



AVer FC2020-P1

User Manual

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Preface

The FC2020-P1 is a compact cube camera for indoor use with two-way audio communication. It has the added security of a Micro SD based local backup capacity ensuring that images of events also save locally when the alarm is triggered or the network is down. This compact camera offers HD720p resolution and advanced features including intelligent motion detection and privacy masks. The 1.3-megapixel H.264 FC2020-P1 camera can provide your system with good quality, discreet indoor surveillance.

Product Specifications

- 2M cube camera
- HD Definition (1080p) support
- Built-in IR LED (distance :8 Meter) for night view
- Support PIR function
- Digital Wide Dynamic Range
- Power over Ethernet (PoE)
- H.264/MJPEG compression formats
- microSD card backup (SD card is not included)
- 2-way audio
- Adjustable shutter speed
- Support iPhone/ iPad/ Android phone and tablet
- Free bundled 32-CH AVer NXU Lite recording software

Specifications

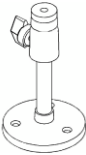
Hardware	
CPU	Multimedia SoC
RAM	256MB
Flash	16M
Image sensor	1 / 2.7" Mega-Pixel CMOS sensor
Lens Type	2.8mm@F2.0, Megapixel fixed lens
View Angle	103°(H), 61°(V)
Shutter time	1/5~1/33,000 sec
Min. illumination	Color : 1.0 Lux (IR LED ON) B / W: 0 Lux (IR LED ON)
I/O	1 Sensor in /1 Relay out
MIC in	1
Audio Out	G.711(64K) and G.726(32K,24K) audio compression Input : MIC built-in Output : 3.5mm phone jack, or Speaker Support 2-way audio
IR distance	8 Meter
PIR	Yes
Power Over Ethernet	Yes
Power Consumption	DC12V : 2.76W(IR Off), 3.72W(IR On); PoE :3.3W(IR Off), 4.3W(IR On)
Dimensions	62mm x 100(mm)x 44(mm)
Operation Temperature	0°C ~ 45°C
Weight	150g (without bracket); 270g (with bracket)
Network	
Ethernet	10/100 Base-T
Network Protocol	Pv6, IPv4, HTTP, HTTPS, SNMP, QoS/DSCP, Access list, RTSP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA, Bonjour

System	
Video Resolution	1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps, 176x144@30fps
Video Adjust	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Shutter Time, Sense-up, D-WDR, Lens Distortion Correction, Flip, Mirror, Day&Night adjustable, Red Gain and Blue Gain, Denois
Triple Streaming	Yes
Image snapshot	Yes
Full screen monitoring	Yes
Privacy Mask	Yes, 5 different areas
Compression format	H.264/ M-JPGE
Video bitrate adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered action	Mail, FTP, Save to SD card, DO, SAMBA
Pre/ Post alarm	Yes (Pre: 5 secs/ Post: 5 secs)
Security	Password protection, IP address filtering, HTTPS encrypted data transmission, QoS/DSCP
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 10
Audio	Yes, 2-way (mono)
MicroSD/SDHC card management	
Recording trigger	Motion Detection, IP check, Network break down (wire only), Schedule, DI
Video format	AVI, JPEG
Video playback	Yes
Delete files	Yes

Web browsing requirement	
OS	Windows 7, XP Microsoft® IE 8.0 or above [Note] Please enable “Compatibility View” while using IE 10 or above.
Hardware Suggested	Intel® Dual Core 2.53GHz, RAM: 1024MB, Graphics Card: 128MB
Mobil support	iOS 5 or above, Android 1.6 or above.

***SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.**

Package contents

Item	Descriptions
	1. FC2020-P1
	2. Bracket
	3. Screw pack
	4. Power Adaptor(DC 12V/0.5A) (Optional)
	5. CD (User's Manual and Quick Guide, NVR software included)

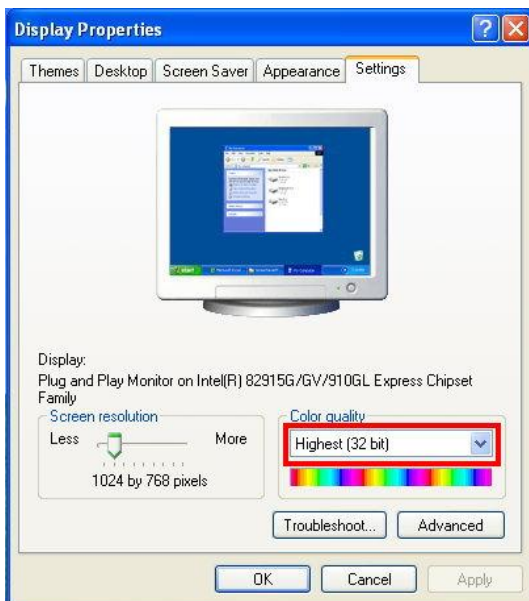
Product Installation

Monitor Setting

1. Right-click on the desktop. Select “ **Properties**”



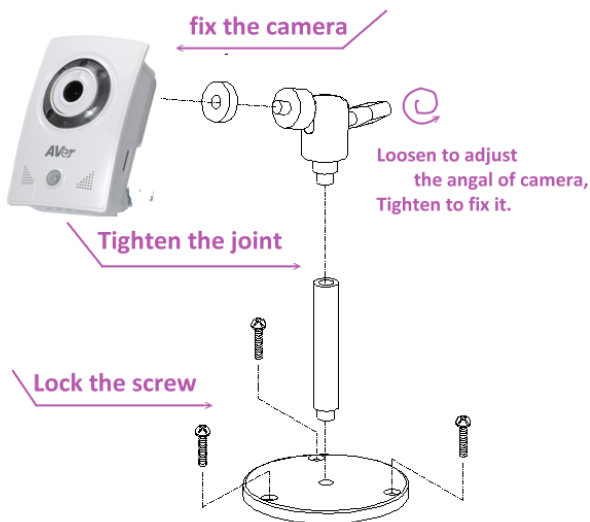
2. Change “Color quality” to “**Highest (32-bit)**”.



Hardware Installation and I/O Pin Assignment

1. Install with bracket

Please refer to the picture for camera installation. Use the screws to lock the bracket to the wall or ceiling, and then connect the camera to the bracket. There's a knob on the back of the bracket. Loosen the knob and you can adjust the angle of camera. Tighten it to fix the angle.



2. Connector Instruction

The camera connectors are as below. Connect the power and the Ethernet cable with the camera, and set it according to your network environment.



3. Adjust focus

Use the rotary dial to adjust focus until the image is clear.



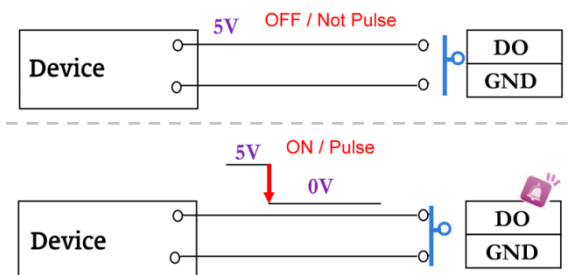
4. I/O Configuration

I/O Connection



- a. Please connect the G & DO pin to the external relay (buzzer) device

When no event happens, DO output is 5V (DO and GND are disconnected). When the camera detects an event happening and triggers an external alarm, DO output is 0V (DO and GND are connected).

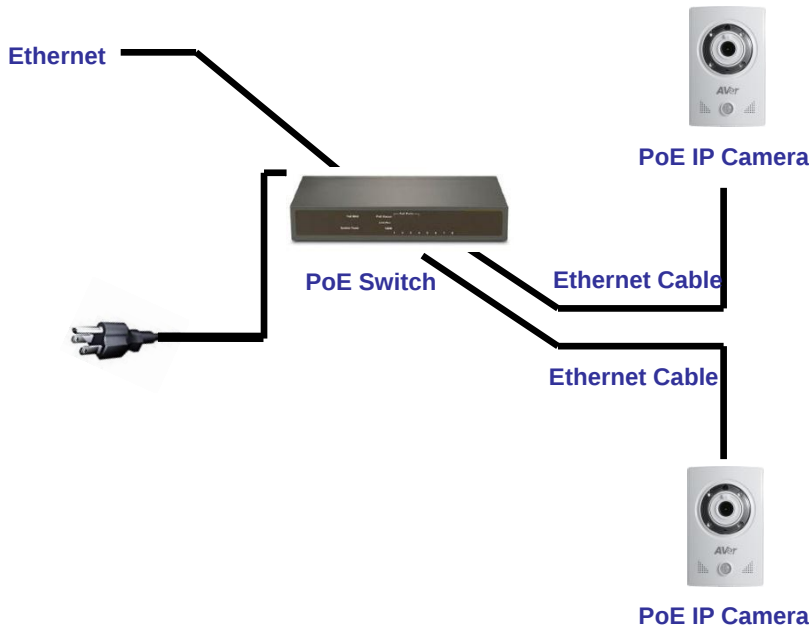


- b. Please connect the G & DI pin to the external trigger device.
- c. If you select "N.O" in "Input sensor setting", when an external device or circuit makes DI and GND pin connected, the camera input alarm is triggered, and then camera will execute the action user has set, for example, send snapshot to E-mail address.
- If you select "N.C" in "Input sensor setting", when external device or circuit makes DI and GND pin disconnect, the camera input alarm is triggered, and then camera will execute the action the user has set, for example, send snapshot to E-mail address.

Power Over Ethernet (PoE)

Set up the IP camera through Power over Ethernet (PoE). PoE is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP camera, using the same cable that is used for network connection. It eliminates the need for power outlets at the camera locations.

[Note] PoE (Power Over Ethernet) (Optional) 802.3af, 15.4W PoE Switch is recommended.



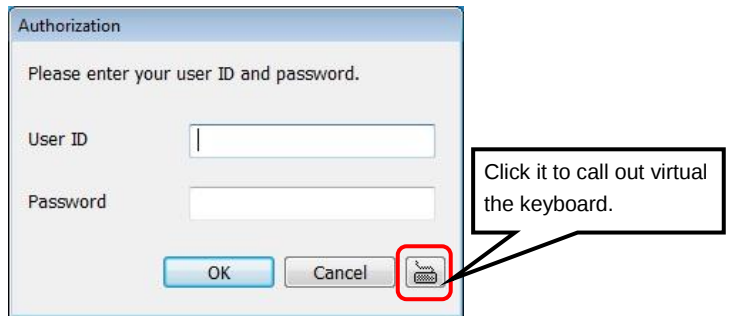
IP Assignment

There are two ways to find IP Cameras:

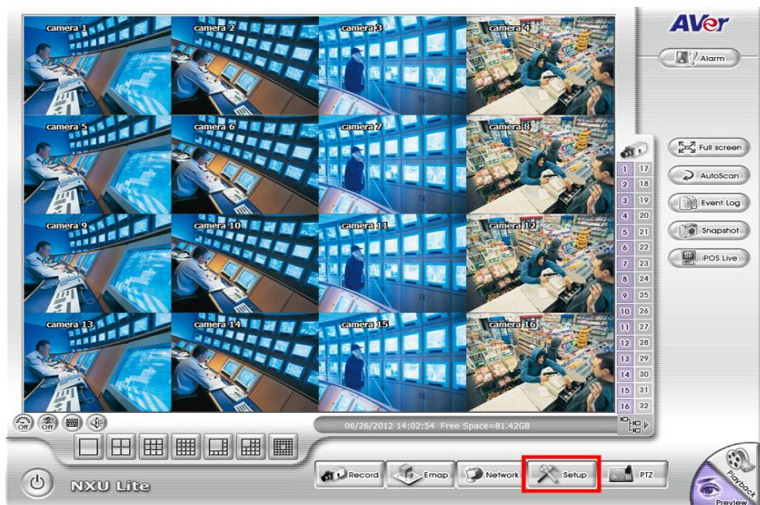
- Finding IP Camera by using the “**NXU Lite recording software**”
- Finding IP Camera by using the “**AVer IPCam Utility**”

Finding IP Camera by using “NXU Lite recording software”

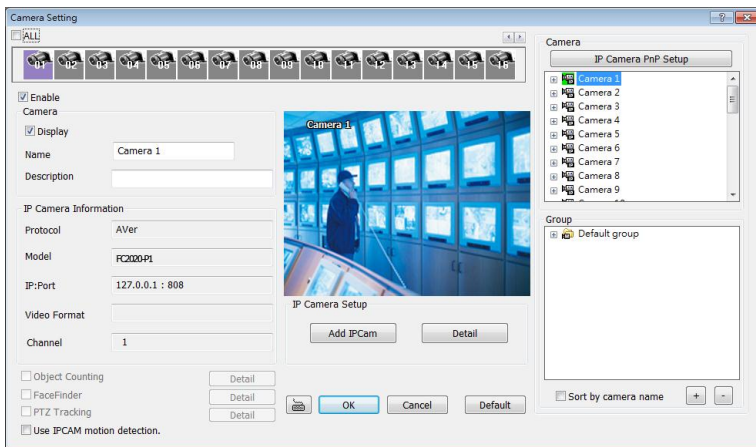
1. The NXU Lite software is in the attached software CD. Before launching it, please install the software first. During the installation process, users will be required to input a User name and Password for login NXU Lite system. Users can define the User name and Password as desired. Please refer to the NXU Lite user manual for detailed installation instructions.
2. To run the application, double-click  on your PC desktop or click **Start > Programs > DVR > NXU Lite**. For security purposes, some of the features require you to enter the User name and Password before it can be accessed. When the Authorization dialog box appears, key in your User ID and Password. (If this is the first time, enter the one you have registered when installing the software.



