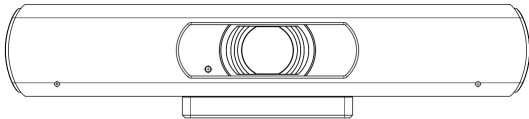


# 4K Ultra HD Camera With Autofocus



## User Manual

### English ( V1.0 )

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Warning

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

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## 1 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 drawing shows as below.



### ● Installation Precautions

Do not grasp the camera lens when carrying it. Don't touch camera lens by hand. Mechanical damage may be caused by 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.

Never power on before installation is completed.

### ● Do not dismantle the camera

We are not responsible for any unauthorized modification or dismantling.



Warning

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

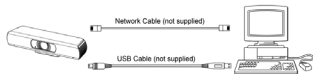
## 2 Supplied Accessories

When you unpack, check that all the supplied accessories are included:

Name	Quantity
Camera	1
AC Power Adaptor	1
Remote Controller	1
User Manual	1

## 3 Quick Start

Please check connections are correct before starting.



## 4 About Product

### 4.1 Features

#### ● 4K ultra high definition

Support 4K ultra high definition, ultra high definition with ultra high resolution, the maximum can provide 4K@30fps/25fps image output, while down compatible with 1080p, 720p and other resolutions.

#### ● Intelligent teaching tracking (optional)

The built-in leading image recognition and

tracking algorithm, without any auxiliary positioning camera or tracking host, can achieve smooth and natural tracking effect.

- **Local storage**

The local storage function is supported and the local direct recording of the U disk can be realized without the need of NVR.

- **AF lens**

Full custom auto focus without distortion lens, wide angle field of view up to 120 degrees, small lens, big eye. At the same time support EPTZ, with unmovable brake, more larger, more clear.

- **Built-in microphone**

With a built-in microphone array, you can pick up a full range of sounds, and pick up the sound distance up to 12 meters. The unique noise suppression algorithm makes your voice perfect.

- **Low-light**

The new CMOS image sensor with high star level ultra high noise ratio can effectively reduce the image noise in the low illumination condition.

Meanwhile, the application of 2D and 3D noise reduction algorithm greatly reduces the image noise. Even under the condition of ultra-low illumination, it still keeps the picture clean and clear, and the SNR of image is as high as 55dB.

- **Support wireless (optional)**

It supports wireless WiFi connections and is easy to deal with network connections in different environments.

- **Support PoE**

The wired network supports PoE power supply, control, power supply, video, and audio only one network line to complete.

## 4.2 Product Specification

<b>Name</b>	4K Ultra HD Camera With Autofocus
<b>Camera</b>	
Sensor	1/2.5", CMOS, Effective Pixel: 8.51M
Scanning Mode	Progressive
Lens Mount	M12
Lens 1	Focus: f=7.35mm, FOV: 46°
Lens 2 (Default)	Focus: f=3.5mm, FOV: 84°
Lens 3	Focus: f=2.8mm, FOV: 120°
Autofocus	Support
Minimal Illumination	0.05 Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, VAR
Digital Noise Reduction	2D, 3D digital noise reduction
Camera bracket	Optional
Backlight Compensation	Support

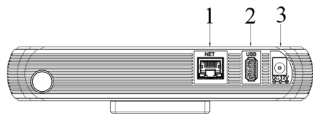
PoE	Support
Local Storage	Support
Auto Tracking Function	Teacher mode/Student mode (optional)
<b>Network Features</b>	
Video Compression	H.264/H.265/MJPEG
Video Stream	Main Stream, Sub Stream
First Stream Resolution	3840x2160, 1920x1080, 1280x720, 1024x576, 960x540, 640x480, 640x360
Second Stream Resolution	1920x1080, 1280x720, 1024x576, 720x576(50Hz support), 720x480(60Hz support), 720x408, 640x360, 480x270, 320x240, 320x180
Third Stream Resolution	960x540, 720x576(50Hz support), 720x480(60Hz support)
Video Bit Rate	32Kbps ~ 102400Kbps
Bit Rate Type	Variable Rate, Fixed Rate
Frame Rate	50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps
Audio Compression	AAC
Audio Bit Rate	48Kbps, 64Kbps, 96Kbps, 128Kbps

