# IR BULLET IP CAMERA SERIES

**OPERATION GUIDE** 

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.



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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.

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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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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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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. To get the codes, please write to <u>marketing@avtech.com.tw</u>.

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# **1. OVERVIEW**

#### **1.1 Product Features**

- Easy **network setup** with your **iOS / Android OS**
- **ONVIF** standard supported to simplify system integration
- POE (Power-over-Ethernet) support to eliminate the use of power cables and reduce installation costs
- IR LEDs built-in for **night surveillance**
- External alarm I/O device connection
- Line in / out jacks available for audio transmission
- **DWDR** to increase image recognizability in overexposure and dark areas.
- Remote Surveillance
  - -- Full compatibility with iOS & Android OS, and Internet Explorer on Windows operating system

# **1.2 Package Content**

Standard Package	
□ IR Camera	□ Quick Guide
> Optional Accessories	
□ Screws & wall plugs	
$\Box$ Sun shield	$\Box$ screw for sun shield
□ Installation sticker	□ Waterproof kit

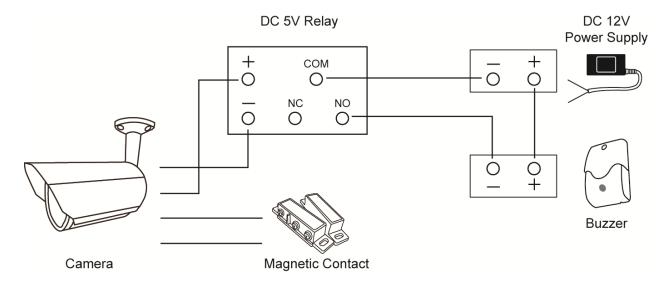
## **1.3 Cable Overview**

Cable	Description
Power cable	Connect to DC12V power supply. Note: The power adapter is optional.
RJ45 network cable	Connect it to the supplied RJ45 cable extender adapter for cable extension, and prepare another RJ45 network cable with suitable length for your connection.
GND	Ground wire, used for reset default or external device connection.
Alarm-in	Reserved for connecting to an external alarm device. For details, please refer the user manual of your alarm device.
Alarm-out	Reserved for connecting to an external alarm device. For details, please refer the user manual of your alarm device.
RESET	Remove the insulating coating of this wire, and twist it with a ground wire together to reset default. This will reset all parameters, including the IP address to factory default settings.
	<b>Note:</b> Disconnect power before twisting these two wires together, and connect to power again for reset default.
Line in (Blue)	Support microphone connection.
Line out (Green)	Support speaker connection.

# **1.4 External Alarm Connection**

This camera supports external I/O device connection for easy connection.

Below shows you how to connect an external device to this camera.



# 2. CAMERA ACCESS WITH INTERNET EXPLORER

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

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

For network configurations, please refer to:

■ "ADVANCED NETWORK SETUP" downloadable from <u>www.surveillance-download.com/user/m650.swf</u>.

# 2.1 Camera Login

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

For example, for the IP address 60.121.46.236 and port No. 888, please key in "<u>http://60.121.46.236:888</u>" 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.

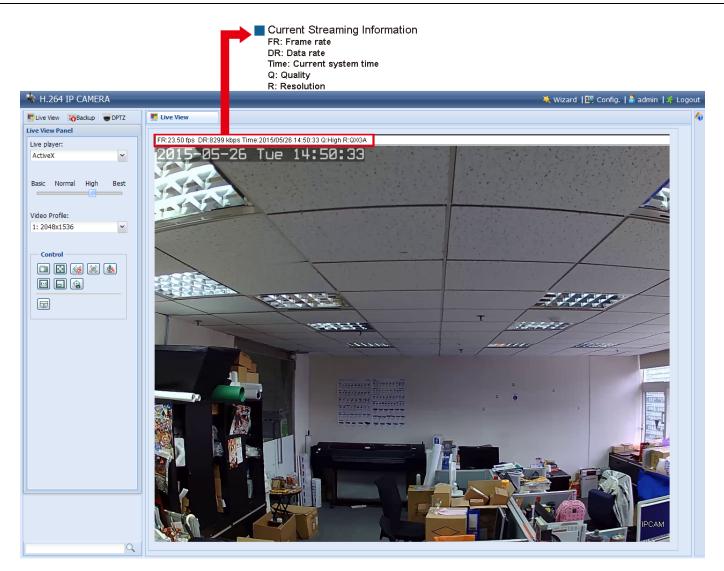
- To skip the wizard and directly access the camera live view, click "Close".
- To directly access the camera live view without starting the wizard for the login next time, check "Do not start wizard at login".

**Note:** If you're prompted to install "VLC player", "Software" and "H264 Streaming Viewer", please agree to proceed the installation.

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

# 2.2 Control Panel Overview

Note: The buttons available depend on the device you have and the user level used to log in.



Function	lcon	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" at page 4.
Config.		Supervisor / Power User	Switch to the system configuration page. The functions available for "Supervisor" and "Power User" are different.
Live player		Supervisor / Power User / Normal User / Guest	<ul> <li>For more details, please refer to "3.1 System configuration menu" at page 8</li> <li>Select the image player from the drop-down list:</li> <li>ActiveX</li> <li>QuickTime <ul> <li>QuickTime</li> <li>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.</li> <li>VLC</li> </ul> </li> </ul>
Quality		Supervisor / Power User / Normal User	Click & drag the slider to select the video quality: BASIC / NORMAL / HIGH / BEST.
Video Profile		Supervisor / Power User / Normal User	Select the pre-defined video set from the drop list. The video set could be configured in "Config" -> "Camera" -> "Video".
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.
Live View Size:		Supervisor / Power User / Normal User	
Full Screen	Đ	-	Click to display the image in full screen. To exit the full screen mode, press "Esc" on your keyboard. <i>This icon appears only when the selected resolution is 640 x 480 or above.</i>
Double size			The QVGA resolution is resized to fit into the current live view size. This icon appears only when the selected resolution is 320 x 240.
Normal Size			The current live view size is the same as the selected resolution. This icon appears only when the selected resolution is 1280 x 720 or above.
Fit to screen		-	The selected resolution is resized to fit into the current live view size. This icon appears only when the selected resolution is 1280 x 720 or above.
No Scale		-	Click and hold the movable square on the left bottom corner of the live view to move This icon appears only when the selected resolution is 1280 x 720 or above.
Audio Switch	(1)	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.
DPTZ*		Supervisor / Power User / Normal User	Click to enable the zoom-in / out function. To move the image in the zoom-in mode, simply click on where you want to see in the live view. <i>For vari-focal models only.</i>
Zoom-in / out*	<b>(</b> ),	Supervisor / Power User / Normal User	Click to zoom in / out the current image. This function is available only when DPTZ is enabled.
Max. Zoom-in / out*	主 , 💻	Supervisor / Power User / Normal User	Click to zoom in the image to the largest / zoom out the image to its original size. This function is available only when DPTZ is enabled.
Focus Assist*		Supervisor / Power User / Normal User	Click to help you determine whether the image clearness is adjusted well when you're adjusting your camera focus. Two values will be calculated and shown as "XX / YY". YY is the best focus value for your current camera view XX is your current focus value When XX is closer to YY, the clearer and sharper images you'll get for your camera view.

\* For selected models only

# 2.3 Digital PTZ (DPTZ) Operations

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.

#### > Type1



#### STEP2: Select the functions when needed:

FUNCTION	ICON	DESCRIPTION
Moving panel		Move the picture.
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.
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.
Audio On / Off	< /	Click to switch the audio-in on / off.
Microphone*	👱 / 🌆	Click to switch the audio-out on / off.

