

## **User Manual**

**V1.2**

**(English)**

**Please read this user manual  
thoroughly before using.**

## **Preface**

Thank you for using this HD Video Conferencing Camera.

This manual introduces the functions, installation process and operation of the HD camera. Prior to installation and usage, please read the manual thoroughly.

## **Precautions**

This product should only be used under the specified conditions in order to avoid any damage to the camera:

- Do not subject the camera to rain or moisture.
- Do not remove the cover. Otherwise, you may risk receiving an electric shock.  
In case of unintended equipment operation, contact an authorized engineer.
- Never operate under unspecified temperature, humidity or power supply.
- Please use soft dry cloth to clean the camera. If the camera is very dirty, clean it with diluted neuter detergent; do not use any type of solvents, which may damage the surface.

## **Note:**

This is a class A production. Electromagnetic radiation at certain frequencies may affect the image quality of TV in home environment.

# Catalogue

<b>ABOUT THE PRODUCT</b> -----	<b>1</b>
FEATURES -----	1
LIST OF PARTS & ACCESSORIES -----	1
MAIN PARTS & INTERFACES -----	2
<b>INSTALLATION AND CONNECTION</b> -----	<b>3</b>
INSTALLATION -----	3
CONNECTION -----	4
<b>OPERATION</b> -----	<b>5</b>
ZOOM AND FOCUS -----	5
MENU -----	5
SPECIAL PRESETS LIST -----	5
<b>MENU CONFIGURATION</b> -----	<b>6</b>
MENU EXPLANATION -----	8
VIDEO -----	9
EXPOSURE -----	9
COLOR -----	10
SYSTEM -----	10
RESTORE DEFAULTS -----	11
<b>NETWORK</b> -----	<b>11</b>
<b>ANNEX 1 TECHNICAL SPECIFICATIONS</b> -----	<b>12</b>
<b>ANNEX 2 SIZE AND DIMENSION</b> -----	<b>13</b>
<b>ANNEX 3 EXTENSION POWER CABLE</b> -----	<b>15</b>
<b>TROUBLE SHOOTING</b> -----	<b>15</b>

# 1 ABOUT THE PRODUCT

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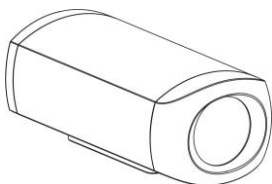
## 1.1 Features

- 1/3" CMOS sensor, 2.14MP;
- 5x optical zoom;
- Support multi control methods:  
LAN / RS-232 / RS-485 / rear panel  
button;
- Support SDI and network  
interface, simultaneous full HD  
video output;
- H.264 video compression, up to  
1080P30 with low network delay;
- Support 2-channel audio input,  
AAC compression;
- Compatible with HTTP /RTSP/  
RTMP / ONVIF protocols.

## 1.2 List of Parts & Accessories

Upon opening the package, check all accessories according to the packing list.

### Camera (1)



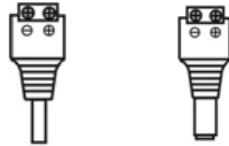
### Power Adapter (1)



### RS-232/ RS-485 Connector (2)



### Convertors for Extension Power Cable

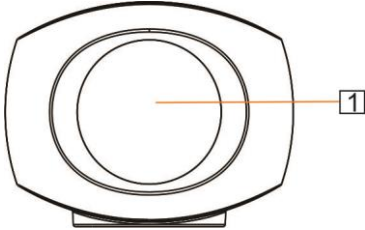


MALE TERMINAL FEMALE TERMINAL

## 1.3 Main Parts & Interfaces

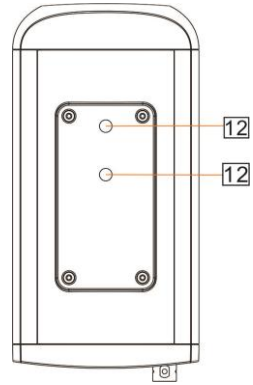
### 1.3.1 Camera

#### Front View



1 Camera Lens

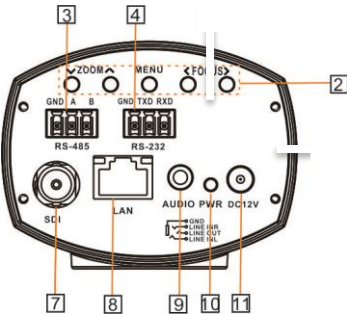
#### Side View



12 Mounting Hole

1/4" screw, used to fix the camera

#### Rear View



2 Button Operation

3 RS-485 Control Interface

4 RS -232 Control Interface

7 HD-SDI Interface

8 Network Interface

9 Audio Interface

10 Power Indicator

11 Power Input (DC12V)

## 2 INSTALLATION AND CONNECTION

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### 2.1 INSTALLATION

The camera can be installed on a wall mount.

