

User Manual

V1.1

Please Read this User Manual
throughout before using

Attentions

- **Electric Safety**

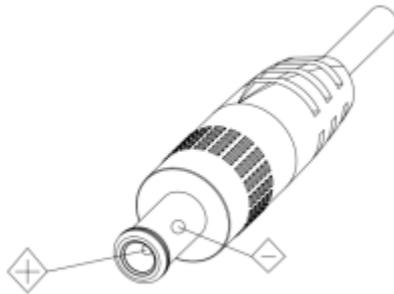
Installation and operation must be in accord with electric safety standard.

- **Caution to transport**

Avoid stress, vibration or soakage during transport, storage and installation.

- **Polarity of power supply**

The power supply of the product is $\pm 12V$, the max electrical current is 2A. Polarity of the power supply plug is shown in the drawing below.



- **Careful of installation**

Do not grasp the camera lens when carrying it. Don't rotate camera lens by hand. Mechanical damage may result from doing so.

This series product must be placed on a smooth platform or surface. It cannot be installed slantwise.

If the camera is used with TV or computer, the base can be fixed by four double-sided adhesive trays.

Don't apply in corrosive liquid, gas or solid environment to avoid any cover (organic material) damage.

Make sure no obstacle is in the rotation range.

Never power on before installation is completed.

- **Don't disassemble discretionarily.**

We are not responsible for any unauthorized modification or dismantling.

- **Attention!**

Specific frequencies of electromagnetic field may affect camera image!

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1. FAST INSTALLATION

1.1 Camera Interface

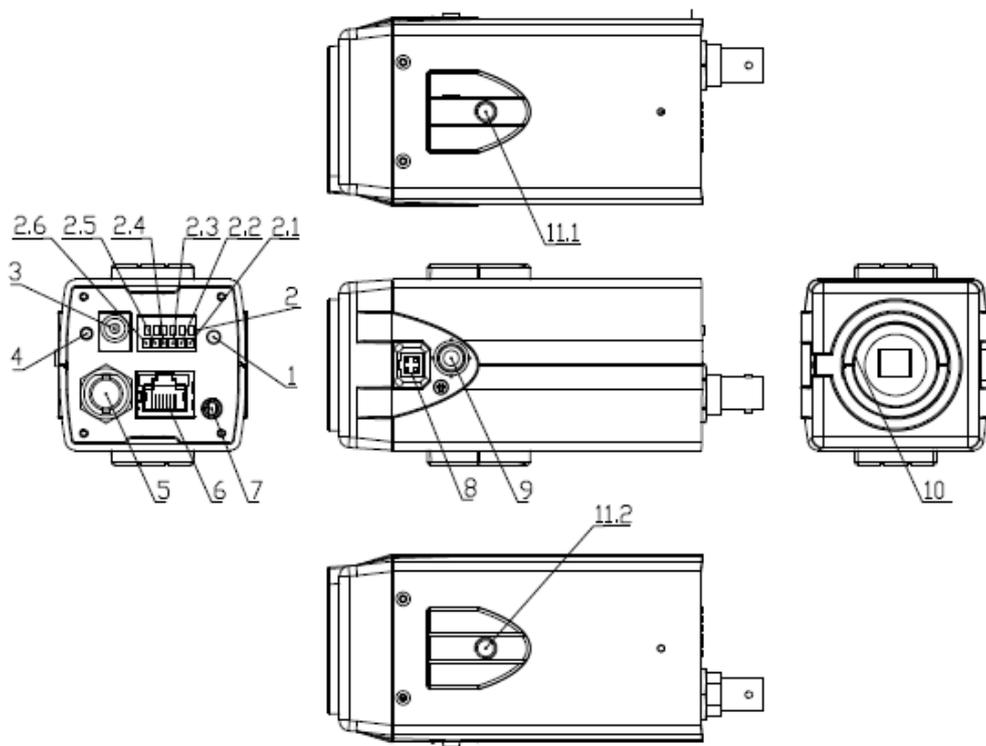


Figure 1.1 AV-1160

- | | | |
|-----------------------|------------------------------|------------------------------|
| 1. RESET | 2. RS485 and alarm interface | 3. DC12V power supply socket |
| 4. Power indicator | 5. 3G-SDI interface | 6. Network interface |
| 7. Audio in interface | 8. Auto iris interface | 9. Function key |
| 10. Lens interface | 11.1. Tripod screw hole | 11.2. Tripod screw hole |

1.2 Power On

Connect the camera to DC12V power adapter. When the power indicator light is on, the camera is ready to use.

1.3 Video Output

AV-1160 has two video output options: LAN and 3G-SDI.

- Video output via LAN:

Ethernet cable connection: port No.6 in Figure 1.1.

Webpage Login: open your browser and enter 192.168.5.163 in the address bar (factory default); press Enter to enter the login page; message: "player is not installed, please download and install!" will show; click on the message, and follow the instructions to install the plug-in video player. After successful installation, restart the browser and enter the user name: admin and password: admin (factory default). Press Enter to enter the preview interface. Users can control camera settings, perform video recording, playback, configuration, etc.

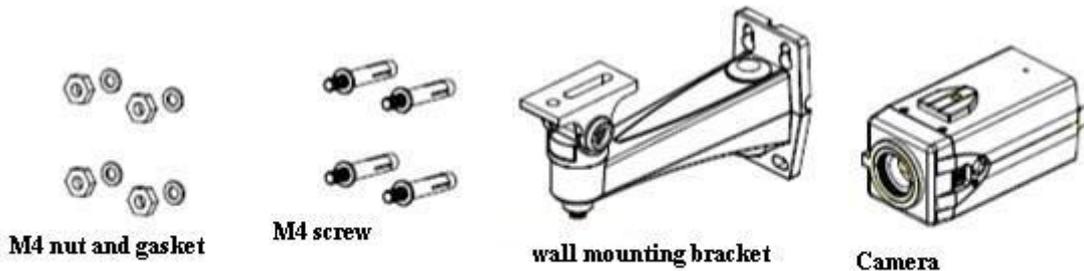
- Video output via 3G-SDI:

SDI cable connection: port No.5 in Figure 1.1.

