ASolutions

User Guide

MS-4K72-12S 4K PTZ Camera



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Product specifications and information which were referred to in this document are for reference only. We may change, delete, or update any content at any time and without prior notice.

FC FCC Notice

This product complies with Part 15 of the FCC Rules. The operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.delete, or update any content at any time and without prior notice.

This product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:



g Operating this equipment in a residential environment may cause radio interference.

CE EC Compliance Statement (Class A)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2014/30/EU.

Catalogue

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Note

- During the installation and use of the equipment, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the power adapter that comes standard with this product.
- Please do not connect multiple devices to the same power adapter (exceeding the capacity of the adapter may generate excessive heat or cause a fire).
- Do not rotate head of the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, secure the device securely. When installing, make sure that there are no obstacles within the rotation range of the gimbal; do not turn on the power until all installations are completed.
- To avoid heat build-up, keep ventilation around the device smooth.
- If the device emits smoke, smells, or makes noises, please turn off the power immediately and unplug the power cord, and contact the dealer in time.
- This device is not waterproof, please keep the device dry.
- This product has no user serviceable parts, damage caused by disassembly by the user is not covered by the warranty.



Notice: Specific frequencies of electromagnetic field may affect the image of the camera!

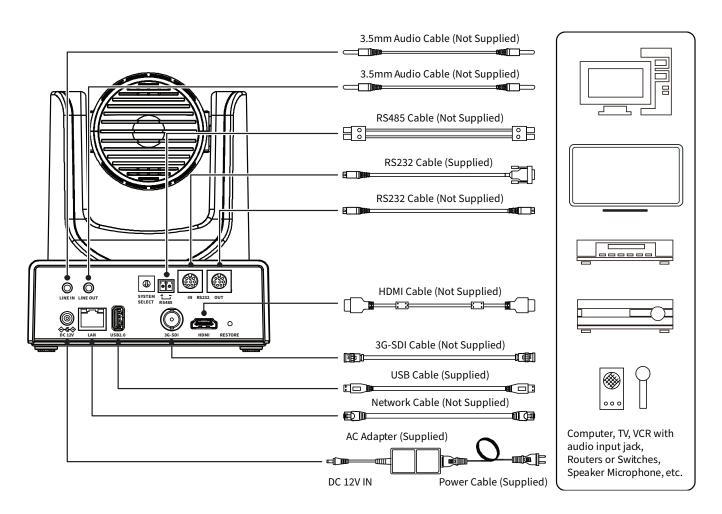
Packing List

When unpacking the package, check that all the supplied accessories are included:

| Name | Quantity | |
|----------------|----------|--|
| Camera | 1 | |
| Camera | 1 | |
| Power Adapter | 1 | |
| Power Cable | 1 | |
| RS232 Cable | 1 | |
| USB Cable | 1 | |
| Remote Control | 1 | |
| User Manual | 1 | |

Quick Start

1. Please check connections are correct before starting.



- **2.** Connect the power adapter to the power connector on the rear panel of the camera. The power indicator on the front panel of the camera is on.
- **3.** After the camera is powered on, it starts to initialize, right up to the limit position, and then both horizontal and vertical go to the middle position, the motor stops running, and the initialization is completed.

(Note: If preset 0 is saved, PTZ will be move to preset 0)

4. Video Format

Video Format

| HDMI | | HDMI | |
|------|------------|------|------------|
| 0 | 1080P60 | 0 | 1080P60 |
| 1 | 1080P50 | 1 | 1080P50 |
| 2 | 1080160 | 2 | 1080160 |
| 3 | 1080 50 | 3 | 1080 50 |
| 4 | 1080P30 | 4 | 1080P30 |
| 5 | 720P60 | 5 | 720P60 |
| 6 | 1080P29.97 | 6 | 1080P29.97 |
| 7 | 1080159.94 | 7 | 1080159.94 |
| 8 | 1080P59.94 | 8 | 1080P59.94 |
| 9 | 720P59.94 | 9 | 720P59.94 |
| А | 4KP29.97 | А | 1080P29.97 |
| В | 4KP59.94 | В | 1080P59.94 |
| С | 4KP25 | С | 1080P25 |
| D | 4KP30 | D | 1080P30 |
| Е | 4KP50 | E | 1080P50 |
| F | 4KP60 | F | 1080P60 |

About the Product

5.1 Features

AI Tracking

With the help of the AI computing power of the chip, the camera is equipped with advanced AI algorithms to realize monocular humanoid tracking, which can realize automatic tracking of scenes such as education, conferences and live broadcasts.

• NDI|HX2

NDI|HX2 has the characteristics of low delay and plug and play, which is convenient for project implementation and deployment. It has good ecology and supports the simultaneous transmission of audio, video and control commands. It is a new generation of network video transmission mode.

4K UHD

Use 1/2.5-inch high-quality UHD CMOS sensor with a maximum of 8.51 million pixels can realize 4K (3840x2160) ultra-high-resolution high-quality images. And downward compatible with 1080p, 720p and other resolutions.

