4K Ultra HD Camera

User Manual

English (V1.0)

Copyright Notice

⚠ Warning

This is class A production. Electromagnetic radiation at specific frequencies may affect the image quality of TV in home environment.

Catalogue

1 Note

● **Electric Safety**

Installation and operation must accord with electric safety standard.

● **Use Caution to Transport**

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

● **Careful Installation**

The product should be placed on smooth desktop. The shell of product is an organic material and is strictly prohibited from contact with any liquid, gas or solid material that may cause corrosion to the shell.

● **Do not Unauthorized Disassemble**

This product has no parts which can be repaired by the user. The damage caused by the user's own disassembly is not covered by warranty.

 Warning

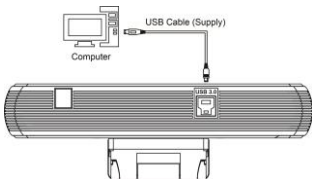Specific frequencies of electromagnetic field may affect the image of the camera!

2 Supplied Accessories

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

Name	Quantity
Camera	1
USB Cable	1
Remote Control	1
User Manual	1

3 Quick Start

Please check the connections are correct before starting.

4 About Product

4.1 Features

● **4K Ultra High Definition**

Support 4K ultra high definition, ultra high definition with ultra high resolution, the maximum can provide 4K@30fps/25fps image output, while down compatible with 1080P, 720P and other resolutions.

● **USB 3.0**

Full function USB 3.0 interface, power supply, video, audio in one, it also can support one channel of the USB video signal source.

● **Wide Angle without Distortion Lens**

Wide angle field of view up to 84/120 degrees, small lens, wide vision.

At the same time support EPTZ, with unmovable brake, more larger, more clear.

● **Built-in Microphone**

With a built-in microphone array, you can pick up a full range of sounds, and pick up the sound distance up to six meters. The unique noise suppression algorithm makes your voice perfect.

● **Low Light**

The application of 2D and 3D noise reduction algorithm greatly reduces the image noise. Even under the condition of ultra-low illumination, it still keeps the picture clean and clear, and the SNR of image is as high as 55dB.

● **Easy Installation**

Standard damping rotary shaft support, suitable for market 100% monitor, easy installation, stable and reliable.

4.2 Product Specification

Name	4K Ultra HD Camera
Camera	
Sensor	1/2.5", CMOS, Effective Pixel: 8.29M
Scanning Mode	Progressive
Lens Mount	M12
Lens 1 (optional)	Lens Focus: f=3.5mm, Wide Angle: 84° (Support Auto Focus)
Lens 2 (optional)	Lens Focus: f=2.8mm, Wide Angle: 120°
Minimal Illumination	0.5 Lux @ (F1.8, AGC ON)

Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, VAR
Digital Noise Reduction	2D, 3D digital noise reduction
Backlight Compensation	Support
USB Features	
Operate System	Windows 7/8/10, Linux, Mac OS
Color / Compression	YUY2/MJPG/H.264
USB Protocol	UVC 1.1
UVC PTZ	Support (EPTZ)
Input/Output Interface	
USB Interface	1 x USB 3.0: Type B, female
Physical Parameter	
Input Voltage	5V (USB Power Supply)
Current Consumption	0.6A
Operating Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Storage Temperature	-40°C ~ 60°C (-40°F ~ 140°F)
Power Consumption	3W
Size	194 x 34 x 42mm (without bracket)
Net Weight	0.34 Kg

4.3 Interface and Button
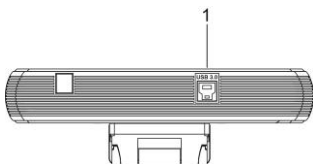
Item	Name
1	USB 3.0 Interface

4.4 Dimension
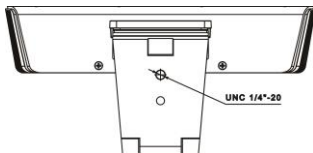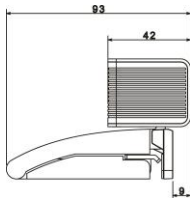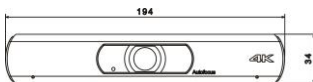
4.5 Remote Control
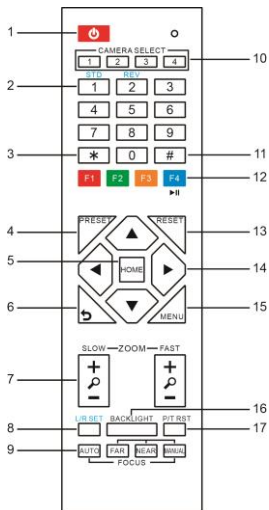
Key Description

1. Standby Key

Press this button to enter standby mode.
Press it again to enter normal mode.
Note: Power consumption in standby
mode is approximately half of the normal
mode.

