection

Trigger duration seconds [1~10]

Trigger threshold [0~100]

☐ Image too bright detection

Trigger duration seconds [1~10]

Trigger threshold [0~100]

☐ Image too blurry detection

Trigger duration seconds [1~10]

Trigger threshold [0~100]

Configurable Conditions

You may enable one (1) or more of the following conditions: Tampering Detection, Image Too Dark, Image Too Bright, or Image Too Blurry.

Each condition has a **Trigger Duration** setting, ranging from **10 seconds to 10 minutes**, which determines how long the anomaly must persist before an alert is triggered.

① Tampering alarms are based on the difference between the live video feed and a pre-captured background reference.

Trigger Threshold

The **Trigger Threshold** controls the detection sensitivity:

- A **lower** threshold increases sensitivity (easier to trigger).
- A **higher** threshold reduces sensitivity (avoids false alarms from minor changes).

Tampering Condition Descriptions

- **Too Bright:** Triggered by sudden exposure to intense lighting (e.g., flashlight). Detected by analyzing average scene brightness.
- **Too Dark:** Triggered when the lens is covered, darkened, or painted.
- **Too Blurry:** May result from intentional movement, defocus, or electromagnetic interference.

Integration With Event Rules

Tampering Detection can be used as an event **Trigger** in the camera's event management system. For example, a tampering event can automatically prompt the system to store snapshots or video clips.

See **Event Settings** → **Trigger** for integration details.

Audio Detection

The Audio Detection feature is used to detect sudden changes in sound within the camera's environment. This can serve as a trigger condition for events, particularly in environments where video motion detection may not be effective.

Typical Use Cases

- Detection of activity outside the camera's field of view (e.g., gunshots, glass breaking).
- Monitoring a noisy facility that suddenly becomes quiet due to mechanical failure.
- Triggering a PTZ preset when a specific sound is detected.
- Monitoring dark environments where visual detection may be limited.

The system monitors the real-time sound input and compares it to a preset threshold. If the volume crosses that threshold, an alarm is triggered. The system visually displays input levels on a fluctuating yellow waveform chart.



How to Configure Audio Detection

1. Open the Audio Detection configuration window.
2. Observe the yellow waveform diagram that represents real-time input levels.
3. Click and drag the **Alarm Level** tab to your preferred trigger threshold.
4. Select the **Enable Audio Detection** checkbox.
5. Click **Save** to apply the configuration.

Important Notes

- The volume scale (0–100) shown beside the waveform does **not** represent dB values. Instead, it maps internally to the camera's sensitivity range. Use real-world test inputs to calibrate the Alarm Level setting.

- ⓘ Ensure that **audio is not muted** under **Configuration → Media → Audio**.

Some models may have audio muted by default due to the lack of a built-in microphone. An external microphone may be required.

Best Practices

- If the alarm threshold is within **20%** of the detected sound level, false alarms may occur. Set the threshold higher or lower as appropriate to minimize errant triggers.
- To enable this feature, ensure that **Video Stream #1 is not set to Motion JPEG (MJPEG)**. Audio streams are only transmitted alongside **H.264/H.265** encoding.

Profile-Based Audio Detection

The system supports creating audio detection profiles for different time periods or environmental conditions. To configure a profile:

1. Select **Enable This Profile**.
2. Open the Audio Detection window to review the yellow waveform.
3. Drag the **Alarm Level** tab to the preferred value.
4. Select a profile mode: **Day**, **Night**, or **Schedule**.
5. If **Schedule** is selected, define the time range during which the profile is active.
6. Click **Save**, then **Close** to complete setup.

