



1-PORT H.264 VIDEO SERVER



USER MANUAL

DN-16100

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.

Trademark Acknowledgements

iPhone® is the registered trademark of Apple Inc.

BlackBerry® and related trademarks, names and logos are the property of Research In Motion Limited and are registered and/or used in the U.S. and countries around the world. Used under license from Research In Motion Limited.

Android™ is a trademark of Google Inc. Use of this trademark is subject to Google Permissions. Microsoft, Windows, Internet Explorer, Mozilla FireFox, Google Chrome, QuickTime, Windows Mobile & Symbian mentioned in this document are the registered trademarks of their respective holders.

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.

Trademark Acknowledgements

Internet Explorer, Microsoft, Windows, Mozilla & QuickTime are registered trademarks of the respective holders.

MPEG4 Licensing

THIS PRODUCT IS LICENSED UNDER THE MPEG4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (ii) DECODING MPEG4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE MPEG4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com).

GPL Licensing



This product contains codes which are developed by Third-Party-Companies and which are subject to the GNU General Public License ("GPL") or the GNU Lesser Public License ("LGPL").

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:

TABLE OF CONTENTS

1. OVERVIEW.....	1
1.1 Product features.....	1
1.2 Package content.....	1
1.3 Dimensions.....	1
1.4 Product Overview.....	1
2. BEFORE USING YOUR DEVICE.....	2
3. ACCESSING THE CAMERA VIA VIDEO VIEWER.....	3
3.1 Installing Video Viewer.....	3
3.2 Accessing the camera.....	3
3.3 Control panel overview.....	4
3.3.1 Simplified version (Default).....	4
3.3.2 Full function version.....	5
3.3.3 Main button overview.....	6
3.4 Frequently-used functions.....	7
3.4.1 Record.....	7
3.4.2 Playback.....	8
3.4.3 Firmware upgrade.....	8
3.4.4 E-Map.....	9
4. CONFIGURATIONS VIA WEB BROWSER.....	14
4.1 Accessing the camera.....	14
4.2 Control panel overview.....	14
4.5 System configuration menu.....	16
4.6 Network.....	17
4.6.1 Network.....	17
4.6.2 QoS.....	17
4.6.3 DDNS.....	17
4.6.4 SNTP.....	18
4.6.5 FTP.....	18
4.6.6 MAIL.....	18
4.6.7 SMS.....	19
4.6.8 Filter.....	20
4.6.9 UPnP / Bonjour.....	21
4.7 Camera.....	22
4.7.1 Color.....	22
4.7.2 Time.....	23
4.7.3 Device.....	23
4.8 General.....	24
4.8.1 General.....	24
4.8.2 Server Log.....	24
4.8.3 Online.....	24
4.8.4 Account.....	25
4.8.5 Trigger.....	26
4.8.6 Video.....	27
4.8.7 Google Maps.....	27
4.8.8 Upgrade.....	28
APPENDIX 1 PRODUCT SPECIFICATIONS.....	29
APPENDIX 2 API ID APPLICATION FOR SMS MESSAGING.....	30

1. OVERVIEW

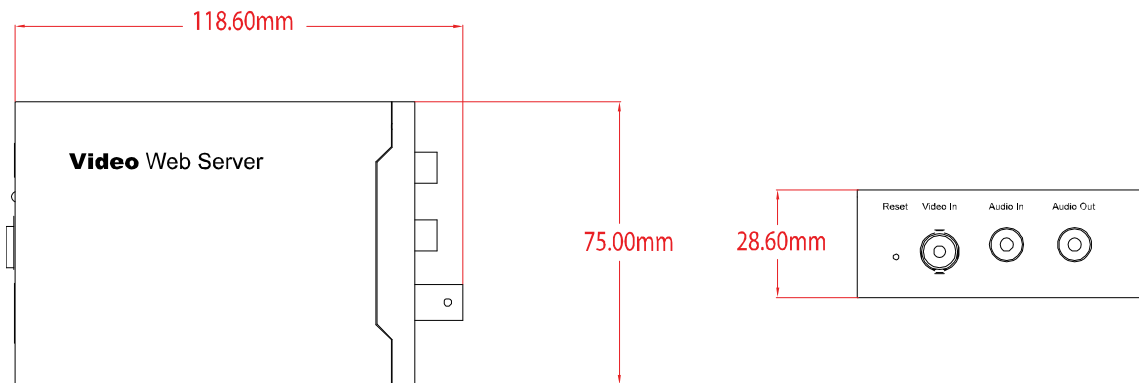
1.1 Product features

- Turn your traditional analog camera into a network camera, and allow users to view live images using a web browser or our CMS software
- Remote configuration and status checking
- Real-time H.264 / MPEG4 / MJPEG compression
- Motion detection and event notification functions
- Free CMS software with E-Map for multiple devices control & surveillance
- ONVIF standard supported to simplify system integration

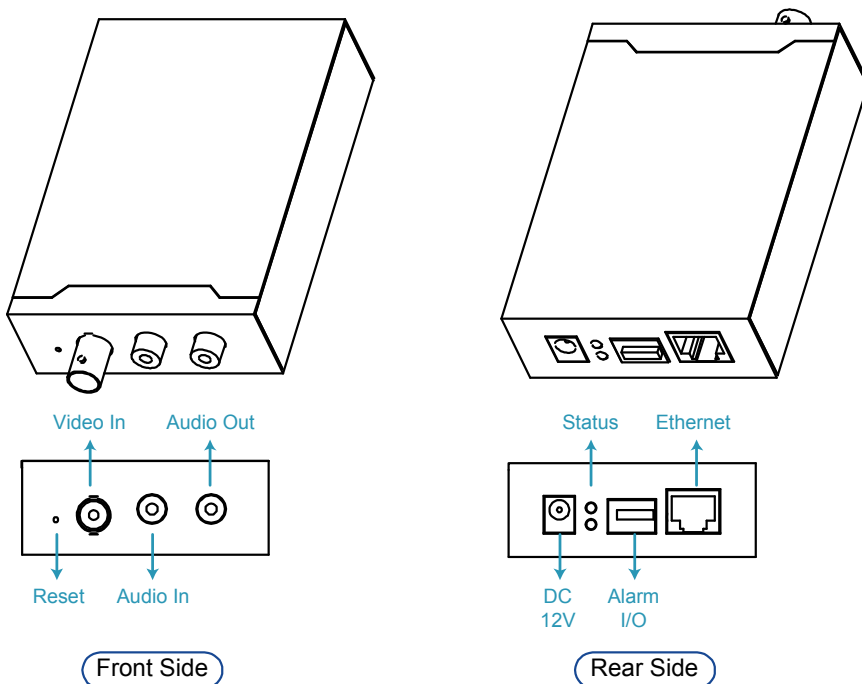
1.2 Package content

- 1CH Video Server
- Adapter
- Installation Guide
- CD-ROM disc (including user manuals & CMS software “Video Viewer”)

1.3 Dimensions



1.4 Product Overview



2. BEFORE USING YOUR DEVICE

This device can be accessed via our supplied CMS software “Video Viewer”, the web browser (such as “Microsoft Internet Explorer” or “Mozilla Firefox”), and smart phones with our self-developed program “EagleEyes” installed depending on different using situations.

