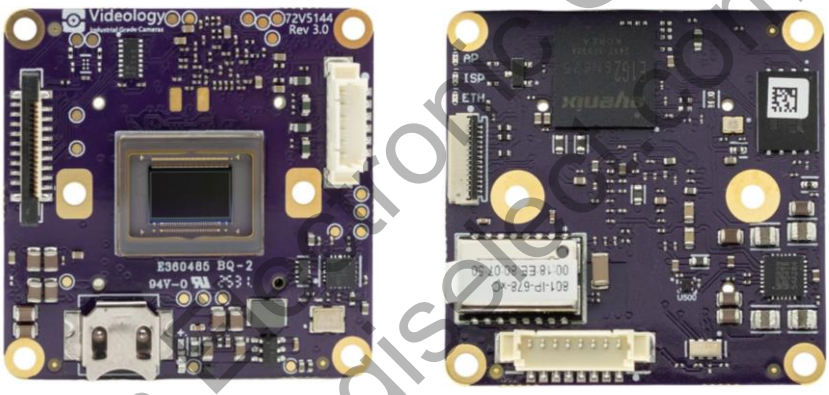
Videology®
Industrial-Grade Cameras
an InTest Company

# 801-IP-678

## 8MP IP Camera, Sony IMX678

Revision C





## Videology Industrial-Grade Cameras

**Over 1 Million Cameras Worldwide**
At Videology, we specialize in meeting the customized specification requirements of OEMs, large-scale integrators and other partners, which have resulted in the delivery of over 1 million embedded cameras worldwide. We are an ISO 9001-certified company headquartered in Mansfield, Massachusetts.

**Our Brand Difference**
Our deep commitment to the customer experience delivers performance excellence throughout the entire customer journey. This is Videology's brand difference and it's our company's most important priority in serving the needs of our customers across the globe.

**Our Brand Promise**
How do we support our brand difference? We do so with a sincere promise we make to every Videology customer as follows: We provide competence, attention to detail and personal care with a level of excellence that will delight every customer in every interaction. This is Videology's brandMPG promise and it's been the key to our growth and success – from a small start-up more than 30 years ago to a global leader in today's imaging industry.

# 1. Prior to Using

Videology reserves the right to modify the information in this document as necessary and without notice. It is the user's responsibility to be certain they possess the most recent version of this document by visiting www.videologyinc.com, searching for the model number, and comparing revision letters on the respective document, located in the document's footer.

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# 2. Warning and Safeguards

**Read instructions before operating the camera**

- Please read/follow all instructions and read all warnings before operating the camera.
- Installation and servicing should only be done by Qualified Service and Installation Personnel.
- Installation shall be done in accordance with all local and national electrical and mechanical codes.
- Avoid mounting in direct sunlight.
- To reduce the risk of fire or electric shock, do not expose this appliance to rain, water or wet locations.
- If the camera is to be mounted outdoors a secondary waterproof enclosure should be used.

## 2.1 Precautions

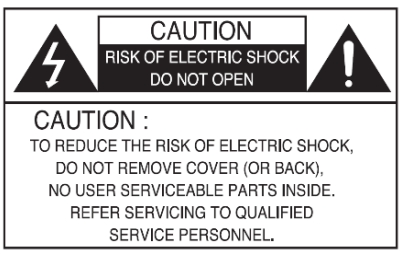
- Do not put objects inside the unit. Make sure that no metal objects or flammable substances get inside the camera. It could cause fire, short-circuits or damage.
- Be careful when handling the unit.
- To prevent damage, do not drop the camera or subject it to strong shock or vibration.
- Install away from electric or magnetic fields.
- Protect the camera from humidity, dust and high temperatures.
- Be careful when installing it close to the ceiling, in a kitchen or boiler room, as the temperature may rise to high levels.
- Cleaning - Dirt can be removed from the cabinet only by wiping it with a soft cloth moistened with a soft detergent solution.
- Mounting Surface - The mounting surface material must be strong enough to secure the camera.
- Avoid viewing a very bright object (such as light fittings) during an extended period.

## 2.2 Care of the Unit

- Remove dust or dirt on the surface of the lens with a blower (commercially available).
- Avoid the use of volatile solvents such as thinners, alcohol, benzene and insecticides. They may damage the surface finish and/or impair the operation of the camera.
- Be careful not to spill water or other liquids on the unit.

## 2.3 Operating and Storage Location

- Consult the datasheet of the camera for temperature limits and guidance.
- Avoid damp or dusty places.
- Avoid places exposed to rain.
- Avoid places subject to strong vibration.




- Avoid places close to generators of powerful electromagnetic radiation such as radio or TV transmitters.
- If the product is to be put out of operation definitively, take it to a local recycling plant for disposal which is not harmful to the environment.

# 3. Document History

## Document History

| Revision | Issue Date | Reason |
|---|---|---|
| A | 12/10/2025 | Initial release |
| B | 01/09/2026 | Added UI changes, updated recording information |
| C | 03/26/2026 | Updated to align with the latest firmware version 5.1 |

# 4. Table of Contents

# List of Figures

## List of Tables

# 5. Introduction

This document will explain how to set up your 801-IP-678, an IP camera with the following highlighted features:

- 8 Megapixel, 30fps, Sony® STARVIS 2 IMX678 1/1.8 Sensor
- RTSP and WebRTC video streaming
    - 3 configurable streams
    - H.265, H.264 and MJPG format support
- Fast Ethernet (also known as 10/100 Ethernet)
    - Full duplex communication
- SD card storage (optional)
    - Supports different storage sizes
- HTTPS and FTP server functionality
- Linux RISC-V architecture - Open-source processor and operating system
- Fully configurable via Videology's web interface and HTTPS API interface
- ONVIF protocol support

# 6. Configuration

### Hardware

A multi-pin connector supplies both power and network connections. The package includes a breakout cable with a standard 12 V DC power connector and an RJ-45 network jack. Connect the cable to a 12VDC power source and a network that supports DHCP. Direct connection to a PC will not work. You will need either a router with a DHCP server or access to a local DHCP-enabled network through a switch.

### Network Address

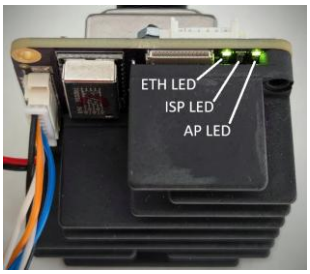



Figure 1 Indicator LEDs

Connect the camera to a DHCP-enabled network. A DHCP-enabled network automatically manages the IP addressing on the network. Power on the camera by connecting the 12 V DC supply. Once the green LED labeled 'ETH' on the back of the camera board lights up steadily, the camera will be available on the network.

To find the camera's IP address, you can use a network scanning tool. Alternatively, use ONVIF Device Manager (ODM) or another ONVIF-compatible management tool if the camera is connected to the same network. These tools automatically detect ONVIF devices and display their IP addresses in the device list. For additional assistance, please contact your IT department.



### Web Interface

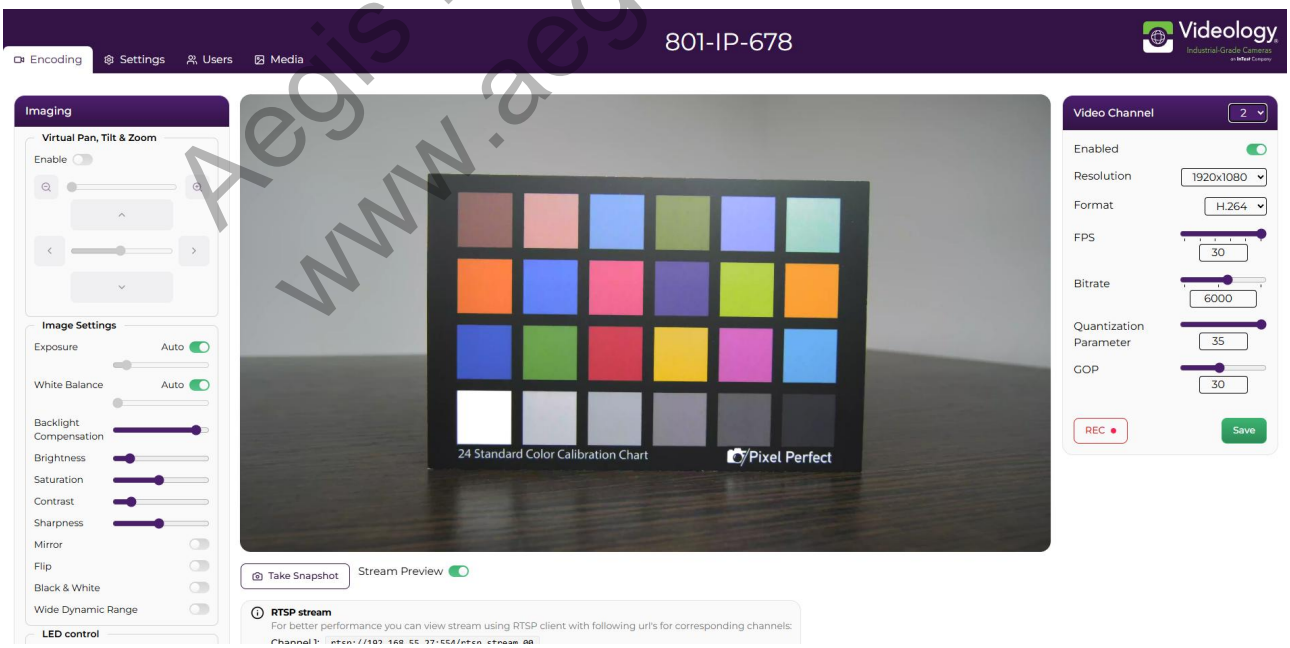



Figure 2 Web Interface

The web interface allows users to configure a wide range of system settings and functions, including image and encoding parameters, network configuration, date and time setup, firmware updates, user management, video streaming and recording, and SD card formatting.

For more information, please refer to section 7, where each feature and setting is explained in detail.

### RTSP Video Stream

In addition to the WebRTC stream available through the web interface, the camera also supports RTSP streaming via third-party applications. A media player that supports RTSP streaming is required, such as the VLC media player or similar.
Use the address with the camera's IP (in this example: 192.168.0.108) and the following suffix:

**rtsp://192.168.0.108:554/rtsp_stream_00**

The last two numbers after "stream_" determines which channel is displayed.

Channel 1: rtsp_stream_**00**
Channel 2: rtsp_stream_**01**
Channel 3: rtsp_stream_**02**

RTSP stream URLs are automatically generated for each channel and can be copied directly from the web interface. These URLs are located below the corresponding video stream.

### VLC Media Player Example

VLC Media Player can be used to view the stream from the camera. It is an open-source program available for download from the Internet. The following steps explain how to view the camera stream in VLC.

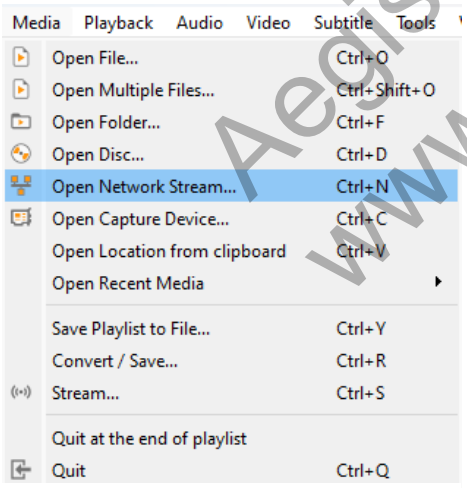



Figure 3 Media

**Media**
In VLC, open the ''Media'' menu and select "Open Network Stream…"

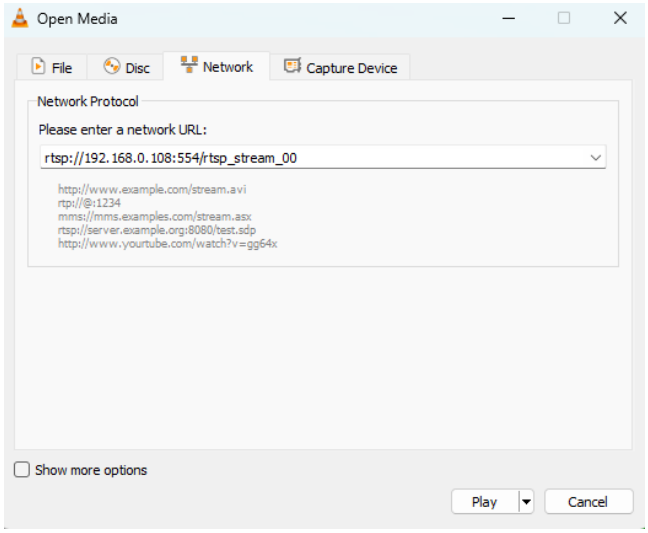



Figure 4 Network

**Open Media**
In the Network tab, enter the network URL of the camera. Use the format explained in section 6.4.

Format
**rtsp://IP-ADDRESS:554/rtsp_stream_00**

Example:
**rtsp://192.168.0.108:554/rtsp_stream_00**

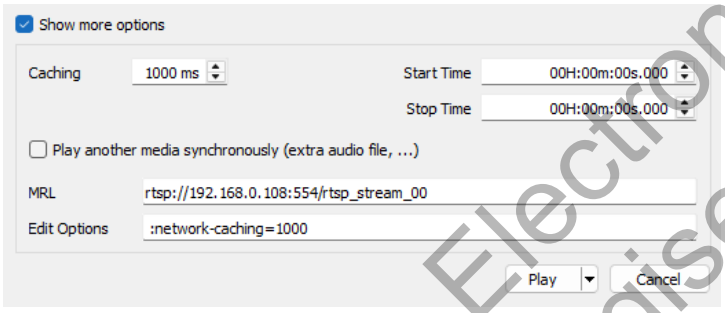



Figure 5 Show more options

**Show more options**
At the bottom of the Open Media window, check the 'Show more options' box. This will open an extended menu.

