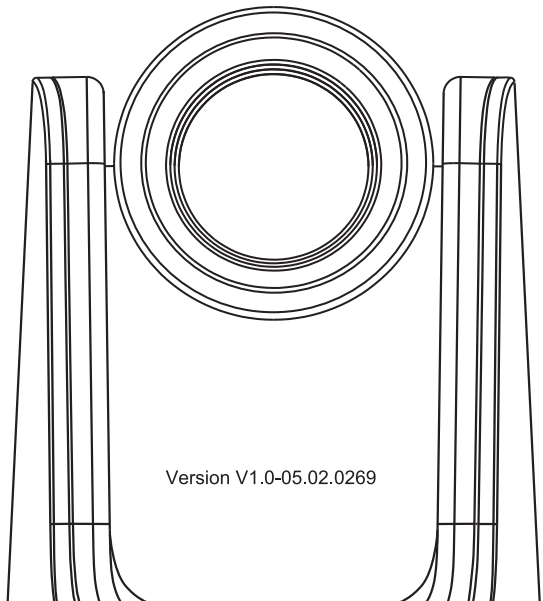


AI Auto Tracking PTZ Camera

User Manual



Version V1.0-05.02.0269

Warranty Card

Thank you so much for choosing our products.

User's Info

Name:_____ Tel: _____

Email:_____ Post Code:_____

Address:_____

Product's Info

Product Name:_____

Factory Serial Number:_____

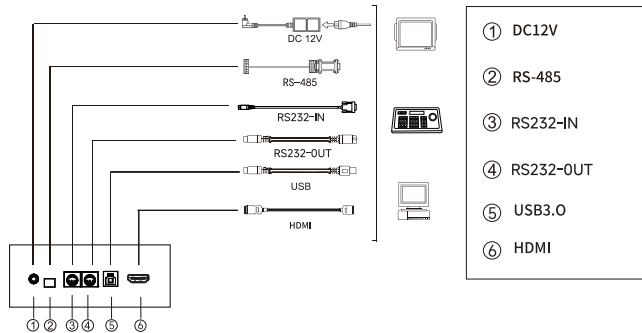
Fault Description

Attention

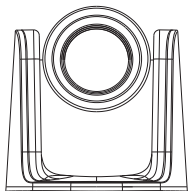
1. This card is considered as the protection to fix warranty, so please reserve it carefully. Please fill in truthfully.
2. Please indicate the model number, factory serial number and the detailed description of the fault information.