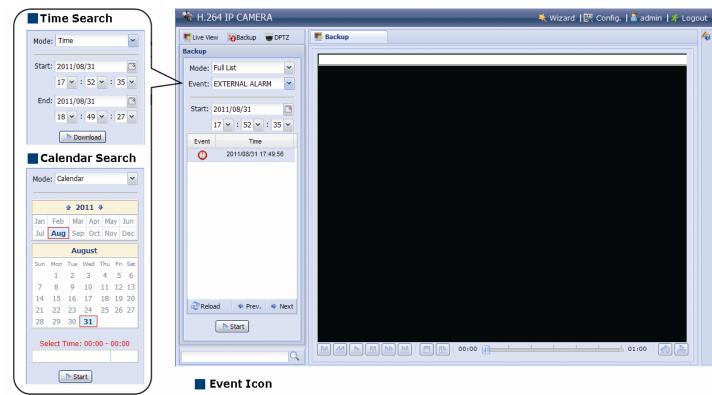
# > Type 2



FUNCTION	ICON	DESCRIPTION
Moving panel		When 🗐 is selected, the moving control panel will be shown to move the picture after zoom-in is performed.
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.
Zoom in / out	⊕ / ⊇	Click 💷 once to enlarge the picture by 1X, and click 의 once to restore the zoom ratio by 1X.
Max. zoom in / out	🛨 / 💻	Click 🖶 once to enlarge the picture to the max zoom ratio by 16X, and click 🖃 once to restore the picture ratio to 1X.
Normal Size		The current live view size is the same as the selected resolution.
		This icon appears only when the selected resolution is 1280 x 720 or above.
Scale		Click and hold the movable square on the left bottom corner of the live view to move
	Ľ	This icon appears only when the selected resolution is larger than the current live view size.

# 2.4 Event Record Search & Playback

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



🕛 External Alarm 🛛 🤶 Motion

M / M	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.
-00-	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.
2		Click to download the current video clip to the specified path in your PC.
	Download	The downloaded video can only be opened by our own video player. Please go to "General" $\rightarrow$ "Maintenance" to download the video player, or get the player from the CD supplied with the sales package.

🕒 Timer

# **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 seven menus: Network, Camera, VA, Record, Storage, Trigger and General.

- For details about "Network", please refer to "3.2 Network" at page 10.
- For details about "Camera", please refer to "3.3 Camera" at page 16
- For details about "VA", please refer to "3.4 VA (For selected models only)" at page 21
- For details about "Record", please refer to "3.5 Record" at page 21.
- For details about "Storage", please refer to "3.6 Storage" at page 22.
- For details about "Trigger", please refer to "3.7 Trigger" at page 22.
- For details about "General", please refer to "3.8 General" at page 24.

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" $\rightarrow$ "Trigger".
	Mail	Enter Email information for event notifications when "Email" is chosen in "Trigger" $\rightarrow$ "Trigger"
	SMS	Enter text messaging information for SMS notifications when "SMS" is chosen in "Trigger" $\rightarrow$ "Trigger".
	Filter	Choose to permit or block the IP address(es) which can access this camera.
		*Suitable for Windows-based operating system.
	UPnP	Allow this camera to be detected among devices within the same network area for easy and quick usage.
		*Suitable for Apple Mac-based operating system.
	Bonjour	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 browsers and Video Viewer for remote access.
	SNMP	Configure SNMP to remotely manage network devices.
	IEEE 802.1X*	The settings here enable the camera to access a network protected by 802.1X/EAPOL (Extensible Authentication Protocol Over LAN).
	Network Share	Assign a location in the LAN environment to save the snapshot of events when "Network Share" is chosen in "Trigger" $\rightarrow$ "Snapshot".
	Network Failure Detection	Configure this camera to check the network connection of other device periodically, and send notifications via Email or FTP for disconnection events.
Camera	Camera	<ol> <li>Rename the camera.</li> <li>Change the place where the camera name is shown on the screen.</li> </ol>
	Video	Adjust video-related settings in different video format.
	ROI*	Select a specific area to reinforce the image quality of that area.
	Color	Adjust the color performance.
	Audio	Adjust the audio volume of the microphone and speaker.
	Advanced	Adjust the camera parameters if necessary.
	Privacy Mask*	Cover certain areas on the camera image.
VA*	TA*	This function should be used with the mini-guard control switch for alarm system integration For details, please check with your distributor or installer.
ONVIF	Event	This function is used to integrate the functions of event and alarm detection when this camera has to work with other ONVIF-compliant device.
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.

\*Selected models only

Main Menu	Sub-Menu	Reference
Trigger	Trigger	<ol> <li>Enable / disable the motion detection.</li> <li>Set the motion detection area.</li> <li>Configure how the camera reacts for any event.</li> </ol>
	Snapshot	Schedule the camera to take snapshots periodically or at a specific time, and send to E-Mail, FTP and / or Network Share for backup. Time-lapse recording could also be configured here.
General	General	<ol> <li>Select the language of the web browser.</li> <li>Check the MAC address of the camera.</li> <li>Lock camera access after the specified time.</li> </ol>
	Time	Set daylight saving time and the current time.
	Server Log	Check the system event logs.
	Online	Check the current online user(s).
	Account	<ol> <li>Create a new user account with different access privilege.</li> <li>Modify or delete an existing user account.</li> </ol>
	Google Maps	Allow you to know where the network camera is.
	Maintenance	<ol> <li>Check the current firmware version and upgrade your camera.</li> <li>Copy system configurations.</li> <li>Reboot the camera.</li> <li>Download the video player to play the recorded data.</li> </ol>

\*Selected models only

### 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/m650.swf.

Network Configuration	
IP Type:	○ Static IP ○ PPPoE ◎ DHCP
Server IP:	192.168.1.10
Gateway:	192.168.1.1
Net Mask:	255.255.255.0
Port:	88
DNS1:	8.8.8.8
DNS2:	168.95.1.1
MAC Address:	00:0E:53:EB:62:10
	Save Reload

#### 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.

Interface:	Ethernet	<b>v</b>
Max. Upload Rate:	4096	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/m650.swf.

System Name:	default	×	
Hostname:	MAC000e531d6ff1		.ddns.eagleeyes.tw
E-Mail:	manager@tech.com		
E-Mail:	manager@tech.com		

#### 3.2.4 SNTP

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

GMT:	(GMT+08:00) Taipei	*
NTP Server:	tock.stdtime.gov.tw	
Sync. Period:	Daily	~
Server Time:	2011-08-30 20:34:42	
	Sync.	
	Save Reload	

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"  $\rightarrow$  "Trigger".

Password:         ••••••           Server:         211.75.85.33           Port:         21
Port: 21
Directory: upload
Mode: Passive 👻

#### 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"  $\rightarrow$  "Trigger".

SMTP Configuration			
SMTP Server:	smtp.gmail.com	I	
Ports	465		
Mail From:	office_manag	er@gmail.com	
Use SSL Encryption:	Yes	No	
Verify Password	Yes	🔘 No	
Username	manager		
Password	•••••		
Subject	Trigger Occur!		
	Save	Test 🛛 🧟 Re	cad
E-Mail Address List			
E-Mail Address:		🔜 🕥 Add ( 🔿 Edit	🔇 Delete
Receiver Name	E-Mail Address		
boss	boss@tech.com		

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".	
Subject	Enter the subject for the E-Mail.	
E-Mail Address List	Add the e-mail address(s) of the assigned recipient(s).	
Test	When all information is entered, click "Test Mail" to try if the receipt.	

**Note:** Before using this function, you need to apply an account and get an API ID from the mobile messaging company, such as Clickatell and EVERY8D. For details, please refer to "APPENDIX 4 API ID APPLICATION FOR SMS MESSAGING" at page 36.

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"  $\rightarrow$  "Trigger".

SMS		
SMS Configuration		
System:	clickatell 🗸	
Username:	tech	
Password:	****	
API ID:	3281378	
Recipient:	+886912665475	
	2	more
Transfer Interval:	15	Minute(s) 💫 Reset Counter
Message:	[192.168.1.10] unauthorized access!	🔽 Include Hostname or IP
	<b>v</b>	
	Save 💦 Test 🔍 Reload	

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.

