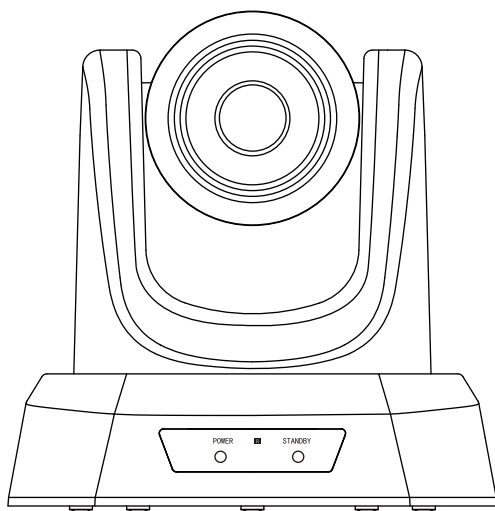


# HD Conference Camera

## User Manual



Version V1.0

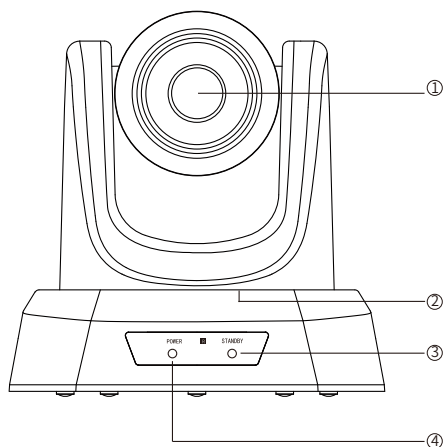


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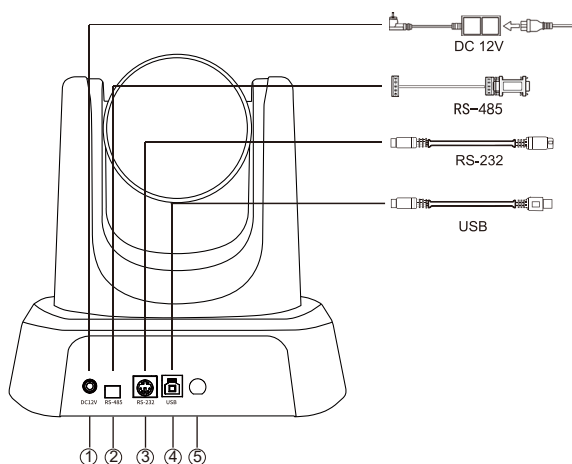
# 1. Product Description

## 1.1 Front



- ① Lens
- ② Pan & Tilt
- ③ Standby
- ④ Power

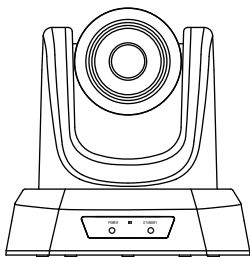
## 1.2 Back



- ① DC12V
- ② RS-485
- ③ RS-232
- ④ USB
- ⑤ WIFI( For wireless version only)

