

# BG-MAESTRO

1080P Full HD 8MP Auto-Tracking Wide Angle ePTZ Camera

## User Manual







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## Statement

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Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

## Safety Precaution

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- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity or power supply specifications.
- Wipe it with a soft, dry cloth when cleaning the camera lens. Wipe it gently with a mild detergent if needed. Do not use strong or corrosive detergents to avoid scratching the lens and affecting the image.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards. The power supply of the product is  $\pm 12V$ , the max electrical current is 2A.
- This product should be placed on a stable desktop or other horizontal surface. Do not install the product obliquely, otherwise it may display inclined image. Do not power on before completely installation.
- Electromagnetic fields at specific frequencies may affect the video image. This product is Class A. It may cause radio interference in household application. Appropriate measure is required.





## Introduction

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The BG-MAESTRO is a compact ePTZ auto-tracking camera that delivers exceptionally accurate tracking throughout its coverage area. Designed to be easily configured without requiring additional software, the auto-tracking parameters are set through the web based interface. Tracking is performed with the electronic pan, tilt, and zoom (ePTZ) capabilities via a fixed lens to maintain a compact form factor. Power over ethernet (PoE) technology further simplifies installation by requiring only one cable for power and internet connectivity.

The BG-MAESTRO features a 1/2.8" high quality 4K CMOS sensor and can simultaneously output USB 3.0, 3G-SDI, and IP streaming in resolutions up to 1080p@30Hz. With 3x digital zoom and ePTZ controls, the camera automatically tracks subjects between distances of 15ft to 50ft within its field of view.

## Features

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- **Intelligent Tracking:** Built-in leading image recognition and tracking algorithms track targets stably, accurately, and quickly without any tracking host.
- **Subject Tracking/Anti-Interference:** The automated tracking stays locked on the initial target without the auto tracking function redirecting itself to an interfering subject passing through the frame.
- **Smooth Tracking:** The adjustable tracking modes, speed, and sensitivity ensure the best possible shot based on the target's movements and desired frame.
- **Tailor to the Environment:** The tracking performance is not affected by the room's size or shape and can mask out objects that may interfere with tracking.
- **Dynamic Exposure:** Prevents issues with the darkening of tracked targets against strong light backgrounds.
- **Multiple Tracking Modes:** Real-time tracking, movie tracking, and area tracking.
- **Ultra HD:** 1/2.8 inch high quality 4K CMOS sensor.
- **Distortion-free Lens:** 4K distortion-free lens with 3X digital zoom and EPTZ controls.
- **Low Noise and High SNR:** The low-noise and high SNR CMOS sensor keeps the picture clean and clear even in low light conditions.
- **Multiple Video Compression Formats:** USB supports H264, MJPG, YUY2, NV12 video compression formats and the network supports H.264, H.265 video compression formats.
- **Multiple Video Outputs:** Simultaneously outputs HDMI/SDI, USB 3.0 and LAN (Gigabit) video streams.
- **Multiple Streams:** Supports up to five streams simultaneously. Output a close-up main-stream, close-up sub-stream, panoramic stream, panoramic sub-stream and director stream.
- **PoE Support:** Power, control, and output video using one CAT cable.
- **Flexible Installation:** Wall mount and ceiling mount options available.
- **Web Interface:** Take control via a network connection to help meet different deployment needs.



## Packing List

- 1x BG-MAESTRO Camera
- 1x Metal Wall/Ceiling Mount (White)
- 1x 10' USB 3.0 Cable
- 1x User Manual

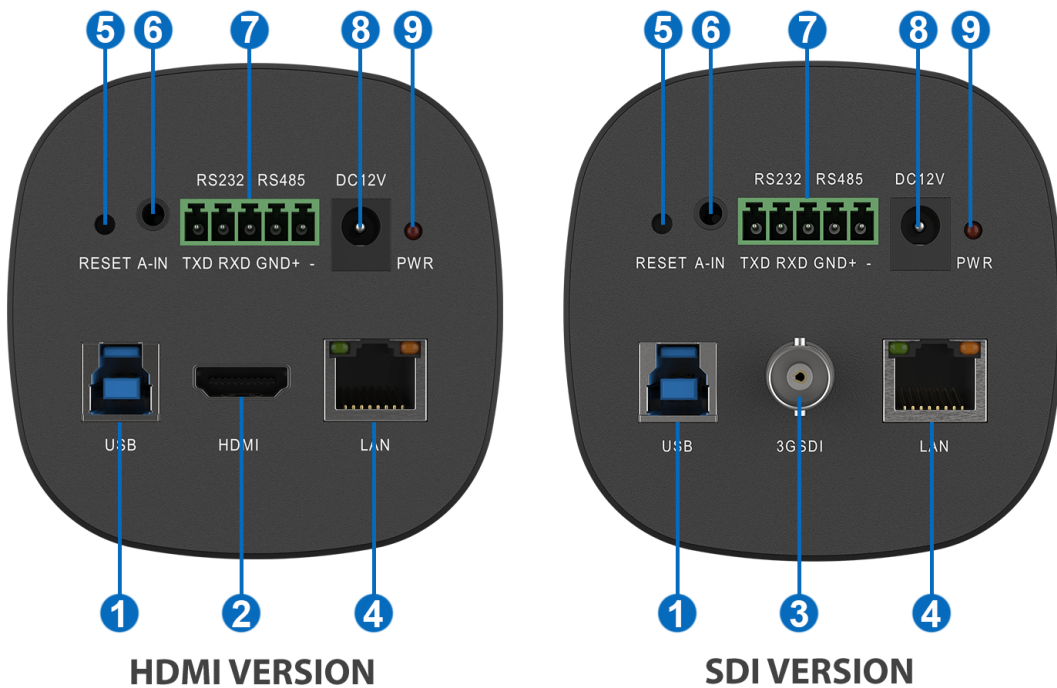
## Specifications

Camera/Lens Parameters	
Image Sensor	1/2.8" High Quality 4K CMOS Sensor
Effective pixels	8.28 Megapixel, 16:9
Video Format	SDI output: 1080p@30Hz/25Hz; 720p@60Hz/50Hz/30Hz/25Hz; U3 output: 1920x1080p@30Hz /25Hz; 1280x720p@60Hz /50Hz /30Hz /25Hz; 960x540p@30Hz; 800x600p@30Hz; 640x360p@30Hz; 640x480p@30Hz; 352x288p@30Hz; USB3.0 can be compatible with USB 2.0 output
View Angle	57.2° (D) /47° (H) /36° (V)
Focus	f=7.23mm
Aperture	F2.4+ 5%
Digital Zoom	3X
Minimum Illumination	0.5Lux (F1.8, AGC ON)
DNR	2D & 3D DNR
White Balance	Auto / Manual/ One Push/ Specified color temperature (2400K-7100K, step length is 100)
Focus	Manual
Exposure	Fixed
BLC	ON/ OFF
DNR	>50dB
Input/Output Interface	
Video Interfaces	1xSDI / HDMI interface 1xUSB interface 1xLAN interface: 10M/100M adaptive Ethernet port (support POE)
Video Compression Format	H.264, H.265, MJPEG, YUY2, NV12
Audio Input Interface	Double track 3.5mm linear Input
Audio Compression Format	AAC, MP3, G.711A
Network protocol	RTSP, RTMP, ONVIF, GB/T28181
Control Interface	RS232, RS485, LAN
Communication Protocol	VISCA, Pelco-D, Pelco-P, support baud rate 115200/38400/9600/4800/2400; Support VISCA Control Protocols
Power Interface	HEC3800 power socket (DC12V)
Other Parameters	
Input Voltage	Power Adapter: 12V
	POE Supply: 48V
Input Current	Power Adapter: 0.42A (max)
	POE Supply: 0.104A (max)
Power Consumption	5W (max)