**Caching**
VLC stores a portion of the video stream in memory, to ensure smooth playback and reduce interruptions caused by instability. For the most stable playback, set it to 1000 ms. For low latency, use the lowest stable value; 200 ms is recommended. Values below 200 ms may cause playback errors.

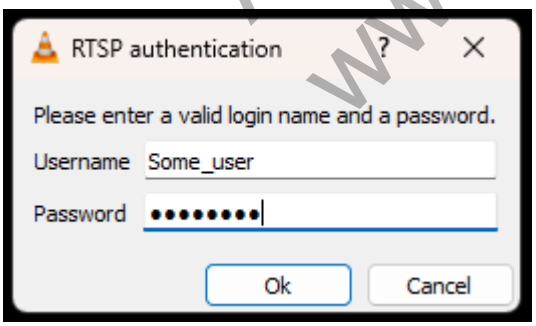



Figure 6 RTSP authentication

**RTSP Authentication**
Enter the user login and password to access the video stream. For instructions on creating the first account on a new camera, see section 7.1.

**Video stream**
After successful authentication, the video stream will open in VLC.

Figure 7 Video Streaming

## 6.6 ONVIF Protocol

The accounts used to access the camera's web interface are the same accounts used for ONVIF. See Section 7.1 for instructions on creating an account during device initialization or Section 7.5 for managing existing accounts.

## 6.7 Device Maintenance and Interfaces

### 6.7.1 Recovery

This procedure is necessary in cases such as a power failure during a firmware update, which prevents the installation from being completed, or when software changes prevent the firmware from booting.

To reset the device to factory settings, connect the GPIO 23 pin to GND and keep it connected for 5 seconds immediately after turning the device on or restarting it.

This process overwrites the current firmware using either the SD card or the internal memory. The device first attempts to load the firmware from the SD card; if it is not found there, it will use the internal memory.

If you are using an SD card, first download the firmware archive and unzip it. Then, copy all extracted files to the root directory of the SD card. The archive can be downloaded from the official website https://www.videologyinc.com/hubfs/software/sft-26003_801-IP-678.tar.gz

### 6.7.2 LED Control

Briefly connect GPIO 21 to GND to switch the AP LED on or off. When the LED is on, it shows that the device is operational; when off, the LED stays dark.

### 6.7.3 Snapshot

For information on creating a snapshot, see section 9.3.

### 6.7.4 J200 Connector

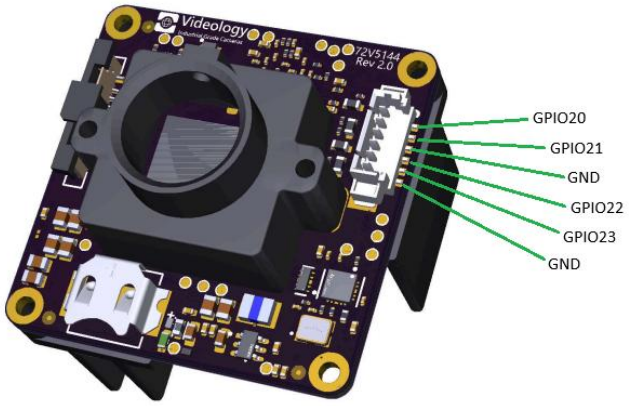



Figure 8 Pinout of connector J200

| Pin | Description |
|---|---|
| GPIO20 | - |
| GPIO21 | LED Control |
| GPIO22 | Snapshot |
| GPIO23 | Factory Reset |
| GND | Ground |

Table 1. Pinout of connector J200

⚠ Each GPIO pin has an internal pull-up resistor.

# 7. Web Interface

You can use the web interface to control various camera settings and view video streams.

## 7.1 Create The Initial Admin Account

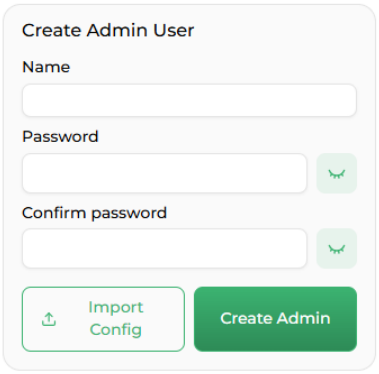



Figure 9 Create the initial admin

Open a web browser and enter the IP address of the camera (e.g., 192.168.0.108).

Web browsers will display warnings about an insecure connection. These warnings do not affect the functionality of the system. Please select continue.

By default, the camera does not have any preconfigured user accounts. Therefore, on the first login, you will be prompted to create an administrator account or import a configuration file. For more information about the configuration file, see section 7.4.5

This administrator account, as well as any additional accounts created in the Users tab, will be used for ONVIF and RTSP authentication.

## 7.2 Login

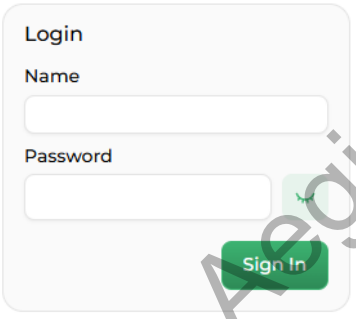



Figure 10 Login interface

To access the web interface, you need to use your account.

## 7.3 Encoding

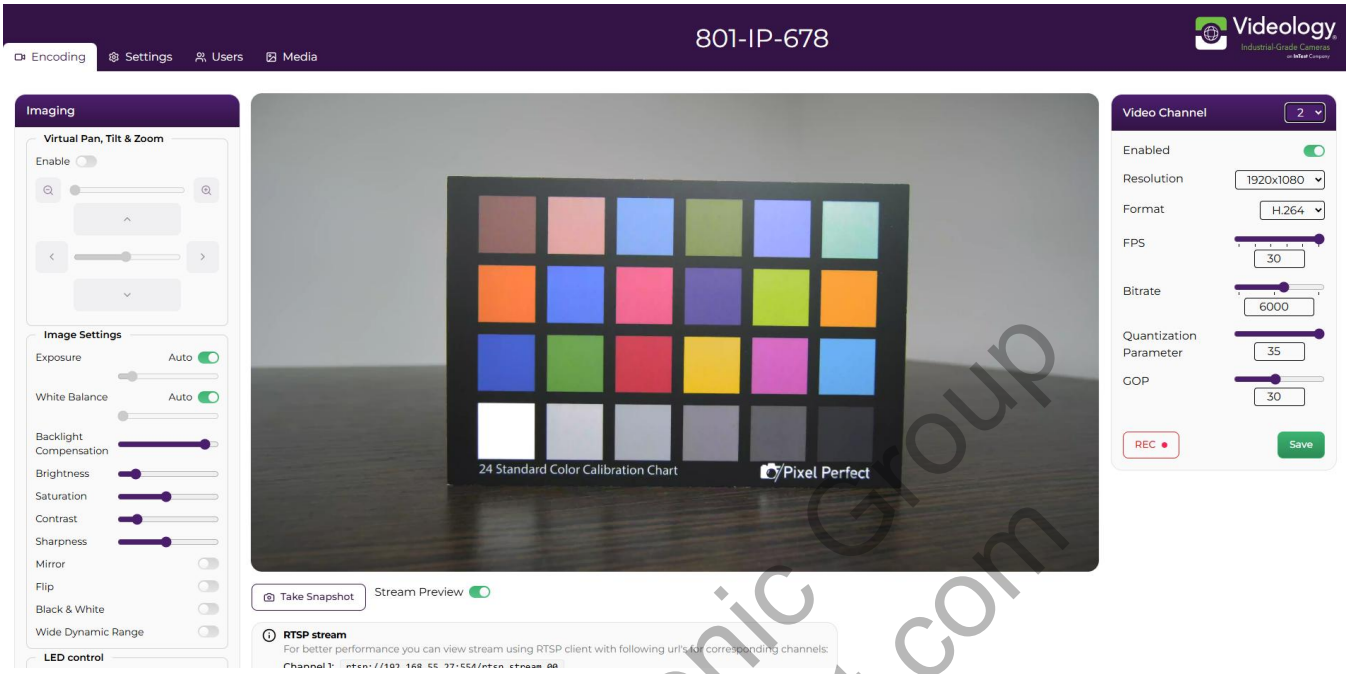



Figure 11 Web interface, Encoding

Once logged in, you can access the Encoding tab. This tab allows you to adjust image and video channel settings, as well as view the live broadcast. Use the tabs at the top of the page to navigate between sections.

### 7.3.1 Imaging Settings


Figure 12 Virtual Pan, Tilt & Zoom interface

**Virtual Pan Tilt Zoom (VPTZ)**
There is a slider to disable this module, located next to its name.

Use single presses of the plus (+) and minus (–) buttons to zoom in and out. Adjust the slider between the buttons to control the zoom increment.

The arrow buttons allow you to pan and tilt the zoomed image. Use the speed slider between the arrows to adjust the movement speed.

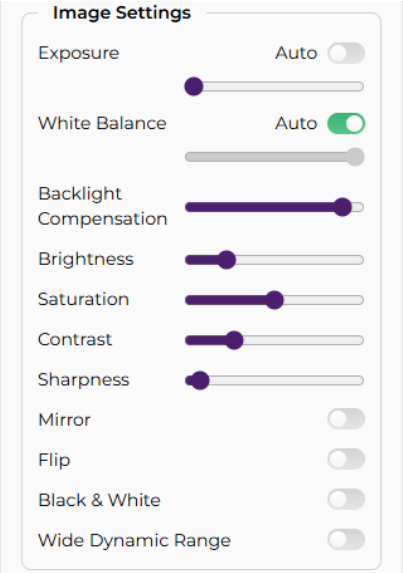



Figure 13 Image Settings

**Exposure**
Adjusts the amount of light reaching the sensor. AUTO will continue to adjust to different lighting conditions.
**White Balance**
Adjusts the color tones to make sure whites appear neutral under different lighting conditions. AUTO will continue to adjust to different lighting conditions.
**Backlight Compensation**
Adjusts the exposure window to compensate for strong backlight in a scene. Lower values (slider moved to the left) cause the auto exposure algorithm to evaluate a larger portion of the frame. Higher values (slider moved to the right) restrict the exposure measurement to the central area of the frame.
**Brightness**
Brightens or darkens the image.
**Saturation**
Adjusts the intensity of the color.
**Contrast**
Darkens the dark areas of the image and lightens the light areas.
**Sharpness**
Adjusts the contrast between edges.
**Mirror**
Sets the image to a reverse view (horizontal).
**Flip**
Sets the image to an upside-down view (vertical).
**Black & White**
Sets the image to black & white.
**Wide Dynamic Range**
Increases the tonal range between light and dark areas of the image.

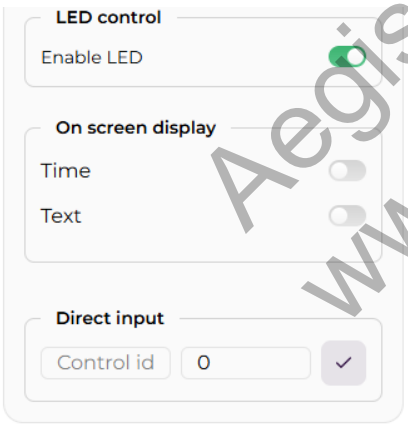



Figure 14 Additional configuration setting

**LED Control**
When this option is enabled, the AP LED turns on to indicate that the device is operational. When disabled, the LED remains off.
**On Screen Display**
Enables displaying the current date, time, and custom text on the video stream. When zoom is used, the OSD remains fixed to the image and may become partially or completely out of view.
**Direct Input**
Allows direct entry of commands and settings. See Appendix 11 for the command list.

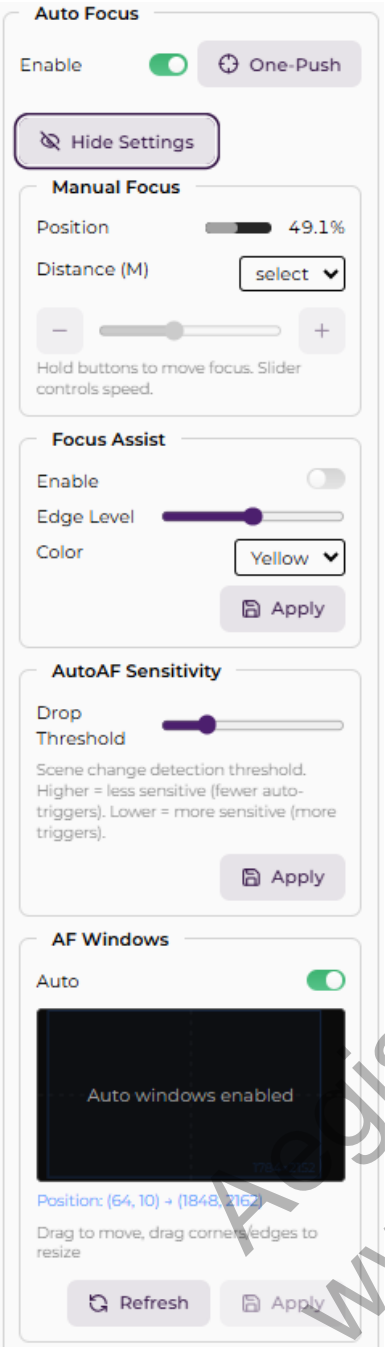



Figure 15 Auto Focus Interface

If you have a camera version that includes autofocus, the "Auto Focus" block will appear on the left side panel below the "On Screen Display" section.

**Main Controls.** The "Enable" toggle turns autofocus on or off. When autofocus is disabled, you need to adjust the focus manually. When it is enabled, the camera automatically acquires focus and can also refocus during operation or when the "One-Push" button is pressed. Focus scan duration: 2.5–4 seconds.

