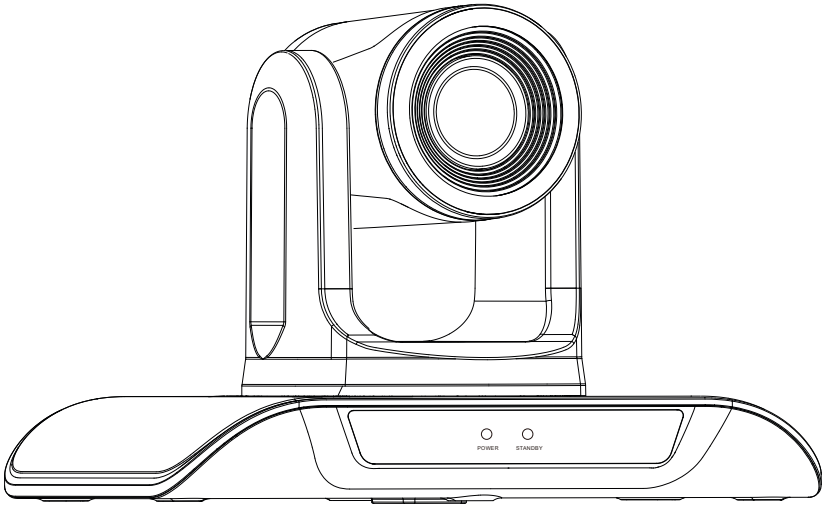
## PTZ Video Camera

# User Manual




Version V1.0U

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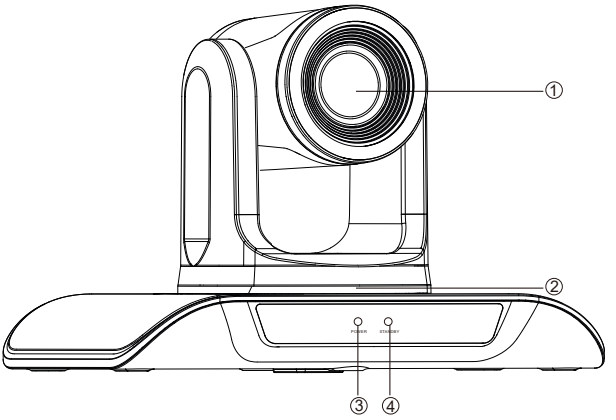
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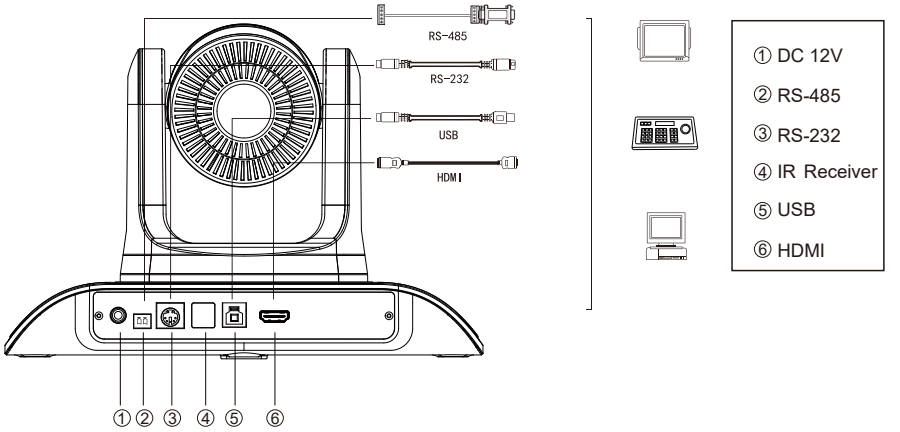
# 1. Product Description

