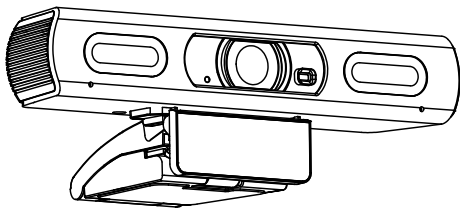


USB 4K Ultra HD Camera



User Manual

English (V1.0)

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Warning

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

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1 Note

● Electric Safety

Installation and operation must accord with electric safety standard.

● 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!

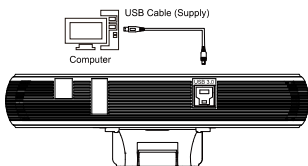
2 Supplied Accessories

When unpacking the package, check that all the following 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 UHD

Support 4K UHD, ultra-high definition combined with ultra-high resolution, support max. 4K@30fps/25fps image encoding output and downward compatible with 1080P, 720P and other resolutions.

● USB 3.0

The full-featured USB 3.0 interface integrated power supply, video and audio, and supports 1 USB video signal source and audio source.

● Lens

The wide-angle field of view up to 84° (Integrated auto-focus function) / 120°, small lens, big vision. The 84° lens supports fast focus function which can quickly provide the accurate focus and present clearer images.

● **Built-in Microphone**

The built-in microphone array can omnidirectional pickup with distance up to 6 meters. The wonderful noise suppression algorithm makes your voice perfect.

● **Landscape/Portrait Mode**

Support one-key landscape and portrait switching which is flexible and adaptable to various application scenarios. In portrait screen mode, it supports manual or AI automatic adjustment of field angle to keep you in c-position all the time.

● **e-PTZ**

No complicated mechanical PTZ devices needed for more reliable and robust noise-free PTZ feature with more accurate rotation to bring a non-inductive pan/tilt experience.

● **Auto Framing**

The built-in intelligent automatic viewfinder AI algorithm, combined with face recognition which can automatically adjust the camera to obtain the best composition as the personnel seat of the meeting room changes.

● **Speaker Tracking**

The built-in intelligent analysis algorithm supports audible position identification and intelligent linkage EPTZ function, the speaker can be automatically tracked, and it intelligently switches the speaker screen to ensure that the speaker is always clear in the screen.

● **AI Tracking**

Use the deep learning technology to extract the target's characteristics and allow smooth face tracking no matter where the face is facing. It is suitable for application scenarios such as presenter automatic tracking and can flexibly select tracking targets.

● **Soft Light Filling**

The integrated fill light device supports remotely adjust the soft light brightness with remote control, which can achieve the desired effect under any lighting conditions.

● **Low Illumination**

The new CMOS sensor with ultra-high SNR can effectively reduce the image noise under low light, use the 2D and 3D noise reduction algorithms simultaneously to greatly reduce the image noise and have clear images with SNR up to 55 dB or higher even under extreme low light.

● **Easy Operation**

The full-featured infrared remote control supports one-key quick switching of horizontal and portrait screen modes, one-key turn on/off auto framing, speaker tracking, body tracking, adjust the brightness of the light remotely, set the preset, e-PTZ, image parameters and others.

● **Easy Installation**

The supplied damping rotating support can work with almost 100% of the displays on market; it's easy to install, stable & reliable.

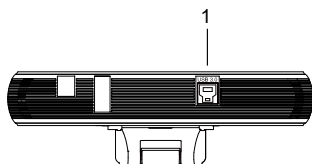
4.2 Product Specification

Name	4K UHD USB Camera
Camera	
Sensor	1/2.5", CMOS, Effective Pixel: 8.29M
Scanning Mode	Progressive
Lens Mount	M12
Lens 1	Focus: f=3.5mm, FOV: 84°
Lens 2 (default)	Focus: f=2.8mm, FOV: 120°
Auto Focus	Support (84°)
Minimal Illumination	0.5 Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, VAR
Camera Stand	Standard Damping Rotating Support
Digital Noise Reduction	2D & 3D Digital Noise Reduction
Backlight Compensation	Support
USB Features	
Operate System	<ul style="list-style-type: none"> Windows® 7 (only 1080P and below supported), Windows 8.1, Windows 10 or

	higher <ul style="list-style-type: none"> macOS™ 10.10 or higher Google™ Chromebook™ Version 76.0.3809.136 or higher Linux Android
Hardware	<ul style="list-style-type: none"> 2.4 GHz Intel® Core 2 Duo CPU or higher 2 GB RAM or more USB 2.0 (USB 3.0 required for 4K)
Color System/ Compression	H.264/MJPEG/YUY2/ NV12
Video Format	4K@30fps/25fps, 1080P@30fps/25fps, 720P@30fps/25fps, 960x540P@30fps/ 25fps, 640x360P@30fps/ 25fps, etc.
USB Protocol	UVC
UVC PTZ	Support (EPTZ)
Input/Output Interface	
USB Interface	1 x USB 3.0: Type B, Female
General Specification	
Input Voltage	5V (USB power supply)

