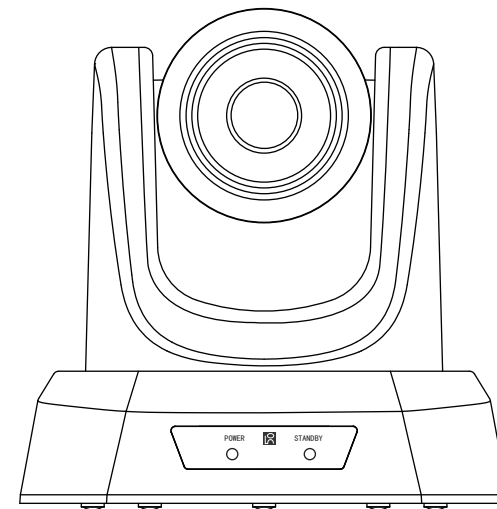




Version V3.22(English)

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Attention

1. Foreword

Thanks for choosing our VHD series conference cameras.
Please read this manual carefully before using the product.

2. Notice

- To avoid damage from stress, violent vibration, soaking during transportation, storage and installation.
- Take care of each components of camera during installation, and install camera at where is affordable enough, to avoid drop or scratches of camera case.
- Handle the camera parts gently, do not squeeze the camera units hard. Please do not touch the camera lens by hand directly to avoid the lens scratched and image quality affected.
- Do not apply excessive voltage. (Use only the specified voltage) Otherwise, you may get an electric shock or a fire occur.
- Do not aim the camera at the sun or the other high luminous objects, otherwise it may cause image blurring or lens flare, even cause permanent damage to the camera.
- Do not clean camera with active chemical or corrosive detergents, and remove dust or dirt on the surface of the lens with a blower (Commercially available)
- Do not disassemble any camera components, in case of abnormal operation; contact your authorized dealer or the store where you purchased the product.

3. Supplied Accessories

- | | |
|--------------------------|---------------------------|
| (1) HD conference camera | (2) DC12V-2A power supply |
| (3) Ceiling mount | (4) Mounting screws |
| (5) Manual | (6) Remote control |
| (7) USB cable | |

Performance Characteristics

1. Camera technical parameters

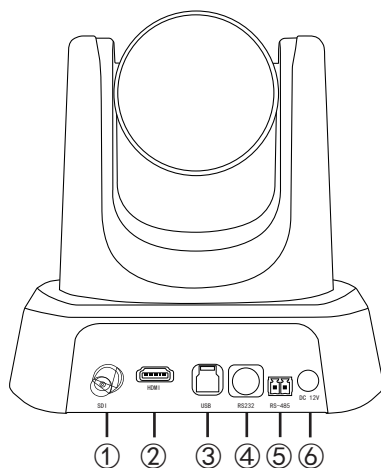
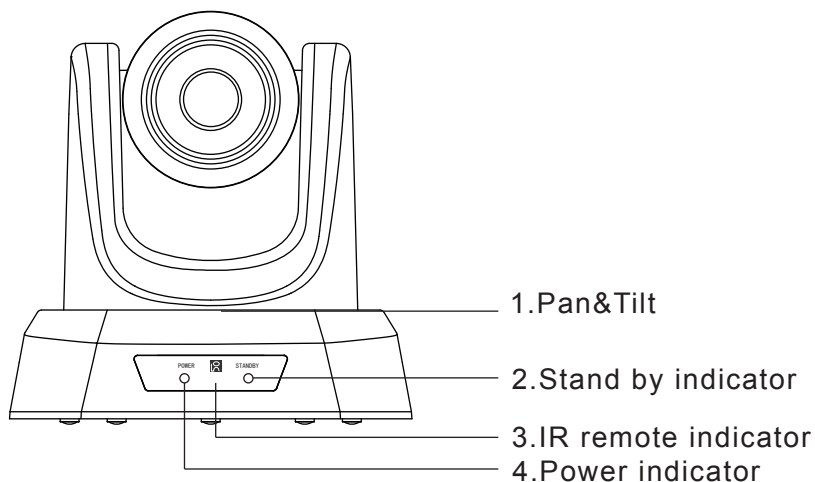
Electric		Communication	
Input Voltage	DC12V	Baud	9600/38400bps
Power	12W	Protocol	VISCA/PELCO-D/PELCO-P
Decoder	internal	Address Set	0~64
Operation		Surroundings	
Horizontal Rotation	±175°	Operating Environment	0°~+50°
Vertical Rotation	120°	Operating Temp	0~95%
Rotation Speed	100°/s		non-condensing
Physics		Installation Method	
Preset Point	Preset Point: 9 for remote control, 256 for PELCO, 64 for VISCA.	Support desktop,wall mount,ceiling mount and tripod installation	
Net-Weight	1.46kg		