12x Optical Zoom

It adopts 4K ultra long focal lens with high quality and 8 million ultra-high resolution, 12x optical zoom, and the maximum field angle is 71°.

HDMI 2.0

Support HDMI 2.0 interface, which can directly output 4KP60 uncompressed digital video.

Low Light

The application of 3D noise reduction algorithm greatly reduces image noise. Even under the condition of ultra-low illumination, it still keep the picture clean and clear, and the SNR of image is as high as 55dB.

Multiple Interfaces

Support HDMI and 3G-SDI interface, effective transmission distance of 3G-SDI is up to 150 meters (1080P30). HDMI or 3G-SDI, USB, LAN can output three HD digital signals at the same time.

Remote Control

Through the RS232 and RS485 serial ports, the camera can be controlled remotely.

Gravity Sensor (Optional)

It supports automatic image flipping function, which is convenient for engineering installation and use.

5.2 Specifications

| Camera | 4K PTZ Camera |
|---------------------------|--|
| HDMI Signal | 4KP60, 4KP50, 4KP30, 4KP25, 4KP59.94, 4KP29.97, 1080P60, 1080P50, 1080P59.94, 1080P30, 1080P29.97, 1080I60, 1080I50, 1080I59.94, 720P60, 720P59.94 |
| 3G-SDI Signal | 1080P60, 1080P50, 1080P30, 1080P29.97, 1080P59.94, 1080P25, 1080l60, 1080l50, 1080l59.94, 720P60, 720P59.94 |
| Sensor | 1/2.5 inch, CMOS, Effective pixels: 8.51M |
| Scanning Mode | Progressive |
| Lens | 12x, f = 4.4mm ~ 52.8mm, F1.8 ~ F2.6 |
| Digital zoom | 16x |
| Minimum Illumination | 0.5 Lux @ (F1.8, AGC ON) |
| Shutter | 1/30s ~ 1/10000s |
| White Balance | Auto, Indoor, Outdoor, One Push, Manual, VAR |
| Backlight Compensation | Supported |
| Digital Noise Reduction | 3D Digital Noise Reduction |
| Signal Noise Ratio | ≥55dB |
| Horizontal Angle of View | 71° ~ 8.2° |
| Vertical Angle of View | 42.7° ~ 4.5° |
| Horizontal Rotation Range | ~170° |
| Vertical Rotation Range | $-30^{\circ} \sim +90^{\circ}$ |
| Pan Speed Range | 1.7° ~ 100°/s |
| Tilt Speed Range | 1.7° ~ 69.9°/s |
| H & V Flip | Supported |
| Image Freeze | Supported |
| PoE | Supported |
| Number of Preset | 255 |
| Preset Accuracy | 0.1° |

5.2 Specifications (continued)

| USB Features | | | |
|--------------------------|---|--|--|
| Operating System | 1Windows 7/8/10, Mac OS X, Linux, Android | | |
| Color System/Compression | YUY2/H.264/H.265/MJPEG | | |
| Video Format | YUY2:max to 1080P@5fpsH.264 AVC:max to 2160P@30fpsH.265 HEVC:max to 2160P@30fpsMJPEG:max to 2160P@30fps | | |
| USB Audio | Supported | | |
| USB Video Protocol | UVC 1.1 ~ 1.5 | | |
| UVC PTZ | Supported | | |

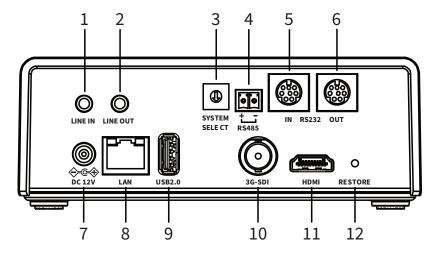
| Network Features | | | |
|--------------------------|--|--|--|
| Video Compression | H.264/H.265/MJPEG | | |
| Video Stream | First Stream, Second Stream | | |
| First Stream Resolution | 3840x2160, 1920x1080, 1280x720, 1024x576, 720x480, 720x408, 640x480, 640x360 | | |
| Second Stream Resolution | 720x480, 720x408, 640x480, 640x360, 480x320, 320x240 | | |
| Video Bit Rate | First Stream: 32kbps~51200kbps Second Stream: 32kbps~20480kbps | | |
| Bit Rate Control | CBR, VBR | | |
| Frame Rate | 50Hz: 1fps ~ 50fps 60Hz: 1fps ~ 60fps | | |
| Audio Compression | AAC | | |
| Audio Bit Rate | 96Kbps, 128Kbps | | |
| Protocols | NDI [®] HX2, TCP/IP, HTTP, RTSP, RTMP/RTMPS, ONVIF, DHCP, SRT, Multicast | | |