>Audio detection profile settings



General settings

☒ Enable this profile

This profile is applied to:

☐ Day mode

☐ Night mode

☒ Schedule mode

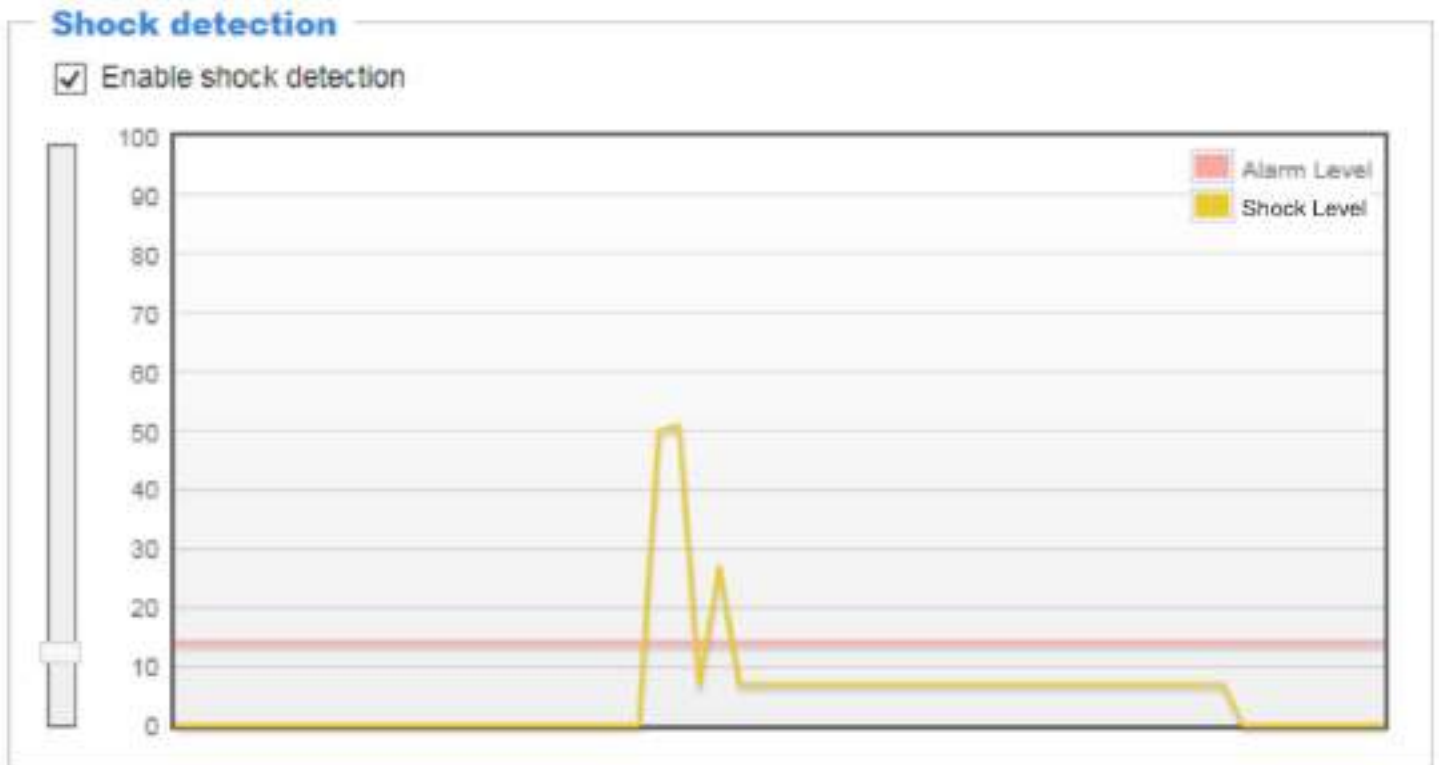
From 18:00 to 06:00 [hh:mm]

Shock Detection

The camera includes a built-in shock sensor that detects physical impacts. This feature is particularly useful in identifying attempts to tamper with or vandalize the camera. When a significant shock is detected, the camera can trigger an event alert or take other predefined actions.

How It Works

When the camera experiences a strong vibration or impact—such as being hit with an object—the built-in accelerometer detects the force and measures its intensity. For example, a **5kgm impact** typically causes the impact reading to spike to approximately **50%** on the measurement scale.