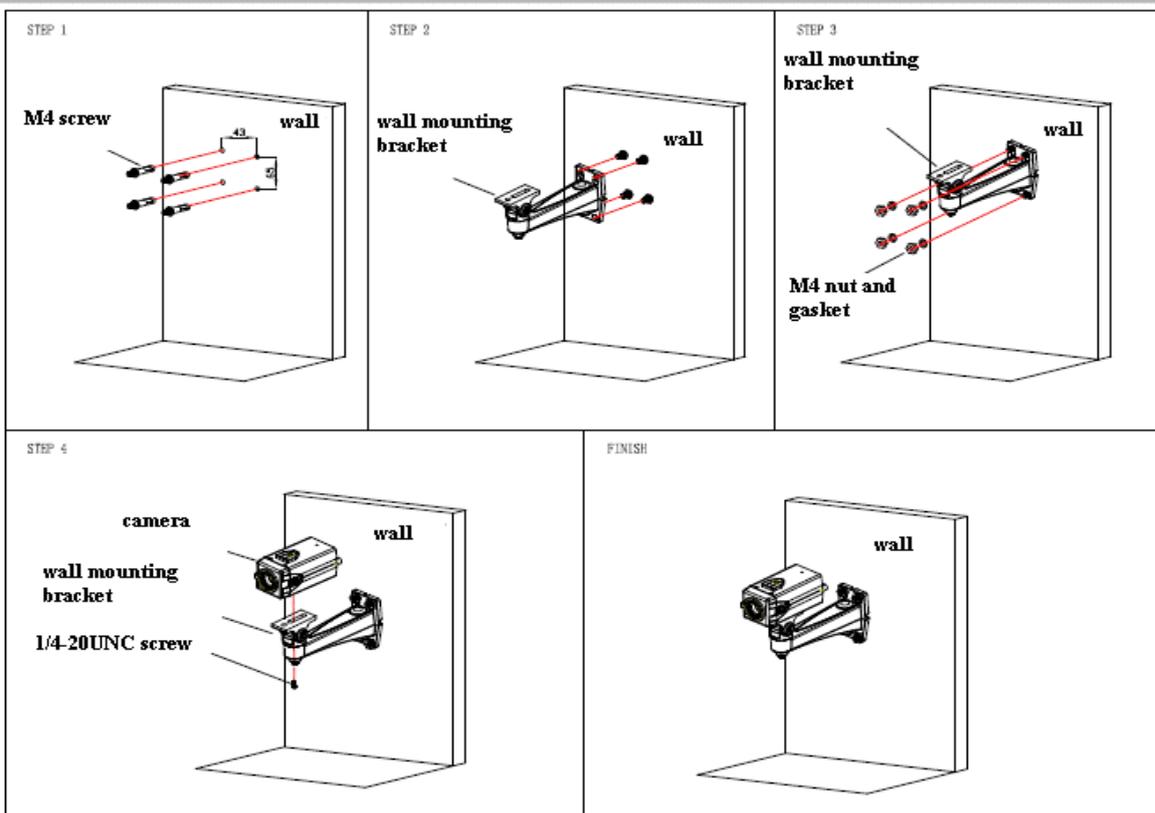
Connect the camera to a monitor via SDI cable. Video output is available upon camera is power on.

1.4 Bracket Mounting

1) Bracket installation accessory introduction



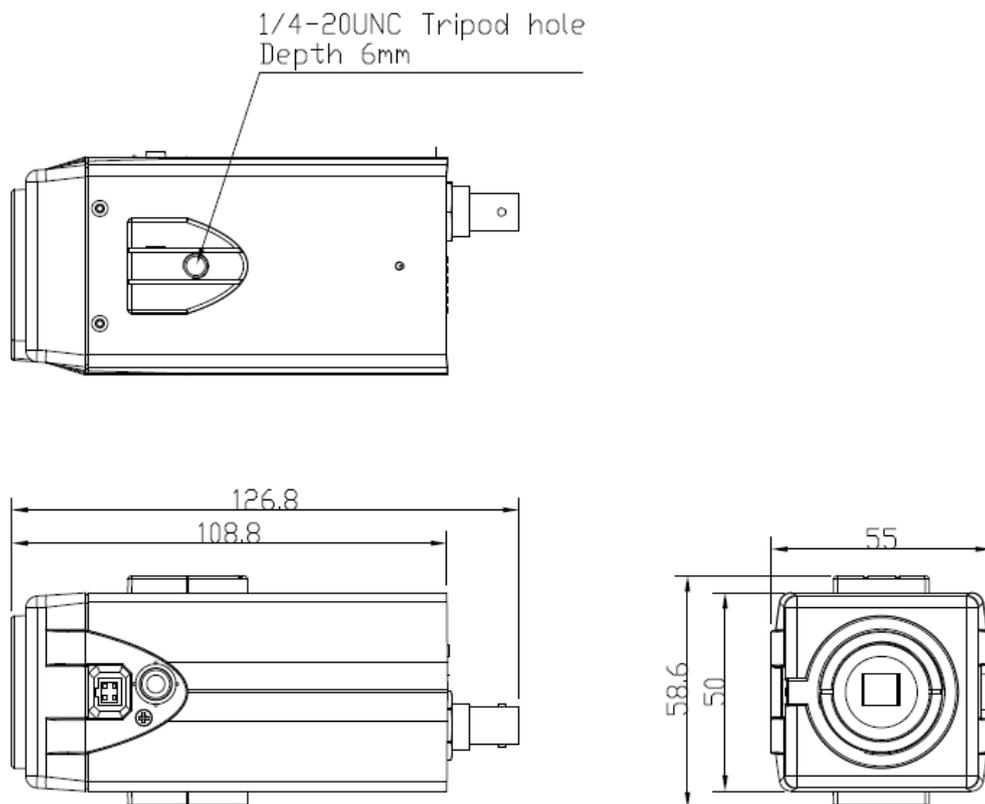
2) Bracket installation steps



2. Product overview

2.1 Product introduction

2.1.1 Dimensions



2.1.2 Accessories

When you unpack, check if all the supplied accessories are included:

Accessory	Power adapter 1pcs
	User manual 1pcs
	Warranty card 1pcs

2.2 Main Features

2.2.1 Camera performance

AV-1160 box camera has a refined design, and offers multiple functions, high performance and various interfaces. The features include advanced ISP processing algorithms to provide vivid images with a strong sense of depth, high resolution and fantastic color rendition. It supports H.264/H.265 encoding which makes motion video fluent and clear even with less than ideal bandwidth conditions.

- 1) **Superb high-definition image:** it employs 1/2.8 inch high-quality CMOS sensor. Resolution is up to 1920x1080 with frame rate up to 60 fps.
- 2) **Low noise and high SNR:** low-noise CMOS effectively ensures a high SNR of the captured video. Advanced 2D/3D noise reduction technology is also used to further reduce the noise while maintaining the image sharpness.
- 3) **Multi-format video output:** support 3G SDI and LAN interfaces. 3G-SDI is available for 100m transmission at 1080p60.
- 4) **Multiple video compression options:** support H.264/H.265 video compression; support compression of 1 channel 1920x1080 with frame up to 60 fps and 2 channel 1920x1080 with 30 fps.
- 5) **Multiple network protocols:** support ONVIF, RTSP, RTMP protocols and RTMP push mode, easy to link to streaming media server (Wowza, FMS)
- 6) **Support multiple control protocols:** can recognize and support VISCA, PELCO-D, PELCO-P protocols. Support VISCA control protocol through IP port.
- 7) **Wide application:** tele-education, lecture capture, webcasting, videoconferencing, tele-training, tele-medicine, interrogation and emergency command systems.