Note: For details about accessing devices via smart phones, please refer to <http://www.eagleeyesctv.com>.

Before using the device, make sure:

- 1) You have installed the supplied CMS software, “Video Viewer”, or a web browser.
- 2) You have configured the network settings, and the network connection is fine.

For Video Viewer installation, please refer to “3.1 Installing Video Viewer” at page 3.

For network configurations, please refer to your installation guide.

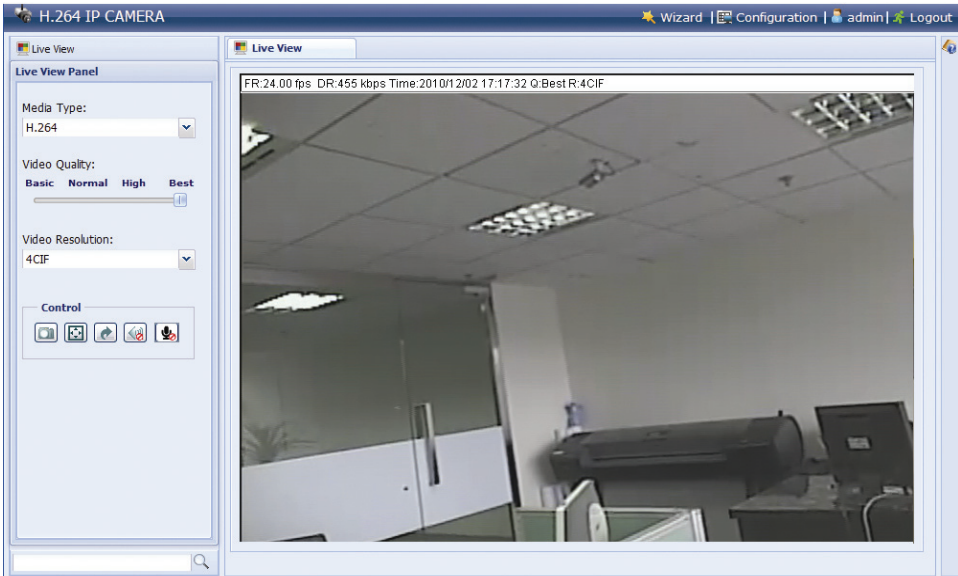
- To check or configure up to 16 surveillance devices simultaneously with the record function, please use “Video Viewer”.

For details about using Video Viewer, please refer to “3. ACCESSING THE CAMERA VIA VIDEO VIEWER” at page 3, and “4. CONFIGURATION” at page 14.



- To check or configure this device only, it's recommended to use the web browser “Microsoft Internet Explorer” or “Mozilla Firefox”.

For details about using the web browser, please refer to “4. CONFIGURATION” at page 14.

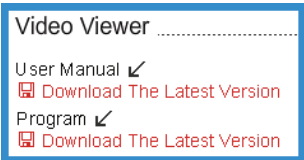



3. ACCESSING THE CAMERA VIA VIDEO VIEWER

3.1 Installing Video Viewer


Step1: Place the supplied CD into your CD-ROM or DVD-ROM drive. The program will be automatically run.


Step2: Click “Program” in the “Video Viewer” section to install Video Viewer, or click “Download The Latest Version” under “Program” to download the latest version of Video Viewer from the Internet (if your PC is connected to Internet).






Step3: Follow the on-screen instructions to finish the installation. When the installation is completed, a shortcut icon “” will be placed on your PC desktop.

3.2 Accessing the camera

Step1: Double-click “” on your PC desktop to open Video Viewer. By defaults, the “Address Book” panel will be displayed on the right side of the control panel.

Step2: In “Address Book”, click “” to key in the IP address, user name, password, and port number of the camera you intend to connect.

OR

Click “” → “” to search the available IP address(es) of other camera(s) under the same domain as your PC’s IP address. The found address(es) will be listed, and can be added into the address book by clicking “”.

Step3: Double-click the IP address you just added into the address book to log in. The live view is displayed in the Video Viewer.





3.3 Control panel overview

Two control panels are available and can be switched depending on your using habit.

3.3.1 Simplified version (Default)

Address Book Record
Miscellaneous Control Snapshot
Log Information

Event Notification & Quick Checklist 



Version
Minimize
Full Function Display Sw
Close Program
180° Counterclockwise
Snapshot
Speaker off / on (Option)
Information

Close Current View
Original Size
Full Screen
Display Mode Switch
Audio Volume (Optional)

3.3.2 Full function version

Event Notification & Quick Checklist

180° Counterclockwise Image Rotation

Snapshot

Information

Speaker Off / On Switch (Optional)

Close All Display Views

Close Current View

Original Size

Full Screen

Display View: 1-Cut

Display View: 4-Cut

Display View: 6-Cut

Display View: 9-Cut

Display View: 13-Cut

Display View: 16-Cut

E-Map

Audio Volume (Optional)