| Input/Output Interface | | | |
|-------------------------|---|--|--|
| LINE IN Interface | 1 x LINE IN: 3.5mm Audio Interface | | |
| LINE OUT Interface | 1 x LINE OUT: 3.5mm Audio Interface | | |
| Communication Interface | 1 x RS485: 2pin phoenix port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P 1 x RS232 IN: 8pin Min DIN, Max Distance: 30m, Protocol: VISCA/Pelco-D/Pelco-P 1 x RS232 OUT: 8pin Min DIN, Max Distance: 30m, Protocol: VISCA network use only | | |
| Network Interface | 1 x LAN: 10M/100M/1000M Adaptive Ethernet Port | | |
| USB Interface | 1 x USB2.0: Type A | | |
| 3G-SDI Interface | 1 x 3G-SDI: BNC type, 800mVp-p, 75 Ω . Along to SMPTE 424M standard | | |
| HDMI Interface | 1 x HDMI: Version 2.0 | | |
| Power Jack | 1 x HDMI: Version 2.0 | | |

5.2 Specifications (continued)

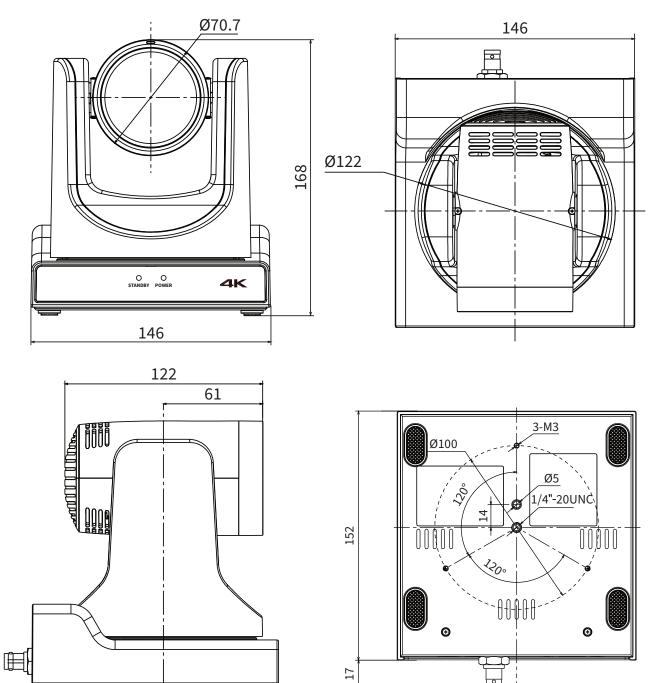
| Physical Parameter | | |
|-----------------------|-----------------------|--|
| Tally Indicator | 1 | |
| Power Indicator | 1 | |
| Status Indicator | 1 | |
| Restore Key | 1 | |
| Input Voltage | DC 12V/PoE+(802.3at) | |
| Input Current | Max. 2A | |
| Operating Temperature | 0°C ~ 40°C | |
| Storage Temperature | -40°C ~ 60°C | |
| Power Consumption | Max. 18W | |
| Dimension | 169mm x 146mm x 168mm | |
| Net Weight | About 1.6Kg | |

5.2 Interface and Switch



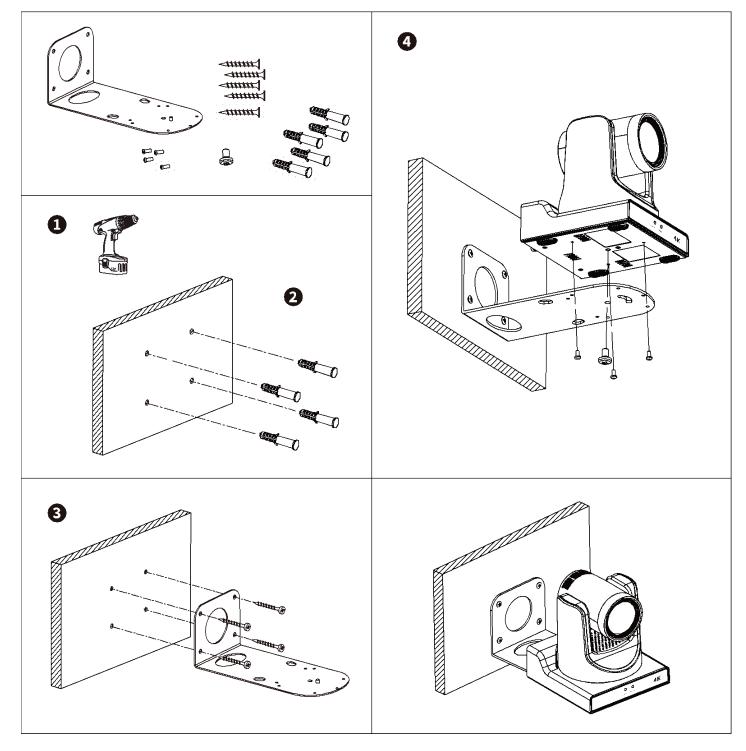
| Item | Name |
|------|----------------------|
| 1 | LINE IN Interface |
| 2 | LINE OUT Interface |
| 3 | System Select Switch |
| 4 | RS485 Interface |
| 5 | RS232 IN Interface |
| 6 | RS232 OUT Interface |
| 7 | DC 12V Interface |
| 8 | LAN Interface |
| 9 | USB2.0 Interface |
| 10 | 3G-SDI Interface |
| 11 | HDMI Interface |
| 12 | RESTORE Interface |