Error Count:	3	
Error Lock Time:	1	Minute(s)
Echo Request:	Non-Block O Block	
IP/MAC Filter Configuration		
IP/MAC Filter: 💿 Enable	🔿 Disable	
IP/MAC Filter Policy: 💿 Allow	⊖ Deny	
IP/MAC Filter Rules		
Rule : 192.168.1.122	🕥 Add 🛛 😥 Delete	Hel
192.168.1.23		

Function	Description		
Filter Configurat	ion		
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 Co	nfiguration		
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 Ru	les		
Rule	<ul> <li>To add an item to the IP address list, key in the IP address in "Rule", and click "Add".</li> <li>To remove an existing item in the IP address list, click the item you want to remove, and click "Delete".</li> </ul>		

#### 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	
UPnP Configuration UPnP:  UPnP:  Disable Friendly Name: IP CAMERA (Fixed) AVM457R-000E53EB6210  Save Reload	
≻ Bonjour	
Bonjour Configuration Bonjour:      Bonjour:      Enable      Disable     Device Name: IP CAMERA (Fixed) AVM457R-000E53EB6210	
Save Reload	

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/m650.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.

Port Mapping:	Enable	O Disable
		a is accessible from the other side of the router using the following URL 97.4:80 or https://60.248.97.4:59207.
Router IP:		(LAN IP Address)
HTTP Port:	80	
HTTPS Port:	59207	
		k or 0, a port number will be set automatically upon enable.

**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.

	End Port:	60000		
Video				
Profile	Ad	dress	Port	Time to Live (TT
1	239.10	1.101.101	9000	15
2	239.10	1.101.102	9000	15
3	239.10	1.101.103	9000	15
4	239.10	1.101.104	9000	15
Audio				
Profile	Ad	dress	Port	Time to Live (TT
1	239.10	1.102.101	9000	15
2	239.10	1.102.102	9000	15
3	239.10	1.102.103	9000	15
4	239.10	1.102.104	9000	15

Function	Description
Port Range The port range u	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.
■ Video	
Address and port for video transmission	Set a specific address and port for multicast of profile 1 ~ 4. 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.
Audio	
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.

#### 3.2.11 SNMP

SNMP, Simple Network Management Protocol, is used to facilitate the exchange of management information between network-attached devices, and network administrators could use it to monitor those devices.

The SNMP consists of three basic components:

- Network-management systems (NMSs) to monitor and control the managed devices.
- Managed devices as network nodes to save all network and management information, such as routers, access servers, switches, bridges, hubs, etc.
- Agents as network management software modules on managed devices to provide the status of managed devices to NMSs.

Note: Before configuring SNMP settings, make sure your NMS is enabled first.

#### Enable SNMP V1 / V2C

Select "Yes" to enable this function, and enter the names of "Read community" and "Write community" based on your NMS configurations.

To enable "Traps" to notify the management station of important events, choose "V1" or "V2C" in "Enable", enter the address and community name, and select the event type(s) needed.

	Enable:	• Yes		O No		
	Read community:	public				
	Write community:	private				
Traps -						
	Enal	ble: V	2C		*	
	Addre	ess: 1	29.231.20.5	8		
	Commun	nity: S	NMP_trap			
	Cold st	art: 💿	Enable	🔘 Disable		
	Warm st	art: 🔍	Enable	🔘 Disable		
	Link	up: 🔍	Enable	🔘 Disable		
	Authentication fail	led: 🧕	Enable	🔘 Disable		

#### Enable SNMP V3

SNMP V3 has a higher security level than SNMP V1 / V2C to allow configuring the authentication password and encryption password.

Choose "Read/Write Security name" or "Read only Security name" based on your NMS settings, and enter the community name. Then, select the authentication type from "MD5" or "SHA", and enter the password for authentication and encryption. The password length is from 8 to 31 characters.

Enable:	Yes	O No		
Read/Write Security name:	Private			
Authentication Type:	MD5		*	
Authentication Password:	1			
Encryption Password:				
Read only Security name:	Public			
Authentication Type:	MD5		~	
Authentication Password:				
Encryption Password:				

#### 3.2.12 IEEE 802.1X (For selected models only)

The settings here enable the camera to access a network protected by 802.1X/EAPOL (Extensible Authentication Protocol Over LAN).

**Note:** For authentication to work properly, it's important to synchronize the time in the camera with an NTP server.

Before using this function, make sure:

- The switch and RADIUS server you have in the LAN environment supports IEEE 802.1X, and IEEE 802.1X settings are enabled.
- You've applied a digital certificate from a Certificate Authority which can be validated by a RADIUS server, and the identity and password used.

Then, follow the steps below:

Step1: Connect this camera to a PC or laptop directly, and go to its login page to log in.

**Note:** To know how to connect the camera to a PC or laptop directly, please check "4 Modem / Hub + Modem" in "<u>ADVANCED NETWORK SETUP</u>".

Step2: Log into the camera, and go to "Config" → "Network" → "IEEE 802.1X". Enable this function, and select the EAP method you want to use.

Note: This camera supports "EAP-PEAP", "EAP-TLS" and "EAP-TTLS".

Step3: Enter the identity and password you get from the Certificate Authority, and select the EAPOL version used in your switch.

Step4: Upload the certificate(s) issued by the Certificate Authority, and save.

IEEE 802.1X Configuration		
IEEE 802.1X:	Enable     Isable	
Status:	Stopped	
EAP Method:	EAP-PEAP	×
Identity:		
Password:		Hidden characters
EAPOL Version:	1	×
CA Certificate:	No CA certificate uploaded.	Vpload
	Save 🔊 Reload	

Step5: Disconnect the camera from your PC or laptop, and connect it to the switch in the LAN environment you want to use IEEE 802.1x, and the camera will start the authentication later.

#### 3.2.13 Network Share

This function is used to assign a location in the LAN environment to save the snapshot of events.

Note: This function is available only for Windows operating systems.

The information you set here will be applied when "Network Share" is selected in "Trigger"  $\rightarrow$  "Snapshot"  $\rightarrow$  "Storage Mode".

Enable:	ON
Status:	*
Address:	192.168.1.221
Directory:	share
Username:	OFFICE
Password:	

To use this function, make sure:

- A PC is installed in the same LAN environment as this camera, and you know the IP address of the PC.
- A PC account is created as "Administrator" with a user name and password.
- A folder in the PC is opened as shared to the user account you assigned.

#### **Note:** Please check "APPENDIX 7 PREREQUISITES FOR NETWORK SHARE" at page 41 for more details.

Enable this function, and enter the address of the PC, the folder being shared, and the user name and password to access the PC. If the information is all correct, you'll see a check in the "Status" column, and you're ready to go to "Trigger"  $\rightarrow$  "Snapshot" for further configurations.

#### 3.2.14 Network Failure Detection

Configure this camera to check the network connection of other device periodically, and send notifications via Email or FTP for disconnection events.

Network Failure Detection		
Network Failure Detection		
Enable:	ON	/
Ping the IP address:	59.221.58.3	
Period:	1	Minute(s)
Triggered Action:	E-Mail, FTP	•
	Save Reload	

### 3.3 Camera

#### 3.3.1 Camera

In this menu, you can set the camera title, OSD display, and location to save snapshots.

#### **Note:** The actual functions shown depend on the model you have.

mera Configuration			
Title:	IPCAM		
Position:	DOWN-LEFT	~	
Snapshot Path:	C:\		
Speed by Zoom:	ON	×	

Title:	IPCAM	
OSD Title Display:	OFF	~
OSD Title Display Position:	DOWN-LEFT	~
Snapshot Path:	C:\snapshot	
Zoom Ratio Display:	ON	~
Speed by Zoom:	ON	Y

#### 3.3.2 Video

You can adjust the power line frequency of your camera (60Hz or 50Hz) to suit your environment if needed, or adjust video-related settings in different video format.