Other Parameters	
Stored Temperature	-10°C ~ +60°C
Stored Humidity	20% ~ 95%
Working Temperature	-10°C ~ +50°C
Working Humidity	20% ~ 80%
Dimension (W x H x D)	5.9 x 3.1 x 3.1in [149.2 x 78 x 78mm]
Weight	Approx. 1.17 lbs [0.53kg]
Application	Indoor

## Interface

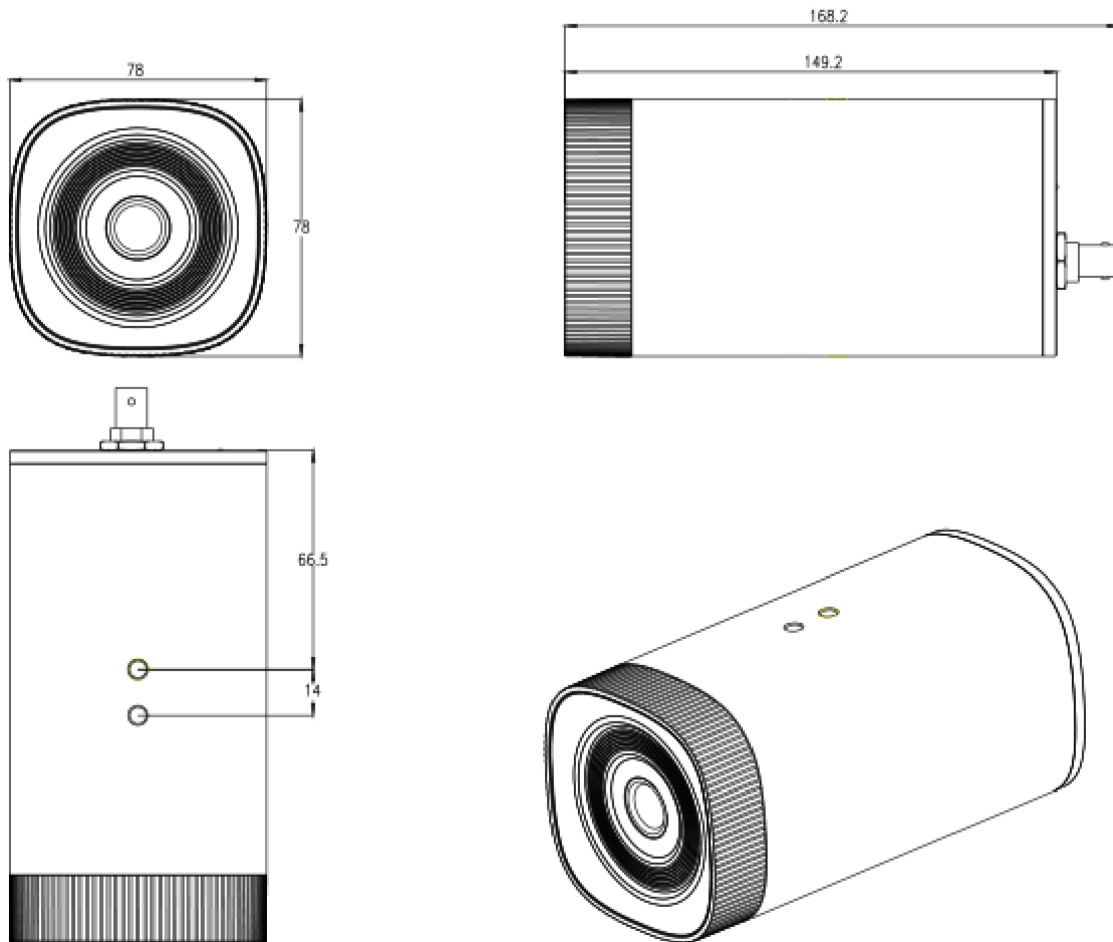


No.	Name
1	USB3.0 Interface
2	HDMI Interface
3	SDI Interface
4	LAN Interface
5	Reset button
6	A-IN
7	RS232/ RS485
8	Power Interface
9	Power Indicator



## Dimensions

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## Web Interface Login and Tracking Settings

### Network Connection

#### Connection Modes

**Direct connection:** Connect the camera directly to the computer using an ethernet cable.

**Internet connection mode:** Connect the camera and computer to a router or switch and access via the local area network (LAN).

**Note:** Ensure power and network connections are secured to prevent video issues caused by poor connection quality.

The computer must be on the same subnet as the camera to connect successfully. The device will not be accessible otherwise. The **camera default IP address is 192.168.5.163**, therefore the computer must be connected to the 192.168.5.x subnet.

To connect to the camera, open the Local Area Connection Properties on the computer.

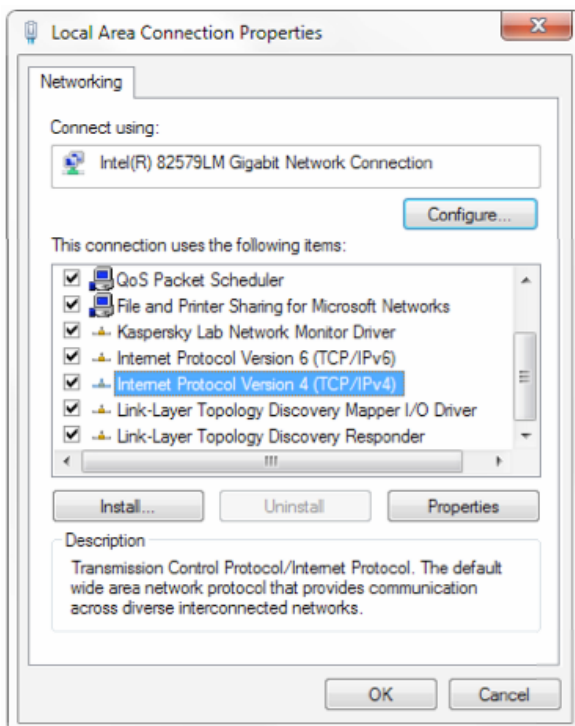
For Windows users right-click on the internet connection in the lower right corner of the desktop.

Select **“Open Network & Internet Settings”**.

Select **“Change Adapter Options”**.

Right-click on your connection (Wi-Fi or Ethernet) and select **“Properties”**.

Select **“Internet Protocol Version 4 (TCP/IPv4)”** as shown below and click **“Properties”**.





For the following steps refer to the diagram below.