2. Camera Parameters

Spec \ lens	10x optical zoom	20x optical zoom
Image Sensor	1/2.9" SONY HD CMOS	1/3" SONY HD CMOS
Effective Pixel	2.1 Mega Pixel	2.1 Mega Pixel
FOV	51.3°~4.64°	55.5°~3.0°
Focal Length	f=5. 0~50. 0mm	f=5. 35~107. 0mm
HD Format	1080P(1920*1080) 720P(1280*720)	
HD Interface	USB,HDMI,SDI	
Resolution	1080P/720P	
Signal System	NTSC/PAL	
Control parameters		
Preset	Preset Point: 9 for remote control, 256 for PELCO, 64 for VISCA.	
Translation/ Pitching Angle	-175°~175° -35°~55°	
Translation/ Pitching Speed	100°/s 80°/s	
Control Protocol	VISCA,PELCO-D,PELCO-P	
Control Interface	RS-232, RS485	
Common Parameters		
Size	Product: 162*172*175mm	
Color	Iron Gray	

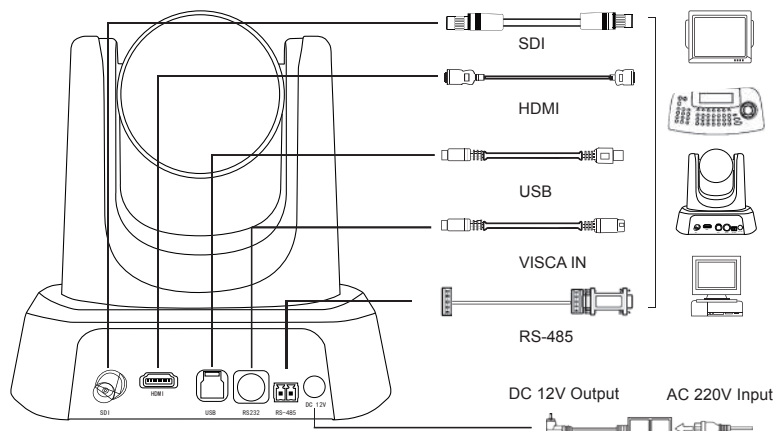
Quick Start

1. Interface definition



- (1)SDI (2)HDMI
(3)USB (4)RS232
(5)RS-485 (6)DC 12V

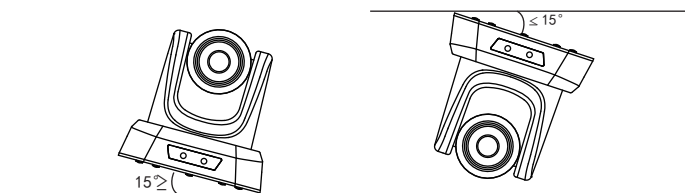
2.Interface diagram



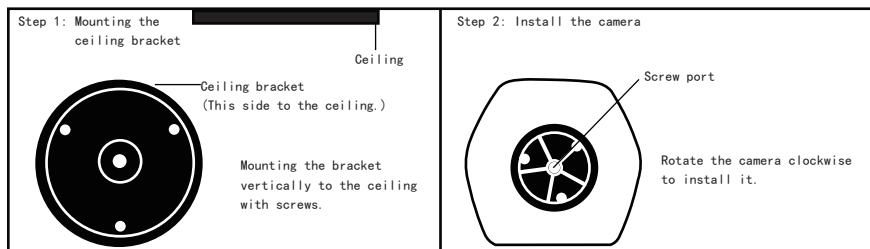
3.Installation instructions

(1)Surface Installation

Put the camera on the desk flatly, and make sure the camera is level. 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.