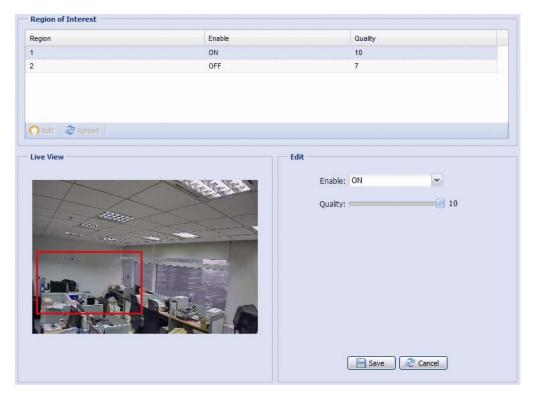
- "Quality" is related to image clearness.
- "FPS" is related to the fluency of the video. The more the FPS, the more fluent the video.
- "Max Bit Rate" is the maximum limitation of data transmission in the selected image format and resolution.

#### Note: QQVGA is for mobile surveillance only.

	ower Line Frequen		✓ Hz			
file						
Profile	Media Type	Resolution	Quality	FPS	GOV	Max Bit Rate(kbps)
1	H264	1280x720	HIGH	15	15	8000
2	H264	640x480	HIGH	15	15	5000
3	H264	320x240	HIGH	15	15	5000
4	JPEG	320x240	HIGH	15	15	5000

#### 3.3.3 ROI (For selected models only)

ROI, Region of Interest, is used to reinforce the image quality of the selected area(s). Users could specify two areas in the camera view.



#### 3.3.4 Color

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

To restore the default values, click "Back to Default".

Color Configuration	Live View
Brightness: 50	
Contrast: 55	
Hue: 50	
Saturation: 65	
	IPCAM
	Back to Default

#### 3.3.5 Audio

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

Input(Mic.):	 5	Mute	
Output(Speaker):	 5	Mute	

#### 3.3.6 Advanced

Adjust the camera parameters if necessary.





Item	Description
Fixed Shutter*	Shutter Speed is a function that can adjust the duration of the electronic shutter to produce optimum image quality. Select the shutter speed suitable for your environment.
Slow Shutter	Select the slow shutter speed suitable for your environment.
Speed	A slower shutter speed in dark conditions will help to produce a brighter image, but will produce fewer frames per second, which may cause images to get blurry during motion.
Exposure Control	This function is used to synchronize the shutter time to the fluorescent light to suppress image flickering.
Exposure Value*	Drag the slider to adjust the exposure level from 0 ~ 4. The higher the value, the more light to let into the camera.
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.
Denoise	Click and drag the slider to adjust the level to decrease the noise shown in the dark environment. The higher the value, the higher the denoise level. 0 means off.
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.
IR Extend Time*	Set the delay time from 1 ~ 60 in second after which the day and night switch is made, or select 0 to disable this function.
	This is used for the environment where the light condition may change suddenly and usually last for a short time, for example, the entrance of a parking lot. It may cause the day & night mode switching constantly and damage the camera.
	With this function, the camera will delay the mode switch at night since the light change is temporary and unnecessary to pay attention.
IR Turn On Level*	Select the level for IR light to activate. 0 means off.
White Balance	Process the current image to retain color balance over a color temperature range.
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. The higher the value, the sharper the image.
Digital WDR	Digital WDR is used to simulate the effect of WDR when users need to increase image recognizability in overexposure and dark areas. 0 means off.

Item	Description
Day and Night*	This function is used to configure the day and night mode:
	• Day - Always stay in the day mode (color).
	• Night - Always stay in the night mode (B/W).
	• Time – Select this option, and click "Day and Night" in blue to enable and set a schedule to enable day and night mode. The selected time (yellow) will be in the day mode, and the unselected time will be in the night mode.
	• Sensor – Use the built-in light sensor for day and night detection.
	• Digital Input N.O. – (Used with Alarm In) Normally stay in the day mode, and switch to the night mode when the alarm is triggered.
	• Digital Input N.C. – (Used with Alarm In) Normally stay in the night mode, and switch to the day mode the when alarm in triggered.
Defog*	Select "ON" or "Auto" to enable the defog function in poor weather conditions such as fog, smog or smoke. The captured image can be improved.
High Light Compensation*	It's used to suppress strong backlight for clearer images. Select "ON" or "Auto", and a gray mask will be covered on the source of the strong light.

\*Selected models only

# 3.3.7 Privacy Mask (For selected models only)

You can cover certain areas on the camera image with privacy masks.

Mosaic Size:	8x8	~					
Priority:	Overlay	~					
						-	
rivacy Mask N		ction 🔺	Mosaic	Color	Mask Color	Transparency	Line Width
ask1	ON		OFF	ON		50%	4
) Add 🛛 🚫	Edit 🛛 🔀 Delei	ie   🍣 Relo			Edit Mask		
2015-07	-22 Wed 14	a 7a 44.			Privacy Mask Name	: Mask1	
					Function	ON	¥
					Mosaic	ON	•
				-	Color	: ON	•
					Color Mask Color		<ul><li>▼</li></ul>
						:	
			-11		Mask Color	: 50%	~

ltem	Description
Mosaic Size	Choose the mosaic size of the privacy mask when "Mosaic" is set to "ON".
	The options are: 8×8, 32×32, and 64×64.
Privacy Mask Name	Name your privacy mask.
Function	Select "On" to enable the privacy mask function.
Mosaic	Select "ON" to have the mosaic effect.
Color	Select "ON" to color the privacy mask.
Mask Color	Select the color for the privacy mask.
Transparency	Select the transparency for your privacy mask.
	The options are: 0%, 25%, 50%, and 100%.
Line Width	Choose the line width from 0, 2, 4 and 6 when the transparency is not set to 0%.

# 3.4 VA (For selected models only)

#### 3.4.1 TA

TA, tampering alarm, should be used with the mini-guard control switch for alarm system integration. For more details, please check with your distributor or installer.

ON	~	

# 3.5 EVENT

#### 3.5.1 Event

This function is used to integrate the functions of event and alarm detection when this camera has to work with other ONVIF-compliant device.

Event			
Namespace			
Namespace:	tnsav="http://www.avtech.com/201	12/event/topics"	
Motion			
Topic:	tnsav:MotionDetection		
Source:	window	0	+
Data:	motion	= 1	
Alarm			
Topic:	tnsav:IO		
Source:	port	0	+
Data:	state	= 1	
	Save	Reload	

# 3.5 Record

3.5.1 Record

- 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

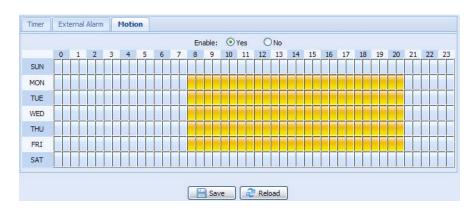
Enable:	Yes	🔘 No	
Overwrite:	Yes	🔘 No	
Audio Record:	Yes	💿 No	
Profile:	Profile2 720	x480 💌	

#### 3.5.2 Record Timer

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

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

Note: The selected time will be yellow-colored.



# 3.6 Storage

3.6.1 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.

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 40.

Memory Configuration	
Fieldory configuration	
File System:	RAMDISK
Capacity Total:	20.00 MB
Capacity Used:	5.22 MB (26.10%)
	Clear Reload

# 3.7 Trigger

#### 3.7.1 Trigger

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

	External Alarm:	OFF		~	
	Motion:	ON		*	Detection
	Duration:	10 Sec.		*	
ction					
E-Mail:	External Alar	m 🔲 Motion			
FTP:	External Alar	m 📃 Motion			
SMS:	External Alar	m 🔲 Motion			
Alarm Out:	🔽 External Alar	m 📃 Motion	Day and Night		
Record:	External Alar	m 📃 Motion			
Audio Alert:	Manual Alarm	n-Out			

#### 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" $\rightarrow$ "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" $\rightarrow$ "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" $\rightarrow$ "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).
	*Day and Night is for selected models only.
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.

#### 3.7.2 Snapshot

Enable this function to schedule the camera to take snapshots periodically or at a specific time, and send the snapshots to E-Mail, FTP, and / or Network Share for backup.