Support protocols	TCP/IP, HTTP, RTSP, RTMP, ONVIF, DHCP, Multicast, etc.
-------------------	--

<b>Input/Output Interface</b>	
Network Interface	1xRJ45: 10/100/1000M Ethernet Interface
Wireless Interface	1xWireless Wi-Fi (optional)
USB Interface	1xUSB 2.0: Type A, female
Power Interface	DC 12V

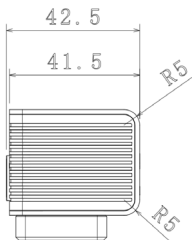
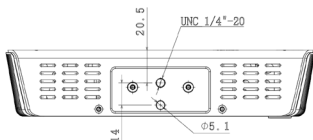
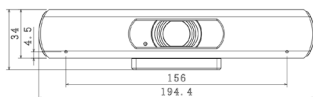
<b>Physical Parameter</b>	
Input Voltage	DC 12V / PoE (IEEE 802.3af)
Current Consumption	0.5A (Max)
Operating Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Storage Temperature	-40°C ~ 60°C (-40°F ~ 140°F)
Power Consumption	3W
Size	194mm x 34mm x 42mm (without bracket)
Net Weight	0.34 Kg
MTBF	>30000h

### 4.3 Interfaces and buttons

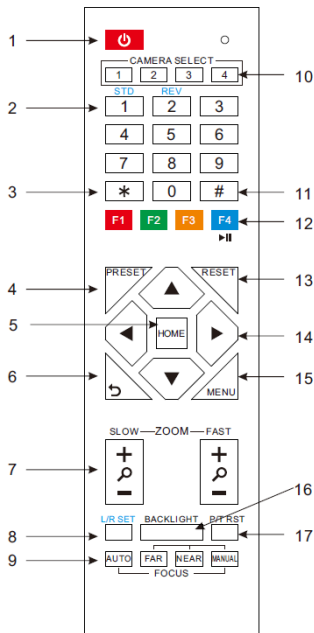


Item	Name
1	Network Interface
2	USB 2.0 Interface
3	Power Interface

### 4.4 Dimension



### 4.5 Remote Control



#### Key Description

##### 1. Standby Button (not supported)

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 preset or call preset.

**3. \*Button**

Used with other buttons.

**4. Set/Preset Buttons**

Set preset: Store a preset position.

[SET PRESET] + Numeric button (0-9):

Setting a corresponding numeric key preset position.

**5. Pan-Tilt control Buttons**

Pressing the Pan-Tilt back to the middle position.

**6. Back buttons**

Press the OSD menu return to the superior.

**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 with 1 buttons and 2 buttons setting the direction of the Pan-Tilt.

- L/R Set +1[STD]: set the Pan-Tilt turn the same direction as the L/R Set.
- L/R Set +2[REV]: set the Pan-Tilt turn the opposite direction as the L/R Set.

**9. Focus Buttons**

Used for focus adjustment.

Press [AUTO] adjust the focuses on the center of the object automatically. To adjust the focus manually.

Press [MANUAL] adjust the focus on the center of the object manual.

MANUAL button, and adjust it with [Far] (Focus on far object) and [NEAR] (Focus on near object).

**10. Camera Select Buttons**

Press the button corresponding to the camera you want to operate with the remote controller.

**11. # Button**

Used with other buttons.

**12. Set Camera IR Address Buttons**

[\*]+[#]+[F1]: Address 1

[\*]+[#]+[F2]: Address 2

[\*]+[#]+[F3]: Address 3

[\*]+[#]+[F4]: Address 4

**13. Clear Preset Buttons**

Clear preset: Erase a preset position.

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

Or: [\*]+[#]+[CLEAR PRESET]: Erase all the preset individually.

**14. Pan/Tilt Control Buttons**

Press arrow buttons to perform panning and tilting after zoom. Press [HOME] button to face 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.
- If a light behind the subject, the subject will become dark. In this case, press the backlight ON/OFF button. To cancel this function, press backlight ON/OFF button.