2.2.2 Network performance

1. **Audio input interface:** support 16000,32000,44100,48000 sampling frequency and AAC, MP3,PCM audio coding.
2. **Multiple audio/video compression:** support H.264/H.265 video compression; AAC, MP3 and PCM audio compression; support compression of 1 channel 1920x1080 with up to 60 fps and 2 channel 1920x1080 with 30 fps.
3. **Multiple network protocols:** support ONVIF, RTSP, RTMP protocols and RTMP push mode, easy to link to streaming media server (Wowza, FMS)

2.3 Technical specifications

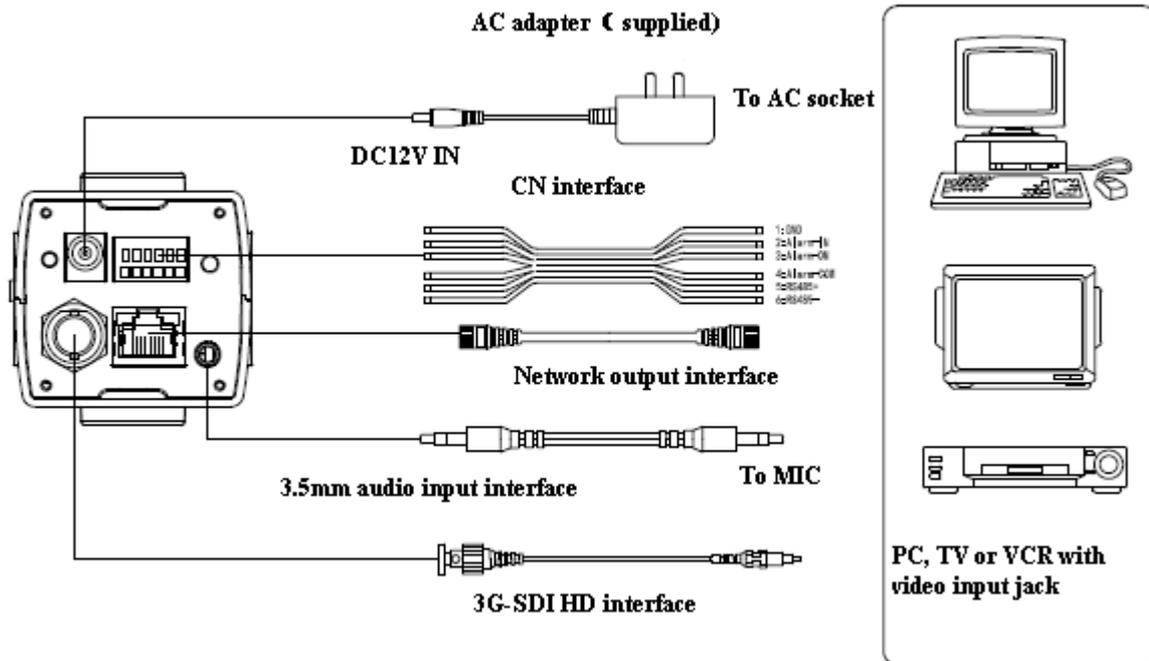
Model	
Camera Parameter	
Sensor	1/2.8" high-quality HD CMOS sensor
Effective Pixels	16: 9; 2.07 megapixel
Video Format	1080P60/30/25/59.94/29.97 ,720P60/30/25/59.94/29.97
Auto Iris	DC driving mode
Digital Zoom	X5
Minimum Illumination	0.5Lux (F1.8, AGC ON)
DNR	2D & 3D DNR
White Balance	Auto/Manual/One Push/ 3000K/ 4000K/5000K/6500K

Focus	Auto/Manual
Aperture	Auto/Manual
Electronic Shutter	Auto/Manual
BLC	ON/OFF
WDR	OFF/ Dynamic level adjustment
Video Adjustment	brightness, color, saturation, contrast, sharpness, B/W mode, gamma curve
SNR	>55dB
Input/output Interface	
Video Interface	3G-SDI
Image Code Stream	Dual streams output
Video Compression Format	H.264/H.265
Control Interface	RS-485
Control Protocol	VISCA/Pelco-D/Pelco-P; Baud Rate: 115200/9600/4800/2400bps
5 Control Keys	UP/DOWN/LEFT/RIGHT/CONFIRM keys for OSD setting, EPTZ controlling
HD IP Interface	100M IP port (10/100BASE-TX), Support VISCA protocol control through IP port.
Network Protocol	RTSP, RTMP, ONVIF
Power Interface	Standard DC interface
Other Parameter	
Power Adaptor	Input AC110V-AC220V, output DC12V/1A, support POE (optional)
Input Voltage	DC12V±10%
Input Current	400mA (max)
Consumption	4.8W (max)
Store Temperature	-10°C~+60°C
Store Humidity	20%~95%
Working Temperature	-10°C~+50°C
Working Humidity	20%~80%
Dimension	126.8mmX55mmX58.6mm
Weight	0.5kg
Remote Operation (IP port)	remote upgrade, remote reboot and remote reset
Accessory	12V/1A power supply, user manual, warranty card
Optional Accessory	Installation Bracket

2.4 Interface Illustrations

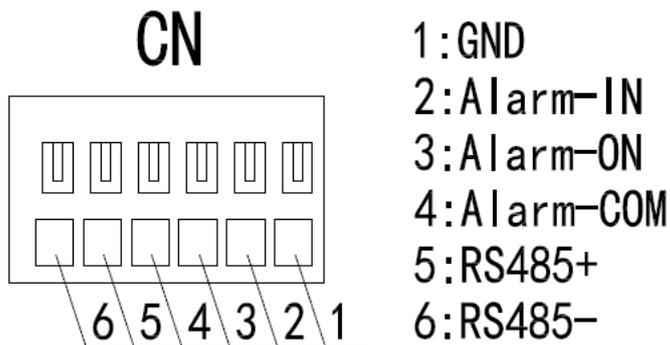
2.4.1 External Interface

- External interface of AV-1160:
RS485 interface, alarm input output, audio input interface, 3G-SDI output ,LAN, DC12V power interface, auto iris interface.



2.4.2 RS-485 interface

RS-485 interface specifications are shown as below:



3. Application Instructions

3.1 Video Output

3.1.1 Power-On Initial Configuration

Connecting the DC12V power cable to the camera, wait for the power indicator light to be on.

3.1.2 Video output

Connect the video output cable: the user select the output mode accordingly. See Figure 1.4.1 for reference (output interface introduction).