(2) Ceiling Mount Installation



Remote Control Button Description

(1) Remote Control Launch Window

(2) **【POWER】** Standby Button, pressing it, camera goes into Standby Mode; pressing again, camera goes Power ON.

(3) **【P/T Reset】** Camera Pan/Tilt reset Function same with ⑧ (P/T RESET)

(4) **【CAMERA SELECT】** Choose the camera number that needed to control, to correspond the dial-up code on the back of camera;

(5) **【POSITION】** Preset position setup keys, include **【PRESET】** and **【RESET】** .

(6) **【UP】**: camera rotating horizontally in regular installed direction

(7) **【DOWN】**: camera rotating horizontally in reversed installed direction

(8) **【PAN-TILT】** **【PAT-TILT】** camera rotation control key: press this button and move by the arrow direction, press

Press **【HOME】** to back to the center of vertical and horizontal position.

(9) **【Camera Pan/Tilt Reset】**: Camera Pan/Tilt reset ;

(10) MENU.

(11) Slow Zoom Key

【Zoom SLOW+】 T: Zoom in at low speed

【ZOOM SLOW-】 W: Zoom out at low speed

(12) Fast Zoom Key

【ZOOM FAST +】: Zoom in at fast speed

【ZOOM FAST -】: Zoom out at fast speed

(13) Manual Focus Mode

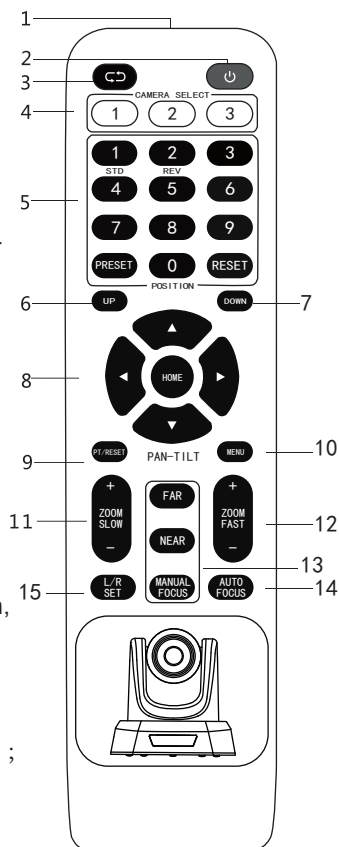
【MANUAL FOCUS】: Start manual focus function

【FAR】: Manually far focus button, clearer for the distant objects, loose finger to stop.

【NEAR】: Manually near focus button, clearer for the nearby objects, loose finger to stop.

(14) **【AUTO FOCUS】**: Auto Focusing Button

(15) **【L/R DIRECTION/SET】**: Not Applicable for this model.



★Attentions for Remote Control

1. If remote control doesn't work, please replace batteries.
2. If there is an object between remote control and specialized remote control sensor, the camera will not work. - Please make sure the remote control is aimed at the sensor which in front of the camera when controlling it.

Common Operations Introductions

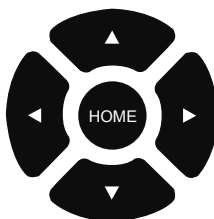
1. Camera Select



Refer to the dial-up at the back of camera and choose camera address number that you want to control (1-3)。

2. Camera Direction Control

-  Turning up
-  Turning down
-  Turning to left
-  Turning to right



*Note: Press direction key to move the camera. Press the direction key when you need to change 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.