Note: Before using E-Mail, FTP and Network Share, make sure the related configurations are done in "Network" → "Mail", "Network" → "FTP", and "Network" → "Network Share".

Enable:	ON							~			
Action:	Daily Time						~				
Daily Time:	12	~	:	00	~	:	00	~	(H:M:S)		-
	12	~	:	30	~	:	00	~	(H:M:S)	+	-
Storage Mode:	E-Mail, F	-TP, Net	wor	k Share				*			
File Name Prefix:	office 1										
Video Source:	Profile2							*			
		S S			Reload	h					

#### Time-lapse Recording

This function allows users to create time-lapse recording by combining snapshots together.

Note: To use this function, make sure "Network Share" is configured well in "Network" → "Network Share". For details, please go to "3.2.13 Network Share" at page 17.

92.168.1.221/share		
i .	*	
st		
0	MB	
	5 st 00	st

Step1: Configure when to take snapshots in "Snapshot", and choose "Network Share" as the storage mode.

- Step2: In "JPG to AVI Conversion", choose how many images you want to see per second in "FPS", name the video file, and specify the file size.
- Step3: Click "Convert" to start file conversion, and go to the path specified to store snapshots in "Network Share" to check the video file.

#### 3.8 General

#### 3.8.1 General

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

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.

Language:	English	*	
Auto Lock Time:	5 MIN	~	
MAC Address:	00:0E:53:E6:0D:90		

#### 3.8.2 Time

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

	OSD:	🔘 Ena	ble	Oisable							
	Date:	2011/	08/30								
	Time:	21	▼ : 16	; <b>~</b>	: 41	~					
			Save	R	eload						
light Saving Time Daylight Saving Time Cor Daylight Saving Time:	-			R 1	eload						
Daylight Saving Time Cor Daylight Saving Time:	🔿 Enable	0	) Disable			Aonday	~	6		0	(HH:MM)
Daylight Saving Time Cor	🔘 Enable August		Disable	eek	× 1	4onday 4onday	~	6	: :		(HH:MM) (HH:MM)

Function	Description
Time Configura	tion
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).

#### 3.8.3 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.

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	

To clear all system event logs, click "Clear All".

#### 3.8.4 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".

	Anonymous Viewer Login:	🔿 Enable	<ul> <li>Disable</li> </ul>	
Lo	gin with CAPTCHA Image:	O Yes	<ul> <li>No</li> </ul>	
	Max Online User:	10		
Isername	IP Address		User Level	Media Type
ıdmin	211.75.84.96		SUPERVISOR	H264
idmin	60.248.97.4		SUPERVISOR	H264

#### 3.8.5 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.

ame	UserL	.evel		Life Time
	SUPER	ERVISOR		INFINITE
POWER		R USER		1 HOUR
	New Account Info			X
	Username:	office		
	Password:	****		
	Confirm Password:	****		
	User Level:	POWER USER	~	
	Life Time:	1 HOUR	~	
	Life Time:	1 HOUR	)	

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.

#### 3.8.6 Google Maps

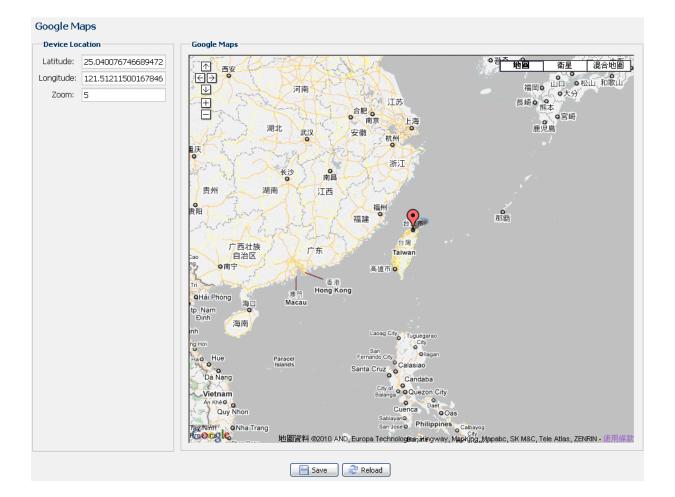
This function is used to let you know where the network camera is.

The system will prompt you to apply a Google 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.



#### 3.8.7 Maintenance

#### Firmware Upgrade

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).

Firmware Upgrade	2	
Firmware Version:	1018-1009-1015-1006	
Firmware File 1:	C:\fakepath\AppImg.bin	-
Firmware File 2:	C:\fakepath\fboot.bin	
Firmware File 3:	C:\fakepath\kernel.bin	-
Firmware File 4:	C:\fakepath\xml.bin	-
	Upgrade Reload	

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 Configuration Backup
If you want to backup your system configuration before upgrade firmware version, click 'Backup' to start the backup process.
😕 Backup

#### System Reboot

Select "Reboot" to restart your camera if needed.

```
System Reboot
If you want to reboot your system , click 'Reboot' to start the system reboot.
```

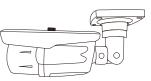
#### Player Download

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.

```
Player Download
If you want to open the video downloaded for playback, please download and install the player first.
```

# **APPENDIX 1 PRODUCT SPECIFICATIONS**

3MP



	Model 1	Model 2		
Network				
LAN Port		ES		
LAN Speed		ed-T Ethernet		
Supported Protocols		IP, QoS, SNMP		
ONVIF Compatible	YES (F	Profile S)		
Numbers of Online Users		10		
Security	<ul><li>(1) Multiple user access levels with pa</li><li>(2) IP address filtering</li><li>(3) Digest authentication</li></ul>	ssword		
Remote Access	<ul><li>(1) Internet Explorer on Windows oper</li><li>(2) 24CH Video Viewer on Windows oper</li><li>(3) EagleEyes on iOS &amp; Android mobil</li></ul>	perating system		
Video				
Video Compression	H.264 (Main P	rofile) / MJPEG		
Resolution	2048x1536 / 1920 x 1080 / 1280 x 720 / 640 x 480 / 320 x 240			
Frame Rate	30	fps		
Multiple Video Streaming	4 (H.264	, MJPEG)		
General				
Image Sensor	1/3" CMOS image sensor	1/2.8" CMOS image sensor		
Min Illumination	0.1 Lux / F1.8;0 Lux (IR LED ON)	0.1 Lux / F1.4(Wide)~F2.8(Tele), 0 Lux (IR LED ON		
Electronic Shutter	· · · ·	5 (Slow shutter)		
S/N Ratio		BdB (AGC off)		
Lens	f3.6mm / F1.8	f2.8 ~ 12mm / F1.4 ~ F2.8		
		Wide: 94° (Horizontal) / 69° (Vertical) / 120° (Diagona		
Viewing Angle	67° (Horizontal) / 49° (Vertical) / 87° (Diagonal)	Tele: 29° (Horizontal) / 22° (Vertical) / 36° (Diagonal		
IR LED	36 L	Jnits		
IR Effective Range	Up to 30	) meters		
IR Shift	Y	ES		
Smart Light Control		ES		
White Balance		rw		
AGC		uto		
IRIS Mode		ES		
WDR		/DR		
Micro SD Card Slot		to 64GB)		
POE (Power-over-Ethernet)		E 802.3af)		
External Alarm I/O		it / 1 output)		
		MB		
RAM				
IP Rating		66		
Operating Temperature		~ 50°C		
Operating Humidity		elative humidity		
Power Source (±10%)		V / 1A		
Current consumption (±10%)	360mA (IR OFF) / 610mA (IR ON)	708mA Max.		
Power Consumption (±10%)	PoE & PoN: 9.5W; DC Adapter: 8.5W	PoE & PoN: 10W; DC Adapter: 8.5W		
Net Weight(kg)	1.145	1.0		
Audio				
Line in		Mono)		
Line out	YES	(Mono)		
Others				
Mobile Surveillance	iOS & Android	mobile devices		
Event Notification		nail / SMS		
Digital Pan / Tilt / Zoom		ES		
Motion Detection		ES		
RTC (real-time clock)		ES		
	<ul> <li>Intel core i3 or higher, or equivalent AMD</li> <li>2GB RAM</li> </ul>	-		
Minimum Web Browsing Requirements	<ul> <li>AGP graphics card, Direct Draw, 32MB RA</li> <li>Windows 10, Windows 8, Windows 7, Windows 10, Windows 8, Windows Edge</li> <li>Internet Explorer 7.x or later (Windows Edge</li> </ul>	dows Vista & Windows XP, DirectX 9.0 or later		

