Packing List

Camera (1)

Power adapter (1)

Power cable (1)

Note: Power cables may vary between countries.

HDMI cable (1)

Note: The HDMI cable is used to connect the camera's HDMI port and a videoconferencing endpoint.

Quick Start Guide (1)

Certificate of Compliance & Safety Precautions & Warranty Card (1)

1/4"-20UNC-7 mm Inch screw (1)

Used to fix a support.

Appearance

No.	Port	Description
1	Lens	12x optical zoom and 12x digital zoom.
2	RF receiver module	Receives radio frequency (RF) signals.
3	MODE button	Switches to your desired submenu.
4	Infrared receiver module	Receives infrared signals.
5	Display	Displays camera model and version information and then license information (1080p or 4K) when a VPC800 is powered on. Displays settings information when a VPC800 is running properly. Displays the error code for a self-check error or PTZ rotation error when an error occurs.
6	Status indicator	Indicates running, sleep, faulty, and upgrade states.
7	SELECT button	Selects a parameter or its mode.
8	Power button	Powers the camera on or off. This button is valid when the camera is connected to a power adapter and is not used with TX or TEX0 series

No.	Port	Description
		videoconferencing endpoints.
⑨	Power port	Functions as a 12 V DC power input port.
⑩	SDI port	Functions as a bayonet-neill-concelman (BNC) connector to output 3G-SDI and HD-SDI signals. 3G = 3rd Generation HD = high definition SDI = serial digital interface
⑪	VISCA IN port	Functions as a serial port to connect to an HD videoconferencing endpoint or cascades to an upper-level camera. In addition, this port can be used to upgrade the camera.
⑫	VISCA OUT port	Cascades a lower-level camera. This port complies with the Video System Control Architecture (VISCA) standard. VISCA is a trademark of Sony Corporation.
⑬	HDMI OUT port	Outputs HDMI2.0 signals and supports a resolution of up to 4K2Kp 60 fps.
⑭	HD-VI port	Inputs serial control signals, infrared signals, and 12 V power. Outputs digital visual interface (DVI) or YPbPr video signals.
⑮	Network port	Performs operations such as camera upgrade as well as camera angle adjustment (upward, downward, left, or right) and image scaling (zoom in or out) through Telnet.

Installation

The VPC800 can be mounted on top of a display(such as TV set and monitor), wall-mounted, ceiling-mounted, or placed horizontally, which you can select based on the site requirements.

- If the displayis thicker than 170 mm or the display is wall-mounted, the VPC800 can be installed in any possible way other than be mounted on top of the display.
- If the display is 170 mm or thinner, the VPC800 can be mounted on top of a display or placed horizontally.

Placed Horizontally

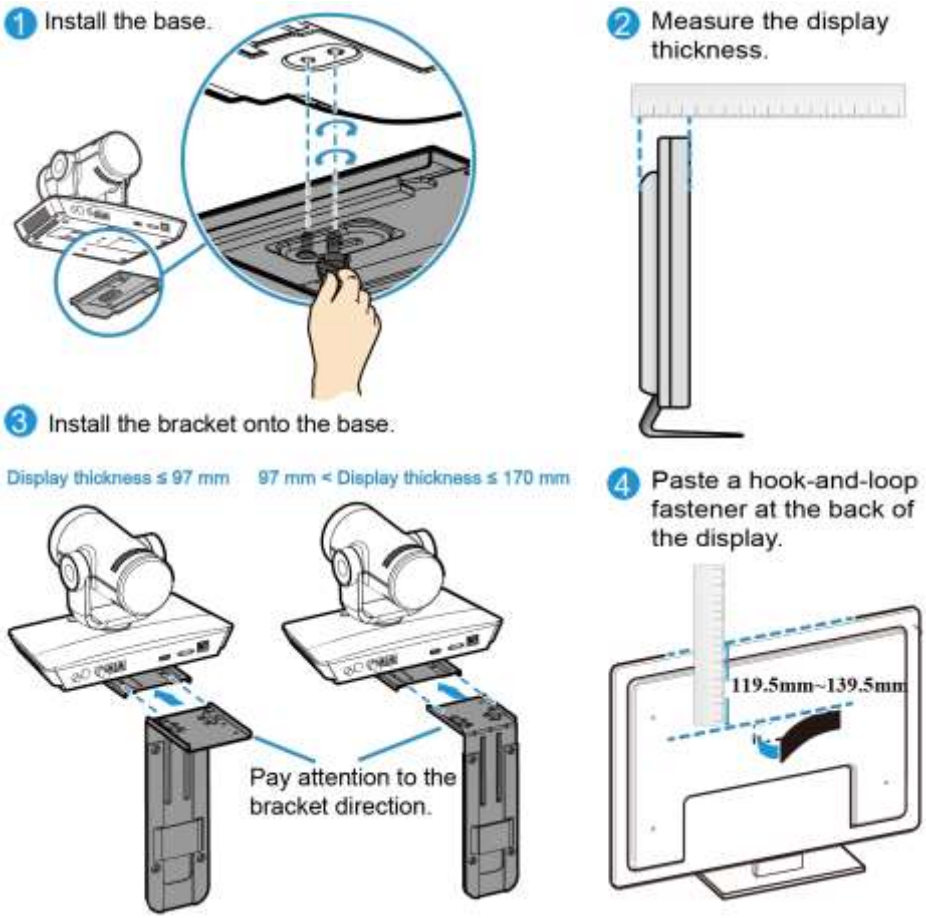
Place the camera on a flat surface.