## 1.1 Front



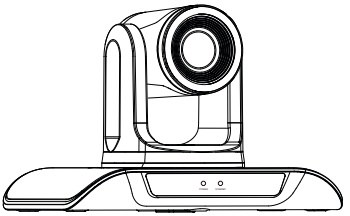

①Lens
②Pan & Tilt
③Power
④Standby

## 1.2 Back




① DC 12V
② RS-485
③ RS-232
④ IR Receiver
⑤ USB
⑥ HDMI

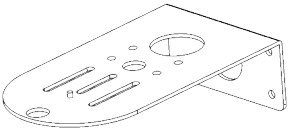
## 2. Packing List



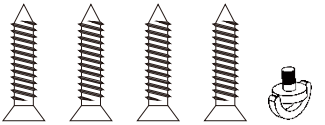
HD conference camera



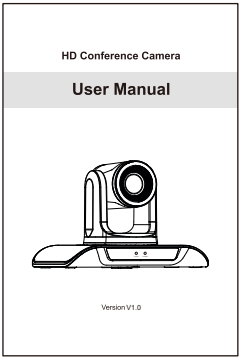
DC 12V power supply



Wall mount



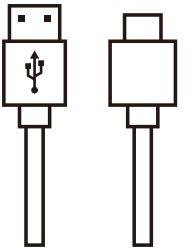
Mounting screws




User manual



Remote control

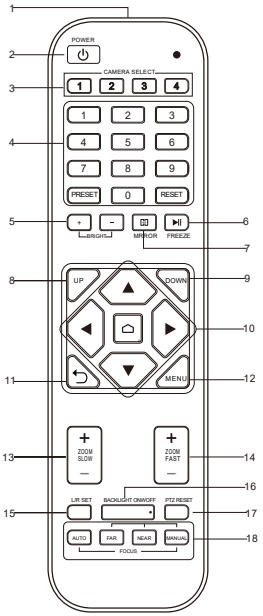


USB cable

# 3. Performance Characteristics

| Model No. | 1080P 3X Zoom | 1080P 10X Zoom | 1080P 12X Zoom | 1080P 20X Zoom | 4K 12X Zoom |
|---|---|---|---|---|---|
| Sensor | 1/2.8"SONY CMOS | | | | 1/2.8"SONY CMOS |
| Effective Pixels | 2.38 mega pixel | | | | 8.29mega pixel |
| Video Signals | 1080p@60/50/30/25fps, 720p@60/50/30/25fps | | | | 4K@30/25fps, 1080p@60/50/30/25fps, 720p@60/50/30/25fps |
| Zoom | 3x optical zoom | 10x optical zoom | 12x optical zoom | 20x optical zoom | 12x optical zoom |
| Lens | f=2.38-7mm | f=5.76-46.09mm | f=3.42-40.02mm | f=5.9-94.4mm | f=3.42-40.02mm |
| Aperture | F1.96-3.64 | F1.8-2.6 | F1.88-3.77 | F1.8-3.9 | F1.88-3.77 |
| Horizontal Angle | 103.69°(W)-42.12°(T) | 54.7°(W)-6.8°(T) | 80.56(W)-7.89°(T) | 52.1°(W)-3.4°(T) | 80.56(W)-7.89°(T) |
| Vertical Angle | 67.14°(W)-24.87°(T) | 30.8°(W)-3.8°(T) | 49.61°(W)-4.46°(T) | 29.3°(W)-1.9°(T) | 49.61°(W)-4.46°(T) |
| Diagonal Angle | 113.91°(W)-47.55°(T) | 62.8°(W)-7.8°(T) | 89.51°(W)-9.04°(T) | 59.8°(W)-3.9°(T) | 89.51°(W)-9.04°(T) |
| Video Output | USB3.0, HDMI | | | | USB3.0, HDMI |
| LAN | / | | | | / |
| Network Protocol | / | | | | / |
| Video Encoding Format | H.264, H.265, MJPG, YUY2 | | | | H.264, H.265, MJPG, YUY2 |
| Video Resolution | 1080P (1920 *1080) etc | | | | 4K (3840*2160) etc |
| Signal Standard | NTSC/PAL | | | | |
| Preset Position | User can set up to 255 presets (10 presets by IR remote) | | | | |
| Control Interface | RS-232 (input only), RS-485, USB | | | | |
| Shutter | 1/30s-1/10000s, auto | | | | |
| Baud Rate | 2400/4800/9600/38400bps | | | | |
| Control Protocol | VISCA, PELCO-D, PELCO-P(RS-232, RS-485) | | | | |
| USB Protocol | UVC1.1 | | | | |
| Minimal Illumination | 0.1Lux | | | | |
| SNR | ≥50dB | | | | |
| Horizontal Rotation | 350° (±175°) 0.1°/s～100°/s | | | | |
| Vertical Rotation | 180° (±90°)0.1°/s～80°s | | | | |
| Power Supply | DC 12V/2A | | | | |
| Power Consumption | 12W | | | | |
| Work Temperature | 0°~+50° | | | | |
| Work Humidity | 0~95% RH | | | | |
| Product Size | 247.1*152*169.6mm/285*217*197mm(before / after packing) | | | | |
| Product Weight | 1.37kg/2.45kg (net / gross weight) | | | | |