To open the additional parameters, press "Show Settings". To hide them, press "Hide Settings".

**Manual Focus.** Here you adjust the focal position for manual mode (when autofocus is off). The Position indicator shows the current focus point (0% = far, 100% = near). You can choose a predefined focus distance or use the "+ " and "–" buttons to adjust the focus manually. The slider between the buttons controls the adjustment speed. You can also select the focus distance using the drop-down list. It includes the following preset distances in meters: 0.35, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 10, 20. Please note that these values are only approximate, as the actual focusing distance depends on your lens and the camera's calibration.

**Focus Assist.** The visual feedback system enables a helper rectangle for AF Windows and a feature that highlights sharp edges in your image, making it easy to see exactly what's in focus and when you've achieved optimal sharpness. You can enable or disable this feature and adjust the edge level and highlight color. The edge level slider controls the sensitivity of edge detection – how strong an edge must be to be highlighted. After adjusting the settings, press "Apply".

**AutoAF Sensitivity.** This parameter defines how sensitive the camera is to scene changes that trigger refocusing. Higher values make the system less sensitive, resulting in fewer automatic triggers. This is more suitable when motion is less frequent or should only trigger on stronger changes. Lower values increase sensitivity, causing more frequent triggers. This is better for scenes with more movement. Keep in mind that each trigger may cause a short refocusing moment. It doesn't stop the recording, but the few seconds of refocusing can look visually distracting in the captured video. After adjusting the setting, press "Apply".

**AF Windows.** The AF window defines where in the image the camera looks when determining focus. This is critical for focusing accuracy. Concept: Imagine overlaying a translucent rectangle on your live view. Only the area inside this rectangle is analyzed for sharpness. Everything outside is ignored by the autofocus system. You can use automatic mode or set the window manually. The Refresh button reloads the current window configuration from the hardware. The Apply button saves the custom window layout when automatic mode is disabled.

### 7.3.2 Encoding Settings

This page displays the current camera stream and allows switching between the three available channels. Each channel provides different streaming configurations, such as resolution and network parameters. Note that each channel has its own independent streaming settings.

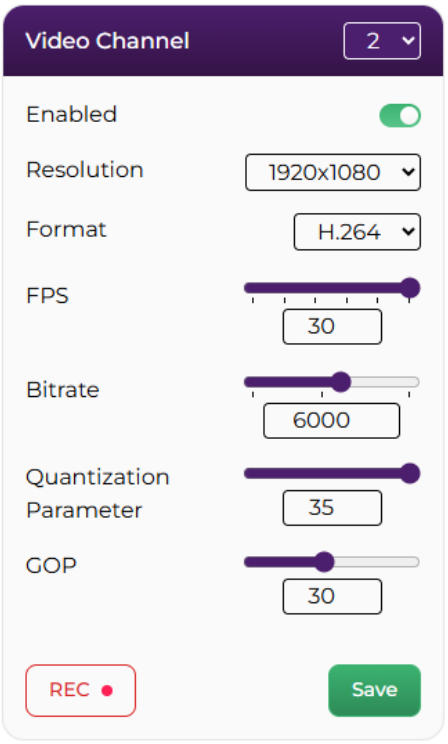



Figure 16 Encoding configuration interface

**Channel**
To choose which video stream to view (Channel 1, 2, or 3), use the drop-down list provided on the page.
**Enabled**
Allows you to enable or disable channels 2 and 3 to improve performance. After enabling or disabling of a channel the camera will be rebooted automatically.
**Resolution**
Select the desired resolution.
**Format**
It can be H.265, H.264 or MJPG.
**FPS**
Select the desired frames per second.
**Bitrate**
Bitrate — Determines the amount of data transmitted per second in the video stream. This setting affects video quality and file size.
**Quantization Parameter**
Controls the level of detail and compression in the video. This setting affects both video clarity and required bandwidth or storage space.
**GOP**
Defines the sequence of keyframes (I-frames) and predictive frames (P-frames), affecting video compression, quality, and streaming efficiency.
**REC**
To start recording video from the selected channel to the SD card, press the REC button. Press the button again to stop recording. Only one video channel can be recorded at a time.
**Save**
After modifying one or more channel settings, click the green 'Save' button at the bottom of the section to apply your changes. This ensures that all changes are applied and retained.



⚠ MJPG format is only supported on the third video channel. When selected, the web interface will display video at a fixed rate of 5 frames per second, regardless of the configured frame rate. However, the configured frame rate still applies to RTSP and ONVIF streams.

⚠ When Channel 1 is set to 3840×2160 resolution, the following limitations apply:

1. Preview in the web browser is unavailable.
2. Only one enhancement feature can be enabled: you may use either VPTZ or WDR, but not both simultaneously.
3. For recording at this resolution, Channels 2 and 3 must be disabled, and both Quantization Parameter and GOP values must be set greater than 20.

### 7.3.3 Stream Preview

The stream preview allows you to view the channel selected in the encoding settings.

⚠ Viewing the preview is not the primary method for receiving the stream. It is recommended to use the preview only during channel setup to verify the configuration. After setup, disable the preview stream for optimal performance and use RTSP or ONVIF to receive the video stream.

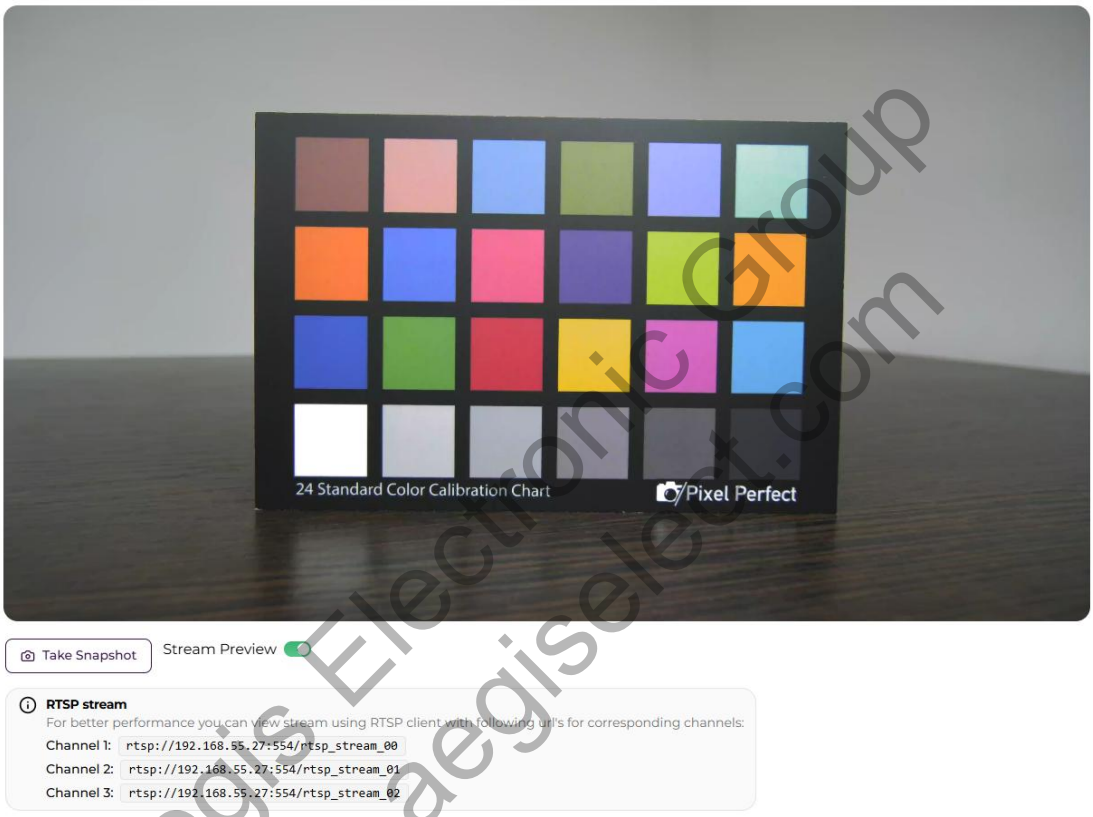



Figure 17 Stream preview and "Take Snapshot" button

**Take Snapshot button**
Pressing this button creates a snapshot. For more information about snapshots, see section 9.3.

**Stream Preview**
This switch enables or disables the stream preview in the web interface.

**RTSP stream information**
For optimal performance, use any RTSP-compatible client to view the stream. The system automatically generates RTSP URLs for each channel.

## 7.4 Settings

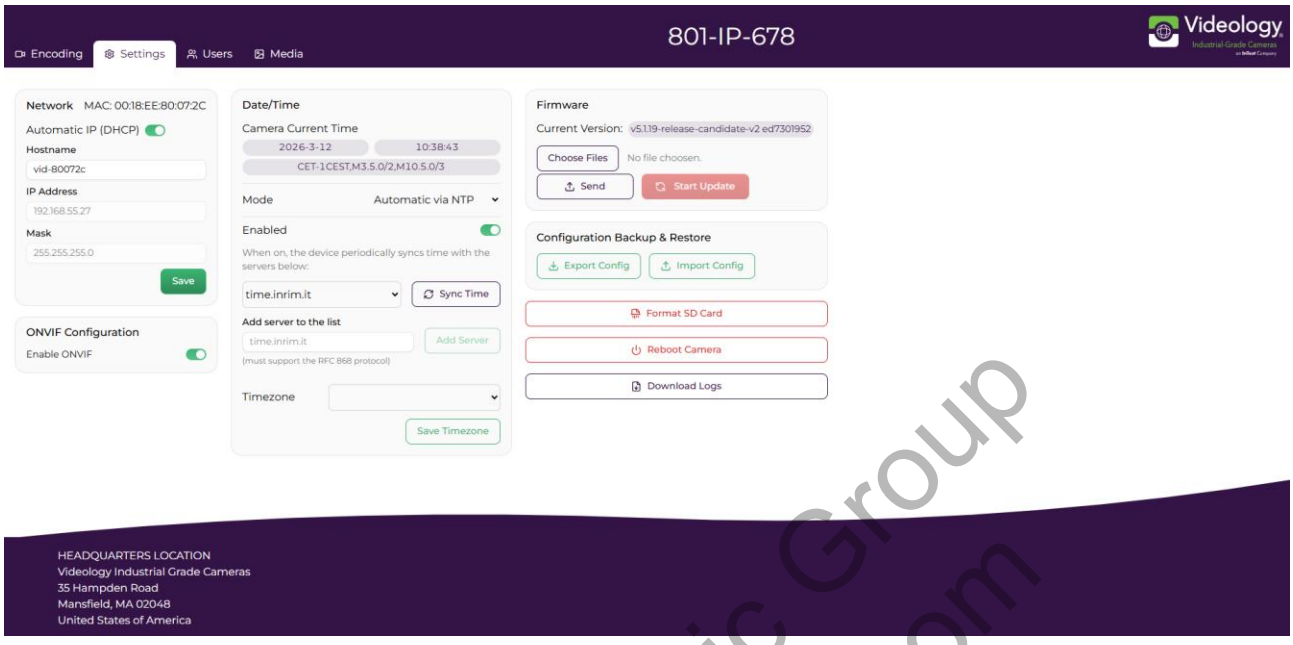



Figure 18 Settings

### 7.4.1 Network settings

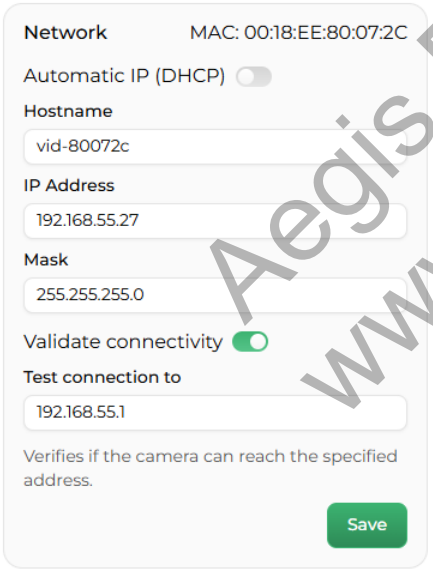



Figure 19 Network settings

**Automatic IP (DHCP)**
The camera comes as standard with the automatic IP (DHCP) option enabled. That means the router dynamically assigns an IP address to the camera. When this option is turned off, a fixed IP address can be set by the user via the address field.

If you want to set a static IP address, you can use the built-in validation function. This function attempts to ping a device in the new network by sending ICMP requests to the IP address you provide.
If at least one successful ping response is received, the camera assumes that the new network configuration is valid. This helps ensure that there are no mistakes in the new IP address or network settings.
If the ping fails, the camera will display a warning message.

Note that if the fixed IP address or subnet mask is set incorrectly, communication to the camera might be lost. Consult your IT department if you are unsure how to use these fields.

When done adjusting these settings, use the green "Save" button.

### 7.4.2 ONVIF Configuration

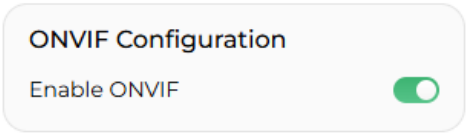



Figure 20 ONVIF configuration

Allows you to enable or disable ONVIF support. When ONVIF is disabled, the device will not appear in ONVIF device discovery, and ONVIF-based control or interaction will not be possible. ONVIF apps will still be able to display the video stream because it is provided over RTSP. When ONVIF is enabled, the camera will reboot.

### 7.4.3 Date and Time

You can view and configure the date, time, and time zone through the web interface.