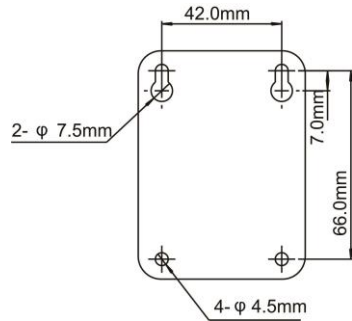
#### NOTE

Before installing, make sure there is enough space to install the camera with all parts/cable. Make sure the installed place is stable and safe enough to hold the camera with its parts, it is suggested that the installed place can withstand 4 times the weight of the camera with cables.

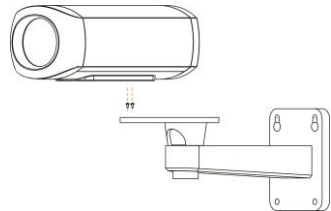


#### 2.1.1 Wall Mount

1. According to diameter and position of the chosen wall mount, drill 4 holes on the wall and fix the bracket onto the wall using 4 screws (wall mount is not included in the package).



2. Use screws to secure the camera on the bracket. Make sure the camera is tightly fixed onto the bracket before your hands leave the camera.

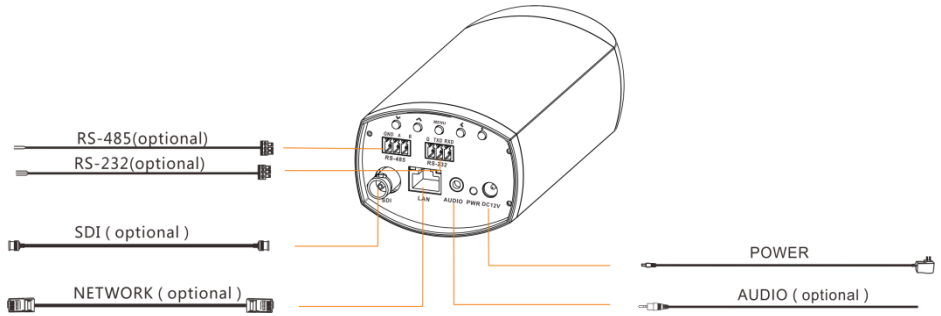


3. Picture is just for illustration; wall mount is NOT included in the camera package.

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## 2.2 CONNECTION

Before powering on, make sure all connections are correct and secure.



## 3 OPERATION

Please refer to “INSTALALTION AND CONNECITON” on page 3.



### 3.1 ZOOM AND FOCUS

Press  $\blacktriangle$  or  $\blacktriangledown$  to zoom in / zoom out the camera; press  $\blacktriangleleft$  or  $\blacktriangleright$  to manually focus of the camera. Make sure you exit the camera menu before zooming using buttons.

### 3.2 MENU

Press “MENU” button to enter camera menu.

#### 3.2.1 MENU SELECTION

Use  $\blacktriangle$  and  $\blacktriangledown$  button to select menu options,  $\blacktriangleleft$  or  $\blacktriangleright$  to change option / value.

#### 3.2.2 MENU CONFIRMATION

Under camera menu, press “MENU” to enter the submenu; press and hold “MENU” button for 3 seconds to exit menu operation.