5.4 Dimensions



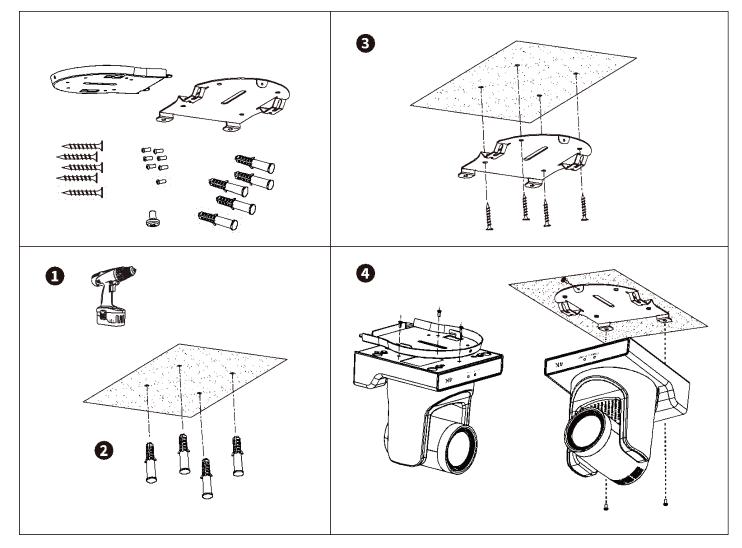
T

5.5 Installation - Wall Mount



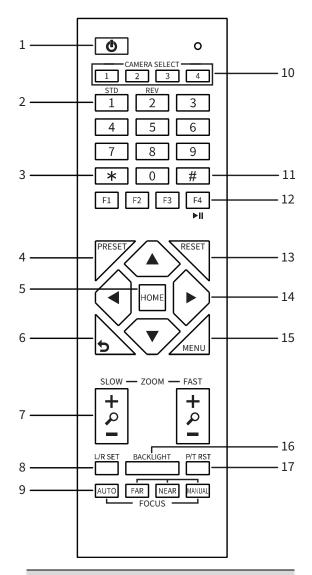
The installation diagram is for reference only. The brackets and screws are not standard. For packing accessories, please refer to the actual product.

5.5 Installation – Ceiling Mount



The installation diagram is for reference only. The brackets and screws are not standard. For packing accessories, please refer to the actual product.

5.6 Remote Control



- Key Description
- 1. Standby Key
- Press to enter standby mode
- 2. Number Key
- Press to set preset or call preset
- 3. *Key
- Use with other keys
- 4. PRESET Key
- Set preset: [PRESET] + Number key (0-9)

5. HOME Key

Confirm selection or press to turn PTZ back to the middle position

| 6. Return Key | |
|---|------------|
| Press to return to the previous menu | |
| 7. ZOOM Key | |
| • SLOW: Zoom In [+] or Zoom Out [-] s | slowly |
| • FAST: Zoom In [+] or Zoom Out [-] fa | ast |
| 8. L/R SET Key | |
| Standard: Simultaneously press L/F | ≀ SET + 1 |
| • Reverse: Simultaneously press L/R | SET + 2 |
| 9. FOCUS Key | |
| Auto/Manual/Far/Near focus | |
| 10. CAMERA SELECT Key | |
| Press to select and control the camera | |
| 11. # Key | |
| Use with other keys | |
| 12. IR Remote Control Key | |
| [*]+[#]+[F1]: Address 1 | |
| [*]+[#]+[F2]: Address 2 | |
| [*]+[#]+[F3]: Address 3 | |
| [*]+[#]+[F4]: Address 4 | |
| [F3]: Turn on human tracking | |
| [F4]: Turn off human tracking | |
| 13. RESET Key | |
| Clear preset position: [RESET] + Numbe | er key (0- |
| 9) | |
| 14. PTZ Control Key | |
| PTZ moved according to the arrow indi | cates |
| 15. MENU Key | |
| Press to enter or exit OSD Menu | |
| 16. BACKLIGHT Key | |
| Backlight ON/OFF: Press repeatedly to | |
| or disable the backlight compensation. | , |
| NOTE: | ło |
| Effective only in auto exposure mod If there is a light behind the subject | |
| | |
| subject will become dark, press the | |
| backlight key to enable the backlight | |
| compensation. Press again to disab | le this |
| function. | |
| 17. P/T RST (PTZ Reset) Key | |
| PTZ starts to self-test after pressed it | |
| Shortcut Set | |
| [*]+[#]+[1]: OSD menu default English | |
| [*]+[#]+[3]: OSD menu default Chinese | |
| [*]+[#]+[4]: Display current IP address | |
| [*]+[#]+[6]: Quickly recover the defaul | t |
| [*]+[#]+[8]: View the camera version | |
| [*]+[#]+[9]: Quickly set up inversion | |
| [*]+[#]+[MANUAL]: Restore default IP a | address |