Record

Snapshot

Miscellaneous Control

Log

Close Program

Simplified Display Switch

Minimize

Version

Setting

PTZ control
















Available Disk Capacity

Setting

PTZ control

Available Disk Capacity

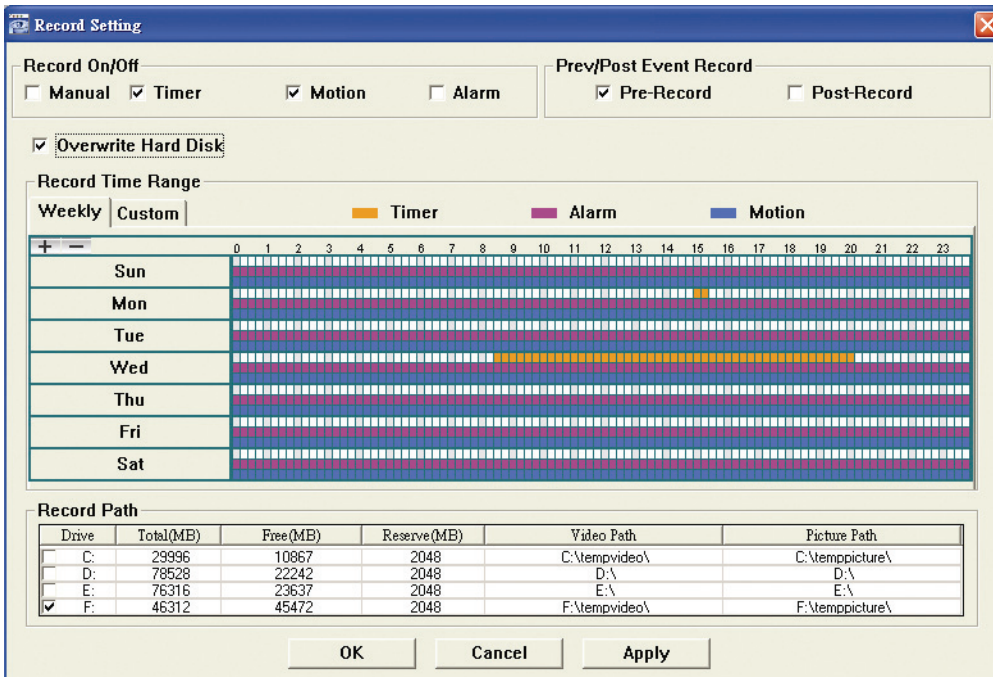
3.3.3 Main button overview

Button		Function	Description		
Simplified	Full Function				
		Address Book	Click to show the predefined IP address(es). You can add, remove or search the IP address to log in the DVR remotely.		
		Miscellaneous Control		Remote Config	Click to go to the detailed system configuration. For details, please refer to “4. CONFIGURATION” at page 14.
				Record Setting	Click to go to the detailed record setting. For details, please refer to “3.4.1 Record” at page 7.
				Custom Setting	Click to choose the language of this program, or set the password when activating this program. The changes will take effect when this program is closed and executed again.
		Log	Click to view all event and recording logs, search the desired log(s) by date, or playback the recording of the selected log.		
		Record / Record Stop	Click to start / stop the manual recording. The record button will be disabled when the reserved disk capacity set in “Record Setting” is larger than the current disk capacity. For details, please refer to “3.4.1 Record” at page 7.		
		Snapshot	Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in “Record Setting”.		
		Information	Click to show the current network connection details.		

3.4 Frequently-used functions

3.4.1 Record



To record remotely, click “” or “” → “” to go to the “Record Setting” page.



In the “Record Setting” page, you can set the following items:



- Record type
- Pre- / post-event record time (0~10 seconds)
- Record time setting
- Record path

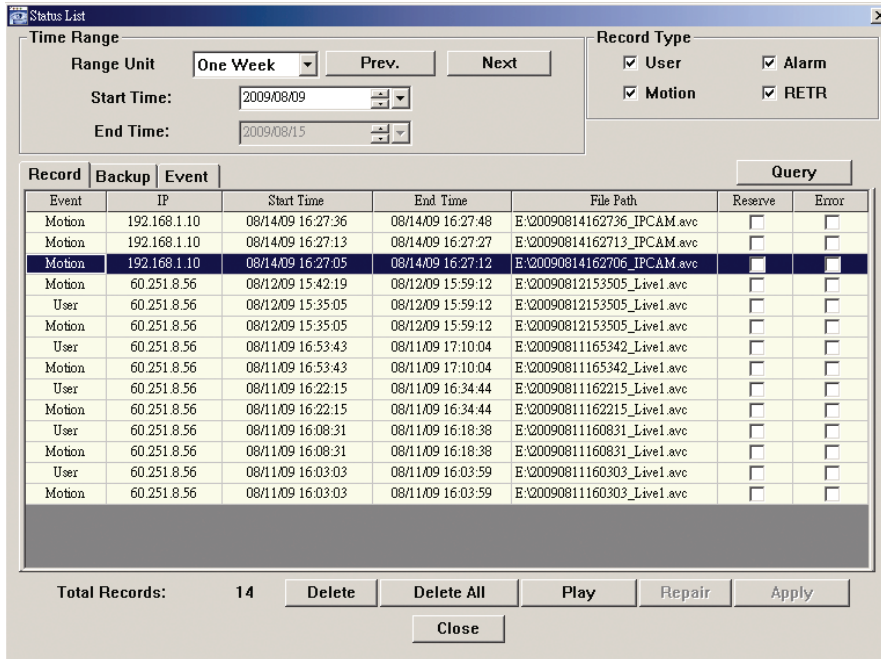
Note: The record function will be disabled when the reserved disk capacity in “Reserved(MB)” is larger than the current disk capacity in “Free(MB)”.

When “Manual” is checked, click “” or “” on the main control panel to start the manual recording immediately, and the recordings will be saved in the location specified in “Record Path”.

When “Motion” and / or “Alarm” are checked, the recording function will be enabled for any motion or alarm event, and the recordings will be saved in the location specified in “Record Path”.

3.4.2 Playback

To play a recording, click “” or “”, and select the “Record” tab. A list of all the recordings will be shown by defaults, and you can also sort out the logs you want to speed up the search time.