1) Network output: connect the camera and a computer via network cable. Open the web browser, enter camera IP address (factory default 192.168.5.163) in the address bar, then input the user name and password (factory default are “admin”) to login and enter the preview page.

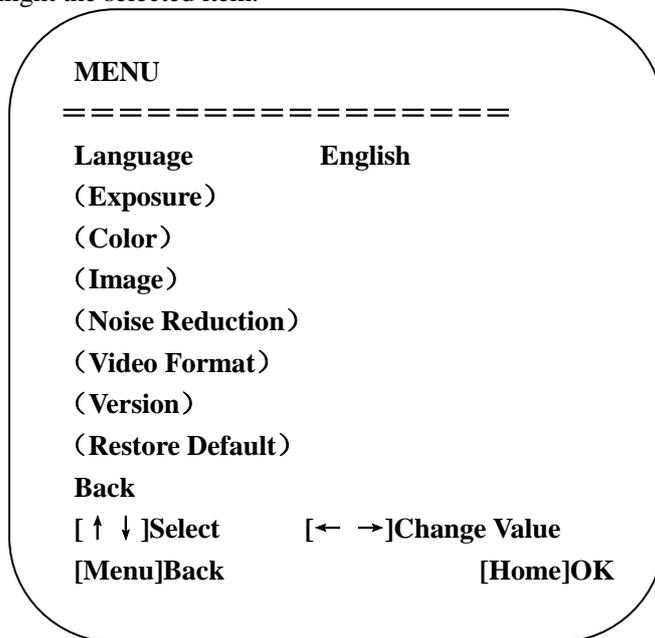
Note: If you forget your user name, password, or IP address, you can manually restore the default settings using the RESET key at the bottom of the machine.

2) 3G-SDI output: connect the monitor with the video output interface, image will show on the monitor.

3.2 MENU SETTINGS

3.2.1 Main menu

In the normal working mode, press **【Function】** key to see the main menu (as shown in No. 9 Figure 1.1). Use scroll arrow to move or highlight the selected item.



LANGUAGE: language setting: Chinese / English

Exposure: enter the sub menu

Color: enter the sub menu

Image: enter the sub menu

Noise Reduction: enter the sub menu

Video Format: enter the sub menu

Version: enter the sub menu

Restore Default: restore the factory default settings, select YES or NO to confirm

[↑↓] Select: move the pointer

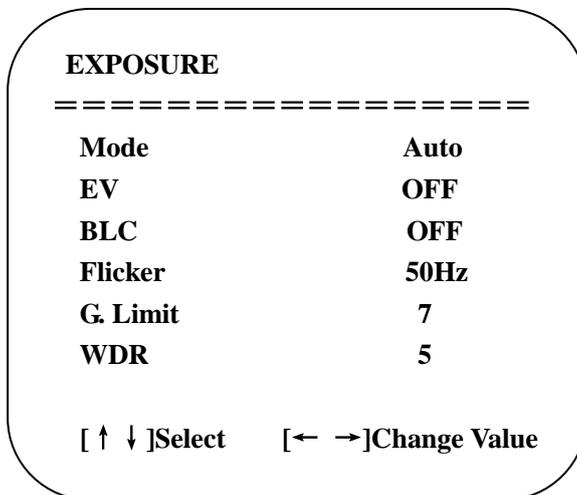
[← →] **Change value:** enter the submenu to modify parameters

[MENU] **Back:** press [MENU] to return

[Home] **OK:** press [Home] to confirm

3.2.2 Exposure

Move the pointer to **【Exposure】** in the Main Menu, click the **【HOME】** to enter the **【Exposure sub menu】** as shown below.



MODE: Auto, Manual, Shutter priority, Iris priority and Brightness priority.

EV: On/Off (only available in auto mode)

Compensation level: -7~7 (only available in auto mode when EV is ON)

BLC: ON/OFF (only available in auto mode)

Anti-Flicker: OFF/50Hz/60Hz (only available in Auto/Iris priority/Brightness priority modes)

Gain limit: 0~15 (only available in Auto/ Iris priority /Brightness priority mode)

BRIGHTNESS: 0~23 (only available in Brightness priority mode)

WDR: Off/1~8

Shutter priority: 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 (only available in Manual or Shutter priority mode)

IRIS priority: OFF, F11.0, F9.6, F8.0, F6.8, F5.6, F4.8, F4.0, F3.4, F2.8, F2.4, F2.0, F1.8 (only available in Manual or Iris priority mode)

3.2.3 COLOR

Move the pointer to the **【COLOR】** in the Main Menu, click **【HOME】** and enter the **【COLOR sub menu】** as shown below.

WB Mode: Auto, 3000K, 4000K, 5000K, 6500K, Manual, One Push

Red Gain: 0~255 (only available in Manual mode)

Blue Gain: 0~255 (only available in Manual mode)

Saturation: 60%, 70%, 80%, 90%, 100%, 110%, 120%, 130%

Hue: 0~14

AWB Sensitivity: high/middle/low

Color style: default, style 1~4

Color temp: high/middle/low

COLOR	
=====	
WB Mode	Auto
Saturation	80%
Hue	7
AWB Sensitivity	High
Color style	Default
Color temp	Middle
[↑ ↓]Select [← →]Change Value	

3.2.4 IMAGE

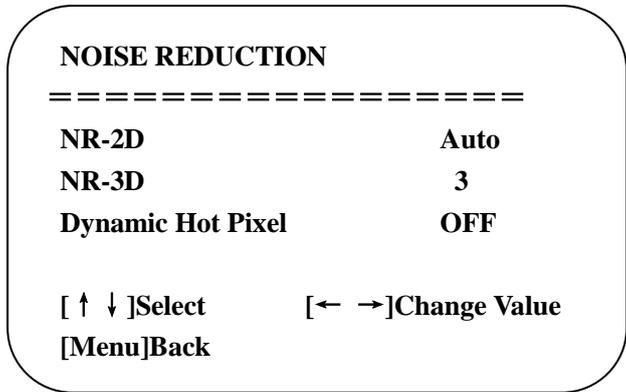
Move the pointer to the **【IMAGE】** in the Menu, click **【HOME】** and enter the **【IMAGE sub menu】** as shown below.