Click on the bubble for **“Use the following IP address”**

In the **IP address** field enter a non-conflicting IP address on the same subnet as the camera. If there is another device with the same IP address you will not be able to connect. In the example below we are using 192.168.5.200

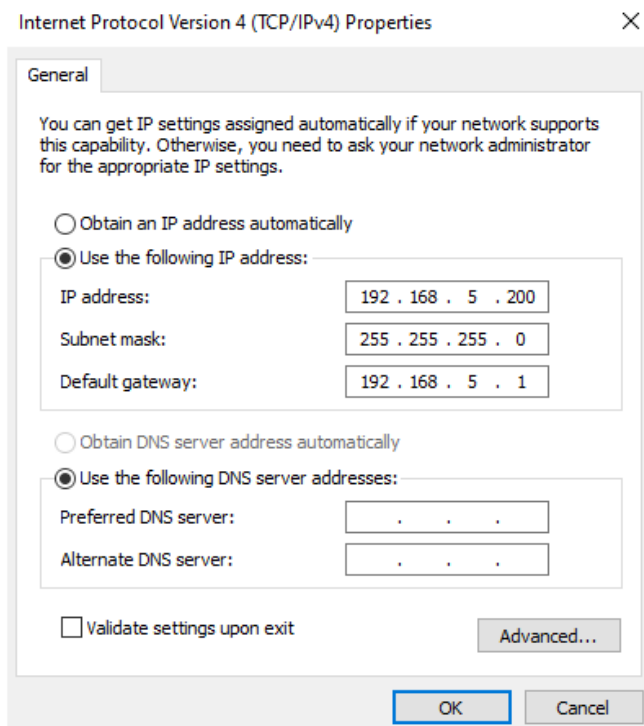
In the **Subnet mask** field enter 255.255.255.0

In the **Default gateway** field type 192.168.5.1

You can leave the DNS fields blank.

Click **OK** to apply your settings.

**NOTE:** When you are finished configuring the camera you will need to return to this screen and click the bubbles for **“Obtain an IP address automatically”** and **“Obtain DNS server automatically”** to restore internet connectivity to your computer. Also make sure to reconnect any ethernet cables you may have unplugged.



**CAUTION:** The IP address to be added cannot be the same as other computers or devices on the network.



## Web Client Login

Input the IP address of the device (192.168.5.163) in the address field of your web browser and press the enter key to enter the Web Client login page.



Users can login as an administrator and normal user. To login as an administrator the **default**

**Username/Password: admin.**

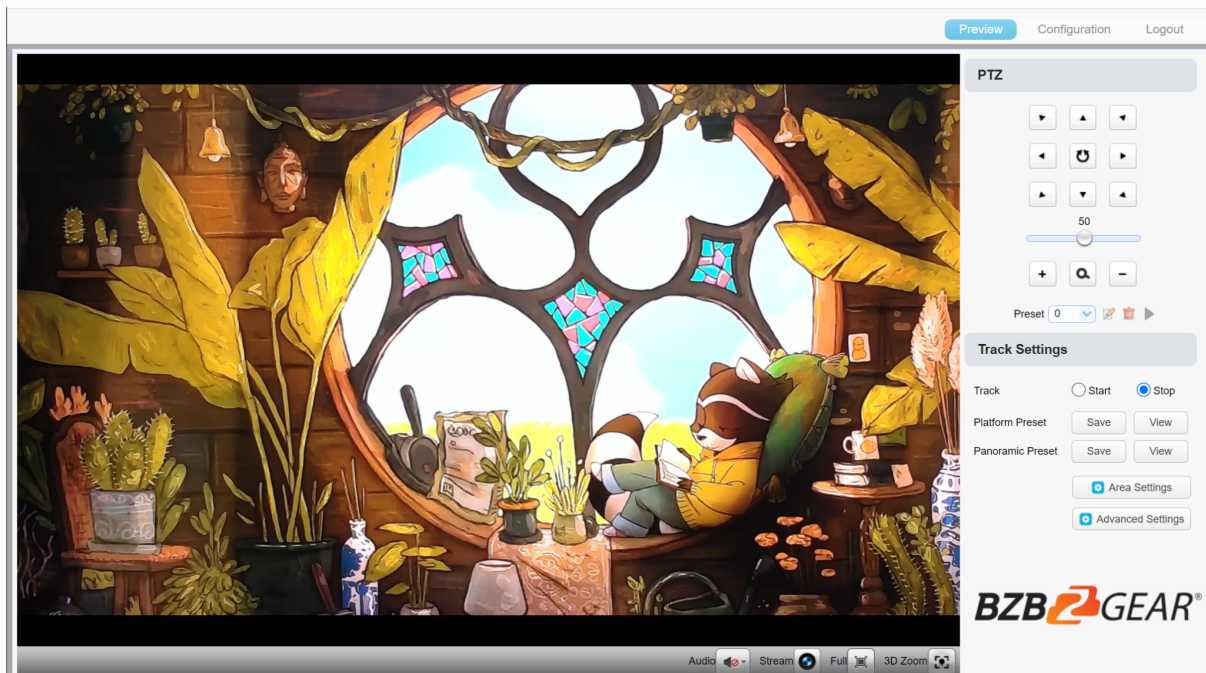
Admin users can preview, playback, and configure settings in the Web Client.

To login as a normal user **default**

**Username/Password: user1 or user2).** Users can only preview, playback, and logout, they cannot configure the camera settings.

## Web Interface Preview Tab

In the Preview interface, users can utilize the PTZ, zoom, and focus controls as well as preview embedded audio, the various available streams, 3D localization, and manage preset positions. Administrators can also set up tracking configurations and turn tracking on/off.

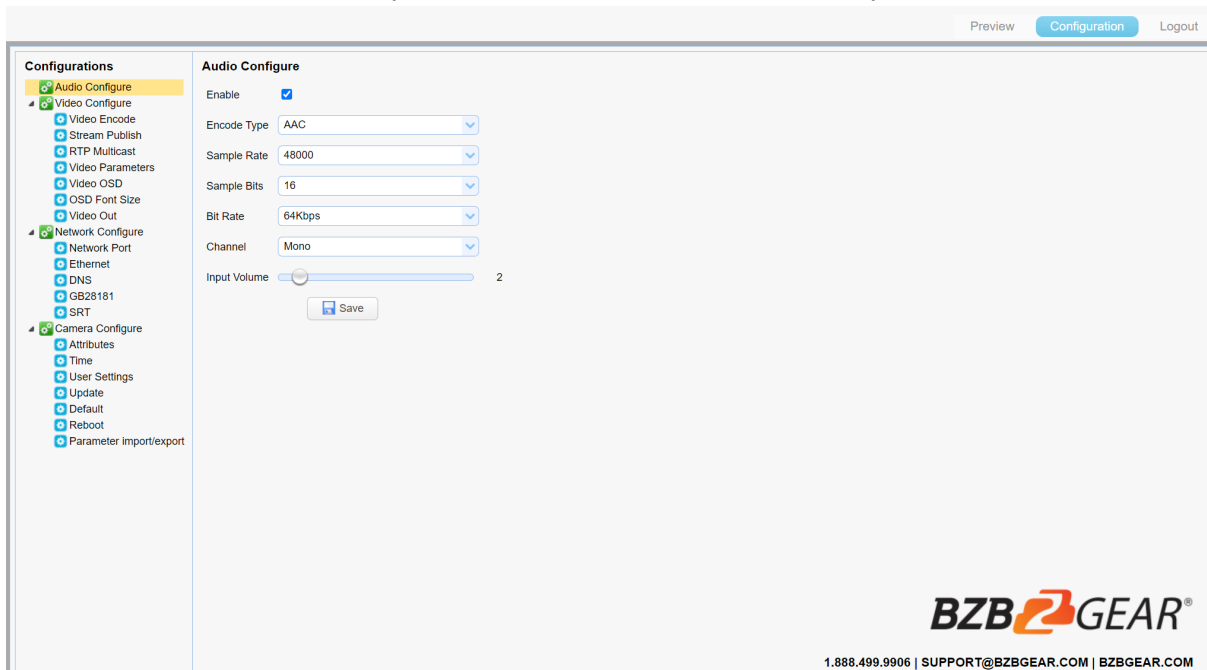


**Note:** Normal users cannot configure settings.



## Web Interface Configuration Tab

Click “Configuration” in the top left to enter into the device setting page.