Configuration

1. Open the **Shock Detection** settings.
2. Adjust the **Alarm Level** slider to your preferred threshold percentage. This determines how much force is required to trigger a shock alert.
3. Select the **Enable Shock Detector** checkbox.
4. Click **Save** to apply the settings.

Technical Details

- **Sensor Range:** $\pm 16G$
- **Sensor Resolution:** Each **1G** (where $g = 9.8 \text{ m/s}^2$) corresponds to **512** internal units.

① For example:

- A **2G** acceleration generates a value of $512 \times 2 \div 16 = 64$ units per axis.
- If all **three axes (X, Y, Z)** register the same 2G impact, the resulting shock level will be calculated as:

$$(64 + 64 + 64) \times 100 \div 1024 = 18.75$$

This final percentage is what appears on the **Shock Detection chart** in the configuration UI.

Integration With Events

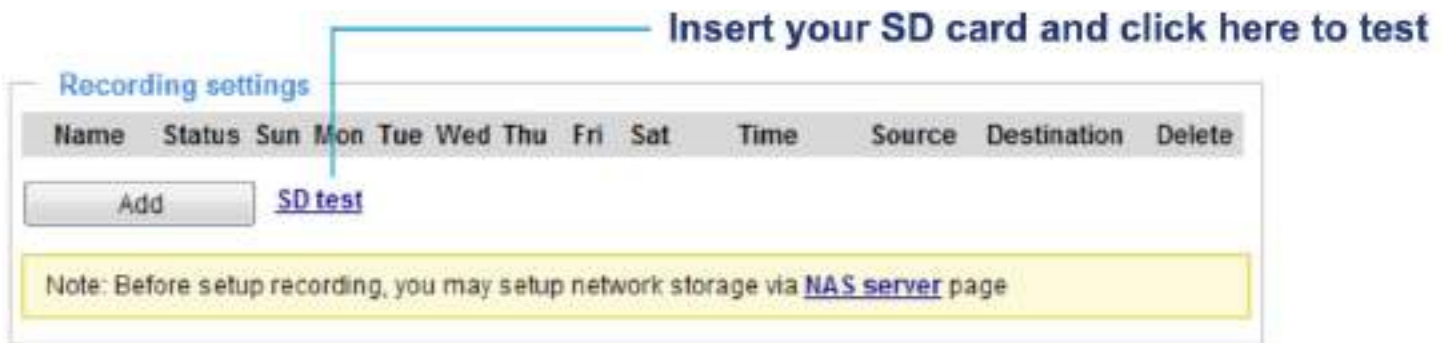
To activate automated responses (e.g., recording, alert emails), configure **Shock Detection** as a **trigger** under **Configuration** → **Event Settings** → **Trigger**. Refer to that section for step-by-step integration.

Recording Settings

This section explains how to configure video recording behavior for the camera.

Initial Setup

① Before using an SD card for the first time, format it via **Configuration → Storage → Local Storage**. Refer to that section for instructions.



Insert the SD card and click the **Test** button to verify readiness.

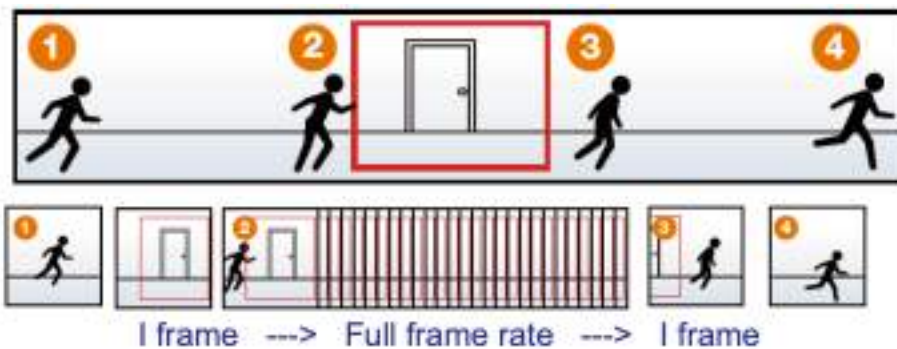
Creating a Recording Profile

Click the **Add** button to open the recording configuration window. A maximum of **two (2)** recording profiles can be created.

