OpenEye®
The Cloud Video Platform

2MP IP PTZ DOME
OE-C8312P2

USER MANUAL

Table of Contents

Live View

The camera displays a live view using the MJPEG stream for setup purposes.

Languages – Select English or French.

Logout – Log out the current user.

Stream Selection – Select camera stream.

Focus:

- **Near / Far** – Click **Manual**, then adjust focus via **Near** and **Far**.
- **Auto** – Click **Auto** to enable auto focus mode. Camera stays in focus automatically regardless of zoom or view changes.
- **Zoom** – Click **Zoom**, and auto focus is activated every time when zoom is adjusted.

Zoom – Click **Wide** or **Tele** to control zoom in and out or adjust the slider.

Preset – Use the dropdowns to change display to predefined camera configurations.

Aspect Ratio – Enable Keep Aspect Ratio at Full Screen.

Camera Information – Click to show on-screen display.

Listen – Click to mute / activate the audio. Select transmission mode under Streaming > Audio to enable.

Snapshot – Click to save a JPEG of the screen.

Live Pause / Play – Click to pause video stream (video will display as a black screen). Press to play live video.

Record – Click to record to local machine.

Trigger – Click to activate a connected external relay output device from the live view.

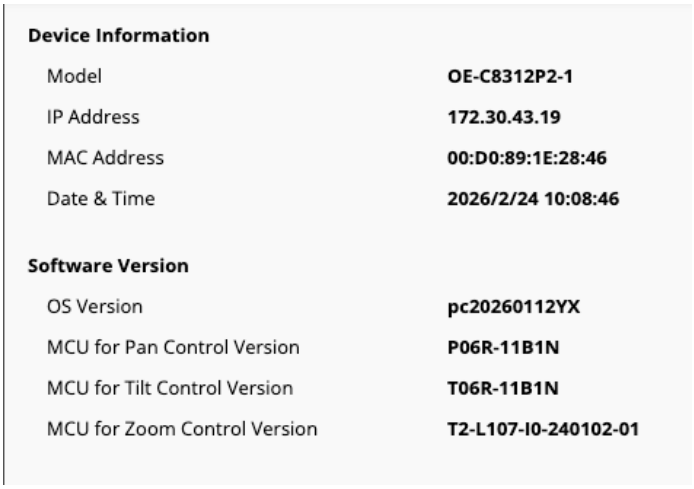
Full Screen – Click to enable full screen.

PTZ

System

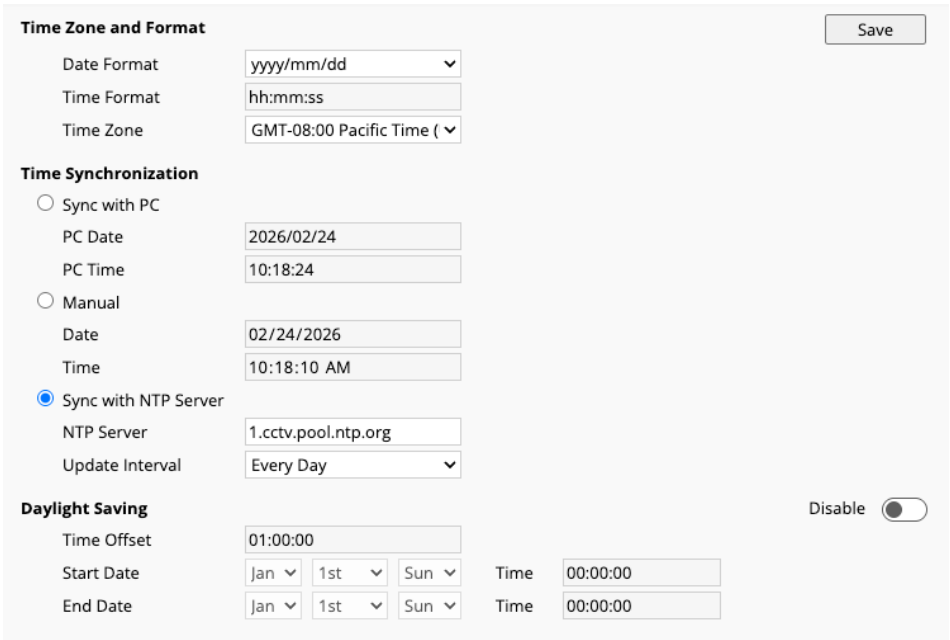
Information

View the **Device Information** and **Software Version** of the camera.



Date and Time

The Date and Time tab allows you to set time zone and format, set authentication type and enable a lockout function for login attempts.



Time Zone and Format - Select the Time Zone from the drop-down menu according to the location of the camera. Choose a time format (yyyy/mm/dd or dd/mm/yyyy) from the drop-down menu. The format of the date and time displayed above the live video window will be changed according to the selected format.

Time Synchronization -

- **Sync with PC** - Video date and time display will synchronize with the PC's time.

- **Manual** - The administrator can set video date and time manually. Entry format should be identical with the examples shown next to the entry fields.
- **Sync with NTP Server** - Network Time Protocol (NTP) is an alternate way to synchronize the camera's clock with a NTP server. Please specify the server to synchronize with in the entry field. Then select an update interval from the drop-down menu.

> **Note** The synchronization will be done every time the camera boots up.

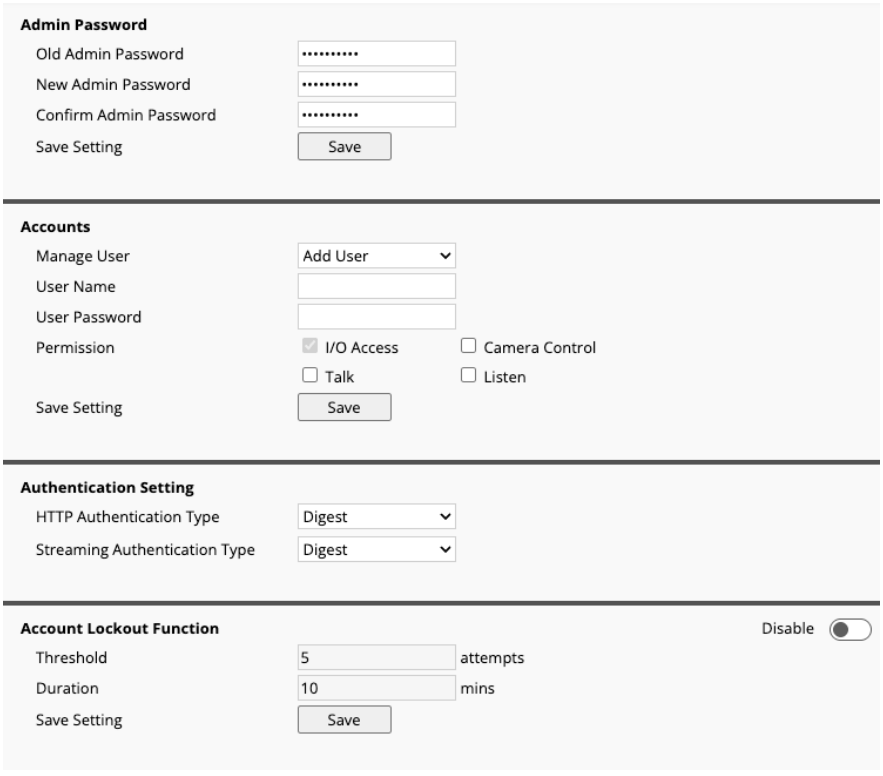
Daylight Saving -

- **Enable Daylight Saving Time** – Check to enable DST, and then specify the **Time Offset** and the DST duration. The format for time offset is [hh:mm:ss]; for instance, if the amount of time offset is one hour, please enter "01:00:00" into the field. Then set **Start Date** and **End Date** and times for daylight saving.

Click **Save** after making any changes to Date and Time.

Users

The Users tab allows you to set an admin password, add users and permissions, set authentication type and enable a lockout function for login attempts.



Admin Password – This allows the administrator to reset the password. Enter the old and new password in **Old Admin Password** and **New Admin Password** and then **Confirm Admin Password**. The maximum length is 14 characters. The input characters / numbers will be displayed as dots for security purposes. Click **Save** to confirm the changes. After the changes are confirmed, the web browser will ask the administrator to re-login to the camera with the new password.

> **Note** The following characters are valid: A-Z, a-z, 0-9, !#$%&'-.@^_~.

Accounts - This allows the administrator to add new users. Enter the new user's name in **User name** and the password in **User password**. Username can be up to 16 characters, and the maximum length of the password is 14 characters. Tick the boxes below to give privileges for functions, including **I/O Access**, **Camera Control**, **Talk** and **Listen**. Click on **Add** to add the new user. The name of the new added user will be displayed in the **User Name** drop-down menu under **Manage User**. There is a maximum of twenty user accounts.

- **I/O access** – I/O access supports fundamental functions that enable users to view the live video when accessing to the camera.
- **Camera control** – Camera control allows the appointed user to change camera parameters.
- **Talk/Listen** – Talk/Listen allows the appointed user in the local site (camera site) to communicate via the device.

Authentication Setting

- **HTTP Authentication Setting** – This setting allows secured connections between the IP camera and web browser by enforcing access controls to web resources. When users access the camera through a web browser, they will have to enter a username and password. There are two security models available: **Basic** and **Digest**.
  - **Basic** – This mode provides basic protection for connection security.
  - **Digest** – Digest mode provides additional protection. The password is sent in an encrypted format to prevent it from being stolen.
- **Streaming Authentication Type** – This setting provides security against unauthorized users from receiving streaming via Real Time Streaming Protocol (RTSP). If this setting is enabled, users will be asked to enter a username and password before viewing live streams. There are three security modes available: **Disable**, **Basic** and **Digest**.
  - **Disable** – If disable mode is selected, there will be no security provided against unauthorized access. Users will not be asked to input a username and password for authentication.
  - **Basic** – This mode provides basic protection for live streams.
  - **Digest** – Digest mode provides additional protection. The password is sent in an encrypted format to prevent it from being stolen.

Account Lockout Function – The Account Lockout Function locks out an account when someone tries to log on unsuccessfully several times in a row. To protect a user's account, the Account Lockout Function is activated when multiple login failures occur. Check the box **Enable Account Lockout Function** and enter values for **Threshold** and **Duration**.

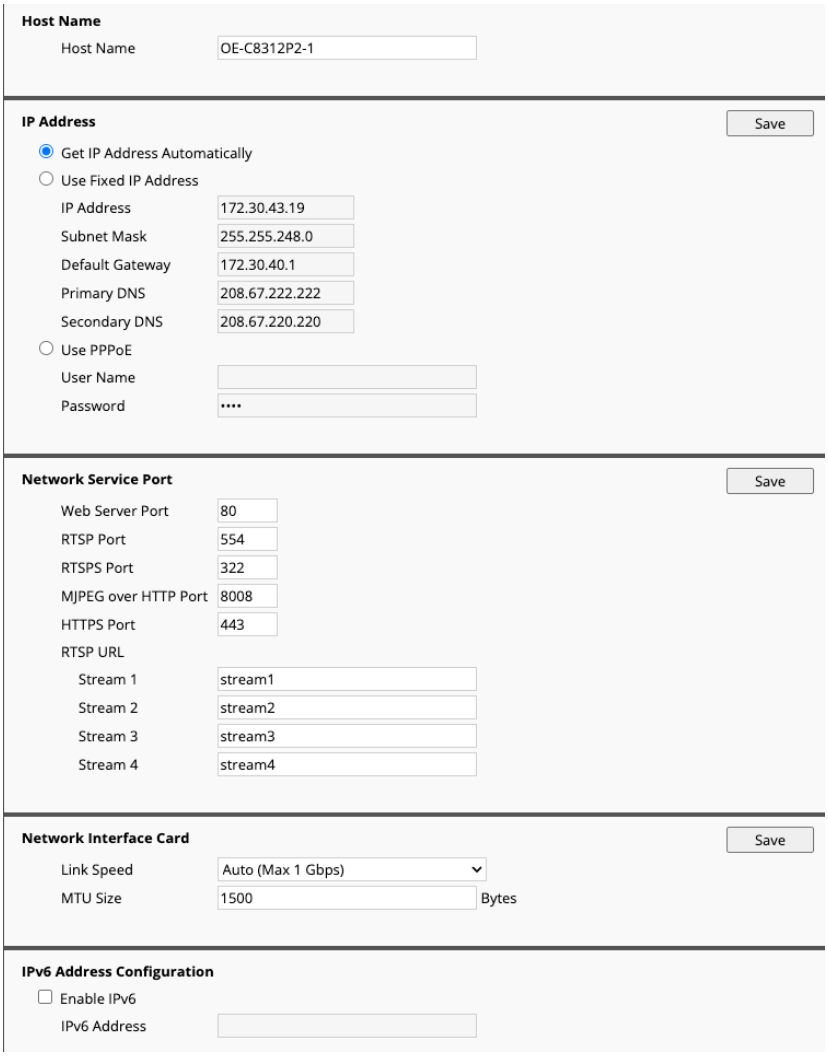
- **Threshold** – Threshold is a maximum number of login attempts, ranging from 5-20 times. The default value is 5 (attempts).

- **Duration** – Duration is the length of time that the account remains locked once the account lockout function is triggered, ranging from 1-60 minute(s). The default value is 10 (mins).

Click **Save** after making any changes to Users.

Network Basic

The IP Address tab allows you to configure the connected camera network settings.



Host Name – Camera identification.
IP Address

- **Get IP Address Automatically (DHCP)** - Select **Get IP address automatically** and click **Save** to confirm the new setting. A note for a camera system reboot will appear. Click **OK** and the camera system will restart. The camera will be assigned a new IP address.

- **Use Fixed IP Address** - Select **Use Fixed IP Address** and insert the new IP address. Then insert the Default gateway. Click **Save** to confirm the new setting. When a note for system restart appears, click **OK** and the camera system will restart. Wait for 15 seconds. The camera's IP address in the URL bar will be changed, and users have to login again.

- **Use PPPoE** - For PPPoE users, enter the PPPoE **User Name** and **Password** into the fields, and click **Save**.

Network Service Port – Advanced is for configuring the camera's **Web Server port**, **RTSP Port**, **MJPEG over HTTP Port**, and **HTTPS Port**:

- **Web Server Port** - The default web server port is 80. With the default web server port 80, users can input the IP address of the camera in the URL bar of a web browser to connect the camera. When the web server port is changed to any number other than 80, users have to enter the camera's IP address followed by a colon and the port number. For instance, a camera whose IP address is set as 192.168.0.100 and web server port is 8080 can be connected by entering "http://192.168.0.100:8080" in the URL bar.

- **RTSP Port** - The default setting of RTSP Port is 554; the RTSP Port should be set as 554 or from the range 1024 to 65535.

