HD

4K Video Camera
USER MANUAL

Multimedia Imaging Technology Expert
Providing Superior High-definition Solution

Contents

Safeguard

1. Before install camera, please read this manual carefully, please follow this manual during installation and operation, and keep this manual for future reference.

2. Power adapter of camera can transfer external AC 110-240V to DC 12V with 2.0A in maximum, please follow local electric safety regulation strictly during installation and operation.

3. Heavy stress, strong vibration and soaking shall be avoided during transportation, storage and installation, which will make damage to camera.

4. Please operate camera within temperature and humidity range as described in this manual, foreign bodies shall be prevented from camera, and don't spill corrosive liquid to camera surface.

5. Don't disassemble camera by yourself, please turn to professional and qualified personnel for help when necessary.

6. When installing and moving camera, please hold camera main body, not head, please pay attention to handle with care, and don't squeeze the camera avoiding damage internal structure. Please keep camera un-plugged before all installation procedure completed.

7. When cleaning camera, please use soft cloth. If camera is very dirty, wipe it off gently with a soft cloth moistened with a weak solution of water and a neutral kitchen detergent. Wring all excess liquid from the cloth before wiping the camera. Next, wipe off all remaining solution with a soft, dry cloth. Use lens cleaning paper to clean the lens.

8. Video and control cables should be well-shielded to keep stable signal transporting.

9. Please put power, video and control cables to safe place to avoid trampling, don't pile up sundries over cables. Cables shall be protected well especially the connection part.

Product Brief

1. Introduction

This product is an industry leading High-definition conference room engineering camera, it uses a powerful 1/2.8 inch high-definition image processor with 8M pixels, output high-definition video with 16:9 ratio in high quality. It is a perfect match to any codec, videoconferencing endpoint, and other video systems.

This camera has a built-in 3x,10x,20x high-definition optical zoom lens,it achieves high-speed and quiet pan/tilt operation, and cover subjects across wide areas,it also achieves excellent and quick auto-focus and auto-exposure.

It can save up to 241 presets, and provides good accuracy and quick response in camera positioning benefit from its outstanding mechanical design. This camera is an ideal choice for applications including AV integration, videoconferencing, distance education, and video streaming.

2. Features

1) Built-in 1/2.8-type HD CMOS image sensor with 8M pixels.

2) Multiple video outputs, 2-ways HD video and 1-way IP video can be outputted simultaneously in high quality.

3) Reliable, quiet and quick Pan/Tilt camera positioning.

4) Multiple control interfaces and multiple protocol support, achieves full camera control, can work perfectly with other video system (codec, video endpoints, and video tracing system).

5) Multiple installation methods (ceiling and walling), video can be vertically flipped easily by operating OSD menu.

6) Support up to 241 presets, pan, tilt and zoom values can be stored even after rebooting.

7) Built-in OSD menu, multi-functional IR remoter, ease-to-use operating.
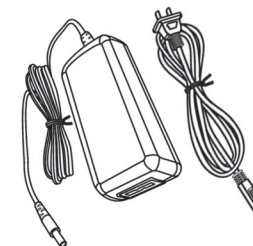
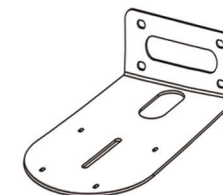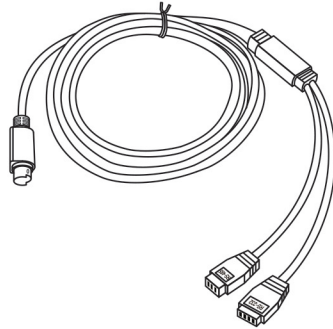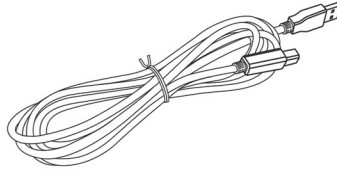## Standard Accessories

1. Camera
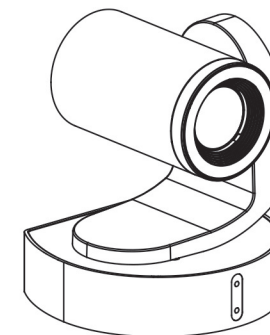
2. IR remote controller
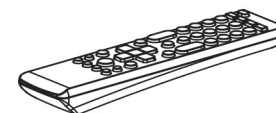
3. Power adapter