# 2. Packing List

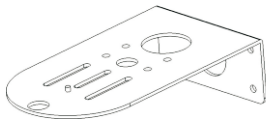
## 2.1 USB Interface Packing List



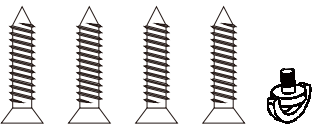
HD conference camera



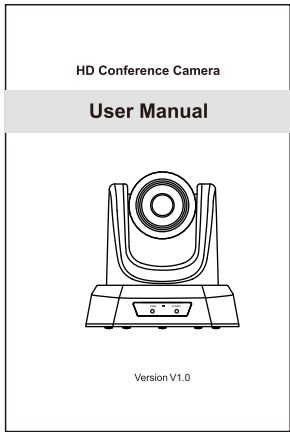
DC 12V power supply



Wall mount



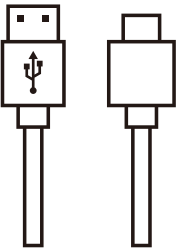
Mounting screws



User manual

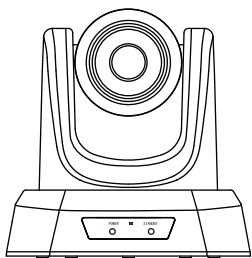


Remote control



USB cable

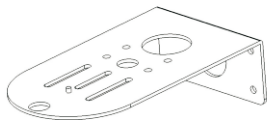
2.2 USB+WIFI Interface Packing List



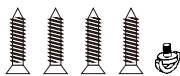
HD conference camera



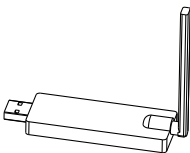
DC 12V power supply



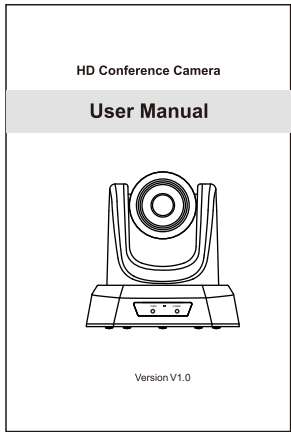
Wall mount



Mounting screws



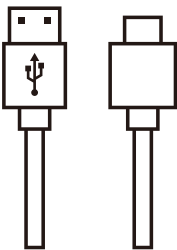
Wifi dongle



User manual



Remote control



USB cable

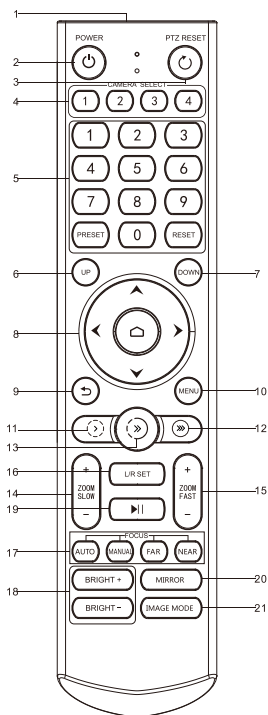
### 3. Performance Characteristics

Model No	NV3U	NV10U	NV20U
Sensor	1/2.8"SONY CMOS		
Effective Pixels	2.38 mega pixel		
Video Signals	1080p@60/50/30/25fps, 720p@60/50/30/25fps		
Zoom	3X optical zoom	10X optical zoom	20X optical zoom
Lens	f=2.38-7mm	f=5.76-46.09mm	f=5.9-94.4mm
Aperture	F1.96-3.64	F1.8-2.6	F1.8-3.9
Horizontal Angle	103.69°(W)-42.12°(T)	54.7°(W)-6.8°(T)	52.1°(W)-3.4°(T)
Vertical Angle	67.14°(W)-24.87°(T)	30.8°(W)-3.8°(T)	29.3°(W)-1.9°(T)
Diagonal Angle	113.91°(W)-47.55°(T)	62.8°(W)-7.8°(T)	59.8°(W)-3.9°(T)
Video Output	USB 3.0		
Video Encoding Format	H.264, H.265, MJPG, YUY2		
Video Resolution	1080P (1920 *1080) 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		
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		
Working Temperature	0°~+50°		
Working Humidity	0~95% RH		
Product Size	181*184*174mm/285*217*197mm(before / after packing)		
Product Weight	1.5kg/2.0kg (net / gross weight)		
Accessories	1*DC 12V Power adaptor, 1*IR remote control, 1*Manual, 1*USB3.0 Cable, 1*Ceiling bracket & screws.		