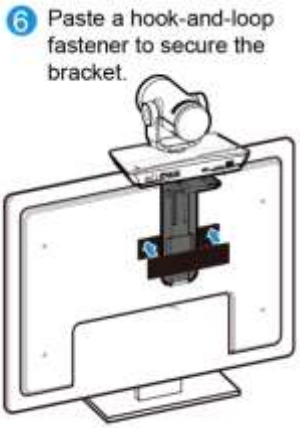
If you have to place the camera on a sloping surface, ensure that the slope is less than ±15° or the camera may not function properly.

Mounted on Top of a Display

Use the L-shaped bracket and its accessories to secure the

VPC800 on top of the display. The following figure shows the installation procedure.





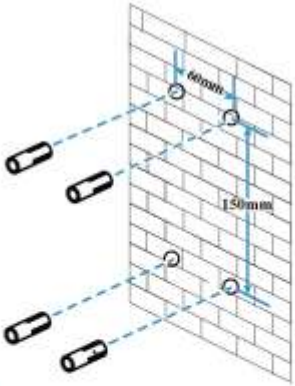
Wall-Mounted

Use the L-shaped bracket and its accessories to mount the VPC800 on the wall.

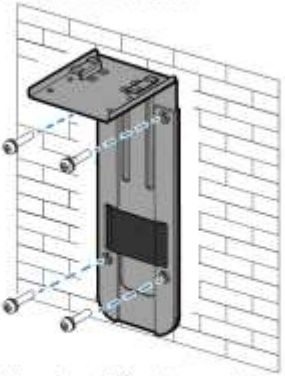
Prepare the hammer drill, rechargeable battery-powered electric screwdriver, hammer, and Phillips screwdriver by yourself.

Drill four holes in the wall for mounting the bracket, each with a diameter of 8 mm (0.31 in.) and depth of 35 mm (1.38 in.). The two holes in the upper part must be parallel to the horizontal plane to ensure that the endpoint is horizontally installed. Then follow the steps in the following figure to install the VPC800.

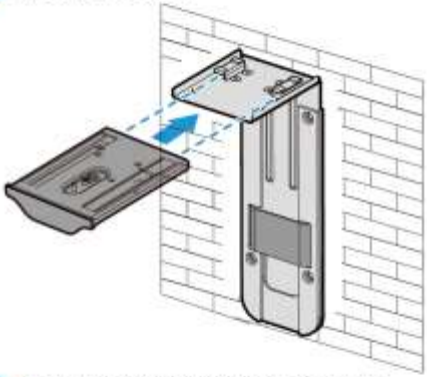
1 Fix four expansion bolts onto the wall.