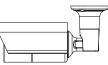
 $^{\star}$  The specifications are subject to change without notice.  $^{\star\star}$  Dimensional tolerance:  $\pm$  5mm



	Model 3	Model 4			
Network					
LAN Port		/ES			
LAN Speed		ed-T Ethernet			
Supported Protocols		P/IP, ICMP, SMTP, FTP, HTTP, RTP, RTSP,			
		, DNS,UDP,IGMP, QoS, SNMP			
ONVIF Compatible	YES (F	Profile S)			
Numbers of Online Users		10			
	(1) Multiple user access levels with pa	assword			
Security	(2) IP address filtering				
	(3) Digest authentication				
	(1) Internet Explorer on Windows oper	rating system			
Remote Access	(2) 24CH Video Viewer on Windows & MAC operating system				
	(3) EagleEyes on iOS & Android mobi	ile devices			
Video					
Video Compression	H.264 (Main Profile) / MJPEG				
Resolution	1920 x 1080 / 1280 x 72	20 / 720 x 480 / 352 x 240			
Frame Rate	;	30			
Multiple Video Streaming	4 (H.264	4, MJPEG)			
General					
Image Sensor	1/2.9" CMOS	image sensor			
Min Illumination	0.1 Lux / F1.4(Wide)~F2.8	8(Tele), 0 Lux (IR LED ON)			
Electronic Shutter	1/10,000 ~ 1/7	.5 (Slow shutter)			
S/N Ratio		8dB (AGC off)			
Lens		n / F1.4 ~ F2.8			
		4° (Vertical) / 122° (Diagonal)			
Viewing Angle		° (Vertical) / 36° (Diagonal)			
IR LED	36 Units	4 Units			
IR Effective Range	Up to 30 meters	Up to 40 meters			
IR Shift		ES			
Smart Light Control		ES			
White Balance		TW			
AGC		uto			
IRIS Mode		ES			
WDR		VDR			
POE (Power-over-Ethernet)		E 802.3af)			
External Alarm I/O		ut / 1 output)			
RAM					
Micro SD Card Slot		to 64GB)			
IP Rating		266			
Operating Temperature		~ 50°C			
Operating Humidity		elative humidity			
Power Source (±10%)		2V / 1A			
Current consumption (±10%)	667mA	260mA (IR LED OFF); 580mA (IR LED ON)			
Power Consumption (±10%)	9.5W (PoE) ; 9.5W (PoN) ; 8W (DC Adapter)	8.7W (PoE) ; 8.7W (PoN) ; 6.96W (DC Adapter)			
Net Weight (kg)	1	1,0			
Audio					
Line in		(Mono)			
Line out	YES	(Mono)			
Others					
Mobile Surveillance	iOS & Android	I mobile devices			
Event Notification	FTP / Er	nail / SMS			
Digital Pan / Tilt / Zoom	Y	ΈS			
Motion Detection	Y	ΈS			
RTC (real-time clock)	Y	ΈS			
× /	Intel core i3 or higher, or equivalent AMD				
	• 2GB RAM				
Minimum Web Browsing Requirements	AGP graphics card, Direct Draw, 32MB R/				
	<ul> <li>Windows 10, Windows 8, Windows 7, Windows 7</li> </ul>	ndows Vista & Windows XP, DirectX 9.0 or later			
	Windows 10, Windows 8, Windows 7, Windows Vista & Windows XP, DirectX 9.0 or later				

 $^{\ast}$  The specifications are subject to change without notice.  $^{\ast\ast}$  Dimensional tolerance: ± 5mm





	Model 5	Model 6
Network		
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, SNMP	
ONVIF Compatible	YES (Profile S)	
Number of Online Users	10	
Security	<ul><li>(1) Multiple user access levels with password</li><li>(2) IP address filtering</li></ul>	
	(3) Digest authentication (1) Internet Explorer on Windows operating system	
Remote Access	<ul><li>(2) 24CH CMS Lite on Windows operating system</li><li>(3) EagleEyes on iOS &amp; Android mobile devices</li></ul>	
Video		
Network Compression	H.264 (Main Profile) / MJPEG	
Video Resolution	1920 x 1080 / 1280 x 720 / 720 x 480 / 352 x 240	
Frame Rate	30fps	
Multiple Video Streaming	4 (H.264, MJPEG)	
General		
Image Sensor	1/2.9" CMOS i	mage sensor
Min Illumination	0.1 Lux / F1.5;0 Lux (IR LED ON) 0.1 Lux / F1.4(Wide)~F2.8(Tele), 0 Lux (IR LED ON)	
Shutter Speed	1/10,000 ~ 1/7.5 (Slow shutter)	
S/N Ratio	More than 48dB (AGC off)	
Lens	F3.8mm / F1.5	f2.8 ~ 12mm / F1.4 ~ F2.8
Viewing Angle	Wide: 73.2° (Horizontal) / 42.8° (Vertical) / 83.2° (Diagonal)	Wide: 103° (Horizontal) / 54° (Vertical) / 122° (Diagor Tele: 31° (Horizontal) / 17° (Vertical) / 36° (Diagona
IR LED	36 Units	2 Units
IR Effective Range	Up to 20 meters	Up to 20 meters (Default)/ Up to 35 meters (IE Enhan
IR Shift	YES	
Smart Light Control	YES	
White Balance	ATW	
AGC	Auto	
IRIS Mode	AES	
Sharpness	Yes	
WDR		
POE (Power-over-Ethernet)	YES (IEEE 802.3af)	
Privacy Mask	YES	
External Alarm I/O RAM	YES (1 input / 1 output) 20MB	
Micro SD Card Slot		
IP Rating	NO	YES (up to 64GB)
Operating Temperature		
Operating Humidity	-25℃ ~ 50℃ 90% or less relative humidity	
Power Source (±10%)	12V / 1A	
Current consumption (±10%)	287mA (IR LED OFF); 632mA (LR LED ON )	301.4mA (IR LED OFF); 484mA (LR LED ON )
Power Consumption (±10%)	9.47W (PoE) ; 9.47W (PoN) ; 7.58W (DC Adapter)	7.26 (PoE) ; 7.26W (PoN) ; 5.81W (DC Adapter)
Net Weight (kg)	0.7	
Audio		
Line in	YES (I	Mono)
Line out	YES (	
Others	\ \_	
Mobile Surveillance	iOS & Android mobile devices	
Event Notification	FTP / Email / SMS	
Digital Pan / Tilt / Zoom	YES	
Motion Detection	YES	
RTC (real-time clock)	YES	
Minimum Web Browsing Requirements	<ul> <li>Intel core i3 or higher, or equivalent AMD</li> <li>2GB RAM</li> <li>AGP graphics card, Direct Draw, 32MB RAM</li> <li>Windows 10, Windows 8, Windows 7, Windows Vista &amp; Windows XP, DirectX 9.0 or later</li> </ul>	
	Internet Explorer 7.x or later (Windows Edge not supported)	