## 4 PRESETS LIST

Preset Number	Function
95	Enter into menu
101	video format:
103	video format: 1280*720p50
104	Installation mode: STAND
105	Installation mode: CEILING
106	Video format:
108	Video format: 1280*720p60
110	Image distortion
111	Image distortion
112	Image distortion
113	Image distortion
114	Image distortion
115	Image distortion
116	Image distortion
117	Image distortion
118	Image distortion
119	Image distortion
120	Image distortion



## 5 MENU CONFIGURATION

---

<VIDEO>  
(Please refer page 9)

- IMAGE MODE — MODE1, MODE2, MODE3
- SHARPNESS — 0 ~ 15
- CONTRAST — 1 ~ 15
- GAMMA MODE — 0, 1, 2, 3, 4,
- DNR LEVEL — ON, OFF
- LDC LEVEL — 1~10, OFF
- BACK

<EXPOSUR  
E>  
Please refer  
page 9

- EXP-COMP — -7, -6, -5, -4, -3, -2, -1, 0, +1, +2, +3, +4, +5, +6, +7
- BLC — ON, OFF
- ANTI-FLICKER — OFF, 50HZ, 60HZ
- BACK

<COLOR>  
Please refer  
page 10

- WB MODE — AUTO, ONE PUSH, MANUAL
- SATURATION — 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- HUE MODE — AUTO, MANUAL
- BACK

< SYSTEM > Please refer page 10	— ADDRESS	1, 2, 3, 4, 5, 6, 7
	— PROTOCOL	VISCA, PELCO-P, PELCO-D
	— BAUD RATE	2400, 4800, 9600, 38400
	— VIDEO FORMAT	1080P30, 1080P25, 720P60, 720P50
	— MOUNTING MODE	STAND, CEILING
	— RS485 PORT	HALF-DUPLEX-1, HALF-DUPLEX-2
	— LANGUAGE	ENGLISH, CHINESE
	— FIRMWARE VER	V2.0.03
	— BACK	

<RESTORE DEFAULTS>

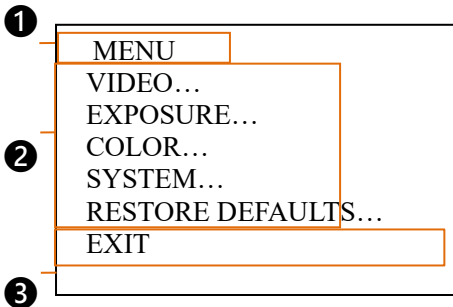
Please refer page 11

<EXIT>

## 5.1 MENU EXPLANATION

### 5.1.1 MAIN MENU

Call preset 95 to enter main menu.



#### 1 Current Menu

It displays currently selected menu option.


#### 2 Menu Options

It shows all the submenus under the


current menu.

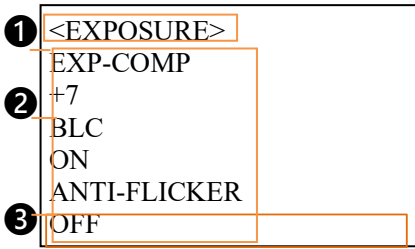
Press ▲ or ▼ button to select submenu options. You'll see

an arrow if one submenu is selected.

Press  button to enter the selected submenu.

### 5.1.2 SUBMENU

Under main menu, navigate to select <EXPOSURE>, press  button to enter the submenu.



### 1 Submenu

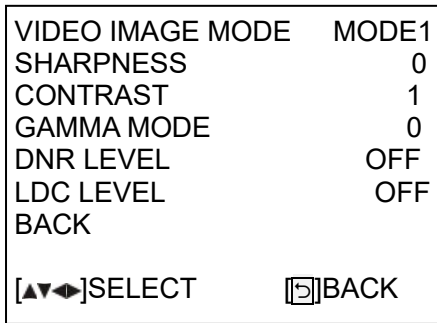
### 3 Set Parameters

Press ◀ or ▶ to change value

### 2. Current setting

## 5.2 VIDEO

VIDEO menu is used to change video parameters.



**IMAGE MODE:** MODE1, MODE2, MODE3.

**SHARPNESS:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

**CONTRAST:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

**GAMMA MODE:** 0, 1, 2, 3, 4

It is for optimizing and adjusting the image curve, brightness and contrast, make subtle adjustment for lighting and shade level of the image, and control the

contrast of the whole image. The higher the level is, the steeper of the Gamma curve will be.

**DNR LEVEL:** It is suggested to be off for a color video. Otherwise, it will affect the video sharpness. The higher the level is, the better the noise reduction there will be, but it will affect video sharpness. (DNR MODE: ON, OFF)

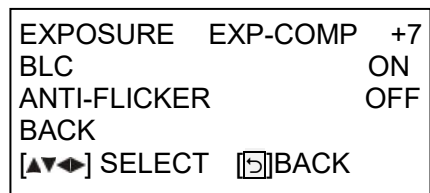
**LDC LEVEL:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, OFF.