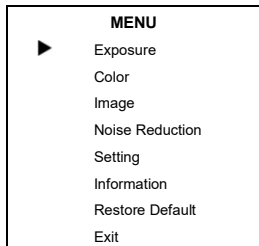
**17. Pan/Tilt reset**

This function is only applicable to the PTZ cameras.

## 5 Menu Settings

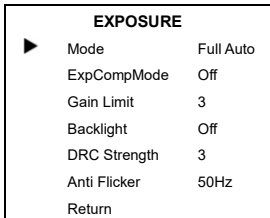
### 5.1 MENU

Press [MENU] button to display the main menu on the normal screen, using arrow button to move the cursor to the item to be set. Press the [HOME] button to enter the corresponding sub-menu.



### 5.2 EXPOSURE

Move the main menu cursor to [EXPOSURE], and press [HOME] key enter the exposure page, as shown in the following figure.



Mode: Optional items: Full Auto, Shutter Priority, Bright.

Shutter: Optional items: 1/30s, 1/60s, 1/90s,

1/100s, 1/125s, 1/200s, 1/250s, 1/350s, 1/500s, 1/725s, 1/1000s, 1/1500s, 1/2000s, 1/3000s, 1/4000s, 1/6000s, 1/10000s (Effective only in Shutter Priority mode).

ExpCompMode: Optional items: On, Off (Effective only in Full Auto mode).

ExpComp: Exposure compensation value, optional items: -7 ~ 7 (Effective only in ExpCompMode item to On).

Gain Limit: Maximum gain limit, optional items: 0 ~ 15 (Effective only in Full Auto, Bright mode).

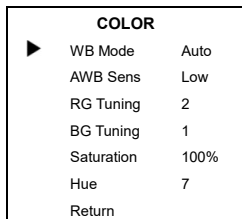
Backlight: Optional items: On, Off (Effective only in Full Auto, Bright mode).

DRC Strength: Optional items: 0 ~ 8.

Anti Flicker: Optional items: Off, 50Hz, 60Hz (Effective only in Full Auto, Bright mode).

### 5.3 COLOR

Move the main menu cursor to [COLOR], and press [HOME] key enter the color page, as shown in the following figure.



WB-Mode: White balance mode, optional items: Auto, Indoor, Outdoor, One Push, Manual, VAR.

AWB Sens: The white balance sensitivity, optional items: Low, Normal, High.



R Gain: Red gain, optional items: 0~255 (Effective only in Manual mode).

B Gain: Blue gain, optional items: 0~255 (Effective only in Manual mode).

colortemp: Optional items: 2500K ~ 8000K (Effective only in VAR mode).

RG Tuning: Red gain fine-tuning, optional items: -10 ~ +10 (Effective only in AWB Sens is Low).

BG Tuning: Blue gain fine-tuning, optional items: -10 ~ +10 (Effective only in AWB Sens is Low).

Saturation: Optional items: 60% ~ 200%.

Hue: Optional items: 0 ~ 14.

## 5.4 IMAGE

Move the main menu cursor to [IMAGE], and press [HOME] key enter the image page, as shown in the following figure.

IMAGE	
▶	Luminance 11
	Contrast 9
	Sharpness 3
	Flip-H Off
	Flip-V Off
	Gamma Default
	Style Clarity
	LDC Off
	Return

Luminance: Brightness adjustment, optional items: 0 ~ 14.

Contrast: Contrast adjustment, optional items: 0 ~ 14.

Sharpness: Sharpness adjustment, optional items: Auto, 0 ~ 14.

Flip-H: Image flipped horizontally, optional items: On, Off.

Flip-V: Image Flip Vertical, optional items: On, Off.

Gamma: Optional items: Default, 0.45, 0.5, 0.56, 0.63.

Style: Optional items: Norm, Clarity, Bright, Soft.

LDC: Optional items: Off, -10 ~ 10.

## 5.5 NOISE REDUCTION

Move the main menu cursor to [NOISE REDUCTION], and press [HOME] key enter the noise reduction page, as shown in the following figure.

