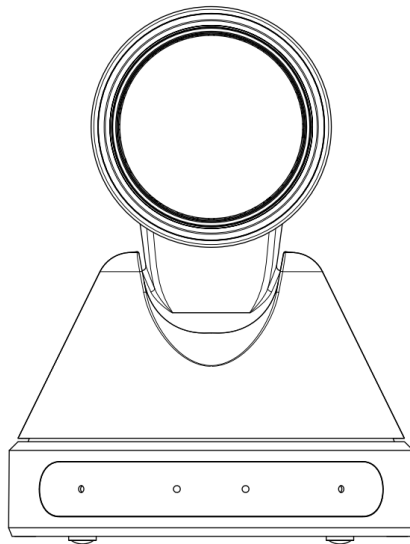




Model: AV-1071
HD Video Conferencing Camera (HDMI)



User Manual

V1.0

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

www.avipas.com

Preface

Thanks 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.

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Note

- **Electric Safety**

Installation and operation must accord with electric safety standard.

- **Use caution to transport**

Avoid stress, vibration or soakage in 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 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!

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

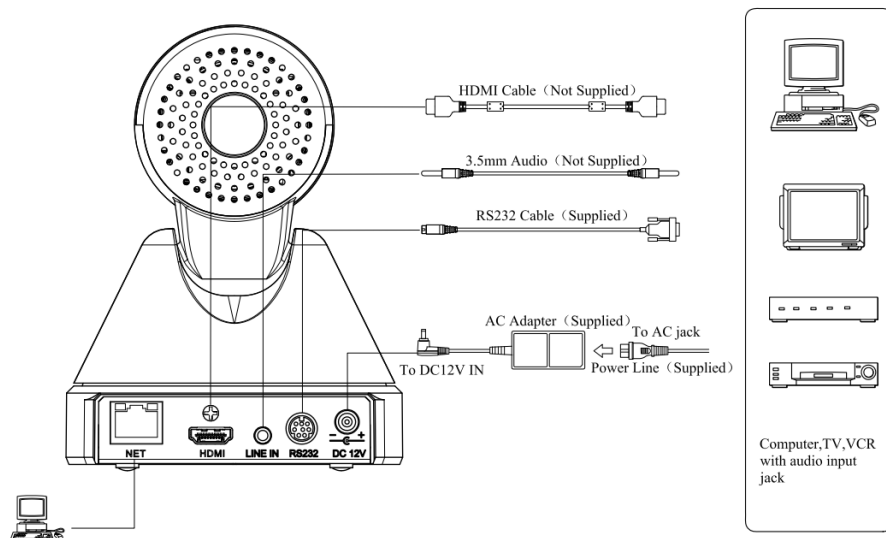
Supplied Accessories

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. Power on, check if the power light is on (front panel).

Step3. Pan-Tilt function rotates the camera to its maximum position of top right upon startup, then it returns to the center, and the process of initialization is finished. (Note: if there is an entry for position preset 0, the corresponding position preset 0 will be called up after initialization.)

Features

- **New design**

Designed with worm gear transmission, completely new look, mini size.

- **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.

- **72.5° wide-angle lens + 16x digital zoom**

The camera uses 72.5° wide-angle high-quality lens, which supports 12x optical zoom and 16x digital zoom.

- **AAC audio encoding**

The camera supports AAC audio encoding, better sound quality and smaller bandwidth.

- **Low-light**

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

- **Remote control**

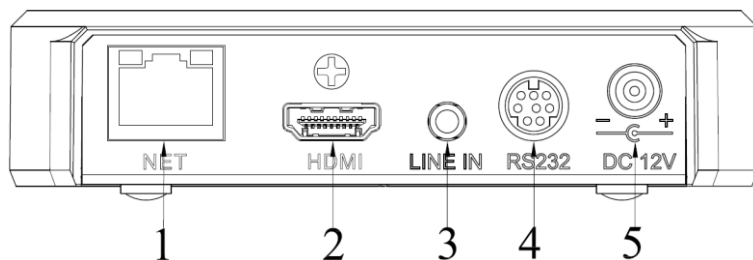
The camera uses RS232/485 interface. All camera parameters can be controlled remotely via high-speed communication.