Menu	Description
Audio Configure	Enable/Disable audio switch, compression format, sample rate, sampling precision, bit rate, channel (mono/stereo), and input volume.
Video Configure	Video encode, stream publish, RTP multicast ,video parameters, video OSD, OSD font size, output resolution.
Network Configure	Port, Ethernet, DNS, GB28181, SRT settings.
Camera Configure	System attributes, time, user management, update, factory reset, reboot, and import/export configuration.





## Audio Configure

### Configurations

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - GB28181
  - SRT
- Camera Configure
  - Attributes
  - Time
  - User Settings
  - Update
  - Default
  - Reboot
  - Parameter import/export

### Audio Configure

Enable

Encode Type

Sample Rate

Sample Bits

Bit Rate

Channel

Input Volume  2

**Enable:** Choose to enable/disable embedded audio (default: off).

**Encode Type:** Set audio compression format and the device will reboot automatically after a change (AAC, MP3, G.711A)

**Sampling Rate:** Set the sampling frequency and the device will reboot automatically after a change (16000, 32000, 44100, 48000)

**Sampling Bits:** Set sampling precision (16 bits)

**Channel:** Set audio compressing code rate (default 64bits, 32, 48, 96, 128bits optional)

**Channel Type:** Set audio channel type (default mono, stereo optional)

**Input Volume:** Set the input volume (default 2, 1-10 optional)



## Video Configure

### 1. Video Encoding

Configurations	Video Encode
Audio Configure	Stream <input type="text" value="Close-up Main Stream"/>
Video Configure	Compressed Format <input type="text" value="H.264"/>
Video Encode	Profile <input type="text" value="HP"/>
Stream Publish	Image Size <input type="text" value="1920*1080"/>
RTP Multicast	Rate Control <input type="text" value="CBR"/>
Video Parameters	Image Quality <input type="text" value="Best"/>
Video OSD	Bit Rate(Kb/s) <input type="text" value="4096"/>
OSD Font Size	Frame Rate(F/S) <input type="text" value="30"/>
Video Out	I Frame Interval <input type="text" value="30"/>
Network Configure	I Frame Min QP <input type="text" value="20"/>
Network Port	Stream Key <input type="text" value="live/av0"/>
Ethernet	
DNS	
GB28181	
SRT	
Camera Configure	
Attributes	
Time	
User Settings	
Update	
Default	
Reboot	
Parameter import/export	

**Stream:** Set different video output mode settings when running different streams. (close-up main stream, close-up sub-stream, panoramic main stream, panoramic sub-stream, and Inter PGM stream)

**Compression Format:** Set the video compression format, save and reboot to take effect (main / secondary stream default: H.264, H.265 optional)

**Profile:** Set Profile mode (default HP, BP, MP optional)

**Video Size:** Set video image resolution, save and reboot to take it effect (close-up main stream default 1920\*1080, 1280\*720, 640\*480; close-up sub-stream default 320\*180, 320\*240, 640\*360, 640\*480, 1280\*720; panoramic main stream default 1920\*1080, 1280\*720, 640\*480; panoramic sub-stream default 320\*180, 320\*240, 640\*360, 640\*480, 1280\*720; Inter PGM stream default 1920\*1080, 1280\*720, 640\*480)

**Rate Control:** Set rate control mode (default CBR [controlled bit rate], VBR [variable bit rate]) save and reboot to take effect.

**Image Quality:** Set the image quality which can be changed only when the rate control is set to VBR (main stream is defaulted to best, secondary stream is default to better (options are best, better, good, bad, worse, worst).

**Bit Rate(Kb/s):** Set the video bit rate (close-up main stream default 4096Kb/s; close-up sub-stream default 512Kb/s; panoramic main stream default 4096Kb/s; panoramic sub-stream default 512Kb/s; and broadcast code stream default 4096Kb/s, (64-40960Kb/s optional).



**Frame Rate (F/S):** Set the video frame rate (close-up main stream, close-up sub-stream, panoramic main stream, panoramic sub-stream, and broadcast code stream default 30F/S, main stream 5-30F/S optional).

**I Frame Interval:** Set the key frame interval (close-up main stream, close-up sub-stream, panoramic main stream, panoramic sub-stream, and broadcast code stream default 30, main stream 1-150F optional).

**I Frame Minimum QP:** Set the key frame minimum QP (default 20, 10-51 optional).

**Stream Name:** When streaming via RTSP or RTMP, users can modify the stream name (close-up main stream(default live/av0), close-up sub-stream(default live/av1), panoramic main stream(default live/av2), panoramic sub-stream(default live/av3), and broadcast code stream(default live/av4).

(Covered by one or more claims of the HEVC patents listed at [patentlist.accessadvance.com](http://patentlist.accessadvance.com))

## 2. Stream Publish

Configurations	Stream Publish
<ul style="list-style-type: none"> <li> Audio Configure</li> <li> Video Configure           <ul style="list-style-type: none"> <li> Video Encode</li> <li> Stream Publish</li> <li> RTP Multicast</li> <li> Video Parameters</li> <li> Video OSD</li> <li> OSD Font Size</li> <li> Video Out</li> </ul> </li> <li> Network Configure           <ul style="list-style-type: none"> <li> Network Port</li> <li> Ethernet</li> <li> DNS</li> <li> GB28181</li> <li> SRT</li> </ul> </li> <li> Camera Configure           <ul style="list-style-type: none"> <li> Attributes</li> <li> Time</li> <li> User Settings</li> <li> Update</li> <li> Default</li> <li> Reboot</li> <li> Parameter import/export</li> </ul> </li> </ul>	<p>Stream <input type="text" value="Close-up Main Stream"/></p> <p>Enable <input type="checkbox"/></p> <p>Protocol Type <input type="text" value="RTMP"/></p> <p>Host Address <input type="text" value="192.168.5.11"/></p> <p>Host Port <input type="text" value="1935"/></p> <p>Stream Key <input type="text" value="live/av0"/></p> <p>Username <input type="text"/></p> <p>Password <input type="text"/></p> <p>Password for stream encryption <input type="text"/></p> <p>Crypto key length in bytes <input type="text" value="0"/></p> <p><input type="button" value="Save"/></p>

**Stream:** You can set close-up main stream, close-up sub-stream, panoramic main stream, panoramic sub-stream, and broadcasting stream

