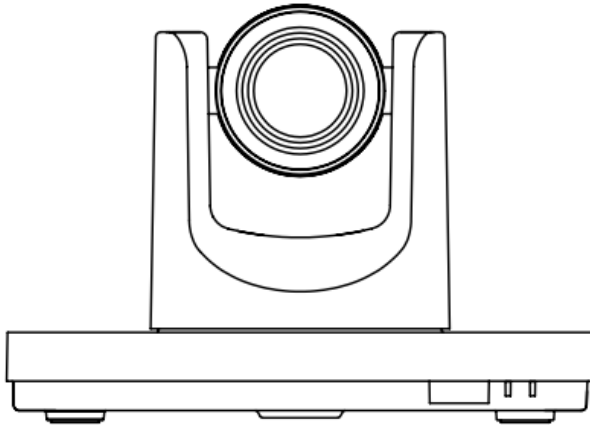


AViPAS

Model: AV-1360
HD Video Conferencing Camera



User Manual

V2.3

(English)

**Please read this User Manual
throughout 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.

Contents

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VISCA Network Configuration	15
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Command List	16
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Network Function.....	22
Maintenance and Troubleshooting	30

Note

- **Electric Safety**

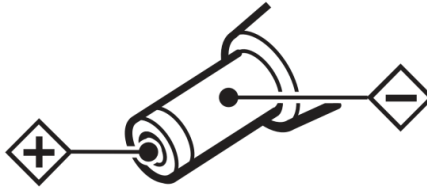
Installation and operation must be in accord with electric safety standard.

- **Use caution to transport**

Avoid stress, vibration or soakage during transport, storage and installation.

- **Polarity of power supply**

The power supply of this product is +12V, the max electrical current is 2A. Polarity of the power supply plug is shown in the drawing below.



- **Installation Precautions**

Do not grasp the camera lens when carrying it. Do not touch camera lens by hand. Mechanical damage may result from doing so.

Do not use in corrosive liquid, gas or solid environment to avoid any cover (plastic material) damage.

Make sure there is no obstacle within the rotation range.

Do not power on before installation is completed.

- **Do not dismantle the camera**

We are not responsible for any unauthorized modification or dismantling.

CAUTION!

Specific frequencies of electromagnetic field may affect the image of the camera!

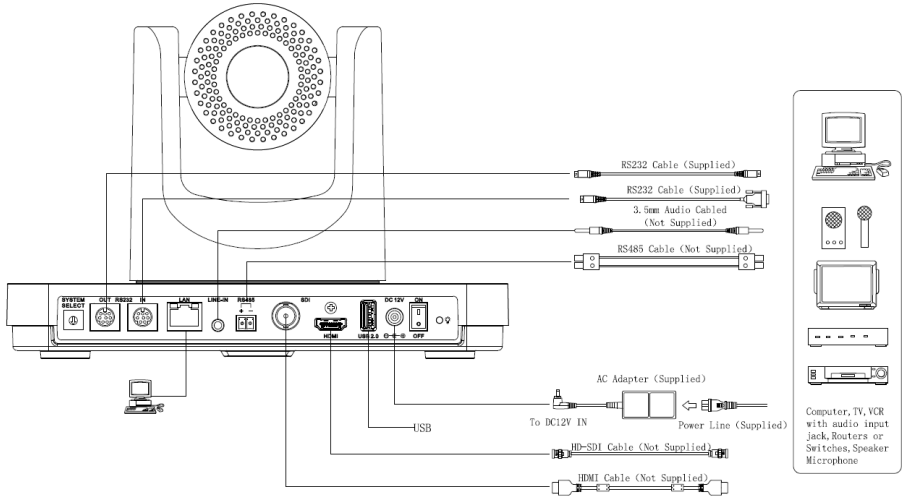
Supplied Accessories

When unpacked, check if all supplied accessories are included:

Camera	1PCS
AC power adaptor	1PCS
Power cord.....	1PCS
RS232 cable.....	1PCS
Remote control.....	1PCS
User manual.....	1PCS

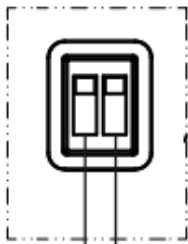
Quick Start

Step1. Check if connections are correct before starting



Step2. Set the bottom switches

Set both switch1 and switch2 to "OFF": the "Normal Working Mode".



12

	SW-1	SW-2	Modes
1	OFF	OFF	Normal Working Mode
2	ON	OFF	-
3	OFF	ON	-
4	ON	ON	-

Step3. Set the system select switch

Video format options:

VIDEO SYSTEM			
0	1080p60	8	720p30
1	1080p50	9	720p25
2	1080i60	A	-
3	1080i50	B	-
4	720p60	C	-
5	720p50	D	-
6	1080p30	E	-
7	1080p25	F	-

CAUTION:

- a. After resetting the switches, the camera needs to be restarted for the changes to take effect.
- b. 720 p30 and 720 p25 are available only under the HDMI output.

Step4. Press the ON/OFF switch on the right rear of the camera. The power light will come on.

Step5. Pan-Tilt function rotates the camera to its maximum position (towards the top right) upon startup. It then returns the camera to the center, and the process of initialization is complete. (Note: if there is an entry for position preset 0, the camera will go to the corresponding position after initialization.)

Features

- **H.265 Support**

The first conference video camera which supports H.265 encoding. It enables full HD 1080p60 video stream with ultra-low bandwidth.

- **1080P Full HD**

Support Panasonic's 1/2.7 inch, 2.07 million effective pixels with high quality HD CMOS sensor. The camera can reach a maximum image resolution of 1920 x 1080.

- **Ultra-high Frame Rate**

The output frame rate can extend up to 60fps in 1080P, and 120fps in 720P (supported by network only), and 240fps in 640x480P (supported by network only, optional).

- **Face Detection**

The built-in face detection module enables PTZ tracking (optional).

- **AAC Audio Encoding**

Supports AAC audio encoding. Better sound quality and smaller bandwidth can be attained.

- **Local Storage**

Support local storage. Video records can be directly stored to local USB flash disk without NVR.

- **Low-light**

The high SNR of the CMOS sensor combined with our 2D and 3D noise reduction algorithm, effectively reduce the noise. Even under low illumination conditions, clear images can still be acquired.

- **Abundant & User-friendly interface**

Support HDMI output and 3G-SDI interface. Can perform effective transmission within distances of up to 100 meters.

- **20x Optical + 32x Digital Zoom**

Uses TAMRON high-quality super telephoto lens, with 20x optical zoom and 32x digital zoom.

- **Remote Control**

Uses the RS232/485 interface. All camera parameters of the may be controlled remotely via high-speed communication.

- **Freeze During Preset**

Supports the "Freeze During Preset" function, which can mask the image when calling the preset.

