



GANZ ZN8 IP Box Camera User Manual



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

Precautions

Precautions

Fully understand this document before using this device, and strictly observe rules in this document when using this device. If you install this device in public places, provide the tip "You have entered the area of electronic surveillance" in an eye-catching place. Failure to correctly use electrical products may cause fire and severe injuries. To prevent accidents, carefully read the following context:

Symbols

This document may contain the following symbols whose meanings are described accordingly.

Symbol	Description
 DANGER	It alerts you to fatal dangers which, if not avoided, may cause deaths or severe injuries.
 WARNING	It alerts you to moderate dangers which, if not avoided, may cause minor or moderate injuries.
 CAUTION	It alerts you to risks. Neglect of these risks may cause device damage, data loss, device performance deterioration, or unpredictable results.
 TIP	It provides a tip that may help you resolve problems or save time.
 NOTE	It provides additional information.

DANGER

To prevent electric shocks or other dangers, keep power plugs dry and clean.

WARNING

- Strictly observe installation requirements when installing the device. The manufacturer shall not be held responsible for device damage caused by users' non-conformance to these requirements.

- Strictly conform to local electrical safety standards and use power adapters that are marked with the LPS standard when installing and using this device. Otherwise, this device may be damaged.
- Use accessories delivered with this device. The voltage must meet input voltage requirements for this device.
- If this device is installed in places with unsteady voltage, ground this device to discharge high energy such as electrical surges in order to prevent the power supply from burning out.
- When this device is in use, ensure that no water or any liquid flows into the device. If water or liquid unexpectedly flows into the device, immediately power off the device and disconnect all cables (such as power cables and network cables) from this device.
- Do not focus strong light (such as lighted bulbs or sunlight) on this device. Otherwise, the service life of the image sensor may be shortened.
- If this device is installed in places where thunder and lightning frequently occur, ground the device nearby to discharge high energy such as thunder strikes in order to prevent device damage.

**CAUTION**

- Avoid heavy loads, intensive shakes, and soaking to prevent damages during transportation and storage. The warranty does not cover any device damage that is caused during secondary packaging and transportation after the original packaging is taken apart.
- Protect this device from fall-down and intensive strikes, keep the device away from magnetic field interference, and do not install the device in places with shaking surfaces or under shocks.
- Clean the device with a soft dry cloth. For stubborn dirt, dip the cloth into slight neutral cleanser, gently wipe the dirt with the cloth, and then dry the device.
- Do not jam the ventilation opening. Follow the installation instructions provided in this document when installing the device.
- Keep the device away from heat sources such as radiators, electric heaters, or other heat equipment.
- Keep the device away from moist, dusty, extremely hot or cold places, or places with strong electric radiation.
- If the device is installed outdoors, take insect- and moisture-proof measures to avoid circuit board corrosion that can affect monitoring.
- Remove the power plug if the device is idle for a long time.
- Before unpacking, check whether the fragile sticker is damaged. If the fragile sticker is damaged, contact customer services or sales personnel. The manufacturer shall not be held responsible for any artificial damage of the fragile sticker.

Special Announcement

All complete products sold by the manufacturer are delivered along with nameplates, operation instructions, and accessories after strict inspection. The manufacturer shall not be held responsible for counterfeit products.

This manual may contain misprints, technology information that is not accurate enough, or product function and operation description that is slightly inconsistent with the actual product. The manufacturer will update this manual according to product function enhancement or changes and regularly update the software and hardware described in this manual. Update information will be added to new versions of this manual without prior notice.

This manual is only for reference and does not ensure that the information is totally consistent with the actual product. For consistency, see the actual product.

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1 Overview

1.1 Device Structure

Figure 1-1 shows the ports on the body of an IP box camera. Table 1-1 describes the ports.