Product Specifications

Name	HD Video Conferencing Camera
Camera	
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	12x, f3.5mm ~ 42.3mm, F1.8 ~ F2.8
Digital Zoom	16x (optional)
Minimal Illumination	0.5 Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual
Backlight Compensation	Support
Digital Noise Reduction	2D&3D Digital Noise Reduction
Video S/N	≥55dB
Horizontal Angle of View	72.5° ~ 6.9°
Vertical Angle of View	44.8° ~ 3.9°
Horizontal Rotation Range	±170°
Vertical Rotation Range	-30° ~ +30°
Pan Speed Range	1.7° ~ 100°/s
Tilt Speed Range	0.7° ~ 28°/s
H & V flip	Support
Image Freeze	Support
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(50Hz),720x480(60Hz),720x408,640x360,480x270,320x240,320x180
Video Bit Rate	32Kbps ~ 20480Kbps
Bit Rate Type	Variable rate, Fixed rate
Frame Rate	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
Network interface	1xRJ45: 10M/100M Ethernet Interface
Audio Interface	1-ch 3.5mm audio interface, Line In
Communication interface	1xRS-232: 8pin Min DIN, Max Distance: 30m, 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	128.5mm x 118.0mm x 156.2mm
Net Weight	0.9K g

Main Units



1. RJ45 interface

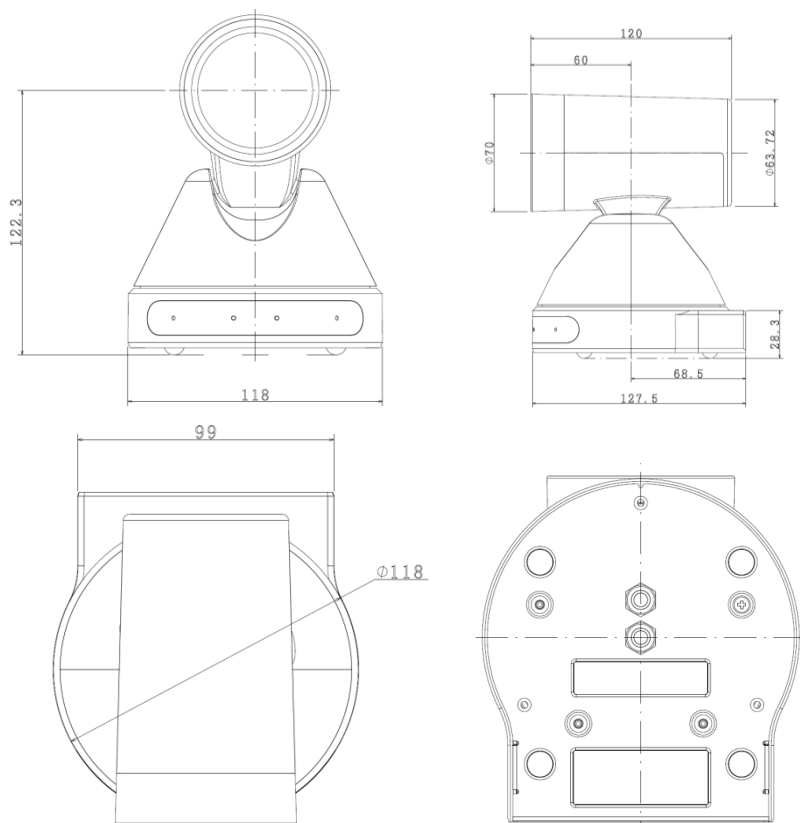
2. HDMI interface

3. LINE IN interface

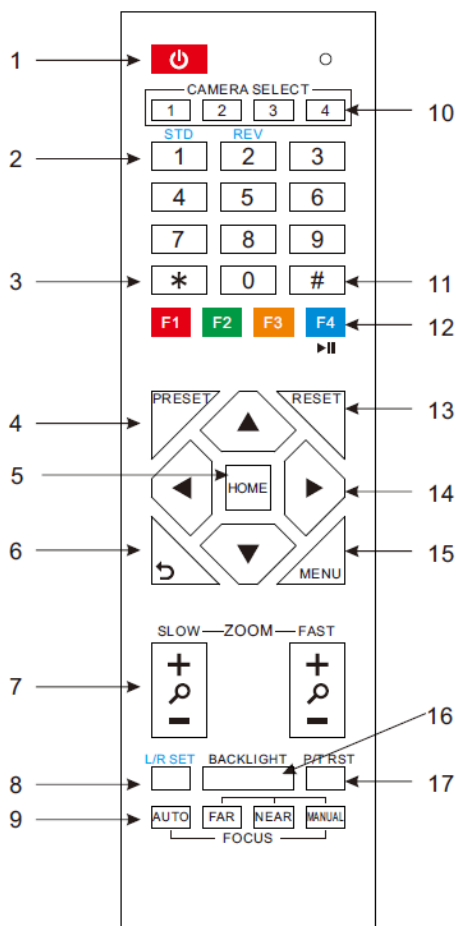
4. RS232 interface

5. DC IN 12V interface

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 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: to store a preset position.

[SET/ PRESET] + Numeric button (0-9): to 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 [-] fast.

8. Pan-Tilt L/R set

Press 1 or 2 button 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