2 Use four M6 x 30 cross recessed pan head screws with washers to secure the bracket.

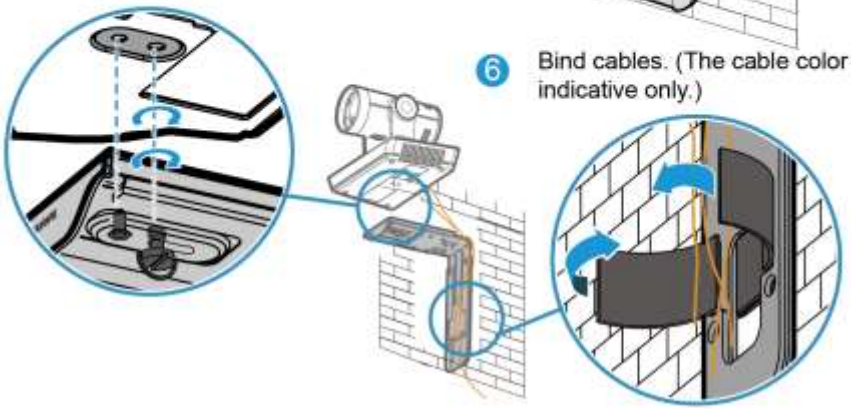


3 Install the base.



4 Use four M3 x 6 countersunk screws to secure the base.

5 Secure the VPC800 onto the base.

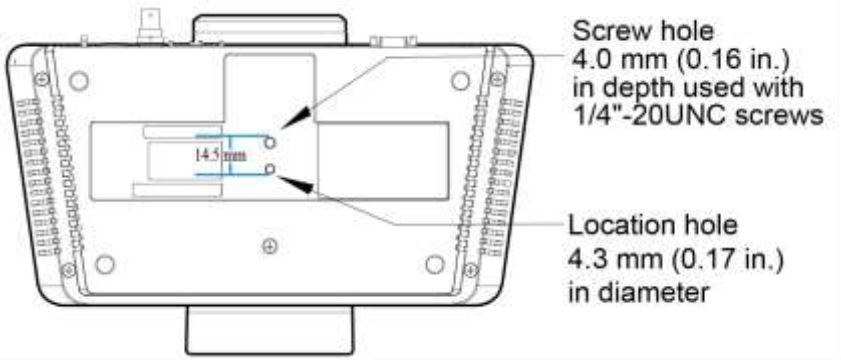


6 Bind cables. (The cable color is indicative only.)

Ceiling-Mounted

Purchase a bracket for inverted installation and mount the VPC800 onto the ceiling using the bracket. The bracket must meet the following requirements:

- It is able to bear a weight of at least 10.5 kg (18.74 lb) and has a thickness between 2 mm (0.08 in.) to 3 mm (0.12 in.).
- It comes with a location pillar, which can be inserted into the location hole of the VPC800. The distance between the screw hole on the bracket and location pillar must be 14.5 mm (0.57 in.), which is also the distance between the two holes on the bottom of the VPC800.
- It comes with a screw hole and one or more 1/4"-20UNC screw.



Note

When attaching the purchased bracket and VPC800, it is recommended that you use a 1/4"-20UNC screw delivered with the purchased bracket rather than a 1/4"-20UNC screw delivered with the VPC800 because the length of the latter may be too long or too short to hold up the purchased bracket.

Others

Install the camera on a tripod (separately purchased).

Powering the Camera On

Connect the cables and power adapter to the camera and press the power button. About 18 seconds later, video is displayed on the display device. The camera faces forward the first time you power it on. Afterward, the camera restores to the position before its power-off each time the camera is powered on.

If the HD-VI port of the camera is connected to a TEX0 videoconferencing endpoint or a TX series videoconferencing endpoint, you do not need to connect the power adapter to the camera

or press the power button. When the videoconferencing endpoint is powered on, it supplies power to the camera to power the camera on.

Checking the Status Indicator

- Steady green: The camera is working properly.
- Steady yellow: The camera is in sleep mode.
- Blinking green: The camera is upgrading.
- Blinking red: The camera is faulty.

Controlling the Camera

The camera supports PTZ and lens control using an HD videoconferencing endpoint or remote control.

- To control the camera using an HD videoconferencing endpoint, connect the camera to the videoconferencing endpoint using a serial cable. The maximum control length (cable length) is 50 m.
- To control the camera using a remote control, set the infrared (RC) mode to IR-LOCAL or RF-LOCAL.
- Use the remote control to hide or display the On-Screen Display (OSD) configuration screen. On the screen, you can perform image-related settings, for example, setting the image output format and enable or disable the image inversion mode.

The following table describes the keys on the remote control, which are used to control the OSD configuration screen.

Key	Description
	Press it twice to hide or display the OSD configuration screen. (The OSD configuration screen is displayed topmost.)
	Press it to confirm an operation.
	On the OSD configuration screen, press them to move to desired options.

Do not manually rotate the camera or stop it from rotating when it is powered on and working properly.