4. Wall bracket

5. RS-485 / RS-232 cable

6. USB 3.0 data cable

7. User manual

8. warranty card and
   Quality certificate

Panels and Interfaces

1. Front panel

❶ Lens

❷ COM indicator

❸ Receive window of IR
   remote controller

❹ POWER indicator

❶
❷
❸
❹
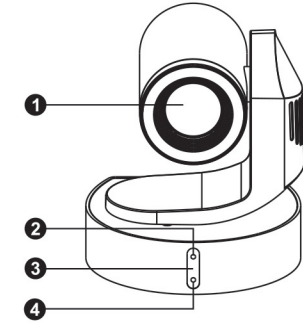
※ Notes ※

● POWER indicator will flash during starting up, when starting up completed, it
  will keep lighting before the first command arrives from IR remote controller
  or COM ports, after then, each flashing means one command received.

2. Back panel

❶ HDMI interface

❷ USB3.0 interface

❸ RS-485 interface

❹ RS-232 IN interface

❺ RS-232 OUT interface

❻ LAN interface

❼ DC 12V Power interface

USB3.0   IN RS232 OUT   LAN   DC 12V

HDMI   RS485

❶   ❷❸❹❺   ❻   ❼
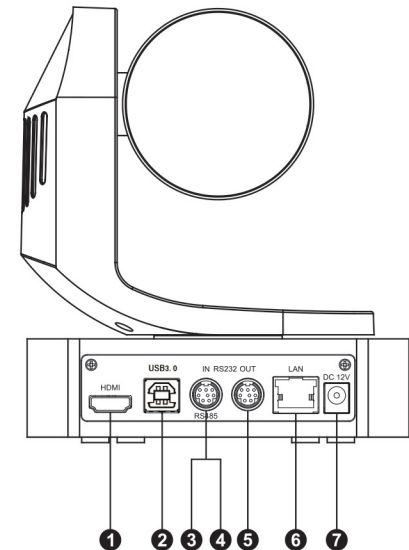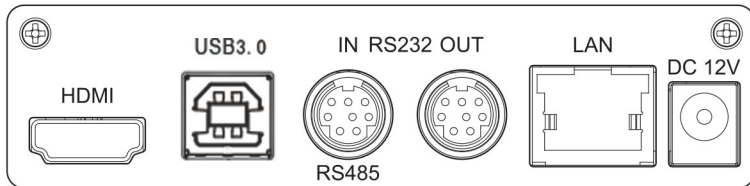
3. Interfaces

1) USB3.0 interface: It carries USB high-definition video signals and seamlessly interfaces with mainstream video conferencing software.

2) HDMI interface: standard HDMI connector, carrying HD video.

3) RJ-45 interface: carrying IP HD video Encoding stream.

4) Control interfaces: one RS485/422 connector, two RS232 connectors, and all support protocols including VISCA and PELCO-D.

IR Remote Controller – Key Layout
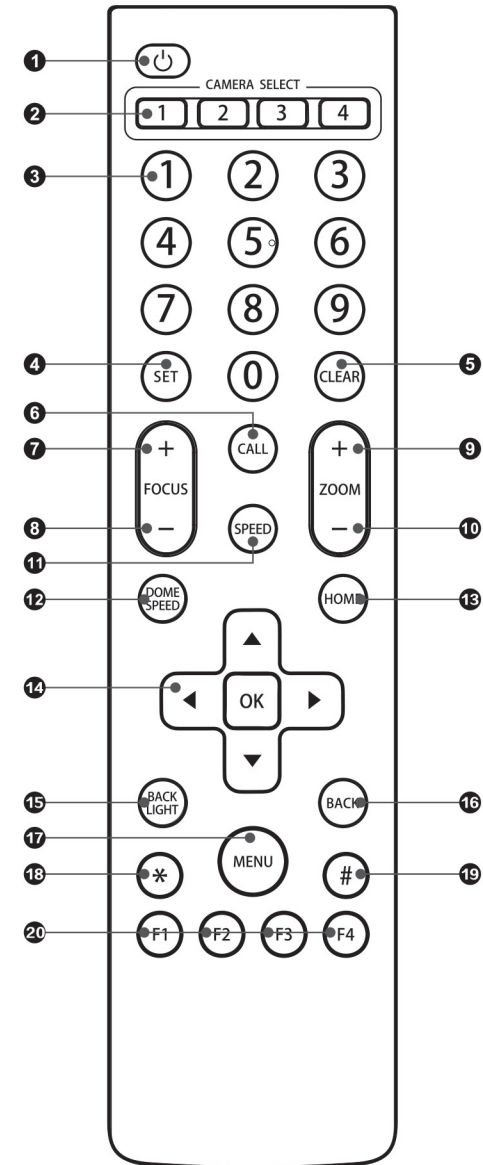
❶ [POWER]: power on/off