## 4. Remote Control Button Description




| No | Name | Function |
|---|---|---|
| 1 | Lunch Window | Remote control launch window |
| 2 | Power Key | Enter into standby mode by pressing it |
| 3 | Camera Select Key | Select the camera need to control |
| 4 | Preset Position | Preset position setup keys,<br>include【PRESET】and【RESET】<br>Set the preset position Reset the preset position |
| 5 | Brightness | Increase or decrease video brightness |
| 6 | Screen Freeze | Turn on or turn off Screen Freeze |
| 7 | Mirror | Turn on the video (left and right) mirror |
| 8 | Up | Camera rotates horizontally in regular installed direction |
| 9 | Down | Camera rotates horizontally in reversed installed direction |
| 10 | PTZ Control Key | PTZ move according to the arrow indicates.<br>Press【⌂】PTZ will return to the middle position |
| 11 | Return Key | Return to the previous operation |
| 12 | Menu | Enter or exit OSD Menu after pressed it |
| 13 | ZOOM Slow Key | Zoom in + or out - slowly |
| 14 | ZOOM Fast key | Zoom in + or out - quickly |
| 15 | L/R Set Key | Long press 10 Seconds to switch the left and right directions |
| 16 | Backlight KEY | Turn on/off backlight compensation |
| 17 | PTZ Reset Key | The camera returns to its original position |
| 18 | Auto Focus | Auto/far/near/manual<br>Default: Auto focus |

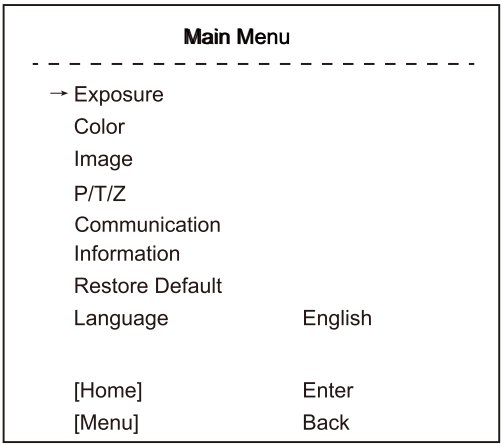
★Attentions for Remote Control

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. Make sure the Number keys on the camera selection area are consistent with the remote control address in the menu.

## 5. Camera Menu Setup

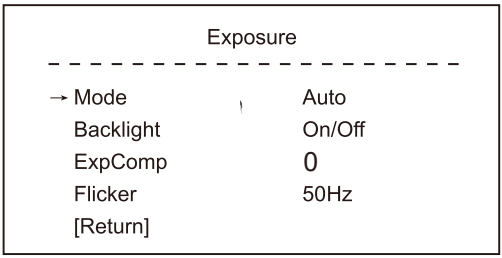
When operating remote control, press【MENU】to enter main menu of the video camera.