Settings

SELECT	Mode	Description
RC	IR-REMOTE	The camera forwards IR signals to a videoconferencing endpoint and is controlled by the videoconferencing endpoint. By default, **RC** is set to **RF-REMOTE**.
	IR-LOCAL	The camera is controlled by IR signals and stops forwarding the signals to the videoconferencing endpoint.
	RF-REMOTE	The camera forwards RF signals to a videoconferencing endpoint and is controlled by the videoconferencing endpoint.
	RF-LOCAL	The camera is controlled by RF signals and strops forwarding the signals to the videoconferencing endpoint.
HD-MODE	STANDARD	The video is displayed in standard mode. If you select this option and set **VEDIO** to 720p 60 fps, 1080p 30 fps, 1080i 60 fps, 1080p 60 fps, 4K2Kp 30 fps, and 4K2Kp 60 fps, the actual video format are 720p 59.94 fps, 1080p 29.97 fps, 1080i 59.94 fps, 1080p 59.94 fps, 4K2Kp 29.97 fps, and 4K2Kp 59.94 fps respectively. By default, **HD-MODE** is set to **STANDARD**, which is recommended.
	FULL	The video is displayed in full frame mode. If you select this option, set **VEDIO** to 720p 60 fps, 1080p 30 fps, 1080i 60 fps, 1080p 60 fps, 4K2Kp 30 fps, or 4K2Kp 60 fps based on the site requirements.
VIDEO	4K2Kp 60	Select a video format. Only a VPC800 with a 4K license supports this function.
	4K2Kp 50	
	4K2Kp 30	
	4K2Kp 25	

SELECT	Mode	Description
	1080p 60	Select a video format.
	1080p 50	
	1080i 60	
	1080i 50	
	1080p 30	
	1080p 25	
	720p 60	
	720p 50	
FLIP	ON	Set **FLIP** to **ON** if the camera is ceiling-mounted.
	OFF	To disable the video flip function, set **FLIP** to **OFF** (default value).
	AUTO	Automatically detects the installation mode (mounted on top of a display or ceiling-mounted) of a camera and automatically enable or disable the image rotation function. The default value is **AUTO**.
BIT DEPTH	8	Indicates that the color output bit depth is 8 bit with the color gamut red green blue (RGB) being 256 x 256 x 256. The default value is 8.
	10	Indicates that the color output bit depth is 10 bit with the color gamut RGB being 1024 x 1024 x 1024. The color gamut for 10 bit depth is wider.

Notes:

1、Press the SELECT button to scroll to **RC**, **VIDEO**, **FLIP**, **BIT DEPTH**, or **HD-MODE**.

2、Press the MODE button to select the desired mode. The mode changes each time you press MODE.

3、Press the SELECT button to confirm your selection.

If the text blinks, the settings do not take effect. In this case, press the SET button for the settings to take effect.

Specifications

Category	Item	Specifications
Lens	Imaging component	12.4-megapixel and 1/1.7-inch SONY IMX226 imaging chip
	Optical zoom	12x
	Focal length and aperture	12x: f = 3.9 mm to 46.8 mm (F1.8 to F2.8)
Video	Output video formats	• 4K: 4K2Kp 50 fps, 4K2Kp 59.94 fps, 4K2Kp 60 fps, 4K2Kp 25 fps, 4K2Kp 29.97 fps, 4K2Kp 30 fps, 1080p 50 fps, 1080p 59.94 fps, 1080p 60 fps, 1080i 50 fps, 1080i 59.94 fps, 1080i 60 fps, 1080p 25 fps, 1080p 29.97 fps, 1080p 30 fps, 720p 50 fps, 720p 59.94 fps, 720p 60 fps • 1080p: 1080p 50 fps, 1080p 59.94 fps, 1080p 60 fps, 1080i 50 fps, 1080i 59.94 fps, 1080i 60 fps, 1080p 25 fps, 1080p 29.97 fps, 1080p 30 fps, 720p 50 fps, 720p 59.94 fps, 720p 60 fps
	Horizontal angle of view	6.3° (TELE end) to 72° (WIDE end), with a wide-angle lens installed
	Diagonal angle of view	9.1° (TELE end) to 90° (WIDE end), with a wide-angle lens installed
	Vertical angle of view	4.5° (TELE end) to 51.8° (WIDE end), with a wide-angle lens installed
	Lowest operating luminance	0.1 lux (F1.8, 50 IRE) IRE = Institute of Radio Engineers
	Shutter speed	1/25 seconds to 1/10000 seconds
	Local camera presets	254
PTZ capability	Horizontal	Range: ±100° Speed: 2°/s to 100°/s Relocation precision: ±0.1°