3. Click **“Setup”** button.



4. Click **“Add IPCam”** button.



5. Select **“IP Camera”** item.



6. Enter IP Camera's ID and Password (default is **admin/admin**) and click “**Auto Search**” to find camera.

Add IPCam

Protocol: **AVer**
Model: **FC2020-P1**
Video Format: **Auto**
Channel: **1**

IP Camera Site: **10.100.91.44** : **80**

URL: **http://**

☒ Authentication
ID: **admin**
Password: *********

☐ Enable Audio

IP Camera Information
F/W: 1.1.2.36

7. In the Search Result window, click the IP camera model that the user has purchased (**Please ignore ONVIF connection item**); the camera is in red text that is configurable. Users can click on the camera in the red text and configure the IP camera's settings; even if the IP camera is not in the same IP segment. Press “**OK**” to go back to the previous screen and press “**Connect**” to start live view.

Search Result

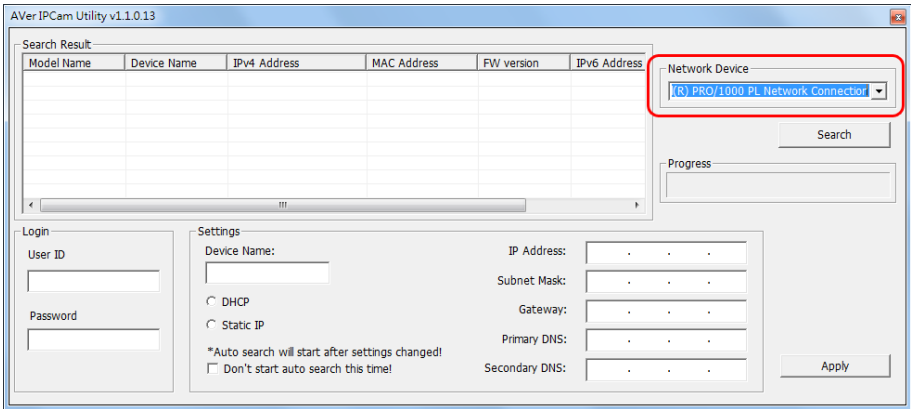
Item	Protocol	Model	IP Camera Site	
1	AVer	FB3027	10.100.91.44	
2	AVer	FX3000-R	10.100.91.44	
3	AVer	FC2020-P1	10.100.91.44	80
4	ONVIF	----	http://10.100.91.44:80/onvif/device_service	80

Click the IP camera model that user has purchased.

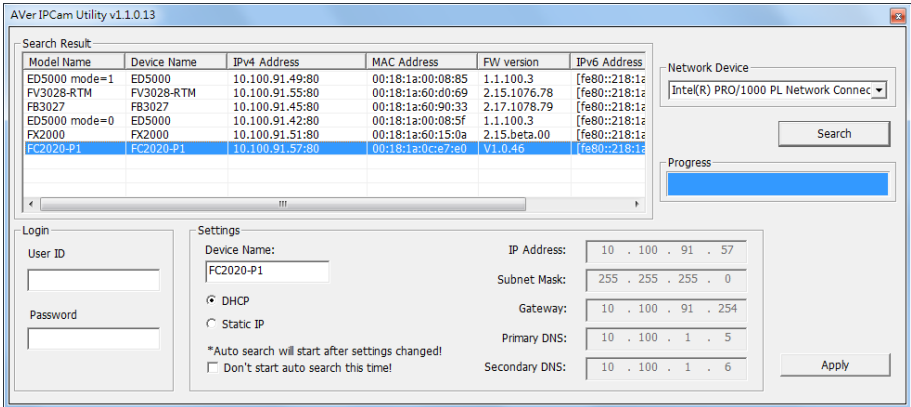
Please ignore ONVIF protocol selection; NXU Lite doesn't support ONVIF connection.

Finding IP Camera by using “AVer IPCam Utility”

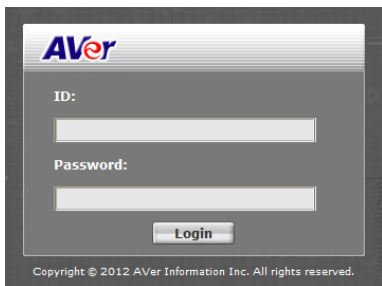
1. Use the software, “**AVer IPCam Utility**” to assign the IP address of the IP camera. The software is in the attached software CD.
2. Run the IPCam Utility
3. Select the proper network adapter and click [Search] to begin searching.



4. Select and double click the IP camera you want to access. If you want to change the setting of the selected IP camera, enter the user ID, correct password, and change the settings and then click **Apply** button. This will change the setting and rescan the network again.



5. The IE browser will open and direct you to the IP camera login page. This requires IPViewer.ocx to run. If the IE ActiveX warning message appears, click to allow running the add-on.



Default ID: admin

Default Password: admin

[Note]

- The default IP address is: 192.168.1.168
- The default ID and Password are both "**admin**".
- You can't enter a device name in Chinese or any other special characters (' " \ & ^).
- Gateway number can't be "0".
- IP camera device name should be less than 30 digits

Using NON-DHCP Server/Router Network

In Non-DHCP server/router network, the static IP address must be assigned to the device each time when adding another IP camera to the network; the default IP address of the current one must be changed to avoid conflict.

Please make sure the Subnet of the PC's IP address and the IP camera's IP address are the same.

[Example]

The same Subnet:

IP camera IP address: 192.168.1.168

PC IP address: 192.168.1.100

Different Subnets:

IP camera IP address: 192.168.1.168

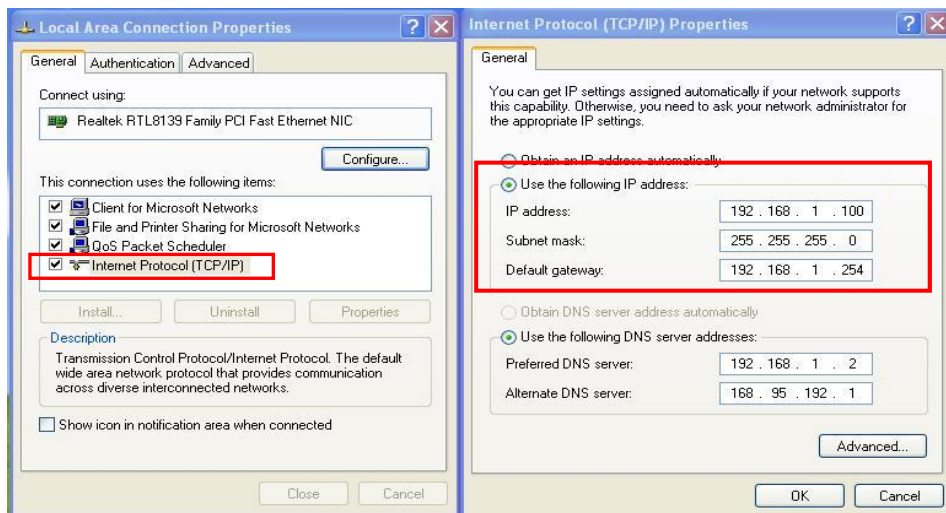
PC IP address: 192.168.2.100

To Change PC IP Address:

Control Panel → Network Connections → Local Area Connection Properties → Internet Protocol (TCP/IP) → Properties

Please make sure your IP camera and PC have the same Subnet. If not, please change IP camera subnet or PC IP subnet accordingly.

PC's IP address:



IP camera IP addresses:

AVer IPCam Utility v1.1.0.13

Search Result

Model Name	Device Name	IPv4 Address	MAC Address	FW version	IPv6 Address
ED5000 mode=1	ED5000	10.100.91.49:80	00:18:1a:00:08:85	1.1.100.3	fe80::218:1a
FV3028-RTM	FV3028-RTM	10.100.91.55:80	00:18:1a:60:d0:69	2.15.1076.78	fe80::218:1a
FB3027	FB3027	10.100.91.45:80	00:18:1a:60:90:33	2.17.1078.79	fe80::218:1a
ED5000 mode=0	ED5000	10.100.91.42:80	00:18:1a:00:08:5f	1.1.100.3	fe80::218:1a
FX2000	FX2000	10.100.91.51:80	00:18:1a:60:15:0a	2.15.beta.00	fe80::218:1a
FC2020-P1	FC2020-P1	10.100.91.57:80	00:18:1a:0c:e7:e0	V1.0.46	fe80::218:1a

Network Device: Intel(R) PRO/1000 PL Network Connec

Search

Progress

Login

User ID

Password

Settings

Device Name: FC2020-P1

IP Address: 10 . 100 . 91 . 57

Subnet Mask: 255 . 255 . 255 . 0

Gateway: 10 . 100 . 91 . 254

Primary DNS: 10 . 100 . 1 . 5

Secondary DNS: 10 . 100 . 1 . 6

Apply

☒ DHCP

☐ Static IP

*Auto search will start after settings changed!

☐ Don't start auto search this time!

A quick way to access remote monitoring is to double-click on a selected IP camera in “Camera Name list” in AVer IPCam Utility. Then, the IE browser will open and connect to the IP camera.

Then, please key in the default “ID” and “Password”, both of which are “admin”.

AVer

ID:

Password:

Login

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[Notes] Please enable “Compatibility View” while using IE 10 or above.

Install ActiveX Control

The first time you attempt to view the camera video via Internet Explorer, it will ask you to install the ActiveX component.

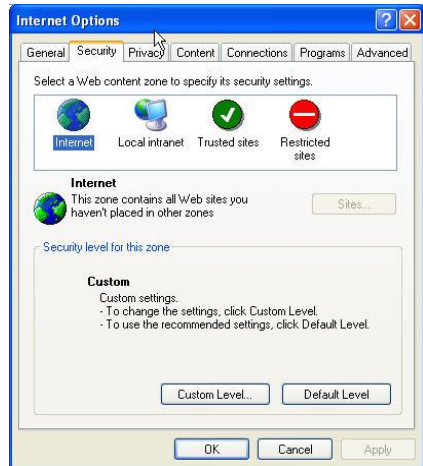
If the installation fails, please check the security settings for the Internet Explorer browser.

1. IE → Tools → Internet Options... → Security Tab → Custom Level... → Security Settings → Download unsigned ActiveX controls → Select **"Enable"** or Prompt.
2. IE → Tools → Internet Options... → Security Tab → Custom Level... → Initialize and script ActiveX controls not marked as safe → Select **"Enable"** or Prompt.

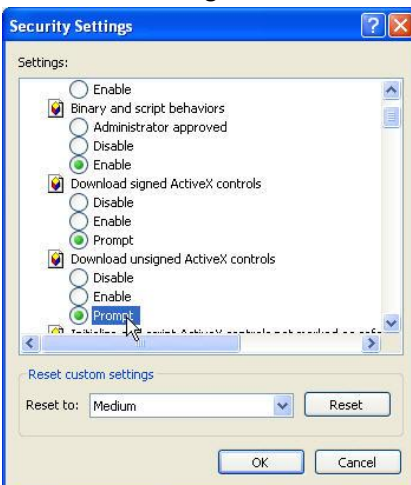
1



2



3

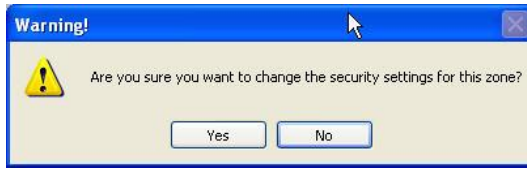


4



5

When the following dialogue box appears, click **“Yes”**.

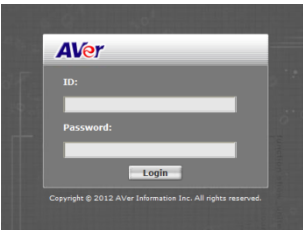


Using the IP Camera Browser Interface

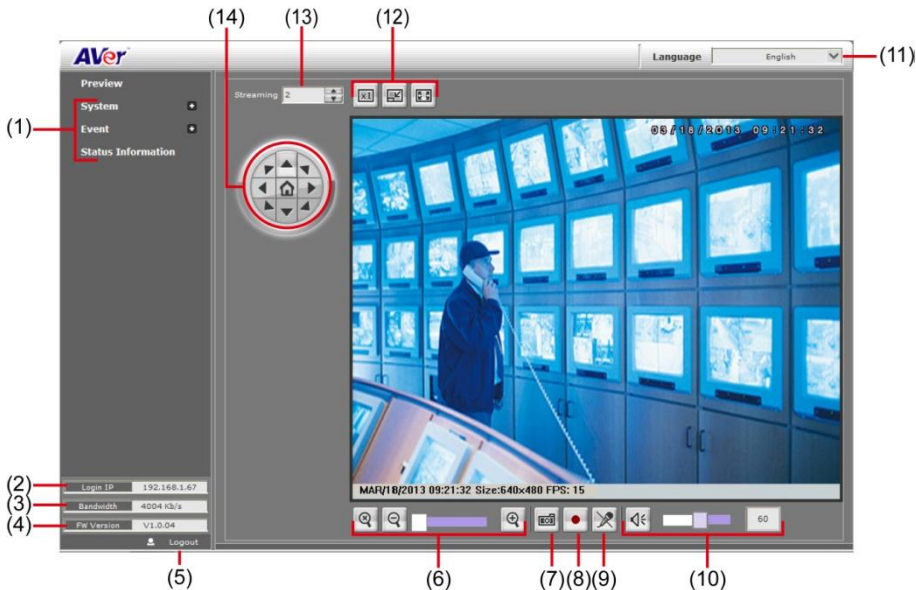
The admin has full access to the IP camera browser interface. You can expand the menu on the left and navigate to access all the features.