- **RTSPS Port** - The default setting of RTSPS Port is 322; the RTSPS Port should be set as 322 or from the range 1024 to 65535.

- **MJPEG over HTTP Port** - The default setting of MJPEG over HTTP Port is 8008; the MJPEG over HTTP Port should be set as 8008 or from the range 1024 to 65535.

- **HTTPS Port** - The default setting of HTTPS Port is 443; the HTTPS Port should be set as 443 or from the range 1024 to 65535.

- **RTSP URL** - When users use RTSP players to view the live streaming, the camera provides the flexibility to configure the streaming access name for stream 1 to stream 4. The streaming format is rtsp://<ip address>:<rtsp port>/<access name>. Take a camera whose IP address is set as 192.168.0.100 for example, if users enter "liveview.1" in the blank of stream 1 access name, the streaming address of stream 1 will be rtsp://192.168.0.100:554/liveview.1.

Note	Port numbers cannot be the same; otherwise, network conflict may occur.

Network Interface Card –

- **Link Speed** - Select the network connection speed for the camera's Ethernet interface. It is recommended to use **Auto** unless a specific speed is required by the network environment.
- **MTU Size** – Set the Maximum Transmission Unit (MTU) size for network packets, in bytes. The default value is typically **1500 bytes**. Adjust this value only if required by the network environment.

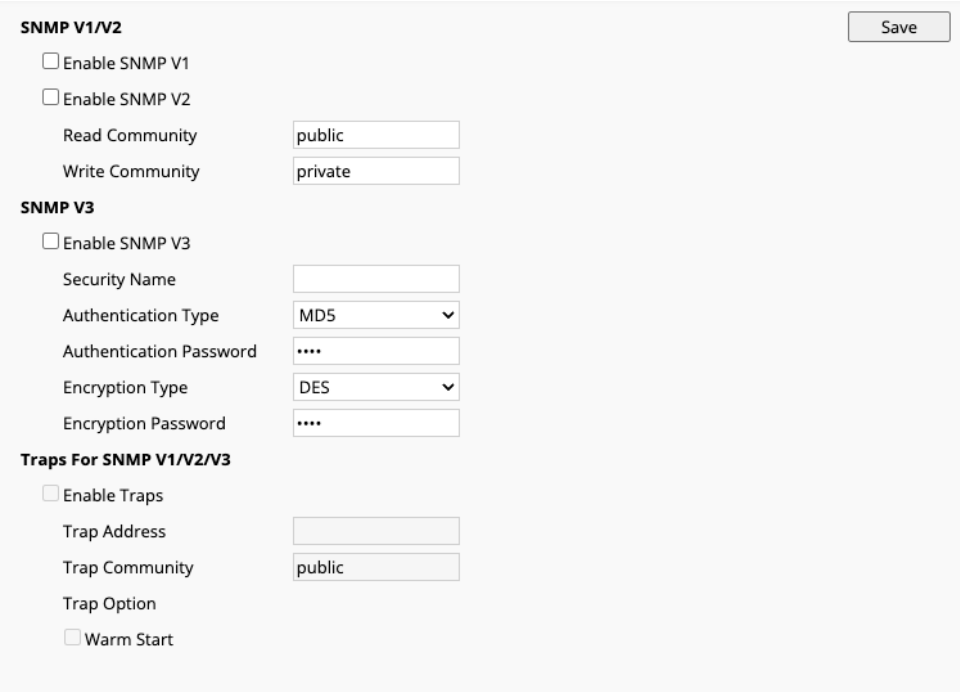
IPv6 Address Configuration - If the network supports IPv6, users can check the box beside **Enable IPv6** and click **Save**. An IPv6 address will appear beside **Address:**, and users can use it to connect to the camera.

Click **Save** after making any changes to Basic Network.

NETWORK ADVANCED

SNMP

With Simple Network Management Protocol (SNMP) support, the camera can be monitored and managed remotely by the network management system.



SNMP v1 / v2

- **Enable SNMP v1 / v2** - Select the version of SNMP by checking the box.
- **Read Community** - Specify the community name that has read-only access to all supported SNMP objects. The default value is “public.”
- **Write Community** - Specify the community name that has read / write access to all supported SNMP objects (except read-only objects). The default value is “private.”

SNMP v3 - SNMP v3 supports an enhanced security system that provides protection against unauthorized users and ensures the privacy of the messages. With SNMP v3, the messages sent between the cameras and the network management system will be encrypted to ensure privacy.

- **Enable SNMP v3** - Enable SNMP v3 by checking the box.
- **Security Name** - The maximum length of the security name is 32 characters.

> **Note** The valid characters are A-Z, a-z, 0-9 and !#$%&'-.@^_~.

- **Authentication Type** - There are two authentication types available: MD5 and SHA. Select **SHA** for a higher security level.
- **Authentication Password** - The authentication password must be 8 characters or more. The input characters / numbers will be displayed as dots for security purposes.

> **Note** The valid characters are A-Z, a-z, 0-9 and !#$%&'-.@^_~.

- **Encryption Type** - There are two encryption types available: DES and AES. Select **AES** for a higher security level.
- **Encryption Password** - The minimum length of the encryption password is 8 characters and the maximum length is 512 characters. The input characters / numbers will be displayed as dots for security purposes. The encryption password can also be left blank. However, the messages will not be encrypted to protect privacy.

> **Note** The valid characters are A-Z, a-z, 0-9 and !#$%&'-.@^_~.

Traps for SNMP v1 / v2 / v3 - Traps are used by the camera to send messages to a management system for important events or status changes.

- **Enable Traps** - Check the box to activate trap reporting.
- **Trap address** - Enter the IP address of the management server.
- **Trap community** - Enter the community to use when sending a trap message to the management system.

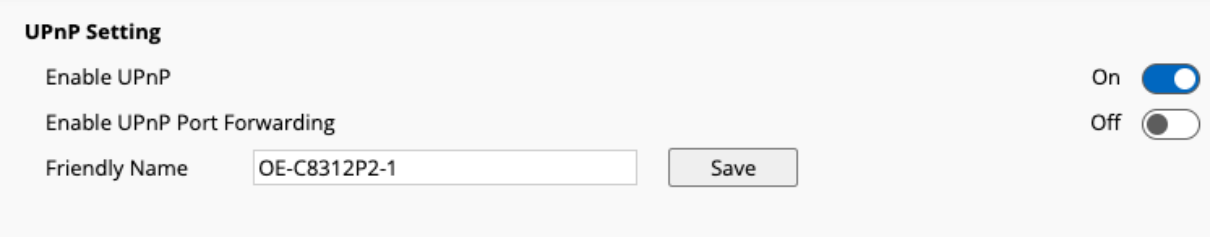
Trap Option

- **Warm Start** - A Warm Start SNMP trap signifies that the SNMP device (IP camera) performs software reload.

Click **Save** after making any changes to SNMP.

UPnP

UPnP (Universal Plug and Play) allows the camera to automatically discover and connect with other compatible devices on the network, simplifying setup and network configuration.



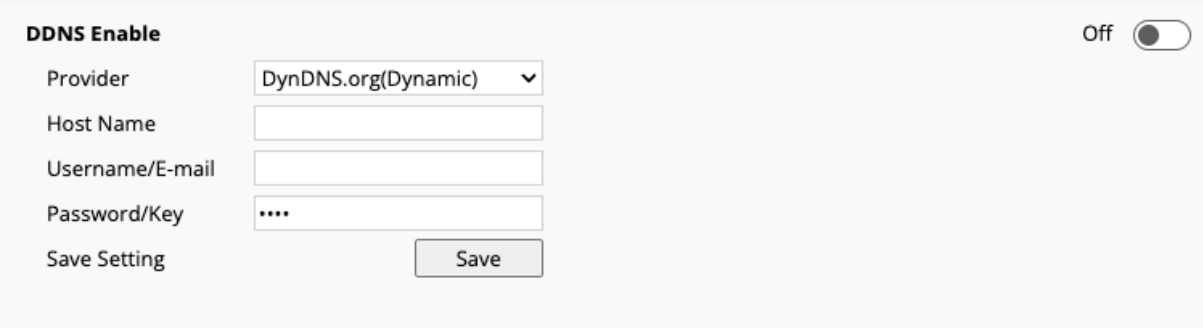
Enable UPnP – Enable Plug n Play, allowing compatible devices on the network to automatically discover and communicate with the camera.

Enable UPnP Port Forwarding – Allows the camera to automatically create port forwarding rules on a UPnP-compatible router for remote access over the internet.

Friendly Name – A name that identifies the camera to other UPnP devices and applications on the network.

DDNS

Dynamic Domain Name System (DDNS) allows a host name to be constantly synchronized with a dynamic IP address. In other words, it allows those using a dynamic IP address to be associated to a static domain name so others can connect to it by name.



DDNS Enable - Check to enable DDNS.

Provider - Select one DDNS host from the provider list.

Host name - Enter the registered domain name in the field.

Username/E-Mail - Enter the username or E-mail required by the DDNS provider for authentication.

Password/Key - Enter the password or key required by the DDNS provider for authentication.

Click **Save** after making any changes to DDNS.

VLAN

A Virtual Local Area Network (VLAN) allows network traffic to be logically separated within the same physical network. By assigning the camera to a VLAN, video, audio, and management traffic can be isolated or prioritized, improving network organization, security, and performance.

VLAN Enable – Check to enable VLAN support. When enabled, the camera will tag network traffic with the specified VLAN ID.

VLAN ID – Enter the VLAN identifier used by the network (valid range is typically 1–4094). This value must match the VLAN configuration on the network switch or router.

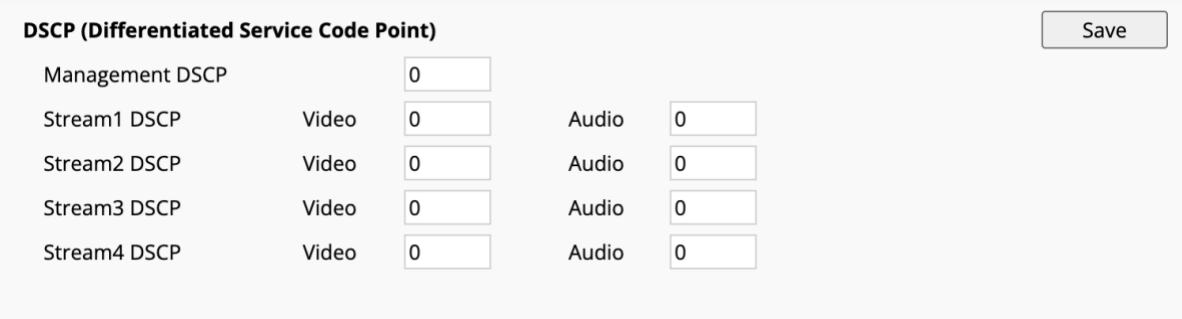
CoS (Class of Service) – Sets the priority level for different types of network traffic. Higher values indicate higher priority.

- **Live Video** – Sets the priority for live video streaming traffic.
- **Live Audio** – Sets the priority for live audio streaming traffic.
- **Management** – Sets the priority for management and configuration traffic.

Save Setting – Click **Save** to apply the VLAN configuration.

QoS

DSCP is a Quality of Service (QoS) mechanism used to classify and prioritize network traffic. By assigning DSCP values, network devices such as switches and routers can give preference to critical traffic like video and audio streams, helping to ensure smooth transmission on congested networks.



Management DSCP – Sets the DSCP value for management and configuration traffic between the camera and management systems.

Stream1–Stream4 DSCP – Sets DSCP values for individual media streams. Each stream can be prioritized independently.

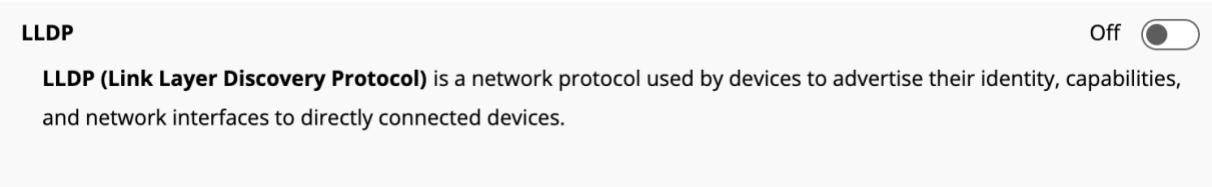
- **Video** – Sets the DSCP value for video data of the selected stream.
- **Audio** – Sets the DSCP value for audio data of the selected stream.

DSCP values range from 0–63. Higher values indicate higher priority. The configured values must be supported and properly mapped by the network infrastructure to take effect.

Click **Save** to apply the DSCP settings.

LLDP

LLDP (Link Layer Discovery Protocol) is a network protocol that allows devices to advertise their identity, capabilities, and network interface information to directly connected devices, such as network switches.



LLDP Enable – Enable or disable LLDP on the camera. When enabled, the camera periodically sends LLDP information that can be viewed on compatible network equipment to assist with device discovery, topology mapping, and troubleshooting.

LLDP operates at the link layer and does not transmit data beyond the local network segment.

RTMP

RTMP (Real-Time Messaging Protocol) allows the camera to stream live video to an external streaming server or platform, such as a media server or live broadcasting service.

RTMP Enable – Enable or disable RTMP streaming.

Selected Stream – Select which video stream (e.g., Stream1) will be used for RTMP output.

Server URL – Enter the RTMP server address provided by the streaming service.

Stream Key – Enter the stream key used by the RTMP server for authentication and stream identification.

