ADVANCED NETWORK CAMERA

USER MANUAL

Please read instructions thoroughly before operation and retain it for future reference.

IMPORTANT SAFEGUARD

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

This apparatus is manufactured to comply with the radio interference requirements.

Federal Communications Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user’s authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. 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 turning 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/TV technician for help.
- FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- All external cables connecting to this basic unit must be shielded.
  For cables connecting to PCMCIA cards, see the option manual or installation instructions.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device mat not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

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Disclaimer

We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. The content of this manual is subject to change without notice.

This product doesn’t have a standby / shutdown mode.

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The GPL Code used in this product is released without warranty and is subject to the copyright of the corresponding author.

Further source codes which are subject to the GPL-licenses are available upon request.

We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

http://download.dvrtw.com.tw/GPL/076D_Series/arm-linux-2.6.tar.gz

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1. OVERVIEW

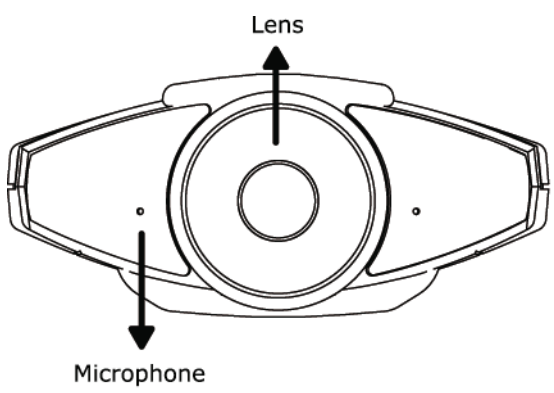
1.1 Product Features

- Easy **network setup** with your **iPhone / iPad**
- **ONVIF** standard supported to simplify system integration
- **External alarm I/O device** connection
- Microphone & speaker built-in for **audio transmission**
- **Remote Surveillance**
  -- Fully compatibility on **iPhone & iPad**, and **Internet Explorer®** on Windows® operating system
- (AVM417A / 317A Only) **POE (Power-over-Ethernet)** support to eliminate the use of power cables and reduce installation costs
- (AVM417A Only) **2 Megapixel** SONY sensor with **HDTV 1080p** quality, allowing users to notice minor details more easily
- (AVM317A Only) **1.3 Megapixel** SONY sensor with **HDTV 720p** quality, allowing users to notice minor details more easily

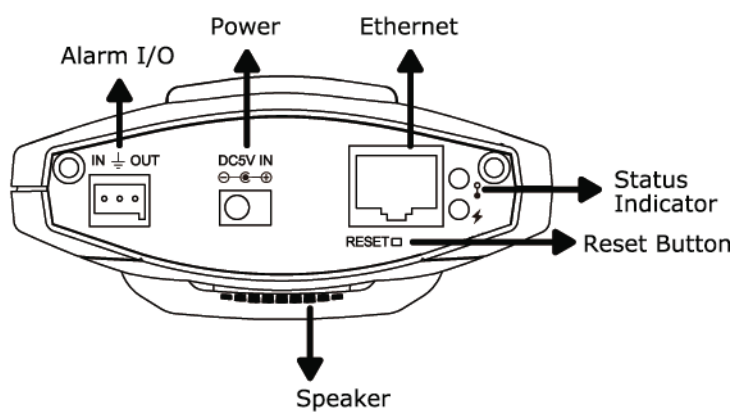
1.2 Package Content

☐ Network camera	☐ Camera Bracket	☐ 3-pin Terminal
☐ Quick Setup with iPhone / iPad	☐ Adapter	

1.3 Product Overview



Front View



Rear View

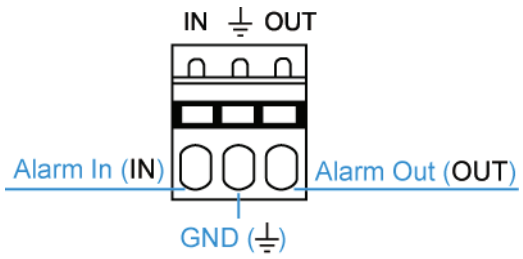
1.4 Rear Panel

Ethernet:	Connect a RJ45 network cable.
Power:	Connect the supplied regulated power supply.
RESET:	With the power connected, press to reset all parameters, including the IP address to factory default settings. The camera will reboot after default reset. Please do not disconnect your camera during the reset process.
Alarm I/O:	A 3-pin I/O terminal is supplied with the camera for external alarm device connection. For details, please refer to “1.5 External I/O Port” at page 2.
Status Indicator	is the indicator for LAN connection, and is the indicator for Internet connection. For details, please refer to “1.6 Status Indicator” at page 2.

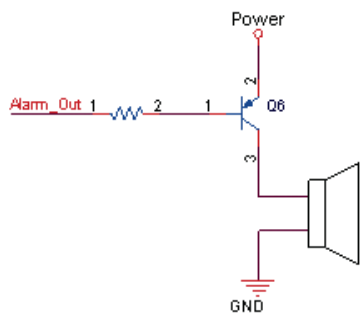
1.5 External I/O Port

This camera supports external I/O device connection, and a 3-pin I/O terminal is supplied with this camera for easy connection.

Below shows which input on the I/O terminal you should use for wiring when you want to connect an external device to this camera.



3-pin I/O Terminal



Alarm Out Connection

1.6 Status Indicator

ICON	LAN connection status	Internet connection status
System Status		
During powering on	Always on	Always on
Reset default	Blinking (on 250 ms, off 250 ms) ●○●○●○●○●○	Always off
Upgrade	Blinking (on 250 ms, off 250 ms) ●○●○●○●○●○	Blinking (on 250 ms, off 250 ms) ●○●○●○●○●○
Connection Status		
LAN connected	Always on	--
LAN disconnected	Blinking (on 100 ms, off 500 ms) ●○○●○○●○○	--
Internet connected	--	Always on
Internet disconnected	--	Blinking (on 100 ms, off 500 ms) ●○○●○○●○○
3G Connection Error on iPhone / iPad / Android Mobile Device		
3G Connection Setting Uncompleted	-- --	Blinking (on 5 sec, off 0.5 sec, on 0.5 sec, off 0.5 sec, on 5 sec) ●●●●○●○●●●●

** LED blinking frequency - ● LED on / ○ LED off*

2. CAMERA ACCESS WITH INTERNET EXPLORER

This network camera can be accessed via Microsoft® Internet Explorer® and iPhone / iPad / Android mobile devices with our self-developed program “EagleEyes” installed depending on different using situations.

Note: For details about accessing network cameras via iPhone / iPad / Android mobile devices, please refer to http://www.eagleeyescctv.com.

Before using the camera, make sure you have configured the network settings, and the network connection is fine.

For network configurations, please refer to:

- “**Quick Setup With iPhone / iPad**” supplied with your camera if you’re using iPhone / iPad, and your network environment is wireless.
- “**ADVANCED NETWORK SETUP**” downloadable from www.surveillance-download.com/user/m317a.swf if your network environment is not wireless.

2.1 Camera Login

Step1: Open your web browser, and key in http://*ipaddress*:*portnum* in the URL address box.

For example, for the IP address 60.121.46.236 and port No. 888, please key in ”http://60.121.46.236:888” into the URL address box, and press “Enter”.

Step2: In the login page, key in the user name and password, and enter the security code from the image below if any. Then, click “LOGIN”.

Step3: The wizard is then started.

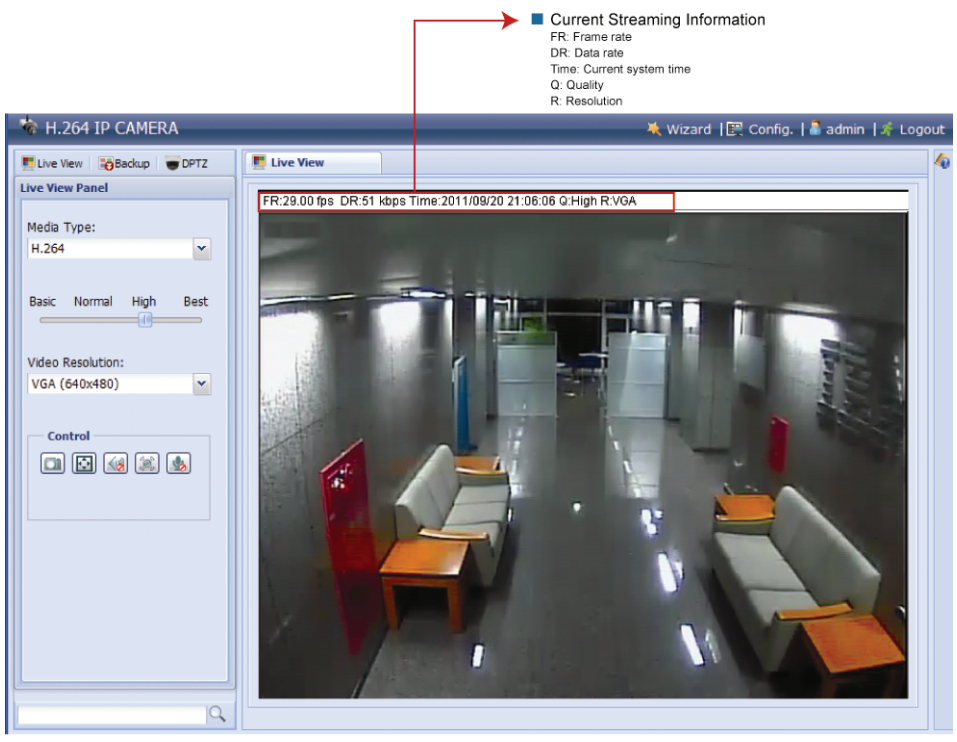
- To skip the wizard and directly access the camera live view, click “Close”.
- To directly access the camera live view without starting the wizard for the login next time, check “Do not start wizard at login”.

Note: If you’re prompted to install “VLC player”, “Software” or “H264 Streaming Viewer”, please agree to proceed the installation. Or, you might not be able to see the live view properly.

Step5: When the login is successful, the live view is shown.

2.2 Control Panel Overview

Note: The buttons available depend on the model number used and the user level used to log in.