IMAGE	
=====	
Brightness	6
Contrast	8
Sharpness	7
Flip-H	OFF
Flip-V	OFF
B&W-Mode	Color
Gamma	Default
DCI	1
[↑ ↓]Select [← →]Change Value	
[Menu]Back	

- Brightness:** 0~14
- Contrast:** 0~14
- Sharpness:** 0~15
- Flip-H:** On/Off
- Flip-V:** On/Off
- B&W mode:** color, black/white
- Gamma:** default/0.47/0.50/0.52/0.55
- DCI:** Dynamic Contrast: Off/1~8

3.2.5 NOISE REDUCTION

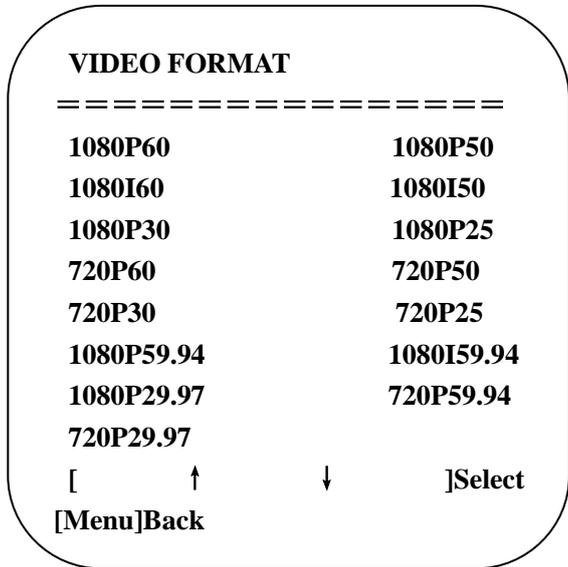
Move the pointer to **【NOISE REDUCTION】** in the Main Menu, click **【HOME】** and enter the **【NOISE REDUCTION】** as shown below.



2D NOISE REDUCTION: Auto/close/1~7
3D NOISE REDUCTION: Close/1~8
Dynamic Hot Pixel: Close/1~5

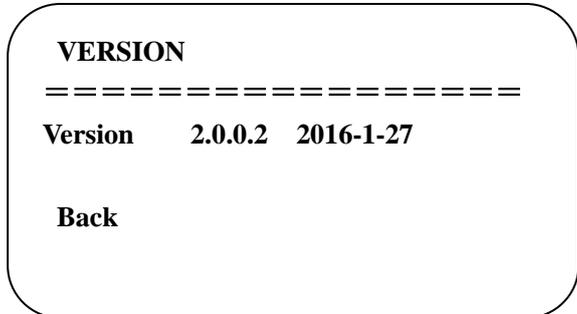
3.2.6 Video Format

Move the pointer to **【Video Format】** in the Main Menu, click**【HOME】**and enter the **【Video Format】** as shown below.



3.2.7 Version

Move the pointer to **【VERSION】** in the Main Menu, click**【HOME】**and enter the **【VERSION】** as shown below.



Note: version information would change accordingly after FM upgrading.

3.2.8 RESTORE DEFAULT

Move the pointer to **【RESTORE DEFAULT】** in the Main Menu, click **【HOME】** and enter the **【RESTORE DEFAULT】** as shown below.

RESTORE DEFAULT
=====

Restore	Default?	NO
----------------	-----------------	-----------

[↑ ↓]Select [← →]Change
Value

Restore default: YES/NO.

4. Network Connection

4.1 Connecting Mode

Direct connection: connect the camera and computer via Ethernet cable.

Internet connection: connect the camera to Internet via Router or Switch so that the user can log into the device using browser.

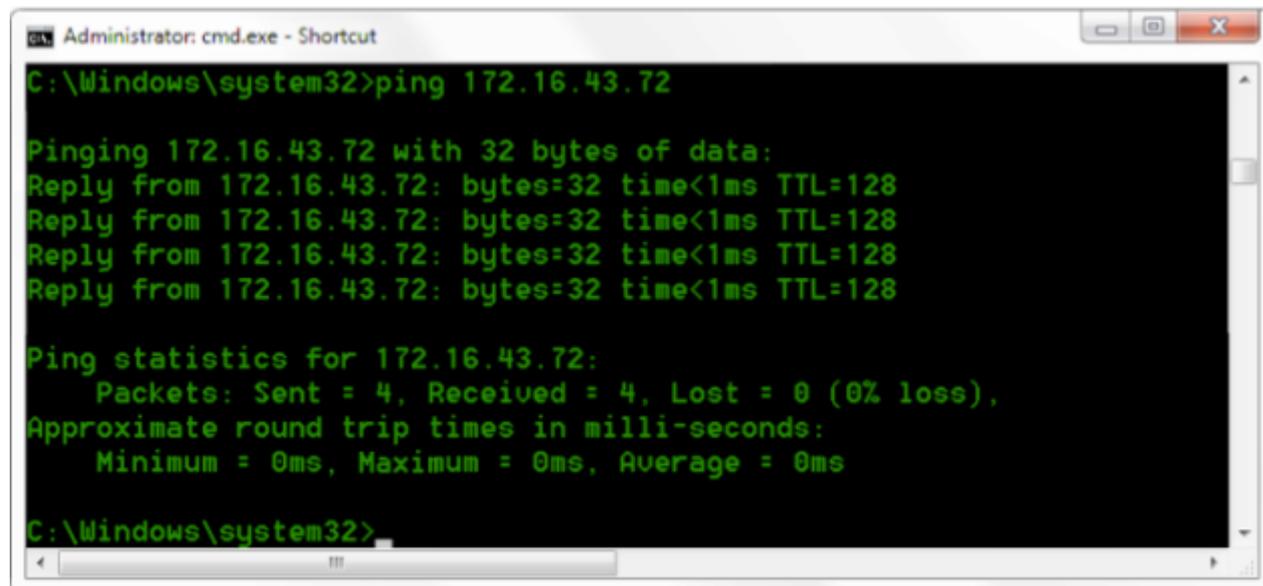
Note: Please do not put the power cable and Ethernet cable in places where can be easily touched to prevent video quality loss caused by unstable signal transmission due to poor contact of cables.

The computer must be assigned to the network segment which the camera IP address belongs to. The device will not be accessible if not in the right segment. I.E. The camera default IP address is 192.168.5.163, then segment 5 must be added in the computer. Specific steps are as below:

Open the Local Area Connection Properties on computer, select the “Internet protocol version 4(TCP/IPv4)”. Double click or click the property “Internet” protocol version 4 (TCP/IPv4) to enter the Internet Protocol Version 4(TCP/IPv4) Properties window. Select “Advanced” to enter the Advanced TCP/IP Setting and add IP and subnet mask in the IP browser. Click “Confirm” to finish adding IP segment. User can add the corresponding network segment according to the revised IP address of the camera.

Note: The IP address to be added cannot be the same as that of the other computers or devices. The existence of this IP address needs to be verified before adding.

To verify whether the network segment has been successfully added, click “Start” and select “Operation” and input cmd, then click CONFIRM and open DOS command window. Type ping 192.168.5.26, press Enter to see information shown below:



```
Administrator: cmd.exe - Shortcut
C:\Windows\system32>ping 172.16.43.72

Pinging 172.16.43.72 with 32 bytes of data:
Reply from 172.16.43.72: bytes=32 time<1ms TTL=128

Ping statistics for 172.16.43.72:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>
```

User can also verify network connection following the steps above after the camera self-check. If IP is default, open DOS command window and input 192.168.5.163. Press Enter to see if the network connection is normal.