GUI Settings

6 GUI Settings

6.1 MENU

Press [MENU] key to display the main menu on the normal screen, using arrow key to move the cursor to the item to be set. Press the [HOME] key to enter the corresponding sub-menu.

| MENU |
|---------------------|
| Exposure |
| Color |
| Image |
| P/T/Z |
| Noise Reduction |
| Setup |
| Communication Setup |
| Restore Default |
| |
| [Home] Enter |
| [Menu] Exit |

6.2 EXPOSURE

Move the main menu cursor to [Exposure], and press [HOME] key enter the exposure page, as shown in the following figure.

| EXPOSURE | |
|----------------------------------|---------|
| Mode | Auto |
| ExpCompMode | Off |
| Backlight | Off |
| Gain Limit | 3 |
| Anti-Flicker | 50Hz |
| Meter | Average |
| DRC | 3 |
| | |
| Select Item | |
| Change Value | |
| [Menu] Back | |

Mode: Auto, Manual, SAE, AAE, Bright.

ExpCompMode: On, Off (Effective only in Auto mode).

ExpComp: -7 ~ 7 (Effective only in ExpCompMode item to On).

Backlight: On, Off (Effective only in Auto mode). **Bright:** 0 ~ 17 (Effective only in Bright mode). **Gain Limit:** 0 ~ 15 (Effective only in Auto, SAE, AAE, Bright mode).

Anti-Flicker: Off, 50Hz, 60Hz (Effective only in Auto, AAE, Bright mode).

Meter: Average, Center, Smart, Top.

Iris: F1.8, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11.0, Close (Effective only in Manual, AAE mode).

Shutter: 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 (Effective only in Manual, SAE mode).

Gain: 0 ~ 7 (Effective only in Manual mode). **DRC:** 0 ~ 8.

6.3 COLOR

Move the main menu cursor to [Color], and press [HOME] key enter the color page, as shown in the following figure.

| COLOR | | |
|-------|--|------|
| | WB Mode | Auto |
| | RG Tuning | 0 |
| | BG Tuning | +1 |
| | Saturation | 100% |
| | Hue | 7 |
| | ▲▼Select Iten ◀ ▶Change Va [Menu] Back | |

WB Mode: Auto, Indoor, Outdoor, One Push, Manual, VAR.

RG: 0 ~ 255 (Effective only in Manual mode).

BG: 0 ~ 255 (Effective only in Manual mode).

RG Tuning: -10 ~ +10 (Effective only in Auto, One Push, VAR Mode).

BG Tuning: -10 ~ +10 (Effective only in Auto, One Push, VAR Mode).

Saturation: 60% ~ 200%.

Hue: 0 ~ 14.

Color Temp: 2500K ~ 8000K (Effective only in VAR mode).

GUI Settings (continued)

6.4 IMAGE

Move the main menu cursor to [Image], and press [HOME] key enter the image page, as shown in the following figure.

| IMAGE | | |
|---|-----------|---------|
| | Luminance | 6 |
| | Contrast | 9 |
| | Sharpness | 3 |
| | Flip-H | Off |
| | Flip-V | Off |
| | B&W-Mode | Off |
| | Gamma | 0.5 |
| | Style | Default |
| | LDC | Off |
| ▲▼Select Item ◀ ▶Change Value [Menu] Back | | |

Luminance: 0 ~ 14.

Contrast: 0 ~ 14.

Sharpness: 0 ~ 15, auto.

Flip-H: On, Off.

Flip-V: On, Off.

B&W-Mode: On, Off.

Gamma: EXT, Default, 0.45, 0.5, 0.56, 0.63. Style: Default, Norm, Clarity, Clarity (LED), Bright, Soft, 5S.

LDC: On, Off.

6.5 P/T/Z

Move the main menu cursor to [P/T/Z], and press [HOME] key enter the P/T/Z page, as shown in the following figure.

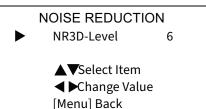
| P/T/Z | |
|----------------------------------|-------|
| SpeedByZoom | On |
| AF-Zone | Front |
| AF-Sense | High |
| L/R Set | STD |
| Display Info | On |
| Image Freeze | Off |
| Digital Zoom | Off |
| Call Preset Speed | 24 |
| Pre Zoom Speed | 5 |
| ▲▼Select Item | |
| Change Value | |

P/T/Z [Menu] Back

SpeedByZoom: On, Off. AF-Zone: Front, Top, Center, Bottom. AF-Sense: Low, Normal, High. L/R Set: STD, REV. Display Info: On, Off. Image Freeze: On, Off. Digital Zoom: Off, 2x, 4x, 8x, 16x. Call Preset Speed: 1 ~ 24. Pre Zoom Speed: 0 ~ 7.