Figure 1-1 Ports on the body of an IP box camera

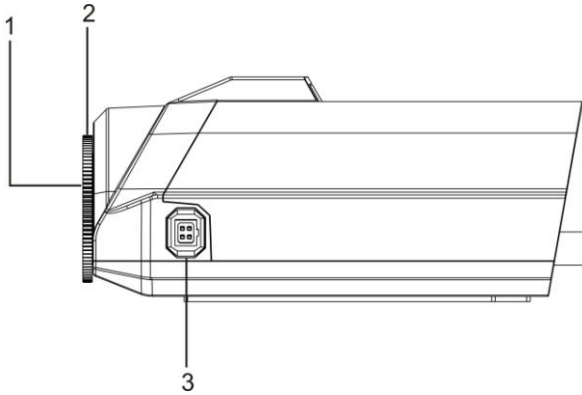


Table 1-1 Components on the rear panel

No.	Port	Description
1	Lens port	Connects to a lens. NOTE A CS-mount lens can be installed on the camera through this port. To install a C-mount lens, use a C/CS mount adapter.
2	Back focusing knob	Adjusting the back focus.
3	Auto aperture port	N/A

Figure 1-2 shows the rear panel of an IP box camera. Table 1-2 describes the ports.

Figure 1-2 Real panel of an IP box camera

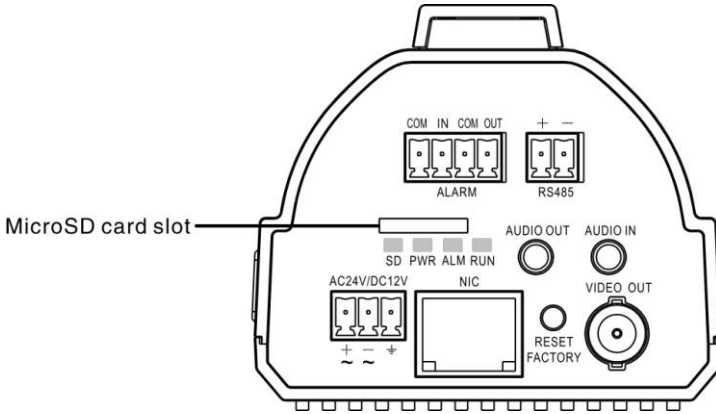


Table 1-2 Components on the rear panel

Port		Function
VIDEO OUT	Video output port	Sends analog video signals. You can connect the camera to a TV monitor through this port to view analog videos.
AC24V/DC12V	Power supply socket	Connects to a 12V (-15%~+10%) direct current (DC) power supply or 24V (-15%~+10%) alternating current (AC) power supply. NOTE When the power is PoE, you cannot access DC12V and AC24V interface at the same time.
RUN	Status indicator	The status indicator on when the camera is powered on.
ALM	Alarm indicator	N/A
PWR	Power indicator	Indicates the power status.
SD	Secure digital(SD) card indicator	Indicates the SD card status, the status is described as follows: <ul style="list-style-type: none"> • Off: No SD card is inserted. • On: An SD card is inserted.
COM	Alarm input ports	Alarm input access ports. <ul style="list-style-type: none"> • COM: common alarm input port • IN: alarm input port
IN		
COM	Alarm	Alarm output access ports

Port		Function
OUT	output ports	<ul style="list-style-type: none">• COM: common alarm output port• OUT: alarm output port
NIC	Network access port	Connects to a standard Ethernet cable.
RS485	RS485 port	Connects to an external Pan Tilt Zoom (PTZ).
RESET FACTORY	Reset button	Restores the camera to the factory settings by pressing and holding this button for more than five seconds.
AUDIO OUT	Audio output port	Connects to an external audio device such as a speaker.
AUDIO IN	Audio input port	Receives analog audio signals from devices such as a sound pickup device.
Micro SD card slot	Micro SD card slot	Installs a Micro SD card. NOTE <ul style="list-style-type: none">• Before installing an SD card, verify that the SD card is not in the write protection state.• Before removing an SD card, verify that the SD card is not in the write protection state. Otherwise, some data may be lost or the SD card may be damaged.• Before installing or removing an SD card when the box camera is running, stop video recording first.

1.2 Features

Network Features

- Support complete TCP/IP protocol suite.
- Support video, audio, and alarm data.
- Provides a built-in web browser and supports access using Internet explorer..
- Supports network data transmission and remote access.
- Support Point-to-Point protocol over Ethernet (PPPoE), Dynamic Host configuration protocol (DHCP), and Dynamic Domain Name System (DDNS) protocols.

- Supports Power over Ethernet (PoE) that complies with the IEEE802.3af standard. The IP camera can connect to a switch or router supporting the PoE function to implement PoE.
- Support remote upgrade and maintenance.