4.2 IE Log In

4.2.1 Web client

1) Web client Log In

Input the IP address of the device 192.168.5.163 in the address filed of the web browser, and click Enter to enter the Web Client Login page as shown below in the picture. The user can login as administrator or normal user. If login as administrator (Default User name/ Password: admin), then the user can access preview, playback, configuration and cancel functions; If the user logs in as normal user (Default User name/ Password:user1 or user2), then the user can only access preview, playback and cancel functions, no access to configuration.



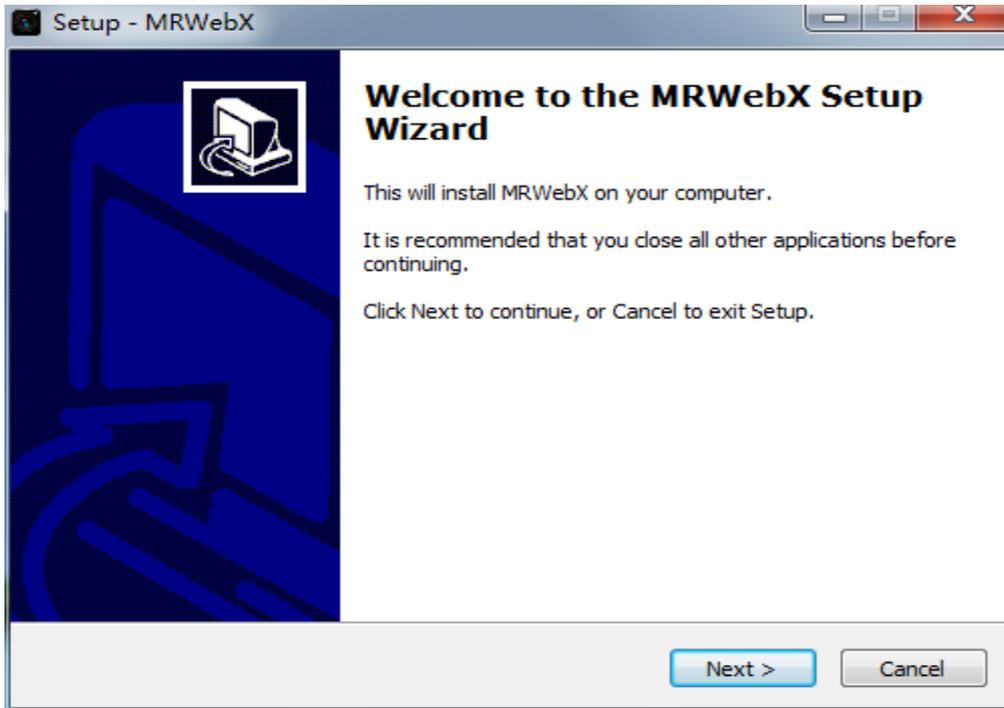
Note: web access supported browsers: IE, Chrome, Firefox, Safari. Web plug-in supports IE only.

2)Download/Install Plug in

When the user uses IE browser to access the web conferencing camera for the first time, the login page will show the message “Playback plug-in is not installed, please download and install!”. Click on this message, download and install MRWebXinstall.exe according to information prompts.

Note: Web plug-in supports IE only.

After installing the plug-in, input user name and password (factory default user name and password: "admin", the user can change the user name and password after login) to enter the Web client management interface.



4.2.2 Preview

After successfully logging into the management interface, video preview interface will show. The user can control PTZ, zoom, focus, video capture, sound, focus, full screen, set, run, delete the preset positions and other operations.

1) Login as administrator

Factory default user name/password: admin.

The user can operate PTZ control, zoom, focus, video capture, sound, full screen, set run, and delete preset positions, and also preview, playback, configuration, and log off.

2) Login as normal user

Factory default user name/password: user1 or user2

The user can operate PTZ control, zoom, focus, video capture, sound, full screen, set, run, and delete preset positions, and also preview, playback and log off.

NOTE: There is no configuration access for normal user.

4.2.3 Playback

1) Playback video files

First, please record, snapshot and save the file when previewing. Click "Playback" to enter playback page (video search), and then select the file type: "Video File", click Search. Click the video file to play.

2) Playback picture files

First, please record, snapshot and save the file when previewing. Click "Playback" to enter playback page (video search), and then select the file type: "Image File", click Search. Click the image file to view.

4.2.4 Configuration

Click “**Configuration**” tab to enter the device parameters setting page.

Parameters are as following: Local configuration, audio configuration, video configuration, network configuration, PTZ configuration, internet access configuration, system configuration. For detailed description, please refer to the table below.

Menu	Explanation
Local configure	Include video preview mode, record video packing time, record video storage route settings etc.
Audio configure	Include audio compressing format, sampling frequency, sampling precision, compressing code rate settings etc.

Video configure	Include video encoding, video parameters, character-overlapping, character size, video output setting etc.
Network configure	Include basic parameters, Ethernet, DNS, wireless network setting etc.
System configure	Include equipment property, system time, user management, version update, Reset, Reboot device settings etc.

1) Local configuration

Video preview mode: the user can choose real-time priority or fluency priority so that the delay will be minimum in real time priority mode and the bandwidth will be maximum in fluency priority mode. Settings can be adjusted based on the user's need (Default value: real time normal (2), real time best (1), fluency normal (3), fluency good (4) and fluency best (5)).

Recording packing time(minute): set video recording packing time (default: 10, range from 1~120 minutes).

Recording/Snapshot file storage route: set local video recording/snapshot file storage route (default D:\MyIPCam\).

Click **Save** button to save the changes and reboot the camera to make settings effective.

2) Audio configuration

Switch: choose to enable/disable the audio.

Compressing format: set audio compressing format, and the device will reboot automatically after setting change (default: MP3, other options: PCM, AAC).

Sampling frequency: set sampling frequency, and the device will reboot automatically after setting change (default: 44100, other options: 16000,32000 and 48000).

Sampling precision: set sampling precision (default: 16bits).

Compressing code rate: set audio compressing code rate (default: 64bits, other options: 32,48,96,128bits).

Note: click "SAVE", a message will show. Restart the device for the changes to take effect.

4.2.5 Video configuration

1) Video encoding

Code stream: different video output mode settings, use main/dual streaming mode (main stream/secondary stream).

Compression Format: set the video compression format. Save and reboot to take effect (primary/secondary stream default: H.264, other option: H.265).

Video size: set video image resolution. Save and reboot to take effect (main stream default: 1920*1080, other options: 1280*720; secondary stream default: 640*320, other options: 320*180, 1280*720, 1920*1080).