**Enable:** Turn on/off stream publish

**Protocol Type:** Set protocol (default RTMP protocol, RTSP, SRT are optional)

**Host Address:** Server IP address (default 192.168.5.11)

**Host Port:** Server port number (default 1935, 0-65535 optional)

**Stream Name:** Choose a different stream name (live/av0, live/av1, live/av2, live/av3, live/av4 optional).

**User:** Set the user name.

**Password:** Set the password.

**Password for stream encryption:** Set SRT stream password.

**Crypto key length in bytes:** Set the length of the SRT stream password.



### 3. RTP Multicast

Configurations	RTP Multicast
<ul style="list-style-type: none"> <li> Audio Configure</li> <li> Video Configure <ul style="list-style-type: none"> <li> Video Encode</li> <li> Stream Publish</li> <li style="background-color: yellow;"> RTP Multicast</li> <li> Video Parameters</li> <li> Video OSD</li> <li> OSD Font Size</li> <li> Video Out</li> </ul> </li> <li> Network Configure <ul style="list-style-type: none"> <li> Network Port</li> <li> Ethernet</li> <li> DNS</li> <li> GB28181</li> <li> SRT</li> </ul> </li> </ul>	<p>Stream <input type="text" value="Close-up Main Stream"/></p> <p>Enable <input type="checkbox"/></p> <p>Protocol Type <input type="text" value="RTP"/></p> <p>Multicast Address <input type="text" value="224.1.2.3"/></p> <p>Multicast Port <input type="text" value="4000"/></p> <p>Access Method rtp://224.1.2.3:4000</p> <p style="text-align: center;"><input type="button" value="Save"/></p>

**Stream:** Set multicast or unicast on close-up main stream, close-up sub-stream, panoramic main stream, panoramic sub-stream, and inter PGM stream.

**Enable:** Turn on/off multicast (enabled) or unicast (disabled).

**Protocol Type:** Set multicast protocol (default RTP multicast, TS multicast optional)

**Multicast Address:** Default 224.1.2.3. The IP address can be edited.

**Multicast Port:** Main Stream Default Port: close-up main stream default 4000, close-up sub-stream default 4002, panoramic main stream default 4004, panoramic sub-stream default 4006, inter PGM stream default 4008.

**Access Method:** Address changes depending on stream, multicast address, and multicast port entered (i.e. rtp://224.1.2.3:4000; udp://@224.1.2.3:4000)



## 4. Video Parameters

**a. Exposure:** Exposure mode, EV, back light compensation, flicker, gain limit, DRC, shutter speed, and brightness can be set depending on mode selected.

**Configurations**

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters**
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - GB28181
  - SRT
- Camera Configure
  - Attributes
  - Time
  - User Settings
  - Update
  - Default
  - Reboot
  - Parameter import/export

**Video Parameters**

Exposure | Color | Image | NR | Style | Refresh

Mode: Auto

EV: OFF

BLC: OFF

Flicker: 50Hz

G.Limit: 3

DRC: 2

\*Click the "Refresh" button to refresh parameter.  
\*Effective after changed parameters

**Exposure Mode:** Set the exposure mode (the default is auto, manual, SAE, and bright available).

**EV:** Set the exposure compensation value. Turn EV to 'On' when auto mode is active (default 0, -7 to 7 optional).

**BLC:** Set back light compensation, usable auto mode is active (default is off).

**Flicker:** Set anti-flicker mode, usable when auto or bright modes are active (50Hz, closed, 60Hz).

**Gain Limit:** Set the gain limit, only valid when mode is set to auto or bright (default 4, 0-15).

**DRC:** Set the dynamic range (default off, 1-8 optional).

**Shutter Speed:** Active when the mode is set to manual or SAE (default 1/50, 1/25, 1/30, 1/50, 1/60, 1/90, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/1000, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 available).

**Bright:** Set the brightness value when bright mode is active (default 11, 0-23 available).

**Gain:** Set the gain value, when manual or SAE modes are active (default 1, 0-20 optional)



**b. Color:** White balance, saturation, color, white balance, sensitivity, color temperature, gain red and blue gain can be set.

**Configurations**

- Audio Configure
- Video Configure
  - Video Encode
  - Stream Publish
  - RTP Multicast
  - Video Parameters
  - Video OSD
  - OSD Font Size
  - Video Out
- Network Configure
  - Network Port
  - Ethernet
  - DNS
  - GB28181
  - SRT
- Camera Configure
  - Attributes
  - Time
  - User Settings
  - Update
  - Default
  - Reboot
  - Parameter import/export

**Video Parameters**

Exposure **Color** Image NR Style Refresh

WB Mode: Auto

RG Tuning: 0

BG Tuning: 0

Saturation: 100%

Hue: 7

AWB Sensitivity: High

\*Click the "Refresh" button to refresh parameter.

\*Effective after changed parameters

**White Balance Modes:** Set the white balance mode (the default automatic, 2400K-7100K, manual, One-push optional).

**RG Tuning:** default 0, -10~10 (only available in automatic mode)

**BG Tuning:** default 2, -10~10 (only available in automatic mode)

**Saturation:** Set the saturation (default 36, 0-127 optional).

**HUE:** Set the chroma (default 4, 0-8 optional).

**AWB Sensitivity:** Set the white balance sensitivity (only available in automatic mode high/medium/low)

**RG:** Sets the red gain in manual mode (default 36, 0-255 optional).

**BG:** Sets the Blue gain in manual mode (default 36, 0-255 optional).

**NOTE:** Click the "Adjust" button when in One-push white balance mode to correct the image.



**c. Image:** Bright, contrast, sharpness, gamma, DCI, LDC, B&W mode, flip-h, flip-v, dzoom, and low-light controls.

The screenshot displays the 'Video Parameters' configuration window. On the left, a sidebar lists various configuration categories, with 'Video Parameters' highlighted. The main window features a preview image of a tropical scene and a control panel with tabs for Exposure, Color, Image, NR, and Style. The 'Image' tab is active, showing sliders for Bright (set to 7), Contrast (set to 7), and Sharpness (set to 4). Below these are dropdown menus for Gamma (Default), DCI (OFF), and LDC (4). At the bottom, there are buttons for B&W Mode (Color), Flip-H (OFF), Flip-V (OFF), DZoom (OFF), and Low-Light Mode (OFF). A 'Refresh' button is located in the top right corner of the main panel. Red text at the bottom of the interface reads: '\*Click the "Refresh" button to refresh parameter.' and '\*Effective after changed parameters'.