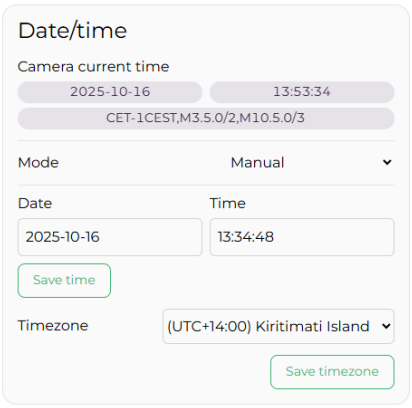



Figure 21 Date and time setting

**Camera current time**
Displays the current date, time, and time zone from the camera's real-time clock.

**Mode**
There are three available modes for setting the date and time:

1. Automatic via NTP
   In this mode, time synchronization is performed using time servers that support the RFC 868 protocol. You can synchronize the time manually by clicking the 'Sync Time' button or enable periodic automatic synchronization. Time servers can be added as needed. A time zone can also be selected in this mode.
2. Sync from Computer
   This mode displays a preview of your computer's current time and time zone. To synchronize the device time with your computer, click the green "Apply" button.
3. Manual
   In this mode, you can manually set the date and time. After entering the desired values, press the green "Save time" button to apply the changes. You can also manually select the time zone.

### 7.4.4 Firmware Version & Update

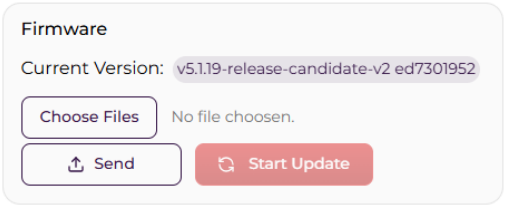



Figure 22 Firmware

**Current version**
Displays the current firmware version.

**Firmware update**
1. Before updating, export the current configuration to avoid losing your settings.
2. Click the 'Choose File' button and select the firmware update file from your computer. The update file can be downloaded from the Videology website: https://www.videologyinc.com/hubfs/software/sft-26003_801-IP-678.tar.gz
3. Click the "Send" button to upload the file to the device.
4. After the file is uploaded, click 'Start Update' to begin the firmware update process.
5. Then, once the device has been updated and rebooted, import the previously saved configuration file to restore all settings.

### 7.4.5 Configuration Backup & Restore

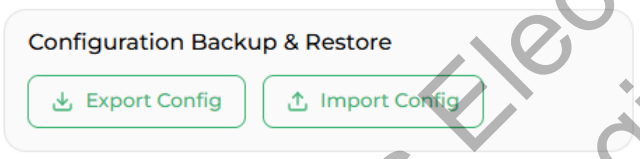


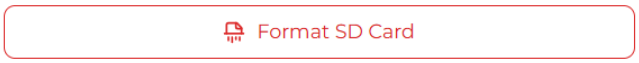

Figure 23 Configuration Backup & Restore interface

Exporting and importing the camera configuration is in JSON format. This file can be used to save the current camera settings and restore them later when needed. The exported configuration includes: encrypted user information (jwt_secret, onvif.key, db.key), network settings, imaging settings, encoder settings, OSD configuration, time settings, NTP servers, and time zone.

This option is especially useful before performing a firmware update, since all settings are erased during the update process. It also allows for quick configuration of multiple devices.

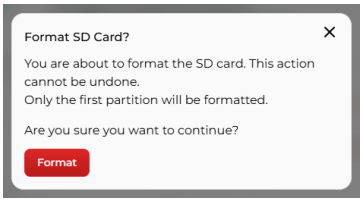
⚠ The configuration file contains sensitive information and should be stored and transferred accordingly. Please follow your organization's IT guidelines for storage and transferring this information.

### 7.4.6 Format SD Card




Click the red "Format SD Card" button to erase all data from the SD card.

Figure 24 Format SD card button

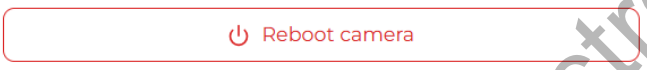



Confirm that you intend to erase all data from the SD card before proceeding.

Figure 25 Confirm formatting of the SD card

If Channel 1 is configured to a 3840×2160 resolution, SD card formatting may take longer than 15 minutes. To minimize delay, the stream will pause temporarily during formatting and automatically resume once the process is complete.

### 7.4.7 Reboot Camera




Press this button to restart the camera.

Figure 26 Reboot camera button

### 7.4.8 Download Logs


Press this button to download an archive containing the camera debug logs.

Figure 27 Download Logs

## 7.5 Users

This page is for user management.


Figure 28 Users management

### 7.5.1 Current User


Figure 29 Current user

This section displays the current username and role, along with a 'Log Out' button. On the right side of the page, you can enter and confirm a new password using two input fields and then save the updated password by pressing the "Update" button.

### 7.5.2 User Level

The system includes several user roles, each offering different access permissions. Below are a description of each role and its associated capabilities.

| Operations | Admin | Operator | Viewer |
|---|---|---|---|
| VPTZ | Edit | Edit | View |
| Image Settings | Edit | Edit | View |
| Focus Settings | Edit | Edit | View |
| LED Control | Edit | Edit | View |
| On Screen Display | Edit | Edit | View |
| Direct Input | Edit | Edit | View |
| Stream Preview | Edit | Edit | View |
| Preview On/Off | Edit | Edit | Edit |

| | | | |
|---|---|---|---|
| Take Snapshot | Yes | Yes | Yes |
| RTSP Stream Links | View | View | View |
| Channel Selection | Edit | Edit | Edit |
| Channel Settings | Edit | Edit | View |
| Channel On/Off | Edit | Edit | View |
| Start/Stop Recording | Yes | Yes | No |

Table 2. Encoding Tab Permissions

| Operations | Admin | Operator | Viewer |
|---|---|---|---|
| Network | Edit | View | View |
| Date/Time | Edit | View | View |
| Save Settings | Edit | View | View |
| Firmware Update | Yes | No | No |
| Current Version | View | View | View |
| Format SD Card | Yes | No | No |
| Reboot Camera | Yes | No | No |
| Download Logs | Yes | No | No |

Table 3. Settings Tab Permissions

| Operations | Admin | Operator | Viewer |
|---|---|---|---|
| Log Out | Yes | Yes | Yes |
| Update Password | Yes | Yes | Yes |
| Users List | Yes | No | No |
| Add User | Yes | No | No |
| Edit User | Yes | No | No |
| Delete User | Yes | No | No |

Table 4. Users Tab Permissions

| Operations | Admin | Operator | Viewer |
|---|---|---|---|
| Images Tab | View | View | View |
| Images List | View | View | View |
| Download Image | Yes | Yes | Yes |
| Delete Image | Yes | No | No |
| Take Snapshot | Yes | Yes | Yes |
| Videos Tab | View | View | View |
| Videos List | View | View | View |
| Download Video | Yes | Yes | Yes |
| Delete Video | Yes | No | No |

Table 5. Media Tab Permissions

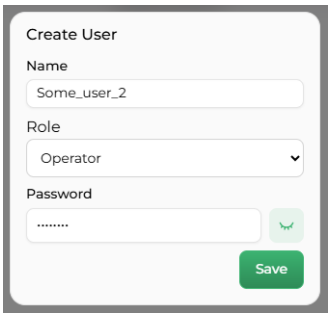
| Operations | Admin | Operator | Viewer |
|---|---|---|---|
| Issue Token | Yes | Yes | No |
| Reveal Own Token | Yes | Yes | Yes |
| Reveal Any Token | Yes | No | No |

Table 6. Token Permissions

### 7.5.3 Add User


To add a user, click the green “Add user” button.

Figure 30 “Add user” button




Enter a username, password, and select a role in the pop-up window. The password must be at least 8 characters long. Click the green "Save" button to apply the changes.

Figure 31 User creation

### 7.5.4 User Table

This section displays information about all user accounts and provides options for deleting them.


Figure 32 User table

**Name.** Lists the usernames.
**Role.** Shows the access level assigned to each user.
**Delete.** Removes the user account.

## 7.6 Media

In this tab, you can manage all available files. For each file, you can view its name, size, the time it was saved, and you also have the option to download or delete it.

⚠ "Date/Time" – displays the file's save time according to your local timezone (for example, the timezone of the laptop you are using to access the Web Interface). At the same time, the camera uses its own configured timezone when encoding timestamps in the filenames.


Figure 33 Media

### 7.6.1 Images

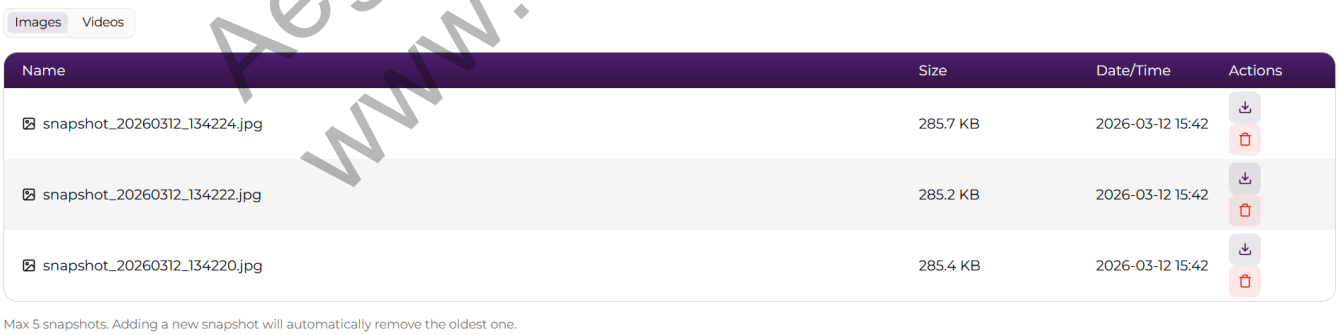



Figure 34 File Manager for Images

This section contains snapshots captured from the video stream. For more information, see Section 9.3.

### 7.6.2 Videos

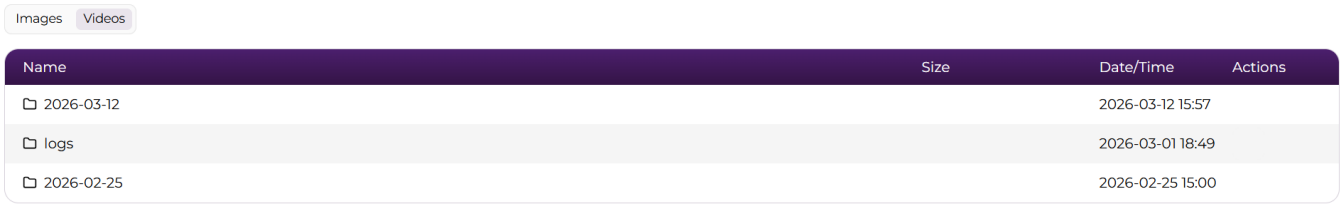



Figure 35 File Manager

In this section you can find the root of the SD card. Here you can browse the directory structure with video folders and other files stored on the SD card.

Videos are organized by date, and each date folder contains subdirectories sorted by hour. Video files are stored inside these subdirectories. For more details about recording and video storage, see chapter 9.

# 8. HTTPS API

## 8.1 General Information About Using HTTPS

You can control the camera using the HTTPS API. This chapter provides usage examples with cURL[1], but you can use any other tool or library capable of sending HTTPS requests. This API permits the integration of the camera into your application written in any programming language that supports HTTPS communication.

All examples in this section use the IP address 192.168.0.108. When adapting the examples for your environment, make sure to replace this IP address with the actual address of your camera.

## 8.2 Authentication

Bootstrap – The process of creating the initial administrator account on a camera, either on a new device or after performing a factory reset.

To get the status (the response will show whether you need to perform bootstrap or not):

```
curl -k https://192.168.0.108/api/v1/auth/status
```

If no user created yet:

```
{
  "success": true,
  "message": "Create first admin user",
  "data": {
    "bootstrap_required": true,
    "version": "1.0.0"
  },
  "timestamp": 1776437056
}
```

If user is already created, continue with Token Generation:

```
{
  "success": false,
  "message": "Bootstrap not required",
  "error": {
    "code": "BOOTSTRAP_NOT_REQUIRED",
    "details": "Users already exist in the system"
  },
  "timestamp": 1776435864
}
```

To perform a bootstrap (use a username and password to create the first admin user):

```
curl -k -X POST https://192.168. 0.108/api/v1/auth/bootstrap \
     -H "Content-Type: application/json" \
   -d '{"username":"admin","password":"12345678"}'
```

[1] Windows: PowerShell 7.6 and up, use backtick ( ` ) character instead of backslash ( \ )

```
Response:
      {
        "success": true,
        "message": "Admin user created successfully",
        "data": {
          "username": "admin",
          "role": "admin"
        },
        "timestamp": 1776436379
      }
```

## 8.3 Token Generation

Most requests also require authentication using an API token.
You can obtain this token by sending a login request with a username and password:

```
curl -k -X POST https://192.168.0.108/api/v1/auth/issue-token \
    -H "Content-Type: application/json" \
    -d '{"username":"admin","password":"12345678"}'
```

This request returns a response like the following:

```
      {
        "success": true,
        "message": "API token issued",
        "data": {
          "token":
"05f9cbb834eeb768b0cd13f6a41e805ad9fea433a6b35736d615d9470d8cee54",
          "key_id": "05f9cbb834eeb768",
          "username": "admin",
          "role": "admin",
          "expires_at": null,
          "created_at": 1773920405
        },
        "timestamp": 1773920405
      }
```

This token uses the "X-API-Key" authentication type. Here is an example of a request that includes the token (the token is shortened in the middle due to its length):

```
curl -k -G "https://192.168.0.108/api/v1/gpio/pins/led" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key 05f9cbb…cee54" \
  -d '{"request":"get","gpio":"led"}'
```

In Windows PowerShell (7.6+) the token can easily by assigned to a variable executing the following code:

```
$ip = "192.168.0.108"
$username = "admin"
$password = "12345678"

$tokenUri = "https://$ip/api/v1/auth/issue-token"
$body = @{
```

```
    username = $username
    password = $password
} | ConvertTo-Json

$response = Invoke-WebRequest -Uri $tokenUri -Method Post -Body $body `
    -ContentType "application/json" -SkipCertificateCheck
$token = ($response.Content | ConvertFrom-Json).data.token
Write-Host "Token: $token"
```

In all following examples, replace the IP address with your camera's IP address (or $ip) and <token> with your actual token (or $token). Do not remove or modify the token type name "X-API-Key".