Preview

Launch the Internet Explorer browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the "ID" and "Password". The default "ID" and "Password" are both "admin".



Once connected to the IP camera, the following program interface will appear.



Name	Function
(1) System/Event/Status Information	Set up IP camera's configuration.
(2) Login IP	Show PC's IP address
(3) Bandwidth	Show current IP camera's transmitting bandwidth
(4) FW Version	Show IP camera's current firmware version
(5) Logout	Exit the application
(6) Zoom control	 Reset zoom level.
	 Increase zoom level.
	 Decrease zoom level.
	 Use the scroll bar to zoom in or zoom out the video screen
(7) Capture	 Capture and save the image on the screen in *.bmp format
(8) Record	 Start/stop audio and video recording. The recorded video will be saved in *.avi format.
(9) 2-way Talk	 Click the Microphone button to talk to IP camera side from user site. Click this button again to mute this function.
(10) Speaker	 Turn on the PC's speaker so that PC side can hear sound from IP camera side. Click this button again to mute this function.
	 Use the scroll bar to adjust the speaker volume.  It shows the current speaker volume's value.
(11) Language	Select the browser interface language.

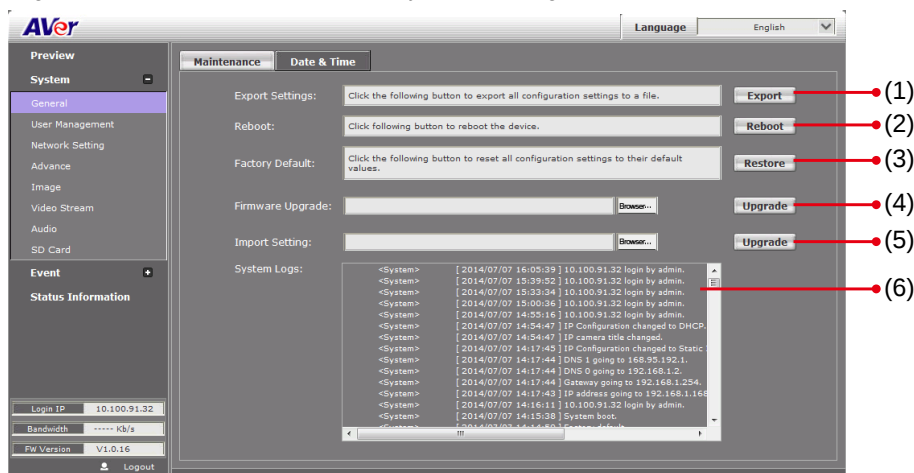
Name	Function
(12) Video screen	Change the video screen display.  Display the actual video pixel size  Display the video screen in compact size.  Display the video in full screen mode. Press ESC to exit full screen mode.
(13) Stream	Switch to view the video stream type. The IP camera can send multiple video streams of up to 3 types. To change the video stream setting, go to System > Video Stream. [Notes]When streaming 2 setting in "Video Setting" is closed, there won't have other stream option
(14) Direction Controller	Move the position of the view point while in zoom mode. User has to zoom in first.

System > General

In this section, only admins are authorized to configure the IP camera system maintenance and the date and time settings.

System > General > Maintenance

In the Maintenance tab, the administrator can check the system event log, upgrade the system firmware, reset the configuration settings without having to change the user management and network settings, reboot, and restore all back to factory default settings.



Name	Function
(1) Export Settings	Upload to save all the configuration settings from the IP camera to the computer hard disk.
(2) Reboot	Turn the IP camera off and on again.
(3) Factory default	Set all the configuration settings back to default except the user management and network settings.

System > General > Date & Time

In the “Date & Time” tab, the administrator can set and update the system’s date and time. After filling in the correct settings, click **Apply** to apply the new settings.

Name	Function
(1) Current Date & Time	Display the current date and time.
(2) Date Format	Select the date display format.
(3) Time Zone	Set the local time zone. Check the box next to “Enable Daylight Saving” to enable and setup the start date and end date for daylight saving time.

Name	Function
(4) Setting Method	Select the date & time settings method. <u>Sync with current PC</u> – Obtain the date and time setting on the current login computer. <u>Sync with NTP Server</u> – Obtain the date and time setting from NTP server. In the drop-down list, select the NTP host name. <u>Manual</u> – Manually set the date and time. Click “Done” to close the date and time interface.

System > User Management

In this section, only admins are authorized to create, delete, and edit the account in Account tab and configure the client connection settings in Connection tab.

System > User Management

IP camera supports two different user accounts – Administrator (Admin) and Guest User.

User Type	Access Rights
Admin	Can access all the configuration pages
Guest User	Can only access the preview and status information pages.

■ Anonymous User Login

- ✓ **Yes:** Allow an anonymous user to view the IP camera without logging in.
- ✓ **No:** Need user name & password to access this IP camera

- **Add user:** Enter the user name in “**Username**”, the password in “**Password**”, and re-enter the password in “**Confirm**”. Then, click “**Add/Set**”.
- **User List:** Click **edit** to change the account password. To delete the user account, click **Remove** button.

A screenshot of a 'User Setup' dialog box. It has a title bar 'User Setup'. Below the title bar, there are three labels: 'Username:', 'Password:', and 'Confirm:'. Each label is followed by a text input field. The 'Username' field contains the text 'guest'. The 'Password' and 'Confirm' fields are empty. At the bottom right of the dialog box, there is an 'OK' button.

User Setup

Username: guest

Password:

Confirm:

OK

[Note]

1. The password can't be empty, otherwise, user are not able to login successfully.
2. Please don't use special symbols as user name such as *, %, \$, &.

System > Network Setting > Setting

- **Device Name:** Used to name the IP camera to search more easily for a specific one among all connected IP cameras.

The screenshot shows the AVer network configuration web interface. On the left is a sidebar with a 'Preview' section and a 'System' menu. The 'Network Setting' option is highlighted. The main content area has tabs for 'Setting', 'Server', 'DDNS', 'Other 1', 'Other 2', and 'IPv6'. The 'Setting' tab is active, showing 'Network Type' with radio buttons for 'DHCP' (selected) and 'Static'. Below these are input fields for 'IP Address' (10.100.91.52), 'Subnet Mask' (255.255.255.0), 'Gateway' (10.100.91.254), 'Primary DNS' (10.100.1.5), and 'Secondary DNS' (10.100.1.6). There is also a 'PPPoE' section with radio buttons, and fields for 'Username', 'Password', 'Confirm Password', a 'Send mail after dialed' checkbox (checked/Enabled), and a 'Subject' field (PPPoE From IP Camera). An 'Apply' button is located at the bottom right of the configuration area.

- **Network Type:** IP camera supports DHCP, static IP and PPPoE. After completed all settings, click **Apply** to save the configuration.
 - **DHCP:** Using DHCP, the IP camera will get all of the network parameters from the DHCP server automatically.
 - **Static:** Please enter the IP address, subnet mask, gateway, Primary DNS, and Secondary DNS.
 - **PPPoE:** Enter the **Username**, **Password** and re-enter the Password in **Confirm Password** for the ADSL connection. And then click **Apply** to save the configuration.

System > Network Setting > Sever

Used to send out the video via Email or FTP, or to save on NAS.

The screenshot shows the AVer network settings interface. On the left is a sidebar with a 'Preview' section and a 'System' menu. The 'System' menu includes 'General', 'User Management', 'Network Setting' (highlighted), 'Advance', 'Image', 'Video Stream', 'Audio', 'SD Card', 'Event', and 'Status Information'. Below the menu, status information is displayed: 'Login IP: 10.100.91.32', 'Bandwidth: ---- Kb/s', 'FW Version: V1.0.16', and a 'Logout' button. The main area is titled 'Setting' and has tabs for 'Server', 'DDNS', 'Other 1', 'Other 2', and 'IPv6'. The 'Server' tab is active, showing three sections: 'Mail Setting', 'FTP Setting', and 'NAS Settings'. The 'Mail Setting' section includes fields for 'Login Method' (set to 'Account'), 'Bcc Mail', 'Sender Email Address', 'Recipient Email Address', 'Mail Server', 'Port' (set to 25), 'Account Name', 'Password', and a 'Secure Connect' option with radio buttons for 'TLS' and 'SSL'. The 'FTP Setting' section includes fields for 'FTP Server', 'Port' (set to 21), 'Account Name', 'Password', 'Path' (set to '/'), 'Create the folder' (set to 'Yes'), and 'Mode' (set to 'PORT'). The 'NAS Settings' section includes fields for 'Location', 'Workgroup', 'Account Name', 'Password', 'Create the folder' (set to 'Yes'), and 'Mode'. An 'Apply' button is located at the bottom right of the settings area.

- **Mail Setting:** Used to send out the video via Email.
 - a. **Login Method:** Click drop-down list to select the method to login Email server – “Account” or “Anonymous”.
 - b. Enter necessary information in “Bcc Mail”, “Sender Email Address”, “Recipient Email Address”, “Mail Server”, “Mail Server Port”, “Account Name”, and “Password” columns.
 - c. Click “Apply” to save the configuration.
- **FTP Setting:** Used to send out the video to FTP server.
 - a. Enter necessary information in “FTP Server”, “Account Name”, “Password”, and “Path” columns.
 - b. **Port:** Select the FTP server port.
 - c. If the user wants to create a new folder on the FTP server to save the video file, select “Yes” under the “Create the folder”.
 - d. **Mode:** Select the FTP transmission mode.
 - e. Click “Apply” to save the configuration.
- **NAS Settings:** Used to send out the video to NAS server.
 - a. Enter necessary information in “Location”, “Workgroup”, “Account Name” and “Password” columns.
 - b. If the user wants to create a new folder on the NAS server to save the video file, select “Yes” under the “Create the folder”.
 - c. Click “Apply” to save the configuration.

NAS Settings	Location:	\\192.168.107.171\AVerNAS	
	Workgroup:	AVerGroup	Create the folder: Yes ▼
	Account Name:	AVerMember	Password:
Apply			

System > Network Setting > DDNS

The IP camera supports DDNS (Dynamic DNS) service.

AVer Language: English ▼

Preview
System ▾
 General
 User Management
Network Setting
 Advance
 Image
 Video Stream
 Audio
 SD Card
Event +
Status Information

Setting Server **DDNS** Other 1 Other 2 IPv6

Service Provider: dyndns.org ▼

Domain Name:

Account Name:

Password:

Schedule Update: 30 Minutes

☒ Enabled DDNS

Status: DDNS not launching!

Note:

1. Schedule Update: Depends on the input time of Schedule Update, it will update DDNS's web site automatically. The time range is from 5 to 5000 minutes.
 *0: It will not update.
 2. dyndns.org & 3322.org: Update once per day is recommended (1440 minutes per day). If updated too frequently, it will be blocked.

Apply

Login IP: 10.100.91.32
 Bandwidth: ***** Kb/s
 FW Version: V1.0.16
 Logout

- Select **“Enabled DDNS”** to enable DDNS function.
- Select the **Service Provider** and enter the **Domain Name**, **Account Name**, and **Password** that the user has registered on the DDNS service provider in the appropriate columns.
- Enter the IP refreshing time period in the **“Schedule Update”** column.
- Click **“Apply”** to save the configuration.

[Note] If you set the schedule update to occur too frequently, the IP may be blocked. In general, performing schedule update once a day (1440 minutes) is recommended.

■ Status

- Common warning message:

Updating!

Failed(1), Please check your DNS setting.

Failed(2), Please check your internet connection.

Failed(3), Please check your internet connection.

Failed(6), receiving data failure

- Warning message from different service provider:

✧ **Server Provider : dyndns.org**

Failed(4), Please check the Dyndns.org.

Error : The system parameter given is not valid.

Error : No user agent was specified.

Error : The username and password pair do not match a real user.

Error : An option available only to credited users was specified.

Error : Not in the form hostname.domain.org or domain.com.

Error : The hostname specified does not exist.

Error : Not under the username specified.

Error : Too many or no hosts specified in an update.

Error : The hostname specified is blocked for update abuse.

Error : DNS error encountered.

Error : DNS Server Error Conditions.

✧ **Server Provider : ddns.camddns.com(TW)**

Failed(5), The name has already been registered.

✧ **Server provider : ddns.ipddn.com(HK)**

Failed(5), The name has already been registered

✧ **Server provider : www.3322.org.**

Failed(4), Please check the www.3322.org.