**Bright:** Set the image brightness (default 7, 0-14 optional).

**Contrast:** Set the contrast (default 7, 0-14 optional).

**Sharpness:** Set the sharpness value (default 4, 0-15 optional).

**Gamma:** Gamma value setting (default, 0.45, 0.50, 0.55, 0.63 optional).

**DCI:** Change dynamic contrast level (default off, off-8 optional)

**LDC:** Change the lens distortion correction level (default 4 , off-8 optional)

**B&W Mode:** Set black and white mode (default color, black/white optional).

**Flip-H:** Flip the image horizontally (default off).

**Flip-V:** Flip the image vertically (default off).

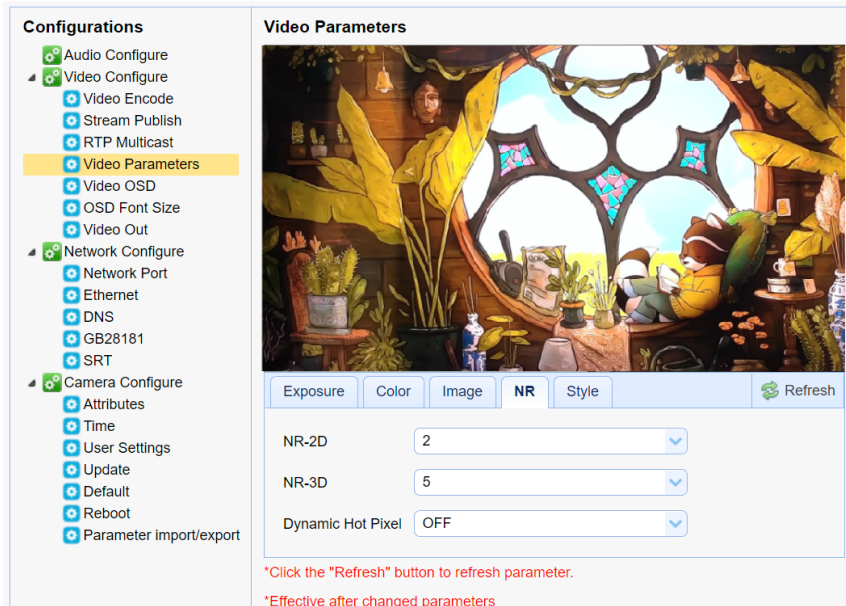
**DZoom:** default off

**Low-Light Mode:** default off





**d. Noise Reduction: 2D noise reduction, 3D noise reduction**

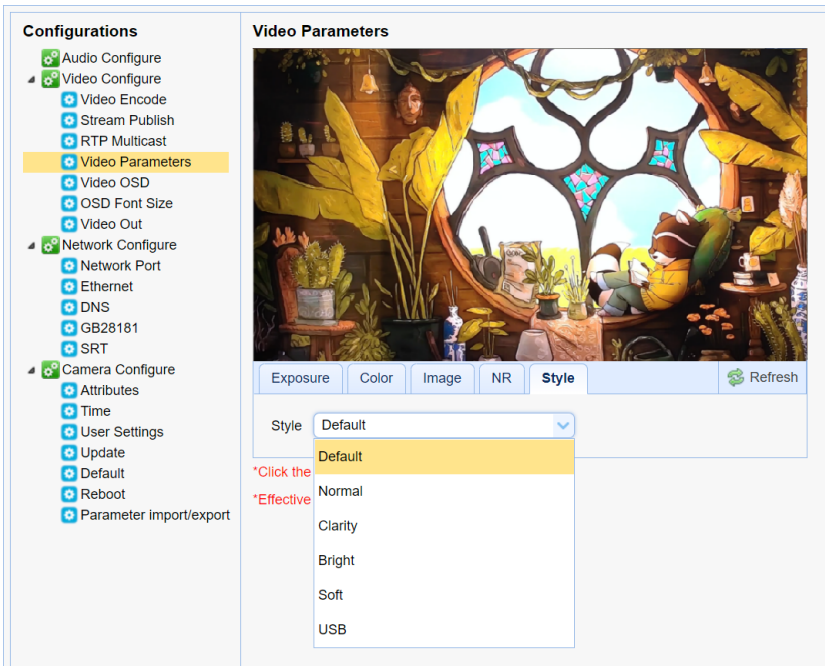


**2D Noise Reduction:** Set 2D noise reduction level (default 2, 1-7, off, auto).

**3D Noise Reduction:** Set 3D noise reduction level (default 5, 1-8, off).

**Dynamic Hot Pixel:** Assist in removing pixels that read too bright (default off 1-5 available)

**e. Style:** select the picture style default, standard, clear, bright, soft or USB.

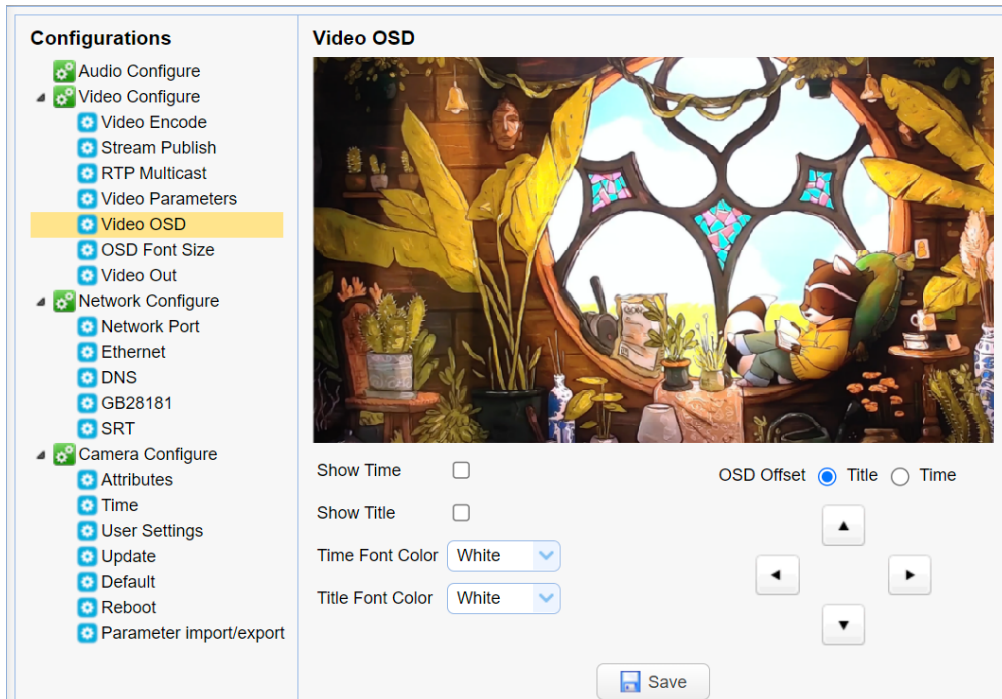


**Note:** Click "Refresh" for any video parameters (a, b, c, d, e) to take effect.





## 5. Video OSD



**Show Time:** Check to show the date and time on the image (set in Camera Configure - Time).

**Show Title:** Check to show the device name on the image (set in Camera Configure - Attributes).

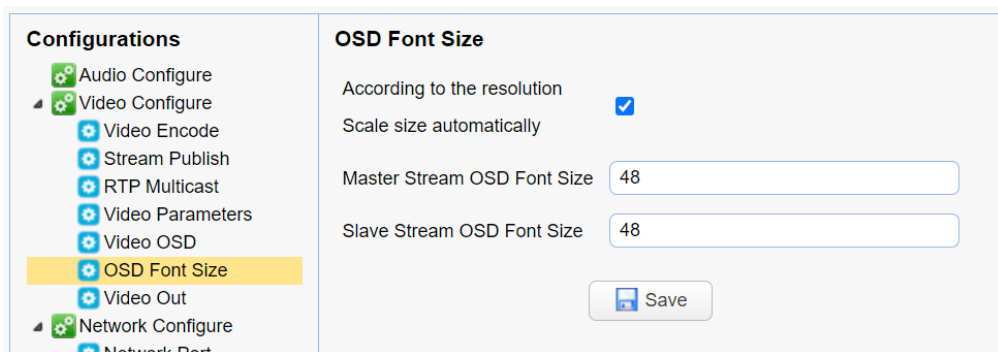
**Time Font Color:** Set font color of time and date (white, black, yellow, red, and blue)

**Title Font Color:** Set font color of title (white, black, yellow, red, and blue).

**OSD Offset and Arrow Keys.** Set the display position of the date/time and title. Click on the "up, down, left, right" buttons to move the selected OSD position.