2. Number Key

To set preset or call preset.

3. *Key

Used with other buttons.

3

4. Preset Key

Set preset: Store a preset position.

[SET PRESET] + Numeric button (0-9): Setting a corresponding numeric key preset position.

5. HOME Key

Confirm menu, enter submenu or lens will back to the middle position after pressed it.

6. Return Key

Return back the last level menu.

7. Zoom Key

- Slow Zoom: Zoom In [+] or Zoom Out [-] slowly
- Fast Zoom: Zoom In [+] or Zoom Out [-] fast

8. Left/Right Setting Key

Press with 1 button and 2 button setting the direction of the Pan-Tilt.

- Simultaneously press L/R Set +1 [STD]: set the Pan-Tilt turn the same direction as the L/R Set.
- Simultaneously press L/R Set +2 [REV]: set the Pan-Tilt turn the opposite direction as the L/R Set.

9. Focus Key

Used for focus adjustment.

Press [AUTO] adjust the focuses on the center of the object automatically.

Press [MANUAL] adjust the focus on the center of the object manual.

MANUAL button, and adjust it with [Far] (Focus on far object) and [NEAR] (Focus on near object).

10. Selection Key

Press the button corresponding to camera you want to operate with the remote control.

11. # Key

Used with other buttons.

12. IR Remote Control Key

[*]+[♯]+[F1]: Address 1

[*]+[♯]+[F2]: Address 2

[*]+[♯]+[F3]: Address 3

[*]+[♯]+[F4]: Address 4

13. Reset Key

Clear preset: Erase a preset position.

[CLEAR PRESET] + Numeric button (0-9)

14. Direction Control Key

After zoom, the lens moves in the direction indicated by the arrow. Press [HOME] button to face the camera back to front.

15. Menu Key

MENU: enter or exit OSD MENU.

16. BLC (Backlight Compensation) Key

BLC ON/OFF: Press this button to enable the backlight compensation. Press it again to disable the backlight compensation.

NOTE:

- Effective only in auto exposure mode.
- If a light behind the subject, the subject will become dark. In this case, press the backlight ON/OFF button. To cancel this function, press

backlight ON/OFF button.
17. PTZ Reset Key
It only applicable to the PTZ cameras.

5 Menu Settings

5.1 MENU

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

```
              MENU
     ▶   Exposure
         Color
         Image
         Noise Reduction
         Setting
         Information
         Restore Default
         Exit
```
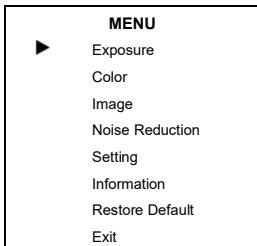
5.2 EXPOSURE

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

```
            EXPOSURE
     ▶   Mode           Full Auto
         ExpCompMode    Off
         Gain Limit     6
         Backlight      Off
         DRC Strength   0
         Anti Flicker   50Hz
         Return
```
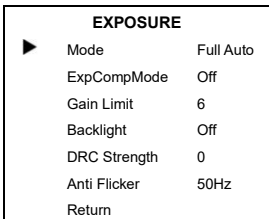
Mode: Optional items: Full Auto, Shutter Priority, Bright.

Shutter: Optional items: 1/30s, 1/60s, 1/90s, 1/100s, 1/125s, 1/200s, 1/250s, 1/350s, 1/500s, 1/725s, 1/1000s, 1/1500s, 1/2000s, 1/3000s, 1/4000s, 1/6000s, 1/10000s (Effective only in Shutter Priority mode).

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

ExpComp: Exposure compensation value, optional items: -7 ~ 7 (Effective only in ExpCompMode item to On).