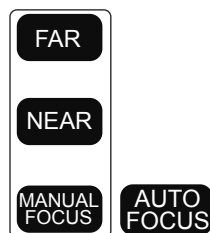
3. Camera Focusing Mode Control

【AUTO】 Switch the focus mode to AUTO

【MANUAL】 Switch the focus mode to MANUAL

【FAR】 Far focus manually

【NEAR】 Near focus manually



4. Camera Zoom Control

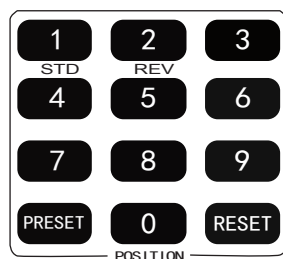
Press any one of the 4 【ZOOM】
to make the zoom functioning.

These 4 keys are not applicable
for fixed focus camera.



5. Preset Setup, Call, Cancel

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



*Note: you can setup 9 presets at most by the remote control.

(2) Call Preset: Press the NUMBER (1-9) directly to call the-
reserved preset.

*Note: It won' t work if there' s no preset reserved in the cor-
responded number.

(3) Remove Preset: Press 【RESET】 , then press one of the-
number (1-9) to remove a preset that correspond to the NU-
MBER.

Camera Menu Setup

Menu Description

Operate remote control, press **【MENU】** to enter main menu of video camera;

1 .Level I Menu - MAIN MENU:

Main Menu	
Image	->
Diaplay	->
Lens	->
System	->

2. Level II Menu - Image:

Image	
Exposure	
Wb	
ImageE.n	
HDMI Output	1080P50
Mirror	Off

HDMI output: Support 1080P60/50/30/25, 720P60/50, 1080i 60/50.

Mirror: Support Off /Left/Right/Up/Down image adjust.

(1) Level III Menu -Exposure

Exposure	
Mode	Ae
Shutter	
Ae	
Me	

Exposure Mode: Support Auto/Manual mode.

Shutter priority: adjust the shooting speed.

(2) Level III Menu -WB

WB	
Mode	Awb
Awb	
Mwb	

WB Mode : Support Auto / Manual mode.

(3) Level III Menu -Image Enhancement

Image Enhancement	
Denoise	
Sharpen	
Gamma	
Defog	
Sat	
Col Tone	
VoCsc	
Drc	
Dci	

Denoise: 2D noise reduction /3D noise reduction switch

Sharpen: Sharpness adjustment function

Gamma: Gamma adjust switch

Defog: Defogging: the defogging strength is calculated automatically according to the manual/automatic specified strength coefficient.

Sat: Adjust the image color effect.

Col Tone: Color tone adjustment interface. The video output result is independent of the color temperature.

VoCsc: VD outputs brightness values,hue values,saturation values, and contrast values.

Drc: Dynamic range adjustment

Dci: Adjust image contrast and brightness dynamically

3.Level II Menu - Display

Display	

Language	English

Language: Support Chinese/English

4.Level II Menu - Lens

Lens	

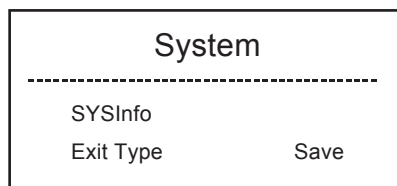
Mf/Af	Af
Af--R	>4.0M
ZoomSav	Off

Focus mode: Support auto and manual 2 modes

Range of focus: Determined by the lens used in the model .

Zoom save: When the camera is turned on, restarting the camera will initialize to the position which was shutdown in last time.

5.Level II Menu – System

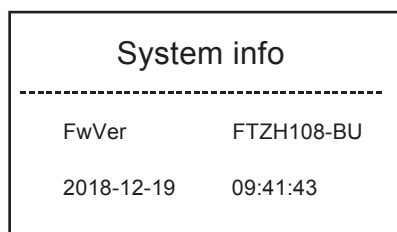


System info: Firmware version and time

Exit Type: Save / Not save / Default

(Select here to determine to save all parameters been adjusted or not.)