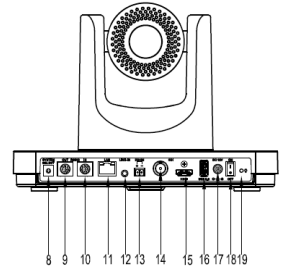
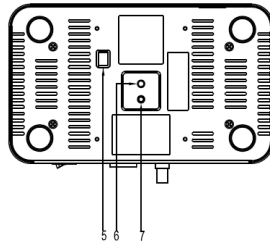
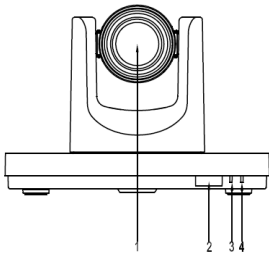
Product Specifications

Name	HD Video Conferencing Camera
Camera Features	
Video System	HD: 1080p/60, 1080p/50, 1080i/60, 1080i/50, 1080p/30, 1080p/25, 720p/60, 720p/50,720p30,720p25
Sensor	1/2.7", CMOS, Effective Pixel: 2.07M
Scanning Mode	Progressive
Lens	20x, f4.42mm ~ 88.5mm, F1.8 ~ F2.8
Digital Zoom	16x (optional)
Minimal Illumination	0.05 Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, 3000K/Indoor,4000K,5000K/Outdoor,6500K-1,6500K-2,6500K-3, One Push, Manual
Backlight Compensation	Supported
Digital Noise Reduction	2D&3D Digital Noise Reduction
Video S/N	≥55dB
Horizontal Angle of View	60.7° ~ 3.36°
Vertical Angle of View	34.1° ~ 1.89°
Horizontal Rotation Range	±170°
Vertical Rotation Range	-30° ~ +90°
Pan Speed Range	1.7° ~ 100°/s
Tilt Speed Range	1.7° ~ 69.9°/s
H & V flip	Supported
Image Freeze	Supported
Face Detection	Supported (optional)
Local Storage	Supported
Number of Preset	255
Preset Accuracy	0.1°

IPC Features	
Video coding standard	H.265/H.264/MJPEG
Video Stream	First stream, Second stream
First stream resolution	1920x1080,1280x720,1024x576,960x540,640x480,640x360
Second stream resolution	1280x720,1024x576, 720x576(Under 50Hz), 720x480(Under 60Hz),720x408, 640x360,480x270,320x240,320x180
Video Bit Rate	32Kbps ~ 20480Kbps
Bit Rate Type	Variable rate, Fixed rate
Frame Rate	50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps
Audio encode standard	AAC
Audio stream rate	96Kbps, 128Kbps, 256Kbps
Support protocols	TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, Multicast, etc.
Input/Output Interface	
HD Output	1xHDMI: Version 1.3
	1x3D-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard
Network interface	1xRJ45: 10/100/1000M Adaptive Ethernet ports
Audio Interface	1-ch 3.5mm audio interface, Line In
USB	1xUSB2.0: Type A female jack
Communication interface	1xRS-232 IN: 8pin Min DIN; Max Distance: 30m; Protocol: VISCA/Pelco-D/Pelco-P
	1xRS-232 OUT: 8pin Min DIN; Max Distance: 30m; Protocol: VISCA network use only
	1xRS-485: 2pin Phoenix port; Max Distance: 1200m; Protocol: VISCA/Pelco-D/Pelco-P
Power jack	JEITA type (DC IN 12V)
Generic Specification	
Input Voltage	DC 12V
Current Consumption	1.0A (Max)
Operating Temperature	-10°C ~ 40°C (14°F ~ 104°F)

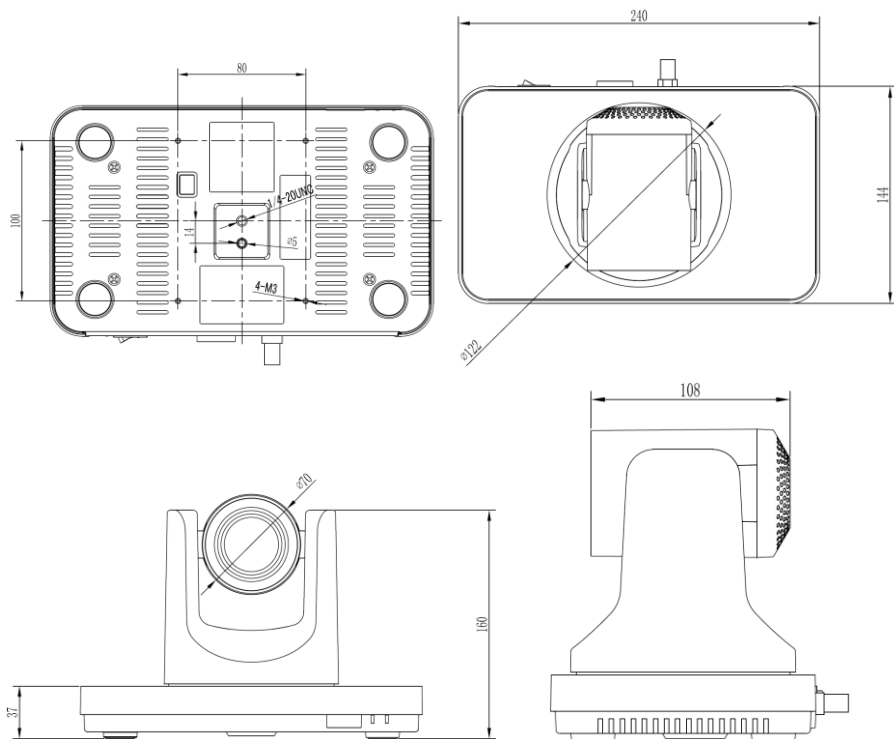
Storage Temperature	-40°C ~ 60°C (-40°F ~ 140°F)
Power Consumption	12W (Max)
MTBF	>30000h
Size	240mm x 144mm x 160mm
Net Weight	1.65Kg (3.6lb)