### 5.1 Level 1 Menu - Main Menu




Language: Support Chinese/English
Click the Home button on the Remote to enter level 2 sub-menu
Click the Menu button on the Remote to exit menu

### 5.2 Level 2 Menu - Exposure




Mode: Auto/Manual
Backlight: On/Off the backlight
ExpComp: Exposure compensation, optional item is 0 to 15
Flicker: Support 50Hz/60Hz
When changing the exposure mode to Manual, the sub-menu is as follows,

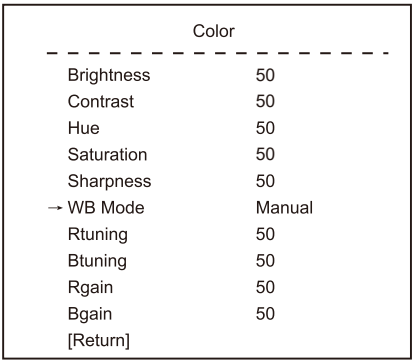
| Exposure | |
|---|---|
| → Mode | Manual |
| Iris | F1.6 |
| Shutter | 1/60 |
| Gain | 0 |
| Flicker | 50Hz |
| [Return] | |

Iris: F No.Setting, the value should be F1.6/F2.0/F2.4/F2.8/F3.4/F4.0/F4.8/F5.6/F6.8/F8.0/F9.6(Suitable for 10x and 12x Zoom PTZ Camera)
Shutter: Shutter value setting, the value is between 1/100000 and 1/25
Gain: Exposure Gain Setting, optional item is 0 to 99
Flicker: Off/50HZ/60HZ

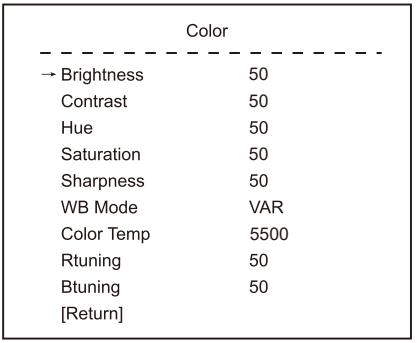
## 5.3 Level 2 Menu - Color

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

Brightness: Set image brightness dynamically. Default 50, optional item is 0-99
Contrast: Set image contrast dynamically. Default 50, optional item is 0-99
Hue: Set the relative brightness of the image. Default 50, optional item is 0-99
Saturation: Set image color effect. Default 50, optional item is 0-99
Sharpness: Set sharpness level. Default 50, optional item is 0-99
WB mode: Auto/Manual/VAR
When the WB mode is Auto, the Rtuning and Btuning value can be tuned and the range is 0 to 99
When the WB mode is Manual, the sub-menu will be the following:

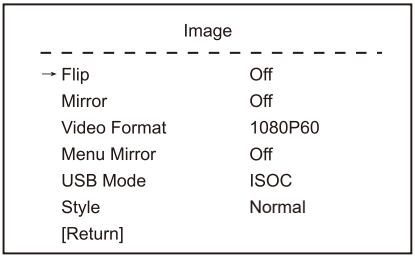



In manual WB mode, the above values can be adjusted. The Rgain and Bgain value can be tuned, the range is 0 to 99. When the WB mode is VAR, the sub-menu will be the following:




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

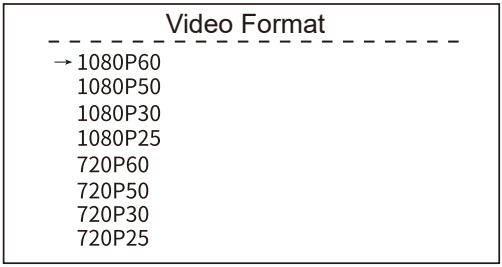
## 5.4 Level 2 Menu - Image



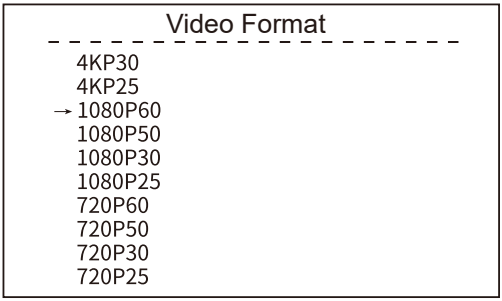

Flip: Off/On, Enable/disable the picture up/down
Mirror: Off/On, Enable/disable the picture left/right flip
Video Format: 1080P60/1080P50/1080P30/1080P25
720P60/720P50/720P30/720P25
Menu Mirror: Off/On, Enable/disable the menu picture left/right flip
Mode: ISOC/BULK
USB mode: Adjust between Isochronous transfers mode
and Bulktransfers mode. Style Mode: Normal, PC, Bright

## 5.5 Video Format

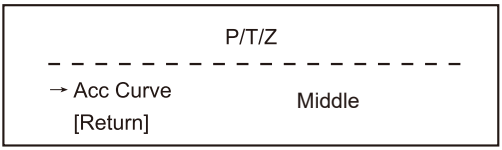
1080P supports video formats as follows:



4K supports video formats as follows:

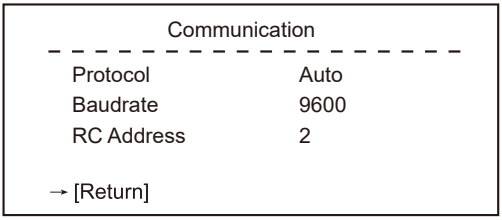



## 5.6 Level 2 Menu P/T/Z



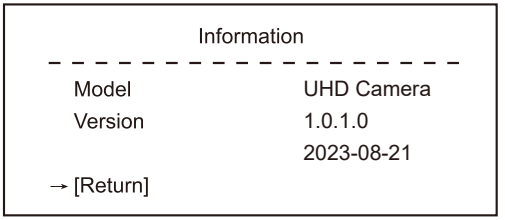

Acc Curve: Adjust the rotation speed of the Pan and Tilt,Fast/Middle/Slow,

## 5.7 Level 2 Menu-Communication

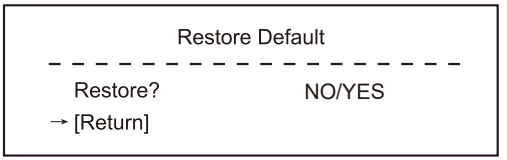



Protocol: Default Visca, option item Visca/PELCO-D/PELCO-P/Auto
Address: Set the camera's address, option item 1-7 in Visca,
1-255 in PELCO-D, 1-32 in PELCO-P
Baudrate: Default 9600, option item 2400/4800/9600/38400
RC Address: Set the IR remote control's address to control the corresponding camera, option item ALL/1/2/3/4

## 5.8 Level 2 Menu-Information




Model: UHD Camera (FHD for 1080P Camera and UHD for 4K Camera)
Version: 1.0.1.0
Date:2023-08-21
Notice:The version number here is just an example,
the actual parameters shall prevail.




Restore: No/Yes, before you Exit the Menu,
please choose restore all settings on the menu or not.

## 6. Common Operation Instructions

6.1 Camera Select

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




6.2 Camera Direction Control

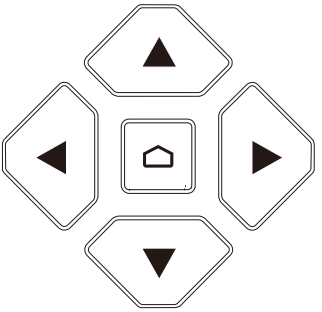
▲ Turning up

▼ Turning down

◀ Turning left

▶ Turning right

⌂ Turning to default



Note: Press the direction key when you need to adjust the angle. If you want to move the camera slowly, just click the direction key; If you want to move the camera fast at a large scale, just long-press the button.