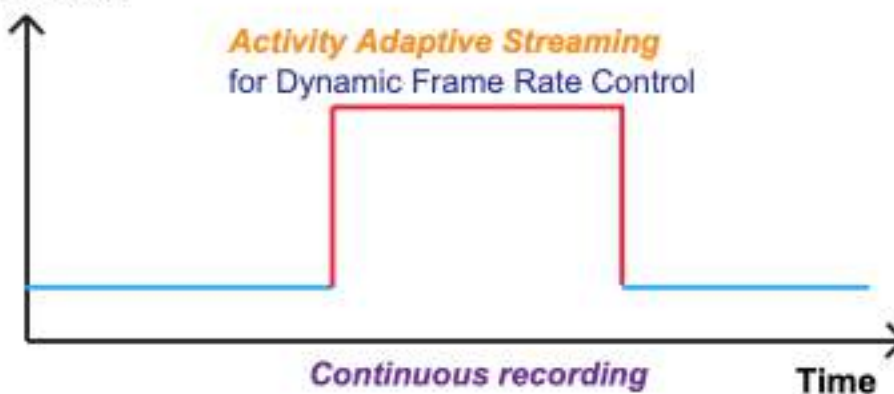
Recording Name: Assign a label to this recording configuration.

Enable This Recording: Check to activate this recording setting.

With Adaptive Recording: When enabled, the frame rate will dynamically adjust based on trigger activity.



Bandwidth



- For example, under an alarm trigger, the camera will use the configured high frame rate from the **Media → Video** settings.
- When idle, it will reduce to low-bandwidth modes (e.g., I-frame only or 1 fps).

① Supported triggers for adaptive recording include **Motion Detection**, **Digital Input**, or **Manual Trigger**.

Pre-Event Recording / Post-Event Recording:

- The camera uses a buffer to store recent frames.
- Define the number of seconds to include before and after a trigger.

Priority: Select from **High**, **Normal**, or **Low**. Higher-priority recordings take precedence in execution.

Source: Choose the video stream to record from the profile list.

① To activate recording alerts, set up an event rule in **Configuration** → **Event Settings**.

Adaptive Recording Behavior

- **No Trigger Active:**
 - **JPEG mode:** records 1 frame per second
 - **H.264 mode:** records I-frame only
- If the **I-frame interval** exceeds 1 second, the system will reduce it to 1s automatically when adaptive mode is enabled.

Setup Steps

1. **Trigger:** Choose a trigger type.

Trigger

☒ Schedule

☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat

Time

☒ Always

☐ From to [hh:mm]

☐ Network fail

- **Schedule:** Enables continuous recording based on a defined timetable.
 - **Network Failure:** Activates local SD card recording when the connection to NAS is lost.
2. **Destination:** Select one of the following.

Priority: Normal ▼
Source: Stream 1 ▼



Destination

Destination: NAS ▼

Capacity:

☒ Entire free space

☐ Reserved space: 100 Mbytes

☐ Enable cyclic recording

Recording file management

Maximum duration: 1 minutes [1~30]

Maximum file size: 100 MB [100~2000]

File name prefix:

- SD Card
- NAS (Network Storage)

If using NAS:

1. Click **Add NAS Server**

Destination: SD ▼

Add NAS server

Server name: NAS 3

Server type

☒ Network storage

Network storage location: \\192.168.5.12\NAS
(For example: \\my_nas\disk\folder)

Workgroup:

User name:

Password:

Test 2 Close 4 Save server

Network storage path
(\\server name or IP address\folder name)

User name and password for your server

2. Enter:
 - Server path (e.g., \\IP\shared_folder)
 - Username and password
3. Click **Test** to validate connectivity.

4. Click **Save**, then **Close**

① A test file named test.txt will be written to confirm access.