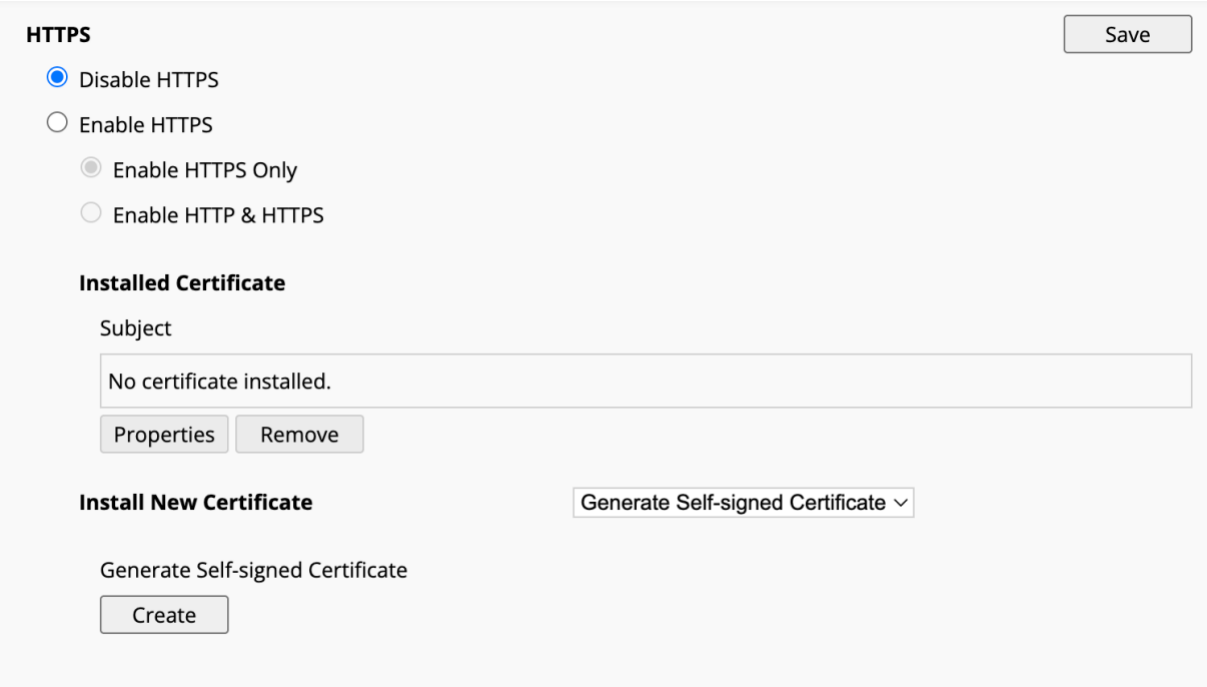
Save Setting – Click **Save** to apply the RTMP configuration.

Ensure the selected stream settings (resolution, frame rate, and bitrate) are compatible with the RTMP server requirements.

SECURITY

HTTPS

HTTPS (Hypertext Transfer Protocol Secure) encrypts communication between the camera and web browsers or management systems, helping protect login credentials and configuration data from unauthorized access.



Disable HTTPS – Disables HTTPS and allows access using HTTP only.

Enable HTTPS – Enables HTTPS support.

- **Enable HTTPS Only** – Allows access to the camera using HTTPS only. HTTP connections are blocked.
- **Enable HTTP & HTTPS** – Allows access using both HTTP and HTTPS.

Installed Certificate – Displays the currently installed SSL/TLS certificate.

- **Subject** – Shows certificate details. If no certificate is installed, this field will indicate that none is present.
- **Properties** – View certificate information.
- **Remove** – Remove the installed certificate.

Install New Certificate – Used to install or generate a new SSL/TLS certificate.

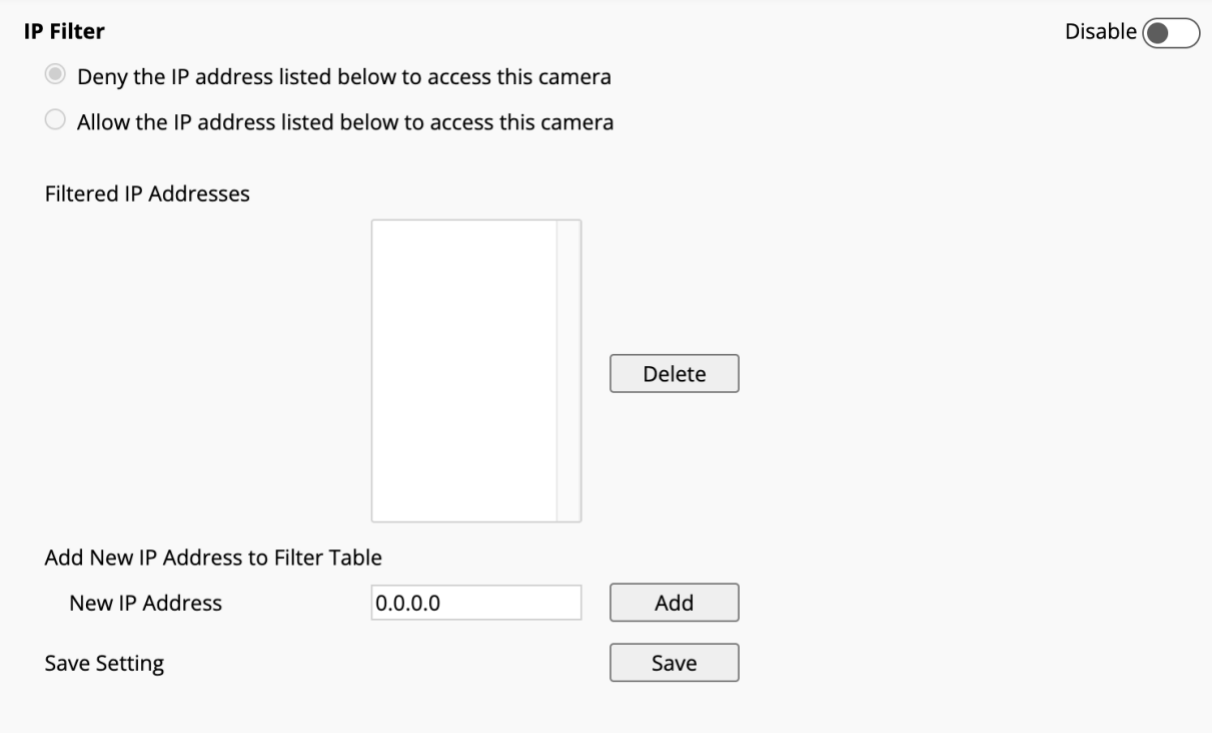
- **Generate Self-signed Certificate** – Creates a self-signed certificate for encrypted HTTPS access.
- **Create** – Click to generate and install a self-signed certificate.

Click **Save** to apply HTTPS settings.

> **Note** When HTTPS Only is enabled, ensure a valid certificate is installed before saving the settings to avoid loss of web access.

IP Filter

The IP Filter function controls which IP addresses are allowed to access the camera. This feature can be used to restrict management access and improve security by permitting or blocking specific network devices.



IP Filter Enable – Enable or disable the IP filtering function.

Filter Mode

- **Deny the IP address listed below to access this camera** – Blocks access from the IP addresses specified in the filter list.
- **Allow the IP address listed below to access this camera** – Allows access only from the IP addresses specified in the filter list. All other IP addresses will be denied.

Filtered IP Addresses – Displays the list of IP addresses currently included in the filter table.

- **Delete** – Remove the selected IP address from the list.

Add New IP Address to Filter Table

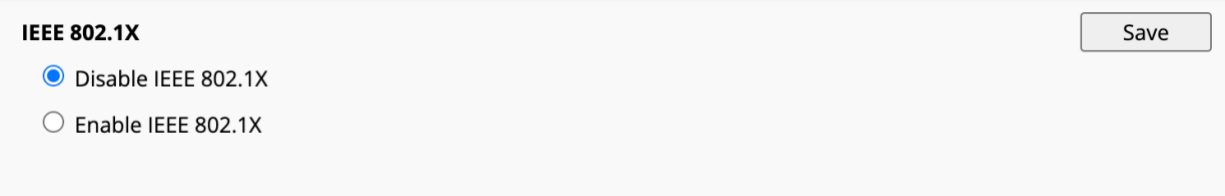
- **New IP Address** – Enter the IP address to be added to the filter list.
- **Add** – Add the entered IP address to the filter table.

Save Setting – Click **Save** to apply the IP filter configuration.

> **Note** When using the "Allow" mode, ensure your current IP address is included in the filter list to avoid losing access to the camera.

IEEE 802.1X

IEEE 802.1X is a port-based network access control standard used to authenticate devices before they are allowed to communicate on the network. When enabled, the camera must successfully authenticate with an authentication server before network access is granted.



Disable IEEE 802.1X – Disables 802.1X authentication.

Enable IEEE 802.1X – Enables 802.1X authentication. When enabled, the camera will use the configured authentication credentials to connect to the network.

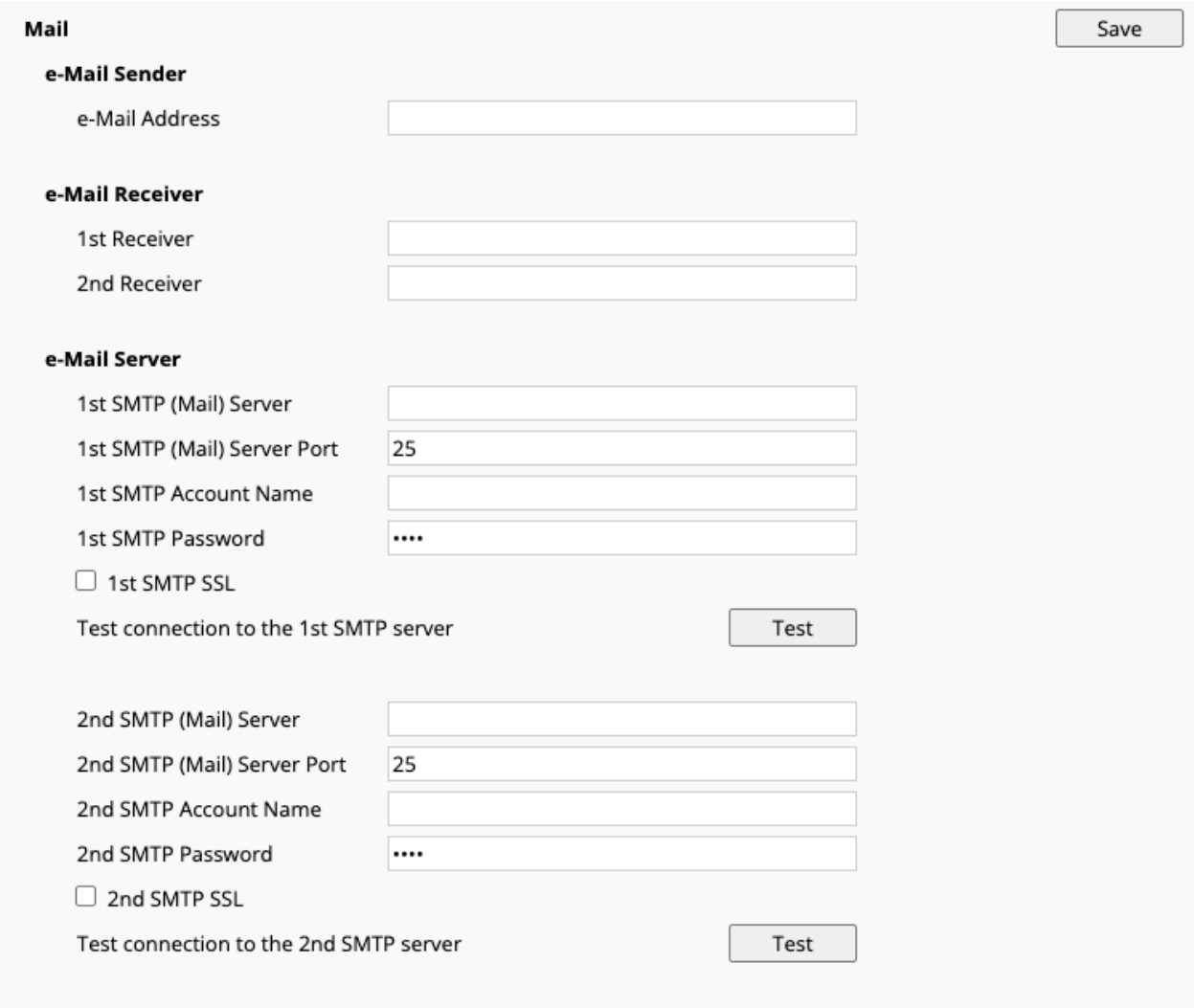
Click **Save** to apply the IEEE 802.1X settings.

> **Note** Enabling IEEE 802.1X requires a properly configured authentication server (such as RADIUS). Incorrect settings may prevent the camera from accessing the network.

EVENT MANAGEMENT

Mail

The Mail settings configure the camera to send email notifications using an SMTP server. This allows the camera to deliver alerts, event messages, or system notifications to designated recipients.



e-Mail Sender – Defines the sender information used in outgoing emails.

- **e-Mail Address** – Enter the email address that will appear as the sender of camera emails.

e-Mail Receiver – Specifies the destination email addresses for notifications.

- **1st Receiver** – Primary recipient email address.
- **2nd Receiver** – Secondary recipient email address.

e-Mail Server – Configures one or two SMTP servers for sending email.

- **1st SMTP (Mail) Server** – Hostname or IP address of the primary SMTP server.
- **1st SMTP (Mail) Server Port** – Port number used by the SMTP server (default: 25).
- **1st SMTP Account Name** – Username for SMTP authentication.
- **1st SMTP Password** – Password for SMTP authentication.
- **1st SMTP SSL** – Enables SSL encryption for the primary SMTP connection.
- **Test connection to the 1st SMTP server** – Click **Test** to verify connectivity and authentication.

2nd SMTP (Mail) Server – Hostname or IP address of the secondary SMTP server (backup).

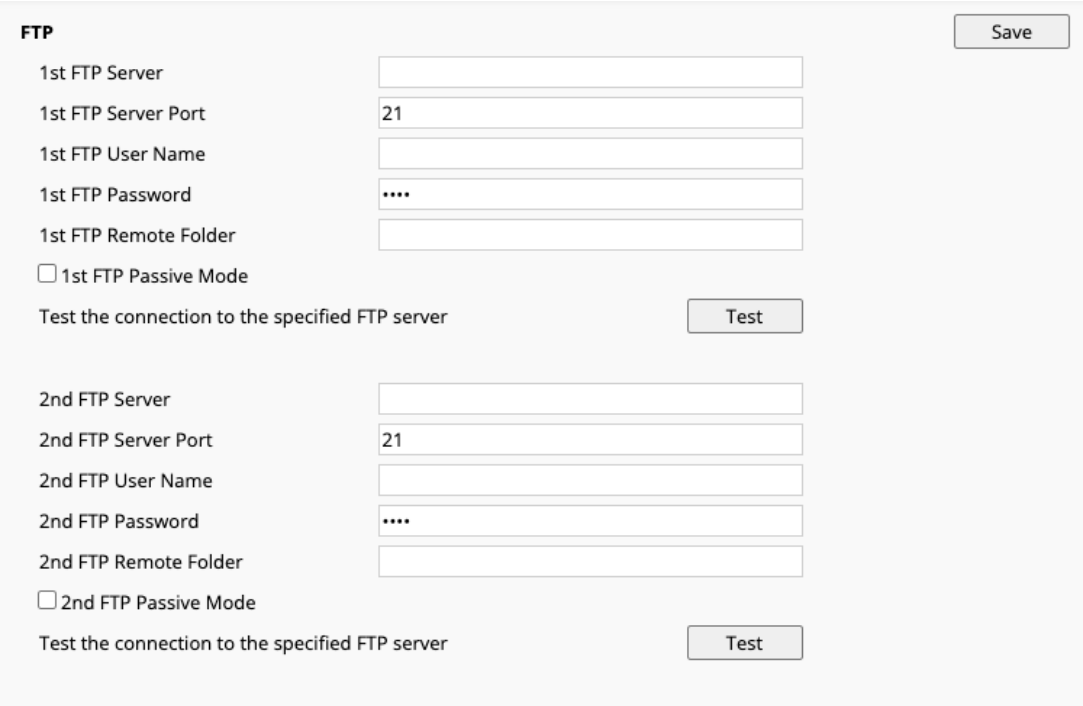
- **2nd SMTP (Mail) Server Port** – Port number used by the secondary SMTP server (default: 25).
- **2nd SMTP Account Name** – Username for secondary SMTP authentication.
- **2nd SMTP Password** – Password for secondary SMTP authentication.
- **2nd SMTP SSL** – Enables SSL encryption for the secondary SMTP connection.
- **Test connection to the 2nd SMTP server** – Click **Test** to verify connectivity and authentication.