6.6 NOISE REDUCTION

Move the main menu cursor to [Noise Reduction], and press [HOME] key enter the noise reduction page, as shown in the following figure.



NR3D Level: Off, $1 \sim 11$.

6.7 SETUP

Move the main menu cursor to [Setup], and press [HOME] key enter the setup page, as shown in the following figure.

| SETUP | |
|----------------------------------|---------|
| Language | EN |
| DVI Mode | DVI |
| Auto Scan Shoot | Off |
| SDI-3G Mode | LEVEL-A |
| Video Output | HDMI |
| Auto Inversion | On |
| Tally Mode | On |
| USB2.0 Function | Host |
| | |
| Select Item | |
| Change Value | |
| [Menu] Back | |

Language: EN, Chinese, Russian. DVI Mode: HDMI, DVI.

GUI Settings (continued)

SDI-3G Mode: LEVEL-A, LEVEL-B.

Video Output: HDMI, SDI.

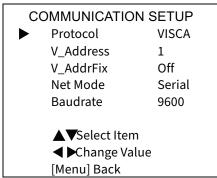
Auto Inversion: On, Off. Tally Mode: On, Off.

USB2.0 Function: Host, UVC.

6.8 COMMUNICATION SETUP

Move the main menu cursor to

[Communication Setup], and press [HOME] key enter the communication setup page, as shown in the following figure.



Protocol: Auto, VISCA, PELCO-D, PELCO-P.

V_Address: 1 ~ 7 (Effective only in Auto, VISCA protocol).

V_AddrFix: On, Off (When set to On, useless in 88 30 01 FF Command).

P_D_Address: 0 ~ 254 (Effective only in Auto, PELCO-D protocol).

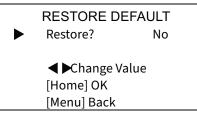
P_P_Address: 0 ~ 31 (Effective only in Auto, PELCO-P protocol).

Net Mode: Serial, Paral.

Baudrate: 2400, 4800, 9600, 38400.

6.9 RESTORE DEFAULT

Move the main menu cursor to [Restore Default], press [HOME] key enter restore default page, as shown in the following figure.



Restore: Yes, No.



GUI menu and parameters are subject to change without notice.

Web Settings

7 WEB Settings

7.1 Access Camera

Access http://192.168.100.88 to pop up the login window, then input username (default: admin) and password (default: admin). After login, it will show as below:



7.2 Control Camera

All pages include two menu bars: Real time monitoring: displaying video image Parameter setup: with function buttons.

A. Video Viewing Window

Video viewing window must be same as video resolution, the bigger the resolution is, the bigger the playing area is. Double click viewing window, will show full-screen, double click again, will return to initialized size.

Status bar in viewing window shown as below:

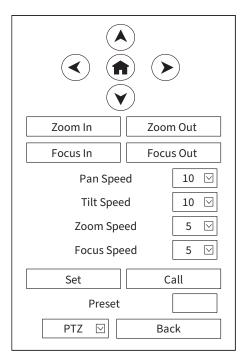


1) Video playback pause button: control real-

time video pause, stop the last picture, click recoverable video again.

- 2) Audio control buttons: can adjust the volume or set silent mode.
- 3) Full screen switch button.

B. PTZ Setup



1) Pan and Tilt Control

Up, Down, Left and Right arrows and the home button allow you to manually drive the camera to the desired position.

2) Zoom

Zoom In and Zoom Out buttons allow for wide or narrow view of the space.

3) Focus

Focus In and Focus Out buttons allow for fine manual focus adjustment if the camera has any problems auto focusing on the difficult object.

4) PTZ Speeds

Pan speed can be set at any rate between 1 ~ 24, Tilt speed can be set at any rate between 1 ~ 20. Zoom and Focus speeds can be set at any rate between 1 ~ 7.

5) PTZ Presets

After manually setting up a shot that you would like to return to later, you can save presets for quick recall of these positions. Type a number between 0 and 254 into the Preset box.

Web Settings (continued)

Click the "Set" button to save the current location with that preset number. Click the "Call" button to cause the camera to return to that position. This enables smooth, quick and convenient control without the need to manually drive the camera.

You can set up preset that user want as below. Method: Type preset number into the Preset box.

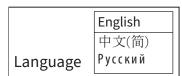
| Set | Call |
|--------|------|
| Preset | |

Preset: Optional items: 0 ~ 254.

6) PTZ/OSD Dropdown

From the dropdown menu, clicking the OSD option will open the on-screen display menu of the camera giving you control from within the IP interface.

C. Language Selection



Click either "Chinese", "English" or "Russian" to change the language of the webpage.