1. Product Description

1.1 Interface



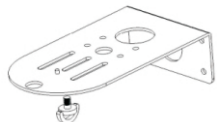
2. Packing List



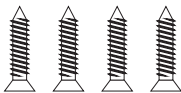
PTZ camera



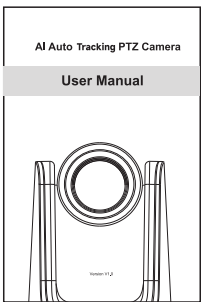
DC 12V power supply



Wall mount



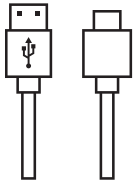
Mounting screws



User manual



Remote control

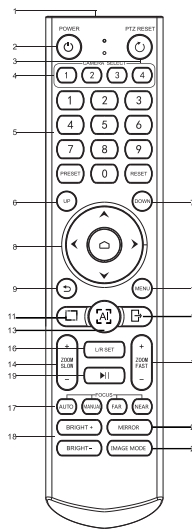


USB cable

3. Performance Characteristics

Model No.	4K 3x Zoom	1080P 3x Zoom	1080P 12x Zoom	1080P 20x Zoom
Image Sensor	1/2.8"SONY CMOS		1/2.8"SONY CMOS	
Effective Pixels	8,29mega pixel		2,07megapixels	
Optical Zoom	3x optical zoom	3x optical zoom	12x optical zoom	20x optical zoom
Digital Zoom	4x		8x	
Lens	f=3.5mm~10.5mm	f=3.5mm~10.5mm	f=3.4mm~40.9mm	f=4.72mm~94.4mm
Aperture	F2.5-F3.4	F2.50-F3.4	F1.8-F3.0	F1.8-3.9
Horizontal Angle	83.0°~32.0°	83.0°~32.0°	67.5°~7.6°	54.8°~3.59°
Vertical Angle	51.0°~20.0°	51.0°~20.0°	40.18°~4.34°	31.5°~2.03°
Diagonal Angle	93.0°~39.4°	93.0°~39.4°	75.4°~8.76°	62.0°~4.1°
Video Format	HDMI: 4Kp@30/25fps,2Kp@60,1080P@60/59.94/50/30/29.97/25fps,720P@60/59.94/50/30 USB3.0: H.264: max to 2160P@30fps H.265: max to 2160P@30fps MJPG: max to 2160P@30fps NV12: max to 896P@30fps YUY2: max to 896P@30fps	HDMI: 1920*1080P@60/59,94/50/30/29,97/25fps, 1280*720P@60/59,94/50/30 USB3.0: H.264: max to 1080P@60fps, H.265: max to 1080P@60fps MJPG: max to 1080P@60fps, NV12: max to 896P@60fps YUY2: max to 896P@60fps		
Video Encoding Format	H.264, H.265, MJPG, YUY2			
Backlight Compensation	Support			
SNR	>50dB			
Focus	Auto / Manual			
Digital Noise Reduction	2D & 3D Noise Reduction			
Exposure	Auto / Manual			
Input/Output Interface				
Video Interfaces	HDMI, USB3.0			
Video Compression Format	H.264, H.265, MJPG, YUY2			
LAN	/			
Network Protocol	/			
Control Protocol	VSCA/Pelco-D/Pelco-P; Baud Rate: 2400/4800/9600/38400bps			
Control Interface	RS232, RS485,USB3.0 (UVC1,1)			
PTZ Parameter				
Horizontal Rotation	350° (±175°) 0.1°/s ~ 100°/s			
Vertical Rotation	180° (±90°) 0.1°/s ~ 80°/s			
Preset Number	User can set up to 255 presets (10 presets by IR remote)			
General Parameter				
Operation Systems	Windows 10, Windows 11; Android, Mac OS™ 10,10 or higher, Linux (Required to support UVC,)			
Input Voltage	DC 12V			
Input Current	2.0A (Max.)			
Power Consumption	24W (Max.)			
Store Temperature	-20°C~ +60°C			
Store Humidity	20%~90%RH			
Working Temperature	0 °C~ +40°C			
Working Humidity	20%~80% RH			

4. Remote Control Button Description



No	Name	Function
1	Launch Window	Remote Control Launch Window
2	Power	Enter into Standby mode by pressing
3	PTZ Reset	Reset the PTZ
4	Camera Select Key	Select the camera need to control
5	Position	Preset position setup keys,including 【PRESET】 and 【RESET】 Set or reset the preset position
6	UP	The camera tilts upward (in normal installation orientation)
7	DOWN	The camera tilts downward (in inverted installation orientation)
8	PTZ Control Key	PTZ move according to the arrow indicates. Press 【↩】 PTZ will back to the middle position
9	Return/Exit	Return to previous menu or exit menu
10	MENU	Press to enter or exit the OSD menu
11	Enter Single Object Tracking	When entering single object tracking mode, press the PTZ Control Keys to select the object. Press 【↩】 to confirm.
12	Exit Single Object Tracking	Framing mode
13	Auto Framing	Turn on/off Auto Framing mode
14	ZOOM Slow Key	Zoom in(+)or out (-) slowly
15	ZOOM Fast Key	Zoom in(+)or out (-) quickly
16	L/R Set	Press and hold for 10 seconds to activate L/R Set
17	Focus Key	Auto/Manual/Far/Near Focus Default: Auto Focus
18	Bright Adjustment	Adjust the brightness of the image
19	Freeze/Unfreeze	Freeze/Unfreeze the image
20	Mirror	Enable horizontal (left/right) image flip
21	Image Mode	Switch among three image modes Normal,PC and Bright

★Attentions for Remote Control

1. Please check whether the indicator corresponding to the camera selection area is on or not.
2. If the remote control doesn't work, please replace batteries.
3. Verify that the number selected in the camera selection area matches the remote control address set in the camera's menu.

5. Camera Menu Setup

When operating remote control, press 【MENU】 to enter main menu of the video camera.

5.1 Level 1 Menu - Main Menu

Main Menu	
→ Exposure	
Color	
Image	
P/T/Z	
Communication	
Tracking	Off
Information	
Restore Default	
Language	English
[Home]	Enter
[Menu]	Back

Language: Support Chinese/English

Press the 【↩】 button on the Remote to enter level 2 sub-menu

Press the 【Menu】 button on the Remote to exit menu

5.2 Level 2 Menu - Exposure

Exposure	
→ Mode	Auto
Backlight	Off
ExpComp	00
Flicker	50Hz
[Return]	

Mode: Auto/Manual/SAE/AAE/Bright

Backlight: On/Off(only effective under Auto mode)

ExpComp: Optional item is -7~+7 (only effective under Auto mode)

Flicker: Off/50Hz/60Hz

5.3 Level 2 Menu - Color

Color	
→ Brightness	50
Contrast	50
Hue	50
Saturation	50
Sharpness	50
WB Mode	Auto
Rtuning	00
Btuning	00
[Return]	

Brightness: Optional item is 0-99

Contrast: Optional item is 0-99

Hue: Optional item is 0-99

Saturation: Optional item is 0-99

Sharpness: Optional item is 0-99

WB mode: Auto/Manual/VAR/Indoor/Outdoor/Onepush

When the WB mode is Auto, the Rtuning and Btuning value can be tuning.