For use of 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 to 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 by pressing [F4] on the remote control. "Freeze" will display on the upper left corner of the screen, and will 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 will disappear automatically after 5 seconds.

Recall Preset Image Freeze: use "Recalling Preset Image Freeze" function in the OSD Menu. After the function is activated, the screen pauses. 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

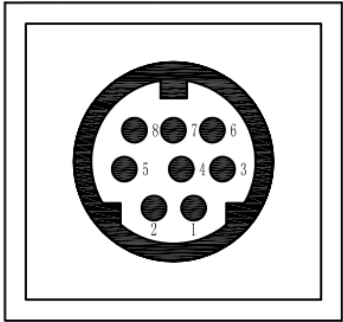
[*]+[#]+[5]: Save OSD

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

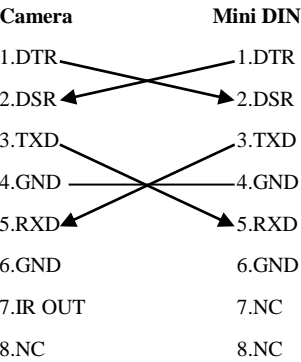
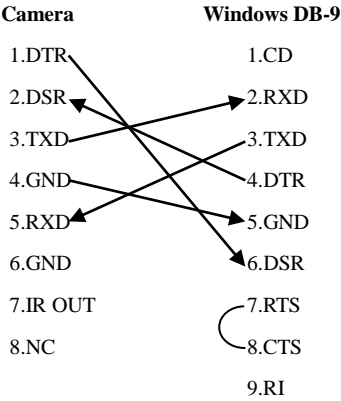
[*]+[#]+[8]: Look up camera version

[*]+[#]+[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



Serial Communication Control

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

➤ RS232 Communication Control:

The camera can be controlled via RS232. Parameters are as follows:

Bit rate: 2400/4800/9600/38400 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 of top right upon startup, then it returns to the center, and the process of initialization is finished. (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.

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.

MENU
► Exposure
Color
Image
P/T/Z
Noise Reduction
Setup
Communication Setup
Restore Default
[Home] Enter
[Menu] Exit

2. EXPOSURE

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

EXPOSURE	
► Mode	Auto
ExpCompMode	Off
Backlight	Off
Gain Limit	3
Anti-Flicker	50Hz
Meter	Average
DRC	2
▲▼ Select Item	
◀▶ Change Value	
[Menu] Back	

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 mode).

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

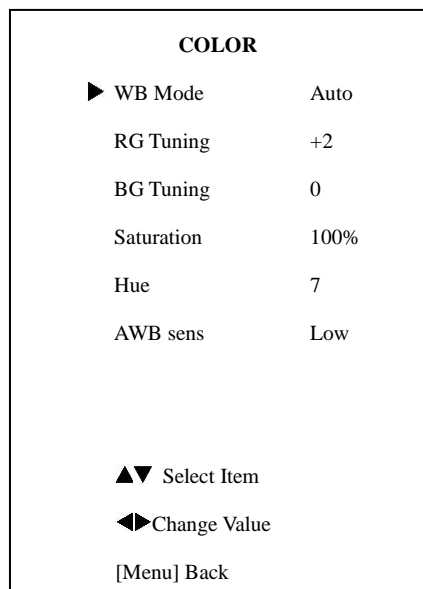
Meter: Options: Average, Center, Bottom, Top.