Main Units

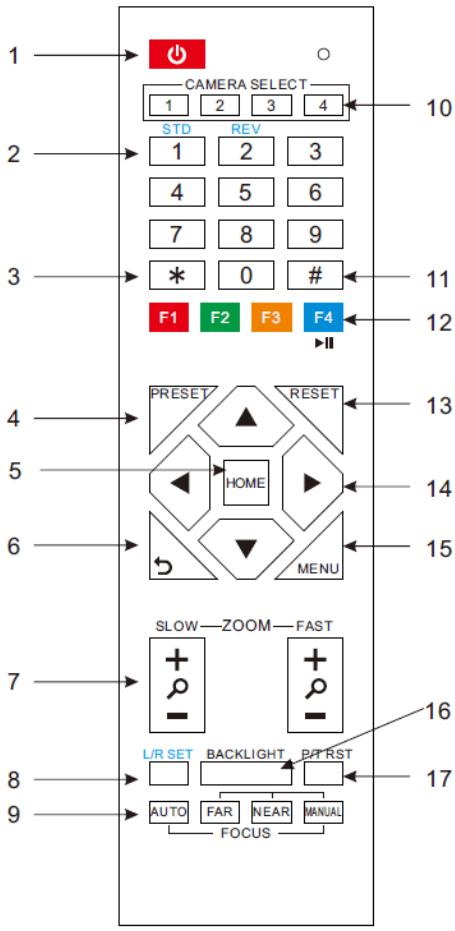


1. Lens
2. Sensor for the remote commander
3. Power lamp
4. Standby lamp
5. Bottom switches
6. Tripod screw hole
7. Fixing screw hole
8. System select switch
9. RS232 OUT interface
10. RS232 IN interface
11. RJ45 interface
12. Line in interface
13. RS485 interface
14. HD-SDI interface
15. HDMI interface
16. USB2.0
17. DC IN 12V interface
18. Power switch
19. POWER lamp

Dimensions



IR Remote Control Menu



1. Standby Button

Press this button to enter standby mode. Press it again to enter normal mode. (Note: Power consumption in standby mode is approximately half that of the normal mode).

2. Position Buttons

To set or call preset.

3. *Button

For use with other buttons.

4. Set/ Preset Buttons

Set/ preset: store a preset position. [SET/ PRESET] + Numeric button (0-9): set a corresponding numeric key for the preset position.

5. Pan-Tilt Control Buttons

Press the Pan-Tilt buttons to move back to the middle position

6. Back buttons

Press the OSD menu to return to the previous page.

7. Zoom Buttons

Slow Zoom: Zoom In [+] or Zoom Out [-] slowly.

Fast Zoom: Zoom In [+] or Zoom Out [-] quickly.

8. Pan-Tilt L/R set

Press 1 and 2 buttons to set the direction of the Pan-Tilt.

L/R Set +1[STD]: set the Pan-Tilt to turn the same direction as the L/R Set.

L/R Set +2[REV]: set the Pan-Tilt to turn the opposite direction from the L/R Set.

9. Focus Buttons

Use for focus adjustment.

Press [AUTO] to adjust the focus on the center of the object automatically. To adjust the focus manually, press [MANUAL]. Adjust focus with [Far] (focus on far object) or [NEAR] (focus on near object).

10. Camera Select Buttons

Press the button corresponding to the camera being operated with the remote control.

11. # Button

For use with other buttons.

12. Camera IR Address Setup Buttons

[*]+[#]+[F1]: Address1

[*]+[#]+[F2]: Address2

[*]+[#]+[F3]: Address3

[*]+[#]+[F4]: Address4

13. Clear Preset Buttons

Clear preset: erase a preset position.

[CLEAR PRESET] + Numeric button (0-9) individually.

Or: [*]+[#]+[CLEAR PRESET]: erase all the preset positions.

14. Pan/Tilt Control Buttons

Press arrow buttons to perform panning and tilting.

Press [HOME] to reposition the camera back towards the front.

15. MENU

MENU: enter or exit OSD MENU.

16. BLC (Backlight Compensation) Button

BLC ON/OFF: Press this button to enable the backlight compensation. Press it again to disable the backlight compensation. (NOTE: effective

only in auto exposure mode).

Note: if there is a light source behind the subject, the subject will become dark. In this case, press the backlight ON/OFF button to adjust.

17. Pan/Tilt reset

Preset Pan/Tilt self-test.

18. Image freezing function

Manually freeze: Enable the freezing function after pressing [F4] on the remote control. "Freeze" will display on the upper left corner of the screen, and disappear automatically after 5 seconds. Press [F4] again to return to normal mode. "Unfreeze" will display on the upper left corner of the screen, and disappear automatically after 5 seconds.

Recall the Preset Image Freeze: use "Recalling the Preset Image Freeze" function in the OSD Menu. After the function is activated, the screen will pause. It can then be switched to any preset position by pressing the corresponding number.

19. Shortcut Setup

[*]+[#]+[1]: OSD menu default English

[*]+[#]+[3]: OSD menu default Chinese

[*]+[#]+[4]: Default IP address

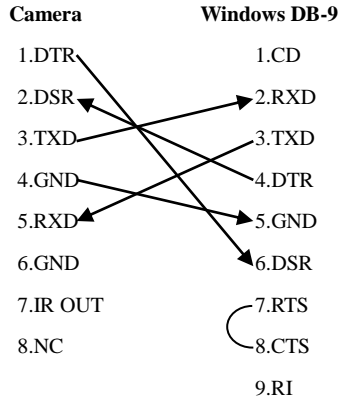
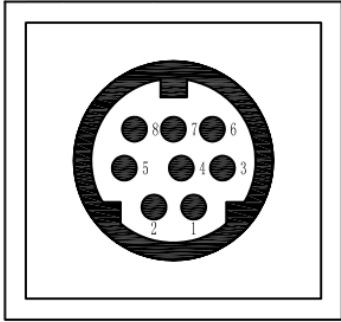
[*]+[#]+[5]: Save OSD

[*]+[#]+[6]: Quick default reset

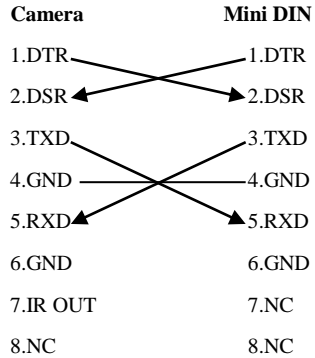
[*]+[#]+[8]: Look up camera version

[*]+[#]+[9]: Quick inversion setup

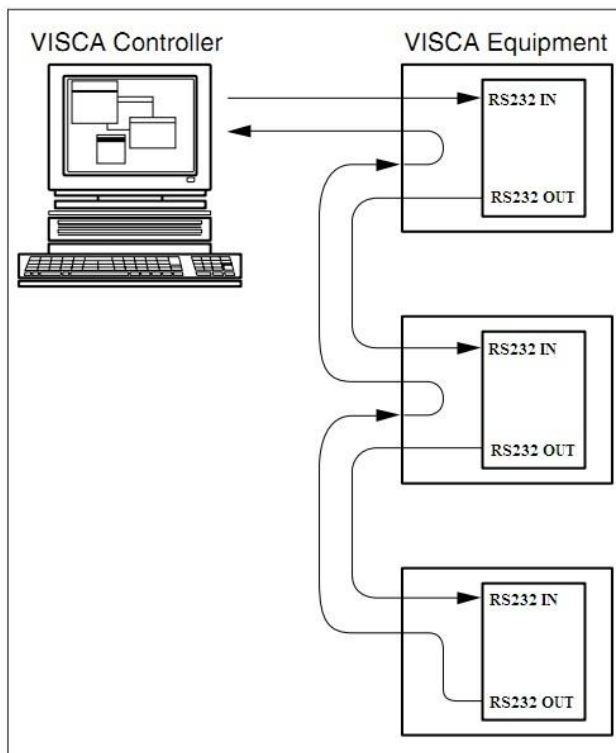
RS-232 Interface



No.	Function
1	DTR
2	DSR
3	TXD
4	GND
5	RXD
6	GND
7	IR OUT
8	NC



VISCA Network Configuration



Serial Communication Control

In the default working mode, the camera can connect to a VISCA controller with a RS232C serial interface.