Category	Item	Specifications
	Vertical	Range: ±30° Speed: 2°/s to 25°/s Relocation precision: ±0.1°
Automatic adjustment	Automatic white balance (AWB)	Automatic, manual, and one-push
	Automatic exposure (AE)	Automatic, manual, Iris priority, and shutter priority
	Automatic focus (AF)	Automatic and manual
RF remote control	RF signal reception	Control distance: 25 m without barriers and 10 m with barriers Control angle: 360°, 8 m without barriers
Infrared remote control	Infrared signal reception	Comply with the following standards: Control distance: 6 m Vertical angle: ±15° Horizontal angle: ±30°
Power and power supply	Input voltage	100–240 V AC, 50 Hz or 60 Hz
	Output voltage	12 V DC
	Power	• Operating ≤ 30 W • Hibernation ≤ 2 W
Physical specifications	Control port rate	9600 baud
	Ambient temperature	0°C to 40°C
	Operating humidity	10% to 90%
	Operating height	≤ 5000 m (16.4 ft)
	Dimensions (H x W x D)	178 mm x 287 mm x 197 mm (7.00 in. x 11.30 in. x 7.76 in.)
	Weight (unpacked)	2.95 kg

Safety Precautions

- Before you use the product, refer to the product vendor for version mapping information and to confirm compatibility with other videoconferencing equipment.
- Keep the device dry and prevent it from colliding with other objects during storage, transportation, and operations.
- During installation and commissioning, ensure that the camera is properly grounded, and do not insert or remove the camera video cables when the camera is powered on.
- Do not use any power adapter other than the one provided with the device. In addition, do not refit the adapter.
- Do not attempt to dismantle the device. In case of any faults, contact an authorized maintenance center.
- Position the device on stable surfaces only.
- Keep the device or its accessories away from children. Swallowing the accessories may be fatal.
- Keep the power plug clean and dry to prevent electric shocks or other hazards.
- Before cleaning the device, shut it down and disconnect the power supply.
- Do not press, scratch, or hit the lens and display with force.
- Do not touch the lens or display with any rubber or plastic items as doing so may impair brightness.
- Dispose packaging, batteries, and the devices according to the local regulations. Please recycle if possible.

To know more precautions, contact your device provider.

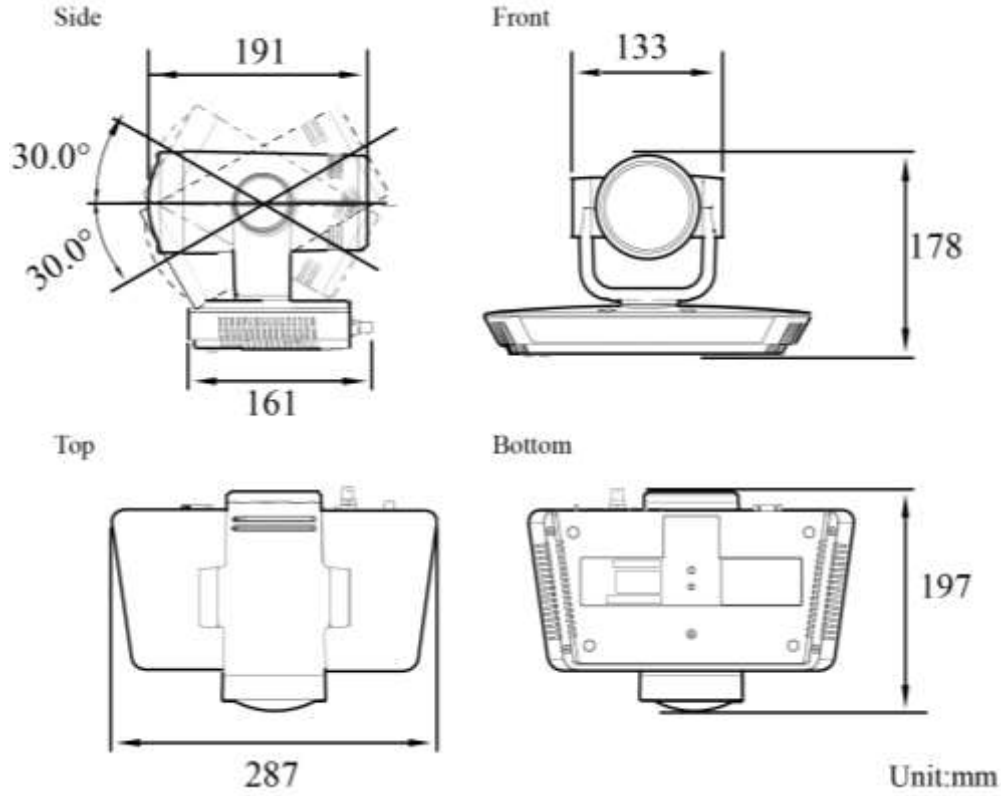
This is a class A product. In a living environment, this product may cause radio interference in which case the user may be required to take preventative measures.