Image Processing Features

- Support multiple streams. Single-stream model or dual-stream mode can be selected based on the site requirement. Encoding parameters for the main stream and sub stream be configured separately.
- Support dynamic stream parameters based on different image quality requirement.
- Support independent hardware compression and constant bit rate (CBR) and variable bit rate (VBR) Videos can be compressed using the Motion Joint Photographic Experts Group (MJPEG) or H.264 standard. The frame rate and image quality can be configured

I/O Features

- Support accompanying sound and bidirectional intercom.
- Provides a 10/100 Mbit/s self-adaptive Ethernet port.

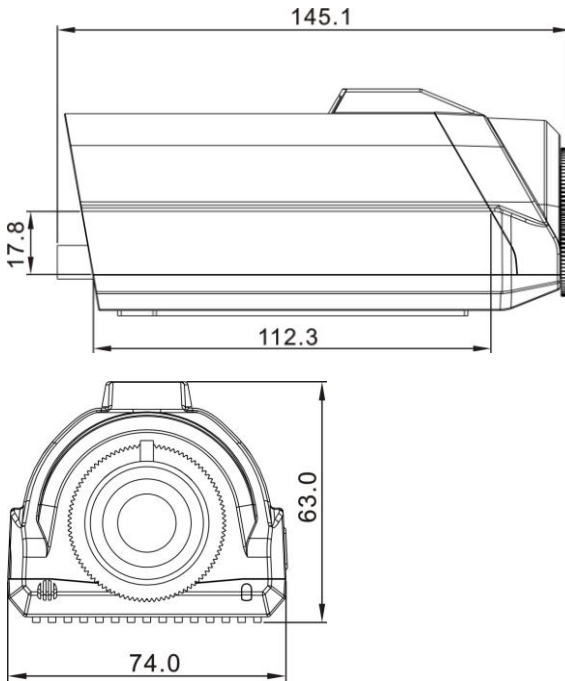
Other Features

- Support the heartbeat function that allows the management host to learn the running status of the IP camera in real time.
- Support level-based user rights management.

2 Device Dimensions

Figure 2-1 shows the box camera dimensions.

Figure 2-1 Dimensions (unit: mm)



3 Device Installation

3.1 Installation mode

3.1.1 Installing an Auto Aperture and Manual focus Lens

Description

Before installing a lens, remove the front protection cap from the camera first.

Procedure

- Step 1 Attach the lens to the camera body and turn the lens clockwise until it locks into place.
- Step 2 Insert the cable plug of the lens into the IRIS port on the side of the camera body.
- Step 3 After adjust focus, lock the Tele/wide and focus pullers mounted on the lens.

3.1.2 Installing a Manual Aperture and Manual focus Lens

Installing a C-Mount Manual Aperture and manual focus Lens

Before installing a lens, remove the front protection cap from the camera first.

**NOTE**

A C-mount lens requires a C/CS mount adapter.

Procedure

- Step 1 Use the Phillips screwdriver to loosen the screw on the side of the focusing ring. Turn the focusing ring counterclockwise to extend it for several millimeters and manually bring the camera into focus.

**NOTE**

The camera has been calibrated before delivery. You can also adjust the focusing ring as required to obtain the required focus.

- Step 2 Tighten the screw using the Phillips screwdriver to secure the focusing ring.
- Step 3 Install the C/CS mount adapter to the camera.
- Step 4 Attach the lens to the camera body and turn the lens clockwise until it locks into place.

Installing a CS-Mount Manual Aperture and manual focus Lens

Before installing a lens, remove the front protection cap from the camera first.

Procedure

Step 1 Use the Phillips screwdriver to loosen the screw on the side of the focusing ring. Fully turn the focusing ring counterclockwise and manually bring the camera into focus.



NOTE

The camera has been calibrated before delivery. You can also adjust the focusing ring as required to obtain the required focus.

Step 2 Tighten the screw using the Phillips screwdriver to secure the focusing ring.

Step 3 Attach the lens to the camera body and turn the lens clockwise until it locks into place.

3.1.3 Uninstalling a Lens

Procedure

Step 1 Turn the lens counterclockwise until it is removed.