In the examples, the parameters that you may need to change will be highlighted. The remaining parts of the requests should generally not be modified.

## 8.4 Imaging

### 8.4.1 Video Configuration

To change the imaging or video settings use the below structure.

To set the video brightness level (EBTD — the brightness parameter in the HTTPS API):

```
curl -k -G https://192.168.0.108/api/v1/imaging/controls \
    -H "Authorization: X-API-Key $token" \
    -d 'EBTD=255'
```

To read the current value:

```
curl -k -G https://192.168.0.108/api/v1/imaging/controls \
    -H "Authorization: X-API-Key $token" \
    -d 'EBTD'
```

Every configuration command follows the same structure. The full list of input arguments is in the last section of this document, *Appendix: list of configuration IDs*.

### 8.4.2 Backlight Compensation

The window range is 1 to 100. 1 corresponds to the full frame, and the window gets progressively smaller as you increase the value to 100.

To set the value blacklight compensation ("value":50 – the value that we want to set for backlight compensation):

```
curl -k -G https://192.168.0.108/api/v1/imaging/blc \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"set","value":50}'
```

To read the current value:

```
curl -k -G https://192.168.0.108/api/v1/imaging/blc \
```

```
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"get"}'
```

### 8.4.3 Autofocus

These requests are required only if your camera is equipped with the autofocus module. Below you can find examples of HTTPS API commands and short descriptions.

**Get Status**
To get autofocus status:

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"status"}'
```

**AF Control**
To enable or disable autofocus (enable – set "enable": true, disable – set "enable": false):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"af","enable":true}'
```

To send a one-push autofocus request (initiate refocus):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"af","action":"onepush"}'
```

**Manual Focus**
To set the focus speed (focus - speed in PPS (pulses per second), range 1-800):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"speed","focus":200}'
```

To change the optical focus distance ("value":100 – the focus step size, negative values move focus closer, positive values move focus farther; valid range for value – 1–250):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"focus","value":100}'
```

**Focus Presets**
To change the optical distance using a preset (available float values: 0.35, 0.4, 0.5, 0.7, 1, 1.5, 2, 3, 5, 10, 20 – all in meters):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
```

```
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"focus_preset","meter":0.7}'
```

Or (idx - index into distance array (0-10)):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"focus_preset","idx":4}'
```

**Focus Assist**

To enable and configure Focus Assist ("fadj" – set to "true" to enable, "false" to disable; "fths" – edge level, range 0–20; "facs" – highlight color: 0 – white, 1 – yellow (default), 2 – cyan, 3 – red, 4 – blue, 5 – black):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"assist_set","fadj":true,"fths":15,"facs":4}'
```

If Focus Assist is enabled, a helper rectangle for AF Windows will appear. Disabling it will remove the rectangle.

**AutoAF Sensitivity**

To configure AutoAF Sensitivity ("af17" – 0–50, higher values reduce sensitivity, lower values increase it for auto-refocus):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"afopts_set","af17":42}'
```

**AF Windows**

To enable or disable auto AF Windows (0 – manual, 1 – auto):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
-H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"afopts_set","af15":1}'
```

To refresh the current AF Windows configuration:

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"afw_get"}'
```

To apply a custom AF Windows configuration (h0/h1 – horizontal start/end, 0–2000; v0/v1 – vertical start/end, 0–2200):

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"afw_set","window1":{"h0":64,"h1":1428,"v0":10,"v1":1649}}'
```

```
curl -k -G https://192.168.0.108/api/v1/imaging/autofocus \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"afw_set","window1":{"h0":500,"h1":800,"v0":400,"v1":680}}'
```

## 8.5 Encoders

For each channel, the following parameters should be defined:

- width
- height
- fps
- encoding
- bitrate
- quality
- gov

See section 7.3.2 for detailed descriptions of each encoding setting. The possible values of each parameter are the same as in the web interface. The width and height correspond to the resolution in the horizontal and vertical axis.

| Width | Height | Channel support |
|---|---|---|
| 3840 | 2160 | 1 |
| 1920 | 1080 | 1, 2 |
| 1280 | 720 | 1, 2, 3 |
| 640 | 480 | 3 |

Table 7. Video resolution

⚠ If channel 1 is set to 3840×2160 resolution, you can use either VPTZ or WDR on this channel, but not at the same time.

To get encoder capabilities:

```
curl -k -G https://192.168.0.108/api/v1/encoders/capabilities \
    -H "Authorization: X-API-Key $token"
```

To get actual encoder settings:

```
curl -k -G https://192.168.0.108/api/v1/encoders \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d "{}"
```

To apply new encoder settings:

```
curl -k -G https://192.168.0.108/api/v1/encoders \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
-d
'[{"enabled":true,"bitrate":4000,"quality":35,"gov":30,"encoding":"H.264","height":1
```

```
080,"width":1920,"fps":30},
{"width":1280,"height":720,"encoding":"H.264","fps":15,"bitrate":1000,"gov":45,"qual
ity":35,"enabled":true},
{"enabled":false,"bitrate":500,"quality":50,"gov":30,"encoding":"H.264","height":360
,"width":640,"fps":10}]'
```

## 8.6 GPIO

### 8.6.1 AP LED

To get the AP LED value:

```
curl -k -G "https://192.168.0.108/api/v1/gpio/pins/led" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"get","gpio":"led"}'
```

To set the AP LED value (0 – off, 1 – on):

```
curl -k -G "https://192.168.0.108/api/v1/gpio/pins/led" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"set","gpio":"led","value":1}'
```

### 8.6.2 Snapshot

To make a snapshot:

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/gpio/snapshot?{"request":"set","gpio":"snapshot"}' \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

## 8.7 On Screen Dime

Enables the display of the current date and time on the video stream. When zoom is used, the OSD remains fixed to the image and may become partially or completely out of view.

| Value | Possible Values | Description |
|---|---|---|
| action | start, stop, status | Defines what action you want to perform. |
| target | time, text | Selects which OSD block the action applies to. |
| text | Any text | The text that will be displayed on the OSD. |

Table 8. OSD input arguments

To get the OSD status:

```
curl -k -G https://192.168.0.108/api/v1/osd/time \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"status"}'
```

To start or stop the on-screen time display:

```
curl -k -G https://192.168.0.108/api/v1/osd/time \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"start","target":["time"]}'
```

To enable and configure text on the OSD:

```
curl -k -G https://192.168.0.108/api/v1/osd/time \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
-d '{"action":"start","text":"hello","coordinates":[1,2]}'
```

To disable OSD text:

```
curl -k -G https://192.168.0.108/api/v1/osd/time \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"stop","target":["text"]}'
```

To disable both time and text on the OSD:

```
curl -k -G https://192.168.0.108/api/v1/osd/time \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"stop","target":["time","text"]}'
```

## 8.8 Virtual Pan Tilt Zoom (VPTZ)

This feature enables the digital zoom of the camera. Different parts of the image can be zoomed and panned up and down. The operation can be done from the web interface described in section 7.3.1 or by the HTTPS commands. This feature is different from the Digital Zoom function (Dzoom), which ''snaps'' to a certain zoom level and position in the image.

The input argument is depicted as a letter, for example -z. After the letter, the value **(α)** is inserted. For example, for setting the zoom speed to 1: -z1.

| Input argument | Description | Range (α) |
|---|---|---|
| -zα | Zoom in speed | 1 ~ 30 |
| -z-α | Zoom out speed | 1 ~ 30 |
| -s | Stop zooming in or out | N.A. |
| -pα | Pan right | 1 ~ 100 |
| -p-α | Pan left | 1 ~ 100 |
| -tα | Tilt up | 1 ~ 100 |
| -t-α | Tilt down | 1 ~ 100 |

Table 9. VPTZ input arguments

See below an example HTTPS command string for the VPTZ function panning left (without stopping):

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/ptz/passthrough?cmd=-p-1' \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

Zooming in at 1x speed and then panning to the left at 1x speed:

1. cmd=-z1
2. cmd=-s
3. cmd=-p1
4. cmd=-s

⚠ The STOP action (-s) is required after every operation, otherwise the action continues indefinitely.

## 8.9 Network

### 8.9.1 Hostname

To get the hostname:

```
curl -k -G https://192.168.0.108/api/v1/network/hostname \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"hostname":null}'
```

To set the hostname (replace "cam-test" with your desired hostname):

```
curl -k -G https://192.168.0.108/api/v1/network/hostname \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"hostname":"cam-test"}'
```

### 8.9.2 MAC Address

To get the MAC address:

```
curl -k -G https://192.168.0.108/api/v1/network/mac \
    -H "Authorization: X-API-Key $token"
```

### 8.9.3 IP Address

To get the IP address:

```
curl -k -G https://192.168.0.108/api/v1/network/address \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"address":null}'
```

To set the IP address (set new IP address and gateway):

```
curl -k -G https://192.168.0.108/api/v1/network/address \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"address":"192.168.0.120/24","default gateway":"192.168.0.1"}'
```

### 8.9.4 Gateway Address

To get the gateway address:

```
curl -k -G https://192.168.0.108/api/v1/network/gateway \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"DefaultGateway":null}'
```

To set the gateway:

```
curl -k -G https://192.168.0.108/api/v1/network/gateway \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"DefaultGateway":"192.168.0.1"}'
```

### 8.9.5 DHCP

To get the DHCP status:

```
curl -k -G https://192.168.0.108/api/v1/network/dhcp \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"DHCP":null}'
```

To enable DHCP:

```
curl -k -G https://192.168.0.108/api/v1/network/dhcp \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"DHCP":true}'
```

For disabling DHCP just manually change the IP address.

### 8.9.6 DNS

To get DNS information:

```
curl -k -G https://192.168.0.108/api/v1/network/dns \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"DNS":null}'
```

### 8.9.7 Protocols

To get protocol status information:

```
curl -k -G https://192.168.0.108/api/v1/network/protocols \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"NetworkProtocols":null}'
```

## 8.10 Date and Time

To get the time:

```
curl -k -G https://192.168.0.108/api/v1/time/system \
    -H "Authorization: X-API-Key $token"
```

To set the date and time (use the format: data=yyyy-mm-dd&time=hh:mm:ss):

```
curl -k -X PUT https://192.168.0.108/api/v1/time/system \
    -H "Authorization: X-API-Key $token" \
    -d 'date=2026-01-01&time=12:34:56'
```

⚠ Before setting the date and time, you must disable the time server.

To get info about the time servers:

```
curl -k -G https://192.168.0.108/api/v1/time/ntp \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"get"}'
```

To set time servers (the "servers" parameter must contain a JSON list of servers that support the RFC 868 protocol):

```
curl -k -G https://192.168.0.108/api/v1/time/ntp \
     -H "Content-Type: application/json" \
     -H "Authorization: X-API-Key $token" \
     -d '{"action":"set-
     servers","servers":["pool.ntp.org","time.google.com"]}'
```

⚠ Time servers must support the RFC 868 protocol.

To enable or disable time synchronization with the time server ("enable" – on, "disable" – off):

```
curl -k -G https://192.168.0.108/api/v1/time/ntp \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"action":"enable"}'
```

To synchronize with the time server (specify the desired time server instead of time.ien.it):

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/time/ntp/sync?{"action":"sync","server":"time.ien.it"}
' \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

## 8.11 Recording Video

To get status:

```
curl -k -G https://192.168.0.108/api/v1/recording/status \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"request":"get","value":"status"}'
```

To start recording (set the desired channel in "channel":"2"):

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/recording/session?{"request":"set","value":"star
t","channel":"2"}' \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

Response: `{"ok": true, "isRecording": true, "channel": 2}`

To stop recording:

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/recording/session?{"request":"set","value":"stop
"}' \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

Response: `{"isRecording": false, "ok": true}`

## 8.12 Storage

To get the status:

```
curl -k -G https://192.168.0.108/api/v1/storage/sd/status \
    -H "Authorization: X-API-Key $token"
```

Response SD card present: `{"success": true, "status": "idle"}`
Response no SD card: `{"success": true, "status": "not_present"}`

To format the SD card:

```
curl -k -X POST "https://192.168.0.108/api/v1/storage/sd/format" \
     -H "Content-Type: application/json" \
     -H "Authorization: X-API-Key $token" \
     -d '{"stop_streamer":true}'
```

Response: `{"status": "formatting", "ok": true}`

⚠ If Channel 1 is configured to a 3840×2160 resolution, SD card formatting may take longer than 15 minutes. To minimize delay, the stream will pause temporarily during formatting and automatically resume once the process is complete.