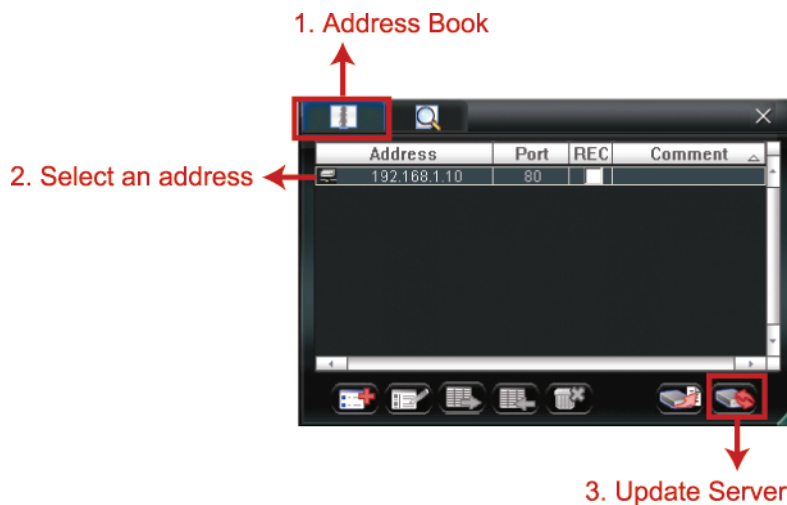
3.4.3 Firmware upgrade

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

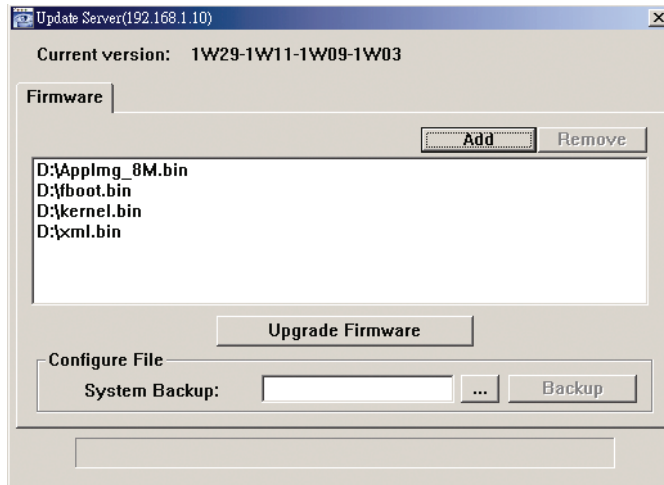
Note: Before using this function, make sure you have the correct upgrade files provided by your installer or distributor.

Step1: Click “”, and select the IP address of your device in the address book.

Step2: Click “” to show the upgrade page, “Update Server”.



Step3: Click “Add” to browse to the upgrade files.



Step4: Click “Upgrade Firmware” to start firmware 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 device will reboot after the upgrade.

Step5: Select the IP address of the device and click  again to check if the firmware is upgraded.



3.4.4 E-Map

Video Viewer is also a Central Management System (CMS) software, which allows network device control & management for up to 16 devices simultaneously.

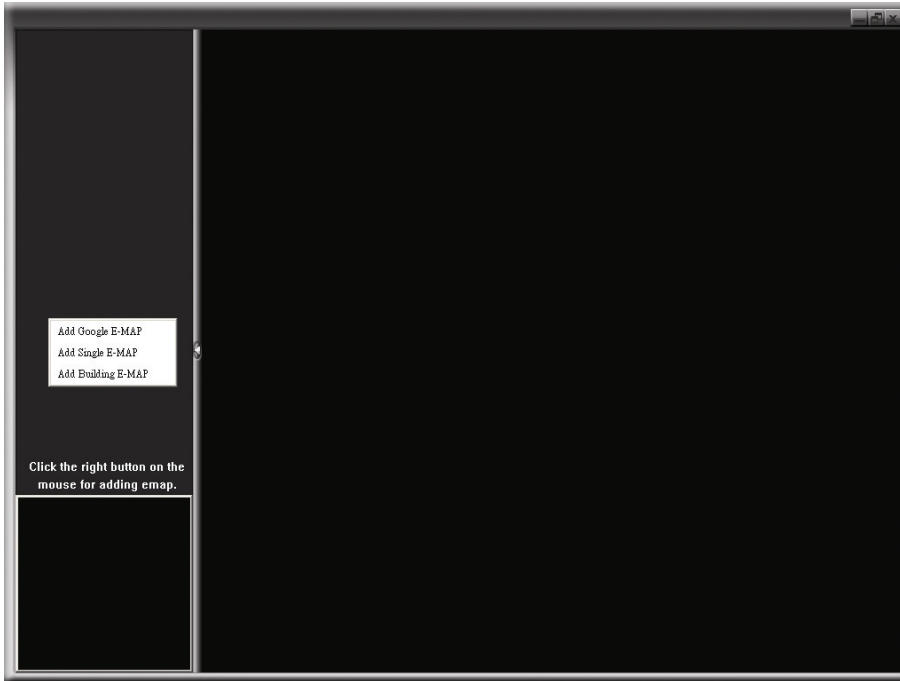
Note: Before using this function, make sure Video Viewer is connected to all the devices (up to 16) you want to monitor.

E-Map is **ONLY** available when the control panel is switch to the full function version.

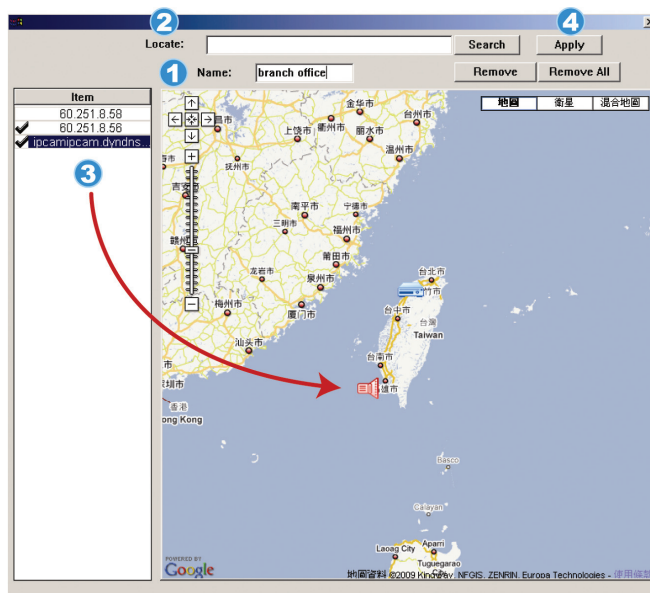
How to add an E-Map group

STEP1: In the simplified version, click “” to switch the control panel to the full function version, and click “” to enter the E-Map page as follows.

Note: To know where the buttons are, please refer to “3.3.1 Simplified version (Default) at page 4, and “3.3.2 Full function version” at page 5.

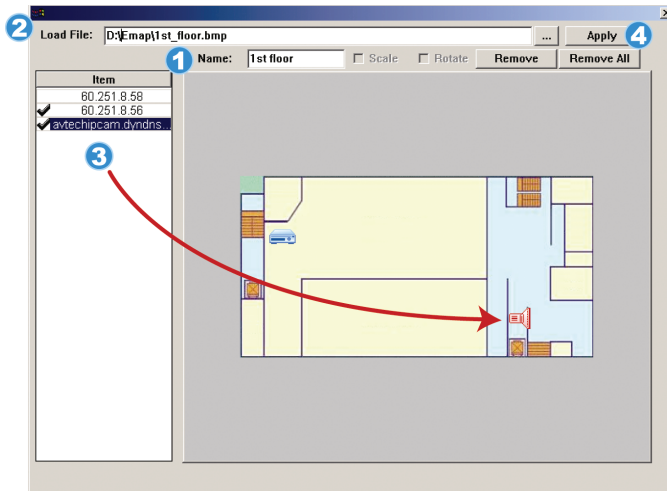


STEP2: Right-click to show the shortcut menu on the top-left panel, and select the E-Map group you want to add. There are three E-Map groups you can add: Google E-MAP, Single E-MAP, and Building E-MAP.