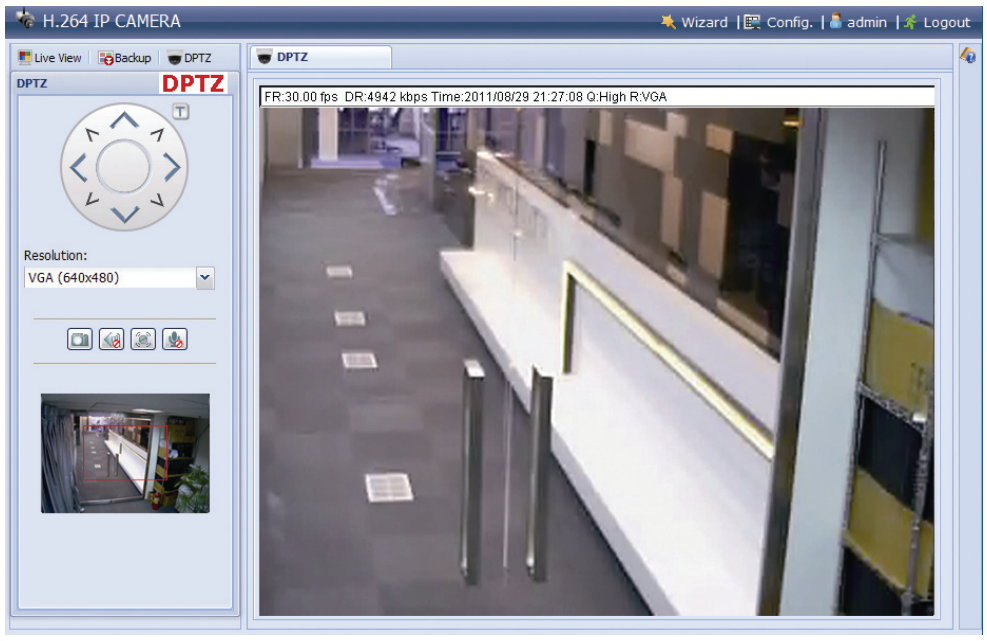


Function	Icon	User Level	Description
Live		Supervisor / Power User / Normal User / Guest	Switch to the live view page.
Backup		Supervisor / Power User	Enter the event record list for video playback. For details, please refer to “2.4 Event Record Search & Playback’ at page 6.
DPTZ*		Supervisor / Power User / Normal User	Switch to the DPTZ configuration page. For details, please refer to “2.3 Digital PTZ (DPTZ) Operations (AVM417A / 317A Only)” at page 5.
Config.		Supervisor	Switch to the system configuration page, and the functions available for “Supervisor” and “Power User” are different. For details, please refer to “3.1 System configuration menu” at page 7.
Media Type	--	Supervisor / Power User / Normal User / Guest	Select the image player from the drop-down list: ■ H.264 / MPEG-4 / Motion JPEG ■ QuickTime QuickTime is Apple Inc.’s multimedia software. You need to have QuickTime installed in your operating system before selecting “QuickTime”. When it is selected, you will be promoted to enter the user name and password to access the camera. ■ VLC
Quality	--	Supervisor / Power User / Normal User	Click & drag the slider to select the video quality: Basic / Normal / High / Best.
Video Resolution	--	Supervisor / Power User / Normal User	Select the image resolution from the drop list: AVM417A: ■ HD1080P (1920 x 1080) ■ HD720P (1280 x 720) ■ VGA (640 x 480) ■ QVGA (320 x 240) AVM317A: ■ SXGA (1280 x 1024) ■ HD720P (1280 x 720) ■ VGA (640 x 480) ■ QVGA (320 x 240) AVM217: ■ D1 (720 x 480) ■ CIF (352 x 240) ■ CIF (352 x 240)
Live View Size:		Supervisor / Power User / Normal User	
Full Screen			Click to display the image in full screen. To exit the full screen mode, press “Esc” on your keyboard. *This icon appears only when the selected resolution is HD1080P, SXGA, HD720P, VGA or D1.*
Double size			The QVGA resolution is resized to fit into the current live view size. *This icon appears only when the selected resolution is QVGA or CIF.*
Normal Size			The current live view size is the same as the selected resolution. *This icon appear only when the selected resolution is SXGA or HD720P or HD1080P.*
Fit to screen			The selected resolution is resized to fit into the current live view size. *This icon appear only when the selected resolution is SXGA or HD720P or HD1080P.*
No Scale			Click and hold the movable square on the left bottom corner of the live view to move *This icon appear only when the selected resolution is SXGA or HD720P or HD1080P.*
Snapshot		Supervisor / Power User / Normal User	Click to take a snapshot of the current view on a new window. Right click on the picture and re-save it to the location you want.
Audio On / Off	/	Supervisor / Power User / Normal User	Click to switch the audio-in on / off.
Alarm Out		Supervisor / Power User / Normal User	Click to force your alarm-out device to work. For example, when your alarm device is a buzzer, click this button and your buzzer will start to sound even if there’s no alarm event.
Microphone	/	Supervisor	Click to switch the audio-out on / off.

2.3 Digital PTZ (DPTZ) Operations (AVM417A / 317A Only)

This camera has PTZ capability, i.e. digital PTZ (hereafter called “DPTZ”), for wide area monitoring.

STEP1: Click “DPTZ” to show the DPTZ control panel.



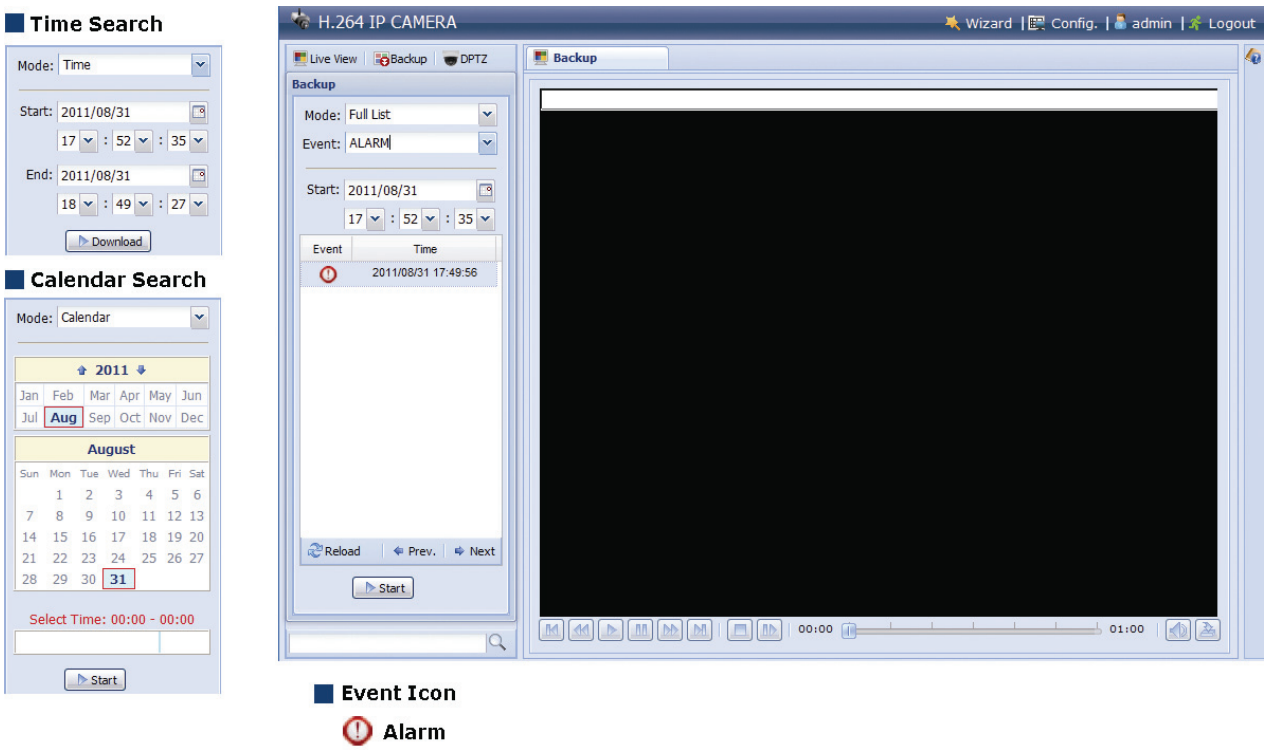
STEP2: Select the functions when needed:

FUNCTION	ICON	DESCRIPTION
Resolution	--	Select the video resolution for the DPTZ function. Only “VGA” and “QVGA” are available.
Take snapshots		Click to take a snapshot of the current view on a new window. Right click on the picture and re-save it to the location you want.
Audio On / Off	/	Click to switch the audio-in on / off.
Alarm Out		Click to force your alarm-out device to work. For example, when your alarm device is a buzzer, click this button and your buzzer will start to sound even if there’s no alarm event.
Microphone	/	Click to switch the audio-out on / off. *Available only when you’re a “Supervisor”.*

2.4 Event Record Search & Playback

This camera can only save up to three alarm recordings.

Note: To save more recorded data, it's recommended to use this camera with the compatible NVR.



/	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.
	Fast Forward	Increase the speed for fast forward. Click to get 2X, 4X, 8X & 16X speed forward eventually.
	Fast Rewind	Increase the speed for fast rewind. Click to get 2X, 4X, 8X & 16X speed rewind eventually.
	Play	Click to play the current video clip.
	Pause	Click to pause the video playback.
	Stop	Click to stop the video playback.
	Step	In the pause mode, click to get one frame forward.
	Audio	Click to mute the playback if necessary, and click again to restore.
	Download	Click to download the current video clip to the specified path in your PC. *The downloaded video can only be opened by our own video player. Please go to "General" → "Maintenance" to download the video player, or get the player from the CD supplied with the sales package.*

3. CAMERA CONFIGURATIONS

Users can further configure this network camera by accessing via Internet Explorer.

3.1 System configuration menu

Click “Config.” to enter the configuration page.

The functions are categorized into six menus: Network, Camera, Record Timer, Storage, Trigger and General.

- For details about “Network”, please refer to “3.2 Network” at page 8.
- For details about “Camera”, please refer to “3.3 Camera” at page 12.
- For details about “Record”, please refer to “3.4 Record” at page 15.
- For details about “Storage”, please refer to “3.5 Storage”’ at page 15.
- For details about “Trigger”, please refer to “3.6 Trigger” at page 16.
- For details about “General”, please refer to “3.7 General” at page 17.

Main Menu	Sub-Menu	Reference
Network	Network	Configure network settings.
	QoS	Limit the data flow for live streaming.
	DDNS	Enter DDNS information when the network type is PPPOE or DHCP.
	SNTP	Synchronize your camera time with the networked computer systems.
	FTP	Enter the FTP information for event notifications when “FTP” is chosen in “Trigger” → “Trigger”.
	Mail	Enter Email information for event notifications when “Email” is chosen in “Trigger” → “Trigger”.
	SMS	Enter text messaging information for SMS notifications when “SMS” is chosen in “Trigger” → “Trigger”.
	Filter	Choose to permit or block the IP address(es) which can access this camera.
	UPnP	**Suitable for Windows-based operating system.* Allow this camera to be detected among devices within the same network area for easy and quick usage.
	Bonjour	**Suitable for Apple Mac-based operating system.* Allow this camera to be detected among devices within the same network area for easy and quick usage.
	RTP	Set the parameters for video data transmission when you’re using multimedia other than web broswers and Video Viewer for remote access.
Camera	Camera	1. Rename the camera. 2. Change the place where the camera name is shown on the screen.
	Video	Adjust video-related settings in different video format.
	Color	Adjust the color performance.
	Audio	Adjust the audio volume of the microphone and speaker.
	Advance	Adjust the camera parameters if necessary.
Record	Record	Configure the record function.
	Record Timer	Schedule external alarm recording.
Storage	Memory	Check the current storage capacity and clear all recorded data when needed.

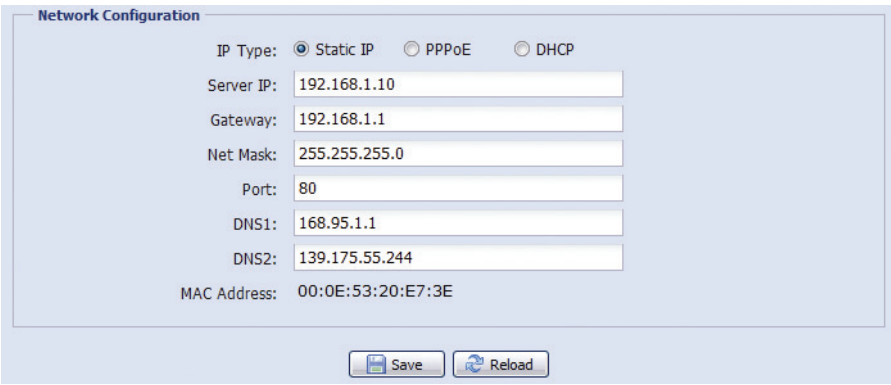
Main Menu	Sub-Menu	Reference
Trigger	Trigger	1. Enable / disable motion and alarm detection. 2. Set the motion detection area. 3. Configure how the camera reacts for any event.
General	General	1. Select the language of the web browser. 2. Check the MAC address of the camera. 3. Lock camera access after the specified time.
	Time	Set daylight saving time and the current time.
	Server Log	Check the system event logs.
	Online	Check the current online user(s).
	Account	1. Create a new user account with different access privilege. 2. Modify or delete an existing user account.
	Google Maps	Allow you to know where the network camera is.
	Maintenance	1. Check the current firmware version and upgrade your camera. 2. Copy system configurations. 3. Reboot the camera. 4. Download the video player to play the recorded data.

3.2 Network

3.2.1 Network

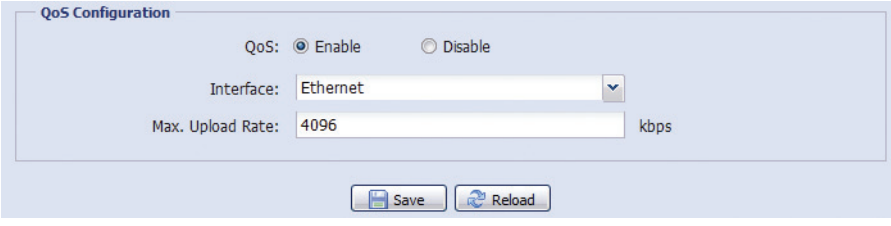
You can set the network configuration of the network camera depending on your network type.

For details, please refer to “Advanced Network Setup” from www.surveillance-download.com/user/m317a.swf.



3.2.2 QoS

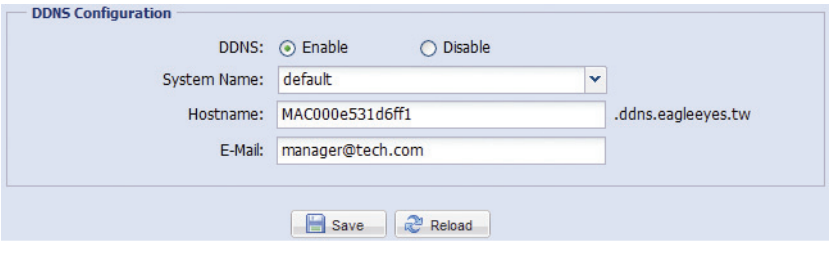
QoS, Quality of Service, is the ability to control the data flow for real-time streaming. This function is important if your network bandwidth is insufficient and you have other devices to share the network bandwidth.
Check “QoS Enable”, and set the max. upload rate from 256 to 10240 kbps.