Capacity and Storage Behavior

- **Capacity:** You can select to use full available space or specify a limit.
 - Ensure the **Recording Size Limit** exceeds the **Reserved Amount** if using cyclic storage.
- **Enable Cyclic Storage:** When full, older recordings are overwritten by newer files.
- **Reserved Amount:** This buffer allows for smooth transition between overwriting cycles.

Recording File Management

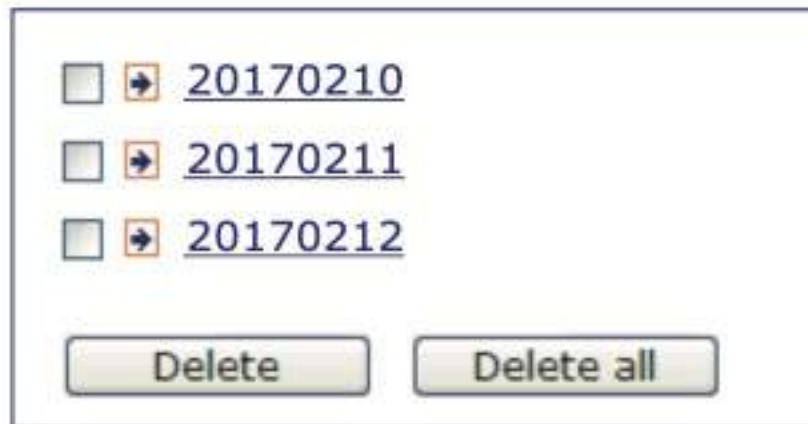
- **Max Duration:** Set the length of each recording file (in seconds).
- **Max File Size:** Define the size cap for each video file (in MB).
- **File Name Prefix:** Input custom text for file naming consistency.

Managing Recording Settings

- To delete a recording: Choose its name from the list and click **Delete**.



- To edit: Click the profile name.
- To disable: Click the **ON** status to toggle **OFF**.
- To browse recordings: Click the **NAS** or **SD Card** link in the Destination column.



① Folder names are date-based (e.g., 20230701, 20230702). See **Storage → Content Management** for more.

Final Steps

After configuration:

- Check **Enable This Recording**
- Click **Save**
- Click **Close** to exit

The new profile will appear in the drop-down list on the Recording Settings page. When triggered, the system will begin saving video to the selected destination.

Storage Settings

This section describes how to manage SD card and NAS (Network Attached Storage) configurations, as well as how to search, access, and manage recorded video content stored on the device.

Local Storage (SD Card Management)

You can view the current SD card status and configure local storage options.

SD Card Format

- SD cards **larger than 32GB** are formatted using the **EXT4** file system.
- ⓘ Windows systems cannot read EXT4 by default. Use third-party tools if you need to access EXT4-formatted SD cards on a PC.

SD Card Status

- This column shows whether the SD card is inserted and available, and how much space is reserved or free.

ⓘ Always **turn off recording** before physically removing the SD card from the camera.

Important Notes

- The SD card has a limited lifespan. Replace it periodically for optimal performance.
- A portion of memory is reserved by the camera's internal file system.
- Do **not** use SD cards that contain files from other systems.
- Avoid renaming or moving folders manually on the SD card. This can cause storage errors.

NAS Management

Use this section to configure external NAS for recording and backup.

NAS Setup

1. Click the **NAS Management** tab.



The screenshot shows the 'NAS setup' window with the following fields and buttons:

- Network storage location:** A text box containing the path '\\DS213air\DS_network_share'.
- (For example: \\my_nas\disk\folder)** A note below the network storage location field.
- Workgroup:** A text box containing 'WORKGROUP'.
- User name:** A text box containing 'admin'.
- Password:** A password field with masked characters (dots).
- Buttons:** 'Test', 'Mount', and 'Unmount' buttons are located at the bottom right of the form.

2. Fill in the network path, username, and password.
 - Example path: \\192.160.5.122\NAS
3. Click **Test** to validate connectivity.
4. Click **Mount** to complete setup.