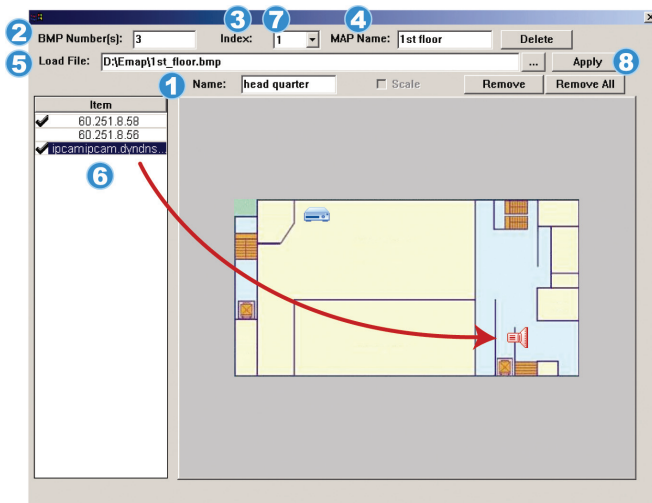
How to add a Google E-Map group:

- 1 Enter the name of this Google E-Map group.
- 2 Enter a specific address or landmark, and click “Search”.
OR
Move to the map and drag to the location you want.
- 3 Click and drag the IP address to where it's located in the current level.
- 4 Click “Apply” to save and finish.



How to add a single E-Map group:

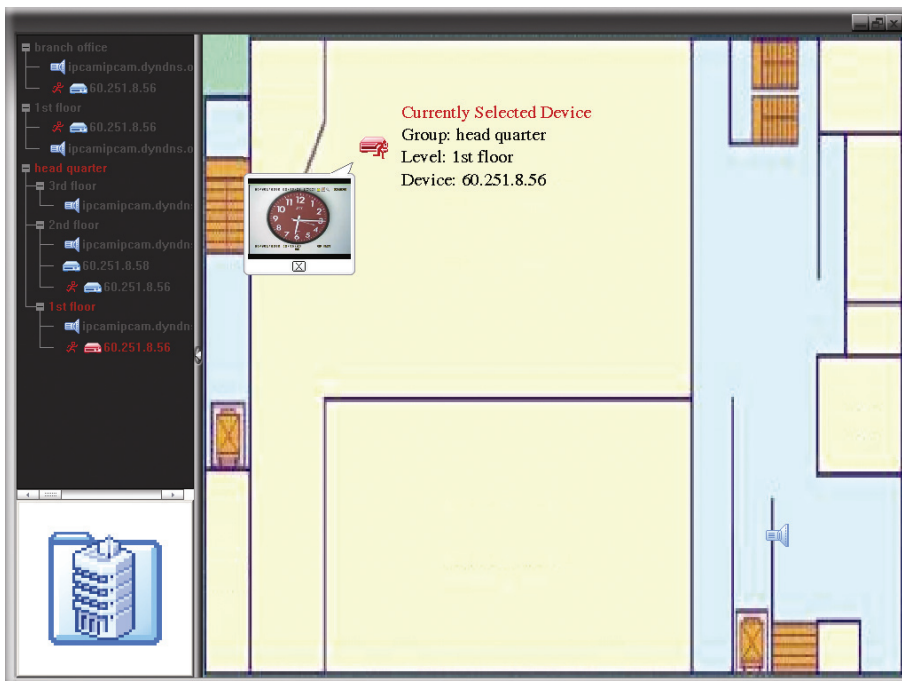
- 1 Enter the name of this single E-Map group.
- 2 Click “...” to browse the map file in BMP or JPEG.
- 3 Click and drag the IP address to where it's located in the current level.
- 4 Click “Apply” to save and finish.






How to add a building E-Map group:

- 1 Enter the name of this building E-Map group.
- 2 Enter the total levels of this building.
- 3 Select the level of the building from the drop-down list.
- 4 Enter the name of the level.
- 5 Click “...” to browse the map file in BMP or JPEG.
- 6 Click and drag the IP address to where it's located in the current level.
- 7 Go back to STEP 3 to select other level of the building, and repeat from STEP 3 to 6 until the setup for all levels are finished.
- 8 Click “Apply” to save and finish.

STEP3: When the E-Map group is created, you will see the tree on the top-left panel, showing all the devices you've added to this group.



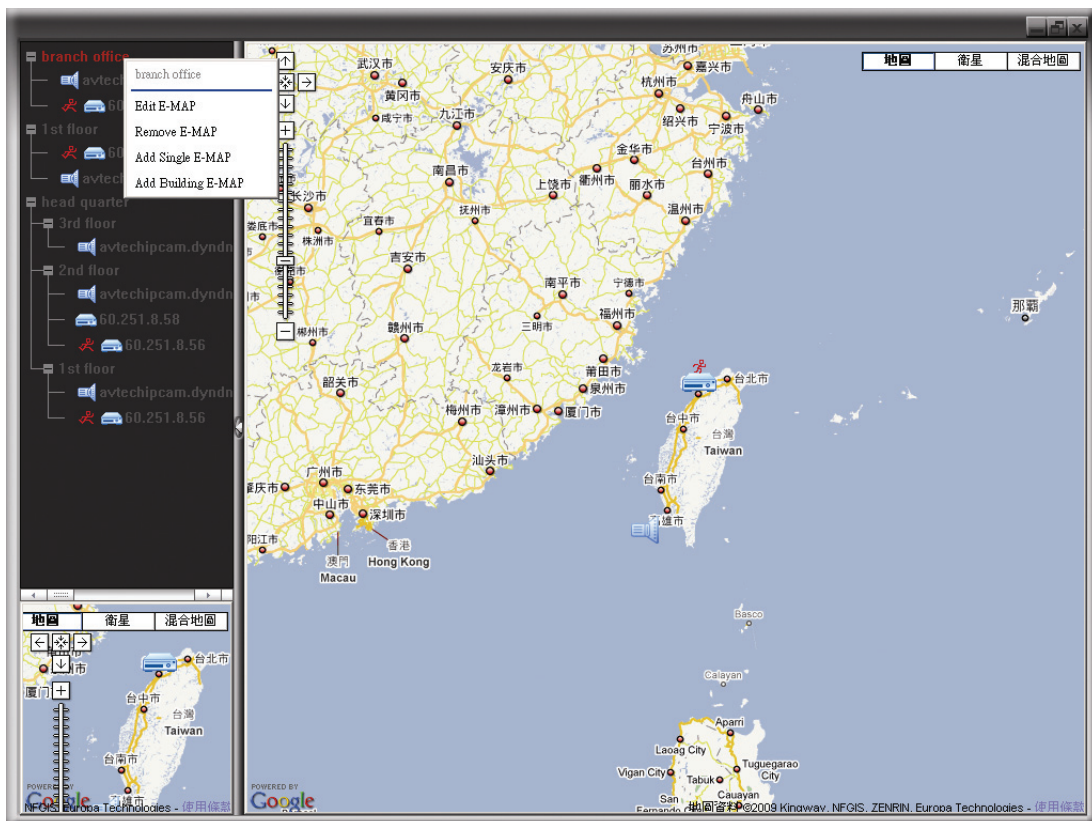
Icon	Description
	The connected device is camera. When it's selected, it will become red.
	The connected device is DVR. When it's selected, it will become red.
	For any motion or alarm event, it will appear on the screen to catch your attention. To know what's happening quickly, double-click the device icon on the E-Map to show the live view.