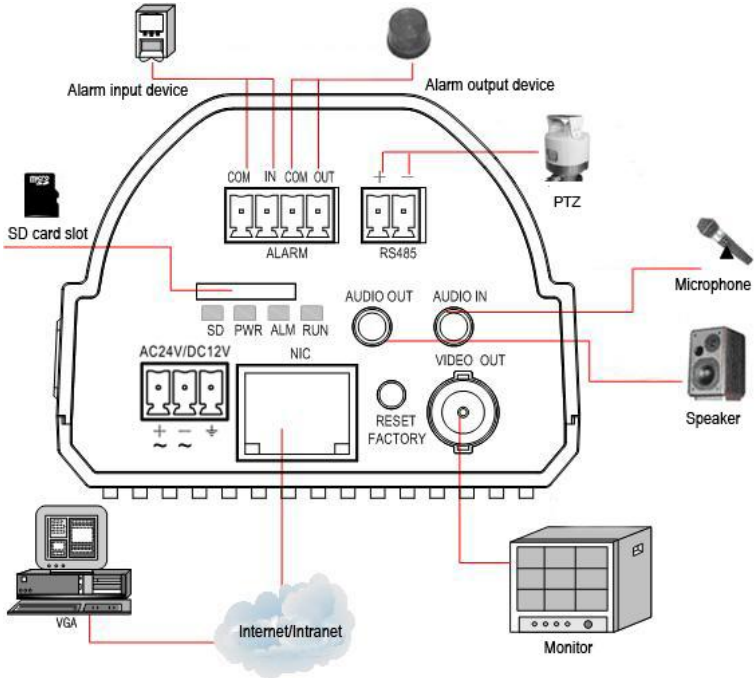
Step 2 Remove the cable plug of the auto aperture lens from the IRIS port. If you are removing a manual aperture lens, skip Step 2.

Step 3 If no lens needs to be installed on the camera, mount the front protection cap to protect the device.

3.2 Connecting Other Devices to the Camera Through the Ports on the Rear Panel

Figure 3-1 shows how to connect other devices to the camera through the ports on the rear panel.

Figure 3-1 Device connections



4 Quick Configuration

4.1 Login and Logout



CAUTION

You must use Internet Explorer 6 or a later version to access the web management system; otherwise, some functions may be unavailable.

Login system

Step 1 Open the Internet Explorer, enter the IP address of IP camera (default value: 192.168.1.168) in the address box, and press Enter.

The login page is displayed, as shown in Figure 4-1.

Figure 4-1 Login page

The screenshot shows the GANZ login interface. It features a header with the GANZ logo and a language selector set to English. Below the header, there are two text input fields labeled 'User Name' and 'Password', and a blue 'Login' button to their right.

Step 2 Input the User and password.

NOTE

- The default name is **ADMIN**. The default password is **1234**. Change the password when you log in the system for first time to ensure system security.
- You can change the system display language on the login page.

Step 3 Click Login.

The main page is displayed.

logout

To logout of system, click Sign out in the upper right corner of the main page, the login page is display after you log out of the system.



4.2 Main page layout





On the main page, you can view Live video, playback and configuration, change the password, and log out of the system. Figure 4-2 is shown the main page layout. Table 4-1 describes the elements on the main page.

Figure 4-2 Main page layout



Table 4-1 Elements on the main page

N O.	Element	Description
1	Live video area	Live videos are played in this area. You can also set sensor parameters.
2	Playback	You can query the playback videos in this area. NOTE Only when the SD card has videos that you can query the playback videos.
3	Configuration	You can choose a menu to set device parameters, including the device information, audio and video streams, alarm setting, and privacy mask function.
4	Alarm icon	When the device generates an alarm, the alarm icon  is displayed. You can click  to view the alarm information. NOTE

N O.	Element	Description
		When the device accepts an alarm signal, the alarm icon will display within 10s in the web management system.
5	Fault icon	When the device encounters an exception, the fault icon  is displayed. You can click  to view the fault information.
6	Change password	You can click  to change the password.
7	Sign Out	You can click  to return to the login page.

4.3 Browsing Video

User can browse the Live video in the web management system.