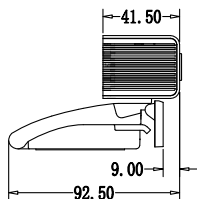
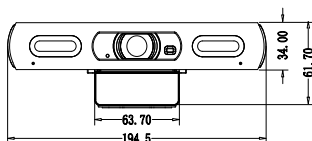
Input Current	0.8A (max.)
Operating Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Storage Temperature	-40°C ~ 60°C (-40°F ~ 140°F)
Power Consumption	4W (max.)
Dimension (mm)	194 x 34 x 42 (without bracket)
Net Weight	0.5Kg
MTBF	30000h

4.3 Interface and Key

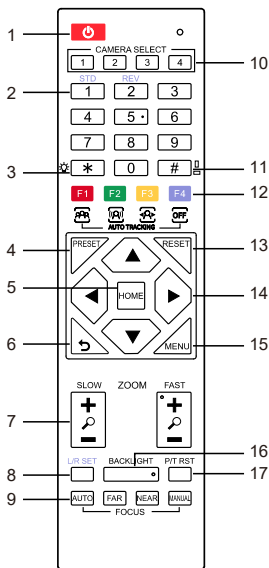


Item	Name
1	USB 3.0 Interface

4.4 Dimension



5 Remote Control



Key Description

1. ⏻ (Standby) Key

Press to enter standby mode. Press again to resume to normal mode.

Note: The power consumption in standby mode is approximately half of that in normal mode.

2. Number Key

To set preset or call preset.

3. * Key

Use with other keys.

4. PRESET Key

Set preset: Store a preset position.

[PRESET] + Numeric key (0-9): Set the preset position.

5. HOME Key

Confirm selection or press to turn the lens back to the middle position.

6. ↶ (Return) Key

Press to return to the previous menu.

7. ZOOM Key

- SLOW: Zoom In [+] or Zoom Out [-] slowly.
- FAST: Zoom In [+] or Zoom Out [-] fast.

8. L/R SET Key

Press with 1 or 2 key to set the direction of the Pan-Tilt.

- Press L/R Set + 1 [STD]: Set the Pan-Tilt turn the same direction as the PTZ control key.
- Press L/R Set + 2 [REV]: Set the Pan-Tilt turn the opposite direction as the PTZ control key.

9. FOCUS Key

Focus adjustment:

Press [AUTO] to adjust the focus automatically.

Press [MANUAL] to adjust the focus manually.

When in manual focus mode, press [FAR] to focus on far object or [NEAR] to focus on near object.

10. CAMERA SELECT Key

Camera selection:

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

13. RESET Key

Clear the preset position:

[RESET] + Numeric key (0-9).

14. PTZ Control Key

After zooming, press arrow button to perform panning and tilting. Press [HOME] button to face the camera back to front.

15. MENU Key

Enter or exit the OSD menu.

16. BACKLIGHT Key

Backlight ON/OFF: Press repeatedly to enable or disable the backlight compensation.

NOTE:

- Ineffective when in manual exposure mode.
- If there is a light behind, the subject will become dark, press the backlight key to enable the backlight compensation.

Press again to disable this function.

17. P/T RST (PTZ Reset) Key

Function only applicable to the PTZ camera.

18. Shortcut Set

F1: Press to open the auto box selection.

F2: Press to open the speaker tracking.

F3: Press to open the person tracking.

F4: Press to close the tracking mode and tracking effect.

[*]: Long press to switch the brightness of the compensation light.

[#]: Long press to switch between landscape and portrait mode.

◀/▶: Press to select the target when in non-menu state and the person tracking mode is enabled.

6 GUI Settings

6.1 MENU

Press [MENU] key to display the main menu on the screen. Use the arrow key to move the cursor to desired item and press the [HOME] key to confirm to enter the corresponding sub-menu.

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

6.2 EXPOSURE

When in main menu page, move the cursor to [Exposure] and press [HOME] key to confirm to enter the exposure page as shown in below figure.

EXPOSURE		
▶	Mode	Full Auto
	ExpCompMode	On
	ExpComp	1
	GainLimit	6
	Backlight	Off
	DRC Strength	2
	Anti Flicker	50Hz
	Return	

Mode: Full Auto, Manual, Shutter Priority, Bright.