➤ RS232 Communication Control:

The camera can be controlled via RS232. The parameters of RS232C are as follows:

Bit rate: 2400/4800/9600 bit/s.

Start bit: 1 bit.

Data bit: 8 bits.

Stop bit: 1bit.

Parity bit: none.

➤ RS485 Communication Control:

The camera can be controlled via RS485 in half-duplex mode:

Bit rate: 2400/4800/9600 bit/s.

Start bit: 1 bit.

Data bit: 8 bits.

Stop bit: 1bit.

Parity bit: none.

Pan-Tilt function rotates the camera to its maximum position (towards the top right) upon startup. It then returns the camera to the center, and the process of initialization is complete. (Note: if there is an entry for position preset 0, the corresponding position preset 0 will be called up after initialization.) Then user can control the camera with commands in the command list.

PTZ over TCP/UDP

A TCP server is embedded in camera, port number 5678. When the user establishes a TCP connection with the server, and sends a PTZ control command to the server, the server will parse and execute the PTZ command.

A UDP server is embedded in camera, port number 1259. When the user sends a PTZ control command, the server will parse and execute the PTZ command.

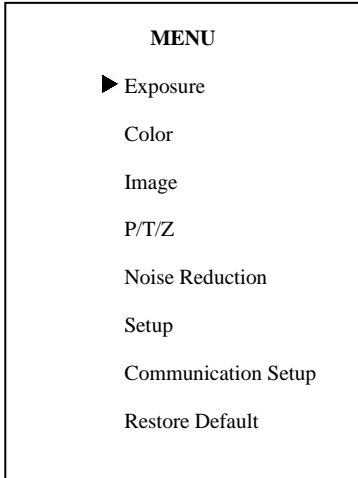
Command List

The serial standard VISCA/ Pelco-D/ Pelco-P needs secondary development. If VISCA/ Pelco-D/ Pelco-P protocol command is needed, please list in detail and contact the manufacturer.

Menu Settings

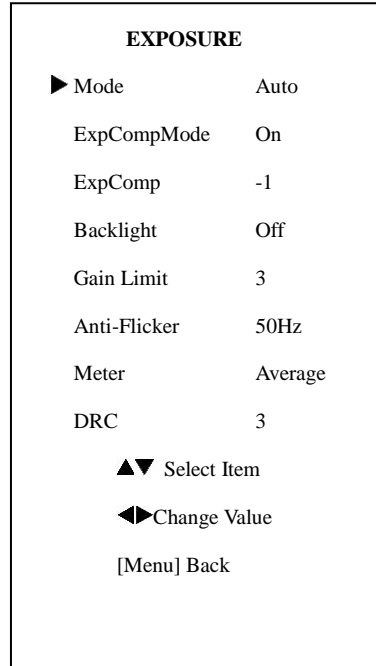
1. MENU

Press [MENU] to display the main menu on the screen. Use the arrow buttons to move the cursor. Press [HOME] to enter the corresponding sub-menu.



2. EXPOSURE

Move the cursor to Exposure in the main menu and press [HOME], the EXPOSURE menu is shown below.



Mode: Exposure mode. Options: Auto, Manual, SAE, AAE, Bright.

ExpCompMode: Exposure compensation mode. Options: On, Off (effective only in Auto mode).

ExpComp: Exposure compensation value. Options: -7 ~ 7(effective only when ExpCompMode is On)

Backlight: Set the backlight compensation. Options: On, Off (effective only in Auto mode)

Gain Limit: Maximum gain. Options: 0 ~ 15 (effective only in Auto, AAE, and Bright modes)

Anti-Flicker: Options: Off, 50Hz, 60Hz (effective only in Auto and Bright modes)

Meter: Options: Average, Center, Bottom,

Top Auto, 3000K/Indoor, 4000K, 5000K/Outdoor, 6500K-1, 6500K-2, 6500K-3, One Push, Manual.

DRC: DRC strength. Options: 0 ~ 8.

Bright: Bright intensity control. Options: 00~17. (effective only in Bright mode) RG: Red gain. Options: 0~255 (effective only in Manual mode)

Iris: Aperture value. Options: F1.8, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11.0, Close (effective only in Manual and AAE modes) BG: Blue gain. Options: 0~255 (effective only in Manual mode)

Shut: Shutter value. Options: 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 (effective only in Manual and SAE mode) RG Tuning: Red gain fine-tuning. Options: -10 ~ +10 (effective only when AWBsens is Low)

BG Tuning: Blue gain fine-tuning. Options: -10 ~ +10 (effective only when AWBsens is Low)

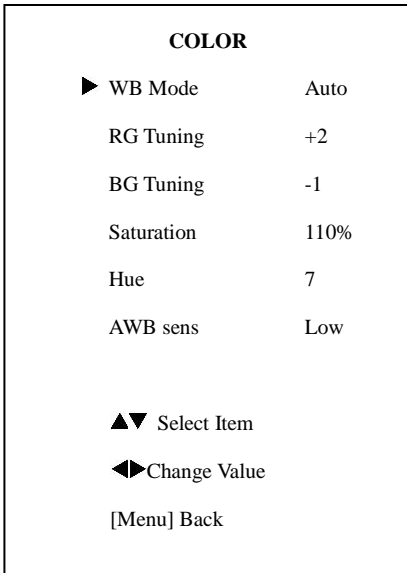
Saturation: Options: 60% ~ 200%.

Hue: Chroma adjustment. Options: 0 ~ 14.

AWBsens: White balance sensitivity. Options: Normal, High, Low.

3. COLOR

Move the cursor to “Color” in the main menu and press [HOME], the COLOR menu is shown below.



4. IMAGE

Move the cursor to “Image” in the main menu and press [HOME], the IMAGE menu is shown below.

WB Mode: White balance mode. Options:

IMAGE

▶ Luminance	7
Contrast	7
Sharpness	2
Flip-H	Off
Flip-V	Off
B&W-Mode	Off
Gamma	Default
Style	Clarity
LDC	Off

▲▼ Select Item

◀▶ Change Value

[Menu] Back

Gamma: Options: Default, 0.45, 0.5, 0.56,
0.63

Style: Options: Norm, Clarity, Bright, Soft,
5S.