3.2.3 DDNS

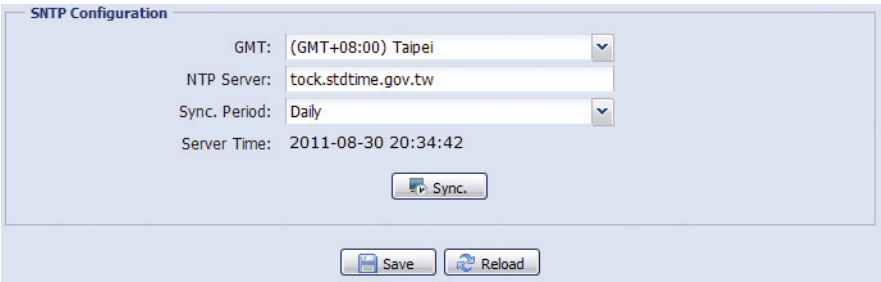
Select “On” when the selected network type in “Network” is “PPPOE” or “DHCP”.

For details, please refer to “Advanced Network Setup” from www.surveillance-download.com/user/m317a.swf.



3.2.4 SNTP

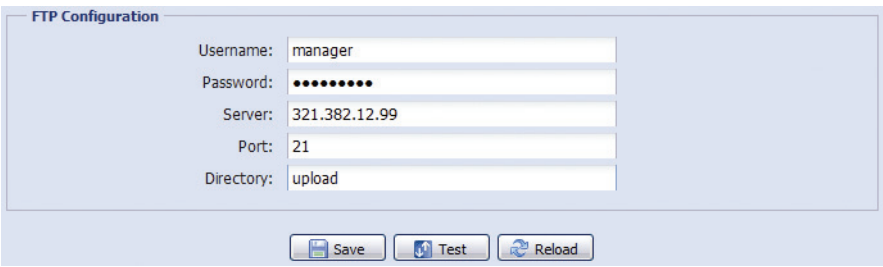
SNTP (Simple Network Time Protocol) is used to synchronize your camera time with the networked computer systems.



Function	Description
GMT	Once users choose the time zone, the network camera will adjust the local area time of the system automatically.
NTP Server	Simply use the default SNTP server (For example, tock.stdtime.gov.tw) or change to another server with which users are familiar.
Sync. Period	Select “Daily” to synchronize the camera time with the network time every day or “None” to turn off this function.
Sync	Click and the network camera will synchronize the time with the network time.

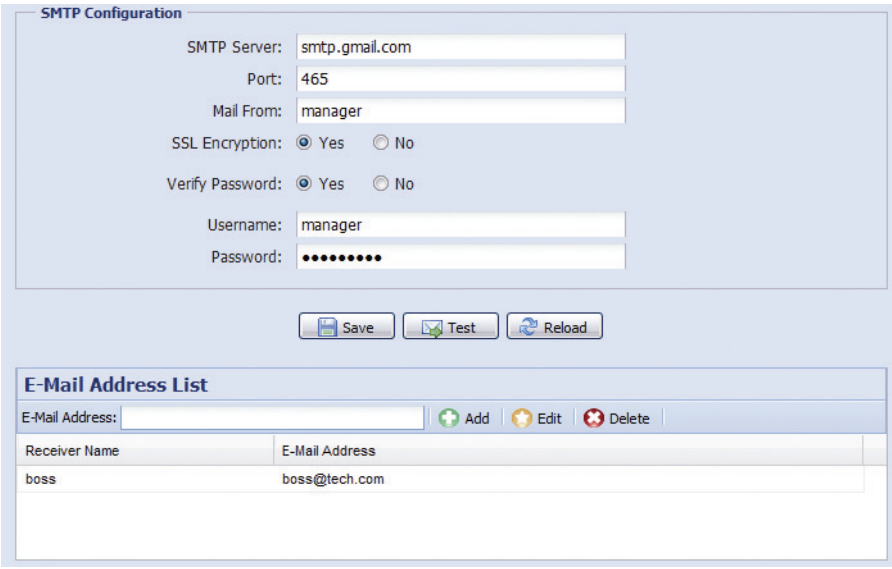
3.2.5 FTP

Enter the detailed FTP information and click “Save” to confirm. The information you set here will be applied when “FTP” is selected in “Trigger” → “Trigger”.



3.2.6 MAIL

Enter the detailed e-mail information and click “Save” to confirm. The information you set here will be applied when “Email” is selected in “Trigger” → “Trigger”.



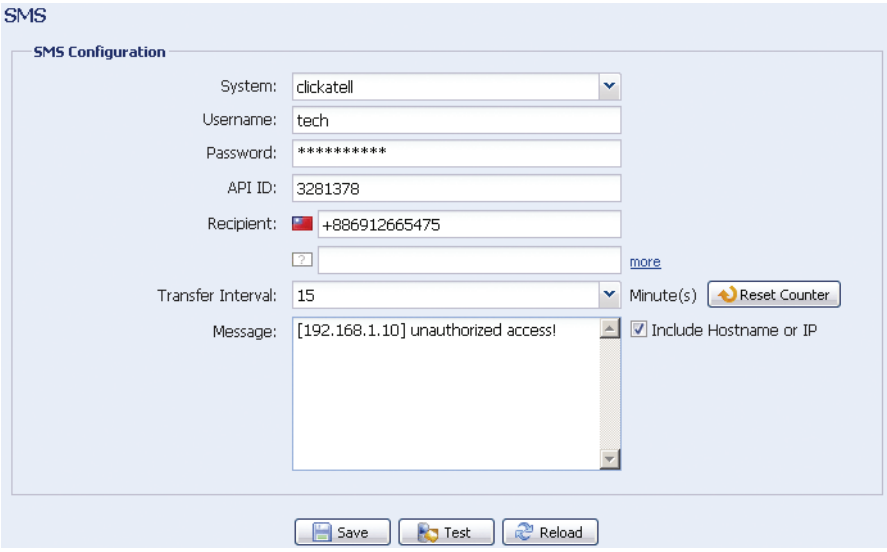
Function	Description
SMTP Server	Enter the SMTP server address provided from your e-mail system supplier.
Port	Enter the port number provided from your e-mail system supplier. If this column is left blank, the e-mail server will use port 25 to send e-mails.
Mail From	Enter the name of the sender.
SSL Encryption	Select “Yes” if your e-mail server is using SSL encryption to protect your e-mail content from unauthorized access.
Verify Password	Some mail servers are required to verify the password. Please enter the “user name” and “password”.
E-Mail Address List	Add the e-mail address(s) of the assigned recipient(s).

Function	Description
Test	When all information is entered, click “Test Mail” to try if the receipt.

3.2.7 SMS

Note: Before using this function, you need to apply an API ID from the mobile messaging company, Clickatell, and you will be charged starting from the 11th message. For details, please refer to “APPENDIX 4 API ID APPLICATION FOR SMS MESSAGING’ at page 27.

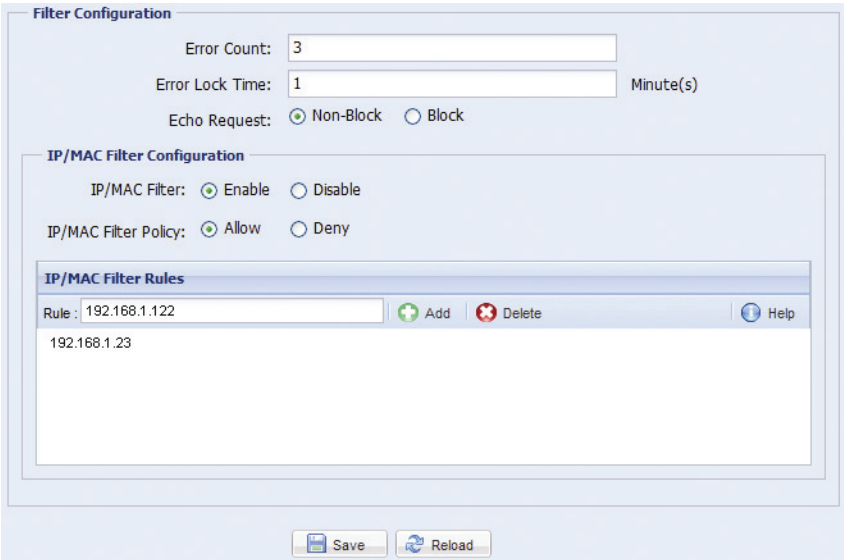
Enter the detailed information needed for text messaging, and click “Save” to confirm. The information you set here will be applied when “SMS” is selected in “General” → "Trigger".



Function	Description
System	The text messaging service provider is Clickatell.
User name / Password	Enter the account user name and password you created in Clickatell.
API ID	Enter the API ID you applied from Clickatell.
Recipient	Click “Add” to enter the phone number, including the country code, to receive the text message. Five sets of phone numbers are allowed.
Transfer Interval	Set the interval time in minutes between two-message sending. The options are 0, 15, 30 & 60.
Reset Counter	Click to restart the text messaging, and the SMS will be sent after the specified time interval since you click this button.
Message	Enter the text content (up to 70 characters) you want to send with the text message.
Test	To know whether your SMS setting is correct, click this button to immediately send a SMS to your phone. Note: This testing is not free and you will be charged for SMS sending base on your local rate.

3.2.8 Filter

Choose to permit or block the IP address(es) which can access this camera, and click “Save” to confirm.



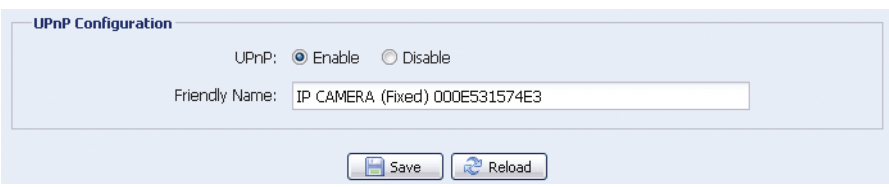
Function	Description
■ **Filter Configuration**	
Error Count	Set the maximum count for login failure. When the maximum count is reached, the IP address trying to access the network camera will be locked.
Error Lock Time	Set the lock time in minutes when the maximum count of error login for an IP address is reached.
Echo Request	Select “Non-Block” to allow other users to use the ping command to detect the IP address of your network camera, or “Block” to deny the ping command request.
■ **IP/MAC Filter Configuration**	
IP/MAC Filter	Choose to enable or disable the filter function.
IP/MAC Filter Policy	If “Enable” is selected, choose whether you want to permit (Allow) or block (Deny) the IP address list below.
■ **IP/MAC Filter Rules**	
Rule	• To add an item to the IP address list, key in the IP address in “Rule”, and click “Add”. • To remove an existing item in the IP address list, click the item you want to remove, and click “Delete”.

3.2.9 UPnP / Bonjour

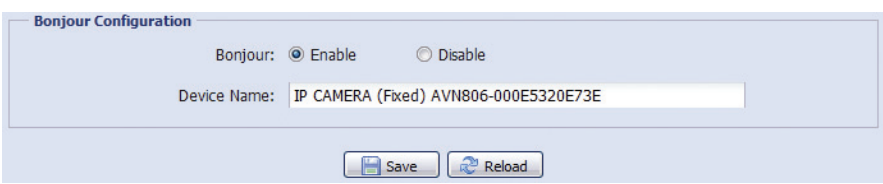
“UPnP” stands for “Universal Plug and Play”, which allows devices to connect seamlessly in the home and corporate environments and simplify installation of computer components, and is only suitable for Microsoft Windows-based operating system.

“Bonjour” functions the same as “UPnP”, but it’s only suitable for Apple Mac-based operating system.

➢ **UPnP**



➢ **Bonjour**



Check “Enable” to allow the network camera to be detected among devices within the same network area, and set the identification name of the camera in “Friendly name”.

When this function is activated, the other PC within the same domain as this camera will be able to search this camera in:

➢ “Network Neighbor” with the identification name set in “Friendly name” for Windows-based PC, or

➢ “ ” (finder) or “Bookmark” with the identification name set in “Device Name” for Mac-based PC.

Double-click it to quickly open the web browser for camera access.

Port Mapping (Available only in UPnP)

This function can eliminate the need to additionally access the router for port forwarding.

For details, please refer to “Advanced Network Setup” from www.surveillance-download.com/user/m317a.swf.

Note: Before using this function, make sure your router supports UPnP, and this function is enabled. If not, please access your router additionally for port forwarding.