NOISE REDUCTION	
▶	2D NR 1
	3D NR 2
	Return

2D NR: 2D noise reduction, optional items: Close, Auto, 1 ~ 5.

3D NR: 3D noise reduction, optional items: Close, 1 ~ 8.

## 5.6 SETTING

Move the main menu cursor to [SETTING], and press [HOME] key enter the setting page, as shown in the following figure.

SETTING		
▶	Language	English
	Protocol	VISCA
	Visca Addr	1
	AF Sense	Low
	EPTZ	On
	Zoom Limit	3x
	Return	

Language: Optional items: English, Chinese.

Protocol: Optional items: VISCA, PELCO-D, PELCO-P.

Visca Addr: Optional items: 1 ~ 7.

P-D Addr: Optional items: 0 ~ 254.

P-P Addr: Optional items: 0 ~ 31.

AF Sense: Optional items: Low, Middle, High.

EPTZ: Optional items: On, Off.

Zoom Limit: Optional items: 1.5x, 2x, 3x, 4x, 8x (Effective only in EPTZ item to On)

## 5.7 INFORMATION

Move the main menu cursor to [INFORMATION], and press [HOME] key enter the information page, as shown in the following figure.

INFORMATION		
	Version	8.1.26
	Model	O10.V
	Date	2017-11-24
	IP	192.168.100.88
	Gateway	192.168.100.1
	Netmask	255.255.255.0
▶	Return	

## 5.8 RESTORE DEFAULT

Move the main menu cursor to [RESTORE DEFAULT], and press [HOME] key enter the restore default page, as shown in the following figure.

RESTORE DEFAULT	
▶	Yes
	No
	Return

Yes: Confirm restore factory settings.

No: Cancel restore factory settings.

Note: Press [HOME] button to confirm, all parameter restore default, include IR Remote address and VISICA address.

## 6 Network Function

### 6.1 Operating Environment

Operating System: Windows 2000/2003/XP/vista/7/8/10

Network Protocol: TCP/IP

Client PC: P4/128M RAM/40GHD/support scaled graphics card, support DirectX8.0 or more advanced version.

### 6.2 Equipment Installation

- 1) Connect internet camera to your internet or to your PC directly via internet cable.
- 2) Turn on DC 12V power.
- 3) When the network connection is normal, the connection light (Green) is lit up at the network interface within 5 seconds, which indicates that the physical connection of the camera is completed.

## 6.3 Internet Connection

There are two main ways to connect network camera.



Connect by Network Cable



Connect by Switch/Router

## 6.4 IP camera controlled by LAN

### 6.4.1 Setup IP address

The IP camera default IP address is "192.168.100.88". Unknow camera IP, view as below:

Method 1: Use the remote control to transfer out the OSD menu, and go to the information page to see the IP address.

Method 2: connect camera to PC with network cable, use "upgrade\_En.exe" to search for IP address.



upgrade

Change IP address, two methods as below:

Method 1: Login the web page, select "Network > Lan Settings", change IP address. Click "Apply" then restart camera.

**Lan Settings**

IP Configuration Type: Fixed IP Address

IP Address: 192.168.100.205

Subnet Mask: 255.255.255.0

Gateway: 192.168.100.1

DNS Address: 8.8.8.8

MAC Address: D4 : E0 : 8E : F5 : 76 : B2

Apply Cancel

**Port Settings**

HTTP Port number: 80 (80)

RTSP Port: 554 (554)

PTZ Port: 5678 (5678)

**Control Protocol Settings**

Visca Address: 1 (1-7)

Peico-D Address: 0 (0-255)

Peico-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 modified, IP Camera will be restart.

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 : D0 : 18 : 06

Set Reset

Language: English



Tips

- The default IP address of camera is "192.168.100.88".
- The default username and password are "admin".

#### 6.4.2 Visit/Access IP Camera

Input <http://192.168.100.88> to IE (better with IE web browser, others will cause little latency), a login window pop up, input login name: admin, password: admin, shown as below:



After login, shown as below:



Tips

If user first time use this camera by internet (only for new user), must install a player software (VLC). Please go to VLC website <http://www.videolan.org/vlc/#download> and

Install VLC (player software). After installation, login again, will show as above.