LDC: Options: On, Off.



Note:

1080p60 and 1080p50 do not support lens
distortion.

5. P/T/Z

P/T/Z

▶ SpeedByZoom	On
AF-Zone	Center
AF-Sense	High
L/R Set	STD
Display Info	On
Image Freeze	Off
Digital Zoom	Off
Fast Zoom	Off

▲▼ Select Item

◀▶ Change Value

[Menu] Back

Luminance: Brightness adjustment. Options:
0~14

Contrast: Contrast adjustment. Options: 0~14

Sharpness: Sharpness adjustment. Options:
Auto, 0~15

Flip-H: Flip image horizontally. Options: On,
Off.

Flip-V: Flip image vertically. Options: On,
Off

B&W-Mode: Image color. Options: On, Off

SpeedByZoom: The depth of field scale adjustment. Options: On, Off

AF-Zone: Focusing area of interest. Options: Top, Center, Bottom

AF-Sense: Automatic focusing sensitivity. Options: Low, Normal, High

L/R Set: Options: STD, REV

Display Info: Options: On, Off

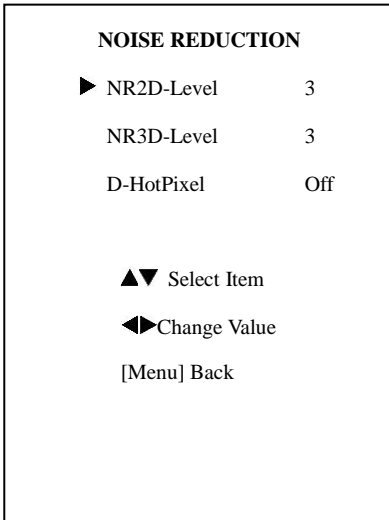
Image Freeze: Options: On, Off

Digital Zoom: Options: On, Off

Fast Zoom: Options: On, Off

6. NOISE REDUCTION

Move the cursor to “Noise Reduction” in the main menu and press [HOME]. The NOISE REDUCTION menu is shown below.



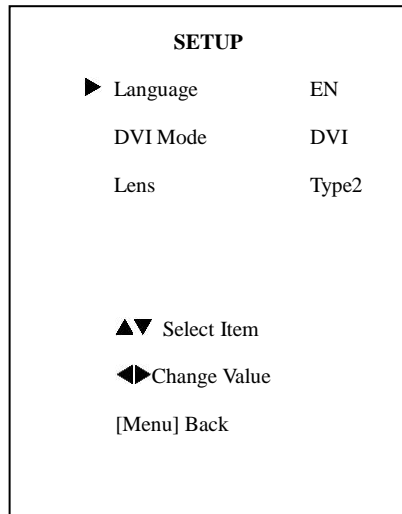
NR2D-Level: 2D noise reduction. Options: Off, Auto, 1 ~ 5

NR3D-Level: 3D noise reduction. Options: Off, 1 ~ 8

D-HotPixel: Dynamic bad points. Options: Off, 1 ~ 5

7. SETUP

Move the cursor to “Setup” in the main menu and press [HOME]. The SETUP menu is shown below.



Language: Menu language. Options: English, Chinese, Russian

DVI Mode: Options: DVI, HDMI



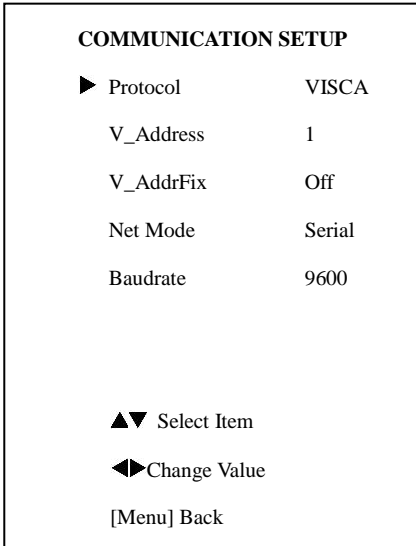
Note:

When switching the camera from DVI to HDMI mode, the user needs to save the change and restart the camera. There will be embedded audio in the HDMI output.

Lens: Lens type. Options: Type1, Type2

8. Communication SETUP

Move the cursor to “Communication Setup” in the main menu and press [HOME]. The COMMUNICATION SETUP menu is shown below.



Protocol: Control protocol type. Options: AUTO, VISCA, PELCO-D, PELCO-P

V_Address: Protocol address, consistent with the agreement. Options: AUTO, VISCA.

P_D_Address: PELCO-D protocol. Options: 0 ~ 254

P_P_Address: PELCO-P protocol. Options: 0 ~ 31

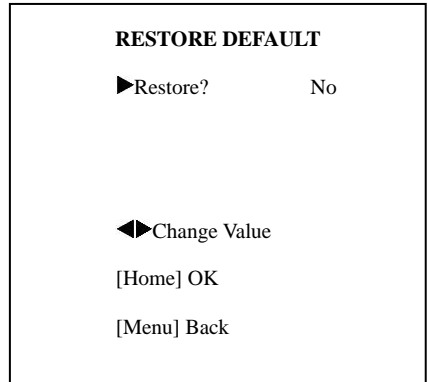
V_AddrFix: Change serial port using infrared switch. Options: On, Off (when set to On, command 88 30 01 FF becomes invalid)

Net Mode: Set the serial port control pattern. Options: Serial, Paral

Baudrate: Serial port baud rate. Options: 2400, 4800, 9600

9. RESTORE DEFAULT

Move the cursor to “Restore Default” in the main menu and press [HOME], The RESTORE DEFAULT menu is shown below.



Restore: Restore factory settings. Options: Yes, No

Note: Press [HOME] to confirm. All parameters will be reset to default values, including IR Remote address and VISCA address.

Save: Save settings. Options: Yes, No

Network Function

1 Operating Environment

Operating System: Windows 2000/2003/XP/vista/7/8.

Network Protocol: TCP/IP.

Client PC: P4/128MRAM/40GHD/ supports scaled graphics card, DirectX8.0 or more advanced version.

2 Equipment Installation

1) Connect internet camera to a wireless network (Wi-Fi) or to your PC directly via internet cable.

2) Turn on DC12V power.

3) When the orange light on the internet port lights up (green light flashing), the physical connection is complete.

3 Local storage

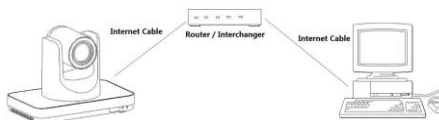
Supports local USB flash disk storage. Requires the corresponding SDK. Please contact the manufacturer for SDK information.