To get the list of videos (in "path" you must specify the folder path):

```
curl -k -G "https://192.168.0.108/api/v1/storage/files" \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"action":"list","files":"video","path":"2026-03-19/11"}'
```

To delete a video (in "name" you must specify the full path and file name):

```
curl -k -G "https://192.168.0.108/api/v1/storage/files" \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"action":"delete","files":"video","name":"2026-03-
19/11/ch2_1280x720x15__2026-03-19_11-42-23.mp4"}'
```

To get list of snapshots:

```
curl -k -G "https://192.168.0.108/api/v1/storage/files" \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d '{"action":"list","files":"snapshot"}'
```

To delete a snapshot (in "name" you must specify the name of the snapshot):

```
curl -k -G "https://192.168.0.108/api/v1/storage/files" \
          -H "Content-Type: application/json" \
          -H "Authorization: X-API-Key $token" \
          -d
'{"action":"delete","files":"snapshot","name":"snapshot_20260101_164840.jpg"}'
```

## 8.13 System

### 8.13.1 Reboot

To reboot:

```
curl -k -X POST "https://192.168.0.108/api/v1/system/reboot" \
    -H "Authorization: X-API-Key $token"
```

### 8.13.2 Firmware Version

To get the firmware version:

```
curl -k -G "https://192.168.0.108/api/v1/system/version" \
    -H "Authorization: X-API-Key $token"
```

## 8.14 User Management

To get the list of users:

```
curl -k -G "https://192.168.0.108/api/v1/users/list" \
    -H "Authorization: X-API-Key $token"
```

To create a new user (set "username" – user login, 3–32 characters; "password" – user password, at least 8 characters; "role" – assigned access level: "admin", "operator", or "viewer"):

```
curl -k -X POST "https://192.168.0.108/api/v1/users/create" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"username":"someone","password":"12345678","role":"admin"}'
```

To delete a user (set "username" – the user account you want to delete):

```
curl -k -X DELETE "https://192.168.0.108/api/v1/users/delete" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"username":"someone"}'
```

To update a user (set "username" – the user you want to modify, and specify the new role and new password):

```
curl -k -X PATCH "https://192.168.0.108/api/v1/users/update" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"username":"someone","role":"viewer","password":"12345678"}'
```

To set a new password (set "username" – the user you want to change the password for, and "password" – the new password):

```
curl -k -X PATCH "https://192.168.0.108/api/v1/users/set-password" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"username":"someone","password":"12345678"}'
```

## 8.15 Tokens

To get the list of tokens for a user (set "username" – the username for which you want to get the list of tokens):

```
curl -k -G "https://192.168.0.108/api/v1/tokens/list" \
     -H "Authorization: X-API-Key $token" \
     -d 'username=Some user'
```

To create a token for a user (set "username" – the username for which you want to create a token):

```
curl -k -X POST "https://192.168.0.108/api/v1/tokens/create" \
     -H "Content-Type: application/json" \
     -H "Authorization: X-API-Key $token" \
     -d '{"username":"Some user"}'
```

To reveal a token of a user (set "key_id" – the ID of the token you want to reveal):

```
curl -k -X POST "https://192.168.0.108/api/v1/tokens/reveal" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"key_id":"b18a60341c232590"}'
```

To revoke a token of a user (a user can have only one token, so you can revoke it either by specifying the username or by providing the token's key_id):

```
curl -k -X POST "https://192.168.0.108/api/v1/tokens/revoke" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"username":"Some user"}'
```

Or:

```
curl -k -X POST "https://192.168.0.108/api/v1/tokens/revoke" \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d '{"key_id":"b18a60341c232590"}'
```

## 8.16 Other Features

### 8.16.1 ONVIF

To enable or disable ONVIF ("EnableOnvif": 1 – On, 0 – Off):

```
curl --globoff -k -X POST \
'https://192.168.0.108/api/v1/onvif/dispatch?{"type":"set","data":"EnableOnvif
","EnableOnvif":0}' \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    -d ''
```

### 8.16.2 Logs

To download logs (write your desired archive name after "-o"):

```
curl -k -G https://192.168.0.108/api/v1/logs/download \
    -H "Authorization: X-API-Key $token" \
    -o logs.tar
```

### 8.16.3 Config

To export the config:

```
curl -k -G https://192.168.0.108/api/v1/config/export \
    -H "Authorization: X-API-Key $token"
    -o camera-config-yyyy-mm-dd.json
```

Best rename output file to camera-config-yyyy-mm-dd.json or any other name.

To import the config (include the file path after the "@"):

```
curl -k -X POST https://192.168.0.108/api/v1/config/import \
    -H "Content-Type: application/json" \
    -H "Authorization: X-API-Key $token" \
    --data-binary @<path>/camera-config-yyyy-mm-dd.json
```

The import will be without the network settings.

Response:

```
{"warnings": ["Network: skipped (include_network=false)"], "success": true,
"errors": []}
```

# Recording

## 9.1 SD Card Formatting Instructions

Format the SD card using the FAT32 format, with a block size of 32 kilobytes.
For information and software to format the SD card, please contact your IT department.

## 9.2 Video Recording

You can start recording through the Web Interface or via the HTTPS API. The recorded video files can be accessed through the Web Interface, the FTP server, or directly from the SD card.

Video files on the SD card are organized by date and time. The root directory is `/sd`, and each day has its own folder named in `YYYY-MM-DD` format (e.g., `/sd/2025-12-11`). Inside it, recordings are grouped into subfolders by hour (00–23), such as `/sd/2025-12-11/13`. Videos are saved as multiple two-minute segments. Each file name includes the channel number, resolution, frame rate, and the start timestamp.

```
ch2_1920x1080x30__2025-12-08_13-50-32.mp4
ch2_1920x1080x30__2025-12-08_13-52-32.mp4
ch2_1920x1080x30__2025-12-08_13-54-32.mp4
ch2_1920x1080x30__2025-12-08_13-56-32.mp4
```

Example full path: `/sd/2025-12-11/13/ch2_1920x1080x30__2025-12-11_13-50-32.mp4`

⚠ If you have trouble viewing recorded MP4 files, ensure that your media player fully supports the H.264 video codec. Most modern media players support this format.

⚠ In case of an unexpected camera shutdown or SD card removal, the last two minutes of recording will be lost.

The camera uses loop recording. Once the SD card becomes full, the recording starts overwriting the oldest files. The total duration of the recordings depends on the size of the SD card, the selected video settings and how much motion there is in the scene being recorded.
As a reference, Table 6 shows approximate recording times for different SD card sizes with the following channel settings: 1920×1080, H.264 codec, 30 FPS, 10,000 Kbps bitrate, Quantization Parameter - 15, and GOP size of 30.

| SD card size | Recording time |
|---|---|
| 32GB | 8.5 hours |
| 64GB | 17 hours |
| 128GB | 1.5 days |
| 256GB | 3 days |
| 512GB | 6 days |
| 1024GB | 12 days |

Table 10. Approximate recording time

Use an SD card that meets the speed requirements of your selected stream. Higher resolution, frame rate, and bitrate demand faster cards. For Full HD recording, choose a card rated Class 10 or higher.

## 9.3 Snapshot

You can create snapshots through the Web Interface, via the HTTPS API, or using a GPIO trigger. Created snapshots can be found in the "Media" section of the Web Interface or on the FTP server.

The camera supports external snapshot triggering through GPIO22 and GND. By connecting these two the camera will automatically take a snapshot. This feature allows you to connect external devices to trigger the camera. You can use a motion detector, push button, or any other sensor capable of closing the circuit between GPIO22 and GND. Refer to section 0 for pin layout.

⚠ The snapshot will be taken from the channel with the highest resolution.

⚠ The camera stores snapshots in its internal memory, with a maximum capacity of 5 images. When this limit is reached, the oldest snapshot is automatically overwritten by the newest one, ensuring that the memory always contains the most recent images.

## 9.4 FTP Server

To access the snapshots and videos, connect to the camera via FTP using the following credentials:

**Username:** ftpuser
**Password:** (leave empty)
**Port:** 2121

If you require assistance with FTP software installation or configuration, please contact your IT department.

After connecting to the camera via FTP, you will have access to two directories:

1. `sd` – contains subfolders organized by date with video recordings and may also contain firmware files
2. `snapshot` – contains snapshot images

These directories allow you to download or manage stored media.

There may be a short delay before files appear in the directory listing. If the contents are not visible immediately, try refreshing the folder view in your FTP client.

⚠ The camera does not support copying files from the SD card while streaming all three channels at maximum resolution. Please lower stream resolution while transferring recordings from the SD card.

## 9.5 Clear SD Card

Use the Web Interface as described in section 7.4.6.
Alternatively, perform the operation via HTTPS, following the instructions in section 0.

# 10. Dimensions

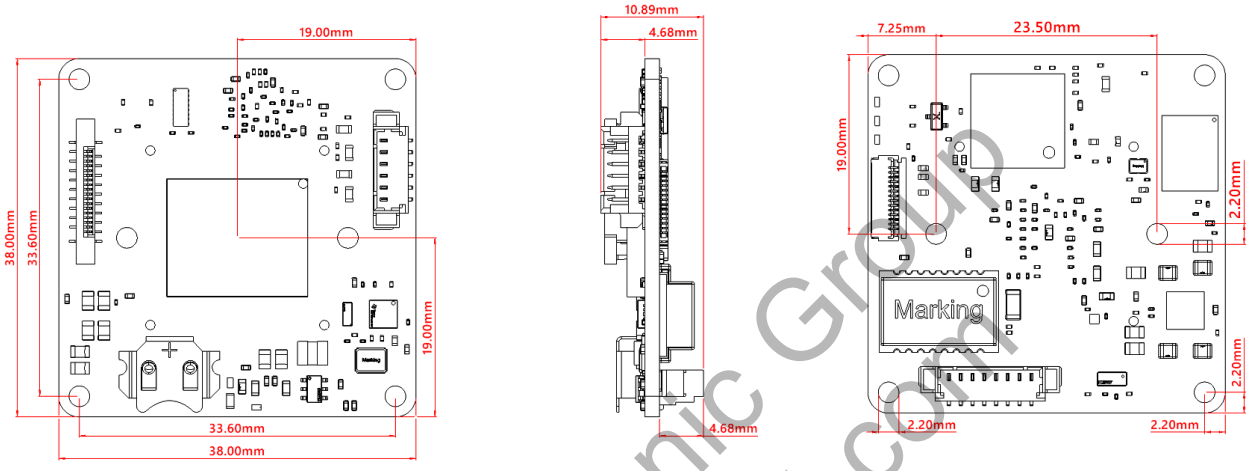



Figure 36 Camera Dimensions

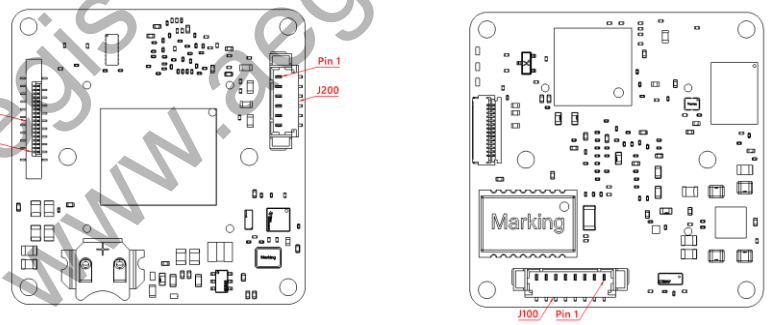



Figure 37 Connectors

Datasheets and 3D STEP files are available on the Videology website.

# 11. Appendix: list of configuration IDs

Values and parameters for HTTPS API commands to alter the imaging settings of the camera. This is explained in section 8.4.1.

## 11.1 Exposure

Sets the target brightness through AE (Auto Exposure) function.

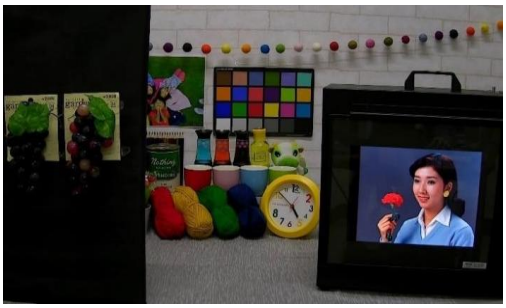
| ID | Feature | Description | Range |
|---|---|---|---|
| EBON | AeOn | Auto Exposure operation. (0: OFF, 1: ON) | 0 ~ 1 |
| EBTD | Brightness | Set the brightness. | 0 ~ 255 |
| EBTN | AgcTarget | Set the AGC target. (0~100 %of normal brightness) A situation in which AGC is entered in AE control may determine that the current scene is dark. Setting the same brightness as a bright scene in a dark scene can be unnatural, so set the brightness to a percentage of normal brightness when AGC is entered. | 0 ~ 100 |
| ESON | AntiSatOn | The ability to improve image saturation due to SPOT. (0: OFF, 1: ON) | 0 ~ 1 |
| ESWT | SatBrt | Sets the strength of the ANTI SAT. (Min: 0 ~ Max: 20)<br>The larger the value, the more visible for saturation areas, but the surrounding area becomes darker. | 0 ~ 20 |
| ESSB | Stabilizing | Sets the degree of control stabilization for changes in SPOT images.<br>(0: OFF (immediate response), 1: LOW (15FPS), 2: MIDDLE(30FPS), 3: HIGH(60FPS)) | 0 ~ 3 |
| EION | Iris | ELC will pull IRIS full open, and ALC will control brightness with IRIS. DC iris (0: ELC, 1: ALC), piris & AF iris (0: MANUAL, 1: AUTO) | 0 ~ 1 |
| ESHT | Shutter | Sets sensor shutter control method. (0: AUTO, 1: MANUAL, 2: FLICKER) | 0 ~ 2 |
| ESHN | ShtMin | Sets the Shutter Min Exposure Time (Sec) in AUTO mode<br>(0: 1/30, 1: 1/60, 2: 1/120, 3: 1/250, 4: 1/500, 5: 1/1000, 6: 1/2000,<br>7: 1/4000, 8: 1/8000, 9: 1/15000, 10: 1/30000) | 0 ~ 10 |
| ESHD | DeblurMin | Sets the Deblur Min Shutter Exposure Time (Sec) in AUTO mode<br>(0: 1/30, 1: 1/60, 2: 1/120, 3: 1/250, 4: 1/500, 5: 1/1000, 6: 1/2000,<br>7: 1/4000, 8: 1/8000, 9: 1/15000, 10: 1/30000) | 0 ~ 10 |
| ESHM | ShtMax | Sets the Shutter Max Exposure Time (Sec) in AUTO mode<br>(0: 1/30, 1: 1/60, 2: 1/120, 3: 1/250, 4: 1/500, 5: 1/1000, 6: 1/2000,<br>7: 1/4000, 8: 1/8000, 9: 1/15000, 10: 1/30000) | 0 ~ 10 |
| ESHP | ShutSpd | Sets the Shutter Exposure Time (Sec) in MANUAL mode. | 0 ~ 10 |