7.3 Video Settings

| Video Settings | |
|----------------------|---------------|
| HDMI/SDI Output | HDMI 🖂 |
| Video Format | 1920x1080/50p |
| Encode Level | mainprofile 🖂 |
| First stream | |
| Encode Protocol | H264 |
| Resolution | 1920x1080 |
| Bit Rate | 4096 |
| Frame Rate | 25 Sfps |
| I Key Frame Interval | 25 |
| Bit Rate Control | CBR |
| | |

| Second stream | | |
|----------------------|--------------|--------------------|
| Encode Protocol | H264 | \bigtriangledown |
| Resolution | 640x360 | \bigtriangledown |
| Bit Rate | 4096 | |
| Frame Rate | 25 | ✓ fps |
| I Key Frame Interval | 25 | |
| Bit Rate Control | CBR | \bigtriangledown |
| S | ubmit Cancel | |

1) HDMI/SDI Output

Support HDMI and SDI Output.

2) Video Format

Video Format 1920x1080/50p.

3) Encode Level

Support mainprofile and highprofile two levels.

4) Encode Protocol

Support H.264, H.265 and MJPEG protocols.

5) Resolution

First stream support 3840x2160, 1920x1080, 1280x720, 1024x576, 720x480, 720x408, 640x480, 640x360. Second stream support 720x480, 720x408, 640x480, 640x360, 480x320, 320x240; The bigger resolution is, the clearer the image will be, more network bandwidth will be taken.

6) Bit Rate

The user can specify the bit rate. Generally speaking, the larger of the bit rate, the clearer of the image. However, the configuration of the bit rate needs to be combined with the network bandwidth. When the network bandwidth is narrow and the bit rate is configured larger, the video stream cannot be transmitted normally, and the visual effect is worse.

7) Frame Rate

User can specify the size of the frame rate, generally, the frame rate greater, the image more smooth; Frame rate is smaller, the more sense of beating.

Web Settings (continued)

8) I Key Frame Interval

Set interval between 2 I frame, the bigger interval is the response will be lower from viewing window.

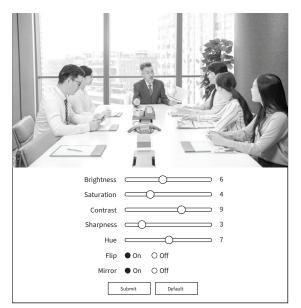
9) Bit Rate Control

Code stream control way:

CBR (Constant Bit Rate): Video coder will be coding according to preset speed.

VBR (Variable Bit Rate): Video coder will adjust the speed based on preset speed to gain the best image quality.

7.4 Image Settings



1) Brightness

Brightness of image: 0~14 (Default value is 6).

2) Saturation

Saturation of image: 0~14 (Default value is 4).

3) Contrast

Contrast of image: 0~14 (Default value is 9).

4) Sharpness

Sharpness of image: 0~16 (Default value is 3).

5) Hue

Hue of image: 0~14 (Default value is 7).

6) Flip

Turn On/Off the Flip function.

7) Mirror

Turn On/Off the Mirror function.

7.5 Audio Settings

| Audio Settings | | | |
|----------------|--------------|-------------|--------------------|
| | Audio Switch | On | \bigtriangledown |
| | Audio Type | AAC | \bigtriangledown |
| | Sample Rate | 48K | \bigtriangledown |
| | Bit Rate | 96K | \bigtriangledown |
| | Input Type | LINE IN | |
| | Input Vol | 20 | ∨ dB |
| | ADTS Options | Off | \leq |
| | Su | bmit Cancel |] |

1) Audio Switch

Enable or disable audio switch.

2) Audio Type

Optional items: AAC.

3) Sample Rate

Optional items: 44.1K, 48K.

- 4) Bit Rate
- Optional items: 96K, 128K.
- 5) Input Type

Input type LINE IN.

6) Input Vol The volume of the channel.

7) ADTS Options

Optional items: On, Off.

7.6 System Settings

| Initialize | | |
|------------|----------|--------------|
| | Reboot | Reboot |
| User | | |
| | UserName | admin |
| | Passwd | •••• |
| | Guest | guest |
| | Passwd | ••••• |
| | S | ubmit Cancel |

Web Settings (continued)

1) Reboot

Click the "Reboot" button, system restart.

2) Username and Password

The user can modify the password (letters and Numbers only).