4 Internet Connection

There are 2 ways of connecting the internet camera to a computer.



Picture 1.1 connect by internet cable



Picture 1.2 connect by router /interchanger

5 IP camera visited/ controlled by LAN

5.1 Setup IP address

The camera's default IP address is 192.168.100.88. For unknown camera IP, follow these instructions to reveal:

Method 1: press * and # and 4 on the remote control in order. The camera's IP address will be displayed on-screen.

Method 2: connect the camera to a PC with an Ethernet cable. Use "upgrade_En.exe" to search for the IP address.



To change the IP address, follow these steps:

Method 1: On the web control page, click "Network" > change IP > click "Apply" > restart camera

LAN Settings

IP Configuration Type: Fixed IP Address

IP Address: 192.168.100.87

Subnet Mask: 255.255.255.0

Gateway: 192.168.100.1

DNS Address: 8.8.8.8

MAC Address: D4 : E0 : BE : 1E : 18 : C0

Apply Cancel

Port Settings

HTTP Port number: 80 (80)

RTSP Port: 554 (554)

PTZ Port: 5678 (5678)

Control Protocol Settings

Viaca Address: 1 (1-7)

Pelco-D Address: 0 (0-255)

Pelco-P Address: 0 (0-31)

RTMP Settings

First stream: On Off Video Audio

MRL: rtmp://192.168.100.138/live/stream0

Second stream: On Off Video Audio

MRL: rtmp://192.168.100.138/live/stream1

RTSP Settings

RTSP Auth: On Off

ONVIF Settings

ONVIF: On Off

ONVIF Auth: On Off

Multicast Settings

Multicast: On Off

Address: 224.1.2.3

Port: 6688

SDK Settings

Active Connection: On Off

Address: 192.168.100.138

Port: 1234

Apply Cancel

Method 2: Open "upgrade_En.exe"; change IP and click "Set". After modifying, restart the IP Camera.

UPGRADE v1.9

Search Upgrade Config Backup

Mode: Manual

IP Address: 192.168.100.88

Mask: 255.255.255.0

GateWay: 192.168.100.1

First DNS: 192.168.100.1

MAC Address: D4 : E0 : 8E : DB : 18 : 06

Set Reset

Language: English



NOTE!

The IP camera's default IP address: "192.168.100.

88", user: "admin", password: "admin".

5.2 Visit/Access IP Camera

Input http://192.168.100.88 in the address bar (best with IE web browser, others will cause a little latency). When the login window pops up, input login name: admin, password: admin.

Windows Security

The server 192.168.100.88 is asking for your user name and password. The server reports that it is from ..

Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.

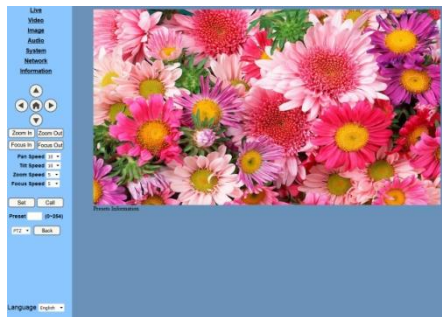
User name:

Password:

Remember my credentials

OK Cancel

After login, the page will be as shown below:



NOTE!

If the camera is being used for the first time with an Internet connection, the user must install a video player (VLC). Please go to the VLC website <http://www.videolan.org/vlc/download>; download and install as instructed. After installation, login again; the home page will show.

6 IP Camera accessed/controlled by WAN (Internet)

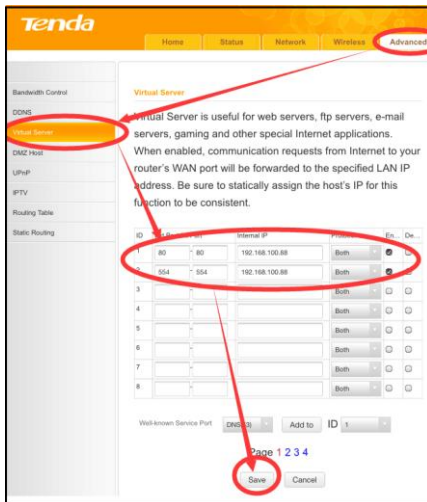
6.1 Setup IPC accessed/controlled by dynamic DNS

2 dynamic DNS available:

Dyndns.org,
3322.org

Router Port Mapping:

Example with Tenda router: enter the Router Home Page (interface page)> select "Advanced"> "Virtual Server"> add a new port number in "Ext Port"> add a new port number in "Int port"> put camera IP address as "Internal IP"> "Save".



6.2 Dynamic DNS visits camera

Set domain name to camera and set the parameters. Then the dynamic DNS can access the camera. Access link: <http://hostname: port number>. For example, if the host computer name is set to: youdomain.f3322.org, camera port number: 554,

then the access link should be:

<http://youdomain.3322.org:554>.



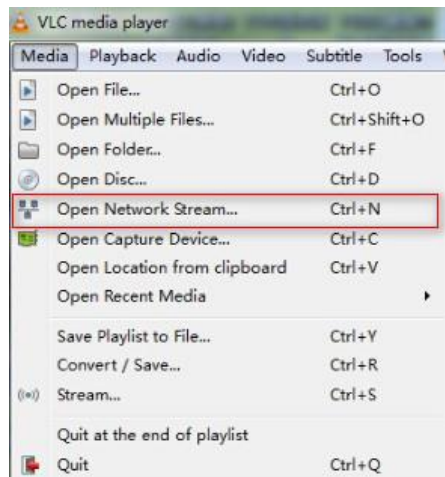
NOTE!

If the default camera port is 80, it's unnecessary to enter the port number. By using only the host name, the user can access the camera directly.

6.3 VLC stream media player monitoring

Visit VLC media server procedure

Open the VLC media player, click "Media"> "Open Network Steam", or use "Ctrl+N".



Input URL address:

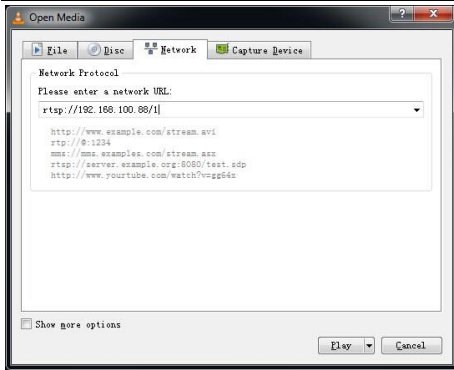
`rtsp://ip: port number/1` (First stream);

`rtsp://ip: port number/2` (Second stream).



NOTE!

Default port number: 554.



7 IP Camera parameter setup

7.1 Homepage introduction

Menu

All pages include 2 menu bars:

Real-time monitoring: display video.

Parameter setup: function buttons.