Shutter: 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 in Manual & Shutter Priority mode).

Gain: 0 ~ 64 (Effective only in Manual mode)

ExpCompMode (Exposure Compensation Mode): On, Off (Effective only in Full Auto mode).

ExpComp (Exposure Compensation Value): -7 ~ 7 (Effective only in ExpCompMode On).

GainLimit (Maximum Gain Limit): 0 ~ 15 (Effective in Full Auto & Bright mode).

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

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

DRC Strength (Dynamic Range Control): 0 ~ 8.

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

6.3 COLOR

When in main menu page, move the cursor to [Color] and press [HOME] key to confirm to enter the color page as shown in below figure.

COLOR		
▶	WB Mode	Auto
	RG Tuning	1
	BG Tuning	1
	Saturation	100%
	Hue	7
	Return	

WB-Mode (White Balance Mode): Auto, Indoor, Outdoor, One Push, Manual, VAR.

R Gain (Red Gain): 0 ~ 255 (Effective only in Manual mode).

B Gain (Blue Gain): 0 ~ 255 (Effective only in Manual mode).

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

RG Tuning (Red Gain Tuning): -10 ~ 10 (Effective in Auto, One Push & VAR mode).

BG Tuning (Blue Gain Tuning): -10 ~ 10 (Effective in Auto, One Push & VAR mode).

Saturation: 60% ~ 200%.

Hue: 0 ~ 14.

6.4 IMAGE

When in main menu page, move the cursor to [Image] and press [HOME] key to confirm to enter the image page as shown in below figure.

IMAGE		
►	Luminance	7
	Contrast	7
	Sharpness	2
	Flip-H	Off
	Flip-V	Off
	Gamma	0.5
	Style	Default
	LDC	10
	Return	

Luminance: 0 ~ 14.

Contrast: 0 ~ 14.

Sharpness: 0 ~ 14.

Flip-H (Flip Horizontally): On, Off.

Flip-V (Flip Vertically): On, Off.

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

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

LDC (Lens Distortion Correction): Off, 1 ~ 10.

6.5 NOISE REDUCTION

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

NOISE REDUCTION		
►	2D NR	Auto
	3D NR	4
	Return	

2D NR (2D Noise Reduction): Close, Auto, 1 ~ 5.

3D NR (3D Noise Reduction): Close, Auto, 1 ~ 8.

6.6 SETTING

When in main menu page, move the cursor to [Setting] and press [HOME] key to enter the setting page as shown in below figure.

SETTING		
►	Language	English
	EPTZ	On
	Zoom Limit	3x
	Uvc EXT Setting	
	Osd EXT Setting	
	Audio	
	Return	

Language: English, Chinese, French & Deutsch.

EPTZ: On, Off.

Zoom Limit: 1.5x, 2x, 3x, 4x, 8x (Effective only in EPTZ on mode).

Uvc EXT Setting: Enable or disable the H264, NV 12, Bulk and Portrait.

Osd EXT Setting: Do Goto Preset, Tracking Mode, Tracking Effect (effective in participants and speaker tracking mode), Track Sense (effective in person tracking mode), Lamp Intensity and OSD Mirror settings.

Audio: Enable or Disable the Audio (when enabled, you can set the Audio PC Mono to on or off).

6.8 INFORMATION

When in main menu page, move the cursor to [Information] and press [HOME] key to confirm to enter the information page to check the product information as shown in below figure.

INFORMATION	
Version	9.0.02
Model	043.V
Date	2021-09-28
▶ Return	



Note

The above information is for reference only, please refer to the real product for the actual specification.

6.9 RESTORE DEFAULT

When in main menu page, move the cursor to [Restore Default] and press [HOME] key to confirm to enter the restore default page as shown in below figure.

RESTORE DEFAULT	
▶ Yes	
No	
Return	

Yes: Select to restore the factory settings.



Notice

Press [HOME] key to confirm, all parameters will be restored to factory setting, including IR Remote Address.
No: Cancel to restore the factory settings.



Note

GUI menu and parameters are subject to change without notice.

7 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 damage the surface.

Unqualified Application

- Do not shooting extreme bright object for a long time, such as sunlight, etc.
- Do not operating in unstable lighting conditions, otherwise image will be flickering.
- Do not operating close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

Troubleshooting

Image

- Image jitters when the camera lens at maximum multiple
- 1) Check that the camera installation is stable.
 - 2) Check that any vibrating machinery or object near the camera.

Control

- Remote control does not work
- 1) Check and replace with new batteries.
 - 2) Check that the camera is in normal working mode.
 - 3) Check the address key of remote control can match the camera.

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