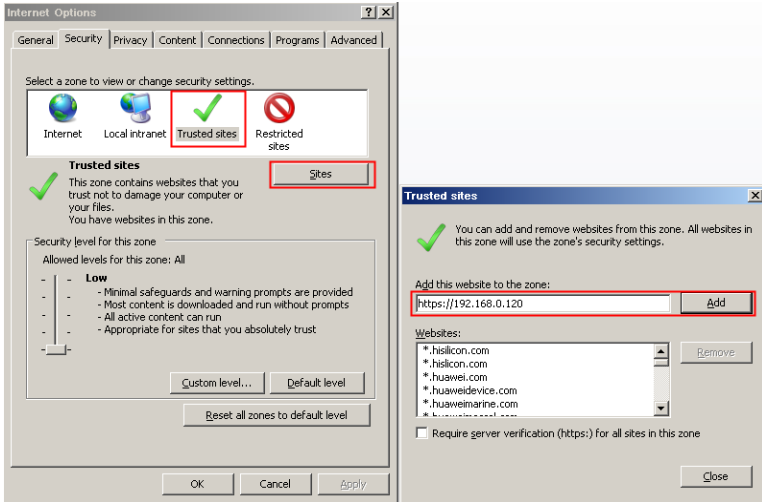
Preparation

To ensure the Live video can be play properly, you must perform the following operation when you log in to the web for the first time:

1. Open the Internet Explorer. **Choose Tools > Internet options > Security > Trusted sites > Sites.**

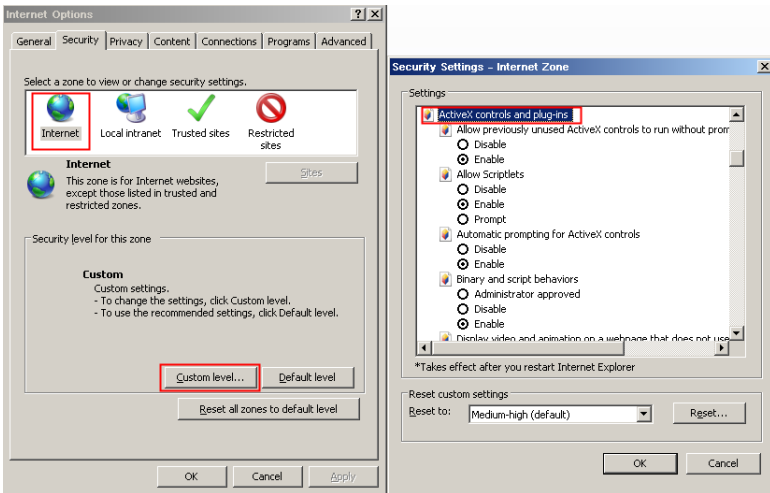
In the display dialog box, click **Add**, as shown in Figure 4-3.

Figure 4-3 Adding the a trusted site



2. In the Internet Explorer, choose Tool > Internet Options > Security > Customer level, and set Download unsigned ActiveX control and initialize and script ActiveX controls not marked as safe for scripting under ActiveX controls and plug-ins to Enable, as shown in Figure 4-4.

Figure 4-4 Configuring ActiveX control and plug-ins



3. Download and install the player control as prompted.

 **NOTE**

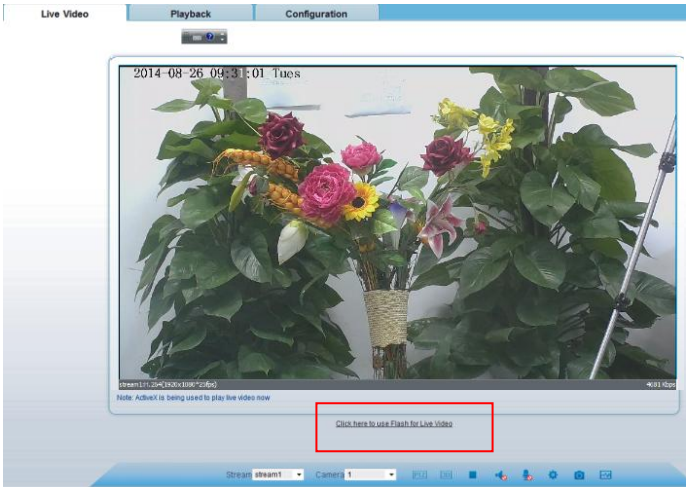
The login page is display when the control is loaded.

4.3.2 Download the right control in the Internet Explorer

Preparation

- User uses the Internet Explorer browse video.
- Live video page pop-ups the message “clicks to play live video with ActiveX control to reduce latency” as shown in Figure 4-5.