Troubleshooting

Question	Why can't I use PTZ to control the camera from an HD videoconferencing endpoint?
Answer	The serial connection between the camera and the HD videoconferencing endpoint is incorrect. The serial port of the HD videoconferencing endpoint type is set incorrectly.
Question	Why does the camera fail its startup diagnosis along with one of the following symptoms: 1) The camera fails to start. 2) The PTZ generates abnormal noise. 3) Nothing is displayed on the camera screen?
Answer	A nonstandard power adapter may be used. The standard one provides a 12 V DC output. The connector at the low-voltage side of the camera's power adapter has been reconstructed, or the cable of this power connector has been extended. If the cable of the camera adapter is not long enough, extend the cable of the power socket.
Question	Why is the camera video not displayed on the display connected to the HD videoconferencing endpoint?
Answer	The HD videoconferencing endpoint and camera are not connected correctly. The input and output settings on the HD videoconferencing endpoint are incorrect. The HD videoconferencing endpoint does not support the camera's video format. The display does not support the video output format set on the HD videoconferencing endpoint.
Question	Why does the display fail to display any video after the camera has worked for a period?
Answer	Check the camera's working environment. For example, check whether the cables are connected securely, whether the voltage is stable, and whether heat is dissipated properly.
Question	Why is the camera video displayed unclearly or why cannot the camera automatically adjust its focus after the camera is powered on?
Answer	The lens surface is not clean, with dust, fingerprint, or mist on it. The camera is not in autofocus mode.

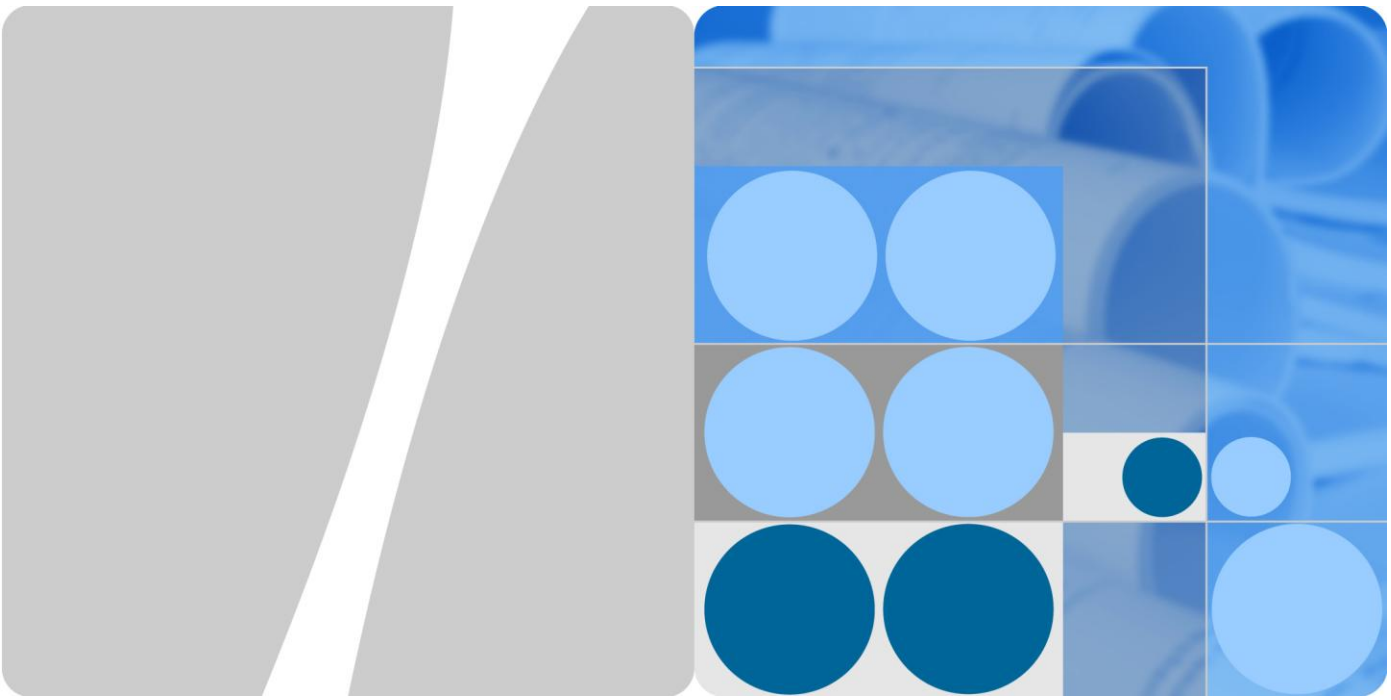
	To set the camera to autofocus mode, perform the following operations: Press  on the remote control to access the camera control page. On the remote control interface, select Adjust Focus, use the direction keys to select  on the remote control to set the camera to autofocus mode. The distance between the object and the camera is less than 0.7 meters, or the camera shooting angle is improperly set.
Question	Do the cameras support daisy chain cascade control? If daisy chain cascade control is supported, how are the cameras connected and controlled? How are the camera address codes set? Why cannot the cameras be controlled after they are connected?
Answer	The Huawei VPC800 camera supports the Video System Control Architecture (VISCA) protocol and cascade control. Connection method: Use a keyboard that supports the VISCA protocol to connect the cameras. Connect the VISCA IN port of the first camera to the VISCA keyboard. Then, connect the VISCA OUT port of the first camera to the VISCA IN port of the second camera, the VISCA OUT port of the second camera to the VISCA IN port of the third camera, and so on. A maximum of seven cameras can be connected in this serial connection mode. The VISCA protocol supports cascade control of a maximum of seven cameras. The address codes are automatically negotiated and increase by 1 from the first camera to the seventh camera. If the control is abnormal, check the cables and their connections. Ensure that the cables and their connections are normal. Ensure that the keyboard can properly control the first camera. If the first camera can be properly controlled but the other ones cannot, check the cable length. Ensure that the cable length does not exceed 50 meters. If the fault persists, restart the keyboard and the cameras.