(1) Level III Menu -System info



Dial-up:

1.Dial-up ON/OFF set



2.Dial-up SW1(1,2,3,4,5,6): Baud rate set

SW1						
PTZ Add.	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
....						
64	ON	ON	ON	ON	ON	ON

3.Dial-up SW2(1/2/3): Protocol set

SW2				
Protocol	DIP-1	DIP-2	Baud	DIP-3
VISCA	OFF	OFF	9600	OFF
PELCO-D	OFF	ON	38400	ON
PELCO-P	ON	OFF		

4.Dial-up 3 IR transfer(IR PASS), DIP-4 reserve

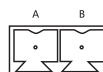
IR Add.	DIP-5	DIP-6	DIP-4
All	OFF	OFF	RESERVE
1	OFF	ON	
2	ON	OFF	
3	ON	ON	

PS: RS-485 and RS232 Pins distribution

1、 Control Interface

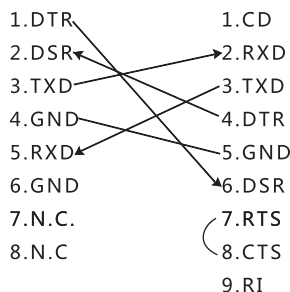
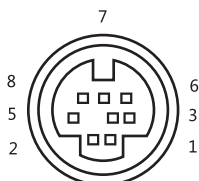
(1) RS485 Interface Distribution

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



(2) RS-232 Interface Distribution

VISCA RS-232C IN



Troubleshooting

Before request service to serviceman, it can according to below methods to remove failures, if still can't be solved, please contact us for help.

Q:The video of 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 menu was displayed on monitor. Please re-operate after exit 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:1 Press **【BACK LIGHT】** on remote control or menu (ON/OFF) to adjust backlight effect. 2 Arrange the church lighting properly

Q:Remote control is not working or insensitive

A: 1 Not work, please replace batteries.

2: Not sensitive: 1Choose the correct "IR select" number to meets camera. 2 Control the camera within 15m 3 Remove the obstacles 4 Aim at the sensor which is in front of the camera when controlling it.

Q: USB interface is not identifiable.

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

Q No image after HDMI interface connects.

A: 1 check the HDMI cable and connected device are normal.

2 check the video format that is supported by the connected device or not. If not, adjust the video format according to the connected device.

3 Recommended cable is no longer than 30m.

Q:It was not been controlled via RS232/RS485 when camera connect to PC.

A:Make sure it is a correct connection between camera and PC. (Reference to RS-422/485 and RS232 Pins distribution in page 16.)

Q:Why no wall mount brackets?

A: Camera comes with ceiling mount, wall mount or tripod brackets needs to buy separately.

Q: Does this camera has built-in mic?

A: No, our cameras comes with no built-in mic.

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

A: We can control the camera by remote control. Keyboard controller (joystick), and software.

Maintenance Services

All products purchased from our company are guaranteed to keep in good repair for 18 months. If there are any quality problems during the guarantee period, we will maintain for free.

Under any of the following warranty, elated maintenance costs will be collected:

1. Product was not normal used.

2. Fire, electric shock, outside object collapse or other natural disasters causes make the equipment damage.

3. Unauthorized repair, misuse, abuse and change.

Tenveo Warranty Card

Thank you very much for choosing our products.

User 's info:

Name : _____ Tel: _____

Email: _____ Post code: _____

Address: _____

Product' s information:

Product Name : _____

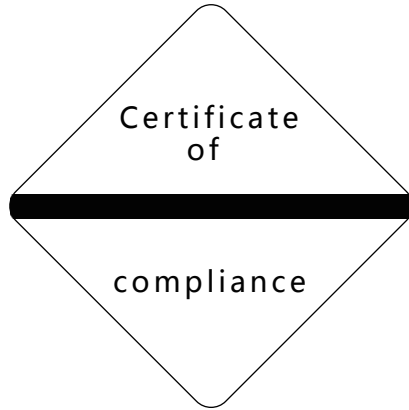
Factory Serial Number : _____

Purchase Date

Attention:

- 1.This card is considered as the Protection to fix warranty, so please reserve them carefully.Please fill in truthfully.
2. Please indicate the model number, Factory Serial Number and the detailed description of the fault information.







Make any meeting better and easier