**(NOTE:** Click on the "Save" button for settings to take effect.)

## 6. OSD Font Size



**According to the resolution scale size automatically:** check to enable text size scaling to auto,

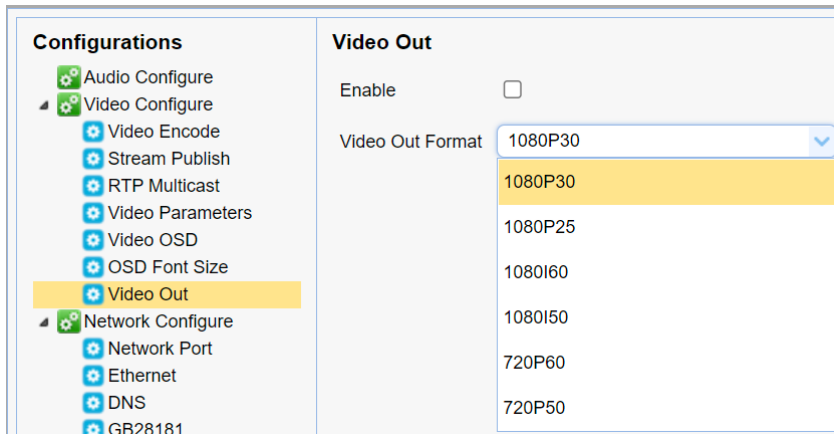
**Main Stream Character Size:** Set the character size of the display, the device will automatically restart after changed and saved (default 48, 28-200 optional)

**Secondary Stream Character Size:** Set the character size of the display, the device will restart automatically after changed and saved (default 48, 28-200 optional)

**(NOTE:** Click on the "Save" button for settings to take effect.)



## 7. Video output



**Enable:** check to enable video output through the HDMI/SDI port. (OFF by default)

**Output Format:** 1080P30, 1080P25, 1080I60, 1080I50, 720P60, 720P50

**(NOTE:** Click on the "Save" button for settings to take effect.)

## Network Configure

### 1. Network Port

**Port Data :** Set the data port, the device will restart automatically after changed (default 3000, 0-65535 optional)

**Port Web:** Set the Web port, the device will restart automatically after changed (default is 80, 0-65535 is optional)

**Port Onvif:** Set the Onvif port, the device will restart automatically after changed (default 2000, 0-65535 optional)

**Port Soap:** Set the Soap port (default 1936, 0-65535 optional)

**Port RTMP:** Set the RTMP port (default 1935, 0-65535 optional)

**Port RTSP:** Set the RTSP port, the device will restart automatically after changing (default 554, 0-65535 optional).

**Port Visca:** Set the Visca port, the device will restart automatically after changing (default 1259,0-65535 optional).

**Port WebSocket:** Set the WebSocket port, change and save it and restart the device to take effect (default 8088, 0-65535 optional)

**(NOTE:** Click on the "Save" button for settings to take effect.)

**RTSP Obtaining method:** rtsp:// device IP address: 554 / live / av0 (av0 close-up main stream, av1 close-up sub-stream, av2 panoramic main stream, av3 panoramic sub-stream, av4 broadcast code stream.)

**RTMP Obtaining method:** rtmp:// device IP address:1935/live/ av0 (av0 close-up main stream, av1 close-up sub-stream, av2 panoramic main stream, av3 panoramic sub-stream, av4 broadcast code stream.)



## 2. Ethernet Parameters

Configurations	Ethernet
<input type="checkbox"/> Audio Configure	DHCP <input type="checkbox"/>
<input checked="" type="checkbox"/> Video Configure	IP Address <input type="text" value="192.168.5.163"/>
<input type="checkbox"/> Video Encode	Subnet Mask <input type="text" value="255.255.255.0"/>
<input type="checkbox"/> Stream Publish	Default Gateway <input type="text" value="0.0.0.0"/>
<input type="checkbox"/> RTP Multicast	MAC Address <input type="text" value="E4:77:D4:A2:DE:E3"/>
<input type="checkbox"/> Video Parameters	<input type="button" value="Save"/>
<input type="checkbox"/> Video OSD	
<input type="checkbox"/> OSD Font Size	
<input type="checkbox"/> Video Out	
<input checked="" type="checkbox"/> Network Configure	
<input type="checkbox"/> Network Port	
<input checked="" type="checkbox"/> Ethernet	
<input type="checkbox"/> DNS	

**DHCP:** Check to enable or disable to obtain an IP address automatically. Save changes and reboot the device to take effect (default: OFF)

**IP Address:** Set the IP address, save changes and reboot the device to take effect (default 192.168.5.163). **Note:** This IP address is the same one used to login to the Web Interface.

**Subnet Mask:** Set the subnet mask (default 255.255.255.0).

**Default Gateway:** Set the default gateway (default 0.0.0.0).

**MAC Address:** The parameter is read-only and cannot be modified.

(NOTE: Click on the "Save" button for settings to take effect.)

## 3. DNS parameters

**Preferred DNS Server:** Set the preferred DNS server. (Default 0.0.0.0).

**Alternate DNS Server:** Set the alternate DNS server. (Default 0.0.0.0).

(NOTE: Click on the "Save" button for settings to take effect.)

## 4. GB28181

**Enable:** Check to enable/open GB28181.

**ClockSync:** Check to enable time synchronization.

**Video Type:** select which stream will be modified (main stream/secondary stream)

**Registration Valid Time(s) (in seconds):** 3600 Range 5-65535

**Heartbeat Time (seconds):** 60 Range 1-65535

**Register ID:** 34020000001320000001

**Register User name:** IPC

**Register Password:** 12345678

**Equipment Belong:** Users can add their own ID.

**Administrative Region:** Users can add their own.

**Alarm Areas:** Users can add their own.

**Device Address:** Users can add their own.

**Local SIP Port:** 5060 Range 0-65535

**Server IP:** IP address of the GB28181 computer/server.

**Server SIP Port:** 5060 Range 0-65535

**Server ID:** 34020000002000000001

(NOTE: Click on the "Save" button for settings to take effect.)