Click **Save** to apply the email settings.

Note	Ensure the SMTP server information and credentials are correct before saving. If SSL is enabled, confirm the selected port supports SSL/TLS to avoid email delivery failures.

FTP

The FTP settings configure the camera to upload files to a remote FTP server, allowing event data, images, or video clips to be stored externally.



FTP Server – Configures one or two FTP servers for file upload.

- **1st FTP Server** – Hostname or IP address of the primary FTP server.
- **1st FTP Server Port** – Port number used by the FTP server (default: 21).
- **1st FTP User Name** – Username for FTP authentication.
- **1st FTP Password** – Password for FTP authentication.
- **1st FTP Remote Folder** – Remote directory where files are uploaded.
- **1st FTP Passive Mode** – Enables passive FTP mode.
- **Test the connection to the specified FTP server** – Click **Test** to verify connectivity.
- **2nd FTP Server** – Hostname or IP address of the secondary FTP server (backup).
- **2nd FTP Server Port** – Port number used by the FTP server (default: 21).
- **2nd FTP User Name** – Username for FTP authentication.
- **2nd FTP Password** – Password for FTP authentication.
- **2nd FTP Remote Folder** – Remote directory where files are uploaded.
- **2nd FTP Passive Mode** – Enables passive FTP mode.
- **Test the connection to the specified FTP server** – Click **Test** to verify connectivity.

Click **Save** to apply the FTP settings.

Note	Use Passive Mode when the FTP server is behind a firewall or NAT to ensure successful file transfers.

HTTP

The HTTP settings configure the camera to send data to a remote HTTP server, typically used for event notifications or integrations with external systems.

HTTP Server – Configures one or two HTTP servers for data transmission.

- **1st HTTP Server** – URL or address of the primary HTTP server.
- **1st HTTP User Name** – Username for HTTP authentication.
- **1st HTTP Password** – Password for HTTP authentication.

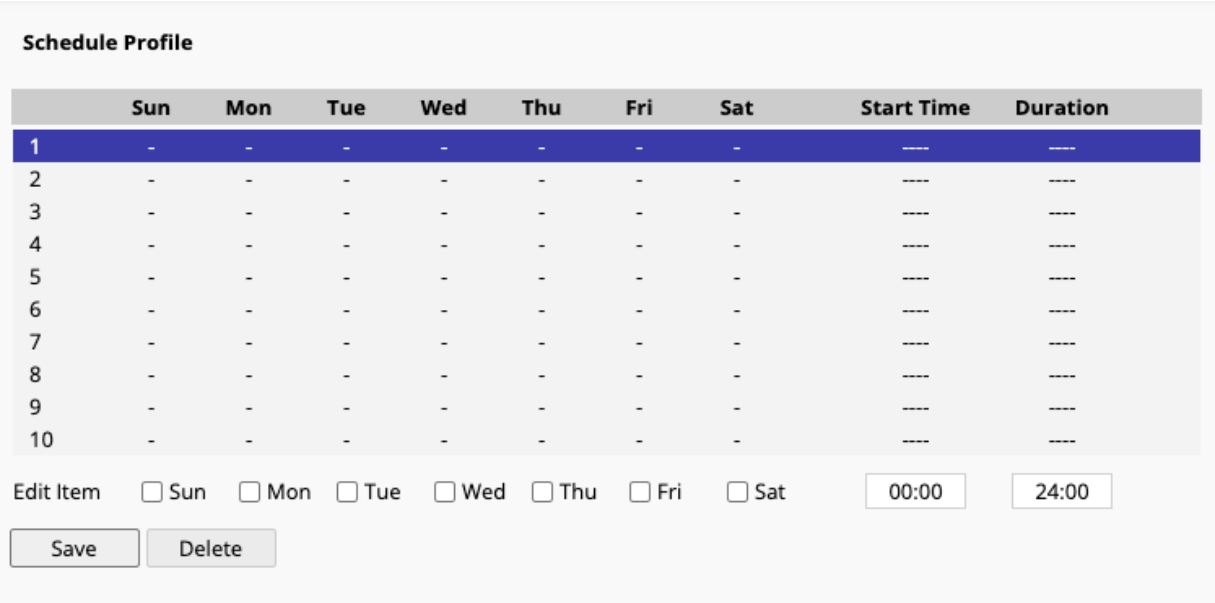
- **2nd HTTP Server** – URL or address of the secondary HTTP server (backup).
- **2nd HTTP User Name** – Username for HTTP authentication.
- **2nd HTTP Password** – Password for HTTP authentication.

Click **Save** to apply the HTTP settings.

Note	Ensure the HTTP server supports the required authentication method to avoid transmission failures.

Schedule Profile

The Schedule Profile settings define time schedules used to control when camera functions or events are active.



Schedule List – Displays available schedule profiles.

- **Profile Number** – Select a schedule entry to edit.
- **Sun–Sat** – Indicates the days of the week included in the schedule.
- **Start Time** – Start time for the selected schedule.
- **Duration** – Length of time the schedule remains active.

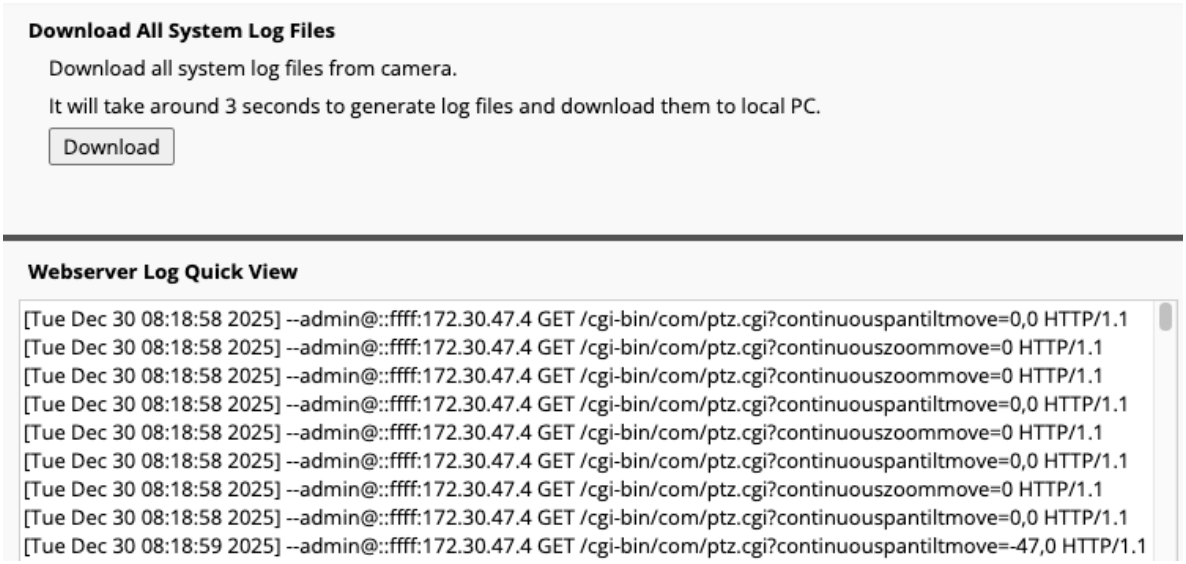
Click **Save** to apply the schedule settings.
Click **Delete** to remove the selected schedule profile.

> **Note** A schedule must be configured before it can be assigned to events or camera functions.

LOG MANAGEMENT

System Log

The System Log provides access to camera log files for troubleshooting and system analysis.



Download All System Log Files – Downloads all system log files from the camera to the local PC.

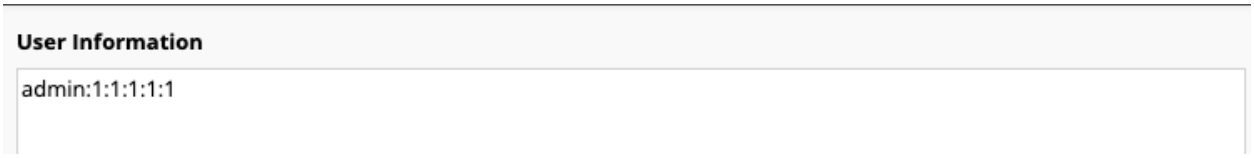
- **Download** – Click to generate and download the log files. The process takes approximately 3 seconds.

Webserver Log Quick View – Displays recent web server activity directly in the browser.

- **Log Entries** – Shows timestamps, user information, source IP address, and HTTP request details.

User Information

The User Information page displays details about the currently logged-in user.

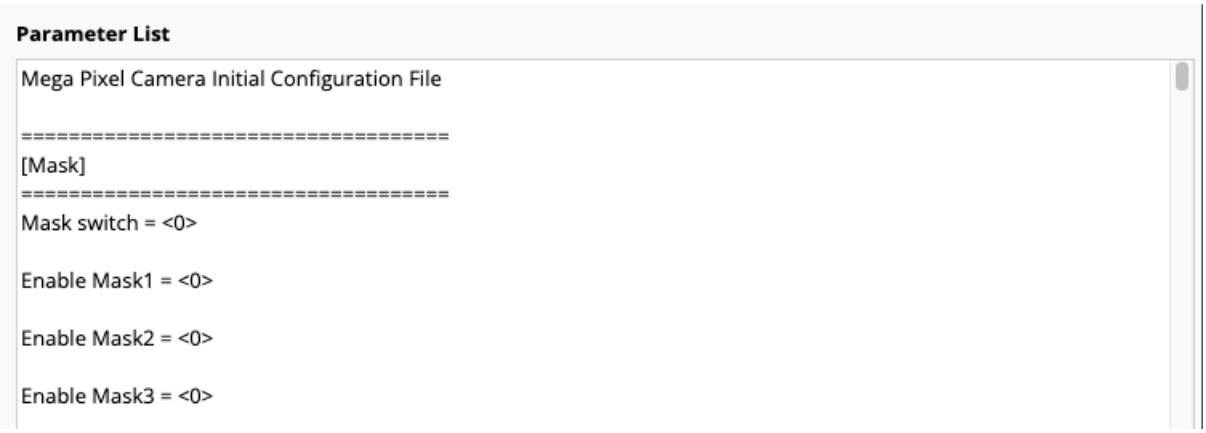


User Information – Shows the active user account and related session details.

Note	This information is view-only and cannot be modified.

Parameters

The Parameter List displays the camera's internal configuration parameters in text format.

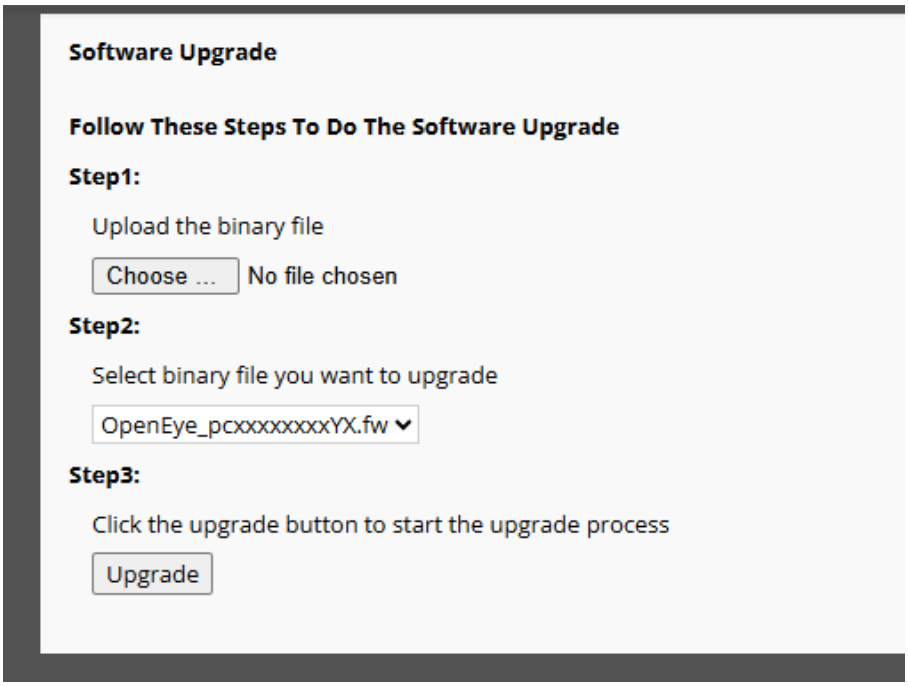


Parameter List – Shows the initial configuration file and current parameter values used by the camera system.

MAINTENANCE

Software Upgrade

The Software Upgrade page is used to update the camera firmware.



STEP 1 – Upload the binary file.

Click **Choose** to browse for the file.

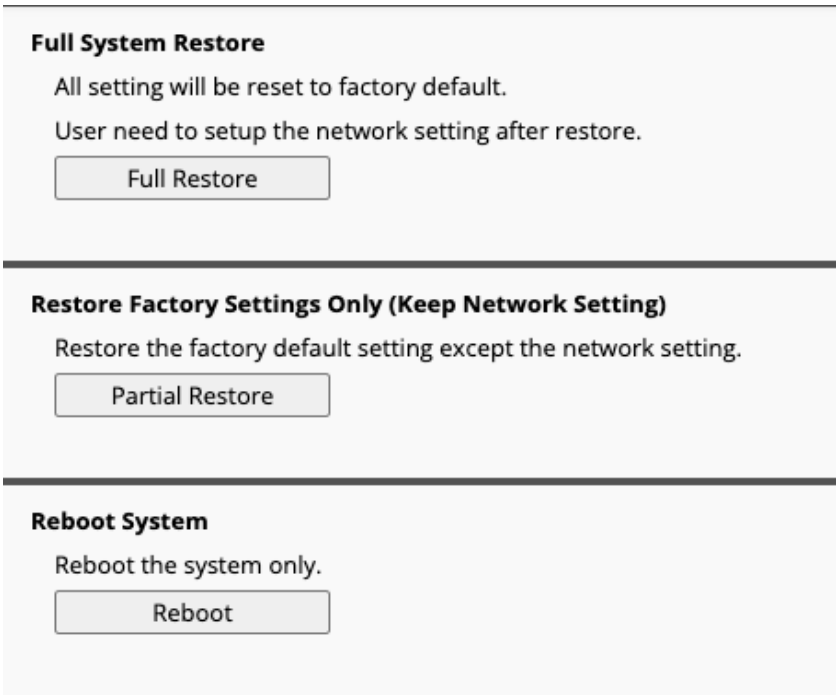
STEP 2 – Select binary file you want to upgrade from the dropdown.