	Model 7	
Network		
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, UPn1 DNS,UDP,IGMP, QoS, SNMP	
ONVIF Compatible	YES (Profile S)	
Number of Online Users	10	
Security	<ul> <li>(1) Multiple user access levels with password</li> <li>(2) IP address filtering</li> <li>(3) Digest authentication</li> </ul>	
Remote Access	<ul> <li>(1) Internet Explorer on Windows operating system</li> <li>(2) 24CH CMS Lite on Windows operating system</li> <li>(3) EagleEyes on iOS &amp; Android mobile devices</li> </ul>	
Video		
Network Compression	H.264 (Main Profile) / MJPEG	
Video Resolution	1920 x 1080 / 1280 x 720 / 720 x 480 / 352 x 240	
Frame Rate	30/25fps	
Multiple Video Streaming	4 (H.264, MJPEG)	
General		
Image Sensor	1/2.7" CMOS image sensor	
Min Illumination	0.1 Lux / F1.5;0 Lux (IR LED ON)	
Shutter Speed	1/2 to 1/10000 sec	
S/N Ratio	More than 48dB (AGC off)	
Lens	F3.8mm / F1.5	
Viewing Angle	Wide: 77° (Horizontal) / 45° (Vertical) / 88° (Diagonal)	
IR LED	12 Units	
IR Effective Distance**	Up to 10 meters	
IR Shift	YES	
White Balance	ATW	
AGC	Auto	
IRIS Mode	AES	
Sharpness	Yes	
WDR	DWDR	
POE (Power-over-Ethernet)	YES (IEEE 802.3af)	
External Alarm I/O	YES (1 input / 1 output)	
RAM	20MB	
Weather-proof	IP66	
Operating Temperature	-25℃ ~ 50℃	
Operating Humidity	90% or less relative humidity	
Power Source (±10%)	12V / 1A	
	235mA (IR LED OFF); 360mA (LR LED ON )	
Current consumption (±10%) Power Consumption (±10%)	5.4W (PoE & PoN) ; 4.32W (DC Adapter)	
Net Weight (kg)	0.25	
	0.20	
Others		
Mobile Surveillance	iOS & Android mobile devices	
Motion Detection	YES	
Event Notification	FTP / Email / SMS	
3-Axis	YES	
RTC (real-time clock)	YES	
Digital Pan / Tilt / Zoom	YES	
Minimum Web Browsing Requirements	<ul> <li>Intel core i3 or higher, or equivalent AMD</li> <li>2GB RAM</li> <li>AGP graphics card, Direct Draw, 32MB RAM</li> <li>Windows 10, Windows 8, Windows 7, Windows Vista &amp; Windows XP, DirectX 9.0 or later</li> <li>Internet Explorer 7.x or later (Windows Edge not supported)</li> </ul>	

# 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.

#### **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

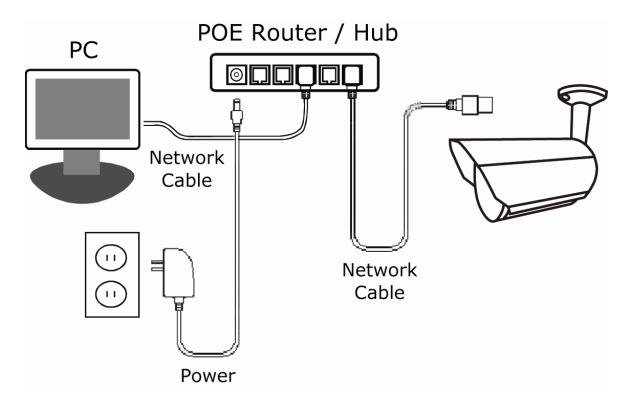
Resolution	Quality	Frame Rate	(Dynamic) kbps	(Static) kbps
SXGA	Best	FULL	3253	3216
	High		2375	2160
	Normal		1571	1266
	Basic		1465	873
VGA	Best		2010	1261
	High		1042	1034
	Normal		685	572
	Basic		457	350
QVGA	Best		646	366
	High		482	350
	Normal		302	286
	Basic		168	161
SXGA	Best	1/4	1163	1076
	High		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

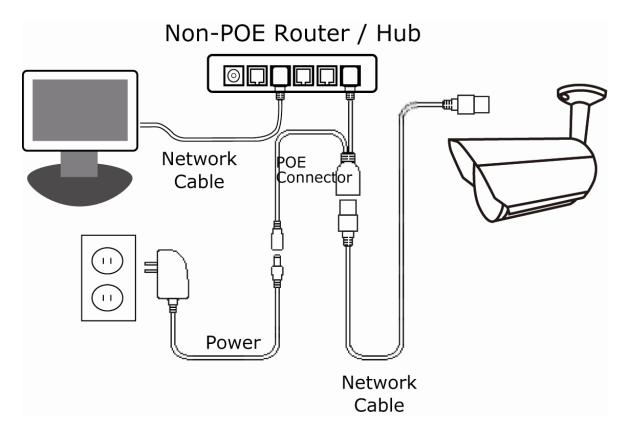
# APPENDIX 3 POE CONNECTION

This device supports PoE (Power-over-Ethernet), developed by the IEEE802.3af or IEEE802.3at 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 a mobile messaging company first, such as Clickatell or EVERY8D.

Below shows an example of how to get an API ID from Clickatell.

- **Note:** The SMS messaging may not be totally free. Please check the charge policy of the messaging service you use.
- **Note:** The instructions below are for reference only and may vary when Clickatell's official website is updated.

Please follow the steps below for application.

Step1: Go to http://www.clickatell.com/login.php. Sign up an account first.



Step2: Select "Developers Central", select the location where you want to use this service, and fill in your information to create an account.

Which product would you like	to sign up for?				
Send bulk SMS via the internet. No programming needed. s	Developers Central Reliable, scalable, ustomisable ustomisable ustomisable vigtem via APIs.		elopers Cen Which product is How much w	right for me? ill it cost?	
Where would you like to send	<sup>me</sup> Check v	which one i	is suitable fo	or you.	
Anywhere in the Worl	ld	Special Offers	One Country only	/	Why special?
International excl US Free signup	es per o the	South Africa Free signup	UK Free signup	Ireland Free signup	India Free signup
What is your first name? *					
test					$\bigcirc$
What is your last name? *					
test					
Which username would you lil	ke to use? *	<b>F</b> 111 i.e.			
test		Fill in			
What is your mobile number?	*	your ii	<b>iform</b> ation		
886 22586666	ada Avithaut first (1), an	mobile pumber, pe open	hraskata ar daobaol		
[Country code][area code or network co Example:[1][4155551212](for USA) or [	[27][123457894](for Sc	uth Africa)			
What is your email address? *			Privacy Policy		
test@tech.com					
Are you human? "Please enter the	This	box, in order and separate	u by a Space.		
Create your ac					
Create my Account	By clicking	this button, you agre Terms and Conditio			

- Step3: When the account is created, the system will automatically send an Email to your specified Email address with the user name, password, and client ID used to log into the service.
- Step4: Click the link within the email to log in, and you will be prompted to validate your mobile phone number. Select "SEND ACTIVATION CODE". The system will send an activation code to that number for verification.

Check if you receive a text message from Clickatell, and enter the activation code.

Verify yo	ur Mobile Number
	ile number in order to make your first credit purchase and send no SMS messages.
	88622586666
Your activation code will be sent to	SEND ACTIVATION CODE NOW
If this is not your number, please retype your mabile num	ber in the box above and click the "SEND ACTIVATION CODE NOV
If this is not your number, please retype your methics num Enter your activation code once you have received it on your mobile phone:	ber in the box above applicated the "SEND ACTIVATION CODE NOV En activation code here VERIFY NOW

Step4: In your account, find "Connection Status" and create a connection (API ID).

	Note: Information on this page Account Status		Message Delivery Status MT
iew Daily Volumes	Credit Balance: Payments Pending: Credit Balance Alert: Auto Billing: SMS Bundle: SenderD	0 Disabled Disabled Disabled OK	Message Derivery status in For pariod 15 April 2013 between 00:00 and 23:59 (GMT+2) Messages delivered: 0 Messages failed: 0 Totat: 0
с	onnection Status		<u>Click here</u> to view a detailed report. Message Delivery Status MO
Click here to c	reate a connection (API ID)		For period 15 April 2013 between 00:00 and 23:59 (GMT+2) MO received: 0
			Click here to view a detailed report.