System > Network Setting > Other 1

Preview

System

General

User Management

Network Setting

Advance

Image

Video Stream

Audio

SD Card

Event

Status Information

Login IP10.100.91.32

Bandwidth-----Kb/s

FW VersionV1.0.16

Logout

LanguageEnglish

SettingServerDDNSOther 1Other 2IPv6

HTTP Port:80

HTTPS Port:443

UPnP Support:☒ Yes☐ No

UPnP Port Forwarding:☐ Yes☒ No

External HTTP Port:80

External HTTPS Port:443

External RTSP Port:554

RTSP Server:☐ Yes☒ No

RTSP Authentication:Disable

RTSP Port:554

RTP Start Port5000[1024..9997]

RTP End port:9000[1027..10000]

ONVIF:☒ Enabled☐ Disabled

Security:☐ Yes☒ No

RTSP Keepalive:☐ Yes☒ No

Apply

User may need to assign a different port to avoid conflict when setting up IP assignment. Click **Apply** to save the configuration.

- **HTTP Port:** setup web page connecting port and video transmitting port (Default: 80)
- **HTTPS Port:** AVer IP Camera supports encrypted browsing using HTTPS. This is configured on the System > Advance > HTTPS
- **UPnP Support:** This IP camera supports UPnP, if this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to “My Network Places.”

[Note] UPnP must be enabled on your PC.

Please follow the procedure to activate UPnP.

1. Open the **Control Panel** from the Start Menu.
2. Select **Add/Remove Programs**.
3. Select Add/Remove Windows Components and open Networking Services section.
4. Click **Details** and select **UPnP** to setup the service.
5. The IP device icon will be added to “**My Network Places**”.
6. User may double click the IP device icon to access IE browser.

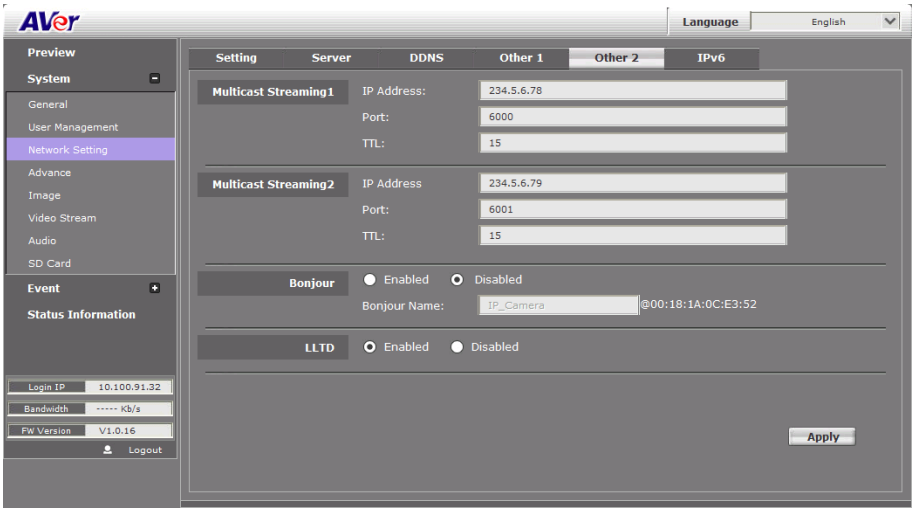
- **External HTTP Port:** The port is used for HTTP.
- **External HTTPSs Port:** The port is used for HTTPSs.
- **External RTSP Port:** The port is used for RSTP.
- **UPnP Port Forwarding:** If the IP camera is set up behind the firewall, please select YES to enable it.

32

- **RTSP Server:** Enable/disable RTSP function. The Real Time Streaming Protocol (RTSP) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.
- **RTSP Authentication:** Select the RTSP authentication mode – disable, basic, or digest.
- **RTSP Port:** setup port for RTSP transmitting (Default: 554)
- **RTP Start and End Port:** in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.
- **Security:** **Yes** is required account and password to connect with this IP camera through ONVIF protocol. **No** is not required account and password to connect.
- **RTSP Keepalive:** To keep connection until remote site disconnects it.

System > Network Setting > Other 2

Multicast Setting (based on the RTSP Server): User can setup two streams based on the RTSP Server.



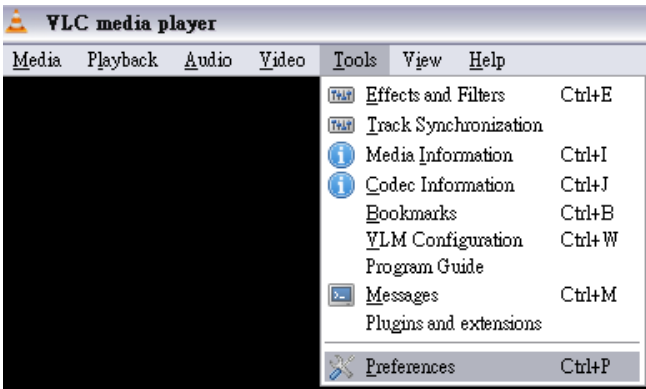
Multicast operation example:

The application is to get the multicast streaming in the LAN environment. Basically, the users operate VLC player, and then you can get the multicast streaming from IP camera.

Please follow the steps to obtain the multicast streaming in the following steps:

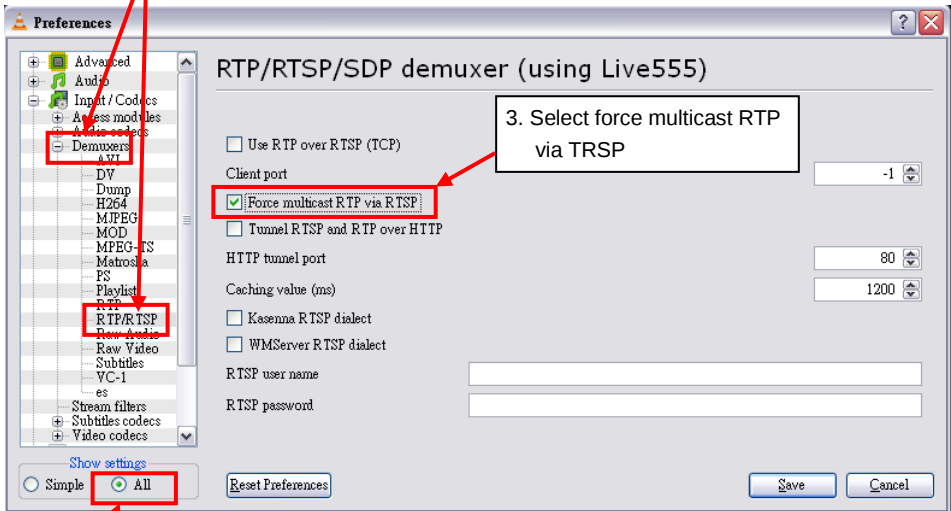
Step 1:

- 1. Implement VLC player (please download from the Internet)
- 2. Select /tools/preferences



Step 2:

2. Select Demuxers and
RTP/RTSP

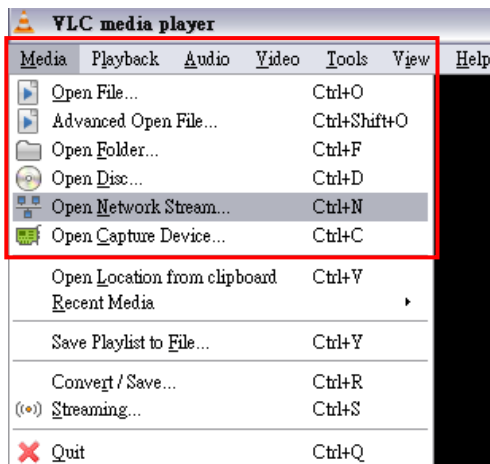


3. Select force multicast RTP
via TRSP

1. Select all

Step 3:

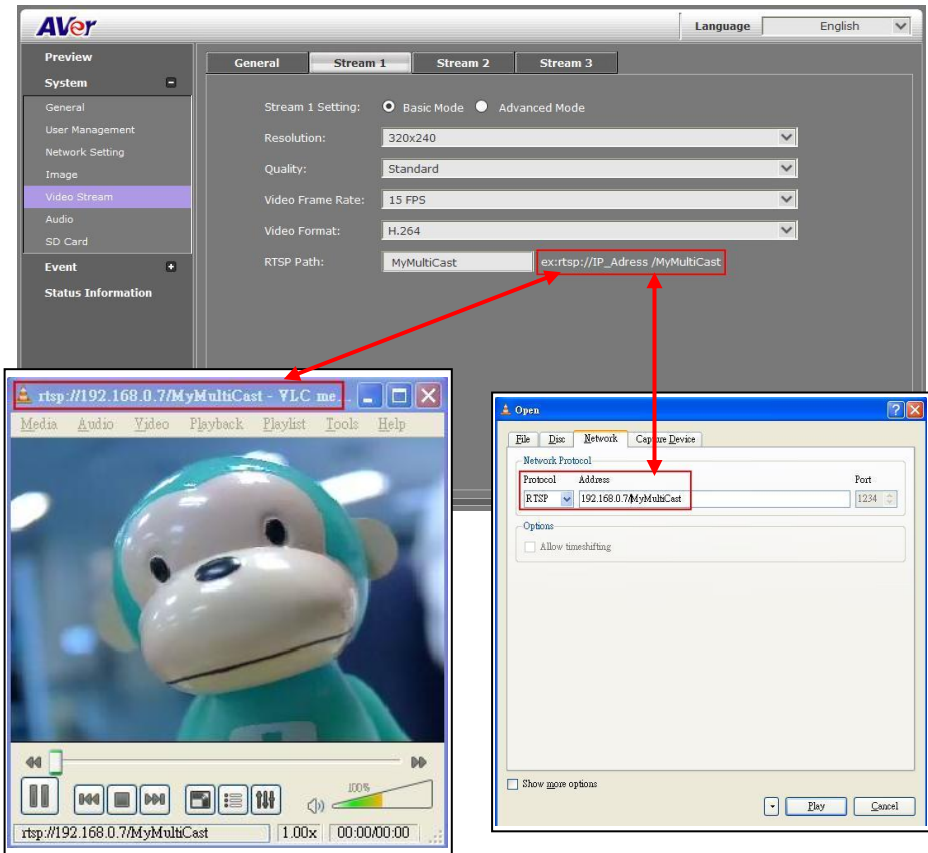
Select Media/open network stream



Step 4:

Input **rtsp://[IPCAM Address] / [RTSP Path]**

The URL address should be the same as the RTSP path in Video Stream (System-->Video Stream)



[Notice]

- a. If the received image is not from the required IP camera, please adjust the value. (Change either IP Address or Port number)

Aver

LanguageEnglish

Preview

System

General

User Management

Network Setting

Advance

Image

Video Stream

Audio

SD Card

Event

Status Information

SettingServerDDNSOther 1Other 2IPv6

Multicast Streaming1

IP Address:234.5.6.78

Port:6000

TTL:15

Multicast Streaming2

IP Address234.5.6.79

Port:6001

TTL:15

Bonjour

EnabledDisabled

Bonjour Name:IP_Camera@00:18:1A:0C:E3:52

LLTD

EnabledDisabled

Apply

Login IP10.100.91.32

Bandwidth-----Kb/s

FW VersionV1.0.16

Logout

- b. If the Multicast stream you use doesn't support RTSP Keepalive, please select NO.

Aver

LanguageEnglish

Preview

System

General

User Management

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Audio

SD Card

Event

Status Information

SettingServerDDNSOther 1Other 2IPv6

HTTP Port:80

HTTPS Port:443

UPnP Support:YesNo

UPnP Port Forwarding:YesNo

External HTTP Port:80

External HTTPS Port:443

External RTSP Port:554

RTSP Server:YesNo

RTSP Authentication:Disable

RTSP Port:554

RTP Start Port:5000[1024..9997]

RTP End port:9000[1027..10000]

ONVIF:EnabledDisabled

Security:YesNo

RTSP Keepalive:YesNo

Apply

Login IP10.100.91.32

Bandwidth-----Kb/s

FW VersionV1.0.16

Logout

- **Bonjour:** This function enables MAC systems to link to this IP Camera. Please key in the name here.(Safari supports Bonjour protocol.)
- **LLTD:** If your PC supports LLTD, enable this function then you can check the connection status, properties, and device position (like IP address) of this IP Camera in the network map. On computer's running Windows Vista or Windows 7, you can find LLTD through the path **Start → Control Panel→ Network and internet→ Network and Sharing Center→ Click “ See full map”**.

The screenshot shows the AVer web interface for network settings. The left sidebar contains a menu with 'System' expanded, showing 'General', 'User Management', 'Network Setting' (highlighted), 'Advance', 'Image', 'Video Stream', 'Audio', and 'SD Card'. Below this is an 'Event' section and a 'Status Information' section showing 'Login IP: 10.100.91.32', 'Bandwidth: ---- Kb/s', and 'FW Version: V1.0.16'. The main content area has tabs for 'Setting', 'Server', 'DDNS', 'Other 1', 'Other 2', and 'IPv6'. The 'Setting' tab is active, showing 'Multicast Streaming1' and 'Multicast Streaming2' configurations. Below these, the 'Bonjour' section has 'Enabled' selected. The 'LLTD' section has 'Enabled' selected, which is highlighted by a red rectangle. An 'Apply' button is at the bottom right.

System > Network Setting > IPv6

Besides IPv4, there is IPv6 for user to set up IP address.