The range is 0 to 99.

When the WB mode is Manual, the sub-menu will be as shown below:

Color	
→ Brightness	50
Contrast	50
Hue	50
Saturation	50
Sharpness	50
WB Mode	Manual
Rgain	40
Bgain	30
[Return]	

When the WB mode is VAR, the sub menu will be as follows:

Color	
Brightness	50
Contrast	50
Hue	50
Saturation	50
Sharpness	50
→ WB Mode	VAR
Color Temp	5600
[Return]	

The range for the color temp can be adjusted between 2500K to 9000K;

5.4 Level 2 Menu-Image

Image	

→ Flip	Off
Mirror	Off
Video Format	1080P60
Menu Mirror	Off
USB Mode	BULK
UVC Format	YUY2
Style	Normal
HDMI Mode	Force
[Return]	

Flip: Enable/disable picture flip vertically (up/down)

Mirror: Enable/disable picture flip horizontally (left/right)

Video Format: 1080P60/1080P59.94/1080P50/1080P30/1080P29.97/1080P25/720P60/720P59.94/720P50/720P30

Menu Mirror:Off/On

USB Mode: ISOC/BULK

USB mode: Switch between Isochronous transfers mode and Bulk transfers mode

UVC Format:YUY2 , MJPG

Style Mode: Normal, PC, Bright

HDMI Mode:Force , Auto

5.5 Level 2 Menu- P/T/Z

P/T/Z	

→ Acc Curve	Middle
L/R SET	Off
ZOOM Speed	7
AF Zone	Center
AF Sense	Normal
AF Scene	Normal
D-Zoom Limit	Off
[Return]	

Acc Curve: Fast/Middle/Slow

L/R SET: On/Off

Zoom Speed: Optional items are 1-8

AF Zone: Bottom/Left/Right/Wide /Front/Top/Center

AF Sense: Normal/High/Low

AF Scene: Normal/Macro

D-Zoom Limit: Off/x2/x4/x8(Only for 12x/20x Optical Zoom)

5.6 Level 2 Menu - Communication

Communication	

Protocol	Auto
→ Baudrate	9600
RC Address	All
Visca ACK	On
[Return]	

Protocol: Option are Auto/Visca/PELCO-D/PELCO-P

Baudrate: Option are 2400/4800/9600/38400

RC Address: Set the IR remote control address to control the corresponding camera.

Option are ALL/1/2/3/4.

Visca ACK: On/Off

Address: Set the camera's address. Option are 1-7 for Visca, 0-255 for PELCO-D, 0-31 for PELCO-P.

5.7 Level 2 Menu - Tracking

Main Menu	

→ Exposure	
Color	
Image	
P/T/Z	
Communication	
Tracking	Auto Framing
Information	
Restore Default	
Language	English
[Home]	
Enter	
[Menu]	
Back	

Tracking: Off/Presenter/Auto Framing

1. Select Framing Tracking Mode under "Tracking Mode" in the "Menu", then exit the menu to activate Auto Framing Tracking Mode.

2. Presenter Tracking Mode: Select "Presenter Tracking Mode" under "Tracking Mode" in the "Menu", then exit the menu to activate Presenter Tracking Mode. Use the "Left/Right buttons" to select the target person, then press the "【>】" to confirm and start tracking.

3. Disable Tracking: Select "Turn Off" in the "Menu" to deactivate the current tracking mode.

5.8 Level 2 Menu -Information

Information	

Model	FHD Camera
PTZ Version	1.0.2.5
SOC Version	1.1.141
AF Version	3.22
→ IQ Version	1.04.001
HW Version	1.2
[Return]	

Notice: 1.FHD for 1080P Camera and UHD for 4K Camera;

2.The version number shown is for reference only. Please refer to the actual parameters for accuracy.

5.9 Level 2 Menu - Restore Default

Restore Default	

Yes	
No	
→ [Return]	

6. Common Operation Instructions

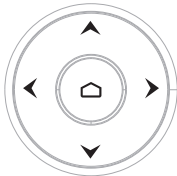
6.1 Camera Select

Set the IR remote control address to control the corresponding camera, option item 1/2/3/4

CAMERA SELECT			
1	2	3	4

6.2 Camera Direction Control

- ▲ Turning up
- ▼ Turning down
- ◀ Turning left
- ▶ Turning right
- ⬮ Turning to default



Note: Press the direction key when you need to adjust the angle.

To move the camera slowly, just click the direction key;

To move the camera quickly over a larger distance, press and hold the direction key.