STEP 3 – Click the upgrade button to start the upgrade process.

Note	Do not power off or disconnect the device during the upgrade to prevent system damage.

Factory Default

The System Restore options are used to reset or reboot the camera.



Full System Restore – Restores all settings to factory defaults.

- **Full Restore** – Click to reset the camera. Network settings will also be reset and must be reconfigured after restore.

Restore Factory Settings Only (Keep Network Setting) – Restores factory defaults except for network settings.

- **Partial Restore** – Click to reset all settings except network configuration.

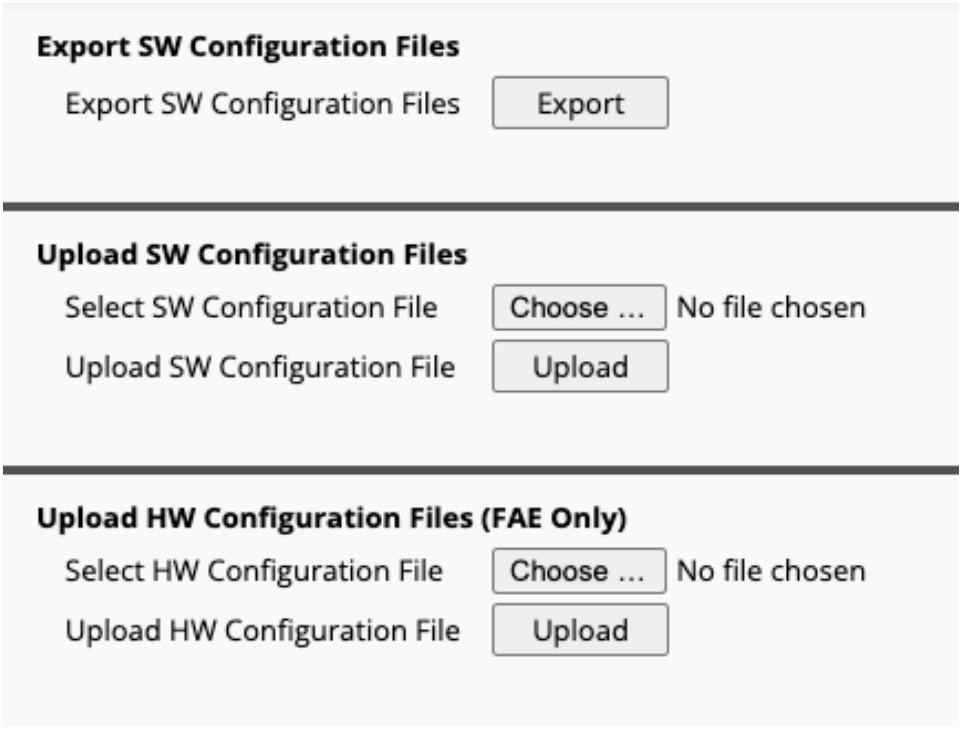
Reboot System – Restarts the camera without changing any settings.

- **Reboot** – Click to reboot the system.

Note	Do not power off the device during restore operations.

Configuration Files

The Configuration Files options allow exporting and importing camera configuration settings.



Export SW Configuration Files – Exports the current software configuration.

- **Export** – Click to download the configuration files to the local PC.

Upload SW Configuration Files – Imports software configuration files to the camera.

- **Select SW Configuration File** – Choose a configuration file from the local PC.
- **Upload** – Click to upload and apply the selected configuration file.

Upload HW Configuration Files (FAE Only) – Imports hardware configuration files.

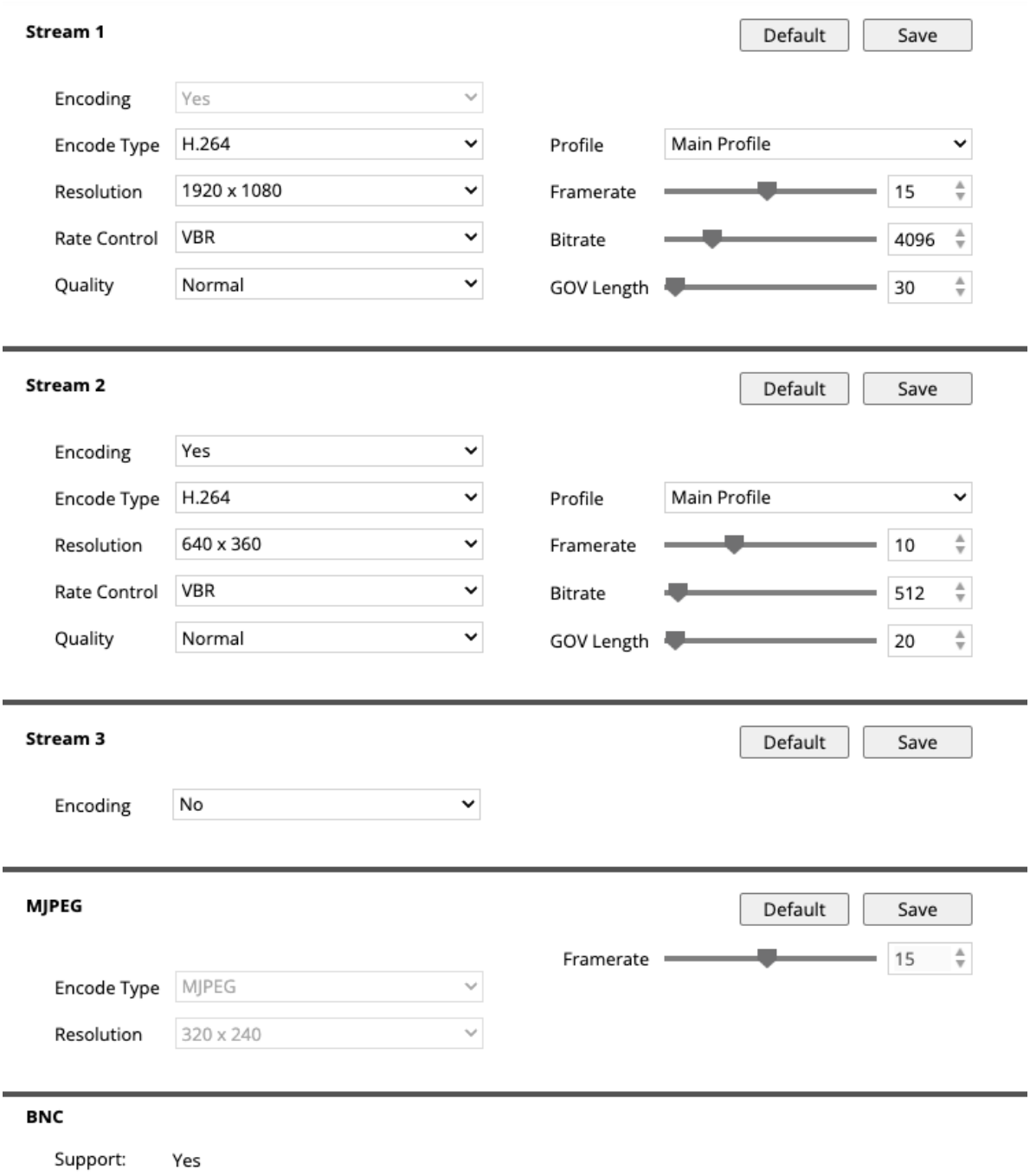
- **Select HW Configuration File** – Choose a hardware configuration file.
- **Upload** – Click to upload the selected hardware configuration file.

Note	Uploading configuration files may overwrite existing settings.

Streaming

Video Configuration

The Video Stream settings configure video encoding parameters for each available stream.



Stream 1 / Stream 2 – Configures the primary and secondary video streams.

- **Encoding** – Enables or disables the stream.
- **Encode Type** – Selects the video compression format (e.g., H.264).
- **Profile** – Selects the encoding profile.
- **Resolution** – Sets the video resolution.
- **Framerate** – Sets the number of frames per second.
- **Rate Control** – Selects the bitrate control mode (e.g., VBR).
- **Bitrate** – Sets the target video bitrate.
- **Quality** – Sets the image quality level.
- **GOV Length** – Sets the Group of Video (GOV) length.

Default – Restores default stream settings.
Save – Applies the stream settings.

Stream 3 – Configures an additional video stream.

- **Encoding** – Enables or disables the stream.

MJPEG – Configures MJPEG video output.

- **Encode Type** – MJPEG format.
- **Resolution** – Sets the MJPEG resolution.
- **Framerate** – Sets the MJPEG frame rate.

Default – Restores default MJPEG settings.
Save – Applies MJPEG settings.

BNC – Displays analog video output support status.

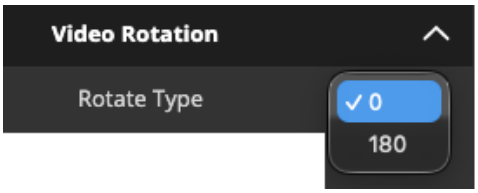
- **Support** – Indicates whether BNC output is supported.

Note	Higher resolution, frame rate, and bitrate settings increase bandwidth and storage usage.

Video Rotation

Rotate Type

The Video Rotation setting controls the orientation of the camera video.

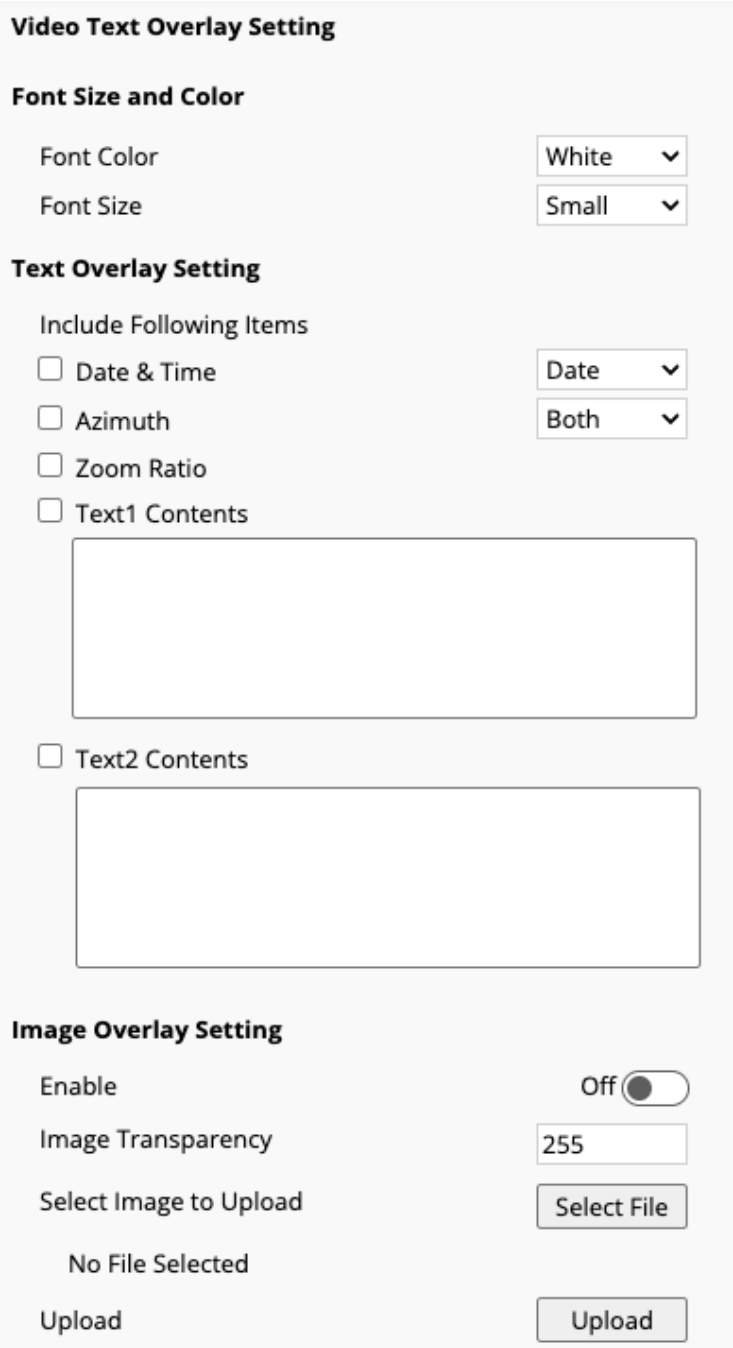


Rotate Type – Selects the rotation angle for the video image.

- **0** – Displays the video in the original orientation.
- **180** – Rotates the video image by 180 degrees.

Video Text Overlay

The Video Text Overlay settings configure text and image information displayed on the video.



Font Size and Color – Configures text appearance.

- **Font Color** – Selects the color of overlay text.
- **Font Size** – Selects the size of overlay text.

Text Overlay Setting – Configures text information shown on the video.

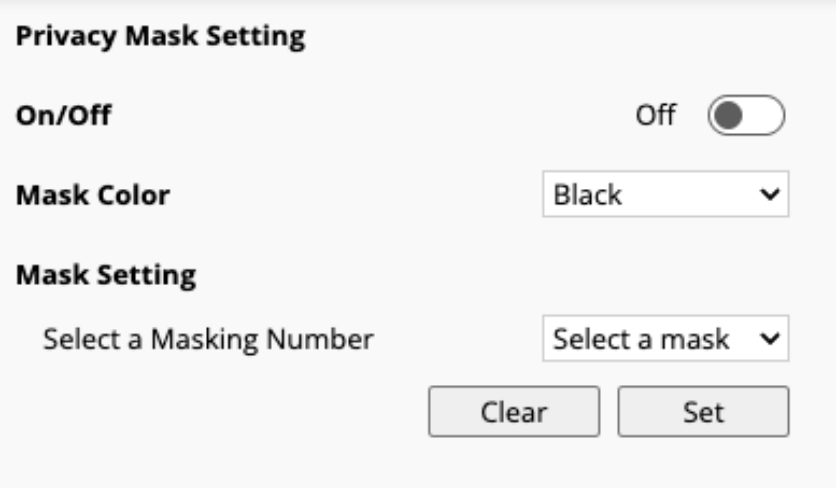
- **Include Following Items** – Selects which items to display.
- **Date & Time** – Displays date, time, or both on the video.
- **Azimuth** – Displays camera azimuth information.
- **Zoom Ratio** – Displays the current zoom ratio.
- **Text1 Contents** – Displays custom user-defined text.
- **Text2 Contents** – Displays additional custom user-defined text.