When “Port Mapping” is set to “Enable”, the system will automatically assign an IP address or port number for you if no IP address or port number is entered.

Note: When the configurations are saved successfully, you’ll see a message indicating the IP address and port number assigned to this network camera.

3.2.10 RTP

The Real-time Transport Protocol (RTP) is an Internet protocol standard to manage the real-time transmission of multimedia, such as VLC player.

The media player you want to use for remote access must support RTP transmission for this function to work normally.

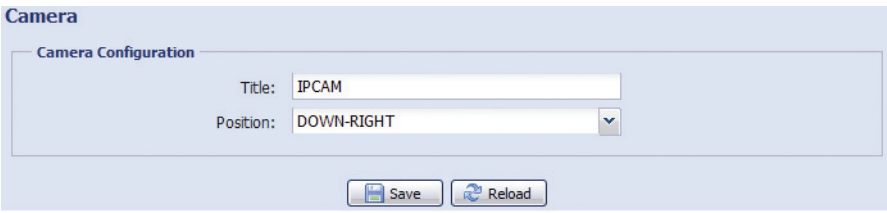
Note: When you’re about to end the remote access, please press the stop button on your media player first, and then close the program. This is to ensure the server receives the stop command, and also help to protect the server from redundant data transmission.

Function	Description
■ **Port Range** The port range used by RTP is limited, and preserving 100 ports between the start port and end port is necessary.	
Start Port	The range of the start port is 1024 ~ 65434.
End Port	The range of the end port is 1124 ~ 65534.
■ **Multicast**	
Address and port for H264 / MPEG4 / JPEG transmission	Set a specific address and port for multicast of each stream format (H264/ MPEG4/ JPEG). The range of the address is limited between 224.0.0.1 ~ 239.255.255.255. The port for multicast must be an even number.
Address and port for audio transmission	Set a specific address and port for multicast of audio. The range of the address is limited between 224.0.0.1 ~ 239.255.255.255. The port for multicast must be an even number.
Time to Live (TTL)	The range of Time to Live of the package is between 1 ~ 255. As soon as Time to Live of the package is 0, it will be dropped.

3.3 Camera

3.3.1 Camera

Rename the camera, and change the place where the camera name is shown on the screen, UP-LEFT / UP-RIGHT / DOWN-LEFT / DOWN-RIGHT.



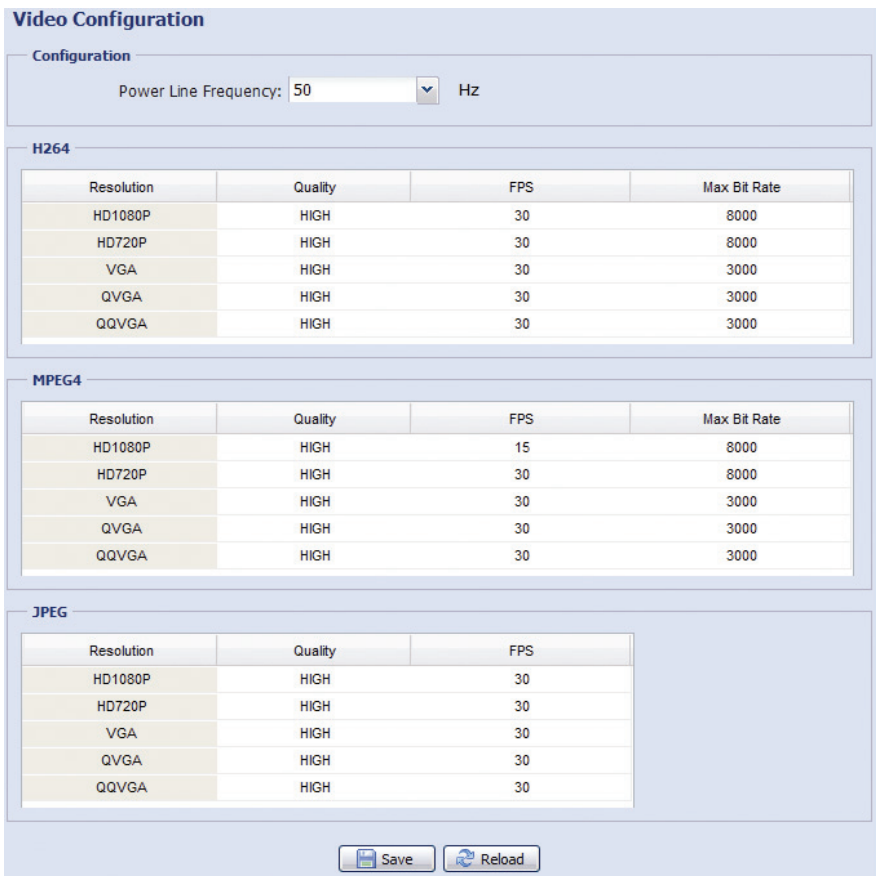
3.3.2 Video

Adjust video-related settings in different video format.

- “Quality” is related to image clearness.
- “FPS” is related to the fluency of the video. The more the FPS, the more fluent the video.
- “Max Bit Rate” is the maximum limitation of data transmission in the selected image format and resolution.

Take AVM417A as an example below. For AVM317A / AVM217, please refer to its actual display.

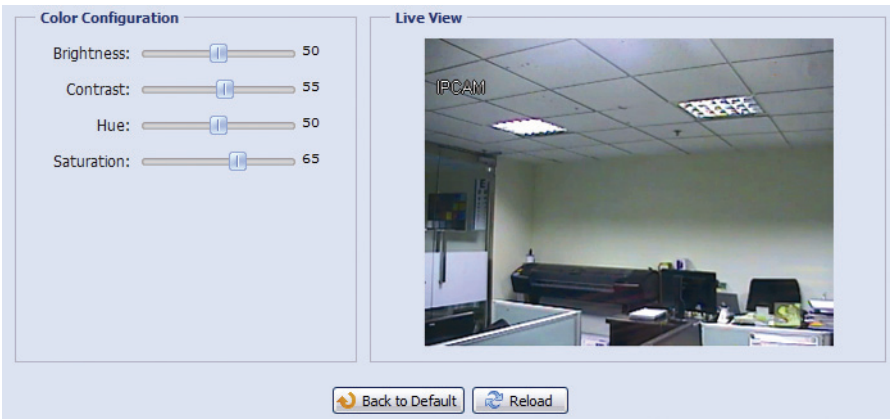
Note: QQVGA is for mobile surveillance only.



3.3.3 Color

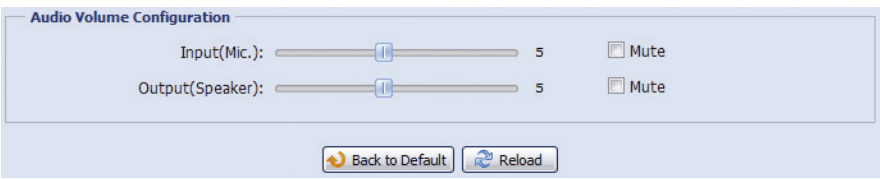
Adjust the color performance from Brightness, Contract, Hue and Saturation. Click and drag the slider to preview the color change on the right side of ths page and adjust the image color.

To restore the default values, click “Back to Default”.



3.3.4 Audio

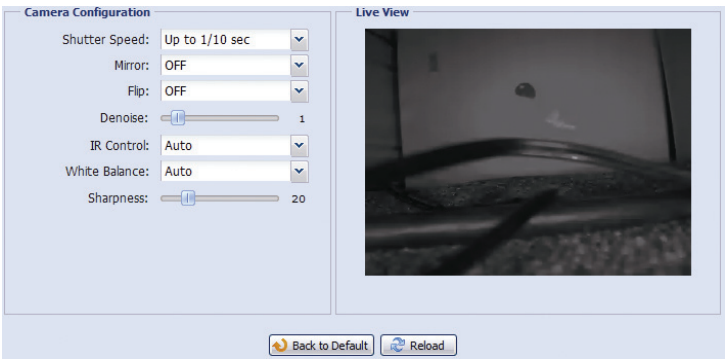
Drag the slider to adjust the volume of the microphone and speaker.



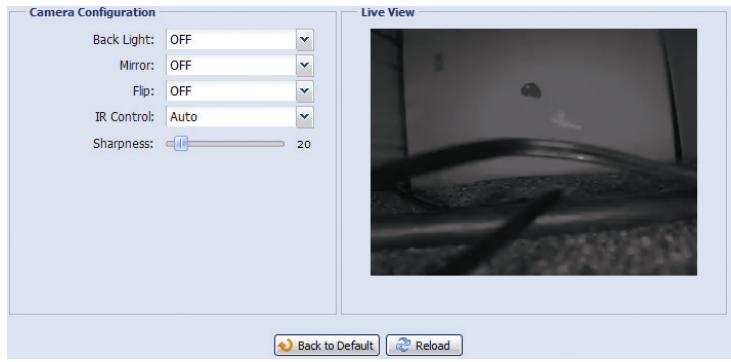
3.3.5 Advance

Adjust the camera parameters if necessary.

AVM417A / 317A



AVM217



Item	Description
Shutter Speed*	Set the shutter speed based on your need. The options are: Up to 1/10 sec, Up to 1/30, Up to 1/15, Up to1/6, Up to 1 and Up to 2.
Back Light**	It is the function to adjust the image to compensate for an area that is overpowered by brightness because of excessive light. The image will be properly exposed for clearness. Select to activate (ON) or disable (OFF) this function. Note: This function is available only in the day mode.
Mirror	Select “ON” to rotate the images horizontally based on your installation situation when necessary.
Flip	Select “ON” to rotate the image 180° when necessary.
De-noise*	Click and drag the slider to adjust the level from 0 ~ 10 to decrease the noise shown in the dark environment.
IR Control	Select “Auto” to automatically enable IR LEDs at night or in the dark environment, “On” to always enable IR LEDs, or “OFF” to disable this function.
White Balance*	Process the current image to retain color balance over a color temperature range. The options are: Auto, Incandescent Light, Cool Light, sun Light, Cloudy & Sun Shade.
Sharpness	Sharpness enhances the clarity of image detail by adjusting the aperture and sharpening the edges in the pictures. Hold and drag the slider to adjust the level of sharpness from 0 ~ 100. The higher the value, the sharper the image.

* AVM417A / 317A Only **AVM217 Only

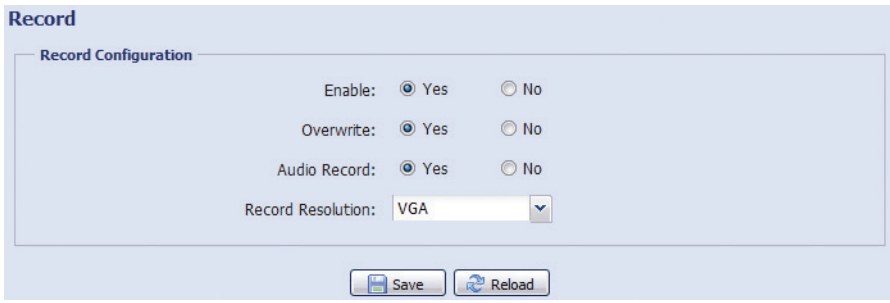
3.4 Record

3.4.1 Record

In “Record Configuration”, you can:

- Enable or disable the alarm record function. When “Enable” is set to “No”, the alarm record function is disabled even if you enable it in other configuration pages.
- Select if the data should be overwritten when the memory storage is full.
- Enable or disable the audio record function.
- Select the video resolution for event recording.

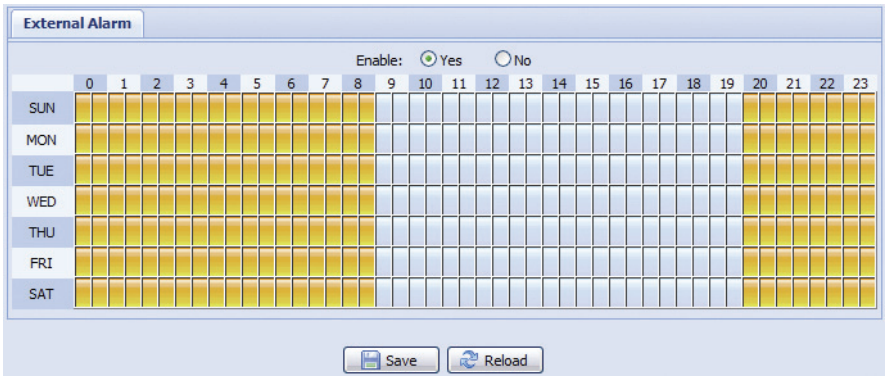
Note: The higher resolution you choose, the more accuracy and higher image quality the recording will be, but the faster the memory storage is consumed and become full.