How to edit / remove an existing E-Map group

➤ For Google E-Map Group

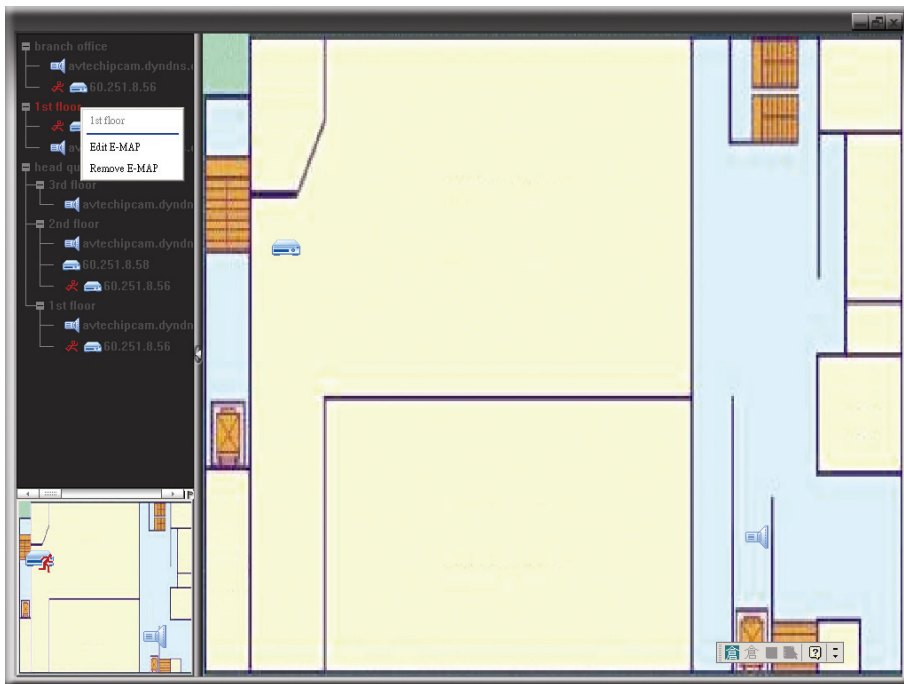
Right-click on the group name to show the shortcut menu list, and select “Edit E-MAP” or “Remove E-MAP” as needed.

You can also add a single E-Map group (Add Single E-MAP) or Building E-Map group (Add Building E-MAP) into the existing Google E-Map group.



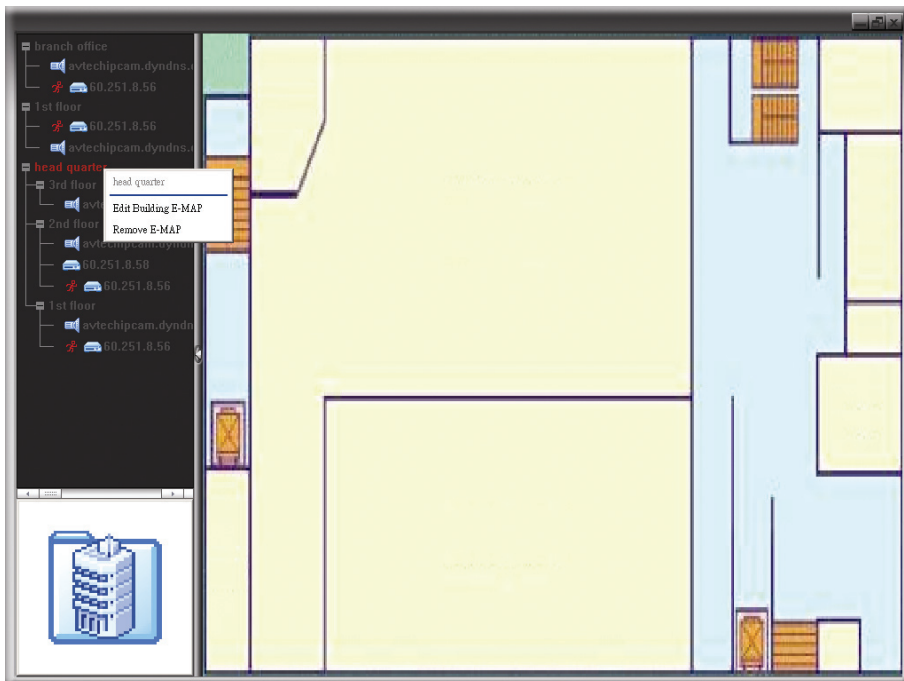
➤ For Single E-Map Group

Right-click on the group name to show the shortcut menu list, and select “Edit E-MAP” or “Remove E-MAP” as needed.



➤ For Building E-Map Group

Right-click on the group name to show the shortcut menu list, and select “Edit Building E-MAP” or “Remove E-MAP” as needed.



4. CONFIGURATIONS VIA WEB BROWSER

Users can also access the camera connected to this device via a web browser, such as Microsoft Internet Explorer, Mozilla Firefox, Google Chrome and Safari.