❷ [CAMERA SELECT]: select the camera address for controlling

❸ [0-9]: number key

❹ [SET]: set preset

❺ [CLEAR]: clear preset

❻ [CALL]: call preset

❼ [FOCUS +]: focus to far direction

❽ [FOCUS -]: focus to near direction

❾ [ZOOM +]: zoom to tele direction

❿ [ZOOM -]: zoom to wide direction

⓫ [SPEED]: switch zoom/focus speed between fast and slow mode

⓬ [DOME SPEED]: switch pan/tilt speed between fast and slow mode

⓭ [HOME]: back to home position

⓮ DIRECTION KEY: pan/tilt direction/menu operation

⓯ [BACK LIGHT]: backlight compensation on/off

⓰ [BACK]: back to previous menu

⓱ [MENU]: OSD menu on/off

⓲ [*]: switch to auto focus mode

⓳ [#]: switch to manual focus mode

⓴ [F1] [F2] [F3] [F4]: reserved

IR Remote Controller – Menu Operation

OSD menu can be displayed and operated using IR remote controller, as shown below.
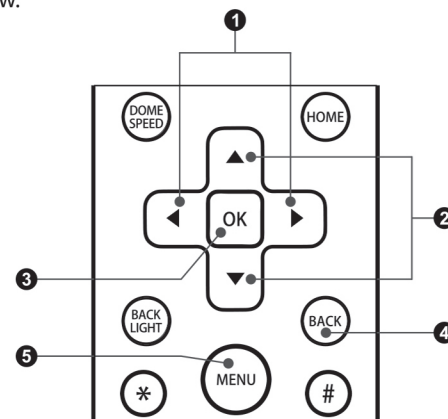
❶ Change menu item   ◀ ▶

❷ Select menu item   ▲ ▼

❸ Enter sub menu   OK

❹ Back to previous menu   BACK

❺ Menu on/off   MENU

If menu is displayed, camera will not respond to operations other than menu navigation from IR remote controller or COM port, OSD menu will not be displayed in SD video output.

※ Notes ※
- Any change made in OSD menu will be saved after menu turn off normally.

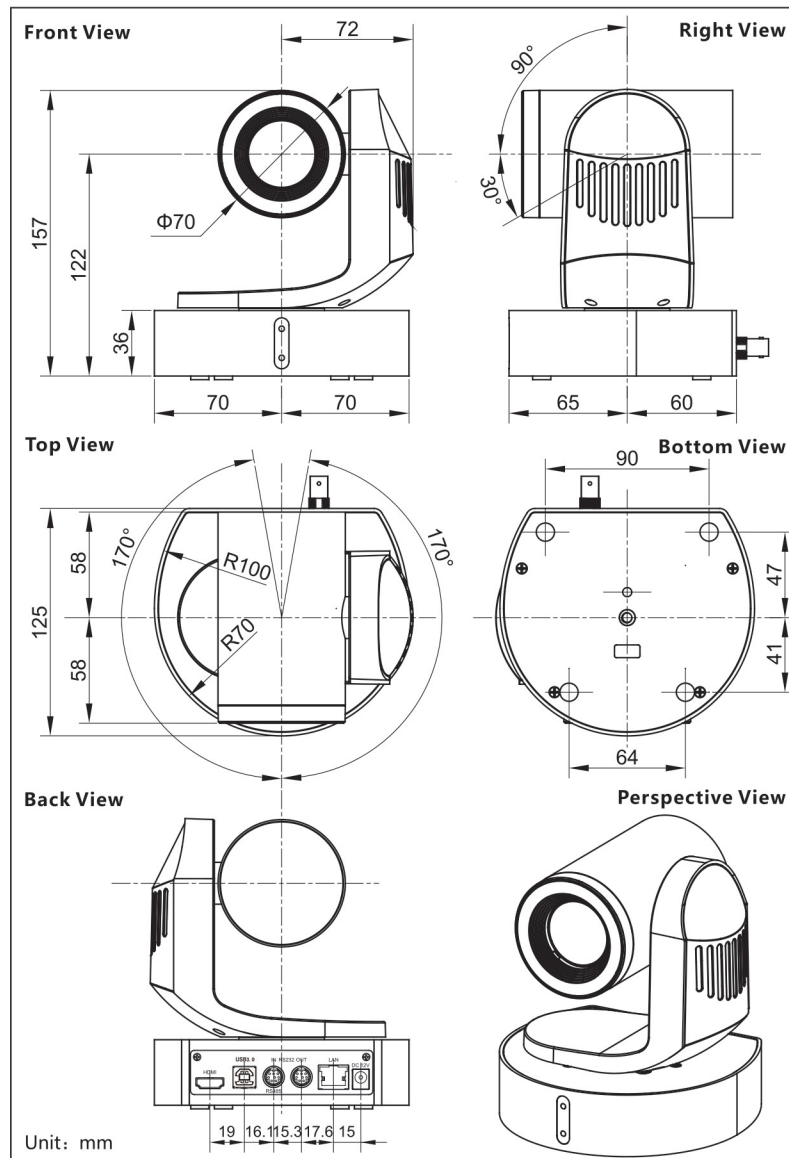The menu supports Simplified Chinese, Traditional Chinese, and English. The detailed content is shown in the table below:

Main Menu	Sub Menu	Option	Description
MENU LANGUAGE	ENGLISH		Set menu language
	CHINESE		
SYSTEM	FORMAT	4K/25	Set video format
		4K/30	
		1080P/23.98	
		1080P/59.94	
		1080P/29.97	
		1080P/60	
		1080P/50	
		1080P/30	
		1080P/25	
		720P/50	
		720P/60	
	COM_BAUD	CONTROL BAUDRATE	1200/4800/9600/19200/38400/57600/115200
	COM_ADDR	1-7 OR 1-254	Set control address(1-7) for VISCA(1-254) for PELCO-D
	PROTOCOL	AUTO	Set control protocol
		VISCA	
		PELCO-D	
		PELCO-P	
	RCU_ADDR	THE REMOTE CONTROL SETS THE CONTROL	Corresponding to the remote control address code 1-4, can be set to 4 cameras address

CAMERA	SCENE	BRIGHT	Set video style
		STANDARD	
		COLORFUL	
		REAL	
LEN	ZOOM SPEED	SET 1-8	Set zoom speed
	DIGITAL SPEED	OFF/ON	Set digital speed
	FOCUS MODE	AUTO/MANUAL	Set focus mode
	FOCUS ZONE	DEFAULT/TOP/CENTER/BOTTOM/ALL	Focus the selected first
	NERA_LIMIT	1cm/30cm/50cm/75cm/1.0m/1.5m2.0m/3.0m/5.0m/10m/21	Set focus distance
	SENSITIVITY	HIGH/MID/LOW	Set the focus sensitivity
PICTURE	BRIGHT	SET 1-100	Set brightness
	CONTRAST	SET 1-100	Set contrast
	SATURATION	SET 1-100	Set saturation
	COLOR_HUE	SET 1-100	Set hue
	SHARP	SET 1-100	Set overall sharpness
EXPOSURE	EXPOSURE_MODE	AUTO/AHUTTER/IRIS/MAUUAL	Set exposure mode
	COMP	STE 1-100	Set backlight
	GAIN	STE 1-100	Set gain max limit
	WDR	ON/OFF	Set wdr
	WDR LEVEL	SET 1-100	Set wdr level
	BACKLIGHT	ON/OFF	Set backlight

WHITE BALANCE	WB_MODE	AUTO/INDOOR/ONE_PUSH/MANUAL/COLOR_TEMP	Set white balance
	RTUNE	SET 1-100	Ser red gain
	BTUNE	SET 1-100	Ser blue gain
ENHANCED	NR	SET 1-5	Set noise filter
	3D NR	SET 1-10	Set 3D noise filter
	CAMMA	DEFAULT/0.45/0.50/0.55/ 0.63	Set camma
OTHER	REVERSE	ON/OFF	Set reverse
	FLIP	ON/OFF	Set flip
	FLICKER	CLOSE/50HZ/60HZ	Set flicker
	OSD_ROTATE	0/90/180/270	Set osd rotate
PTZ	PTZ_SPEED	SET 1-8	Set ptz speed
	START_PRESET	OFF/ON	Set start preset
	PRESET_FOCUS	AUTO	Set digital zoom
		MANUAL	After call perset Auto focus again
	SPEED_MODE	AUTO	Change pan/tilt tate by zoom position
		FIXED	Fix on pan/tilt rate
	PRESET_FREEZE	OFF/ON	Set preset freeze
VERSION	CAM_VER		Display control version
	ARM		Arm control version
	RCU_ADDR		Set rcu addra
RESTORE	NO/YES		Restore settings to factory default