Model No.	NV3W	NV10W	NV20W
Sensor	1/2.8"SONY CMOS		
Effective Pixels	2.38 mega pixel		
Video Signals	1080p@60/50/30/25fps, 720p@60/50/30/25fps		
Zoom	3X optical zoom	10X optical zoom	20X optical zoom
Lens	f=2.38-7mm	f=5.76-46.09mm	f=5.9-94.4mm
Aperture	F1.96-3.64	F1.8-2.6	F1.8-3.9
Horizontal Angle	103.69°(W)-42.12°(T)	54.7°(W)-6.8°(T)	52.1°(W)-3.4°(T)
Vertical Angle	67.14°(W)-24.87°(T)	30.8°(W)-3.8°(T)	29.3°(W)-1.9°(T)
Diagonal Angle	113.91°(W)-47.55°(T)	62.8°(W)-7.8°(T)	59.8°(W)-3.9°(T)
Video Output	USB 3.0, 5.8G Wifi		
Video Encoding Format	H.264, H.265, MJPG, YUY2		
Video Resolution	1080P (1920 *1080) 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		
Wifi	Frequency band: 5G /Distance: 10 meters		
Shutter	1/30s-1/1000s, 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	181*184*174mm/285*217*197mm(before / after packing)		
Product Weight	1.5kg/2.0kg (net / gross weight)		
Accessories	1*DC 12V Power adaptor, 1*IR remote control, 1*Manual, 1*USB3.0 Cable, 2* 5.8G Wifi antennas, 1*5.8G Wireless Dongle, 1*Ceiling bracket & screws.		



## 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, include <b>【PRESET】</b> and <b>【RESET】</b> Set the preset position Reset the preset position
6	UP	The camera rotates horizontally in regular installed direction
7	DOWN	The camera rotates horizontally in reversed installed direction
8	PTZ Control Key	PTZ moves according to the arrow indicates. Press <b>【HOME】</b> PTZ will back to the default position
9	Return/Exit	Return to up level menu or exit menu
10	MENU	Enter or exit OSD Menu after pressing it
11		PTZ rotates speed-
12		PTZ rotates speed
13		PTZ rotates speed+
14	ZOOM Slow Key	Zoom in + or out - slowly
15	ZOOM Fast Key	Zoom in + or out - quickly
16	L/R Set	Support, press this key for 10 seconds
17	Focus Key	Auto/Manual/Far/Near Focus Default: Auto Focus
18	Bright Adjustment	Adjust the brightness of the image
19		Reserved
20	Mirror	Enable the picture left/right flip
21	Image Mode	Switch between three image modes Normal, PC, 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. 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

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

Language: Support Chinese/English

Press the Home 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	On/Off
ExpComp	1
Flicker	50Hz
[Return]	

Mode: Auto/Manual

Backlight: On/Off the backlight

ExpComp: Exposure compensation, optional item is -50--+50

Flicker: Support Off/50Hz/60Hz

When changing the exposure mode to Manual, the sub-menu is as shown below:

Exposure	
-----	
→ Mode	Manual
Iris	F1.6
Shutter	1/10000~1/25
Gain	50
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

Shutter: Shutter value setting, the value is between 1/10000 and 1/25

Gain: Exposure Gain setting, optional item is 0 to 99

Flickr: 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 0-99

Contrast: Set image contrast dynamically. Default 50, optional item 0-99

Hue: Set the relative brightness of the image. Default 50, optional item 0-99

Saturation: Set image color effect. Default 50, optional item 0-99

Sharpness: Set sharpness level. Default 50, optional item 0-99

WB mode: Auto/Manual/VAR

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	69
Contrast	53
Hue	50
Saturation	55
Sharpness	50
WB Mode	Manual
Rtuning	50
Btuning	50
Rgain	50
Bgain	50
[Return]	

In manual WB mode, the above values can be adjusted. The Rgain and Bgain value can be tuning. The range is 0 to 99

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

Color	
-----	
→ Brightness	69
Contrast	53
Hue	50
Saturation	55
Sharpness	50
WB Mode	VAR
Color Temp	5600
Rtuning	50
Btuning	50
[Return]	

The range for the Color Temp can be adjusted between 2500K to 9000K.

## 5.4 Level 2 Menu - Image

Image	
-----	
→ Flip	Off/On
Mirror	Off/On
Video Format	1080P60fps
Menu Mirror	On/Off
USB Mode	ISOC/BULK
Style	Bright
[Return]	

Flip: Enable/disable the picture up/down flip

Mirror: Enable/disable the picture left/right flip

Video Format: 1080P-60/50/30/25:720P-60/50/30/25

USB Mode: ISOC/BULK

Adjust between Isochronous transfers mode and Bulk transfers mode

Style Mode: Normal, PC, Bright Normal/PC/Bright

## 5.5 Level 2 Menu - P/T/Z

P/T/Z	
→ Acc Curve	Fast/Middle/Slow
[Return]	

Acc Curve: Adjust the speed of pan, tilt.