DRC: DRC strength. Options: 0 ~ 8.

Bright: Bright intensity control. Options: Auto, Indoor, Outdoor, One Push, Manual.
 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 mode). 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], COLOR menu is shown below.



4. IMAGE

Move the cursor to Image in the main menu and press [HOME], 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

▲▼ Select Item

◀▶ Change Value

[Menu] Back

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
Call Preset Speed	24

▲▼ Select Item

◀▶ Change Value

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: Greyscale display. Options: On, Off.

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

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

SpeedByZoom: 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.

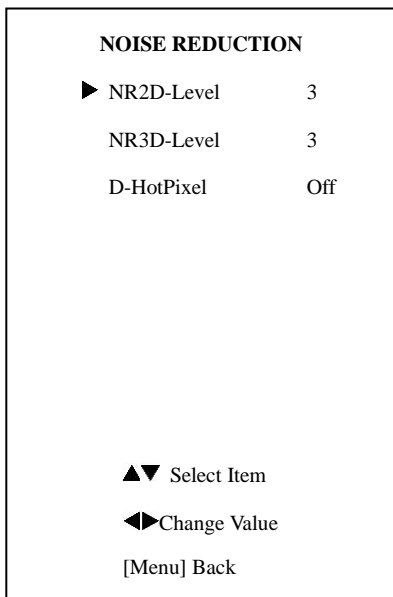
Image Freeze: Options: On, Off.

Digital Zoom: Options: On, Off.

Call Preset Speed: Options: 1~24.

6. NOISE REDUCTION

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



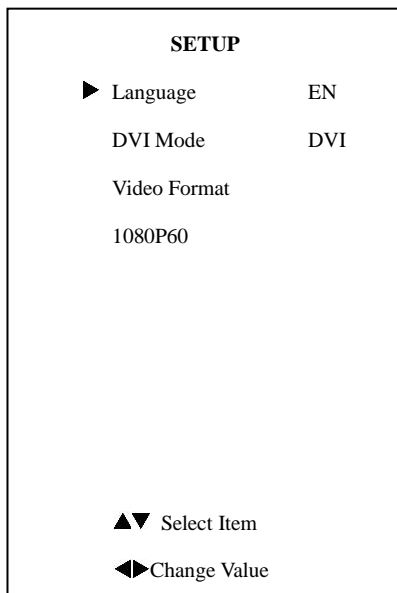
NR2D-Level: 2D noise reduction. Options: Off, Auto, 1 ~ 5.

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]. SETUP menu is shown



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

DVI Mode: Options: DVI, HDMI.



Note:

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

Video Format: Options: 1080P60,1080P50, 720P60,720P50,1080P30,1080P25,720P30,720P25.

8. COMMUNICATION SETUP

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

below.

COMMUNICATION SETUP

► Protocol VISCA
V_Address 1
V_AddrFix Off
Net Mode Serial
Baudrate 9600

▲▼ Select Item

◀▶ Change Value

[Menu] Back

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

V_Address: Protocol address, should be
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, 38400.

9. RESTORE DEFAULT

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

RESTORE DEFAULT

►Restore? No

◀▶ Change Value

[Home] OK

[Menu] Back

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.

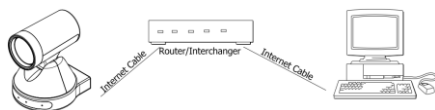
3) When the orange light on the internet port lights up (green light flashing), the physical connection is complete.

3 Internet Connection

There are 2 ways of connecting the camera to your computer.



Connect by Ethernet cable



Connect via router /interchanger

4 IP camera visited/ controlled by LAN

4.1 Setup IP address

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

Method 1: press * and # and 4 on remote control in order, the camera's IP address will display on screen.