Note: It's recommended to consult with your installer before changing system configurations.

Note: You need to be the supervisor to enter the system configuration page. If not, please re-log into the camera with the supervisor user level.

However, the web browser is only available for single device access. If users want to access more than two devices through one interface, it's recommended to use our supplied CMS software, Video Viewer. For details, please refer to "3. ACCESSING THE CAMERA VIA VIDEO VIEWER" at page 3.

Before using the device, make sure you have configured the network settings and have the IP address, user name and password used for accessing the camera in hand. If not, please refer to the installation guide.

4.1 Accessing the camera

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

For example, for 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".

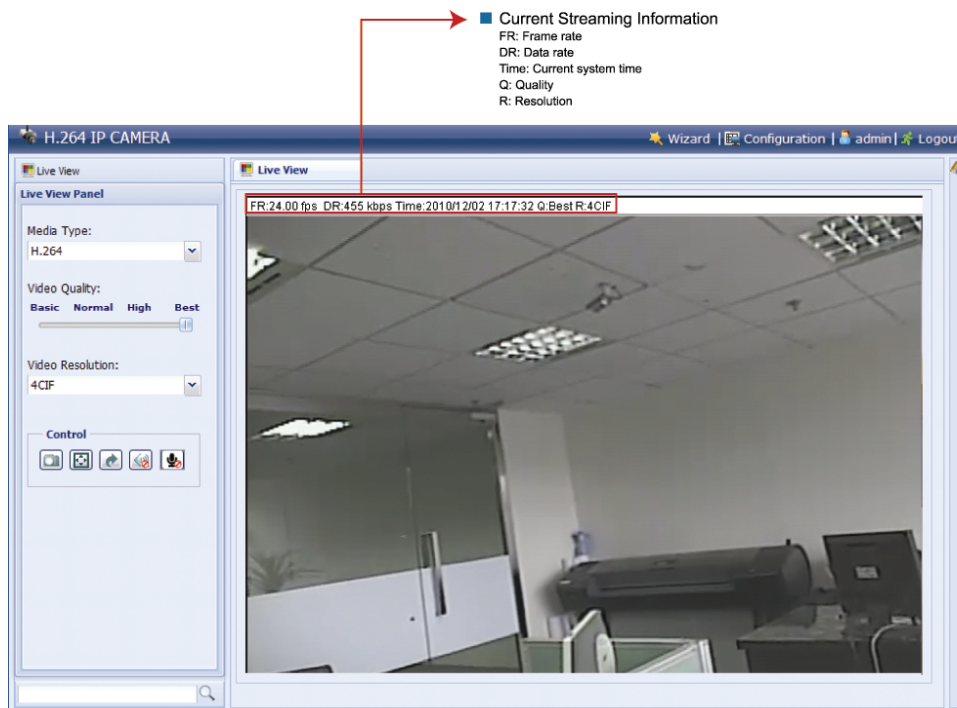
Step3: The wizard is then started.

- 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".

Step4: When the login is successful, the live view is shown.

4.2 Control panel overview

Note: The buttons available depend on the web browser you're using, and the user level used to log in.



Function	Icon	User Level	Description
Configuration Page:			
Live		Supervisor	Switch to the live view page.
Configuration		Supervisor	Switch to the system configuration page For details, please refer to "4.5 System configuration menu" at page 16.
Media Type	--	Supervisor / Power User / Normal User / Guest	Select the web transmission format from the drop-down list: H.264 / MPEG-4 / Motion JPEG / QuickTime. For users using Mozilla Firefox or Google Chrome, only "QuickTime" is selectable. 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.
Video Quality	--	Supervisor / Power User / Normal	Click & drag the slider to select the video quality: BASIC / NORMAL / HIGH / BEST.
Video Resolution	--	Supervisor / Power User / Normal	Select the video resolution from the drop list: 4CIF / CIF.
Snapshot		Supervisor / Power User / Normal User	Click to take a snapshot of the current view, and save to the location specified in "Configuration" → "Camera" → "Camera" → "Snapshot Path".
Flip		Supervisor / Power User / Normal User	Click to rotate the image 180° counterclockwise when necessary.
Full Screen		Supervisor / Power User / Normal User	When "4CIF" is selected, click to display the image in full screen. To exit the full screen mode, press "Esc" on your keyboard.
Double Size		Supervisor / Power User / Normal User	When "CIF" is selected, click to enlarge the CIF size to 4CIF size.
Audio On / Off		Supervisor / Power User / Normal User	Click to switch the audio on / off.
Speaker On / Off		Supervisor	Click to switch the speaker on / off when a speaker is connected to the audio output of this device.

4.5 System configuration menu

Click “Configuration” to enter the configuration page.

The functions are categorized into three menus: Network, Camera and General.

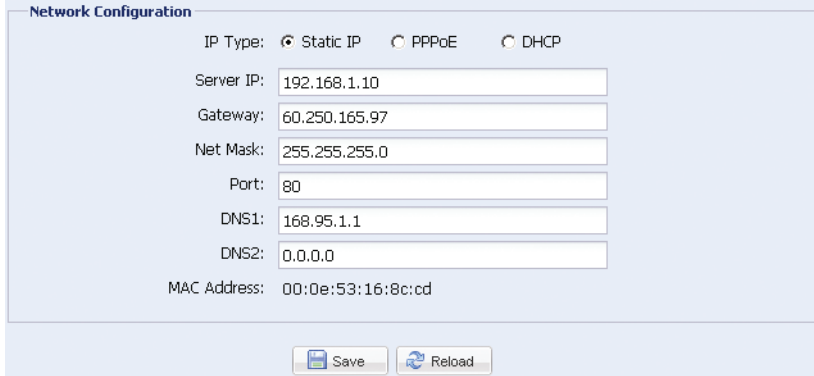
- For details about “Network”, please refer to “4.6 Network” at page 17.
- For details about “Camera”, please refer to “4.7 Camera” at page 22.
- For details about “General”, please refer to “4.8 General” at page 24.