#### Step5: Select "HTTP/S".

Connection Setup	
Choose the connection that you would like to add to your account.	
Click "HTTP/S" Clickatel API. It is used as an HTTP/Internet Post.	Clickatell HTTP/API icon
SMTP IEmail to SMS] Another firm favourite, the SMTP API allows messages that are sent via e-mail to be converted to SMS. Popular with customers who already have an e-mail messaging system in place.	SMTP

Give a meaning name for this connection, and click "Submit and Get API ID".

		dified later.
Description:	IP_SMS	
	Required field	for this connection
	e Leading Zero (Dial Prefix) 🤨 IP Address Restriction (IP Lock Down) 🥝	
-	SMS Status Notification (MT Callback) 🥝	

Step5: An API ID will be generated as follows.

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

HTTP API		
	reated successfully. Your connection	is live ready for you to send SMS
API ID:	3461662	
Description:	IP_SMS	

# APPENDIX 5 Q&A

Q1:	I can connect to t	his camera in my house	or office where	it's installed with	n wireless netwo	ork.
	But when I leave PC (connected to	my house or office, I can o Internet). Why?	i't connect to it f	rom my mobile	phone (with 3G	network), or other
A1:	You didn't configu	ure this camera to Interne	et, but only in LA	۸N.		
	network configura	to download and follow t ations, or it's recommend it's usually hard for a per	led for you to ch	eck with your lo	ocal installer or r	eseller for this
Q2:	My live images a	re not fluent. Why?				
A2:		uld be affected by the loc idth, complexity of live vie	-	oad bandwidth, r	outer efficiency,	, client network
		To have the best image to XVGA" based on the mod				
Q3:	The live video ke	eps flickering. Why?				
A3:	For iPhone users	ng the power line freque , access the camera, and ge. Then, go to "Advance	d select "🐼" o	on the top right o	corner to enter II	PCAM
	For access from	Internet Explorer, log into	o the camera, ar	nd select "Config	g." → "Camera"	→ "Video".
Q4:	I am sure the gm	ail information is right, bu	ut I still can't rec	eive the email,	why?	
A4:	Please change a	few settings in your Gma	ail account.			
	Step1: Log in and	d click your email address	s on the upper r	ight corner. Clic	k "My account."	
	Google				<b>∀ Q</b> Si	impson III O 🍏
	Gmail +	U - C Moro	<b>T</b>		and the second se	erck Simpson eksimpson@gmail.com
	COMPOS	Primary	🔝 Social			oglei Profile – Privaty Mylaccount
	Inbox (47) Starred	📙 🖗 📮 Derek	faðr 10/16		Change	ay account
	Important Sent Mail	🗋 🖗 📮 Derek	f⊒ár 10/16 3	Click	Add account	Sign out
	Drafts (10)	🖂 🌾 🕒 Derek	何億10/16-2			(일 - 21 Oct

	G M 🚳 🔀 🚥	
Click	Welcome, Yang Conchita	
Control, protec	t and secure your account	, all in one place
Account gives you quick access to settings and to	ols that let you safeguard your data, protect your privacy an	d decide how your information can make Google services
¥	work better for you	
Sign-in & security	Personal info & privacy >	🕸 Account preferences 🔹 🗲
Control your password and account-access settings.	Manage your visibility settings and the data we use to personalise your experience.	Set language, accessibility, and other settings that help you use Google.
Signing in to Google	Your personal info	Language & Input Tools
Device activity & notifications	Activity controls	Accessibility
Connected apps & sites	Ads actlings	Your Google Drive storage
	Account overview	Delete your account or services
Security Check-up	Control your content	, <u> </u>
Frotect your account in just a few minutes by reviewing your security settings and schrity.	Privacy Check-up Take this curick theek up to review important privacy settings, and adjust them to your preference.	

Manage your passwords from Smart Lock.	Chrome and Android that are saved with Google
S andaudio.com	© cht.com.tw
evernote.com	f facebook.com
(+7 more)	
MANAGE PASSWORDS	
	Turn it On
Allow less secure apps: ON	
could leave your account vulne	vices use less secure sign-in technology, which rable. You can turn off access for these apps use to use them despite the risks.

## 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

### **APPENDIX 7 PREREQUISITES FOR NETWORK SHARE**

"Push Video" is an active notification system, different from traditional FTP & Email notification methods. It's more active and stable, but also easier to be affected by your network bandwidth.

## A7.1 Check PC IP Address

**Note:** The instructions below are taking Windows 7 and 8 for an example.

Step1: Go to "Network and Sharing Center", and select "Change adapter settings".



Step2: Right-click on "Local Area Connection", and select "Properties".



#### Note: If your local area connection is not enabled, please also enable it.

Step3: In the "Networking" tab, select "Internet Protocol Version 4 (TCP/IPv4)", and select "Properties".

Step4: In the "General" tab, note down the IP address in "Use the following IP address".

Local Area Connection 3 Properties	Internet Protocol Version 4 (TCP/IPv4) Properties	
Networking     Sharing       Connect using:	General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	
Configure This connection uses the following items:	Obtain an IP address automatically     O Use the following IP address:	
<ul> <li>☑ <sup>™</sup> Client for Microsoft Networks</li> <li>☑ <sup>®</sup> QoS Packet Scheduler</li> </ul>	IP address: 192 . 168 . 1 . 238	Note down the address
Picke and Printer Sharing for Microsoft Networks     A Internet Protocol Version 6 (TCP/IPv6)     A Internet Protocol Version 4 (TCP/IPv4)     Internet Protocol Version 4 (TCP/IPv4)	Subnet mask:         255 . 255 . 255 . 0           Default gateway:	shown here
Link-Layer Topology Discovery Mapper I/O Driver     Link-Layer Topology Discovery Responder	Obtain DNS server address automatically	
Install Uninstall Properties Properties	Wese the following DNS server addresses:     Preferred DNS server:     Alternate DNS server:     .     .	
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Advanced	
OK Cancel	OK Cancel	

### A7.2 Create "Administrator" Account

It's recommended to create a new administrator account on the PC for "Network Share" to use, or user could use the existing administrator account.

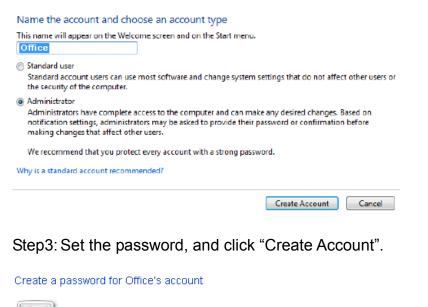
Note: The instructions below are taking Windows 7 and 8 for an example.

Step1: Go to "User Accounts" → "Manage Accounts", and select "Create a new account".

Choose the account you would like to change

	EVB Administrator Password protecte	ed		Administrator Administrator Password protected	
	allen Administrator Password protecte	ed		Guest Guest account is off	
Create a new acc		a new accoun			
What is a user ac		a new accoun	I		
Additional thing	s you can do				
😵 Set up Paren	tal Controls				
Go to the main U	Jser Accounts page				

Step2: Set a user name, and choose "Administrator" for this account. Then, click "Create Account".





A7.3 Share Folder

Note: The instructions below are taking Windows 7 and 8 for an example.

Step1: Right-click the folder you want to use to save snapshots for "Network Share", and choose "Properties".

Step2: In "Share Properties", select the tab of "Sharing", and choose "Share...".

📙 Share Properties 📉 🔀
General Sharing Security Previous Versions Customize
Network File and Folder Sharing
Share Not Shared
Network Path: Not Shared
Share
Advanced Sharing
Set custom permissions, create multiple shares, and set other advanced sharing options.
Revealed Sharing
Password Protection
People must have a user account and password for this computer to access shared folders.
To change this setting, use the <u>Network and Sharing Center</u> .
Close Cancel Apply

Step3: Choose the account you want to share with, and click "Share" to save.

Choose people to share with	
ype a name and then click Add, or click the arrow	to find someone.
	Add
Administrator	
illen	Level
Office	
EVB	
Everyone	-
Create a new user	