## 5. SRT

**Port SRT:** Set the SRT port (default 9000, 0-65535 optional)

**Password for stream encryption:** Set the SRT password. (the default is empty, the password is between 10-80 characters)

**Crypto key length in bytes:** Set the length of the SRT password (default 0, 16, 24, 32 optional)

**(NOTE:** Click on the "Save" button for settings to take effect.)

## Camera Configure

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### 1. Attributes

**Device Name:** Set the device name (default name is CAMERA-1).

**Device ID:** Default is 1 and is Read-Only.

**System Language:** Set the system language (default Simplified Chinese, English).

**(NOTE:** Click on the "Save" button for settings to take effect.)

### 2. Time

**Date Format:** Set the date format (YYYY-MM-DD, MM-DD-YYYY, or DD-MM-YYYY).

**Date Separator:** set the date separator ('/', '-', or '.').

**Zone:** Set the time zone.

**Hour Type:** Set the time type 24 or 12.

**NTP Enable:** Check to enable NTP mode.

**Update Interval:** Set the NTP server to automatically update the time(1-10 days). NTP Enable must be checked.

**NTP Host URL:** Set NTP server address or domain name (default time.nits.gov).

**NTP Server Port:** Sets the NTP server port (default 123).

**Time Settings:** Set the time setting method (Synchronize with computer time, synchronize with NTP server, and Set manually)

**New Time:** Time settings must be set to "Set manually" to edit

**(NOTE:** Click on the "Save" button for settings to take effect.)

### 3. User Settings

**Authority:** Set the user type (admin, User 1, User 2)

**User Name:** set the username for the selected authority.

**Password:** Set a password for the selected authority.

**Confirm Password:** Confirm passwords are the same.

Click the "Save" button, and the setting will take effect when the "Save successful" message pops up.

**NOTE:** Username and password are case-sensitive.



#### 4. Update

Normal users can only read the camera version information but can not modify or update.

**Update File:** Click the "Choose File" button to browse to and select the firmware upgrade file in the pop-up window.

Click on the "Upgrade" button and the upgrade dialog will appear. The device will reboot automatically after the update completes successfully.

**NOTE:** Ensure the power and network stay connected during this process or the upgrade will fail.

#### 5. Default

Click the "Restore Factory Defaults" button and then click "Yes" in the pop-up window to restore the cameras' factory default settings and attributes.

#### 6. Reboot

Click the "Reboot" button and choose "Yes" in the pop-up window, to reboot the device.

#### 7. Parameter import/export

Click "Choose File" and click the "Import" button to import a camera configuration file. Click the "Export" button to export the camera configuration file when connected via USB.

### Logout

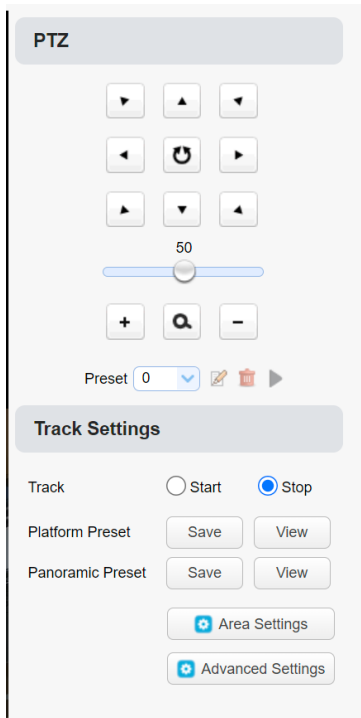
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Click the "Logout" button in the top right and select "Yes" in the pop-up window to exit the web interface.



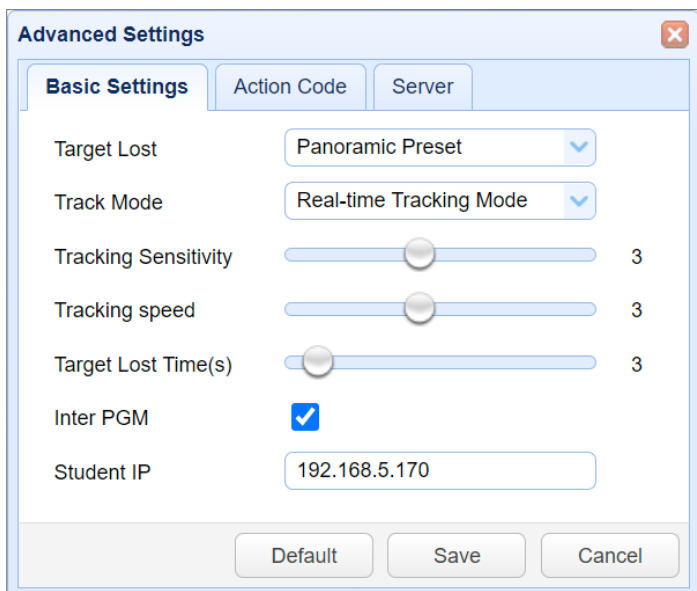
## Tracking Configuration

Follow these steps to set up tracking.



1. Click the “Stop” radial button to disable tracking and enable the “Platform Preset,” “Panoramic Preset,” and “Area Settings.”
2. Adjust the camera position and zoom using the arrow keys and for the frame the platform and then click “Save” next to “Platform Preset.”
3. Use the controls again to perform the same set up for the “Panoramic Preset” (typically a wider shot the camera uses to locate a subject should the tracking target be lost).
4. Click “Area Settings
5. Highlight the area by clicking and dragging the red box to select the platform/stage and then click the “Enable Platform Area” check box to have the camera focus on that area for tracking.
6. Click the “Mask Area” tab and select areas/objects you would like the tracking to ignore such as doorways, windows, etc.

**NOTE** For additional assistance please see the MAESTRO product webpage on [www.bzbgear.com](http://www.bzbgear.com) for video instructions.



Use the “Advanced Settings” controls to manage the advanced tracking settings.

**Target Lost:** Lens will return to the assigned preset.

**Track Mode:** Real-time Tracking Mode (constantly follows target), Movie Mode (moves a frame at a time), Area Tracking Mode (camera tracking only moves after you approach the edge of the frame)

**Tracking Sensitivity:** The higher the sensitivity the smaller the movement needed to trigger the camera tracking movement.

**Tracking Speed:** How quickly the

camera pans while tracking.

**Target Lost Time(s):** How long in seconds for the camera to return to the selected “Target Lost” camera preset position should the tracking subject be lost.

**NOTE**

The Inter PGM, Student IP, Action Code and Server tabs and settings are for a more advanced setup with multiple cameras and a camera server which are not currently supported for normal use and should be disregarded.

**Tech Support**

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Have technical questions? We may have answered them already!

Please visit BZBGear's support page ([bzbgear.com/support](http://bzbgear.com/support)) for helpful information and tips regarding our products. Here you will find our Knowledge Base ([bzbgear.com/knowledge-base](http://bzbgear.com/knowledge-base)) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV ([youtube.com/c/BZBTVchannel](http://youtube.com/c/BZBTVchannel)), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

<b>Phone</b>	<b>Email</b>	<b>Live Chat</b>
1.888.499.9906	<a href="mailto:support@bzbgear.com">support@bzbgear.com</a>	<a href="http://bzbgear.com">bzbgear.com</a>

**Warranty**

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BZBGear Pro AV products and cameras come with a three-year warranty. An extended two-year warranty is available for our cameras upon registration for a total of five years.

For complete warranty information, please visit [bzbgear.com/warranty](http://bzbgear.com/warranty).

For questions, please call 1.888.499.9906 or email [support@bzbgear.com](mailto:support@bzbgear.com).



## Mission Statement

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BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.

## Copyright

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