A. Video viewing window

Video viewing window must accommodate the video resolution: the higher the resolution is, the bigger the playing area should be. Double clicking the viewing window will enable full-screen; double clicking again will return to initialized size.

Status bar in viewing window is shown below:



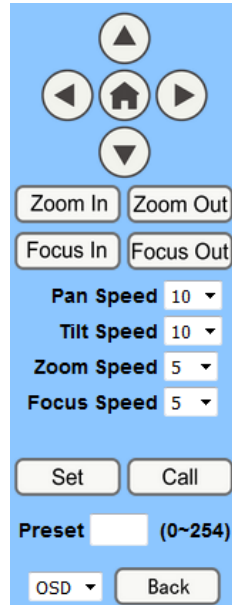
1) Video playback pause button:

stops video at the last frame. Click again to resume video.

2) Audio control buttons: can set to silent mode.

3) Full screen switch button.

B. PTZ Setup



1) PTZ direction control box: up, down, left, right, home oblique buttons.

2) Rate: Vertical speed can be set to any value from 1 ~ 24, horizontal direction can be set to any rate between 1 ~ 20.

3) Select a certain speed and click the direction buttons to set the PTZ speed higher or lower.

4) Zoom In/ Zoom out: for zooming in or zooming out. Focus In/ Focus Out: Focusing on distant objects or on closer objects.

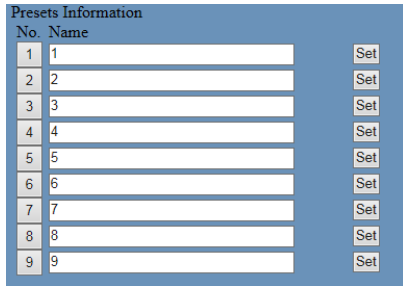
5) Set/ Call: when PTZ turns to an expected position, it can be saved as a preset entry:

Method 1: Type a number into the Preset box.



Method 2: Type a name into the Preset

information.



Click the "Set" button to confirm. When the PTZ turns to other positions, click "Call" button or click "No." PTZ will redirect to the corresponding preset position.

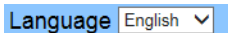


6) MENU/ PTZ:

MENU: OSD menu displays at the upper corner of the image page. PTZ direction control box: up/down button moves to the menu item; home button enters the submenu, left/right button modifies the submenu. After the menu has been modified, select PTZ. If in the main menu, the system will save the settings and exit automatically. Otherwise, return to the previous menu. "Back" button is effective only in submenu.

PTZ: system in PTZ mode.

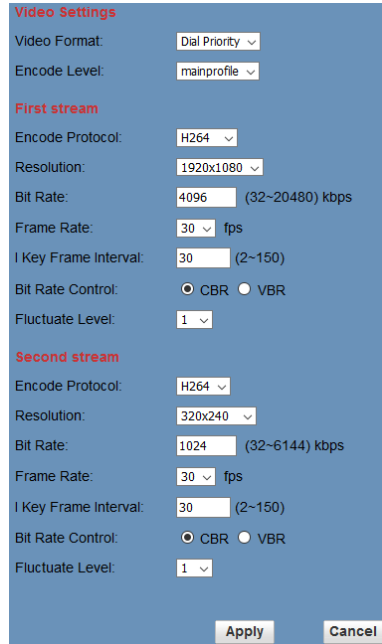
C. Language selection



Chinese/English/Russian

7.2 Media

Click "Video" to finish video setup:



1) Video format

Supports 3 formats: 50Hz (PAL), 60Hz (NTSC), and Dial priority.

2) Encode Level

Supports 3 formats: baseline, mainprofile, and highprofile.

3) Encode Protocol

Supports 3 formats: H.264, H.265, and MJPEG

4) Resolution

First bit flow supports 1920x1080, 1280x720, 1024x576, 960x540, 640x480 and 640x360. Second bit flow supports 1280x720, 1024x576, 720x576(Under 50Hz), 720x480(Under 60Hz), 720x408, 640x360, 480x270, 320x240 and 320x180. The higher the resolution is, the clearer

the image will be, and more network bandwidth will be taken.

5) Bit Rate

User can assign bit flow/stream. Normally a larger bit flow contributes to a clearer image. The bit allocation must coordinate with the network bandwidth. If the network bandwidth is narrow while the allocated bit flow is too large, the video signal flow will not be transmitted normally, and the video quality will thus be corrupted.

6) Frame rate

User can specify a proper frame rate. Generally, a higher frame rate gives a smoother image. With a smaller frame rate, there is a higher chance of beating.

7) I key frame interval:

Set interval between 2 I frames, the larger the interval is, the slower the response will be in the viewing window.

8) Bit Rate (code stream) control

Constant bit rate: video will be coded according to the preset speed.

Variable bit rate: video coder will adjust the speed based on preset speed for the best image quality.

9) Fluctuate level

Restrain the fluctuation magnitude within grade 1 ~ 6.

7.3 Click “Image” to finish image setup:



1) Brightness

Brightness 0~14, slide to control. The box on the right shows the corresponding numerical value. Default: 7.

2) Saturation

Saturation 0~14, slide to control. The box on the right shows the corresponding numerical value. Default: 4.

3) Contrast

Contrast 0~14, slide to control. The box on the right shows the corresponding numerical value. Default: 7.

4) Sharpness

Sharpness 0~15, slide to control. The box on the right shows the corresponding numerical value. Default: 2.

5) Hue

Hue 0~14, slide to control. The box on the right shows the corresponding numerical value. Default: 7.

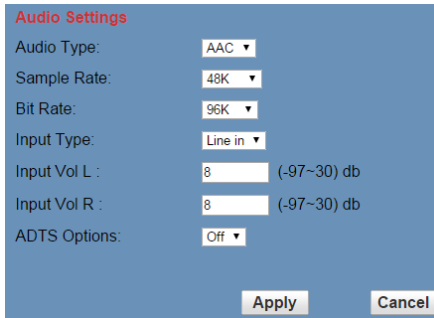
6) Flip & Mirror

Click “Flip” to flip image upside down. Click “mirror” to show the mirror image.

7) Button

To adjust the parameters, click “apply” to save, click “cancel” to discard the change of the parameters, click “default” to restore the default values.

7.4 Click “Audio” to finish audio setup:



Audio Settings

Audio Type: AAC

Sample Rate: 48K

Bit Rate: 96K

Input Type: Line in

Input Vol L : 8 (-97~30) db

Input Vol R : 8 (-97~30) db

ADTS Options: Off

Apply Cancel

1) Audio Type

Audio type: AAC.

2) Sample rate

Sample rate: 44.1 K and 48 K.

3) Bit rate

Bit rate: 96k, 128k, 256k.

4) Input Type

Line-in only.

5) Input Vol L

Volume of the left channel.