① Upon success, the system creates a file called test.txt on the NAS.

SD Card Control Options

- **Enable Cyclic Storage:** When enabled, old files are automatically overwritten when space is full.
- **Enable Automatic Disk Cleanup:** Enter the number of days to retain recordings.
 - Example: Set to **7 days** to keep the past week's recordings.
- **Maximum Duration for Keeping Files:** Set the retention window in days.

Click **Save** to apply all changes.

NAS Storage Settings

- **Minimum Reserved Storage Space:** Acts as a buffer for data overflow when cyclic storage is active.
- **Enable Cyclic Storage:** Same function as SD card cyclic mode.
- **Enable Automatic Disk Cleanup:** Choose the retention period (in days) for NAS recordings.
- **Maximum Duration for Keeping Files:** Define lifespan of each file set.

Content Management

This interface allows you to **search**, **play**, **download**, and **delete** recorded video stored on the camera.

Searching and Viewing the Records

Search

Device target

☒ All devices☐ SD☐ NAS

Trigger type

☐ Backup☐ System boot☐ Digital input☐ Motion☐ Network fail☐ Recording notify☐ Periodically☐ Shock detection☐ SD card life expectancy☐ Tampering detection☐ Smart Analysis☐ Manual triggers☐ Audio detection

Media type

☒ Video clip☐ Snapshot☐ Text

Time

Search for last

1

minute(s)

hours

days

weeks

From:

2025/07/11

03

30

PM

to:

2025/07/18

03

30

PM

Search

Set search criteria by:

- **File Attributes:** Filter by media type, trigger type, or file lock status.
- **Trigger Time:** Specify a date/time range.

Click **Search**. Results appear in a table with:

- **Trigger Time**
- **Media Type**
- **Trigger Type**
- **Locked Status**

Click column headers to sort results.

Numbers of entries displayed on one page

Search results

<input type="checkbox"/>	Name	Trigger type	Starting time	Ending time
<input type="checkbox"/>	to SD	Periodically	Today at 3:45 PM	Today at 3:58 PM
<input type="checkbox"/>	to SD	Periodically	Today at 3:58 PM	--
<input type="checkbox"/>	test	Motion	Today at 3:45 PM	Today at 3:45 PM
<input type="checkbox"/>	test	Motion	Today at 3:49 PM	Today at 3:49 PM
<input type="checkbox"/>	test	Motion	Today at 3:49 PM	Today at 3:49 PM
<input type="checkbox"/>	test	Motion	Today at 3:50 PM	Today at 3:50 PM
<input type="checkbox"/>	test	Motion	Today at 3:50 PM	Today at 3:50 PM

10

Click to open a live view

Download Lock/Unlock JPEGs to AVI Remove

Available Functions

- **Play:** Highlight a file, then click Play to launch the built-in viewer.
- **Download:** Select a file and click **Download** to save it locally.
- **JPEGs to AVI:** Converts selected JPEG snapshots into an AVI video file.
- **Lock/Unlock:** Prevent a file from being deleted during cyclic overwrite.

Search results

<input type="checkbox"/>		Name	Trigger type	Starting time	Ending time
<input type="checkbox"/>		to SD	Periodically	Today at 3:45 PM	Today at 3:58 PM
<input type="checkbox"/>		to SD	Periodically	Today at 3:58 PM	—
<input checked="" type="checkbox"/>		test	Motion	Today at 3:45 PM	Today at 3:45 PM
<input checked="" type="checkbox"/>		test	Motion	Today at 3:49 PM	Today at 3:49 PM
<input checked="" type="checkbox"/>		test	Motion	Today at 3:49 PM	Today at 3:49 PM
<input type="checkbox"/>		test	Motion	Today at 3:50 PM	Today at 3:50 PM
<input type="checkbox"/>		test	Motion	Today at 3:50 PM	Today at 3:50 PM

10

/ 3

Click to switch pages

- **Remove:** Permanently delete selected files.
- **Pagination:** Use arrows to navigate between result pages.