| | | | |
|---|---|---|---|
| | | (0: 1/30, 1: 1/60, 2: 1/120, 3: 1/250, 4: 1/500, 5: 1/1000, 6: 1/2000,<br>7: 1/4000, 8: 1/8000, 9: 1/15000, 10: 1/30000) | |
| EMDC | DcMode | Sets Auto Exposure Control mode when Iris settings are ALC.<br>(0: INDOOR, 1: OUTDOOR, 2: DEBLUR)<br>**INDOOR**<br>Full Shutter fixation to prevent indoor Flicker generation, AE control mode with IRIS.<br>At this time, the Shutter is automatically changed to Full Shutter.<br>**OUTDOOR**<br>In outdoor situations, the setting for AE control with IRIS is fixed to the SHUTTER MIN when IRIS control is performed. However, when the surrounding environment becomes dark and IRIS becomes full open, it controls AE with the shutter and operates up to SHUTTER MAX.<br>**DEBLUR**<br>It will operate the same as DEBLUR mode in IRIS Full Open & ShtMode. (see below) | 0 ~ 2 |
| EMSH | ShtMode | Sets Auto Exposure Control mode when Iris settings are ELC.<br>(0: NORMAL, 1: DEBLUR)<br>**NORMAL**<br>IRIS is a mode that controls AE with a Full Open and a Shutter.<br>**DEBLUR**<br>It is a function to minimize the Blur phenomenon that occurs as you go to Slow Shutter. To minimize the Blur, AGC is applied to improve the Shutter speed quickly. | 0 ~ 1 |
| EDSS | Dss | Sets mode for Long shutter (>1Frame).<br>The ability to compensate for insufficient light by increasing the exposure time of the sensor but decreases the frame rate. (0: OFF, 1: X2, 2: X4, 3: X8, 4: X16, 5: X32, 6: X64, 7: X128) | 0 ~ 7 |
| EAGC | Agc | Sets max control range for Sensor AGC. | 0 ~ 255 |
| EISP | IrsSpeed | Sets IRIS control speed. | 0 ~ 20 |
| ESGP | ShtSpeed | Sets Shutter Control Speed. | 0 ~ 20 |
| EGCP | AgcSpeed | Sets Agc control speed. | 0 ~ 20 |
| ESHR | rAeSht | Read sensor shutter value (read only) | - |
| EAGR | rAeAgc | Read sensor AGC value (read only) | - |

Table 11. Exposure Control

Example:

AntiSatOn 0 (Off)



AntiSatOn 1(On/Lv10)

Iris 0(ELC)

Iris 1(ALC)

Figure 38 Exposure example

## 11.2 WDR

Setting Function to WDR (Wide Dynamic Range).

| ID | Feature | Description | Range |
|---|---|---|---|
| WDON | WdrOn | WDR operation ON. (0: OFF, 1: ON) | 0 ~ 1 |
| WMOD | *WdrMode | WDR method setting. (0: ISP FRAME WDR, 1: LINE HDR) | 0 ~ 1 |
| WLMD | WdrLine | Set LINE HDR mode (0: 2Page, 1: 3Page) | 0 ~ 1 |
| WWTL | WdrWgt | WDR intensity setting. (0: LOW, 1: MIDDLE, 2: HIGH) | 0 ~ 2 |
| WBTL | AE_WDR_LTGT_OFST2 | The brightness (Iris, AGC, Shutter) of the dark domain is established in the WDR mode. | 0 ~ 511 |
| WBTS | AE_WDR_STGT_OFST2 | The brightness (Iris, AGC, Shutter) of the bright domain is established in the WDR mode. | 0 ~ 511 |
| WBTM | AE_WDR_MTGT_OFST2 | The brightness (Iris, AGC, Shutter) of the medium domain is established in the WDR mode. | 0 ~ 255 |
| WBTN | AE_WDR_LTGT_NIGHT | The brightness (Iris, AGC, Shutter) of the dark domain is established in the WDR mode at night. 0~100 Percent(%) of the daytime brightness | 0 ~ 100 |
| WBTD | ACEWDR1_TH | The brightness (ISP Gain) of the whole-area in the WDR mode. | 0 ~ 255 |
| WCNT | ACEWDR2_TH | The contrast (ISP Contrast) of the whole-area in the WDR mode. | 0 ~ 255 |

| | | | |
|---|---|---|---|
| WGMM | GammaWdr | Gamma Settings in WDR Mode.<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75, 7: Adaptive, 8: Default) | 0 ~ 8 |
| WGMD | GammaWdrDay | Day gamma settings in gamma adaptive mode with WDR.<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75) | 0 ~ 6 |
| WGMN | GammaWdrNgt | Night gamma settings in gamma adaptive mode with WDR.<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75) | 0 ~ 6 |

Table 12. WDR Control

⚠ *WdrMode[WMOD] is reflected in Initial only when the initial value of SSID meets the condition. See SSID parameter.

WdrOn 0 (off) WdrOn 1

Figure 39 WDR WdrOn



## 11.3 Color

AWB (Auto White Balance) is a function that automatically balances colors according to the color temperature characteristics of the input image.

| ID | Feature | Description | Range |
|---|---|---|---|
| WBMD | AwbMode | The AWB Mode consists of AUTO, AUTOext, PRESET, and MANUAL Mode<br>(0: AUTO, 1: AUTOext, 2: PRESET, 3: MANUAL)<br>**AUTO**<br>White Balance is automatically performed through the default color temperature band.<br>**AUTOext**<br>Color temperature range extension mode compared to AUTO mode **PRESET**<br>White Balance does not automatically renew. When using the PresetHold function, the color temperature at the time is maintained.<br>**MANUAL** | 0 ~ 3 |

| | | | |
|---|---|---|---|
| | | The White Balance is proceed based on the fixed color temperature (3000K, 5000K, 8000K). RGAIN and BGAIN can be established additionally. | |
| WBPS | AwbPresetHold | If you write 1, It get the color temperature information at the time. When color temperature acquisition is finished, the 'AwbPresetHold' parameter is changed to 0. In Awb 'PRESET' mode, the held color temperature information is fixed. | 0 ~ 1 |
| WBMT | AwbMnlTemp | In the Manual mode, the color temperature is established (0: 3000K, 1: 5000K, 2: 8000K) | 0 ~ 2 |
| WBMR | AwbMnlRgain | In the Manual mode, the weight about red color is controlled | 0 ~ 255 |
| WBMB | AwbMnlBgain | In the Manual mode, the weight about blue color is controlled | 0 ~ 255 |
| WBSR | SaturationR | Function that adjusts the overall color of the image in the red direction | 0 ~ 255 |
| WBSG | SaturationG | Function that adjusts the overall color of the image in the green direction | 0 ~ 255 |
| WBSB | SaturationB | Function that adjusts the overall color of the image in the blue direction | 0 ~ 255 |

Table 13. Color Control

⚠ Change DebugMode[DBMD] into 3 to display the AWB window area.

AWB off | AWB 0 (Auto) | AWB 1 (Autoext)

Figure 40 AWB example

AwbMnl 0(3000K)
(light source: CWF)

AwbMnl 1(5000K)
(light source: CWF)

AwbMnl 2(8000K)
(light source: CWF)

Figure 41 AwbMnlTemp example

### 11.3.1 Saturation

The saturation parameter is a combination of three values, WBSR (Red), WBSG (Green), WBSB (Blue). To alter the saturation, each of the three color parameters should be set to the same value.

SaturationR

SaturationG

SaturationB

Figure 42 Saturation example

## 11.4 HUE & CHROMA

Hue and chroma settings that control custom colors.

| ID | Feature | Description | Range |
|---|---|---|---|
| HYRG | Yellow_HUE_RedToGreen | Adjust Yellow Hue from Red to Green (0: Red, 255: Green) | 0 ~ 255 |
| HYCH | Yellow_CHROMA | Adjust Yellow Chroma | 0 ~ 255 |
| HRYB | Red_HUE_YellowToBlue | Adjust Red Hue from Yellow to Blue (0: Yellow, 255: Blue) | 0 ~ 255 |
| HRCH | Red_CHROMA | Adjust Red Chroma | 0 ~ 255 |
| HBGR | Blue_HUE_GreenToRed | Adjust Blue Hue from Green to Red (0: Green, 255: Red) | 0 ~ 255 |
| HBCH | Blue_CHROMA | Adjust Blue Chroma | 0 ~ 255 |

| | | | |
|---|---|---|---|
| HGBY | Green_HUE_BlueToYellow | Adjust Green Hue from Blue to Yellow (0: Blue, 255: Yellow) | 0 ~ 255 |
| HGCH | Green_CHROMA | Adjust Green Chroma | 0 ~ 255 |

Table 14. HUE & CHROMA Control

Default Blue CHROMA Blue HUE GreenToRed

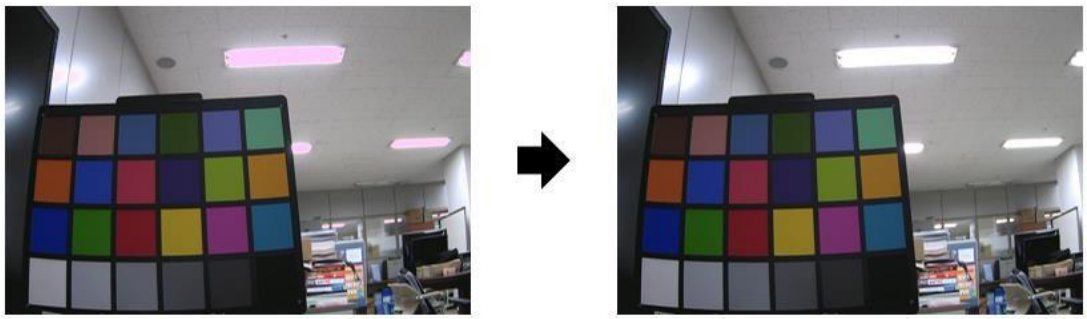
Figure 43 HUE & CHROMA example

## 11.5 Color Suppression

Color suppression mode is a function to correct the problems generated in color reproduction. There are three functions: low light color, edge color, and high light color.

| ID | Feature | Description | Range |
|---|---|---|---|
| CSHO | HSUP_ON | High Light color suppression on/off (Y domain control) (0: OFF, 1: ON) Corrects problems in color reproduction caused by differences caused by different RGB saturation points | 0 ~ 1 |
| CSHT | HSUP_TH | High Light color suppression threshold (Y domain control) The standards of the saturation point of time is established. | 0 ~ 255 |
| CSEN | CES_NOR | Edge color suppression weight in normal<br>Corrects the problem that occurs when color is affected at the edge during RGB interpolation | 0 ~ 40 |
| CSEW | CES_WDR | Edge color suppression weight in WDR<br>Corrects the problem that occurs when color is affected at the edge during RGB interpolation | 0 ~ 40 |
| CSLO | LSUP_ON | Low Light color suppression on/off (0: OFF, 1: ON)<br>Function to suppress the occurrence of color noise when entering AGC | 0 ~ 1 |

Table 15. Color suppression Control



HSUP_ON 0 (Off) HSUP_ON 1 (On)

Figure 44 Color suppression example

## 11.6 DNR

Settings related to noise reduction.

| ID | Feature | Description | Range |
|---|---|---|---|
| DN3L | Adnr3D | Setting the intensity of 3D DNR<br>(0: OFF, 1~25: LOW, 26~75: MIDDLE,<br>76~177: HIGH, 178~255: VERY HIGH) | 0 ~ 255 |
| DN3N | Adnr3D_Ngt | Setting the intensity of night 3D DNR<br>(0: OFF, 1~25: LOW, 26~75: MIDDLE,<br>76~177: HIGH, 178~255: VERY HIGH) | 0 ~ 255 |
| DN3I | DnrIncrease | The ability to interlock the control strength of the 3D DNR according to the AGC value (0: OFF, 1: ON)<br>The larger the AGC value, the larger the 3D DNR strength | 0 ~ 1 |
| DN2D | Adnr2D | Setting the intensity of 2D DNR<br>(0: OFF, 4: LOW, 8: MIDDLE, 16: HIGH, 17~255: VERY HIGH) | 0 ~ 255 |
| DN2N | Adnr2D_Ngt | Setting the intensity of night 2D DNR<br>(0: OFF, 4: LOW, 8: MIDDLE, 16: HIGH, 17~255: VERY HIGH) | 0 ~ 255 |
| DN2E | EdgeLv | 2D DNR edge level | 0 ~ 4 |

Table 16. DNR Control

Adnr3D 0 (Off)

Adnr3D 51 (On)

Figure 45 DNR example



## 11.7 Sharpness

Settings related to sharpness.

| ID | Feature | Description | Range |
|---|---|---|---|
| SPLV | Sharpness | Setting the intensity of sharpness<br>The function of emphasizing the edge of the image | 0 ~ 255 |
| SPEB | ShpEdgeBoost | Edge Enhancement | 0 ~ 255 |
| SPEL | ShpEdgeLimit | Edge Limitation in Low Lighst | 0 ~ 255 |
| SPBE | ShpBigEdge | Sharpness for Big edge image | 0 ~ 255 |
| SPSE | ShpSmallEdge | Sharpness for Small edge image | 0 ~ 255 |