Image Overlay Setting – Configures an image overlay on the video.

- **Enable** – Enables or disables the image overlay.
- **Image Transparency** – Sets the transparency level of the overlay image.
- **Select Image to Upload** – Selects an image file for overlay.
- **Upload** – Uploads the selected image to the camera.

Privacy Mask

The Privacy Mask settings configure areas of the video that are hidden from view.

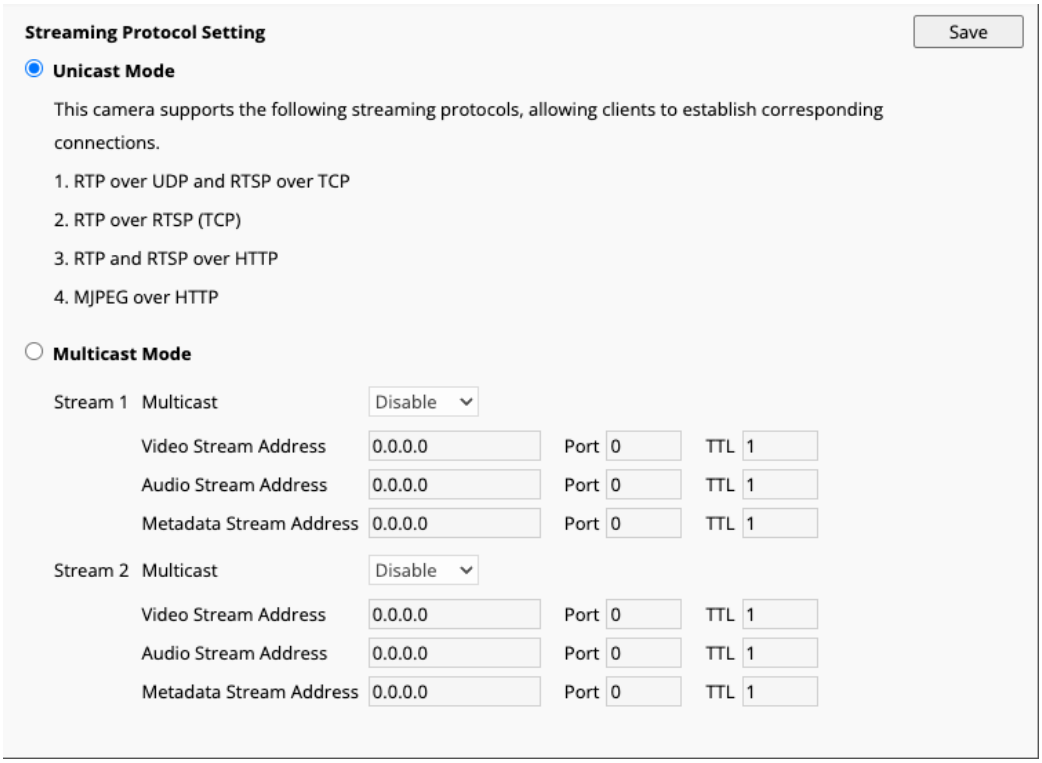


- **On/Off** – Enables or disables the privacy mask function.
- **Mask Color** – Selects the color used for masked areas.
- **Mask Setting** – Configures individual privacy mask regions.
- **Select a Masking Number** – Selects the mask region to configure.

Set – Defines the selected privacy mask area on the video.
Clear – Removes the selected privacy mask area.

Streaming Protocol

The Streaming Protocol settings configure how video streams are delivered to clients.



Unicast Mode – Enables unicast streaming for client connections. The camera supports the following unicast streaming protocols: RTP over UDP and RTSP over TCP, RTP over RTSP (TCP), RTP and RTSP over HTTP, and MJPEG over HTTP.

Multicast Mode – Enables multicast streaming for network distribution.

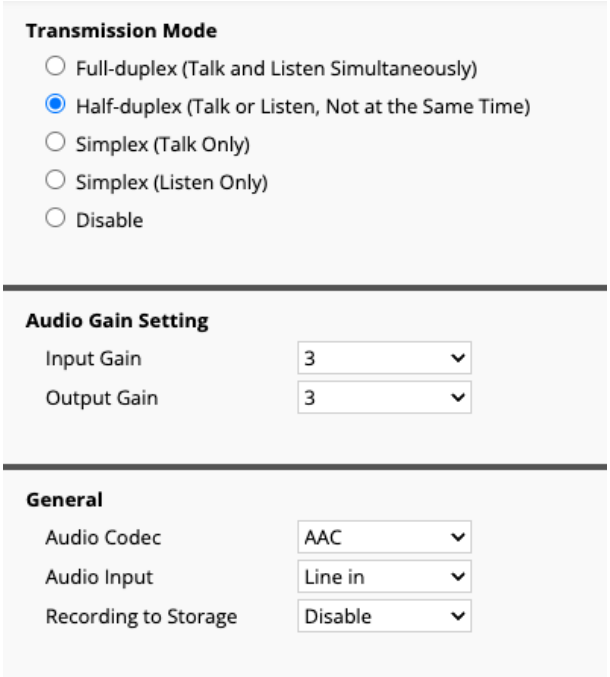
Stream 1 / Stream 2 Multicast – Configures multicast settings.

- **Enable/Disable** – Enables or disables multicast for Stream 1.
- **Video Stream Address** – Multicast IP address for video streaming.
- **Audio Stream Address** – Multicast IP address for audio streaming.
- **Metadata Stream Address** – Multicast IP address for metadata streaming.
- **Port** – Network port used for the stream.
- **TTL** – Time To Live value for multicast packets.

Click **Save** to apply the streaming protocol settings.

Audio

The Audio Settings configure audio transmission, gain, and general audio parameters.



Transmission Mode – Selects how audio is transmitted.

- **Full-duplex (Talk and Listen Simultaneously)** – Enables simultaneous audio talk and listen.
- **Half-duplex (Talk or Listen, Not at the Same Time)** – Enables either talk or listen, but not both at the same time.
- **Simplex (Talk Only)** – Enables audio transmission only.
- **Simplex (Listen Only)** – Enables audio reception only.
- **Disable** – Disables audio transmission.

Audio Gain Setting – Configures audio volume levels.

- **Input Gain** – Sets the microphone input level.
- **Output Gain** – Sets the speaker output level.

General – Configures general audio parameters.

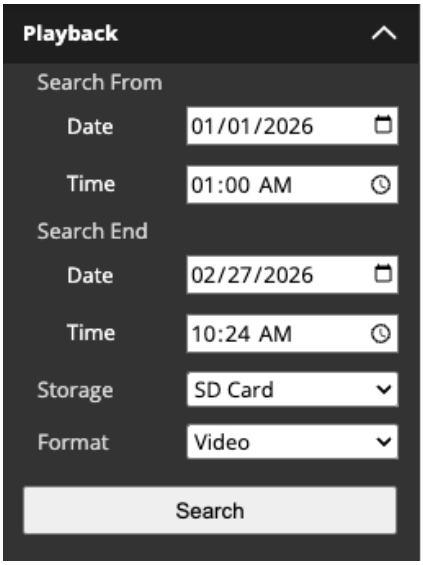
- **Audio Codec** – Selects the audio compression format.
- **Audio Input** – Selects the audio input source.
- **Recording to Storage** – Enables or disables audio recording to storage.

Note	Audio functionality depends on connected audio hardware and selected transmission mode.

Recording

Playback

The Playback page is used to search and play recorded data stored on the camera.



Search From – Sets the start time for playback search.

- **Date** – Selects the start date.
- **Time** – Selects the start time.

Search End – Sets the end time for playback search.

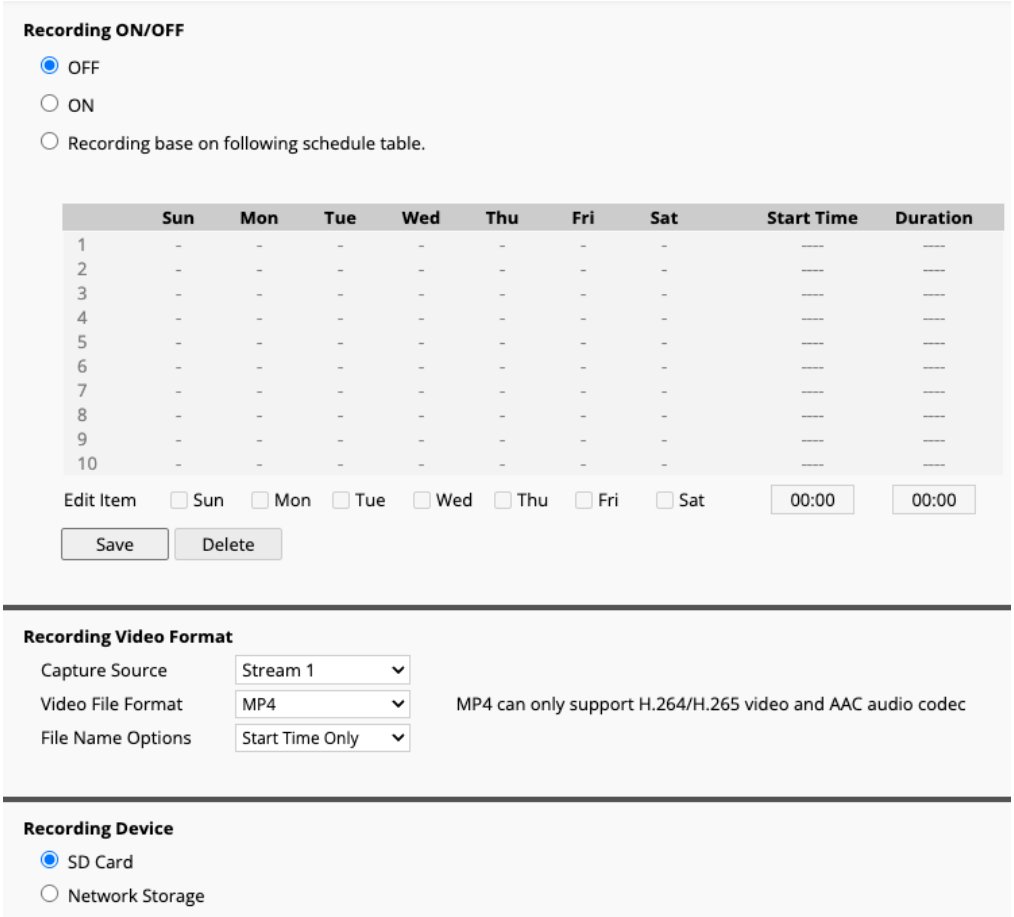
- **Date** – Selects the end date.
- **Time** – Selects the end time.

Storage – Selects the storage location to search.
Format – Selects the recording format.

Search – Starts searching for recorded files based on the specified criteria.

Recording Settings

The Recording settings configure video recording behavior, schedule, format, and storage location.



Recording ON/OFF – Controls video recording operation.

- **OFF** – Disables recording.
- **ON** – Enables continuous recording.
- **Recording based on following schedule table** – Enables recording according to the configured schedule.
    - **Sun–Sat** – Indicates the days of the week included in the schedule.
    - **Start Time** – Sets the start time for recording.
    - **Duration** – Sets the recording duration.

  Save – Saves the schedule settings.
  Delete – Deletes the selected schedule entry.

Recording Video Format – Configures recording format settings.

- **Capture Source** – Selects the video stream used for recording.
- **Video File Format** – Selects the recording file format.

- **File Name Options** – Selects the file naming method.

Recording Device – Selects the storage destination.

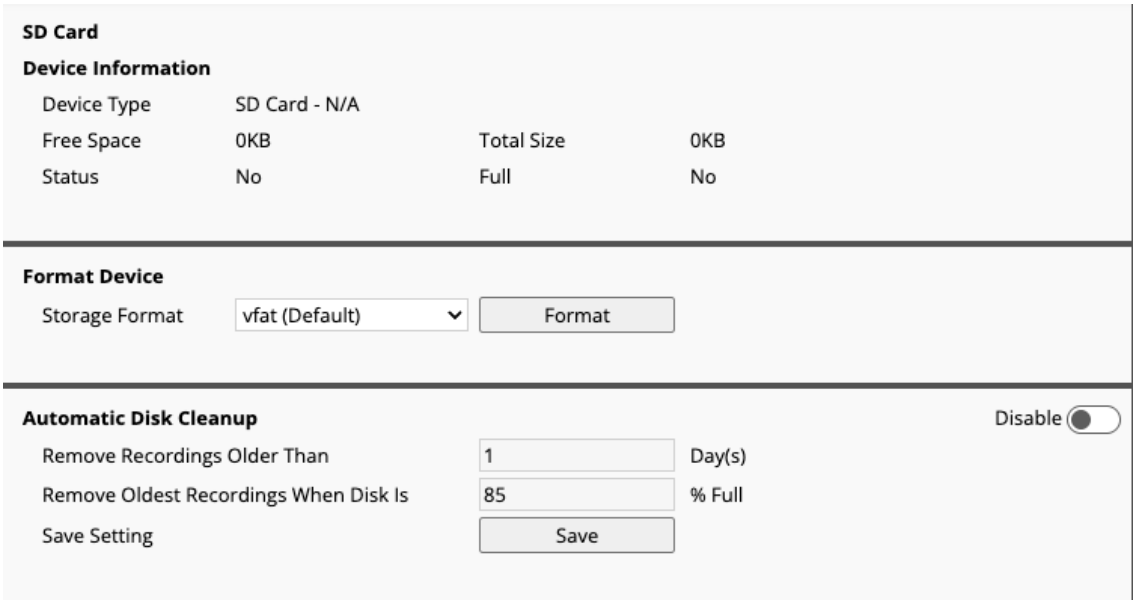
- **SD Card** – Records video to the SD card.
- **Network Storage** – Records video to network storage.

> **Note** Recording availability depends on storage status and selected video and audio codecs.

STORAGE MANAGEMENT

SD Card

The SD Card page displays storage information and configures SD card management settings.



Device Information – Displays SD card status and capacity details.

- **Device Type** – Shows the detected storage device type.
- **Free Space** – Displays available storage space.
- **Total Size** – Displays total storage capacity.
- **Status** – Indicates SD card availability and usage status.
- **Full** – Indicates whether the SD card is full.

Format Device – Formats the SD card.