Stream rate control: set rate control mode. Save and reboot to take effect (main/secondary stream default: variable bit rate, other option: fixed rate).

Image quality: set the image quality. Image quality can be changed only when rate control is set to variable bit rate (main stream default: better, secondary stream default: not good. Other options: best, better, good, bad, worse, worst).

Rate (Kb/s): set the video bit rate (main stream default: 4096Kb/s, other option: 64-12288Kb/s; secondary stream default: 1024Kb/s, other option: 64-10240Kb/s).

Frame rate (F/S): set the video frame rate (main/secondary stream default: 25F/S, other option for main stream: 5-60F/S, other option for secondary stream: 5-30F/S).

Keyframe interval: set the key frame interval (main/secondary stream default: 75F, other options for main stream: 1-300F; secondary stream: 1-150F).

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

2) Stream release

Switch: turn on/off the main/secondary stream.

Protocol: main/secondary stream applies RTMP protocol.

Host Port: server port number (default: 1935, other options: 0-65535).

Host Address: server IP addresses (default: 192.168.5.11)

Stream Name: choose a different stream name (default: live / av0, other option: live / av1).

User: set the user name.

Password: set the password.

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

Method of obtaining RTSP: rtsp: // device IP address: 554 / live / av0 (av0 main stream; av1 secondary stream)

3) Video parameters

a. Focus: focus mode, focus range, focus sensitivity can be set.

Focus mode: set the focus mode (default: auto, other option: manual).

Focus range: set the focus range (default: middle, other options: upper and lower)

Focus sensitivity: set the focus sensitivity (default: low, other options: high, medium)

b. Exposure: exposure mode, exposure compensation, back light compensation, anti-flicker, gain limit, wide dynamic, shutter speed, aperture value and brightness can be set.

Exposure mode: set the exposure mode (default: automatic, other options: manual, shutter priority, aperture priority, brightness priority).

Exposure compensation: exposure compensation setting. Valid when in auto mode (default: off).

Exposure compensation value: set the exposure compensation value. Valid when it is set to auto mode (default 0, other options: -7 to 7).

BLC: set back light compensation. Valid when it is set to auto mode (default: off).

Anti-flicker: set up anti-flicker mode. Valid when in automatic, aperture or brightness priority mode (default: 50Hz, other options: closed, 60Hz).

Gain limit: set the gain limits. Active when it is in the status of aperture or brightness priority (default: 7, other options: 0-15).

Dynamic range: set the dynamic range (default: 3, other options: 0-8).

Shutter speed: active when it is in the status of manual or shutter-priority (default 1/90, other options: 1/90, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000).

Aperture value: set the aperture value. Active when it is in the status of manual or aperture-priority (default: F1.8, other options: closed, F9.6, F8.0, F6.8, F5.6, F4.8, F4.0, F3.4, F2.8, F2.4, F2.0, F1.8).

Brightness: set the brightness value. Active when it is in the status of brightness priority (default: 7, other options: 0-23).

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

White balance modes: set the white balance mode (default: automatic, other options: 3000K, 4000K, 5000K, 6500K, manual, One-push).

Note: click the "Correction" button when the One-push white balance mode is selected.

Saturation: set the saturation (default: 80%, other options: 60%, 70%, 80%, 90%, 100%, 110%, 120%, 130%).

Auto white balance sensitivity: sensitivity of auto white balance (default: low, other options: high, medium).

Chroma: set the chrome (default: 7, other options: 0-14).

Color temperature: set color temperature (default: high, other options: low, middle).

Red gain: set the red gain, effective when it is in manual mode (default: 255, options: 0-255).

Blue gain: sets the blue gain, effective when it is in manual mode (default: 199, options: 0-255).

d. Image: brightness, contrast, sharpness, black and white mode, gamma curve, and H/V flip can be set.

Brightness: set the brightness (default: 6, options: 0-14).

Contrast: set the contrast (default: 8, options: 0-14).

Sharpness: set the sharpness value (default: 7, options: 0-15).

Black and white mode: set black and white mode (default: color).

Gamma: Gamma value setting (default: 0.45, options: 0.50, 0.52, 0.55).

Flip Horizontal: flip horizontally (default: Off).

Flip Vertical: flip vertically (default: Off).

e. Noise reduction: 2D noise reduction, 3D noise reduction and dynamic dead pixel correction can be set.

2D Noise Reduction: set 2D noise reduction level (default: Auto, options: 1-7 and Off).

3D Noise Reduction: set 3D noise reduction level (default: 3, options: 1-7 and Off).

Dynamic dead pixel correction: set Dynamic dead pixel correction (default: Off, options: 1-8).

Note: click "Refresh" to make changes of any parameters of a, b, c, d, e effective .

4) Character-overlapping

Display date and time: set whether to display the time and date (default: display).

Display Title: set whether to display the title (default: display).

Font Color of Time: set font color of time and date (default: white, options: black, yellow, red, blue).

Font Color of Title: set font color of title (default: white, options: black, yellow, red, blue).

Moving characters: set the display position of moving date, time and title, click the "up, down, left,

right" buttons to move to the corresponding character position.

Title Content: set title content (default: CAMERA1).

Time Content: set time content (default: 1970/01/10 05:36:00)

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

5) Character Size

Main stream character size: set the character size of the main stream display. The device will restart automatically after the changes are made (default: 24, options: 24,16).

Secondary stream character size: set the character size of the secondary stream display. The device will restart automatically after the changes are made (default: 16, options: 24,16).

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

6) Video output

1080P60, 1080P50, 1080P30, 1080P25, 1080P59.94, 1080P29.97, 1080I60, 1080I50, 1080I59.94, 720P60, 720P50, 720P30, 720P25, 720P59.94, 720P29.97.

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

4.2.6 Network configuration

1) Network port

Data Port: set the data port, the device will restart automatically after change is made (default: 3000, options: 0-65535).

Web Port: set web port, the device will restart automatically after change is made (default: 80, options: 0-65535).

Onvif Port: set Onvif port, the device will restart automatically after change is made (default: 2000, options: 0-65535).

Soap Port: set Soap port (default: 1936, options: 0-65535).

RTMP Port: set RTMP port (default: 1935, options: 0-65535).

RTSP Port: set RTSP port, the device will restart automatically after change is made (default: 554, options: 0-65535).

Visca Port: set Visca port, the device will restart automatically after change is made (default: 3001, options: 0-65535).

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

Method of obtaining RTMP: rtmp:// device IP address: 1935 / live / av0 (av0 main stream; av1 secondary stream)

2) Ethernet parameters

DHCP: enable or disable obtaining IP automatically. Save the change and reboot the device to take effect (default: OFF).

IP Address: set the IP address. Save the change and reboot the device to take effect (default: 192.168.5.163).