6.3 Camera Focusing Mode Control

【AUTO FOCUS】Switch the focus mode to AUTO

【MANUAL FOCUS】Switch the focus mode to MANUAL

【FAR】Far focus manually

【NEAR】Near focus manually



6.4 Camera Zoom Control

Press any one of the four 【ZOOM】 buttons to activate zoom functioning.

These buttons are not applicable for fixed focus cameras.



6.5 Preset Setup, Call, Cancel

(1)Set Preset: Press【PRESET】, then press a number key (0–9) to save the current position as a preset corresponding to that number.

Note: You can set up to 10 presets using the remote control.

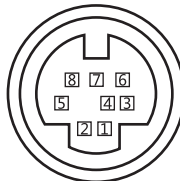
(2)Press a number key (0–9) directly to call the corresponding preset.

Note: This will not work if no preset has been set for that number.

(3)Press【RESET】, then press a number key (0–9) to delete the preset assigned to that number.



6.6 RS-232 Interface Distribution

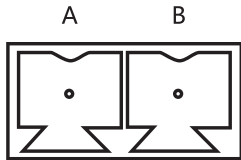


VISCA RS-232 IN /OUT

- 1.N.C.
- 2.N.C.
- 3.TXD
- 4.GND
- 5.RXD
- 6.N.C.
- 7.N.C.
- 8.N.C.

6.7 RS-485 Interface Distribution

PIN NUM	FUNCTION
A	DTR IN+ (connect to RS-485)
B	DSR IN-(connect to RS-485)



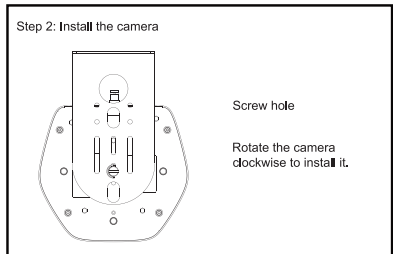
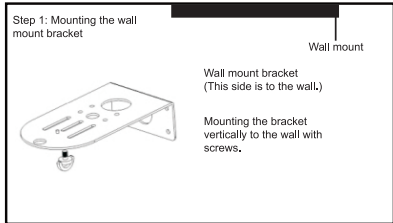
7. Installation Instructions

7.1 Surface Installation

Put the camera on the desk flatly, and make sure the camera is in a horizontal position. If you want to put the camera on an oblique surface, please make sure the angle of inclination is less than 15 degrees to ensure the camera pan and tilt work in normal operation.



7.2 Wall Mount Installtion



8. Trouble Shooting

Before requesting service from our engineers, please try the following troubleshooting methods. If the issue still cannot be resolved, please contact us for further assistance.

Q: The video of the camera cannot be displayed on the screen.

A: Please check the connections between the power cable, video cable, camera, and monitor, and make sure both ends of each connector are securely fastened.

Q: Why is there no image when connecting HDMI cable to TV?

A: Because the TV resolution does not match the camera resolution.

Please connect the camera to the computer via USB to retrieve the image first, and then use the remote control to adjust the camera's resolution and frame rate to match your devices.

Q: It's unable to Pan, Tilt and Zoom camera.

A: Because the camera is in tracking mode or the menu was displayed on monitor. Please re-operate after exiting the tracking mode and the menu.

Q: Why the camera rotates for about 10 seconds after power on?

A: This is the normal self-test of the camera.

Q: Poor Image quality while using in church or other low-light conditions.

A: Change the picture setting in the menu from automatic to manual, and set the corresponding parameters to adjust the image quality.

Q: Remote control is not working or insensitive.

A: ①Not work, please replace batteries.

②Not sensitive: Choose the correct "IR select" number to correspond to the camera. Control the camera within 10m(32.8ft). Remove the obstacles. Aim at the sensor which is in front of the camera when controlling it.

Q: USB interface is not identifiable.

A: Please check if the USB cable and extension cable are well connected or not. If yes, change to another USB interface and try to connect again.

Q: It won't be controlled via RS-232/RS-485 when camera connect to PC.

A: Make sure it is a correct connection between the camera and PC. (Reference to RS-485 and RS-232 Pins distribution).

Q: Why no ceiling mount bracket?

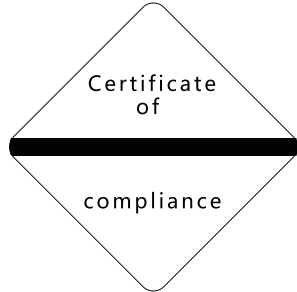
A: Camera comes with wall mount bracket. Ceiling mount or tripod brackets need to buy separately.

Q: Does this camera have built-in mic?

A: No, this camera comes with no built-in mic.

Q: Can we control the camera only by the remote control?

A: You can control the camera by remote control, joystick keyboard controller, and software.



材质：100g 书纸，黑白双面印刷

尺寸：说明书大小 396*297 (wh) 左右 3 折 4 页再对折
折叠后 99*148.5mm (wh)