- **Storage Format** – Selects the file system format.

Format – Click to format the SD card using the selected format.

Automatic Disk Cleanup – Configures automatic deletion of old recordings.

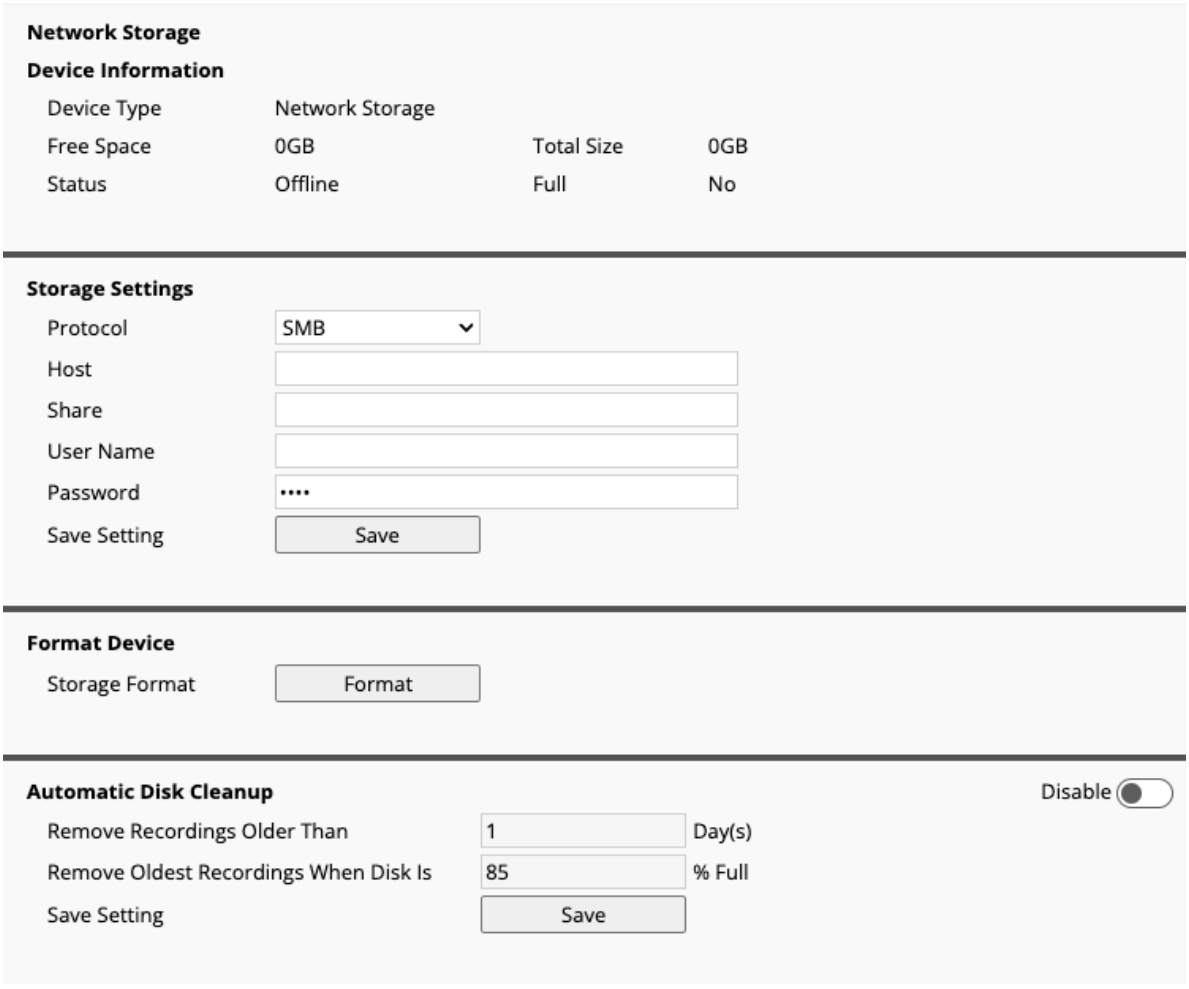
- **Remove Recordings Older Than** – Deletes recordings older than the specified number of days.
- **Remove Oldest Recordings When Disk Is** – Deletes oldest recordings when disk usage reaches the specified percentage.

Save Setting – Saves the automatic cleanup settings.

> **Note** Formatting the SD card will erase all stored data.

Network Storage

The Network Storage page displays network storage status and configures remote storage settings.



Device Information – Displays network storage status and capacity details.

- **Device Type** – Shows the storage type.

- **Free Space** – Displays available storage space.
- **Total Size** – Displays total storage capacity.
- **Status** – Indicates network storage connection status.
- **Full** – Indicates whether the storage is full.

Storage Settings – Configures network storage connection parameters.

- **Protocol** – Selects the network storage protocol.
- **Host** – Specifies the network storage server address.
- **Share** – Specifies the shared folder name.
- **User Name** – Username for network storage authentication.
- **Password** – Password for network storage authentication.

Save Setting – Saves the network storage settings.

Format Device – Formats the network storage device.

- **Storage Format** – Formats the configured network storage.

Automatic Disk Cleanup – Configures automatic deletion of old recordings.

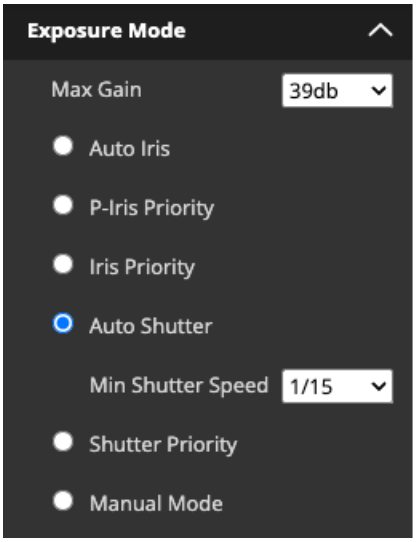
- **Remove Recordings Older Than** – Deletes recordings older than the specified number of days.
- **Remove Oldest Recordings When Disk Is** – Deletes oldest recordings when disk usage reaches the specified percentage.

Save Setting – Saves the automatic cleanup settings.

Camera

Exposure Mode

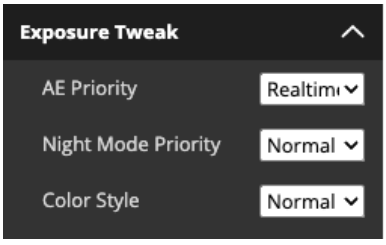
The Exposure Mode settings control how the camera adjusts exposure for different lighting conditions.



Max Gain – Sets the maximum gain level allowed for automatic exposure control.
Auto Iris – Automatically adjusts the iris to control exposure.
P-Iris Priority – Prioritizes P-Iris control for exposure adjustment.
Iris Priority – Prioritizes iris adjustment over other exposure parameters.
Auto Shutter – Automatically adjusts shutter speed to control exposure.
Min Shutter Speed – Sets the minimum shutter speed when Auto Shutter is enabled.
Shutter Priority – Prioritizes shutter speed control for exposure.
Manual Mode – Allows manual control of exposure parameters.

Exposure Tweak

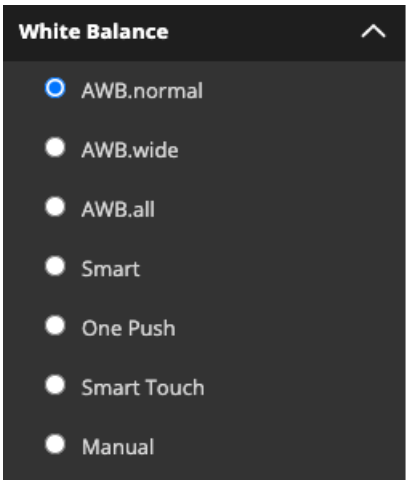
The Exposure Tweak settings fine-tune automatic exposure behavior.



- **AE Priority** – Selects the automatic exposure priority mode.
- **Night Mode Priority** – Selects exposure behavior for night conditions.
- **Color Style** – Selects the overall color rendering style.

White Balance

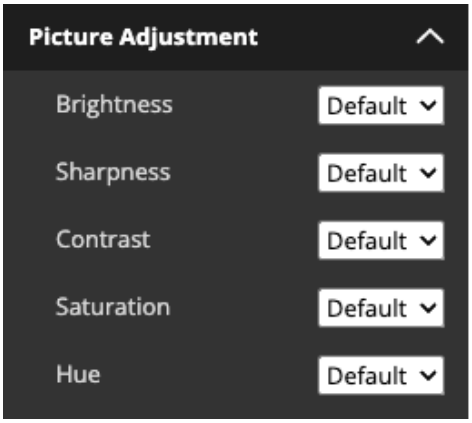
The White Balance settings adjust color balance to ensure accurate color reproduction under different lighting conditions.



AWB.normal – Automatic white balance optimized for standard lighting.
AWB.wide – Automatic white balance optimized for a wider range of lighting conditions.
AWB.all – Automatic white balance covering all supported lighting conditions.
Smart – Automatically adjusts white balance based on scene analysis.
One Push – Performs a one-time automatic white balance adjustment.
Smart Touch – Allows white balance adjustment based on a selected area.
Manual – Allows manual control of white balance settings.

Picture Adjustment

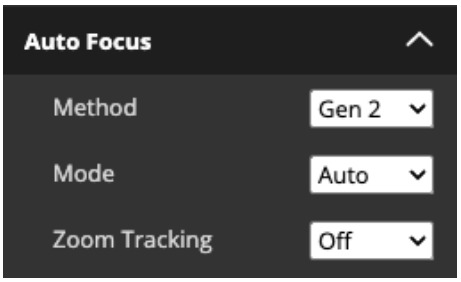
The Picture Adjustment settings control basic image appearance parameters.



Brightness – Adjusts overall image brightness.
Sharpness – Adjusts image edge clarity.
Contrast – Adjusts the difference between light and dark areas.
Saturation – Adjusts color intensity.
Hue – Adjusts overall color tone.

Auto Focus

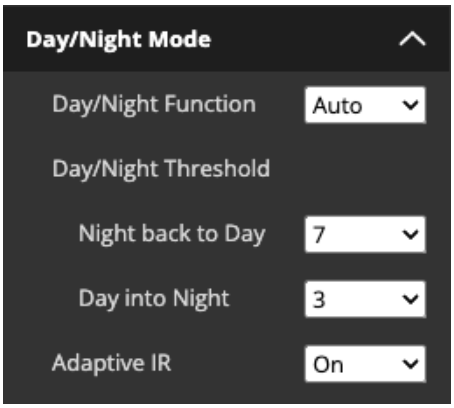
The Auto Focus settings control how the camera automatically adjusts focus.



Method – Selects the autofocus algorithm.
Mode – Selects the autofocus operating mode.
Zoom Tracking – Enables or disables focus adjustment during zoom operations.

Day/Night Mode

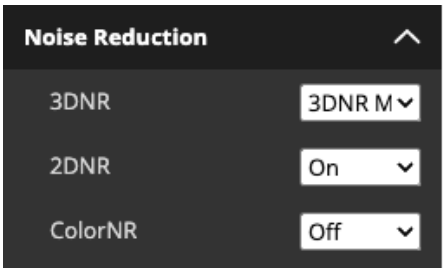
The Day/Night Mode settings control how the camera switches between day and night operation.



Day/Night Function – Selects the day/night operating mode.
Day/Night Threshold – Configures light level thresholds for switching modes.
Night back to Day – Sets the threshold for switching from night mode back to day mode.
Day into Night – Sets the threshold for switching from day mode to night mode.
Adaptive IR – Enables or disables adaptive infrared illumination control.

Noise Reduction

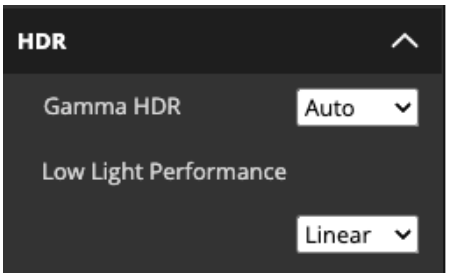
The Noise Reduction settings reduce image noise to improve video quality, especially in low-light conditions.



3DNR – Configures 3D digital noise reduction mode.
2DNR – Enables or disables 2D digital noise reduction.
ColorNR – Enables or disables color noise reduction.

HDR

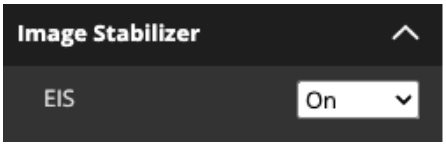
The HDR settings control high dynamic range processing to improve image detail in scenes with varying light levels.



Gamma HDR – Selects the gamma mode used for HDR processing.
Low Light Performance – Selects the HDR behavior in low-light conditions.

Image Stabilizer

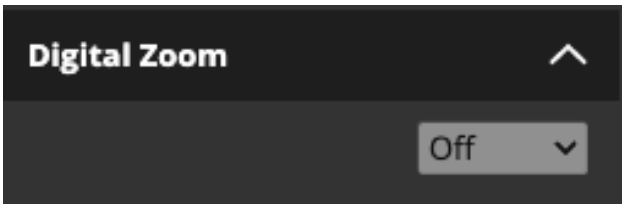
The Image Stabilizer setting reduces image shake to improve video stability.



EIS – Enables or disables electronic image stabilization.

Digital Zoom

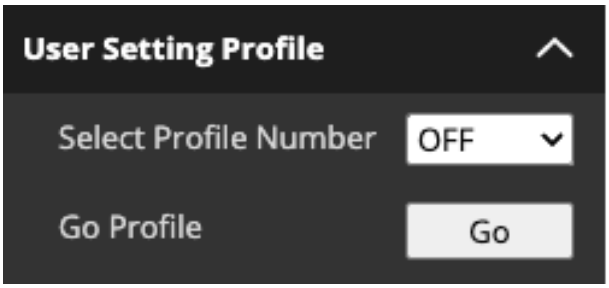
The Digital Zoom setting controls digital magnification of the video image.



Digital Zoom – Enables or disables digital zoom.

User Setting Profile

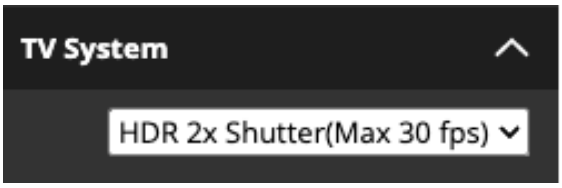
The User Setting Profile allows saving and recalling predefined camera settings.



Select Profile Number – Selects the profile to use.
OFF – Disables profile selection.
Go Profile – Applies the selected profile.

TV System

The TV System setting configures the video system and frame rate behavior.