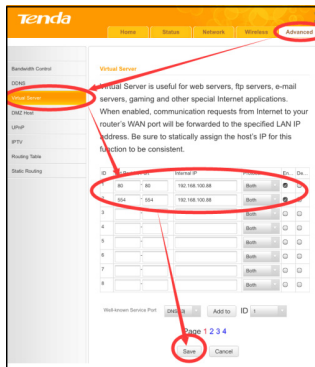
## 6.5 Camera Controlled by WAN

### 6.5.1 Setup IPC controlled by dynamic DNS

Two dynamic DNS available: DynDNS.org, 3322.org

#### Router Port Mapping:

Take Tenda router for example, enter 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 to "Internal IP", then select "Save", shown as below:



### 6.5.2 Dynamic DNS visit camera

Set domain name to camera, setup the parameter, then dynamic DNS can access camera. Access link: <http://hostname: port>

number. For example, setup host computer name: youdomain.f3322.org, camera port number: 554. Access link should be: <http://youdomain.3322.org:554>.



Tips

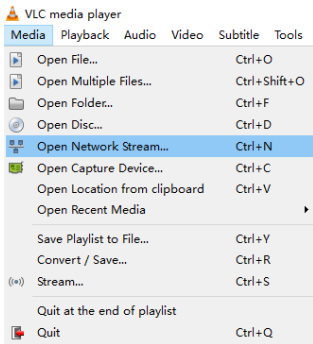
If camera port default as 80, then unnecessary to input port number, use host name can access camera directly.

### 6.5.3 VLC Stream Media Player

#### Visit VLC media server procedure

**Step 1** Open VLC media player.

**Step 2** Click “Media > Open Network Stream”, or click “Ctrl+N”; as below:



**Step 3** Input URL address:

First Stream:

rtsp://ip: port number/1

Second Stream:

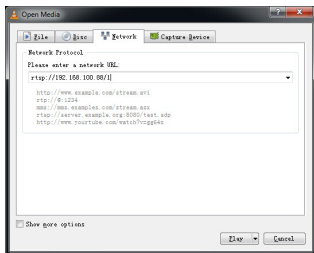
rtsp://ip: port number/2

**Step 4** Finish.



Tips

RTSP port number default 554.



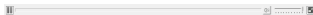
## 6.6 IP Camera Parameter Setup

### 6.6.1 Homepage Introduction

#### A. Video Viewing Window

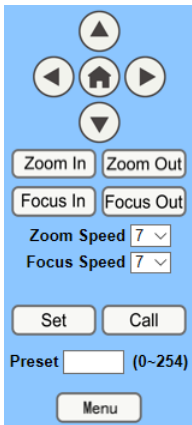
Video viewing window must be same as video resolution, the bigger the resolution is, the bigger the playing area is. Double click viewing window, will show full-screen, double click again, will return to initialized size.

Status bar in viewing window shown as below:



- 1) Video playback pause button: control real-time video pause, stop the last picture, click recoverable video again.
- 2) Audio control buttons: You can set silent mode.
- 3) Full screen switch button.

## B. PTZ Setup



PTZ direction control box: Up, down, left, right, home oblique button as above.

Rate: Zoom Speed can be chosen as 0~ 7, Focus Speed can be chosen as 0~ 7.

Select corresponding speed and click direction button to realize PTZ speed up or speed down.

Zoom In/Zoom out: For zooming in or zooming out. Focus In/Focus Out: Focusing on distant objects or Focusing on close objects.

Set/Call: When PTZ turn to expected position, can set up preset that user want as below.

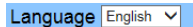
Method: Type a number into the Preset box.



Then click "Set" button, when PTZ turn to other position, click "Call" button or click "No" of the Presets Information, PTZ turn back to preset position.