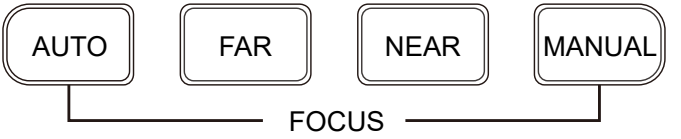
6.3 Camera Focus Mode Control

【AUTO】Switch the focus mode to AUTO

【MANUAL】Switch the focus mode to MANUAL

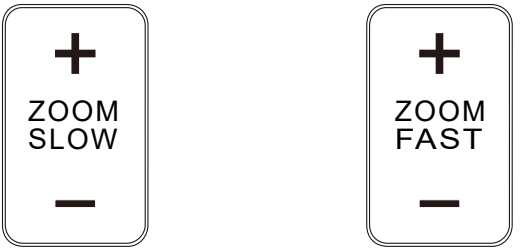
【FAR】Far focus manually

【NEAR】Near focus manually




6.4 Camera Zoom Control

Press any one of the 4【ZOOM】to make the zoom functioning. These 4 keys are not applicable for fixed focus cameras.



6.5 Preset Setup, Call, Cancel

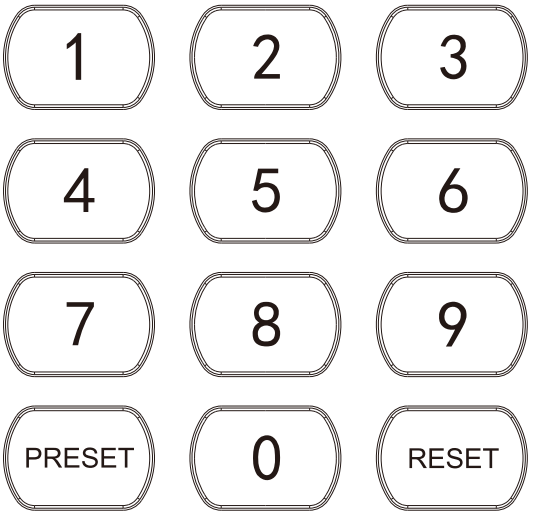
(1) Reserve Preset: Press 【PRESET】, then press one of the numbers (0-9) to reserve a preset that corresponds to the NUMBER.

Note: You can setup 10 presets at most by the remote control.

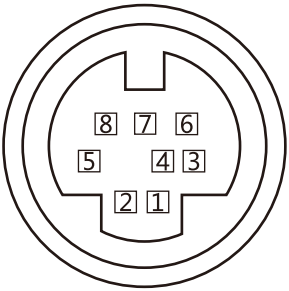
(2) Call Preset: Press the NUMBER (0-9) directly to call the reserved preset.

Note: It won't work if there's no preset reserved in the corresponding number.

(3) Remove Preset: Press 【RESET】, then press one of the number (0-9) to remove a preset that corresponds to the NUMBER.



## 6.6 RS-232 Interface Distribution

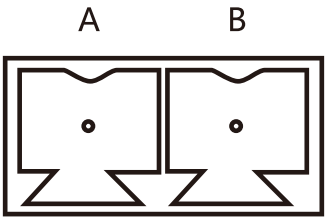



VISCA RS-232 IN

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

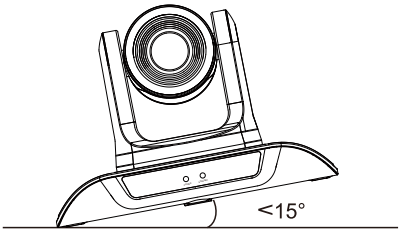
| PIN NUM | FUNCTION |
|---|---|
| A | DTR IN+ (connect to RS-485) |
| B | DSR IN-(connect to RS-485) |