Dimensions



Pin Assignment

No.	Pins(VISCA IN)	Pins(VISCA OUT)
1	DTR	NC
2	NC	DSR
3	TXD	TXD
4	GND	GND
5	RXD	RXD
6	GND	GND
7	IR OUT	NC
8	NC	NC



Regulatory Compliance Statement -HUAWEI VPC800

Issue : 01

Date: 2015-6-14

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1 Regulatory Compliance Statement

About This Chapter

1.1 Declaration of Conformity to European Directives

Figure 1-1 Declaration of Conformity to European Directives

Doc NO.: CE-01958518

Declaration of Conformity

For EU Directives and Regulations

For the following equipment

Product	:	HD Video Camera
Model/Trademark	:	HUAWEI VPC800 / HUAWEI
Manufacturer's Name	:	Huawei Technologies Co., Ltd.
Manufacturer's Address	:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

is herewith confirmed to comply with the requirements which are set out in 1999/5/EC(R&TTE Directive), 2002/95/EC & 2011/65/EU (RoHS Directive), 2002/96/EC&2012/19/EU (WEEE Directive) and 2006/1907/EC(REACH Regulation). For the evaluation of the compliance with these Directives and Regulations, the following standards/requirements were applied:

Safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
EMC	EN55022:2010 EN55024:2010 EN 61000-3-2:2006+A1:2009+A2:2009 EN 61000-3-3:2013 EN 61000-6-2:2005 EN 61000-6-4:2007+A1:2011
Radio & Health	EN 300 440-1 V1.6.1 (2010-08) EN 300 440-2 V1.4.1 (2010-08) Council Recommendation 1999/519/EC EN 62479:2010
RoHS	2002/95/EC, 2011/65/EU, EN 50581: 2012
REACH	EC NO. 1907/2006
WEEE	2002/96/EC, 2012/19/EU

CE Marking Date: 2015-8-21

Responsible for making this declaration is the:

☑ Manufacturer ☐ Authorised representative established within the EU

Person responsible for making this declaration

Name/Title	:	Liu Haili Regulation Compliance Manager
Print Name	:	2015-8-21
Place/ Date	:	Shenzhen, China Aug.21,2015

2 Regulatory Compliance Information

About This Chapter

2.1 Regulatory Compliance Standards

This product complies with the standards listed in Table 2-1.