6) Input Vol R

Volume of the right channel

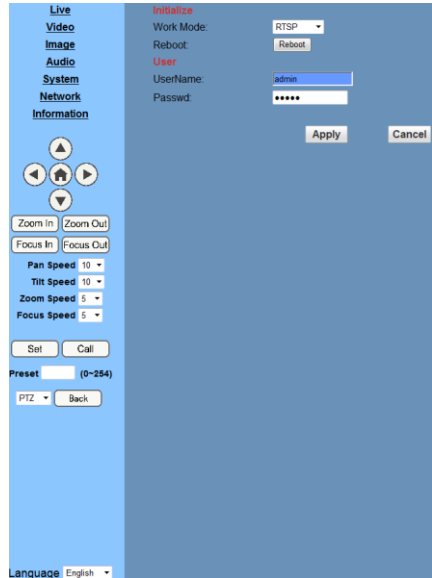
7) ADTS Options

Options: On, Off

8) Button

Click “apply” to save parameter settings. Click “cancel” to discard changes.

7.5 Click “System” to change system settings:



System

Work Mode: RTSP

Reboot: Reboot

User: admin

UserName: admin

Password: *****

Apply Cancel

1) Work Mode

Work mode: RTSP

2) Reboot

Click “Reboot”, system restarts.

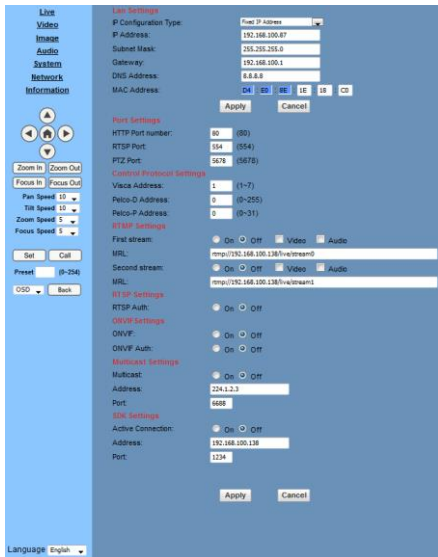
3) User and password

User can modify the user name and password (letters and numbers only).

4) Apply / Cancel

Click “apply” to finish password setting and go back to the login page. Click “cancel” to discard the change.

7.6 Click “Network” to finish network setup:



1) Lan Settings

Default IP address: 192.168.100.88. MAC address can be modified.

2) Port Settings

A. HTTP Port

IP address identifies the network device. Each device can run multiple web applications which use network port to transmit data. Data transmission is to be carried out between ports, and the port setup is to assign WEB SERVER program the corresponding port. The port mapping needs to be consistent with the port number (default port: 80).

B. RTSP Port

Network camera supports RTSP protocol, and user can use the VLC tools to broadcast.

C. PTZ Port

Support PTZ protocol, default port: 5678.

3) Control Protocol Setting

Set camera-control communication protocols, including Visca address, Pelco-D address, and Pelco-P address.

4) RTMP Setting

Set up to two camera streams. For each, select control of "On", "Off", "Video", "Audio", etc.

5) RTSP Setting

Set network camera RTSP protocol, choose "On"/"Off".

6) ONVIF Setting

Set ONVIF protocol and authorization, choose "On"/"Off".

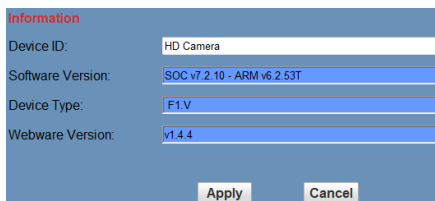
7) Multicast

Set multicast, choose "On"/"Off". Set multicast address (default: 224.1.2.3) and port (default: 6688).

8) Apply / Cancel

Modify network parameters then click "Apply". Click "Cancel" to discard parameter changes.

7.7 Click "Information" to finish device information setup:



Note:

Software version may not be the latest one, the released version shall prevail.

Maintenance and Troubleshooting

Download the upgrade program

If a camera upgrade is needed, please contact the manufacturer.

Camera Maintenance

- If the camera will be idle for a long time, please turn off the power switch and disconnect AC power cord from outlet.

- Use soft cloth or tissue to clean the camera (lens cleaning not recommended).
- Use the soft dry cloth to clean the lens. If the camera is very dirty, clean it with diluted neuter detergent. Do not use any type of solvents, which may damage the surface.

Unqualified Application

- Avoid exposure to light of extremely high intensity or for extended periods of time, such as sunlight or special light sources.
- Do not operate under unstable lighting conditions, otherwise image will flicker.
- Do not operate close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

Troubleshooting

Image

- No image
 1. Check if the power cord is connected, or voltage is right, or POWER light is on.
 2. Check if the camera can self-test upon start-up.
 3. Check the BOTTOM switch and make sure the two switches are both set OFF.
 4. Check if video cable is connected correctly.

- Abnormal display of image

Check if video cable is connected correctly.

- Image dithering even at widest zoom position

1. Check if camera is set correctly.
2. Make sure there is no vibration machine or other disturbing devices nearby.

- No video/ image in IE browser

When IPC is accessed by Internet Explorer (or other web browser) for the first time, a plug-in must be installed.

Installation: visit IP Camera address and click [Download]. A download dialog box will pop up. Select [Run] or [Save] to download. If no dialog box pops up, please go to the VLC (player software)

website <http://www.videolan.org/vlc/download> and install VLC. After the download is complete, install as instructed. After successful installation, login again, and the video/ image will show.

- Unable to access IP Camera by IE browser.

1. Access network with PC, check if network works. In this way, the user can get rid of any cable failure or network failure.
2. Disconnect IP Camera from network. Connect IP Camera to PC, and re-set the IP address following the proper operations.
3. Check the server's IP address, subnet mask and gateway address.
4. Check if MAC addresses conflict.
5. Check if web port is occupied by other devices.

- When modifying the IP address incorrectly (causing the wrong IP address), or if the web password has been forgotten, press "[*]+[#]+[Manual]" on the IR remote control to restore the default settings (Default IP: 192.168.100.88; Default username: admin; Default password: admin)

Sound

- No sound

1. Check the audio connection to the host PC.
2. Check IP Camera audio parameter settings, and check if intercepting function is on.

Control

- IR remote control cannot control the camera

1. Change the battery
2. Check if the camera is in working mode.
3. Check if IR address of the Remote control is set correctly.

- Serial communication cannot control the camera

1. Check if the camera is in working mode.
2. Check if the control cable is connected correctly.

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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Contact Details:

AViPAS Inc.

Address: 3350 Scott Blvd. 61-02
Santa Clara, CA 95054

Phone: 1-844-228-4727

Fax: (408) 228-8438

Email: info@avipas.com

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