The screenshot shows the AVer web interface for IPv6 settings. The left sidebar is the same as the previous screenshot. The main content area has tabs for 'Setting', 'Server', 'DDNS', 'Other 1', 'Other 2', and 'IPv6'. The 'IPv6' tab is active, showing the 'IPv6 Assignment' section. It has a checkbox for 'IPv6 Enabled' which is checked. Below it, there is a checkbox for 'Manually setup the IPv6 address:'. The 'DHCPv6' section has 'Enabled' selected. The 'IPv6 Address' is set to 'fe80::218:1aff:fe0c:e352'. An 'Apply' button is at the bottom right.

System > Advance > HTTPS

AvEr

Language English

Preview

System

General

User Management

Network Setting

Advance

Image

Video Stream

Audio

SD Card

Event

Status Information

Login IP 10.100.91.32

Bandwidth ---- Kb/s

FW Version V1.0.16

Logout

HTTPS SNMP Access list QoS/DSCP

Created Request

Subject: C=TW , ST= , L= , O= , OU= , CN=

Date: 2014/Jul/07 14:15:39

Content Remove

Installed Certificate

Subject: C=TW , ST= , L= , O= , OU= , CN=

Date: Mar 14 08:45:42 2038 GMT

Content Remove

Connection Types HTTP & HTTPS

HTTPS (Hypertext Transfer Protocol Secure): Https can help protect streaming data transmission over the internal on the higher security level. You can select the connection type. "Https" means the user cannot connect the camera via Http protocol. The HTTPS path will be: "https :/(IP address)"/. If you select "Http & Https", both the Http and HTTPS path can be used to access the camera.

Connection Types

Http

Https

Http&Https

Remove the existing setting: Before setting new request, please remove old secure identification. Select "Http" connection type and click "Remove".

Created Request

Subject: C=TW , ST= , L= , O= , OU= , CN=

Date: 2012/Jun/17 17:05:07

Content Remove

Installed Certificate

Subject: C=TW , ST= , L= , O= , OU= , CN=

Date: Mar 14 08:45:42 2038 GMT

Content Remove

Created Request: Set the secure identification and apply it.

Create Request	Country:	
	State or province:	
	Locality:	
	Organization:	
	Organizational Unit:	
	Common Name:	
		Apply

There are two ways to set Certificate- Install Signed Certificate or Create Self-Signed Certificate.

Install Signed Certificate	Signed Certificate:		Browse
Apply			
Create Self-Signed Certificate	Country:		
	State or province:		
	Locality:		
	Organization:		
	Organizational Unit:		
	Common Name:		
	Validity:		Days
Apply			

System > Advance > SNMP

SNMP (Simple Network Management Protocol) provides a simple framework for administering networked hardware. To manage the IP camera, you have to prepare a MIB browser or similar tools first. SNMPv1, SNMPv2c, and SNMPv3 can be enabled simultaneously.

The screenshot shows the AVer IP camera web interface. The sidebar on the left contains navigation links: Preview, System (expanded), General, User Management, Network Setting, Advance (highlighted), Image, Video Stream, Audio, SD Card, Event, and Status Information. The main panel is titled 'SNMP Setting' and has tabs for HTTPs, SNMP (selected), Access list, and QoS/DSCP. The SNMP tab is active, showing configuration options for SNMPv1, SNMPv2c, and SNMPv3. For each protocol, there are fields for 'Write' and 'Read' community names. SNMPv3 also includes fields for 'Write Security Name', 'Authentication Type' (MD5 or SHA), and 'Encryption Type' (DES or AES). There is also a section for 'SNMPv1/v2c Trap' with fields for 'Trap Address', 'Trap Community', and 'Trap Event'. An 'Apply' button is located at the bottom right of the main panel.

- **SNMPv1 and SNMPv2:** The term "Community name" in SNMPv1 and SNMPv2c can be roughly regarded as key. The person who has the community name has the authority to read or edit the information of IP camera via SNMP. Check the box to enable SNMPv1 or SNMPv2c protocol, and specify the community name for write (read and write) and read (read-only). The user who uses read community name to access the IP camera cannot modify any data of this camera.

This is a close-up view of the 'SNMP Setting' form. It shows the 'SNMPv1' and 'SNMPv2c' checkboxes selected. Below them, the 'Write Community' field is set to 'write' and the 'Read Community' field is set to 'public'.

- **SNMPv3:** For data security reasons, the authentication and encryption assurances are added when developing SNMPv3. The user has to give not only the security name (the same as "community name" in v1&v2c, or sometimes we call it "context name") but also the password in order to access the IP camera. Please set security name, authentication type, authentication password, encryption type, encryption password of write and read respectively. The password must be 8–64 bits in length. Different from in SNMPv1 and v2c, the user has to create an account when using SNMPv3. In the account parameters, key in the security name and password you set in the camera to get access.

The image shows a configuration window titled "SNMPv3". It contains two main sections: "Write" and "Read". Each section has fields for "Security Name", "Authentication Type" (MD5 or SHA), "Authentication Password", "Encryption Type" (DES or AES), and "Encryption Password". In the "Write" section, the Security Name is "write", Authentication Type is MD5, and Encryption Type is DES. In the "Read" section, the Security Name is "public", Authentication Type is MD5, and Encryption Type is DES.

- **SNMPv1/v2cTrap:** Trap is a mechanism that allows the managed device to send messages to the manager instead of waiting passively for polling from the manager. Specify the trap event. When those events happen, the camera will send the ring message to the Trap Address, which is usually the manager's IP address. Trap Community means the community that can receive the trap message.
 - **Cold Start:** The camera starts up or reboots.
 - **Setting changed:** The SNMP setting is changed.
 - **Network Disconnected:** The network connection was broken down. (The camera will send trap messages after the network being connected again)
- **V3 Authentication Failed:** A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)
- **SD Insert / Remove:** A microSD/SDHC card is inserted or removed.

The image shows a configuration window titled "SNMPv1/v2c Trap". It contains fields for "Trap Address", "Trap Community", and "Trap Event". The "Trap Community" field is set to "public". The "Trap Event" section has four checkboxes: "Network Disconnected", "V3 Authentication Failed", "Cold Start", and "Setting Changed". The "SD Insert/Remove" checkbox is also present but not checked.

System > Advance > Access list

You can deny an IP address or a range of IP addresses so that they cannot access the IP camera. Tick the "enable" box, key in the IP address you want to deny, select "deny" then click "Add" to add it to the list. You can also choose to deny a range of IP address but allow one or several IP addresses of them. Take the picture above for example, IP address 192.168.50.151~161 is not allowed to connect to the camera, but only 192.168.50.159 can access. Note: In the list "allow" condition must be ranked before "deny" condition. For example, if we exchange the sequence, set "Deny: 192.168.50.151 ~ 192.168.50.161" for the first item and "Allow: 192.168.50.159" for the second item in the list, the IP "192.168.50.159" turns out to be denied by the camera because the "deny" condition has the priority according to our ranking way.

Aver

Language English

Preview

System

General
User Management
Network Setting
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Image
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HTTPS

SNMP

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QoS/DSCP

☐ Enable ip address filter

IPv4 Setting

add

☐ allow ☐ deny

address:

single ▼

No.	IP Address	Filter	Action
1			remove
2			remove
3			remove
4			remove
5			remove
6			remove
7			remove
8			remove
9			remove
10			remove

☐ Allow admin IP address always access this device

Admin IP Address:

Login IP 10.100.91.32
Bandwidth ----- Kb/s
FW Version V1.0.16
Logout

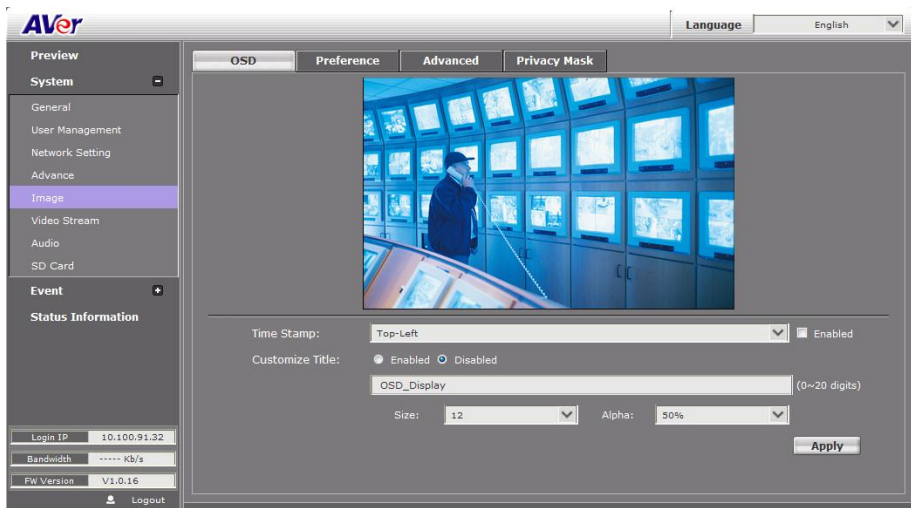
System > Image

Admin and operator levels can adjust the Image setting. There are 4 tabs: OSD, Preference, Advanced, and Privacy Mask

System > Image> OSD

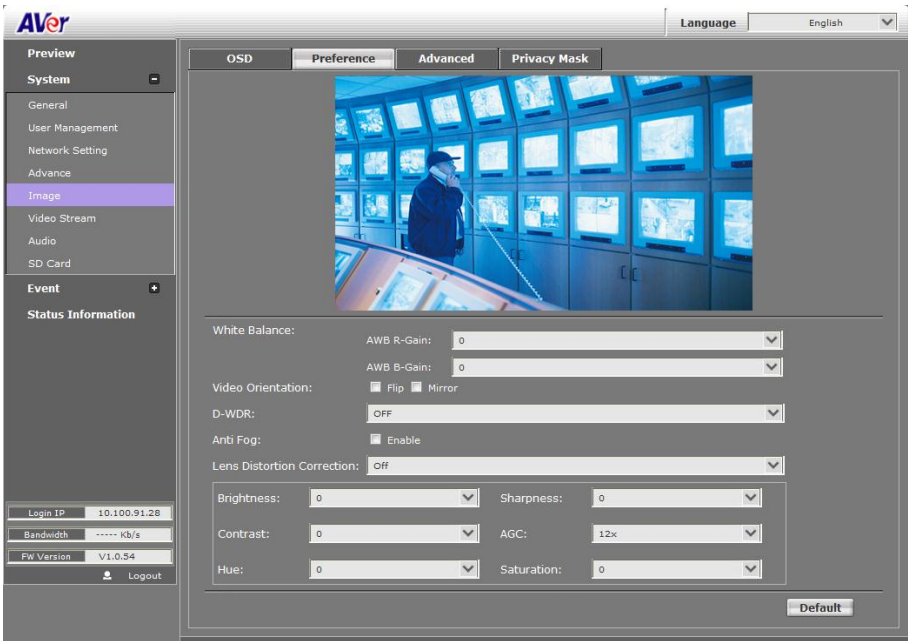
In the OSD tab, you can enable/disable overlaying time stamp and text title. After completing the setting, click Save to apply the new setting and Cancel to keep the new setting. **Please note it can't use Chinese words.**

- **Time Stamp:** Mark **Enable** check box and select a position where date and time stamp / text to display on video screen.
- **Customize Title:** Click **Enabled** can adjust the OSD contents which are including **Size** and **Alpha** of text, the special characters(ex: &, \$, #) are not allowed.



System > Image > Preference

In the Preference tab, you can tune the IP camera's white balance, change the video orientation, and adjust the brightness and contrast.



- **White Balance:** Adjust white balance value.
- **Video Orientation:** To **Flip** or **Mirror** the video on screen.
- **D-WDR:** This function is able to reduce the contrast in the view to avoid the dark zones resulting from over and under exposure.
- **Anti Fog:** Improve the image clarity on environments presenting high levels of fog or smoke.
- **Lens Distortion Correction:** Straight the curves in the borders of the image caused by the lens angles. The available values are: OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
- Adjust “**Brightness**”, “**Contrast**”, “**Hue**”, “**Saturation**”, “**AGC**”, “**Saturation**” to get clear video.
- **Default:** Click it to reset to factory default values.

System > Image> Advanced

Click **Default** button will back to factory default setting.

The screenshot displays the AVer camera web interface. On the left is a sidebar with a 'Preview' section and a 'System' menu. The 'Image' option under 'System' is highlighted. The main content area is titled 'Advanced' and contains various image adjustment settings. At the top right of the main area is a 'Language' dropdown set to 'English'. The settings include: 'Sense-Up' set to '1/15', 'Shutter Time' set to 'Outdoor', 'IR Cut Filter' with radio buttons for 'Color Mode', 'Light Sensor Mode', 'B/W Mode', 'Schedule Mode', and 'DI Trigger Mode' (with 'Schedule Mode' selected and a time range of 17:00 to 05:00), 'IR LED' set to 'On', 'Day Lux' set to '7 lux', 'Night Lux' set to '3 lux', 'Current Lux' showing 'over 55 lux' with a 'Refresh' button, and 'Denoise' with '3D' set to '3' and '2D' set to '1'. A 'Default' button is located at the bottom right of the settings area. At the bottom left of the sidebar, there are fields for 'Login IP' (10.100.200.43), 'Bandwidth' (**** Kb/s), and 'FW Version' (V1.0.38), along with a 'Logout' button.