Table 2-1 Regulatory compliance standards

Discipline	Standards
EMC	• CISPR22 Class A • CISPR24 • EN55022 Class A • EN50024 • ETSI EN 301 489 Class A • CFR 47 FCC Part 15 Class A • ICES 003 Class A • AS/NZS CISPR22 Class A • CNS 13438 Class A • IEC61000-3-2 • IEC61000-3-3 • EN61000-6-2 • EN61000-6-4

Discipline	Standards
Safety	• IEC 60950-1 • EN 60950-1 • UL 60950-1 • CSA C22.2 No 60950-1 • AS/NZS 60950.1 • BS EN 60950-1
RF	• ETSI EN 301 489-1 • ETSI EN 301 489 -17 • EN300 440 -1 • EN300 440 -2 • EN62479:2010 • FCC Part 15 • AS/NZS 4268
Health	• ICNIRP Guideline • 1999-519-EC • EN 50385 • EN 62311 • EN62479 • OET Bulletin 65 • IEEE Std C95.1
Environmental protection	• 2011/65/EU (RoHS) • EC NO. 1907/2006 (REACH) • 2002/96/EC (WEEE)

NOTE

EMC: electromagnetic compatibility

RF: radio frequency

EN: European Standard

ETSI: European Telecommunications Standards Institute

CFR: Code of Federal Regulations

FCC: Federal Communication Commission

IEC: International Electrotechnical Commission

AS/NZS: Australian/New Zealand Standard

VCCI: Voluntary Control Council for Interference

UL: Underwriters Laboratories

GR: General Requirement

FDA: Food and Drug Administration

ICNIRP: International Commission on Non-Ionizing Radiation Protection

OET: Office of Engineering Technology

IEEE: Institute of Electrical and Electronics Engineers

RoHS: restriction of the use of certain hazardous substances

2.2 European Regulatory Compliance

This product complies with the following European directives and regulations.

- 2004/108/EC (EMC)
- 2006/95/EC (low voltage)
- 1999/5/EC (R&TTE)
- 2011/65/EU (RoHS)
- EC NO. 1907/2006 (REACH)
- 2002/96/EC (WEEE)

Product complies with Directive 2002/95/EC, 2011/65/EU and other similar regulations from the countries outside the European Union, on the RoHS in electrical and electronic equipment. The device does not contain lead, mercury, cadmium, and hexavalent chromium and brominated flame retardants (Polybrominated Biphenyls (PBB) or Polybrominated Diphenyl Ethers (PBDE)) except for those exempted applications allowed by RoHS directive for technical reasons.

Product complies with Regulation EC NO. 1907/2006 (REACH) and other similar regulations from the countries outside the European Union. Huawei will notify to the European Chemical Agency (ECHA) or the customer when necessary and regulation requires.

Product complies with Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). Huawei is responsible for recycling its end-of-life devices, and please contact Huawei local service center when recycling is required. Huawei strictly complies with the EU Waste Electrical and Electronic Equipment Directive (WEEE Directive) and electronic waste management regulations enacted by different countries worldwide. In addition, Huawei has established a system for recycling and reuse of electronic wastes, and it can provide service of dismantling and recycling for WEEE. By Huawei recycling system, the waste can be handled environmentally and the resource can be recycled and reused fully, which is also Huawei WEEE stratagem in the word. Most of the materials in product are recyclable, and our packaging is designed to be recycled and should be handled in accordance with your local recycling policies.

In accordance with Article 11(2) in Directive 2002/96/EC (WEEE), products were marked with the following symbol: a cross-out wheeled waste bin with a bar beneath as below:

2.3 U.S.A Regulatory Compliance

2.3.1 FCC Part 15

HUAWEI VPC800 complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device does not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

If this device is modified without authorization from Huawei, the device may no longer comply with FCC requirements for Class A digital devices. In that a case, your right to use the device may be limited by FCC regulations. Moreover, you may be required to correct any interference to radio or television communications at your own expense.

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the device is operated in a commercial environment.

This device generates, uses and radiates radio frequency energy. If it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

Operation of this device in a residential area is likely to cause harmful interference. In this case the user will be requested to correct the interference at his or her own expense.

In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the equipment shall not be less than 0.2 m

2.4 China RoHS hazardous substance table

This products described in this guide complies with “the Administration on the Control of Pollution Caused by Electronic Information Products” which is also called China RoHS

Part Descriptions	**Restricted Substances in Product**					
	Cd	**Pb**	**Hg**	**Cr(VI)**	**PBBs**	**PBDEs**
Alloy Parts	○	X	○	○	○	○
Metal Fitting	○	○	○	○	○	○
PCBA	○	X	○	○	○	○

Other electronics	○	X	○	○	○	○
Solder	○	○	○	○	○	○
Plastic and Polymer	○	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。
╳：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。

2.5 Other Markets

For relevant compliance information/documentation for markets not mentioned above,

Please contact Huawei representative