3.4.2 Record Timer

To schedule alarm recording, enable it, and select the day and time for recording.

Note: The timer must be enabled for the record function to work properly.



3.5 Storage

3.5.1 Memory

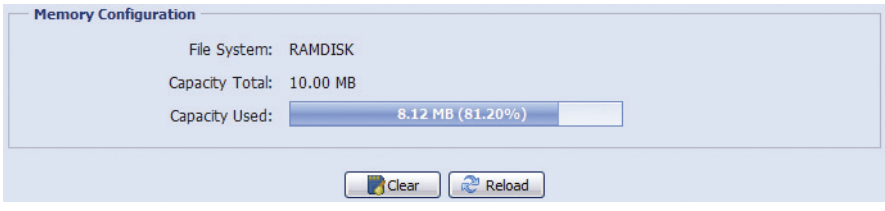
In “Memory”, you can check the remaining capacity for recording, or clear all recorded data saved if needed.

Note: The recorded data will be removed also when you reset or reboot this camera.

This camera can only save up to three alarm recordings.

Note: To save more recorded data, it’s recommended to use this camera with the compatible NVR.

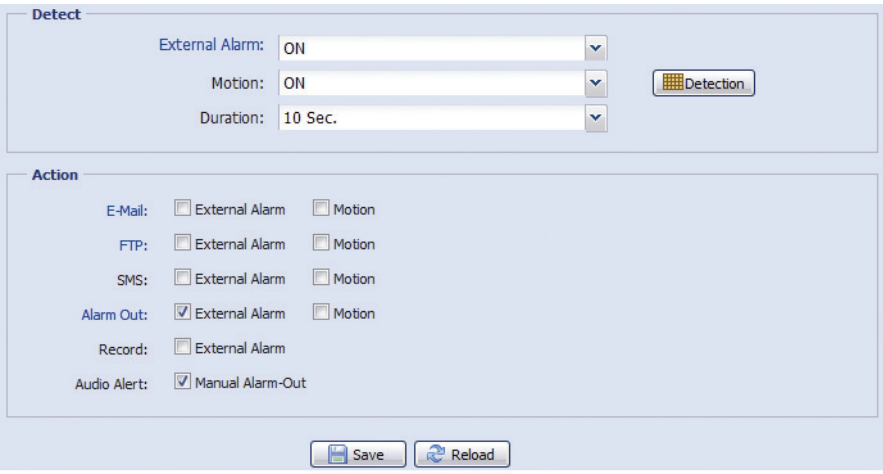
Note: To know the total recording time per recording resolution, please refer to “APPENDIX 6 RECORDING TIME TABLE” at page 30.



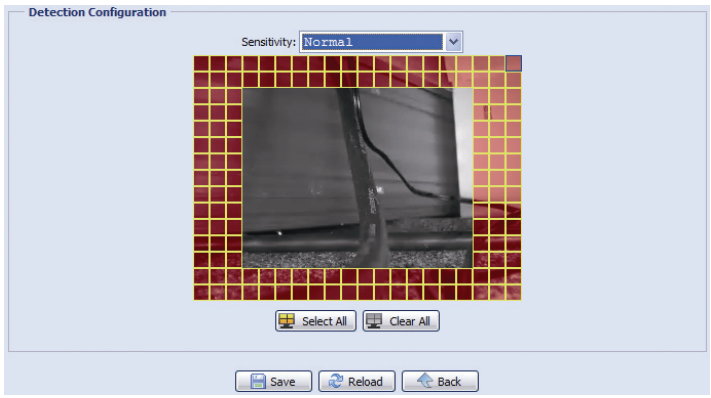
3.6 Trigger

3.6.1 Trigger

You can configure how this camera reacts when there's an alarm or motion event.



◆ Detect

Item	Description
External Alarm	Enable or disable detection from external alarm-in device, and click the title "External Alarm" (in blue) to set "N.O." or "N.C." depending on the configuration of your alarm-in device.
Motion	Enable or disable motion detection. *Motion detection is not supported when the stream format is Motion JPEG.*
	When "Enable" is selected, click "Detection" to enter the motion detection area setting page as follows:  **Sensitivity:** Set the detection sensitivity from the drop-down list: High, Normal or Low. **Area Setting:** Set the motion detection area by selecting the area grids with your mouse. Pink grids represent the area that is not being detected while the transparent grids are the area under detection. You can set multiple areas under detection. Click "Clear All" to set the whole area undetected. Click "Select All" to set the whole area under detection.
Duration	Set the duration time for trigger recording (5 / 10 / 20 / 40 seconds).

◆ Action

Here defines how the camera delivers alerts to you for any event.

Item	Description
E-Mail	Select the event type you want to receive E-mail notifications when it occurs. Then, click the title “E-Mail” (in blue) to configure the media type (H264 / JPEG / MPEG4), file format (AVC / AVI), and record time (1 ~ 5 seconds) for the event video clip. The camera will send the captured video clip to the E-mail address(s) you assigned in “Network” → “Mail” once the selected event type occurs.
FTP	Select the event type you want to receive FTP notifications when it occurs. Then, click the title “FTP” (in blue) to configure the media type (H264 / JPEG / MPEG4), file format (AVC / AVI), and record time (1 ~ 5 seconds) for the event video clip. The camera will upload the captured video clip to the FTP site you assigned in “Network” → “FTP” once the selected event type occurs.
SMS	Select the event type you want to receive a text message when it occurs. The camera will send a text message to the mobile phone number you assigned in “Network” → “SMS” once the selected event type occurs.
Alarm Out	Select the event type you want to trigger the alarm-out device to work when it occurs. Then, click the title “Alarm Out” (in blue) to configure the trigger rule (LOW / HIGH).
Record	Select the event type you want to enable event recording when it occurs.
Audio Alert	Select the event type you want to enable audio alert when it occurs.

3.7 General

3.7.1 General

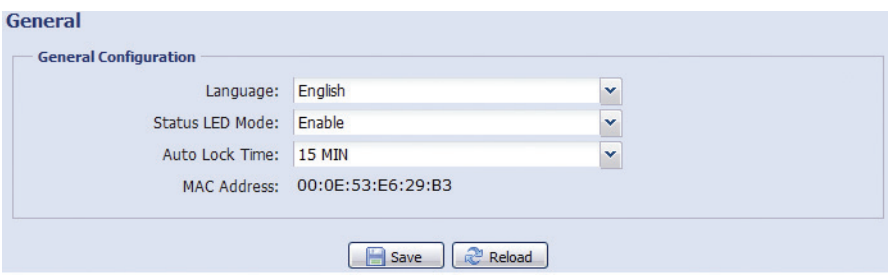
To change the language of UI interface, select from the drop-down list in “Language”.

To allow the status LED indicators to show the status as indicated in “1.6 Status Indicator” at page 2, select “Enable” in “Status LED Mode”; to hide the status, select “OFF”; to only show the error status, select “Temporary Disable”.

Note: The status LED mode will be restored to “Enable” after camera reboot when “Temporary OFF” is selected.

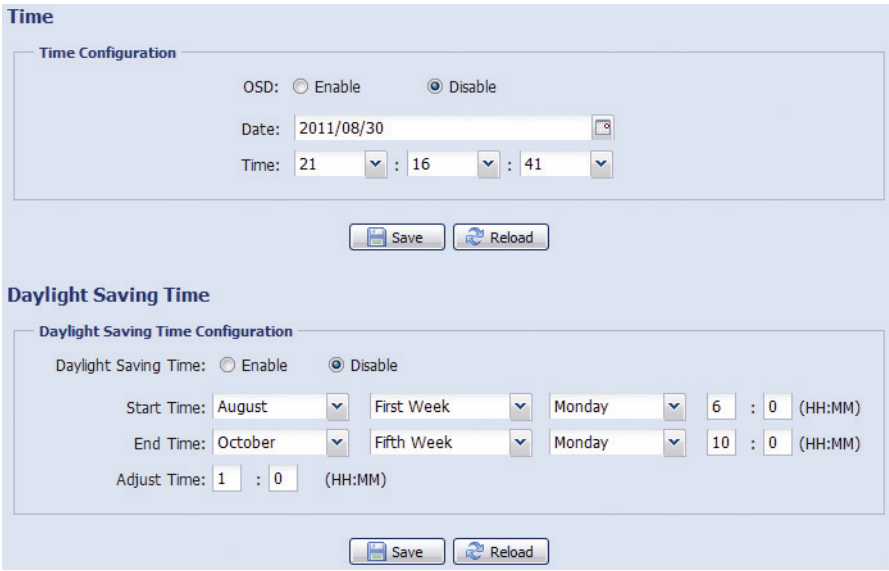
To lock camera access when it’s not used after the specified time, select “5 MIN”, “15 MIN” or “30 MIN” from the drop-down list of “Auto Lock Time”, or select “NEVER” to disable this function.

Note: When the camera access is locked after the specified time, to resume camera access, please enter the password.



3.7.2 Time

Set daylight saving time and the current time, and click “Save” to confirm.

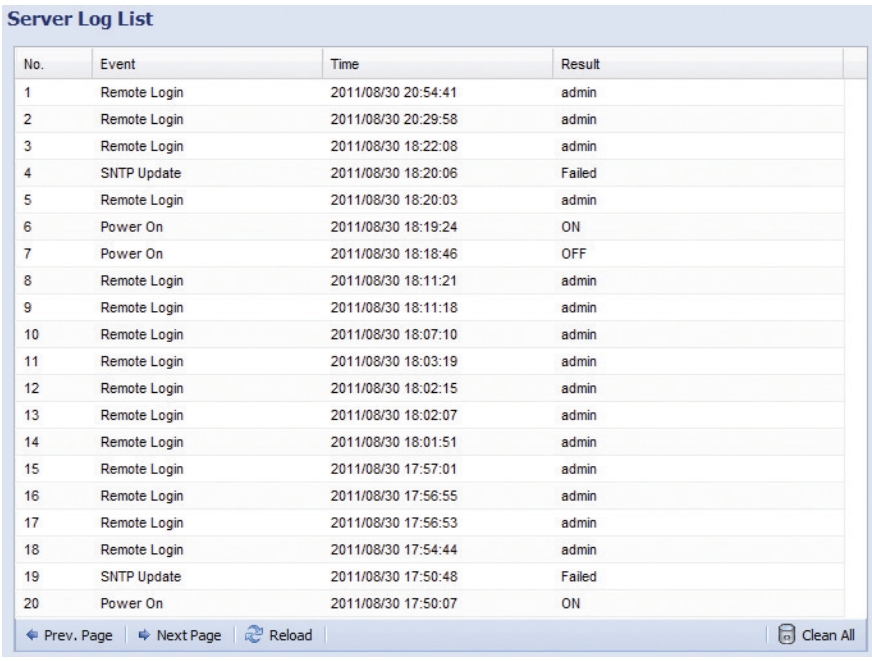


Function	Description
■ **Time Configuration**	
Date	Set the current date.
Time	Set the current time.
■ **Daylight Saving Time Configuration**	
Daylight Saving Time	Specify whether to use daylight saving time (Enable / Disable).
	If this function is enabled, set the time period (Start Time / End Time), and adjust the daylight saving time in hours (Adjust Time).

3.7.3 Server Log

To quickly search the system logs you want by event type, click “Prev. Page” or “Next Page” to find the logs you want, or check the event type(s) and click “Reload” to start searching.

To clear all system event logs, click “Clear All”.



Server Log List

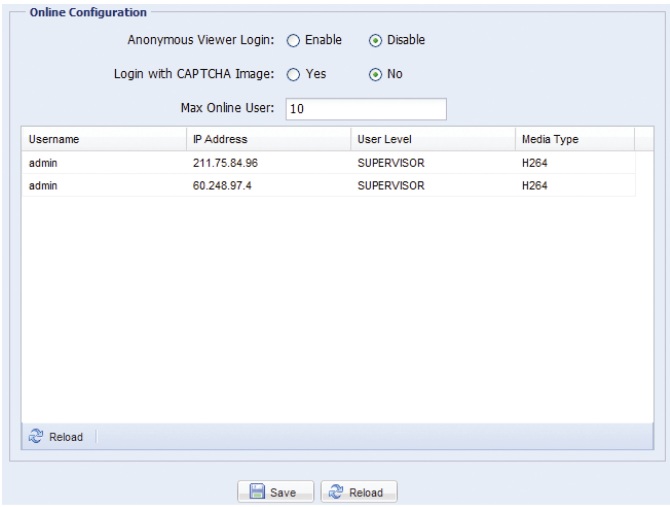
No.	Event	Time	Result
1	Remote Login	2011/08/30 20:54:41	admin
2	Remote Login	2011/08/30 20:29:58	admin
3	Remote Login	2011/08/30 18:22:08	admin
4	SNTP Update	2011/08/30 18:20:06	Failed
5	Remote Login	2011/08/30 18:20:03	admin
6	Power On	2011/08/30 18:19:24	ON
7	Power On	2011/08/30 18:18:46	OFF
8	Remote Login	2011/08/30 18:11:21	admin
9	Remote Login	2011/08/30 18:11:18	admin
10	Remote Login	2011/08/30 18:07:10	admin
11	Remote Login	2011/08/30 18:03:19	admin
12	Remote Login	2011/08/30 18:02:15	admin
13	Remote Login	2011/08/30 18:02:07	admin
14	Remote Login	2011/08/30 18:01:51	admin
15	Remote Login	2011/08/30 17:57:01	admin
16	Remote Login	2011/08/30 17:56:55	admin
17	Remote Login	2011/08/30 17:56:53	admin
18	Remote Login	2011/08/30 17:54:44	admin
19	SNTP Update	2011/08/30 17:50:48	Failed
20	Power On	2011/08/30 17:50:07	ON

Prev. Page Next Page Reload Clean All

3.7.4 Online

You can check the current online user(s) with respective online information. To refresh the list, click “Reload”.