Figure 4-5 Change the ActiveX

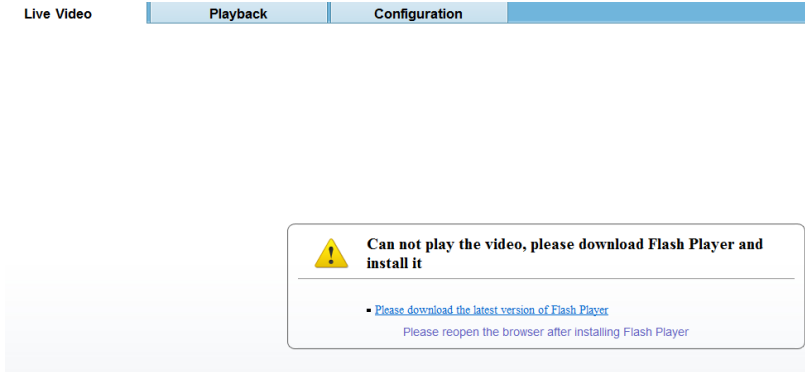


Unable to display video picture, and need to download and install the control

Preparation

- User uses the IE Explorer browse video.
- Live video page pop-ups the message “click here to use Flash for Live Video” as shown in Figure 4-6.

Figure 4-6 Download control tips



Click the message "click here to use Flash for live Video ", jump to download ActiveX control interface, once downloading is complete, you can watch more fluent video screen.

Click the message "Please download the latest version of Flash Player", jump to download ActiveX control interface, once downloading is complete, you can watch more fluent video screen.

4.3.3 In the Google, Firefox, or Safari browsers watch Live video

Google, Firefox, and Safari browsers only support Adobe Flash Player Plugin to play video. When Adobe Flash Plugin control version is too low, browser will automatically clew you to download the latest control.

4.4 Setting Local Network Parameters

Description

Local network parameters include:

- IP protocol
- IP address
- Subnet mask
- Default gateway
- Dynamic Host Configuration Protocol (DHCP)
- Preferred Domain Name System (DNS) server
- Alternate DNS server

Procedure

Step 1 Choose **Configuration > Device > Local Network**.

The **Local Network** page is displayed, as shown in Figure 4-7.

Figure 4-7 Local Network page

Local Network

IP Protocol IPv4

DHCP OFF

IP Address 192.168.10.149

Subnet Mask 255.255.255.0

Default Gateway 192.168.10.254

Preferred DNS Server 211.151.48.59

Alternate DNS Server 211.151.48.47

MTU(800-1500) 1500

Refresh Apply

Step 2 Set the parameters according to Table 4-2.

Table 4-2 Local network parameters

Parameter	Description	Setting
IP Protocol	IPv4 is the IP protocol that uses an address length of 32 bits.	[Setting method] Select a value from the drop-down list box. [Default value] IPv4
DHCP IP	IP address that the DHCP server assigned to the device.	N/A
IP Address	Device IP address that can be set as required.	[Setting method] Enter a value manually. [Default value] 192.168.1.168

Parameter	Description	Setting
Subnet Mask	Subnet mask of the network adapter.	[Setting method] Enter a value manually. [Default value] 255.255.255.0
Default Gateway	This parameter must be set if the client accesses the device through a gateway.	[Setting method] Enter a value manually. [Default value] 192.168.1.1
Preferred DNS Server	IP address of a DNS server.	[Setting method] Enter a value manually. [Default value] 8.8.8.8
Alternate DNS Server	IP address of a domain server. If the preferred DNS server is faulty, the device uses the alternate DNS server to resolve domain names.	[Setting method] Enter a value manually.
MTU	Set the maximum value of network transmission data packets.	[Setting method] Enter a value manually. Note The MTU value is range from 800 to 1500, the default value is 1380, please do not change it arbitrarily.

Step 3 Click **OK**.

- If the message "Apply success" is displayed, click **OK**. The system saves the settings. The message "Please re-login by the new IP address" is displayed. Use the new IP address to log in to the web management system.
- If the message "Parameter is invalid" is displayed, set the parameters correctly.

 **NOTE**

- If you set only the **Subnet Mask**, **Default Gateway**, **Preferred DNS Server**, and **Alternate DNS Server** parameters, you do not need to log in to the system again.
- You can click **Reset** to set the parameters again if required.