Gain Limit: Maximum gain limit, optional items: 0 ~ 15 (Effective only in Full Auto, Bright mode).

Backlight: Optional items: On, Off (Effective only in Full Auto, Bright mode).

Bright: Optional items: 0 ~ 17 (Effective only in Bright mode).

DRC Strength: Optional items: 0 ~ 8.

Anti Flicker: Optional items: Off, 50Hz, 60Hz (Effective only in Full Auto, Bright mode).

5.3 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
      AWB Sens       High
      RG Tuning      0
      BG Tuning      2
      Saturation     100%
      Hue            7
      Return
```

WB-Mode: White balance mode, optional items: Auto, Indoor, Outdoor, One Push, Manual, VAR.

AWB Sens: The white balance sensitivity, optional items: Low, Middle, High.

R Gain: Red gain, optional items: 0 ~ 255 (Effective only in Manual mode).

B Gain: Blue gain, optional items: 0 ~ 255 (Effective only in Manual mode).

colortemp: Optional items: 2500K ~ 8000K (Effective only in VAR mode).

RG Tuning: Red gain fine-tuning, optional items: -10 ~ +10 (Effective only in Auto, One Push, VAR mode).

BG Tuning: Blue gain fine-tuning, optional items: -10 ~ +10 (Effective only in Auto, One Push, VAR mode).

Saturation: Optional items: 60% ~ 200%.

Hue: Optional items: 0 ~ 14.

5.4 IMAGE

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

```
            IMAGE
   ►  Luminance      7
      Contrast       8
      Sharpness      3
      Flip-H         Off
      Flip-V         Off
      Gamma          EXT
      Style          Default
      LDC            10
      Return
```

Luminance: Brightness adjustment, optional items: 0 ~ 14.

Contrast: Contrast adjustment, optional items: 0 ~ 14.

Sharpness: Sharpness adjustment, optional items: Auto, 0 ~ 14.

Flip-H: Image flipped horizontally, optional items: On, Off.

Flip-V: Image Flip Vertical, optional items: On, Off.

Gamma: Optional items: EXT, Default, 0.45, 0.5, 0.56, 0.63.

Style: Optional items: Default, Norm, Clarity, Bright, PC, Clarity (LED), Face.

LDC: Optional items: Off, -10 ~ 10.

5.5 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.

```
        NOISE REDUCTION
  ▶     2D NR              Close
        3D NR              2
        Return
```

2D NR: 2D noise reduction, optional items: Close, Auto, 1 ~ 5.

3D NR: 3D noise reduction, optional items: Close, 1 ~ 8.

5.6 SETTING

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

```
            SETTING
  ▶     Language          English
        EPTZ              On
        Zoom Limit        3x
        Uvc EXT setting
        Return
```

Language: Optional items: English, Chinese, French.

EPTZ: Optional items: On, Off.

Zoom Limit: Optional items: 1.5x, 2x, 3x, 4x, 8x (Effective only in EPTZ item to On).

Uvc EXT setting: Optional items: Enable or disable the H264, Bulk and Audio.

5.7 INFORMATION

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

```
          INFORMATION
        Version      8.4.062
        Model        O11.V
        Date         2020-03-02
  ▶     Return
```

5.8 RESTORE DEFAULT

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

```
        RESTORE DEFAULT
    ▶       Yes
            No
            Return
```
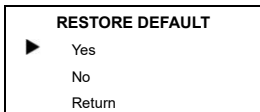
Yes: Confirm restore factory settings.

No: Cancel restore factory settings.

Note: Press [HOME] button to confirm, all parameter restore default, include IR Remote Address.

6 Maintenance and Troubleshooting

Camera Maintains
- Use soft cloth to clean camera cover.
- Please 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 damages the surface.

Unqualified Application
- No shooting extreme bright object for a long time, such as sunlight, etc.
- No operating in unstable lighting conditions, otherwise image will be flickering.
- No operating close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

Troubleshooting

Image
- Image have jitter when the camera lens at max multiple
1) Check whether the camera installed position be stabled.
2) Check whether have vibrating machinery or object near the camera.

Control

Remote control cannot control the camera

1) Check and replace the new battery for
    the remote control.
2) Check whether the camera working
    mode is correct.
3) Check whether the address of remote
    control can match the camera.

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