- To allow anonymous login, select “Enable” in “Anonymous Viewer Login”.
- To disable image code verification at login, select “No” in “Login with CAPTCHA Image”.

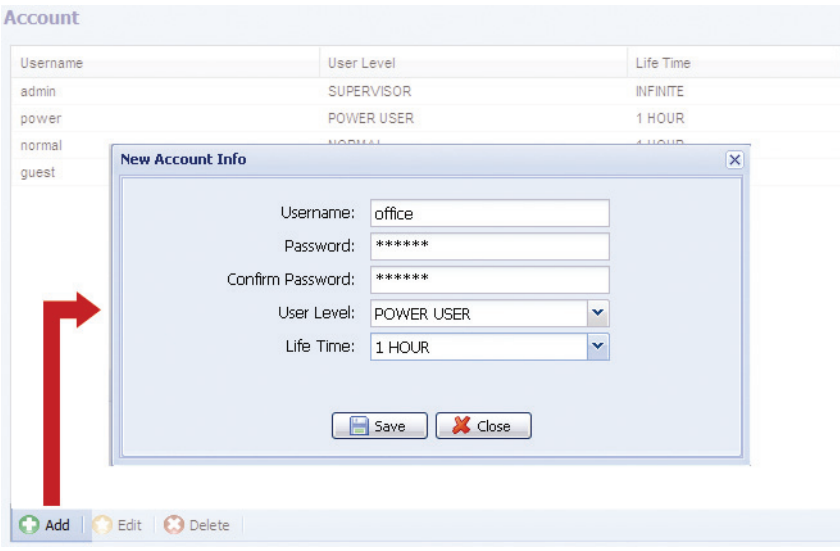


3.7.5 Account

You can create a new account with different user access privilege, or delete or modify an existing account setting.

How to create a new account

Step1: Click “New”, and fill in the following columns.



Column	Description
User Name	Set a user name that will be used for camera access. The user name allows up to 16 alphanumeric characters.
Password	Set the password that will be used for remote login. The password allows up to 16 alphanumeric characters.
Confirm Password	Enter the password again to confirm.
User Level	Set the security level of an account to give the permission to control different functions. There are four user levels: SUPERVISOR, POWER USER, NORMAL USER and GUEST.
Life Time	Select how long this account is allowed to stay online (1 MIN / 5 MIN / 10 MIN / 1 HOUR / 1 DAY / INFINITE)

Step2: Then, click “Save” to save your setting and create a new account.

How to modify or delete an existing account

Step1: Select the account you want to modify or delete.

Step2: To modify the account, click “Edit” to change the settings, and click “Save”.
To remove the account, click “Delete”.

Note: It’s not allowed to remove an account when there’s only one account in the account list.

3.7.6 Google Maps

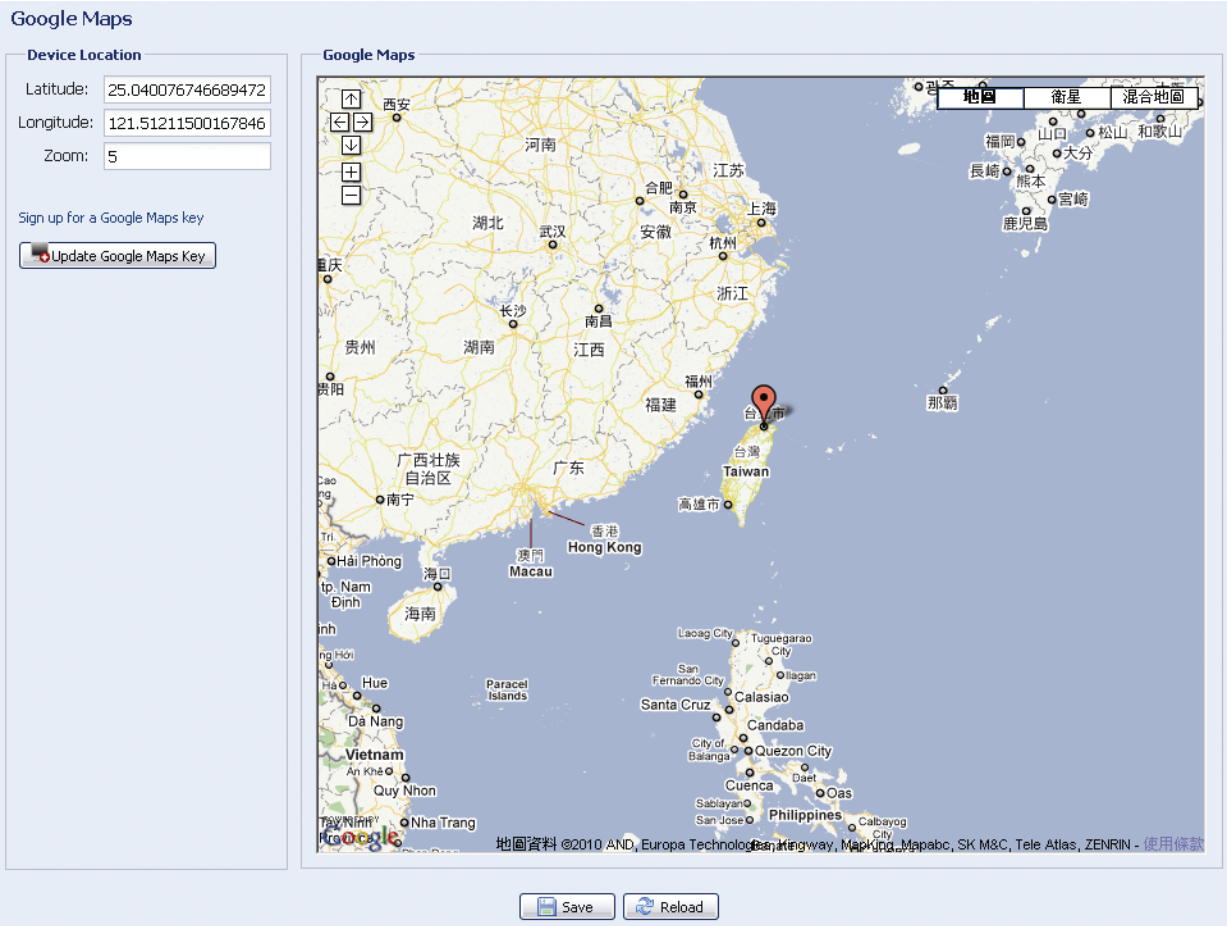
This function is used to let you know where the network camera is.

The system will prompt you to apply a Goole Maps Key if your access is denied. Please follow the instructions below when you're denied:

Step1: Click "Sign up for a Google Maps key" to enter the application page.

Step2: Check the terms and conditions, and enter the IP address of the network camera. Then, click "Generate API Key".

Step3: Copy the generated API key, and click "Update Google Maps Key" on the web browser to paste it.



3.7.7 Maintenance

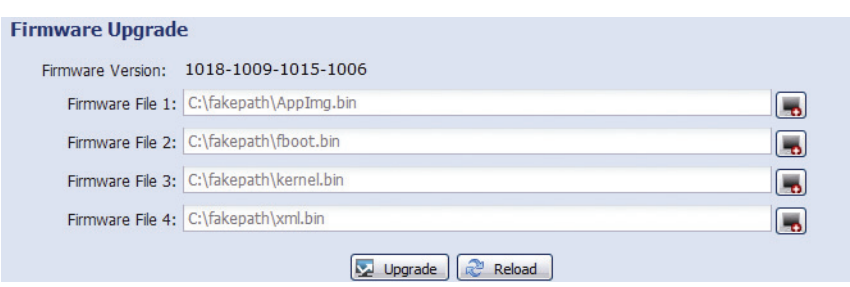
<u>Firmware Upgrade</u>

This function is used when users need to upgrade the camera for function scalability.

Note: Before using this function, make sure you have the correct upgrade files provided by your installer or distributor.

Note: The event videos saved in the camera will be removed after firmware upgrade. Make sure you've copied important events to your PC before firmware upgrade.

Step1: Select "" to browse to where you save the upgrade files, and select them one by one until all files are selected (up to four files).



Step2: Select “Upgrade” to start system upgrading.

Note: You’ll be prompted to keep current configurations. It’s recommended to keep them, or all configurations will be restored to default values after upgrade.

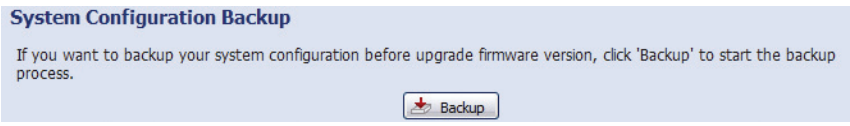
Note: It takes a few minutes to finish the upgrade process. Do not disconnect the power during firmware upgrade, or the upgrade may be failed. The camera will reboot after the upgrade.

System Configuration Backup

This function is used to copy your system configuration to a “System.bin” file.

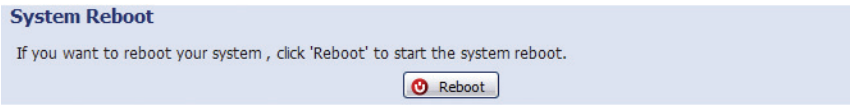
You may import the same system configuration to another camera, or restore your system configuration when the camera is reset to default values.

Select “System.bin” in “Firmware Upgrade”, and select “Upgrade” to import the system configuration.



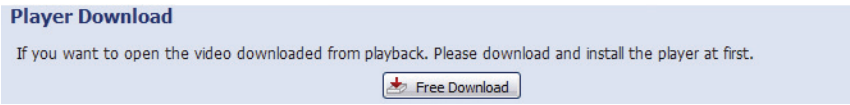
System Reboot

Select “Reboot” to restart your camera if needed.



Player Download

To see the event video clips downloaded to your PC, you need to first install our own video player in your PC. Select “Free Download” to download the video player, and double click the file to install it.



APPENDIX 1 PRODUCT SPECIFICATIONS

	AVM417A	AVM317A	AVM217
■ Network			
Network Compression	H.264 / MPEG4 / MJPEG		
Multiple Video Streaming (Encode Modes, IPS, Resolution)	3 (H.264, MJPEG, MPEG4)		
LAN Port	YES		
LAN Speed	10/100 Based-T Ethernet		
Supported Protocols	DDNS, PPPoE, DHCP, NTP, SNTP, TCP/IP, ICMP, SMTP, FTP, HTTP, RTP, RTSP, RTCP,IPv4, Bonjour, UPnP, DNS,UDP,IGMP, QoS		
Frame Rate	30 FPS		
Number of Online Users	10		
Security	1. Multiple user access levels with password 2. IP address filtering 3. Digest authentication		
Remote Access	1. Internet Explorer on Windows operating system 2. EagleEyes on iPhone, iPad and Android mobile devices		
ONVIF Compatible	YES		
■ Camera			
Image Sensor	1/2.9" SONY CMOS image sensor	1/4" SONY H.R. image sensor	1/3” H.R. image sensor
Video Resolution	HD1080P / HD720P / VGA / QVGA / QQVGA***	SXGA / HD720P / VGA / QVGA	D1 / CIF
Min Illumination	0.1 Lux / F1.5, 0 Lux (IR LED ON)		
Shutter Speed	1 / 60 (1/50) to 1 / 100,000 sec.		
S/N Ratio	More than 48dB (AGC off)		
Lens	f3.8mm / F1.5		
Viewing Angle	83.2°(Diagonal)	62.7°(Diagonal)	80.4°(Diagonal)
IR LED	12 units (10 meters)		
IR Shifter	YES		
White Balance	ATW		
AGC	Auto		
IRIS Mode	AES		
External Alarm I/O	YES		
POE	YES (IEEE 802.3af)		NO
Microphone	YES		
Speaker	YES		
Power Source (±10%)	12V / 1A	5V / 1A	
Operating Temperature	0℃~40℃		
■ Others			
Mobile Surveillance	iPad, iPhone & Android		
Audio Detection	YES		
RTC (real-time clock)	YES		
Motion Detection	YES		
Digital Pan / Tilt / Zoom	YES		NO
Event Notification	FTP / Email / SMS		
Minimum Web Browsing Requirements	□Pentium 4 CPU 1.3 GHz or higher, or equivalent AMD □256 MB RAM □AGP graphics card, Direct Draw, 32MB RAM □Windows 7, Vista & XP, DirectX 9.0 or later □Internet Explorer 7.x or later		

* The specifications are subject to change without notice.