## 5.6 Level 2 Menu - Communication

Communication	
Protocol	Auto
Baudrate	9600
RC Address	1/2/3/4
→ [Return]	

Protocol: Default Auto, 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

## 5.7 Level 2 Menu - Information

Information	
Model	HD Camera
Version	1.1.1.1
	2022-11-04
→ [Return]	

Model: HD Camera

Version: 1.1.1.1

Date: 2022-11-04

Notice: The version number here is just an example. The actual parameters shall prevail.

## 5.8 Level 2 Menu - Restore Default

Restore Default	
Restore?	No
→ [Return]	

Restore: No/Yes

# 6. Common Operation Instructions

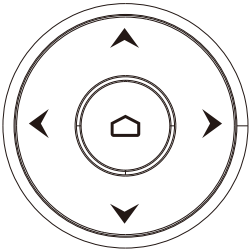
## 6.1 Camera Select

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.

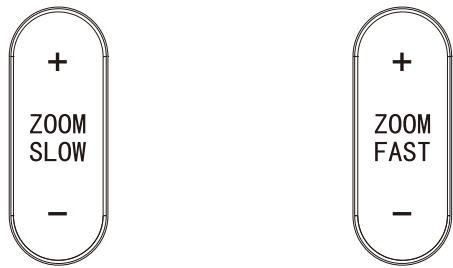
## 6.3 Camera Focu Mode Control

- 【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

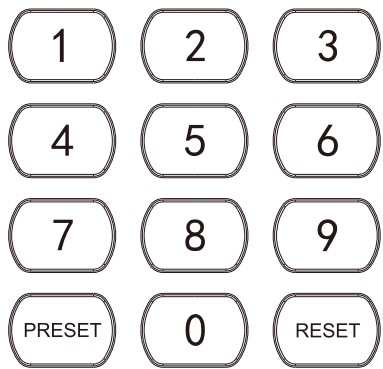
(1) Reserve Preset: Press **【PRESET】**, then press one of the numbers (0-9) to reserve a preset that corresponds to the NUMBER.

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

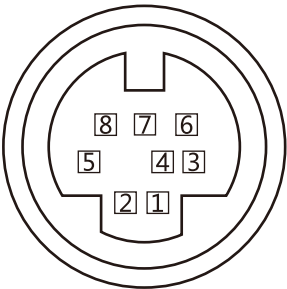
(2) Call Preset: Press the NUMBER (0-9) directly to call the reserved preset.

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

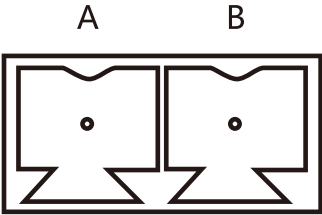


VISCA RS-232 IN

- 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)

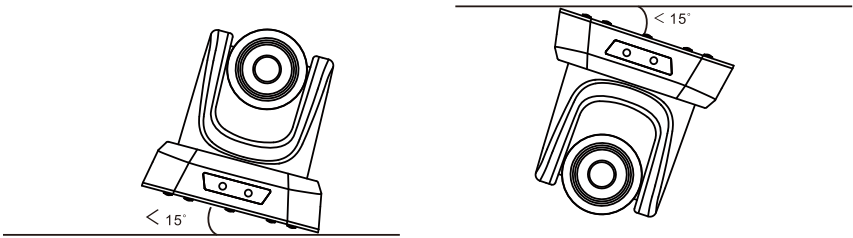




# 7. Installation Instructions

## 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

Step 1: Mounting the wall mount bracket

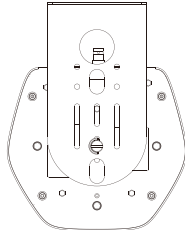


Wall mount

Wall mount bracket  
(This side is to the wall.)

Mounting the bracket  
vertically to the wall with  
screws.

Step 2: Install the camera



Screw hole

Rotate the camera  
clockwise to install it.

## 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 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.  
(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.