It is used to compensate the image distortion, the higher level is, the better image distortion compensation will be.

**BACK**

## 5.3 EXPOSURE

EXPOSURE menu is used to adjust exposure value.



**EXP-COMP:** -7, -6, -5, -4, -3, -2, -1, 0, +1, +2, +3, +4, +5, +6, +7.

+7 is the max compensation value for bright exposure while -7 is the max compensation value for dark exposure.

**BLC:** ON, OFF

Backlight compensation (BLC) can automatically compensate and correct the exposure of subjects with a background that is too bright or dark.


**ANTI-FLICKER:** OFF, 50HZ, 60HZ

This function is to resolve the problem when the image flicks when the lighting frequency is different from the power frequency.

## 5.4 COLOR

COLOR WB MODE	MANUAL
R GAIN	1
G GAIN	122
B GAIN	122
SATURATION	7
HUE MODE	MANUAL
R GAIN	+1
G GAIN	+7
B GAIN	+7
BACK	
[▲▼◀▶]SELECT	[⏪]BACK

**WB MODE:** AUTO, ONE PUSH, MANUAL.

**“ONE PUSH” mode:** Press ▲ or ▼ button to select “ONE PUSH TRIGGER”. Used for focusing the camera at a pure white object (say a white paper), then press  button.

**“MANUAL” R GAIN and B GAIN** values can be chosen from 0~255.

**SATURATION:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14.

**HUE MODE:** AUTO, MANUAL.

## 5.5 SYSTEM

SYSTEM ADDRESS	1
PROTOCOL	VISCA
BAUD RATE	9600
VIDEO FORMAT	1080P30
MOUNT MODE	STAND
RS485 PORT	HALF-DUPLEX-1
DISPLAY INFO	ON
LANGUAGE	ENGLISH
BACK	
[▲▼◀▶]SELECT	[⏪]BACK

**ADDRESS:** 1, 2, 3, 4, 5, 6, 7 (VISCA); 0~255 (PELCO-D/P)

**PROTOCOL:** VISCA, PELCO-D, PELCO-P.

**BAUD RATE:** 2400, 4800, 9600, 38400.

**VIDEO FORMAT:** 1080P30, 1080P25, 720P60, 720P50.

**MOUNT MODE:** STAND, CEILING.

**RS485 PORT:** HALF-DUPLEX-1,  
HALF-DUPLEX-2.

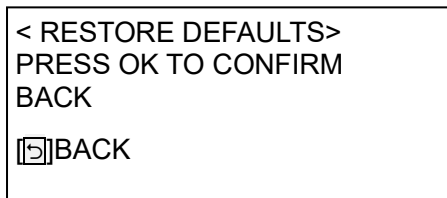
When HALF-DUPLEX-1 is chosen under VISCA protocol, there will be an error message after commands have been executed.

When HALF-DUPLEX-2 is chosen under VISCA protocol, there will be an error message after commands have been executed.

**FIRMWARE VER:** V2.0.03.

**LANGUAGE:** ENGLISH, CHINESE.

## 5.6 RESTORE DEFAULTS



**RESTORE DEFAULTS:** This option is used to reset all parameters to default values.

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## NETWORK

Please refer to “ReadMe.docx”.

Go to AV-1161 page on [www.avipas.com](http://www.avipas.com).

Then click [IPCamConf](#). Or read directly using the URL below:

<https://www.dropbox.com/s/177d5ycwebpn4pa/ReadMe.docx?dl=0>

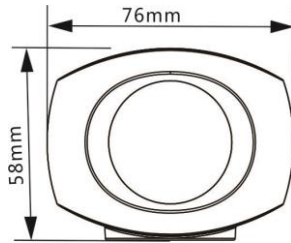
## 6 ANNEX 1 TECHNICAL SPECIFICATIONS

Image Sensor	1/3" CMOS,2.14 megapixel
Max Resolution	1920*1080
Focal Lens	f=2.8mm-14mm
Optical Zoom	5x
Field of View	32°~84°
Focus System	Manual
Min. Illumination	0.5 lux
White Balance	Auto
Exposure Control	Auto
Control Buttons	5
<b>SDI output</b>	
Video output	1080P30/ 1080P25/ 720P60/ 720P50
<b>Network</b>	
Resolution	Max. Support 1920*1080@30fps
Video Compression	H.264
Audio Compression	AAC
Network Protocol	HTTP、RTSP、RTMP、ONVIF
Network Interface	100M, RJ45
Dual Stream	Support
<b>Interface</b>	
Video output (HD)	1 channel SDI interface
Audio Interface	3.5mm interface (2-channel: Line in /Line out)
Comm. Port	RS-232, RS-485
<b>General</b>	
Protocol	VISCA/PELCO-D/ PELCO-P
Power	DC(9V~12V)
Power Consumption	< 5W
Storage Temp	-20°C~+60°C
Dimensions	5.9x3x2.3inch (149×76×58mm)
Weight	0.9lb (0.42kg)
Color	Dark Grey

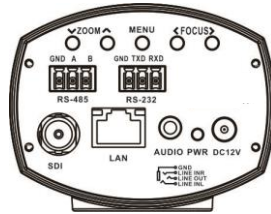
## 7 ANNEX 2 SIZE AND DIMENSIONS

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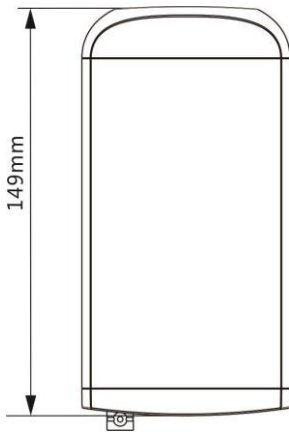
**Front**



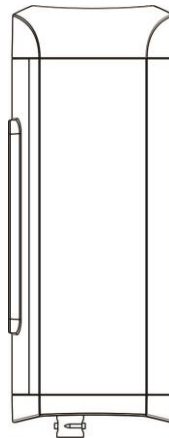
**Rear**



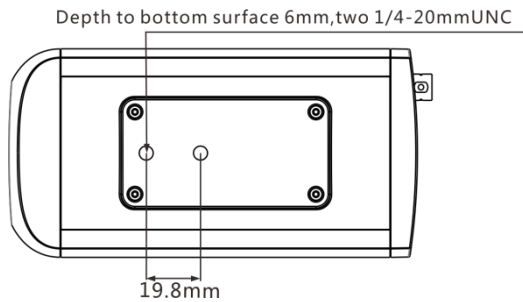
**Top**



**Side**



**Bottom**



## 8 ANNEX 3 RECOMMENDATION DISTANCE FOR EXTENSION POWER CABLE

AWG	Nominal sectional area (mm <sup>2</sup> )	+20°C DC Resistance ≤ (Ω/km)	Recommended distance (m)
20	0.5	36.0	55
19	0.5667	26.9	74
18	0.75	24.5	81
17	1	18.1	110
16	1.318	13.5	148
15	1.5	12.1	165
14	2.075	8.45	236
13	2.5	7.41	269
12	3.332	5.31	376
11	4	4.61	433
10	5.26	3.36	595
9	6	3.08	649



## 9 TROUBLE SHOOTING

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<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
No lens action or video after power on	Power supply failure	Check power supply
	Power adapter damaged	Replace power adapter
	Loose power cable connection	Check & reconnect
No control of the camera after powering on	Incorrect connection or open circuit of RS-485/RS-232 cable	Set the address, protocol and baud rate according to the camera settings.
		Check the connection of RS-485/RS-232 cable.

## Warranty

Thank you for your interest in the products of AVIPAS Inc.

This Limited Warranty applies to HD Conference Camera purchased from AVIPAS Inc. This Limited Warranty covers any defect in material and workmanship under normal use within the Warranty Period. AVIPAS Inc. will repair or replace the qualified products at no charge.

AVIPAS Inc. provides a two (2)-year warranty (from the date of purchase) for this HD Conference Camera.

This Limited Warranty does not cover problems including but not limited to: improper handling, malfunction or damage not resulting from defects in material.

To receive warranty service, please contact AVIPAS Inc. first. We will decide whether a repair or replacement is needed and will advise you of the cost of such repair or replacement.

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VER: 2020-5-12 (EN)

## Contact Details:

### AViPAS Inc.

Address: 4320 Stevens Creek Blvd. Suite 227

San Jose, CA 95129

Phone: (408) 983-0866

1-844-228-4727

Email: [info@avipas.com](mailto:info@avipas.com)

Website: <http://www.avipas.com>