** Dimensional tolerance: ± 5mm

*** QQVGA is for mobile surveillance only

APPENDIX 2 BIT RATE TABLE FOR REFERENCE

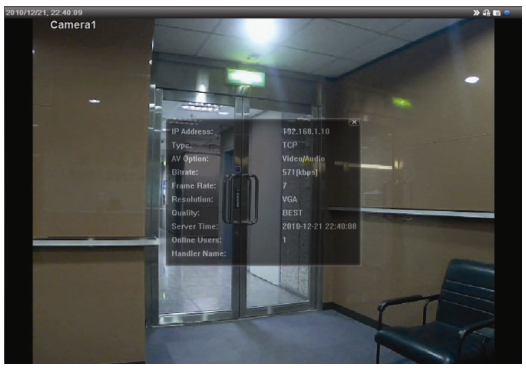
The data below is for reference only.

The bit rates listed here may vary depending on the resolution, image quality & frame rate you choose, the complexity of your monitoring area, and how often the moving objects show in your monitoring area.

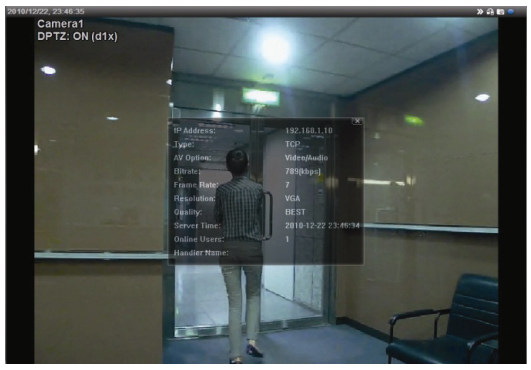
➢ AVM317A

Testing Environment

- Place: Office Entrance
- Network translation: H.264
- Camera type: Megapixel camera



Static: No one coming in and out



Dynamic: One or two people coming in and out

Resolution	Quality	Frame Rate	(Dynamic) kbps	(Static) kbps
SXGA	Best	FULL	3253	3216
	High		2375	2160
	Normal		1571	1266
	Basic		1465	873
VGA	Best		2010	1261
	High		1042	1034
	Normal		685	572
	Basic		457	350
QVGA	Best		646	366
	High		482	350
	Normal		302	286
	Basic		168	161
SXGA	Best	1/4	1163	1076
	High		989	715
	Normal		855	534
	Basic		719	443
VGA	Best		789	571
	High		451	447
	Normal		349	237
	Basic		217	165
QVGA	Best		269	147
	High		182	131
	Normal		164	113
	Basic		97	71

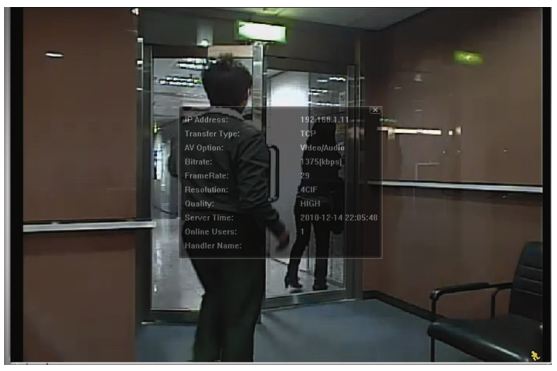
Resolution	Quality	Frame Rate	(Dynamic) kbps	(Static) kbps
SXGA	Best	1/15	581	374
	High		405	342
	Normal		487	248
	Basic		337	141
VGA	Best		358	79
	High		201	63
	Normal		180	28
	Basic		92	15
QVGA	Best		111	84
	High		99	68
	Normal		97	54
	Basic		58	42

➢ AVM217

Testing Environment

- Place: Office Entrance
- Network translation: H.264

Static: No one coming in and out



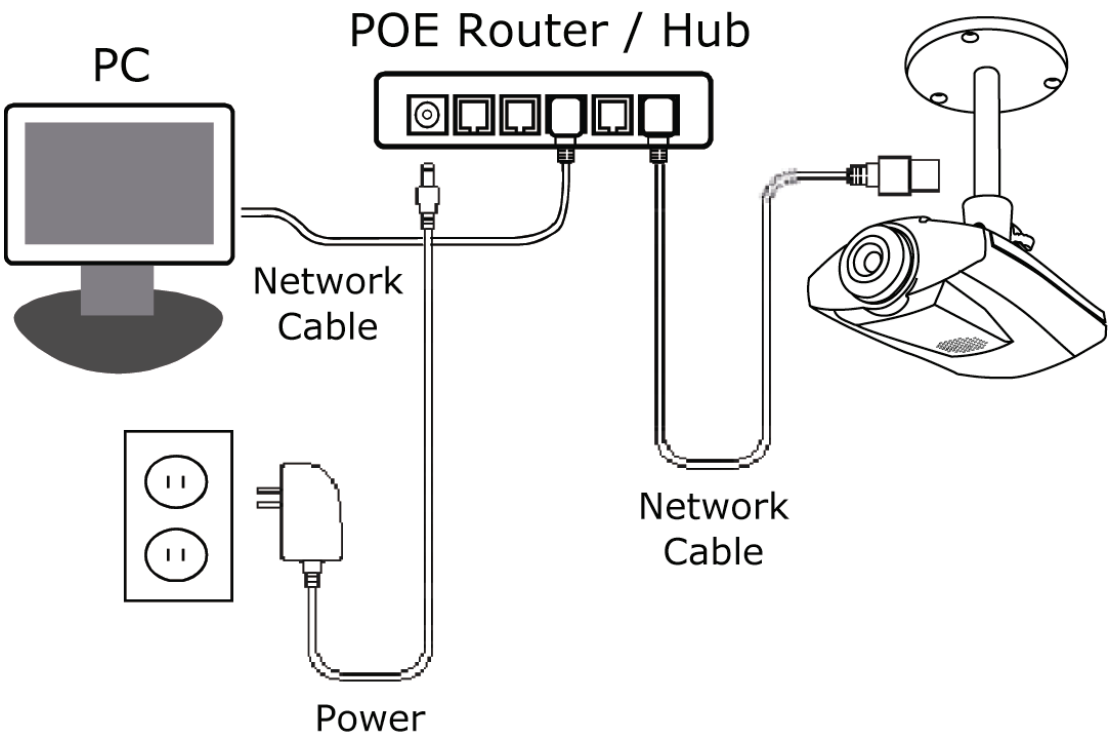
Dynamic: One or two people coming in and out

Resolution	Quality	Frame Rate	(Dynamic) kbps	(Static) kbps
D1	Best	FULL	2786	1546
	High		1375	705
	Normal		1234	425
	Basic		441	245
CIF	Best		955	290
	High		364	171
	Normal		328	111
	Basic		161	68
D1	Best	1/5	935	474
	High		506	272
	Normal		297	175
	Basic		223	108
CIF	Best		222	109
	High		133	67
	Normal		81	49
	Basic		71	32
D1	Best	1/30	127	70
	High		197	20
	Normal		61	11
	Basic		50	4
CIF	Best		42	7
	High		38	2
	Normal		22	1
	Basic		28	0

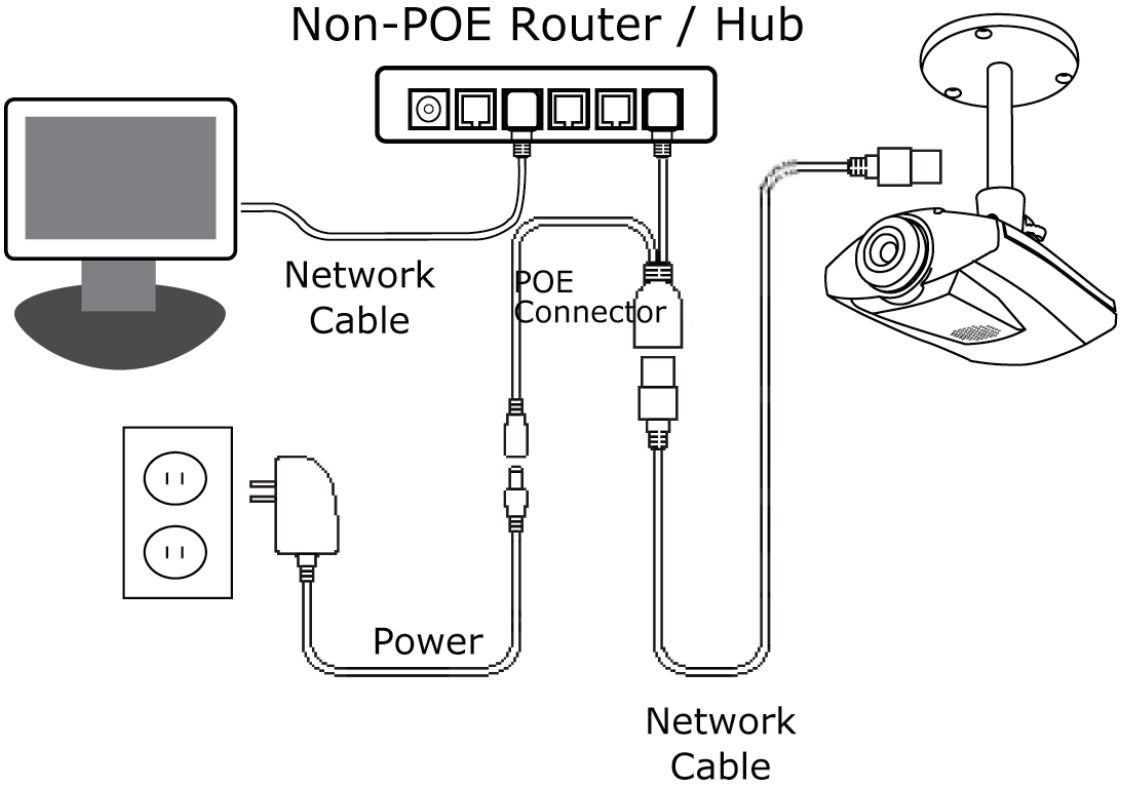
APPENDIX 3 POE CONNECTION (AVM417A / 317A Only)

This device supports PoE (Power-over-Ethernet), developed by the IEEE802.3af task force, and power can be supplied over the same network (Ethernet) cable as the one used to connect to Internet. No power cable is needed. Below shows two examples of POE application for reference.