7.7 Network Settings

| Lan Settings | |
|-----------------------|-------------------------------------|
| IP Configuration Type | Fixed IP Address |
| IP Address | 192.168.100.88 |
| Subnet Mask | 255.255.255.0 |
| Gateway | 192.168.100.1 |
| DNS Address | 8.8.8.8 |
| MAC Address | D4:E0:8E:A9:73:45 |
| | Submit Cancel |
| Port Settings | |
| HTTP Port | 80 |
| RTSP Port | 554 |
| TCP Port | 5678 |
| UDP Port | 1259 |
| Sony Visca | 52381 |
| RTMP(S) Settings | |
| First Stream | ○ On ● Off □ Video □ Audio |
| MRL | rtmp://192.168.100.138/live/stream0 |
| Second Stream | ○ On ● Off □ Video □ Audio |
| MRL | rtmp://192.168.100.138/live/stream1 |
| SRT Settings | |
| SRT | ● On ○ Off |
| SRT Port | 4578 |
| SRT Encryption | None |
| SRT Password | 1234564913131 |
| RTSP Settings | |
| RTSP Auth | O On ● Off |
| ONVIF Settings | |
| ONVIF | ○ On ● Off |
| ONVIF Auth | ○ On ● Off |
| Multicast Settings | |
| Multicast | ○ On ● Off |
| Address | 224.1.2.3 |
| Port | 6688 |
| | |

| NTP Settings | |
|--------------------|------------------------------|
| NTP time sync | ⊖ On ● Off |
| Time Zone | (GMT+08:00) Beijing, China 🖂 |
| Server address | cn.ntp.org.cn |
| Time interval(min) | 1440 |
| Main time show | ○ On ● Off |
| Position | X 0 Y 0 |
| Sub time show | ⊖ On ● Off |
| Position | X 0 Y 0 |
| | Submit Cancel |

1) Lan Settings

Default the IP address is 192.168.100.88, the MAC address cannot be modified.

- 2) Port Settings
- A. HTTP Port

IP address identifies the network device, the device can run multiple web applications, each network program using network port to transmit data, so data transmission to be carried out between the port and port. Port setting is to set up web server program using which port to transmit. When port mapping, need to be consistent with the port number (default port: 80).

B. RTSP Port

The 4K PTZ camera support RTSP protocol, use the VLC tools broadcast, default port: 554.

C. TCP Port

Support TCP connection then control camera, default port: 5678.

D. UDP Port

Support UDP protocol, default port: 1259.

E. Sony Visca

Support Sony Visca, default value: 52381.

Web Settings (continued)

3) RTMP(S) Settings

Setting the MRL of RTMP, select enable or disable video and audio. You can select control code stream of "On", "Off", "Video", "Audio" between in the two streams.

4) SRT Settings

Turn On/Off SRT, Setting the SRT Port, SRT Encry and SRT Password.

5) RTSP Settings

Turn On/Off RTSP Auth.

6) ONVIF Settings

Turn On/Off ONVIF and ONVIF Auth.

7) Multicast Settings

Turn On/Off multicast. Setting the multicast address (default value is 224.1.2.3) and port (default value is 6688, then 6688 is the multicast port of the first stream; 6690 is the multicast port of the second stream).

8) NTP Settings

Turn On/Off NTP time sync, main time show and sub time show. Setting NTP server address, time interval, main stream position and sub stream position.

7.8 Device Information

| Information | |
|------------------|----------------------------|
| Device ID | HD Camera |
| Device Type | F51.V |
| Software Version | SOC v0.0.05 - ARM v6.1.09S |
| Webware Version | v1.5.5 |
| | Submit Cancel |

7.9 Download Upgrade Program

If you need the camera upgrade program, please contact the manufacturer.



WEB interface and parameters are subject to change without notice.

Troubleshooting

8 Troubleshooting

Image

- The monitor shows no image
- Check that the camera power supply is connected, the voltage is normal, and the power indicator light is always on.
- 2) Turn off the power switch to check whether the camera is self-testing.
- Check the cable of video platform and TV whether correct connection.
- The video image displayed by the camera lens is jittery
- 1) Check whether the camera installed position be stabled.
- 2) Check whether have vibrating machinery or object near the camera.
- There is no video image in Browser IE browser does not support H5, you need to use VLC plug-in to view videos. Please access VLC website (http://www.videolan.org/vlc) download and install the 32-bit VLC media player, after it installed, access 4K PTZ camera will have normal image display. Other mainstream browsers already support H5 and do not need to install the VLC plug-in.

- Unable to access 4K PTZ camera through Browser
- Using PC to access the network to test whether the network access can work properly, first of all, the network fault caused by the PC virus can be eliminated, until the PC and 4K PTZ camera can communicate with each other Ping.
- Disconnect the network, connect 4K PTZ camera and PC separately, and reset the IP address of PC.
- 3) Check IP address, subnet mask, and gateway settings for 4K PTZ camera.
- 4) Check whether the MAC address is conflicts.
- 5) Check whether the web port is modified. The default web port is 80.

• Forget the IP address or login password Please remember (The default IP address: 192.168.100.88; default user name: admin; default password: admin).

Control

- Remote control cannot control
- 1) Check and replace the new battery for the remote controller.
- 2) Check whether the camera working mode is correct.
- 3) Check whether the address of remote control can match the camera.
- Serial port cannot control
- 1) Check whether the camera protocol, address and baud rate such is the same.
- 2) Check whether the control line is connected well.



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