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



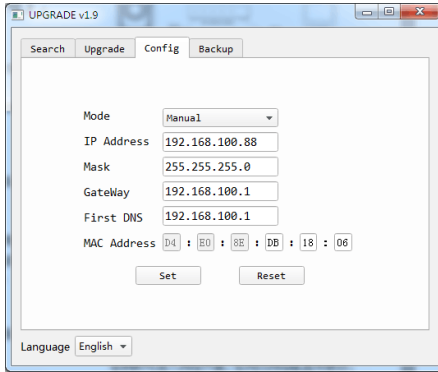
To change IP address, follow these steps:

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

A screenshot of a web control interface for a camera. The "IP Settings" section is active, showing fields for IP Configuration Type (Fixed IP Address), IP Address (192.168.100.131), Subnet Mask (255.255.255.0), Gateway (192.168.100.1), DNS Address (8.8.8.8), and MAC Address (D4 ED BE 48 A1 C2). Below this are "Port Settings" for HTTP (80), RTSP (554), and PTZ (5678). The "Control Protocol Settings" section includes fields for Visca Address (1), Pelco-D Address (0), and Pelco-P Address (0). The "RTMP Settings" section shows "First stream" and "Second stream" with their respective MRLs. The "RTSP Settings" section shows "RTSP Auth" as "On". The "ONVIF Settings" section shows "ONVIF" and "ONVIF Auth" as "On". The "Multicast Settings" section shows "Multicast" as "On" with address 224.1.2.3 and port 6088. The "SDK Settings" section shows "Active Connection" as "On" with address 192.168.100.138 and port 1234. "Apply" and "Cancel" buttons are at the bottom.

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

camera.



NOTE!

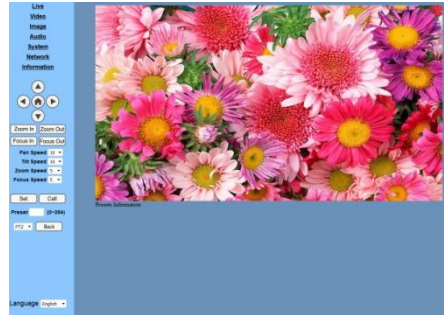
IP camera's default IP address: "192.168.100.88", user: "admin", password: "admin".

4.2 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.



After login, the page will be as shown below:



NOTE!

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

5 IP Camera accessed/controlled by WAN (Internet)

5.1 Setup IPC accessed/controlled by dynamic

DNS

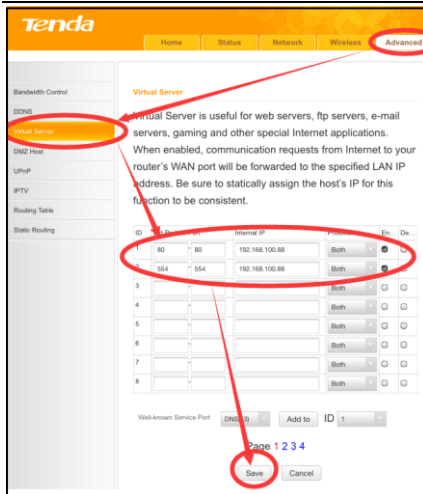
2 dynamic DNS available:

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".



5.2 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>.



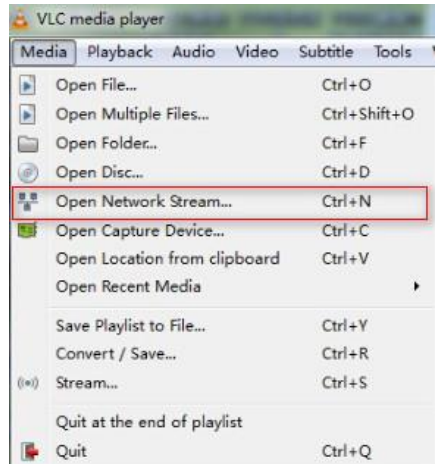
NOTE !

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

5.3 VLC stream media player monitoring

Visit VLC media server procedure

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



Input URL address:

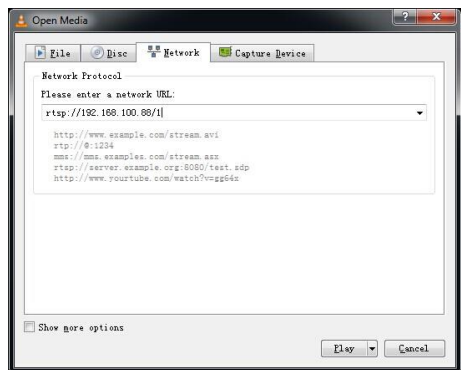
rtsp://ip: port number/1 (First stream);

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



NOTE !