Table 17. Sharpness Control

Sharpness 0

Sharpness 128

Figure 46 Sharpness example



## 11.8 Gamma

Set the gamma parameter.

| ID | Feature | Description | Range |
|---|---|---|---|
| GMML | Gamma | Gamma setting<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75, 7: Adaptive)<br>Set to Adaptive, you can set up separate Gamma settings for Day and Night | 0 ~ 7 |
| GMMD | GammaDay | Day gamma settings in gamma adaptive mode<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75) | 0 ~ 6 |
| GMMN | GammaNgt | Night gamma settings in gamma adaptive mode<br>(0: 0.45, 1: 0.5, 2: 0.55, 3: 0.6, 4: 0.65, 5: 0.7, 6: 0.75) | 0 ~ 6 |
| GMUM | UserGammaMode | User Gamma Mode Selection<br>(0 = Low Saturation, 1 = Traditional Mode, 2 = SW Par Custom gamma) | 0 ~ 2 |
| GMY0~G | UserYGma00 ~ 16 | User Gamma Mode2 - YGamma | 0~1023 |
| GMC0~G | UserCGma00 ~ 16 | User Gamma Mode2 - CGamma | 0~1023 |

Table 18. Gamma Control

## 11.9 Contrast

Set contrast and ACE, DEFOG that corrects images with narrow Contrast.

| ID | Feature | Description | Range |
|---|---|---|---|
| CNTL | Contrast | Contrast setting | 0 ~ 255 |
| ACLV | Ace | ACE (0: OFF, 1: LOW, 2: MIDDLE, 3: HIGH) | 0 ~ 3 |
| ACWT | AceGmgn | ACE intensity setting | 0 ~ 255 |
| ACBT | *AceBrt | Brightness Setting of ACE & DEFOG | 0 ~ 64 |
| DFON | Defog | DEFOG (0: OFF, 1: LOW, 2: MIDDLE, 3: HIGH) | 0 ~ 3 |
| DFMD | DefogMode | DEFOG Mode consists of MANUAL and AUTO Mode.<br>(0: MANUAL, 1: AUTO)<br>**MANUAL**<br>The intensity of the DEFOG mode is established as manual<br>**AUTO**<br>The intensity of the DEFOG mode is established automatically | 0 ~ 1 |

Table 19. Contrast Control

⚠ Ace Brt[ACBT]: The settings are equally applicable to DEFOG.


Figure 47 Contrast example

## 11.10 Mirror

Set to invert the image vertically or horizontally.

| ID | Feature | Description | Range |
|---|---|---|---|
| IMFP | Flip | Image FLIP function (0: OFF, 1: ON) | 0 ~ 1 |
| IMMR | Mirror | Image MIRROR function (0: OFF, 1: ON) | 0 ~ 1 |

Table 20. Mirror Control

Mirror 1 (On)

Flip 1 (On)

Figure 48 Mirror example

## 11.11 DZOOM

Set the digital zoom parameter.

| ID | Feature | Description | Range |
|---|---|---|---|
| DZLV | DZoom | Digital Zoom (0 ~ DZLR-1 = OFF, DZLR ~ 6400 = x1.0 ~ x DZLV/DZLR) | 0 ~ 6400 |
| DZLR | DZoomCtrlRes | Digital Zoom control resolution | 10 ~ 100 |
| DZPH | DZoomPosH | Horizontal Start Position of Digital Zoom (2M resolution: 30 ~ 1890) | 0 ~ 1890 |
| DZPV | DZoomPosV | Vertical Start Position of Digital Zoom (2M resolution: 17 ~ 1063) | 0 ~ 1063 |

Table 21. Dzoom Control

⚠

- The DZOOM function is activated only when there is a "DZOOM YC Input".
- For “DZOOM YC Input”, the YC with the largest resolution is selected among the generated YCs.
- DZOOM function is not applied to YC selected as “DZOOM YC input”.
  case 0) YC0=5M / YC1=2M / YC2=1M
  DZOOM Input YC: YC0(5M), DZOOM applies only to YC1, YC2.
- If there are multiple YCs with the largest resolution, DZOOM is assigned with the highest YC number first.
  case 1) YC0=5M / YC1=5M / YC2=1M
  DZOOM Input YC: YC1(5M), DZOOM applies only to YC0, YC2.

DZoom 10 (x1) DZoom 100 (x10)

Figure 49 Dzoom example

## 11.12 Motion

Settings related to motion detection.

| ID | Feature | Description | Range |
|---|---|---|---|
| ITCH | MotionCh | Select the Motion detect input source (0: Sensor, 1~4: Digital Input CH, 20~255: Auto) | 0 ~ 255 |
| ITON | MotionOn | Motion detect (0: OFF, 1: ON) | 0 ~ 1 |
| ITST | MotionSens | Motion detect Sensitivity<br>The ability to set sensitivity for motion detection | 0 ~ 255 |
| ITMO | MotionBoxOn | Function to display OSD related to Motion Detection (0: OFF, 1: ON) | 0 ~ 1 |
| ITDT | MotionWinBoxType | The ability to display the Motion Detection ROI region (0: Normal image 1: 50 % Blending 2: 75 % Blending 3: 100 % Blending 4: ROI Outline) | 0 ~ 4 |
| ITRF | MotionDetBoxFill | Color box display of object area where motion is detected (0: OFF, 1: ON) | 0 ~ 1 |
| ITAL | MotionDetFontOn | Text Alarm is a function that displays text on the screen when motion occurs (0: OFF, 1: ON) | 0 ~ 1 |
| ITCM | MotionCamMovingTH | Function to prevent false detection of motion by camera movement | 0 ~ 20 |
| ITBC | MotionBrightChgTH | Function to prevent false detection of motion by changes in screen brightness | 0 ~ 200 |
| ITSO | MotionGpioSigOn | Function to output a signal through GPIO when motion occurs (0: OFF, 1: ON) | 0 ~ 1 |

Table 22. Motion Control

MotionOn 1 – Object

Figure 50 Motion detection example

## 11.13 Focus Assist

This function is used to adjust a manual focus lens.

| ID | Feature | Description | Range |
|---|---|---|---|
| FADJ | FocusAdj_On | Edge area emphasis for focus control of manual lens. (0: OFF, 1: ON) | 0 ~ 1 |
| FTHS | FocusThrs | Edge level. | 0 ~ 20 |
| FACS | FocusAdjColorSel | Edge color. (0: WHT, 1: YEL, 2: CYN, 3: RED, 4: BLU, 5: BLK) | 0 ~ 5 |

Table 23. Focus Assist Control

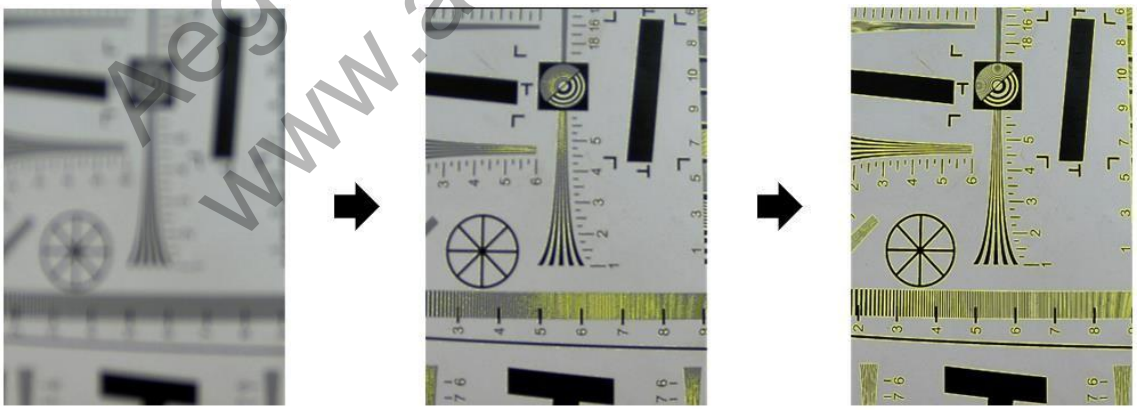


Figure 51 Focus assist example

### 11.14 Stat Config

Set the statistic function configuration.

| ID | Feature | Description | Range |
|---|---|---|---|
| SWDS | StatWinDispSel | Display STAT window<br>(0: OFF, 1: AE, 2: AF, 3: AWB) | 0 ~ 3 |
| EWDS | AeWinDispNumSel | Display STAT AE window<br>select (bit [0] no use, [1] AE window 2, [2] AE window 3, [3] AE window 4, [4] AE window 5, [5] AE window 6) | 0 ~ 63 |
| FWDS | AfWinDispNumSel | Display STAT AF window<br>select (bit [0] AF window 1, [1] AF window 2) | 0 ~ 3 |
| WWDS | AwbWinDispOsdSel | Display STAT AWB white point<br>(0: OFF, 1: ON) | 0 ~ 1 |
| MWDS | MotionWinDispNumSel | Display STAT MOTION window<br>select (bit [0] Motion window 4, [1] Motion window 3, [2] Motion window 2, [3] Motion window 1) | 0 ~ 15 |

Table 24. Stat config Control

### 11.15 Backlight Compensation

Set the Auto Exposure Window. The slider in the web interface makes the detection window bigger or smaller, which means each of these parameters is rewritten when adjusted.

| ID | Feature | Description | Range |
|---|---|---|---|
| EWX2 | AeWinStartX2 | AE window 2 X start position, (4095 = default window) | 0 ~ 4095 |
| EWY2 | AeWinStartY2 | AE window 2 Y start position, (4095 = default window) | 0 ~ 4095 |
| EWW2 | AeWinSizX2 | AE window 2 X width size, (4095 = default window) | 0 ~ 4095 |
| EWH2 | AeWinSizY2 | AE window 2 Y height size, (4095 = default window) | 0 ~ 4095 |
| EWX3 | AeWinStartX3 | AE window 3 X start position, (4095 = default window) | 0 ~ 4095 |
| EWY3 | AeWinStartY3 | AE window 3 Y start position, (4095 = default window) | 0 ~ 4095 |
| EWW3 | AeWinSizX3 | AE window 3 X width size, (4095 = default window) | 0 ~ 4095 |
| EWH3 | AeWinSizX3 | AE window 3 Y height size, (4095 = default window) | 0 ~ 4095 |

Table 25. AE window Control

### 11.16 AE Config

Set the AE slice, clip parameter.

| ID | Feature | Description | Range |
|---|---|---|---|
| ECS2 | AeConfSlice2 | AE window 2 Slice value<br>(0~255: fix slice value, 4095: set AE default operation) | 0 ~ 4095 |
| ECC2 | AeConfClip2 | AE window 2 Clip value<br>(0~255: fix clip value, 4095: set AE default operation) | 0 ~ 4095 |
| ECS3 | AeConfSlice3 | AE window 3 Slice value<br>(0~255: fix slice value, 4095: set AE default operation) | 0 ~ 4095 |
| ECC3 | AeConfClip3 | AE window 3 Clip value<br>(0~255: fix clip value, 4095: set AE default operation) | 0 ~ 4095 |

Table 26. AE config Control

### 11.17 AWB Window

Set the AWB window.

| ID | Feature | Description | Range |
|---|---|---|---|
| WWX1 | AwbWinStartX | AWB window X start position, (4095 = default window) | 0 ~ 4095 |
| WWY1 | AwbWinStartY | AWB window Y start position, (4095 = default window) | 0 ~ 4095 |
| WWW1 | AwbWinSizeX | AWB window X width size, (4095 = default window) | 0 ~ 4095 |
| WWH1 | AwbWinSizeY | AWB window Y height size, (4095 = default window) | 0 ~ 4095 |

Table 27. AWB window Control

⚠ If the initial value is larger than 4095, it operates as a default window and stores the window size in the parameter.

### 11.18 AWB Config

Set the AWB slice, clip parameter.

| ID | Feature | Description | Range |
|---|---|---|---|
| WCS1 | AwbConfSlice | AWB window Y Slice value<br>(0~255: fix slice value, 4095: default value) | 0 ~ 4095 |
| WCC1 | AwbConfClip | AWB window C Slice value<br>(0~255: fix clip value, 4095: default value) | 0 ~ 4095 |

Table 28. AWB config Control

⚠ If the initial value is larger than 4095, it operates as a default window and stores the window size in the parameter.

### 11.19 Black & White

Set the image to black and white settings. To set the camera to black & white mode set RGBB = 1 and TNMD = 2. To turn it back to default color mode, set RGBB = 0 and TNMD = 1.

| ID | Feature | Description | Range |
|---|---|---|---|
| RGBB | RGB_BYPASS | RGB Interpolator Bypass Mode (0: OFF, 1: ON) | 0 ~ 1 |
| TNMD | Tdn | DAY & NIGHT Filter Control Mode Settings<br>(0: AUTO, 1: COLOR, 2: B&W, 3: EXTERN)<br>**AUTO**<br>The mode deciding the day/night based on the AGC level as the decision criteria.<br>**COLOR**<br>It is the mode fixed to the manual mode to the daytime.<br>**B&W**<br>It is the mode fixed to the manual mode to the night time.<br>**EXTERN**<br>The mode which decides the day/night by using the external device. | 0 ~ 3 |

Table 29. AWB config Control

# 12. Support

## 12.1 Videology Help Center

This is your go-to resource for all Videology product support questions. The answer to your question may be at your fingertips. Please see the Videology Help Center for valuable information and resources.

## 12.2 Contact Videology Support

If you need any support on 801-IP-678 product, please fill out the form here to contact our support department: https://www.videologyinc.com/contact-videology-service

## 12.3 Videology RMA Policy

To learn more about our Return Material Authorization (RMA) policy, please visit the RMA Policy page on our website: https://www.videologyinc.com/return-authorization

## 12.4 Videology Terms and Conditions of Sale

Our global sales terms and conditions can be found on this link.