Menu: OSD menu display in the upper corner of the image page. PTZ direction control box: Up/down button select menu. and the home button enter the submenu, the left/right button modify the submenu. After the menu to be modified, select PTZ. If in the main menu, save the setting and exit automatically. Otherwise, return to the previous menu.

## C. Language Selection



Chinese/English/Russian

## 6.6.2 Video Settings

**Video Settings**

Video Format:

Encode Level:

**First stream**

Encode Protocol:

Resolution:

Bit Rate:  (32~102400) kbps

Frame Rate:  fps

I Key Frame Interval:  (2~150)

Bit Rate Control:  CBR  VBR

Fluctuate Level:

**Second stream**

Encode Protocol:

Resolution:

Bit Rate:  (32~102400) kbps

Frame Rate:  fps

I Key Frame Interval:  (2~150)

Bit Rate Control:  CBR  VBR

Fluctuate Level:

**Third stream**

Encode Protocol:

Resolution:

Bit Rate:  (32~102400) kbps

Frame Rate:  fps

I Key Frame Interval:  (2~150)

Bit Rate Control:  CBR  VBR

Fluctuate Level:

### 1) Video Format

Support 50Hz (PAL), 60Hz (NTSC) and OSD three formats.

### 2) Encode Level

Support baseline, mainprofile, highprofile three levels.

### 3) Encode Protocol

Support H.264, H.265 and MJPEG three formats.

### 4) Resolution

First stream support 3840x2160, 1920x1080, 1280x720, 1024x576, 960x540, 640x480, 640x360; Second stream support 1920x1080, 1280x720, 1024x576, 720x576, 720x408, 640x360, 480x270, 320x240, 320x180; Third stream support 960x540, 720x576. The bigger resolution is, the clearer the image will be, more network bandwidth will be taken.

### 5) Bit Rate

User can assign bit flow/stream, normally speaking, the bigger bit flow is, the clearer the image will be. The bit allocation must combine with network bandwidth, when the network bandwidth is too narrow and the allocated bit flow is too big, will cause video signal flow not to be transmitted normally, the video effect will be worse.

### 6) Frame Rate

User can specify the size of the frame rate, generally, the frame rate greater, the image more smooth; Frame rate is smaller, the more sense of beating.

### 7) I Key Frame Interval

Set interval between three I frame, the bigger interval is the response will be lower from viewing window.

### 8) Bit Rate Control

Code stream control way:

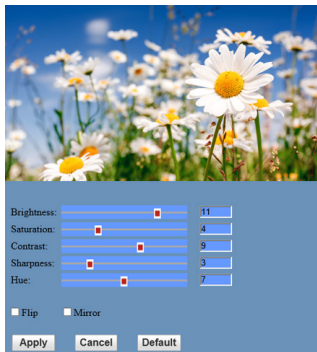
Constant bit rate: video coder will be coding according to preset speed.

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

### 9) Fluctuate Level

Restrain the fluctuation magnitude of variable rate, grade 1 ~ 6.

## 6.6.3 Image Settings



### 1) Brightness

Image bright 0~14, slider control, on the right shows the corresponding numerical. Default value is 11.

### 2) Saturation

Saturation 0~14, slider control, on the right shows the corresponding numerical. Default value is 4.

### 3) Contrast

Contrast 0~14, slider control, on the right shows the corresponding numerical. Default value is 9.

### 4) Sharpness

Sharpness 0~14, slider control, on the right shows the corresponding numerical. Default value is 3.

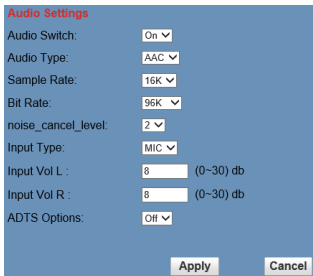
### 5) Hue

Hue 0~14, slider control, on the right shows the corresponding numerical. Default value is 7.

### 6) Flip & Mirror

Tick Flip to realize image upside down, tick mirror to realize image around the mirror. Default value is not tick.

## 6.6.4 Audio Settings



### 1) Audio Switch

Turn On/Off audio switch.

### 2) Audio Type

Audio type AAC.

### 3) Sample Rate

Sample rate 16K.