Default port number: 554.



6 IP Camera parameter setup

6.1 Homepage introduction

Menu

All pages include 2 menu bars:

Real-time monitoring: display video.

Parameter setup: function buttons.

A. Video viewing window

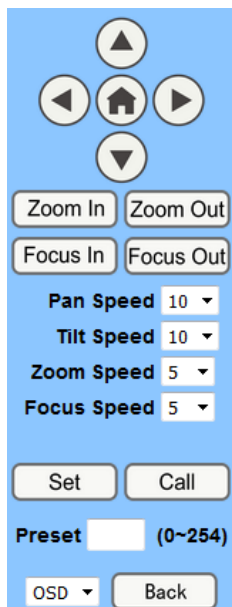
Video viewing window must accommodate the video resolution: the higher the resolution is, the bigger the playing area should be. Double clicking the viewing window will enable full-screen; double clicking again will return to the initialized size.

Status bar in viewing window is shown below:



- 1) Video playback pause button: stops the video at the last frame. Click again to resume video.
- 2) Audio control buttons: can set silent mode.
- 3) Full screen switch button.

B. PTZ Setup



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

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 button to set the PTZ speed.

4) Zoom In/ Zoom out: for zooming in or zooming out; Focus In/ Focus Out: for focusing on a distant object or on a close object.

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.

Presets Information		
No.	Name	
1	<input type="text"/>	<input type="button" value="Set"/>
2	<input type="text"/>	<input type="button" value="Set"/>
3	<input type="text"/>	<input type="button" value="Set"/>
4	<input type="text"/>	<input type="button" value="Set"/>
5	<input type="text"/>	<input type="button" value="Set"/>
6	<input type="text"/>	<input type="button" value="Set"/>
7	<input type="text"/>	<input type="button" value="Set"/>
8	<input type="text"/>	<input type="button" value="Set"/>
9	<input type="text"/>	<input type="button" value="Set"/>

Click "Set" button to confirm. When the PTZ turns to other positions, click "Call" button or click "No.", the 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, system will save the settings and exit automatically. Otherwise, return to the previous menu. "Back" button effective only in submenu. PTZ: system in PTZ mode.

C. Language selection

Language English

Chinese/English/Russian

6.2 Click "Video" for video setup:

Video Settings

Video Format:

Dial Priority

Encode Level:

mainprofile

First stream

Encode Protocol:

H264

Resolution:

1920x1080

Bit Rate:

4096

(32~20480) kbps

Frame Rate:

30

fps

I Key Frame Interval:

30

(2~150)

Bit Rate Control:

☒ CBR ☐ VBR

Fluctuate Level:

1

Second stream

Encode Protocol:

H264

Resolution:

320x240

Bit Rate:

1024

(32~6144) kbps

Frame Rate:

30

fps

I Key Frame Interval:

30

(2~150)

Bit Rate Control:

☒ CBR ☐ VBR

Fluctuate Level:

1

Apply

Cancel

1) Video Format

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

2) Encode Level

Support 3 formats: baseline, mainprofile, and highprofile.

3) Encode Protocol

Support 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 not enough while the allocated bit flow is too high, 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 could be 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

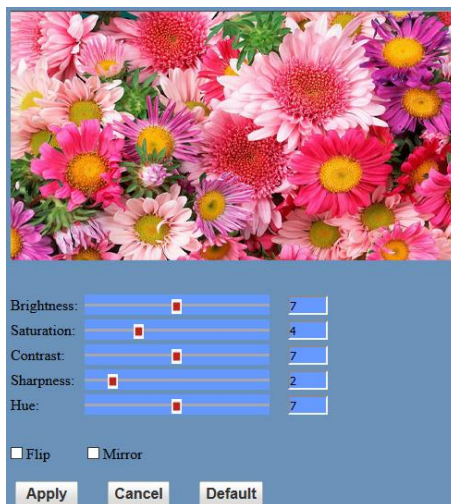
Restrain the fluctuation magnitude within grade 1 ~ 6.