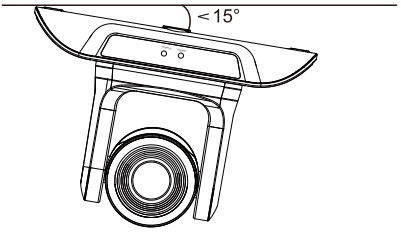


## 7. Installation Instructions

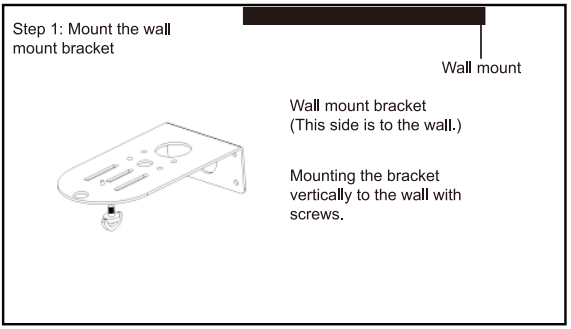
### 7.1 Surface Installation

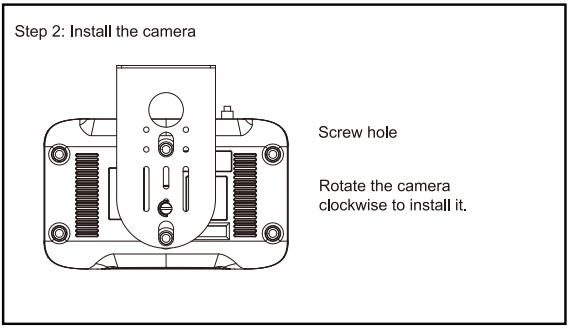
Put the camera on the desk flatly, and make sure the camera is in a horizontal position. If you want to put the camera on an oblique surface, please make sure the angle of inclination is less than 15 degrees to ensure the camera's pan&tilt works normally.




### 7.2 Wall Mount Installation



## 8. Trouble Shooting

Before requesting service to service engineer, please refer to the following methods to remove failures. If the failures still can't be solved, please contact us for assistance.

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

A: Please check the connection between power cable, video cable, camera and monitor, fix the connector on each end.

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

A: Because the menu was displayed on monitor. Please re-operate after exiting 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: Press menu (ON/OFF) to adjust backlight effect to suit the church lighting properly.

Q: Remote control is not working or insensitive.

A: ①Not work, please replace batteries.

②Not sensitive: Choose the correct "IR select" number to corrspond 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. (Refer to RS-485 and RS-232 Pins distribution on page 12).

Q: Why no ceiling mount bracket?

A: Camera comes with wall mount only. ceiling mount or tripod brackets need to buy separately.

Q: Does this camera has 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, keyboard controller (joystick), and software.

## 9 . Maintenance Services

All products purchased from our company are guaranteed to keep in good repair for 36 months. If there are any quality problems during the guarantee period, we will maintain them for free.

Under any of the following warranties, related maintenance costs will be collected:

1. Product was not normally used.
2. Fire, electric shock, outside object collapse or other natural disasters causing the equipment damaged.
3. Unauthorized repair, misuse, abuse or change.

## 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

_____

_____

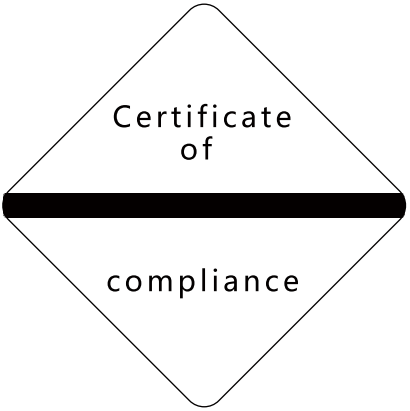
_____

_____

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.




Certificate
of
compliance


Q.A.
QC PASSED



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