Product Dimension

Front View
72
Right View
90°
157
Φ70
30°
122
36
70   70   65   60

Top View
90
Bottom View
58
170°
R100
170°
47
125
R70
41
58
64

Back View
Perspective View
Unit：mm
19 16.1 15.3 17.6 15

Troubleshooting

1. Unable to complete self-checking during camera starting-up, with abnormal pan/tilt sound

Please check whether standard power adapter be used, (KTEC, input: 110-240v, 50/60Hz, 1A; output: 12v, 2A), if not, please check whether power output is compatible with output of standard power adapter.

2. No video display when camera is connected to displayer or codec

Please refer to following procedures:

1) Make sure camera starting-up completed successfully, can do pan/tilt/zoom operation normally.
2) Make sure camera configured with correct video format supported by camera interface in use, to change video format, please operate OSD menu or call specialreset using IR remote controller.
3) Make sure camera configured with correct video format supported by external device, if not sure, may try 1080p25 format which is usually supported by most devices, and then try other format.
4) Make sure video cable connected well, no poor contact happens.
5) Try connecting camera to HDTV or displayer directly, so to bypass complicated connections and locate real cause.

3. Serious color shifting when camera is connected to displayer or codec

Please refer to following procedures:

1) Make sure video cable connected well, no poor contact happens.
2) Make sure camera configured with correct video format supported by external device, if not sure, may try 1080p25 format which is usually supported by most devices, and then try other format.
3) Try connecting camera to HDTV or displayer directly, so to bypass complicated connections and locate real cause.

4. Changes of camera configurations lost after camera rebooting

If changes made through menu operation, menu must be turned off normally before camera rebooting, so to save related changes.

5. Camera turn to a special pan/tilt/zoom position other than HOME position after rebooting

After rebooting, camera will call preset 1 automatically, only when preset 1 isn't configured, camera will keep in HOME position.

6. Camera can only do pan/tilt operation within a limited range

Normal range for pan operation is -170 degree to 170 degree, normal range for tilt operation is -30 degree to 90 degree, if camera cannot reach such range, the most possibility is someone or devices such as video tracking system changed pan/tilt range using VISCA command.

Please contact us for further assistance.

7. Camera is not controllable through COM port

Please refer to following procedures:

1) Enter to <Main menu><System>, check whether COM parameters including COM port, baud rate and protocol are consistent with those of controller.

※ Notes ※
● If protocol is VISCA, camera address shall be within 1 to 7, if protocol is PELCO, camera address shall be within 1 to 255.

2) If using VISCA daisy chain connection for multiple cameras, please check whether cameras are connected one by one with increased address started from 1.
3) Check whether COM cables connected well, and no poor contact happen.

8. Preset set by IR remote controller is not consistent with preset set by COM command

Preset set by IR remote controller use ID defined from 1 to 128, which is mapped to a camera internal definition from 0 to 127; this internal definition is used in COM command, for example, preset 1 set by IR remote controller can be called by COM command using preset ID 0.

Network Operation

1. Device Installation and Network Environment

1) Web client login

Enter the device IP address (default is 192.168.1.253) in the address bar of the browser, press "Enter" to access the Web client login interface.

There are two login methods available: one with the IE (Internet Explorer) engine that includes control components and another with the Chrome engine that does not have these control components. Logging in with the control.

component-enabled method allows you to perform functions such as capturing images and recording videos. Logging in without control components does not offer these functionalities. Note: Web access is supported on standard browsers including IE and Google Chrome.

Language Selection: In the upper right corner of the login interface, you will see '中文|English.' Click to select the language type for the web page interface.

2) Plugin Download and Installation

When accessing the network conference device for the first time using the Internet Explorer (IE) browser, you may encounter a prompt message saying "The playback plugin is not installed, please download and install it!" Click on the prompt message to download and install VideoPlugin_win32_4.1.0.10544.msi. Follow the instructions provided to complete the plugin installation. After installing the plugin, enter the default username and password, which is typically "admin." Once logged in, you can change the username and password as needed. This will grant you access to the Web client management interface.

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