■ When your router / hub supports POE connection



■ When your router / hub doesn't support POE connection (An optional POE connected required)



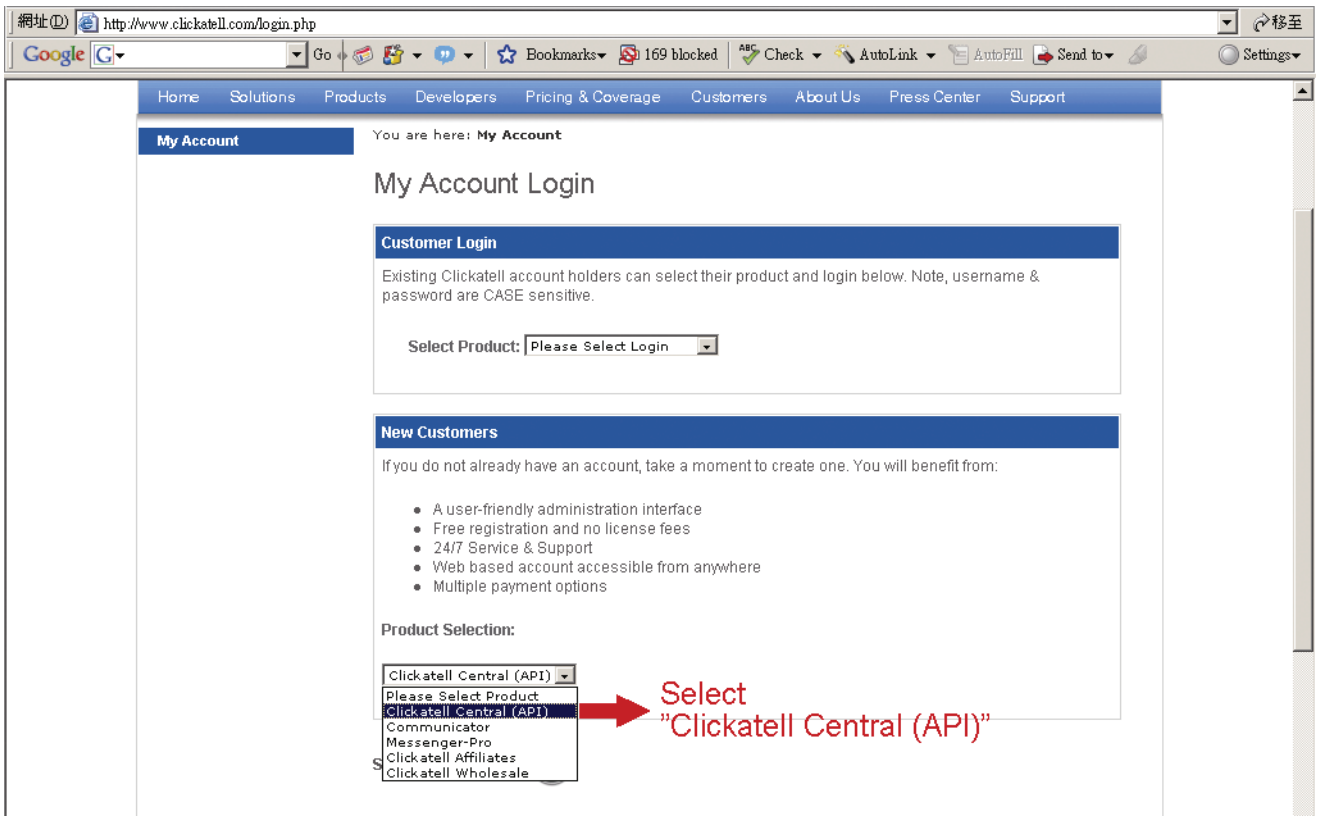
APPENDIX 4 API ID APPLICATION FOR SMS MESSAGING

To allow the camera automatically sending a text message when an event happens, you need to apply an API ID from Clickatell, one mobile messaging company, first.

Note: The SMS messaging is not totally free. You will be charged starting from the 11th message.

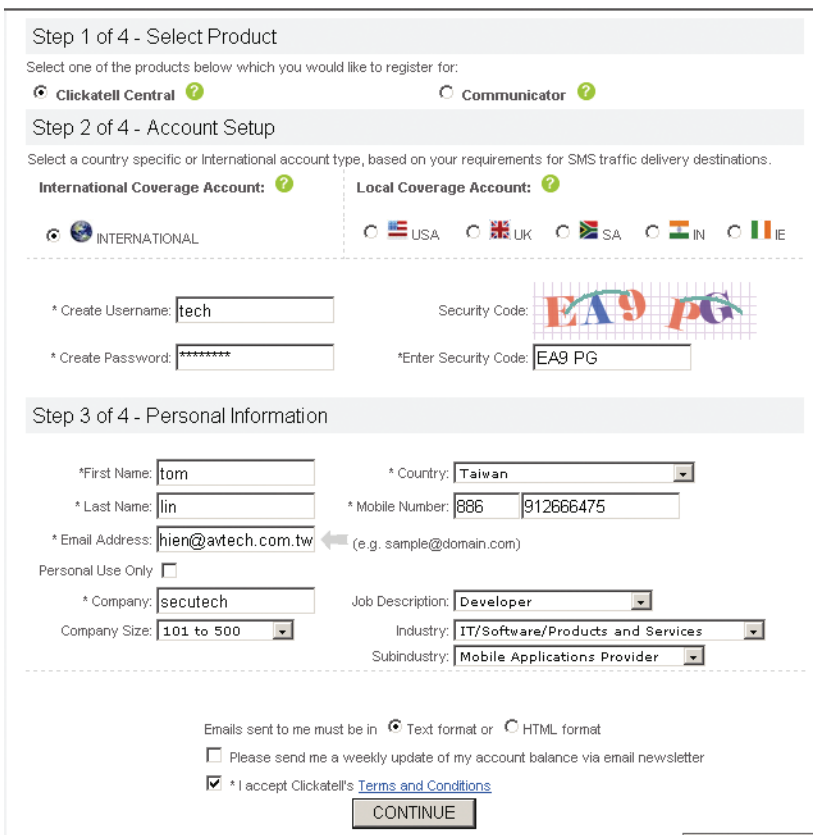
Please follow the steps below for application.

Step1: Go to http://www.clickatell.com/login.php. In “New Customers”, select “Clickatell Central (API)” from the drop-down list.



Step2: Fill in your information to create an account, and click “CONTINUE”.

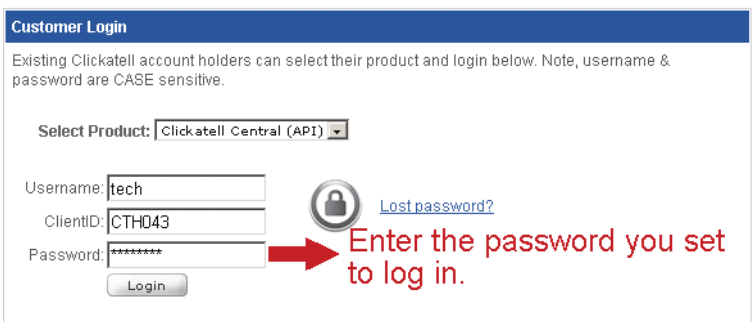
Note: Note down the user name and password, and the mobile phone number you specified here for SMS notification setting later.



Step2: When the account is created, the system will automatically send an Email to your specified Email address and ask you to activate your account.

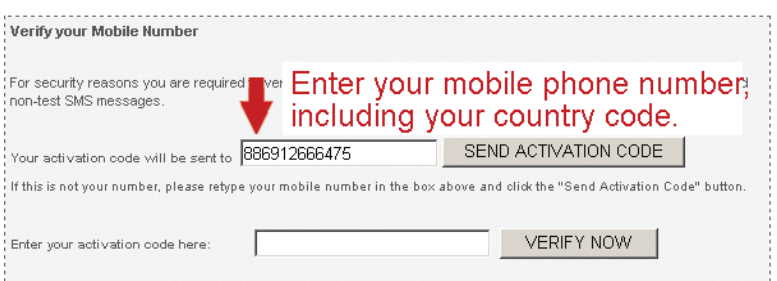
Click the link in the Email to complete account activation, and enter the login page as follows. Enter the password you set, and click “Login”.

My Account Login



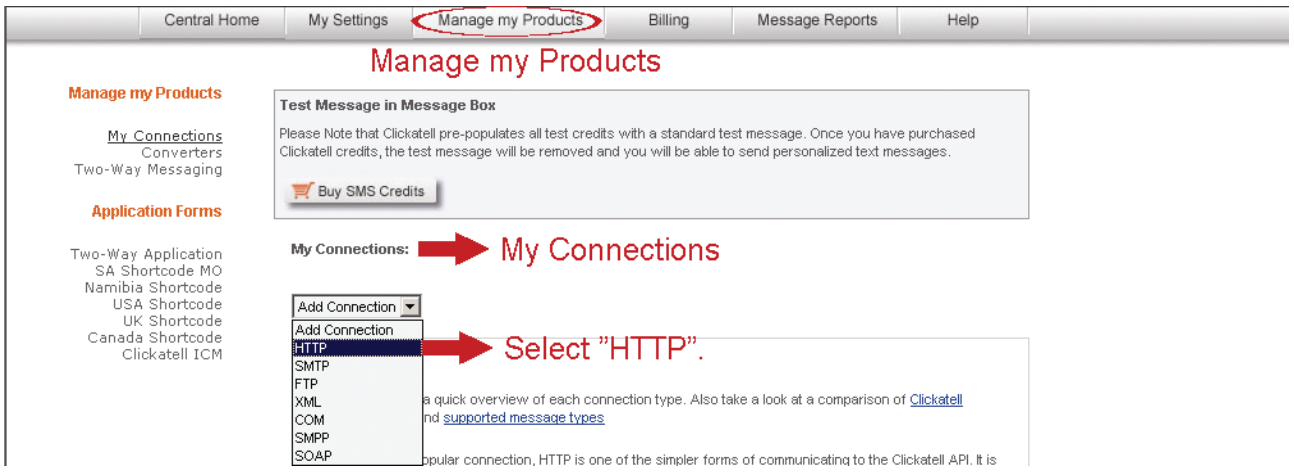
Step3: Enter the mobile phone number (including your country code) you want the text message to be sent, and click “SEND ACTIVATION CODE”. The system will send an activation code to that number for verification.

Check if you receive a text message from Clickatell.

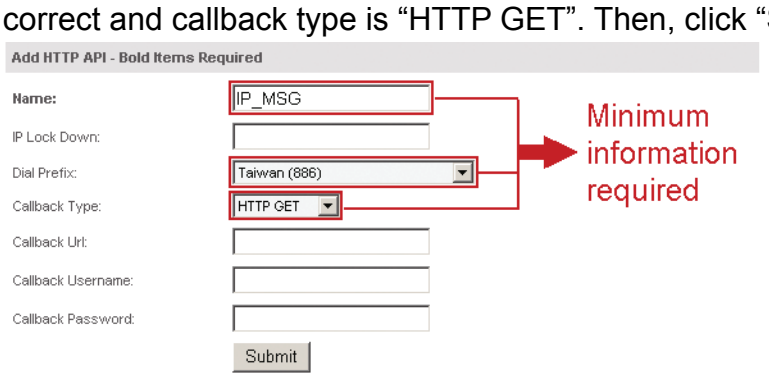


Step4: Go back to Clickatell, and click the tab “Manage my Products”.

Then, select “HTTP” from the drop-down list “My Connections”.

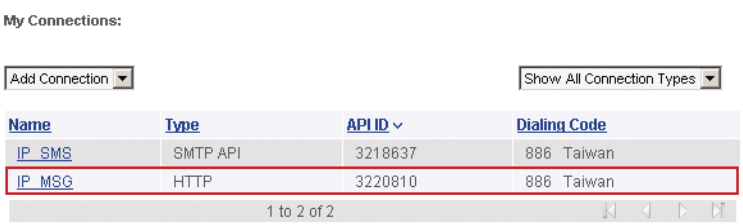


Step5: In “Add HTTP API”, enter a descriptive name for this service, and make sure the dial prefix is correct and callback type is “HTTP GET”. Then, click “Submit”.



Step5: You will get an API ID as follows.

Note: Note down the API ID for SMS notification setting later.



APPENDIX 5 Q&A

For more details about EagleEyes Q&A, please visit our official website: www.eagleeyescctv.com/supp_QnA.aspx.

Question	Answer
I can connect to this camera in my house or office where it's installed with wireless network. But when I leave my house or office, I can't connect to it from my mobile phone (with 3G network), or other PC (connected to Internet). Why?	You didn't configure this camera to Internet, but only in LAN. Please follow the steps in the advanced network setup guide to complete network configurations, or it's recommended for you to check with your local installer or reseller for this service because it's usually hard for a person who doesn't have network knowledge to set network configurations.
My live images are not fluent. Why?	Image fluency could be affected by the local network upload bandwidth, router efficiency, client network download bandwidth, complexity of live view, and more. (Recommended) To have the best image fluency, select QVGA; to have the best image quality, select "HD1080P" or "SXVGA" based on the model you have; to have normal image fluency and quality, select "VGA".
My image is vague. Why?	The camera might lose its focus. Please rotate the lens to adjust.
The live video keeps flickering. Why?	Please try adjusting the power line frequency to "60 Hz" or "50 Hz" for the camera. For iPhone users, access the camera, and select "" on the top right corner to enter IPCAM Configuration page. Then, go to "Advance Setup" → "Camera" to change setting. For access from Internet Explorer, log into the camera, and select "Config." → "Camera" → "Video".

APPENDIX 6 RECORDING TIME TABLE

Below shows the estimated total recording time for each recording resolution.

The recording time per resolution is the average value collected from the both alarm trigger conditions indicated in “Testing Environment”, and is for reference only.

The time may vary depending on the resolution, image quality & frame rate you choose, the complexity of your monitoring area, and how often the moving objects show in your monitoring area.

Testing Environment

- Place: Office
- Monitoring area: 1.5 meters away from the camera
- Alarm trigger conditions:
  (1) One person walks by the monitoring area and leaves immediately.
  (2) Two persons walk by the monitoring area. One goes away immediately, and the other one stays a while and goes away.

Recording Resolution	SXGA	VGA	QVGA
Recording time (second)	25	115	211