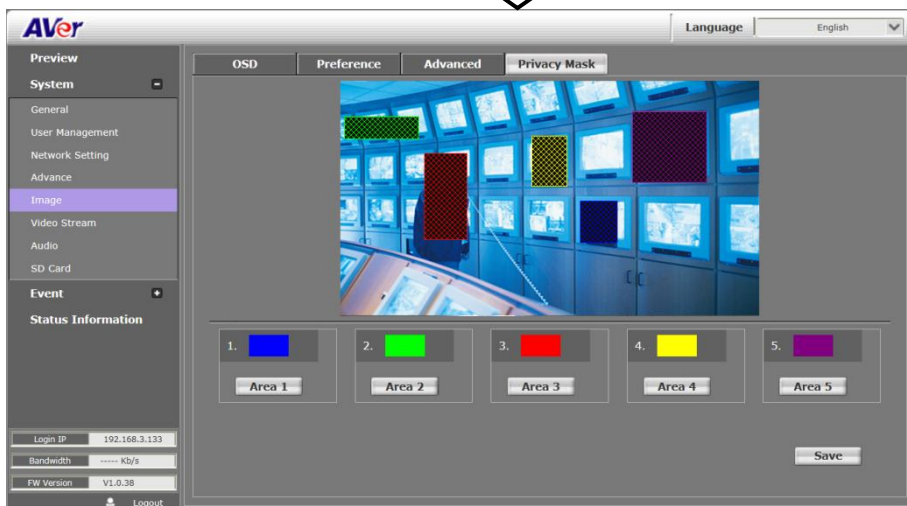
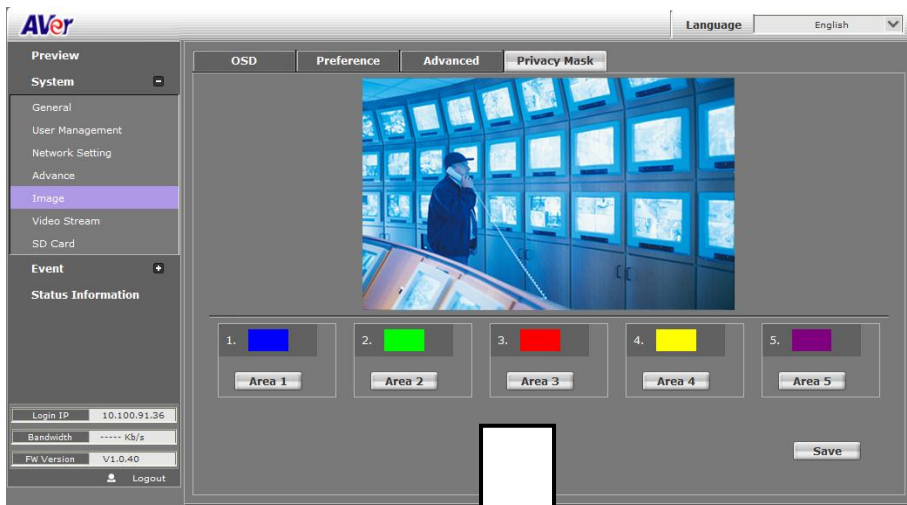
- **Sense-UP:** The main purpose of sense-up is to provide a camera technology that does not rely on artificial light to see in very low light conditions. By allowing the shutter to stay open longer, allowing more light into the camera and seeing better in low light. This setting altogether when there is a moving object in the image and the faster the object moves, the worse the image appears (blurriness).
- **Shutter Time:** Adjust the shutter time level to get the best image quality.
- **IR Cut Filter:** Select the IR cut filter mode – Color Mode, Light Sensor Mode, B/W Mode, Schedule Mode, or DI Trigger Mode. When you choose "Light Sensor Mode", the image will be turned to black and white at night in order to keep clear. Current lux value is provided for reference. Under "Times Mode" the switch time of Color / Black and white is according to the given time. You can also control it by choosing "Color" or "B/W".
- **IR LED:** select off to turn off IR LED.
- **Day Lux/ Night Lux:** To set light sensor mode, appoint a lux standard of switching D/N here.
- **Denoise:** This function is able to filter the noise and blur from the image and show a clearer view.

[Note] When you select a number in "Shutter Time", actually the shutter time varies in a range and controlled by camera automatically. Following table shows the shutter time option and corresponding range

Option	Shutter Time Range (sec.)
Outdoor	Selected number in "Sense-up"
1/5	1/33000 ~ 1/5
1/10	1/33000 ~ 1/10
1/15	1/33000 ~ 1/15
1/30	1/33000 ~ 1/30
Indoor	Selected number in "Sense-up"
1/30	1/33000 ~ 1/30
1/50	1/33000 ~ 1/50
1/60	1/33000 ~ 1/60
1/100	1/33000 ~ 1/100
1/125	1/33000 ~ 1/125
1/250	1/33000 ~ 1/250
1/500	1/33000 ~ 1/500
1/1000	1/33000 ~ 1/1000

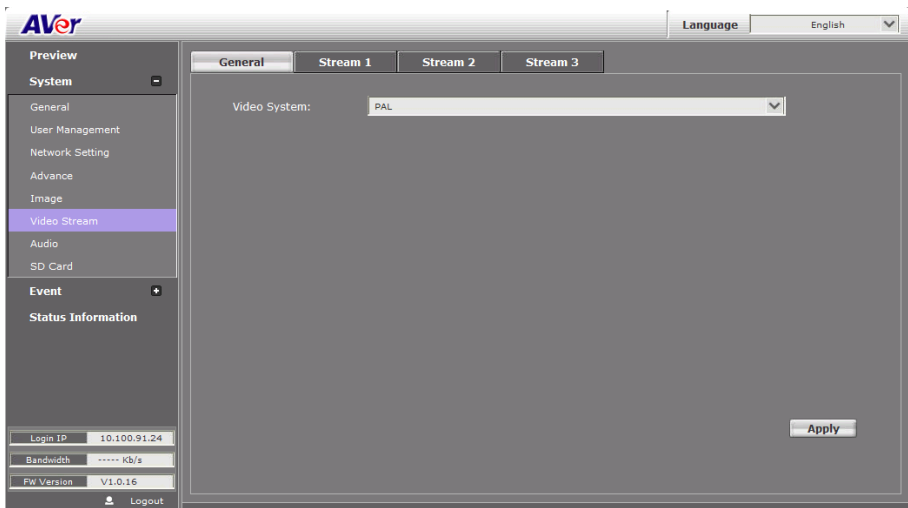
System > Image> Privacy Mask

For the security purpose, there are three areas can be setup for privacy mask. Click Area # (Area 1, Area 2, Area 3, Area 4, Area 5) button first and drag an area on the image screen. Then, click **Save** to save the setting.



System > Video Stream > General

- Video System: PAL or NTSC.



System > Video Stream > Stream1

■ Basic Mode

Click **Apply** to save the configuration.

- **Resolution:** There are 5 resolutions to select from – 1920x1280, 1280x720, 640x480, 320x240, 176x144.
- **Profile:** Chose between Main and Baseline.
- **Quality:** There are 5 levels to adjust – Best, High, Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for transmitting over the Internet.
- **Video Frame Rate:** The video refreshing rate per second.
- **Video Format:** H.264 or JPEG.
- **RTSP Path:** It's a URL address.

The screenshot shows the AVer system configuration web interface. The top navigation bar includes the AVer logo, a 'Language' dropdown set to 'English', and a 'Preview' button. The left sidebar contains a 'System' menu with options: General, User Management, Network Setting, Advance, Image, Video Stream (highlighted), Audio, SD Card, Event, and Status Information. The main content area is titled 'Stream 1' and shows 'Stream 1 Setting' with 'Basic Mode' selected. Configuration fields include: Resolution (1280x800), Profile (Baseline), Quality (Best), Video Frame Rate (30 FPS), Video Format (H.264), and RTSP Path (a text input field followed by the example 'ex:rtsp://IP_Address / Audio:G.711'). An 'Apply' button is at the bottom right. The bottom status bar shows 'Login IP: 10.100.91.24', 'Bandwidth: ----- Kb/s', 'FW Version: V1.0.16', and a 'Logout' button.

■ Advanced Mode

Click **Apply** to save the configuration.

- **Resolution:** There are 5 resolutions select from –1920x1080, 1280x720, 640x480, 320x240, 176x144.
- **Profile:** Chose between Main and Baseline.
- **Rate Control:** There are CBR (Constant Bit Rate) and VBR (Variable Bit Rate) to use.
 - ✓ **CBR:** 32Kbps–8Mbps (the higher the CBR is, the better the video quality is).
 - ✓ **VBR:** 1(Low) ~10(High) – Compression rate, the higher the compression rate, the better the picture quality is. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.

- **Video Bitrate:** 32Kbps~1Mbps (the higher the Video Bitrate is, the better the video quality is).
- **Video Frame Rate:** The video refreshing rate per second.
- **GOP Size:** It means "**Group of Pictures**".
- **Video Format:** H.264 or JPEG
- **RTSP Path:** It's a URL address

The screenshot displays the AVer system configuration web interface. The left sidebar contains a menu with 'Video Stream' highlighted. The main area shows the 'Stream 1' configuration tab. The settings are as follows:

Setting	Value
Stream 1 Setting	Advanced Mode (selected)
Resolution	1280x800
Profile	Baseline
Rate Control	CBR (selected), VBR
Video Bitrate	3Mbps
Video Frame Rate	30 FPS
GOP Size	1 X FPS
Video Format	H.264
RTSP Path	ex:rtsp://IP_Address / Audio:G.711

Additional interface details include a 'Language' dropdown set to 'English', a status bar at the bottom showing 'Login IP: 10.100.91.24', 'Bandwidth: ----- Kb/s', 'FW Version: V1.0.16', and a 'Logout' button.

■ Advanced Mode

Click **Apply** to save the configuration.

- **Resolution:** There are 5 resolutions to select from –1920x1080, 1280x720, 640x480, 320x240, 176x144.
- **Profile:** Chose between Main and Baseline.
- **Quality:** There are 5 levels to adjust – Best, High, Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for transmitting over the Internet
- **Rate Control:** There are CBR (Constant Bit Rate) and VBR (Variable Bit Rate) to use.
 - ✓ **CBR:** 32Kbps–8Mbps (the higher the CBR is, the better the video quality is).
 - ✓ **VBR:** 1(Low) ~10(High) – Compression rate, the higher the compression rate, the better the picture quality is. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.
- **Video Bitrate:** 32Kbps–1Mbps (the higher the Video Bitrate is, the better the video quality is).
- **Video Frame Rate:** The video refreshing rate per second.
- **GOP Size:** It means "Group of Pictures".
- **Video Format:** H.264 or JPEG.
- **RTSP Path:** It's a URL address

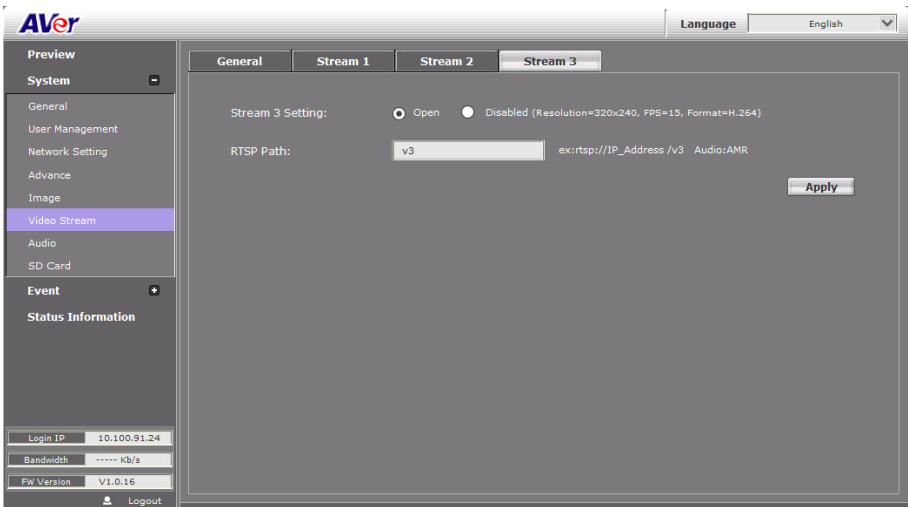
The screenshot displays the AVer software interface. On the left is a sidebar menu with categories: Preview, System (expanded), Event, and Status Information. Under System, options include General, User Management, Network Setting, Advance, Image, Video Stream (highlighted), Audio, and SD Card. Under Event, there is a plus icon. Under Status Information, there is a plus icon. At the bottom of the sidebar, there are fields for Login IP (10.100.91.24), Bandwidth (----- Kb/s), FW Version (V1.0.16), and a Logout button. The main area has tabs for General, Stream 1, Stream 2 (selected), and Stream 3. The Stream 2 tab shows configuration options: Stream 2 Setting (Basic Mode, Advanced Mode selected, Close), Resolution (640x480), Profile (Baseline), Rate Control (CBR selected, VBR), Video Bitrate (512Kbps), Video Frame Rate (15 FPS), GOP Size (1 X FPS, with a note GOP = 15), Video Format (H.264), and RTSP Path (v2, with an example: ex:rtsp://IP_Address /v2 Audio:G.711). An Apply button is at the bottom right.