### 4) Bit Rate

Bit rate 48K, 64K, 96K, 128K selectable.

### 5) noise\_cancel\_level

Optional items: 0~3.



## 6) Input Type

Input type MIC.

## 7) Input Vol L

The volume of the left channel.

## 8) Input Vol R

The volume of the right channel.

## 9) ADTS Options

Optional items: On, Off.

## 6.6.5 System Settings

### 1) Work Mode

The default work mode is RTSP. Optional items: RTSP, SDK, Multicast.

### 2) Reboot

Click the "Reboot" button, system restart.

### 3) Username and password

The user can modify the password (letters and Numbers only).

## 6.6.6 Network Settings

### 1) Lan Settings

Default the IP address is 192.168.100.88, The MAC address can be modified.

### 2) Port Settings

#### A. HTTP Port

IP address identifies the network device, the device can run multiple web applications, each network program using network port to transmit data, so data transmission to be carried out between the port and port. Port setting is to set up WEB SERVER program using which port to transmit. When port mapping, need to be consistent with the port number (default port: 80).

**B. RTSP Port**

Network camera support RTSP protocol, use the VLC tools broadcast.

**C. PTZ Port**

Support PTZ protocol, default port: 5678.

**3) Control Protocol Settings**

Setting camera control communication protocol, include Visca address, Pelco-D address and Pelco-P address.

**4) RTMP Settings**

Setting the camera stream, can set up two stream, in the two stream selection control code stream of "On", "Off", "Video", "Audio".

**5) RTSP Settings**

Turn On/Off RTSP auth.

**6) ONVIF Settings**

Turn On/Off ONVIF and ONVIF auth.

**7) Multicast Settings**

Turn On/Off multicast. Setting multicast address (default value is 224.1.2.3) and port (default value is 6688).

**8) SDK Settings**

Turn On/Off active connection. Setting SDK address (default value is 192.168.100.138) and port (default value is 1234).

**6.6.7 Device Information**

Show the current device information, as shown below.

Information	
Device ID:	HD Camera
Software Version:	SOC v8.1.26
Device Type:	O10 V
Webware Version:	v1.5.3

**6.7 Download the Camera Upgrade Program**

If you need the camera upgrade program, please contact the manufacturer.

**7 Maintenance and Troubleshooting****Camera Maintains**

- If camera will not be used for a long time, please turn off the power switch, disconnect AC power cord of AC adaptor to the outlet.
- Use soft cloth or tissue to clean the camera cover.
- Please 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 damages the surface.

**Unqualified Application**

- No shooting extreme bright object for a long period of time, such as sunlight, light sources, etc.
- No operating in unstable lighting conditions, otherwise image will be flickering.
- No operating close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

## Troubleshooting

### Image

- Image dithering even at widest zoom position
- 1) Check whether camera is fixed correctly.
- 2) Make sure if there are something like vibration machine or other things nearby.
- IE browser not video image

When IPC first time accessed by Internet Explorer (IE or other web browser), must install plug-in. User first time use this camera by internet (only for new user), must install the player software (VLC).

Please go to VLC website

<http://www.videolan.org/vlc/#download> and Install VLC (player software). After installation, login again, will show image, the video image is displayed.

- Unable to access IP Camera by IE browser
- 1) Access to the network with PC can test whether network works, in this way to get rid of cable failure, network failure caused by PC virus until the PC can be Ping.

- 2) Disconnect IP Camera with network, IP Camera and PC are connected, according to the proper operations to re-set the IP address.
- 3) Check the server's IP address and subnet mask and gateway address.
- 4) Check whether there is a conflict in the MAC address.
- 5) Check whether the Web port is occupied by other devices.

- Forget the IP address or login password
- When modify IP address in an incorrect way cause the wrong IP address or forget web passwords, press the IR remote controller "[\*]+[#]+[Manual]" to restore the default value (Default IP: 192.168.100.88. Default username: admin. Default password: admin).

### Control

IR remote controller cannot control the camera

- 1) Change the battery of remote control.
- 2) Check the working mode of the camera.