5 Technical Specifications

Table 5-1 lists the technical specifications of the camera.

Table 5-1 Technical specifications

Items	parameters	Description
Camera function	Image sensor	1/3" CMOS sensor
	Video standard	Configurable
	Effective Pixels	2688(H) × 1512(V)
	Digital zoom	Support
	Minimum illumination	Color: 0.01Lux@ (F1.2, AGC ON) B&W: 0.001Lux@ (F1.2, AGC OFF)
	Day & Night mode	Auto/Color/B&W
	Removable optical filter	Supported, day: IR CUT; night: fully transparent
	Electronic shutter speed	1/6 seconds to 1/8k seconds
	Gain control	Auto/Manual
	White balance	Auto
	Fisheye correction	Not supported
	Wide dynamic range	Support for digital wide dynamic range
	BLC	Support
	Highlight compensation	Support
	DNR	Auto/manual(support for 3D noise reduction)
Digital image stabilization	Support	
Lens	Lens type	CS/C (A C-mount lens requires a C/CS mount adapter.)

Items	parameters	Description
	Focal length of the lens	-
	Auto Iris	DC drive
External interface	Network interface	RJ-45, 10/100Base-T self-adaptive Ethernet port
	RS485	Support
	Alarm interface	Support for one alarm input and one alarm output
	Audio interface	Support for one linear input and one linear output
	CVBS interface	Support
	SD card interface	Micro SD
Video	Video encoding format	H.264(BP/ HP/MP)/MJPEG
	Video resolution and frame rate	Stream1: 2688*1520/2560*1440 20fps 2304*1296 25fps 1920x1080 25/30fps Stream2: 1280*720/D1/VGA/640*360/cif/qvga Stream3: 2688*1520/2560*1440/2304*1296/1920*1080/1280*720/D1/VGA/640*360/cif/qvga
	Video bit rate	Primary stream: 500 kbps to 12 Mbps Secondary stream: 200 kbps to 8 Mbps
	Multi-stream	Support for triple streams
	Stream type	CBR、VBR
	S/N Ratio	55dB
	Audio	Audio encoding format
Audio bit rate		64kbps(G.711), 128kbps(RAW_PCM)
Intercom		Support
Embedded loudspeaker		Not supported

Items	parameters	Description
	Embedded microphone	Support
Network	Network protocol	IPv4/ Ipv6, RTSP/RTP/RTCP, TCP/UDP, HTTPS, DHCP, DNS, DDNS, PPPoE, SMTP
	Streaming mode	Unicast
	Number of users in concurrent access	20
Function	Corridor mode	Not supported
	Defogging	Support
	Region of interest ROI	Support
	Video buffering	Support
	User rights	Two roles: administrator and common users. The administrator can assign common users different rights.
	Security mode	User name and password-based authentication
	Support for SDK development	Linux C/Windows C++ SDK
	Other functions	A reset button, the heartbeat mechanism
Storage	Local storage type	Support for Micro SD card
	Capacity	64G
	SD card availability	Unavailable
WEB applications	Language	Simplified Chinese, English, Spanish, Portuguese, Polish and Italian
	Management and maintenance	Management and maintenance via the web is not supported. An independent upgrade tool is available.
Environmental features	Heating function	Support
	Power supply	DC12V(-15%--+10%) / PoE (802.3af)/AC24V(-15%-+10%)

Items	parameters	Description
	Power consumption	3.2W(Heater OFF) 7.2W(Heater ON)
	Operating temperature	-25°C~+55°C
	Operating humidity	Humidity: <90% (non-condensing)
Physic features	Dimension(m m)	74(W)×63(H)×145 (D)
	Net weight	470g

A Hazardous Substance Declaration

Component	Hazardous Substance or Element					
	Plumbum (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr6+)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Structural part	×	○	○	○	○	○
Board/circuit module	×	○	○	○	○	○
Cable connector	×	○	○	○	○	○
Accessories	×	○	○	○	○	○

○: indicates that the concentration of the hazardous substance in all homogeneous substances of the component is within the limit specified in SJ/T 11363-2006 **Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.**

×: indicates that the concentration of the hazardous substance in at least one homogeneous substance of the component exceeds the limit specified in SJ/T 11363-2006 **Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.**

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