- **Close:** To close stream 2. Click **Apply** to save the configuration.

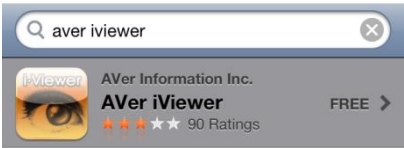
System > Video Stream > Stream3

3GPP Streaming is designed for mobile viewing.

- **Stream 3 Setting:** Open or Disable 3GPP Streaming.
- **RTSP Path:** It's a URL address.

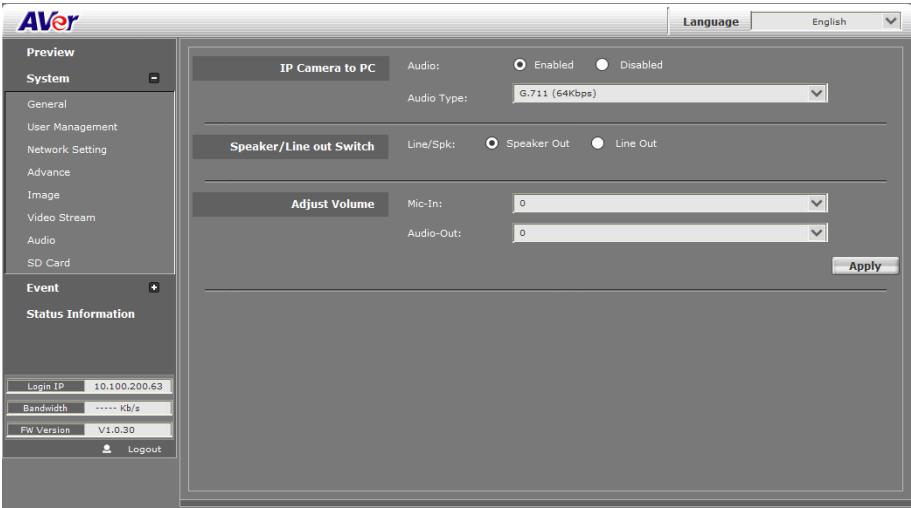


[Note] To get the best mobile viewing quality, please download AVeriViewer (AndroidViewer) from the Apple App store or Google Play. iViewer takes video from Stream 1 or Stream 2, not from 3GPP streaming.



System > Audio

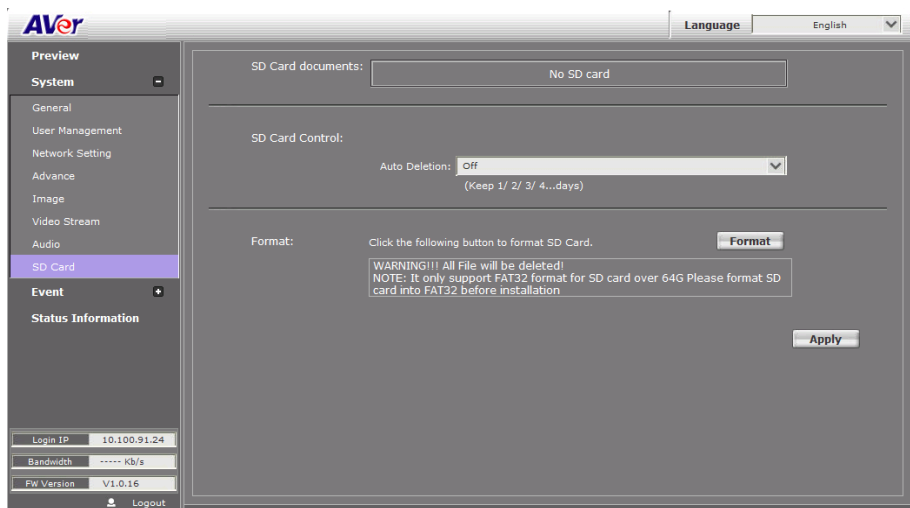
IP camera supports 2-way audio (mono). User can send audio from IP camera while connected to a microphone to remote site; User can also send audio from remote site to IP camera's external speaker.



- a. IP camera to PC: select “**Enable**” to start this function.
- b. There are three audio codes: G.711 (64Kbps), G.726(24Kbps), G.726 (32Kbps)
- c. **Speaker Out**: The audio sound will come out from IP camera.
- d. **Line Out**: The audio sound will come out from the audio device that you have connected on IP camera. If the audio device is not connected, the audio sound still will come out from IP camera.
- e. In live video screen, click  button to start chatting. Press again to mute. Click  button to turn on or off the speaker of PC.



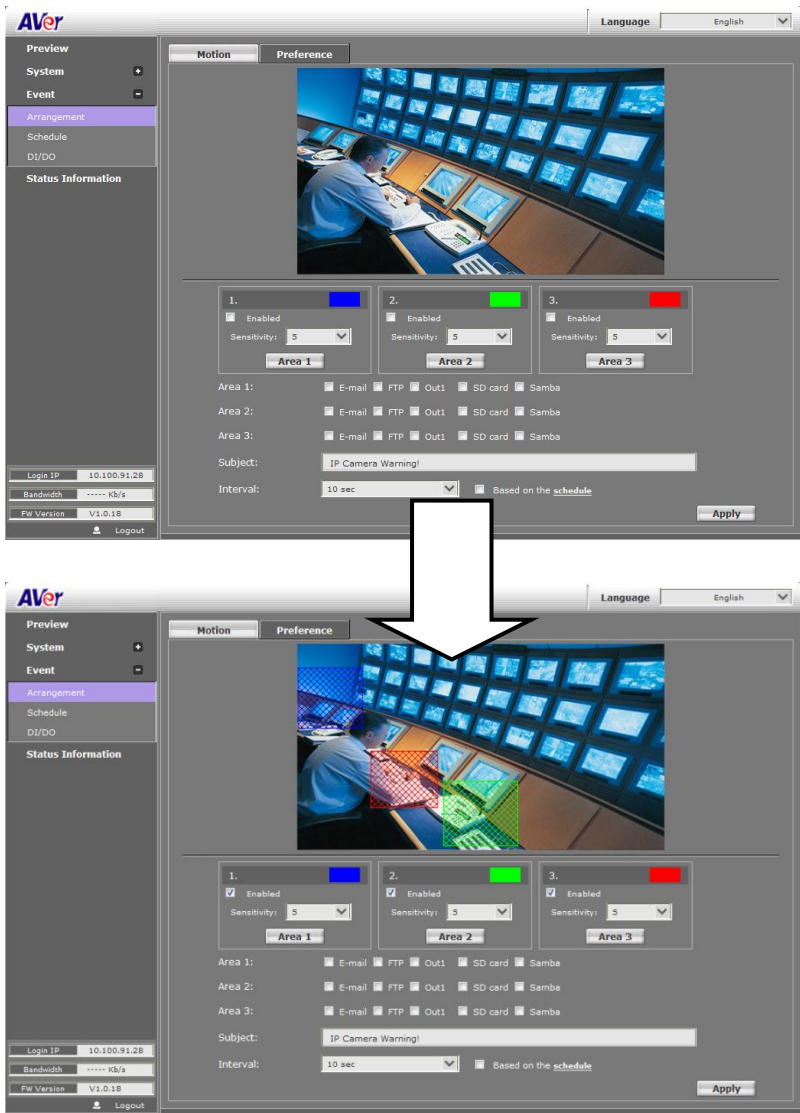
System > SD Card



Please insert microSD/SDHC card before use. Make sure to push microSD/SDHC card into the slot completely.

Event > Arrangement > Motion

Motion Detection: IP camera allows for 3 areas motion detection areas. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD/SDHC card. To set up the motion area 1, click “**Area 1**” button. Using mouse to drag and draw the area. The operation is the same for areas 2 and 3 (The higher the sensitivity value is, the more sensitive to trigger event).



Event > Arrangement > Preference

Record File

File Format: AVI File(with Record Time Setting)

Pre Alarm: 5 sec

Post Alarm: 5 sec

Network Connected

Dis-connected: ☒ Save to SD card

Network IP Check

IP Check: ☒ Enabled ☐ Disabled

IP Address: www.google.com

Interval: 30 sec

Check failed: ☒ Save to SD card

(When IP check failed, first step will save to SD card, continuing other saving storage)

Tampering Detection

Tampering: ☒ Enabled ☐ Disabled

☒ E-mail ☒ FTP ☒ Out1 ☒ Save to SD card ☒ Samba

Interval: 10 sec

PIR Setting

☒ Enable: ☒ E-mail ☒ FTP ☒ Out1 ☒ Save to SD card ☒ Samba ☒ Audio

Wave File: Police Pass

Interval: 30 sec

Upload Wave File:

(Upload File Size:less than 100KB, Format:8KHz/16bit/Mono)

Record Wave File:

■ Record File:

- **File Format:** IP camera allows 3 different types of recording file to change its recording size. When motion/alarm is triggered, there are 3 different types of record mode.
 - AVI File (With Record File Setting)
 - JPEG Files (With Record File Setting), only with MJPEG compression format.
 - Single JPEG (Single File with Interval Setting) (JPEG photo).
- **Pre Alarm and Post Alarm:** Setups for video start and end time when motion detected, I/O, or other devices got triggered.

[Note] Pre/Post Alarm record time is based on record time setting and IP camera built-in Ram memory. Limited by IP camera built-in Ram Memory. When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.

- **Network Connected:** When the network is down, it will save the video to local SD/SDHC card.

- **Network IP check:** When the connection is down, it records the **video** to SD/SDHC card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of “**Save to SD card**”, then click “**Apply**”.
- **Tampering Detection:** When the camera view is covered, moved, hit by strong light, or out of focus, the tampering detection will be triggered, and send snapshot or video to mail/FTP/Samba/SD card, or trigger the external alarm.
For example:

Before Tampering Detection



Tampering Triggered (Defocused)



Before Tampering Detection



Tampering Triggered (Lens Covered)



Before Tampering Detection



Tampering Triggered (Glare)

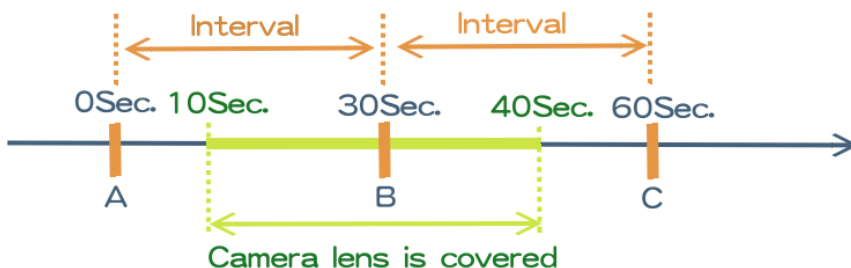


Before Tampering Detection

Tampering Triggered (Camera Moved)



➤ **Interval:** The tampering detecting interval. Take the diagram below as example. The interval is set for 30 second; the camera lens is covered during 10 - 40 sec. At time point B, the camera compares the view with time point A, and sends an alarm when it finds that the lens is covered. At time point C, the camera compares the view with time point B, and sends an alarm when it finds that the lens is uncovered.



■ PIR setting:

Enable PIR function, the camera will be triggered when it detect PEOPLE in its detection range (within 5 Meter), and then send video or snapshot to specific mail addresses, trigger the output device, play sound, or save video to FTP/ Micro SD card/ Samba.

- Wave File: Select the audio file from drop-down list -- Police Pass, Car Alarm , Dog Barking, Firetruck Siren, and Record Wave File. Click Test button to play a selected audio file for testing.
- Interval: Select the interval time period (10 ~ 60 seconds). If you select "10 sec" here, once a person is detected and action is triggered, it cannot be triggered again within 10 seconds.

[Note] The interval of two video files on SD/SDHC card is fixed with 30 seconds.

- Upload Wave File: Connect to PC to download the recorded audio file.
- Record Wave File: Record an audio file by your own.

Event > Schedule

- **Schedule:** After complete the schedule setup, the camera data will be recorded according to the schedule setup.
- **Snapshot:** After enable the snapshot function; user can select the storage position of snapshot file, the **Interval time** of snapshot and the reserved **File Name** of snapshot.



Preview

System

Event

Arrangement

Schedule

DI/DO

Status Information

Language

English

All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon.																								
Tue.																								
Wed.																								
Thu.																								
Fri.																								
Sat.																								
Sun.																								

☐ Schedule Setup.