NOTE!

To adjust the parameters, click "apply" to save; click "cancel" to discard the change of the parameters.

6.3 Click "Image" for image setup:



1) Sharpness

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

2) Hue

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

3) Flip & Mirror

Click "Flip" to flip image upside down. Click "mirror" to show the mirror image.

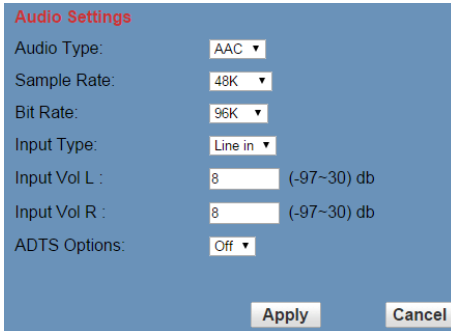


NOTE!

To adjust the parameters, click "apply" to save; click "cancel" to discard the change of the

parameters; click "default" to restore the default values.

6.4 Click “Audio” for audio setup:



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

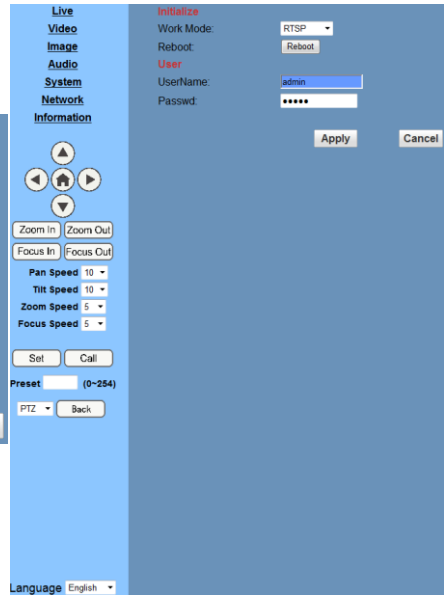
Options: On, Off



NOTE !

Click "apply" to save parameter settings; click "cancel" to discard changes.

6.5 Click “System” for system settings:



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).



NOTE !

Click "apply" to finish password setting and go back to the login page; click "cancel" to discard the change.

6.6 Click “Network” for network setup:

The screenshot shows a web interface for a camera with a sidebar on the left containing tabs: Live, Video, Image, Audio, System, Network, and Information. The 'Network' tab is selected. The main area is divided into sections: 'IP Configuration Type' (set to DHCP), 'IP Address' (192.168.100.87), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.100.1), 'DNS Address' (8.8.8.8), and 'MAC Address'. Below this are 'Port Settings' with fields for HTTP Port number (80), RTSP Port (554), and PTZ Port (5678). The 'Control Protocol Settings' section includes fields for Visca Address (1), Pelco-D Address (0), and Pelco-P Address (0). There are also 'RTSP Settings' for RTSP Auth (ON), ONVIF Auth (ON), and Multicast Settings (Address: 224.1.2.3, Port: 6688). Finally, there are 'Web Settings' for Active Connection (ON) and its Address (192.168.100.138) and Port (1234). Buttons for 'Apply' and 'Cancel' are present at the bottom of each major section.

1) Lan Settings

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



NOTE!

To adjust the Lan parameters, click "apply" to save; click "cancel" to discard the changes.

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).



NOTE!

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

6.7 Click “Information” for device information setup:

Information
Device ID: HD Camera
Software Version: SOC v7.2.10 - ARM v6.2.53T
Device Type: F1.V
Webware Version: v1.4.4

ApplyCancel

Note:

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

7 Download the upgrade program

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

Maintenance and Troubleshooting

Camera Maintenance

- If camera will be idle for a long time, please turn off the power switch and disconnect AC power cord from the outlet.
- Use soft cloth or tissue to clean the camera (lens cleaning not recommended).
- Use 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 other special light sources, etc.
- 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 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 another web browser) for the first time, a plug-in must be installed.

Installation: visit IP Camera address, click “Download”. A dialog box will pop up. Select “Run” or “Save” to download. If no dialog box pops up, please go to VLC (player software) website <http://www.videolan.org/vlc/download> and install VLC. After the download is completed, 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 is 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 the same as that of the camera.

- 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 one (1)-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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