Note: this IP address is the same as the one used to login to the Web page.

Subnet Mask: set the subnet mask (default 255.255.5.0).

Default Gateway: set the default gateway (default 0.0.0.0).

Physical Address: set the physical address (the parameter is read-only and cannot be modified).

Click the "Save" button, a message will show: "saved successfully". The changes will take effect. (Note: prevent IP conflicts when modify).

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).

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

4) GB28181

Switch: set whether open GB28181.

Time Synchronization: set whether synchronization time is set.

Stream Type: set the stream type (default: main stream, option: secondary stream).

Sign effective time (in seconds): default: 3600, options: 5-65535.

Heartbeat time (seconds): default: 60, options: 1-65535.

Register ID: 34020000001320000001

Register User name: IPC

Register Password: 12345678

Equipment ownership: Users can add their own.

Administrative regions: Users can add their own.

Alarm Zone: Users can add their own.

Equipment installation address: Users can add their own.

Local SIP Port: 5060 Range 0-65535

GB28181 Server Address: IP address of the computer.

Server SIP Port: 5060 Range 0-65535

Server ID: 34020000002000000001

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

4.2.7 System configuration

1) Device Properties

Device Name: set the device name (default: Camera1, user can add their own).

Device ID: set the device ID (default: 1, Read-Only).

System Language: set the system language (default: Simplified Chinese, options: English). Need to re-login after modify and save the setting.

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

2) System Time

Date Format: set the date format (default: YYYY-MM-DD, options: MM-DD-YYYY, DD-MM-YYYY).

Date separator: set the date separator (default '/', options: '.', '-').

Time Zone: set the time zone (default: East eight districts, other time zones are optional).

Time Type: set the time types (default 24 hours, options: 12 hours).

Time setting: set time mode (choose the computer time synchronization, NTP server time synchronization, or set manually).

Computer Time: set the computer synchronization.

Update interval: set the NTP server automatic updated time interval. Valid when NTP server synchronization is set (default: 1 day, options: 2-10 days).

NTP server address or domain name: set NTP server address or domain name (default: time.nits.gov). Valid when NTP server synchronization is set.

NTP Server Port: set the NTP server port (default 123). Valid when NTP server synchronization is set.

Set the time manually: effective when in manually mode.

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

3) User Management

Select users: set the user type (default: administrator, options: Common User 1, Common User 2).

User name: set the user name (Administrator default: admin; user1 default: common user1; user2 default: common user 2; user can modify their own).

Password: set a password (Administrator default: admin; user1 default: common user1; user2 default: common user 2; user can modify their own).

Password confirmation: confirm the password.

Click the "Save" button, a message will show: "saved successfully". The changes will take effect.

Note: please note that this system is case-sensitivity of user name and password.

If the user logs in using a common user's name and password, then he does not have the configuration access, and can only operate on preview, playback, and logoff tabs.

4) Version upgrade

MCU version V2.0.0.16 2015-12-18

Camera version V2.0.0.16 2015-12-18

Focus version V2.0.0.6 2015-12-11

Version information is read-only. Different types of the machine has different version information.

When updating file:

Click "Browse ...", and select the upgrade file in the pop-up window.

Click "Upgrade" in the upgrade dialog window. The camera will reboot automatically after update completed.

(Note: make sure the power and network is always connected during the update process, or the upgrade will fail.)

5) Restore factory settings

Click the "Restore Factory Defaults" button and choose "yes". The camera will restart automatically and restore factory settings.

6) Reboot

Click the "Reboot" button and choose "yes". The camera will restart automatically.

4.2.8 Logout

Click "Logout" and then "Confirmation" in the menu. Choose “Yes” to exit the current page and return to the user login interface.

5. Camera Maintenance and Troubleshooting

5.1 Camera Maintenance

1. If the camera will be idle for a long time, please turn off the power switch and disconnect AC power cord from outlet.
2. Use soft cloth or tissue to clean the camera (lens cleaning not recommended).
3. Use the soft dry cloth to clean the lens. If the camera is very dirty, clean it with diluted neuter detergent. Do not use any type of solvents, which may damage the surface.

5.2 Troubleshooting

1) No Video Output

- a. check whether the camera power supply is connected, make sure the voltage is normal, or whether the power indicator is on.
- b. whether the machine could do self-check upon starting.
- c. check whether the bottom of the DIP switch is set to the normal operating mode (see Table 1.2 and Table 1.3).
- d. check whether the video output cable is connected correctly, and the video display is normal.

2) No Image Sometimes

Check whether the video output cable is connected correctly, and the video display is normal under the normal operating mode.

3) No Recorded Video/ No Snapshots

First uninstall the MRWebX plug-in. Go to internet option (IE browser) -> security -> enable protection mode (remove the check). Refresh the camera web login page, log in again, and download the MRWebX as instructed.

4) Image Dithering When Zoom-in/out

- a. check whether the camera's installation position is solid.
- b. check whether there is a shaking machine or object near the camera.

5) Remote Control Cannot Work

- a. check whether control address is set to 1 (if the machine is set to factory default settings, remote control address needs to be set back to 1).
- b. check whether the battery is installed in the remote control, and whether the battery power is high enough.
- c. check whether the camera is under the normal working/operating mode (see Table 1.2 and Table 1.3).
- d. check whether the menu is closed. Camera control through remote control is only available after exiting the menu. If video is output from LAN, the menu will not show. After 30 sec, camera can be controlled by remote control.

6) Serial Port Does Not Work

- a. check whether the camera serial protocol, baud rate, and address are consistent.
- b. check whether the control cable is connected properly.
- c. check whether the camera working mode is set to the normal operating mode (see Table 1.2 and Table 1.3).

7) Web Pages Cannot Log In

- a. check whether the camera is displaying normally.
- b. check whether the network cable is connected properly (Ethernet port yellow light flashing indicates normal network cable connection).
- c. check whether the proper segment is added to the computer, and is consistent with the IP address of the camera.
- d. click "**Start**" and then "**Run**". Type in "cmd" and click "OK" to turn on a DOS command window. Enter ping 192.168.5.163., and press Enter to see whether a message shows as follows: Description network connection is normal.

Warranty

Thank you for your interest in the products of AVIPAS Inc.

This Limited Warranty applies to HD Conference Camera purchased from AVIPAS Inc.

This Limited Warranty covers any defect in material and workmanship under normal use within the Warranty Period. AVIPAS Inc. will repair or replace the qualified products at no charge.

AVIPAS Inc. provides a two (2)-year warranty (from the date of purchase) for this HD Conference Camera.

This Limited Warranty does not cover problems including but not limited to: improper handling, malfunction or damage not resulting from defects in material.

To receive warranty service, please contact AVIPAS Inc. first. We will decide whether a repair or replacement is needed and will advise you of the cost of such repair or replacement.

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