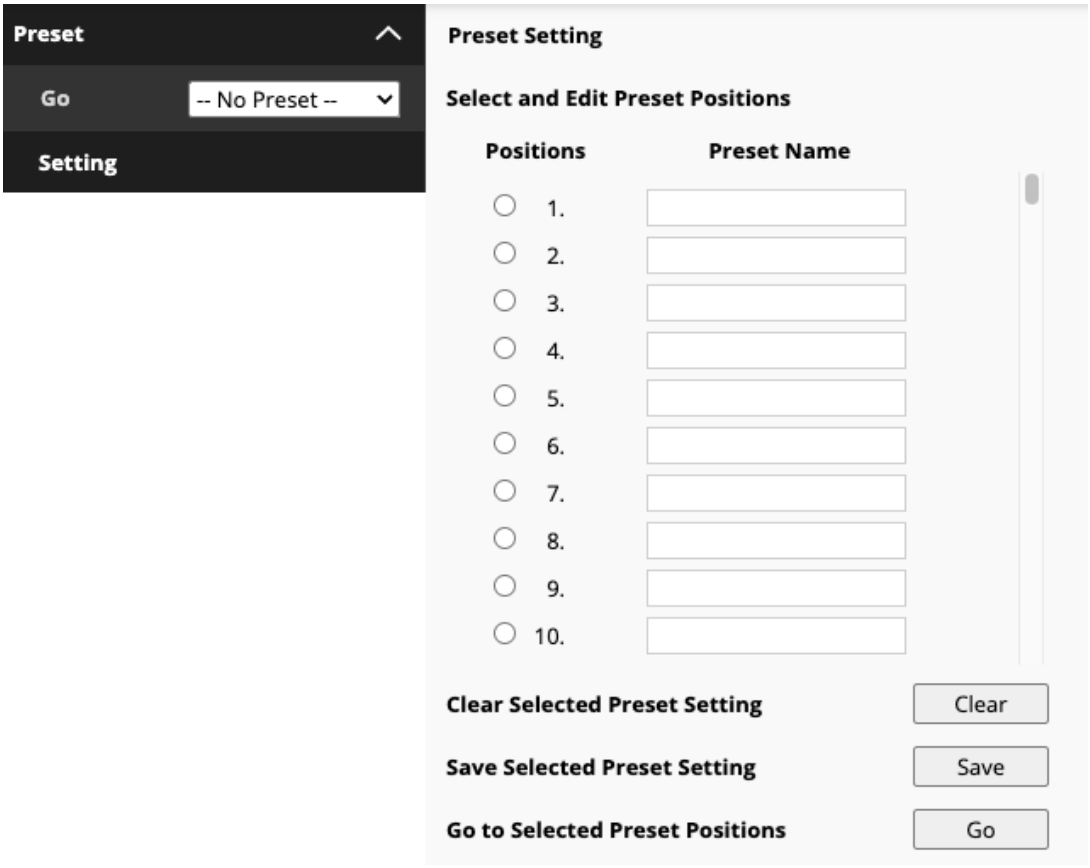


TV System – Selects the video system mode.

PTZ

Preset

The Preset section allows quick selection and management of predefined camera configurations.



Go – Selects and applies a preset configuration from the dropdown.

Setting – Opens preset configuration options.

Select and Edit Preset Positions – Displays a list of available preset slots for configuration.

- **Positions** – Select a preset position number.
- **Preset Name** – Enter a name for the selected preset position.

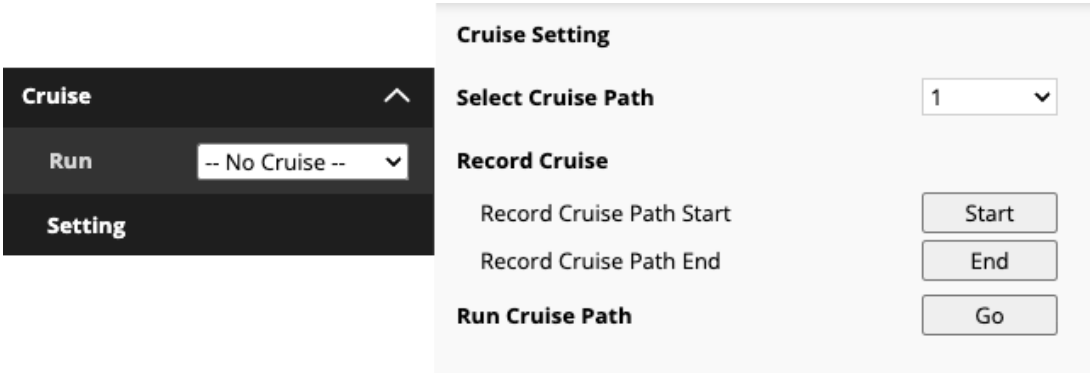
Clear Selected Preset Setting – Deletes the configuration of the selected preset.

Save Selected Preset Setting – Saves the current camera position and name to the selected preset.

Go to Selected Preset Positions – Moves the camera to the selected preset position.

Cruise

The Cruise Setting page configures and manages cruise paths for automated camera movement.



Run – Selects and starts a cruise sequence.

Setting – Opens preset configuration options.

Select Cruise Path – Selects the cruise path number to configure.

Record Cruise – Records a cruise movement path.

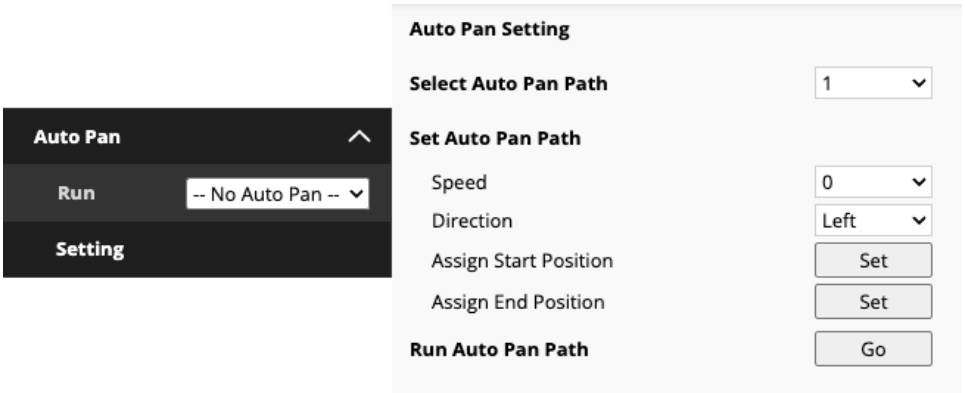
- **Record Cruise Path Start** – Begins recording the cruise path.
- **Start** – Starts recording camera movements.
- **Record Cruise Path End** – Ends recording of the cruise path.
- **End** – Stops recording and saves the cruise path.

Run Cruise Path – Executes the selected cruise path.

- **Go** – Starts the selected cruise path.

Auto Pan

The Auto Pan section controls automatic horizontal camera movement.



Run – Selects and starts an auto pan function.

- **Auto Pan List** – Displays available auto pan options.
- **No Auto Pan** – Indicates that no auto pan function is currently selected.

Setting – Opens auto pan configuration options.

Select Auto Pan Path – Selects the auto pan path number to configure.

Set Auto Pan Path – Defines parameters for the selected auto pan path.

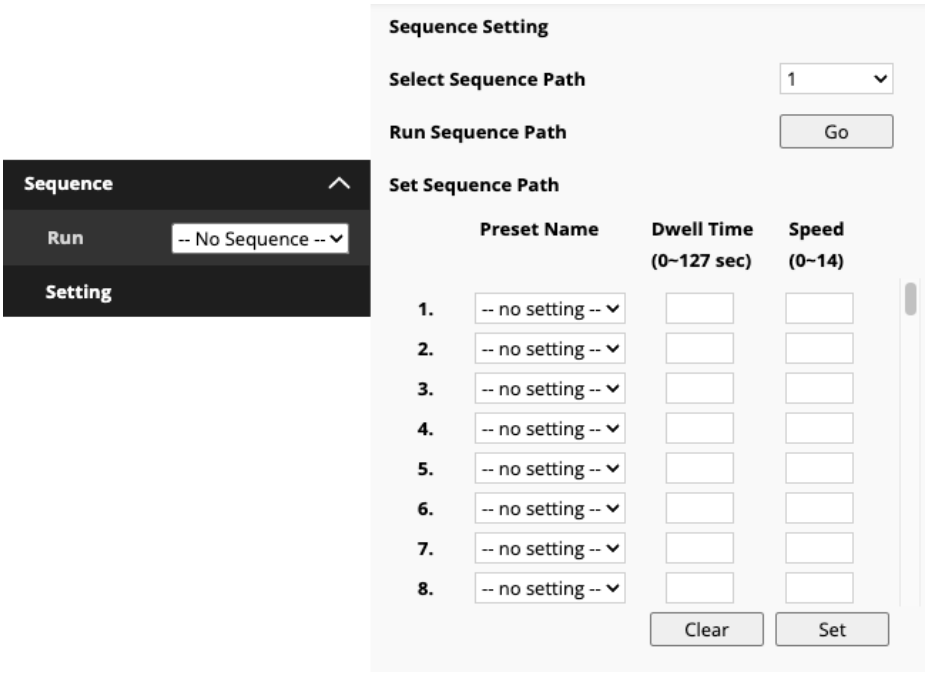
- **Speed** – Sets the pan speed for the auto pan movement.
- **Direction** – Selects the pan direction.
- **Assign Start Position** – Sets the starting pan position.
- **Assign End Position** – Sets the ending pan position.

Run Auto Pan Path – Executes the selected auto pan path.

- **Go** – Starts the auto pan path.

Sequence

The Sequence section controls predefined camera movement sequences.



Run – Selects and starts a sequence.

- **Sequence List** – Displays available sequences.
- **No Sequence** – Indicates that no sequence is currently selected.

Setting – Opens sequence configuration options.

Select Sequence Path – Selects the sequence path number to configure.

Run Sequence Path – Executes the selected sequence path.

- **Go** – Starts the selected sequence.

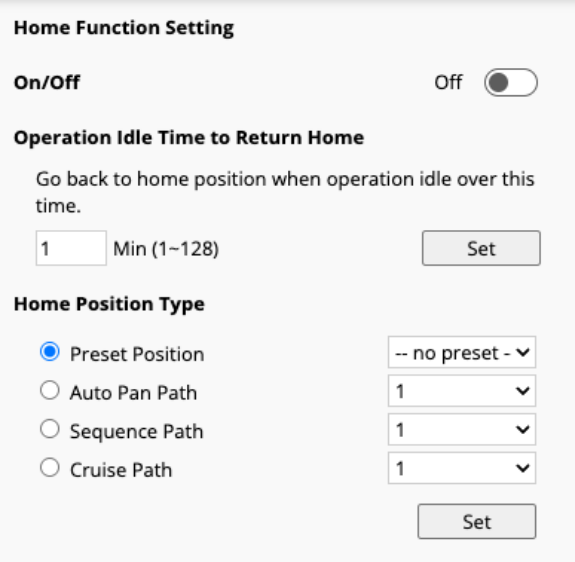
Set Sequence Path – Defines the sequence steps using preset positions.

- **Preset Name** – Selects a preset position for each step in the sequence.
- **Dwell Time** – Sets how long the camera remains at each preset.
  Range: 0–127 seconds.
- **Speed** – Sets the movement speed between presets.
  Range: 0–14.

Clear – Clears all settings for the selected sequence path.
Set – Saves the sequence path configuration.

Home Function

The Home Function Setting page configures automatic return behavior to a defined home position.



On/Off – Enables or disables the Home function.

Operation Idle Time to Return Home – Sets the idle time before the camera automatically returns to the home position.

- **Idle Time** – Enter the number of minutes of inactivity before returning home.
  Range: 1–128 minutes.
- **Set** – Applies the idle time setting.

Home Position Type – Selects the type of position or path the camera returns to.

- **Preset Position** – Returns the camera to a selected preset position.
- **Auto Pan Path** – Returns the camera to a selected auto pan path.
- **Sequence Path** – Returns the camera to a selected sequence path.
- **Cruise Path** – Returns the camera to a selected cruise path.
- **Set** – Applies the selected home position setting.

Tilt Range

The Angle Setting page configures tilt angle limits for camera movement.

Minimum Tilt Angle – Sets the lowest tilt angle the camera can reach.
Range: -10° to 10°.

Maximum Tilt Angle – Sets the highest tilt angle the camera can reach.
Range: 80° to 100°.

Set – Applies the angle settings.

PTZ Setting

The PTZ Setting page configures pan, tilt, and zoom behavior.

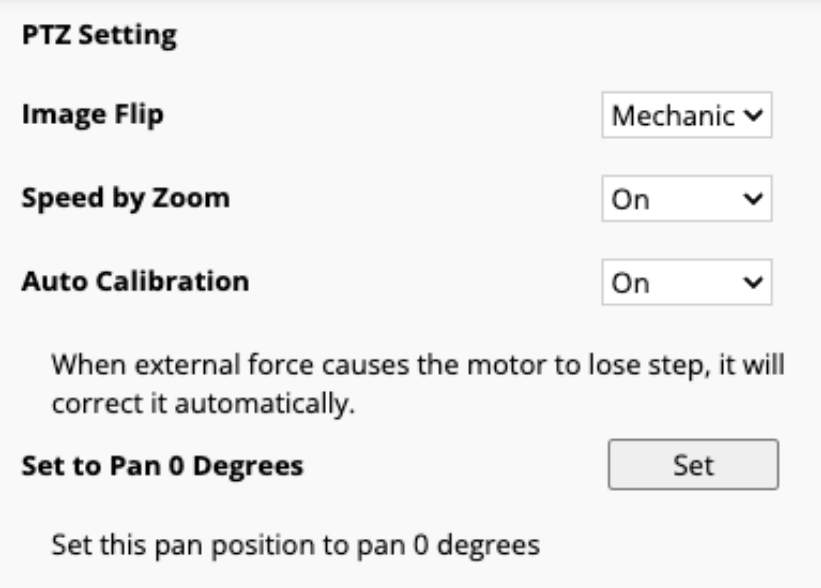


Image Flip – Selects the image flip method.

- **OFF** – Camera will not flip the image.
- **Mechanical** – Uses mechanical rotation to flip the image.
- **Digital** – Uses digital rotation to flip the image.

Speed by Zoom – Enables or disables automatic speed adjustment based on zoom level.

- **On** – Pan and tilt speed adjusts automatically when zooming.

Auto Calibration – Enables or disables automatic motor calibration.

- **On** – Automatically corrects position when external force causes the motor to lose steps.

Set to Pan 0 Degrees – Sets the current pan position as the 0-degree reference.

- **Set** – Applies the pan 0-degree setting.

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