Snapshot

☒ Enabled
 ☐ Disabled

Snapshot:
 ☐ E-mail
 ☐ FTP
 ☐ Save to SD card
 ☐ Samba

Interval:

 Second(s) [1..50000]

File Name:

Login IP

10.100.200.54

Bandwidth

----- Kb/s

PW Version

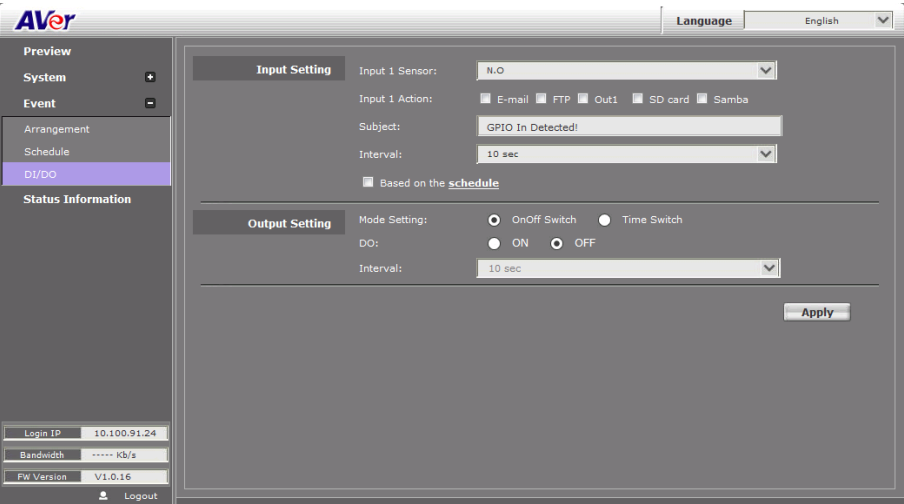
V1.0.62

Logout

Apply

Event > DI/DO

IP camera supports 1 input/1 output (depending on different models). When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD/SDHC card.



CAUTION!!

Please connect to propriety relay box to reduce the risk of electric shock & damage.

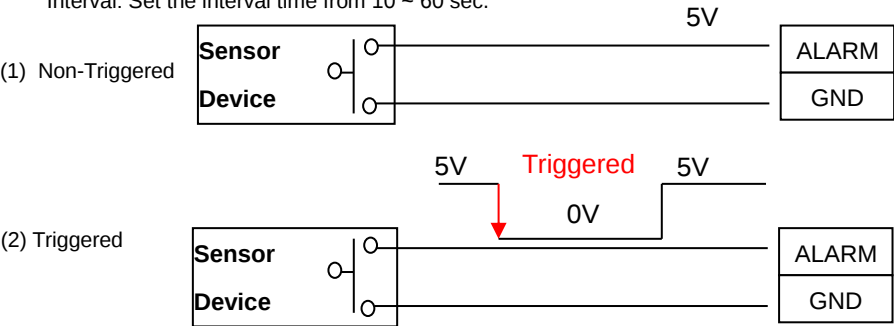
Input Setting:

Input 1 sensor: This is to set the relay status while the sensor is not yet triggered.

Input 1 action: Send the triggered video clips or photos to the selected method.

Subject: This is the subject while sending files via e-mail.

Interval: Set the interval time from 10 ~ 60 sec.



Output Setting:

Mode setting:

OnOff Switch: Relay status is based on sensor triggered times.

Time Switch: To restore the original relay status after the interval time.

[Note]GPIO pin define please refer to the part of Front / Back plane & I/O port pin assignment.

Ground (G)	ALARM INPUT: Normal: 5V (The voltage differential from ALM_IN pin & Ground) Active: 0V (Short the pin of ALM_IN and Ground pin)
DI	
DO	RELAY OUTPUT: MAX: 50 mA, DV 5V
Ground(G)	

Status Information

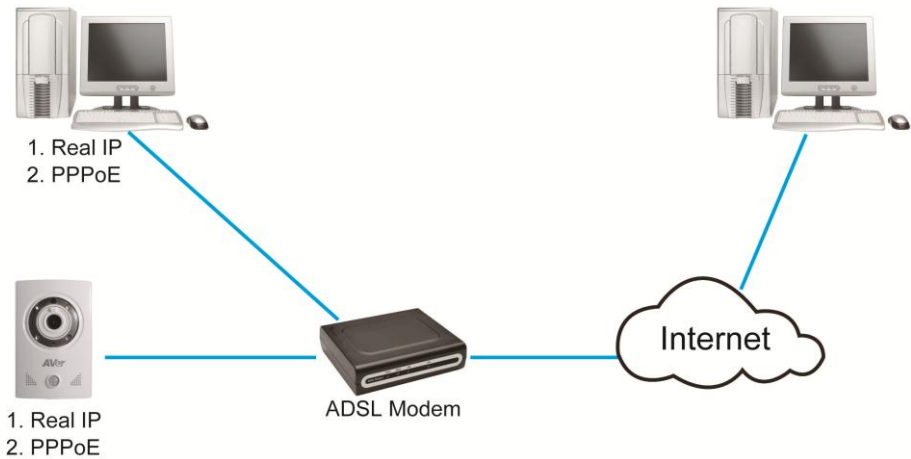
Click **Apply** button to save the configuration.

The screenshot shows the AVer IP camera configuration web interface. The interface is divided into a left sidebar and a main content area. The sidebar contains links for Preview, System, Event, and Status Information. The main content area has two tabs: 'Networking info' and 'Product info'. Under 'Networking info', fields for IP Address (10.100.91.52), MAC Address (00:18:1A:0C:E3:52), Interface (Ethernet), RTSP 1 Path (RTSP://10.100.91.52/), RTSP 2 Path (empty), and 3GPP Path (empty) are shown. Under 'Product info', fields for Server Name (IP Camera), LED Indicator (ON), Company (AVer), Model (FC1020-P), FW Version (V1.0.16), and BuildTime (2014/06/19 17:11:48 CST) are shown. A 'Status Bar' checkbox is also present. At the bottom right is an 'Apply' button. A bottom status bar shows Login IP (10.100.91.24), Bandwidth (**** Kb/s), FW Version (V1.0.16), and a Logout button.

- **Networking Info:** Displays network information of the IP camera.
- **Product Info**
 - **Server Name:** Assigns a name to the IP camera and the name shows on the IP Installer. Also, displays the related information of the IP camera. Mark **Status Bar** to display the Server Name of IP camera on preview interface.
 - **LED indicator:** To disable or enable the LED indicator on the IP camera.

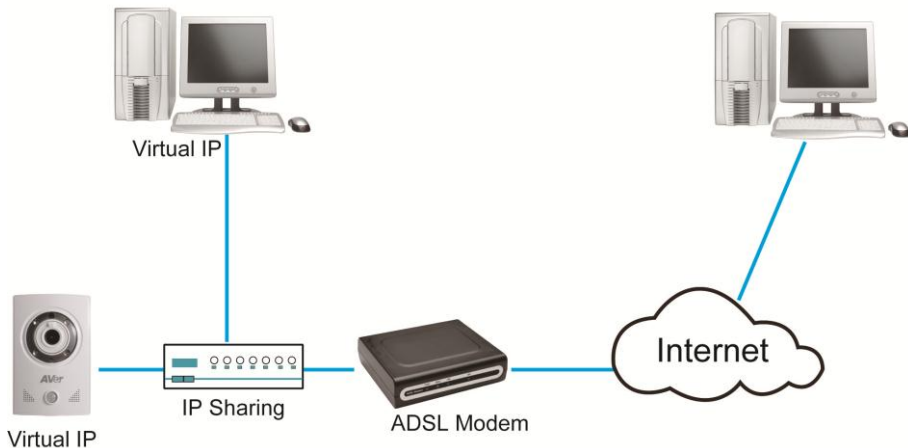
Network Configuration

■ Configuration 1



- a. Internet Access: ADSL or Cable Modem
- b. IP address: More than one real IP
- c. IP camera and PC connect to the Internet
- d. For fixed real IP, set up the IP into IP camera and PC. For dynamic IP, start PPPoE.

■ Configuration 2



- Internet Access: ADSL or Cable Modem
- IP address: one real IP
- IP camera and PC connect to the Internet
- Device needed: IP sharing
- Use virtual IP, set up port forwarding in IP sharing. (Please refer to Network Setting→Other 1→UPnP Port Forwarding)

Factory Default

1. To recover the default IP address and password, please follow the following steps.
2. Remove power and Ethernet cable.



3. Press and hold the button and connect power and Ethernet cable to the camera again and hold for around 20 seconds for system booting.
4. Release the button when camera finishes the process.
5. Re-login the camera using the default IP (<http://192.168.1.168>) or DHCP, and user name (admin), password (admin).

Troubleshooting

Here are some useful tips on how to solve some common problems.

Problem	Solution
I forgot the account and password for FC2020-P1. How can I go back to default setting?	Please refer to the manual of “Factory Default setting” description.
I recorded video file in H.264 file format but failed to playback on Media Player (V.9).	Default Windows Media Player doesn't have H.264 decoder so that you can't playback the file successfully. Please use VLC program to playback the video file. You can search this free program on Internet.
When I use Chinese words as the Gmail title while motion triggered, it turns to be nonsense characters displayed on my Gmail.	It's the spec limitation and please only use English or numbers as mail title to avoid this phenomenon.
I use VLC and connect three RTSP streams (stream 1, 2, 3) at the same time. However, it can't work properly.	Due to spec limitation, please connect one stream each time.

Appendix

FC2020-P1 is compliant with microSD/SDHC card and to ensure recording quality, and please use memory cards over 2G and Class 4 above (Max. 64G)

MicroSD/SDHC card
Transcend SDHC class4 16GB
Transcend SD class4 16GB
Transcend SDHC class4 32GB
Transcend SD class4 32GB
Transcend SD class6 4GB
Transcend SDHC class6 4GB
Transcend SD class6 8GB
Transcend SDHC class6 8GB
Transcend SD class6 16GB
Transcend SDHC class6 16GB
Transcend SDHC class10 4GB
Transcend SDHC class10 8GB
Transcend SDHC class10 16GB
Transcend SDHC class10 64GB
SanDisk SDHC class4 4GB
SanDisk SDHC class4 8GB
SanDisk SDHC class4 16GB
SanDisk SDHC class4 32GB
SanDisk SDHC class4 64GB

FCC NOTICE (Class A)



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:

Warning -This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Community Compliance Statement (Class A)



This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EC.

Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct this interference.

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TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION.



THE MARK OF CROSSED-OUT WHEELED BIN INDICATES THAT THIS PRODUCT MUST NOT BE DISPOSED OF WITH YOUR OTHER HOUSEHOLD WASTE. INSTEAD, YOU NEED TO DISPOSE OF THE WASTE EQUIPMENT BY HANDING IT OVER TO A DESIGNATED COLLECTION POINT FOR THE RECYCLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT. FOR MORE INFORMATION ABOUT WHERE TO DROP OFF YOUR WASTE EQUIPMENT FOR RECYCLING, PLEASE CONTACT YOUR HOUSEHOLD WASTE DISPOSAL SERVICE OR THE SHOP WHERE YOU PURCHASED THE PRODUCT.

Limited Warranty

AVer Information, Inc. ("AVer") warrants that the applicable product ("Product") substantially conforms to AVer's documentation for the product and that its manufacture and components are free of defects in material and workmanship under normal use. "You" as used in this agreement means you individually or the business entity on whose behalf you use or install the product, as applicable. This limited warranty extends only to You as the original purchaser. Except for the foregoing, the Product is provided "AS IS." In no event does AVer warrant that You will be able to operate the Product without problems or interruptions, or that the Product is suitable for your purposes. Your exclusive remedy and the entire liability of AVer under this paragraph shall be, at AVer's option, the repair or replacement of the Product with the same or a comparable product. This warranty does not apply to (a) any Product on which the serial number has been defaced, modified, or removed, or (b) cartons, cases, batteries, cabinets, tapes, or accessories used with this product. This warranty does not apply to any Product that has suffered damage, deterioration or malfunction due to (a) accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification or failure to follow instructions included with the Product, (b) misapplication of service by someone other than the manufacturer's representative, (c) any shipment damages (such claims must be made with the carrier), or (d) any other causes that do not relate to a Product defect. The Warranty Period of any repaired or replaced Product shall be the longer of (a) the original Warranty Period or (b) thirty (30) days from the date of delivery of the repaired or replaced product.

Limitations of Warranty

AVer makes no warranties to any third party. You are responsible for all claims, damages, settlements, expenses, and attorneys' fees with respect to claims made against You as a result of Your use or misuse of the Product. This warranty applies only if the Product is installed, operated, maintained, and used in accordance with AVer specifications. Specifically, the warranties do not extend to any failure caused by (i) accident, unusual physical, electrical, or electromagnetic stress, neglect or misuse, (ii) fluctuations in electrical power beyond AVer specifications, (iii) use of the Product with any accessories or options not furnished by AVer or its authorized agents, or (iv) installation, alteration, or repair of the Product by anyone other than AVer or its authorized agents.

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Except as expressly provided otherwise herein and to the maximum extent permitted by applicable law, AVer disclaims all other warranties with respect to the product, whether express, implied, statutory or otherwise, including without limitation, satisfactory quality, course of dealing, trade usage or practice or the implied warranties of merchantability, fitness for a particular purpose or noninfringement of third party rights.

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In no event shall aver be liable for indirect, incidental, special, exemplary, punitive, or consequential damages of any nature including, but not limited to, loss of profits, data, revenue, production, or use, business interruption, or procurement of substitute goods or services arising out of or in connection with this limited warranty, or the use or performance of any product, whether based on contract or tort, including negligence, or any other legal theory, even if aver has advised of the possibility of such damages. AVer's total, aggregate liability for damages of any nature, regardless of form of action, shall in no event exceed the amount paid by you to aver for the specific product upon which liability is based.

Governing Law and Your Rights

This warranty gives you specific legal rights; You may also have other rights granted under state law. These rights vary from state to state.