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 “General” → “Trigger”.
	Mail	Enter Email information for event notifications when “Email” is chosen in “General” → “Trigger”.
	SMS	Enter text messaging information for SMS notifications when “SMS” is chosen in “General” → “Trigger”.
	Filter	Choose to permit or block the IP address(es) which can access this camera.
	UpnP	<i>*Suitable for Windows-based operating system.</i> 1. Allow this camera to be detected among devices within the same network area for easy and quick usage. 2. Configure port mapping.
	Bonjour	<i>*Suitable for Apple Mac-based operating system.</i> Allow this camera to be detected among devices within the same network area for easy and quick usage.
Camera	Color	Adjust the color performance.
	Time	Set daylight saving time and the current time.
	Device	Set the camera type to “PTZ” if the connected camera is a PTZ camera.
General	General	1. Select the language of the web browser. 2. Check the MAC address of the camera.
	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.
	Trigger	1. Enable / disable motion detection. 2. Set the motion detection area. 3. Select the event notification method.
	Video	Select video file size and image quality.
	Google Maps	Allow you to know where the network camera is.
	Upgrade	Check the current firmware version and upgrade.

4.6 Network

4.6.1 Network

You can set the network configuration of the device depending on your network type. For details, please refer to your installation guide.



Network Configuration

IP Type: Static IP PPPoE DHCP

Server IP:

Gateway:

Net Mask:

Port:

DNS1:

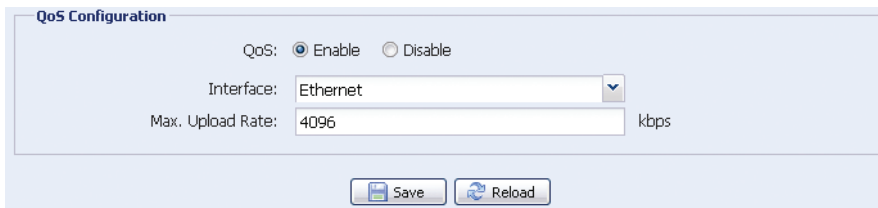
DNS2:

MAC Address: 00:0e:53:16:8c:cd

4.6.2 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.



QoS Configuration

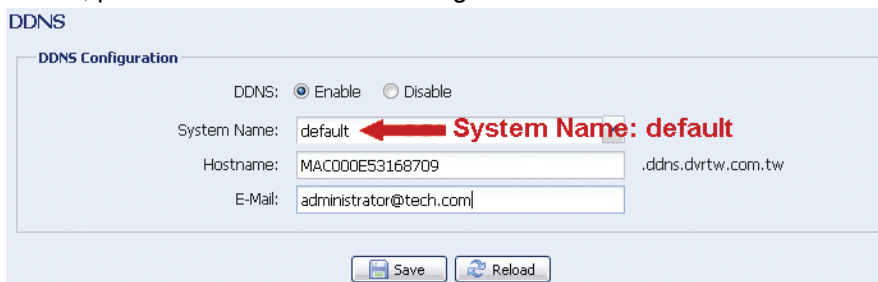
QoS: Enable Disable

Interface:

Max. Upload Rate: kbps

4.6.3 DDNS

Select “On” when the selected network type in “Network” is “PPPOE” or “DHCP”. For details, please refer to the installation guide.



DDNS

DDNS Configuration

DDNS: Enable Disable

System Name: **System Name: default**

Hostname: .ddns.dvrtw.com.tw

E-Mail:

4.6.4 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 device 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.

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 entire mail address to ensure e-mails will not be blocked by SMTP.
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).
Test	When all information is entered, click "Test Mail" to try if the recipe.

4.6.7 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 2 API ID APPLICATION FOR SMS MESSAGING” at page 30.

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”.

The screenshot shows the 'SMS Configuration' form with the following details:

- System: clickatell
- Username: tech
- Password: masked with asterisks
- API ID: 3281378
- Recipient: +886912665475
- Transfer Interval: 15 Minute(s)
- Message: [192.168.1.10] unauthorized access!
- Buttons: Save, Test, Reload
- Checkbox: Include Hostname or IP (checked)

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 SMS	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.

4.6.8 Filter

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

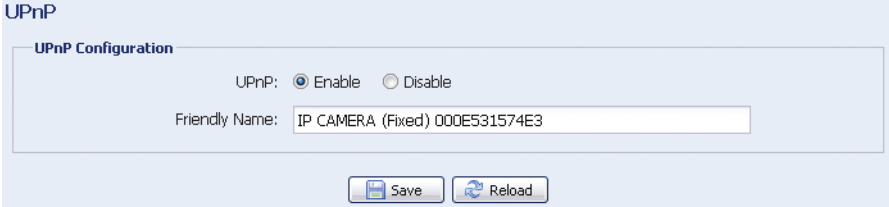
Function	Description
■ Filter Configuration	
Error Count	Set the maximum count for login failure. When the maximum count is reached, the IP address trying to access the device will be locked.
Error Lock Time	Set the lock time in minutes when the maximum count of error login for an IP address is reached.
Echo Request	Select “Non-Block” to allow other users to use the ping command to detect the IP address of your device, 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	<ul style="list-style-type: none"> 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”.

4.6.9 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



The screenshot shows a web interface for UPnP configuration. At the top, it says "UPnP". Below that is a section titled "UPnP Configuration". Inside this section, there are two radio buttons: "UPnP: Enable" (which is selected) and "UPnP: Disable". Below the radio buttons is a text input field labeled "Friendly Name:" containing the text "IP CAMERA (Fixed) 000E531574E3". At the bottom of the configuration area, there are two buttons: "Save" and "Reload".


➤ Bonjour



The screenshot shows a web interface for Bonjour configuration. At the top, it says "Bonjour". Below that is a section titled "Bonjour Configuration". Inside this section, there are two radio buttons: "Bonjour: Enable" (which is selected) and "Bonjour: Disable". Below the radio buttons is a text input field labeled "Device Name:" containing the text "IP CAMERA (Fixed) AVN263-000E53157190". At the bottom of the configuration area, there are two buttons: "Save" and "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.

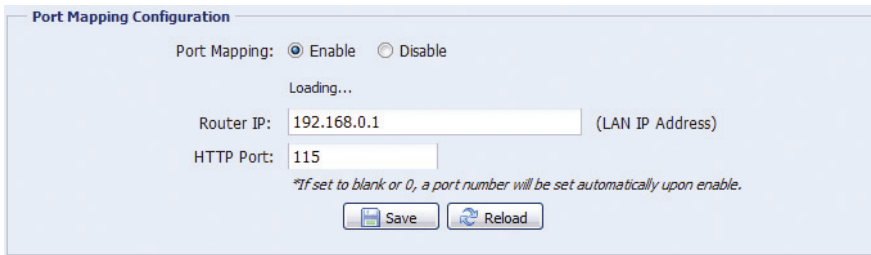
Double-click it to quickly open the web browser for camera access.

Port Mapping (Available only in UPnP)

When your device is connected to Internet via a router and you need to additionally access the router to configure port mapping, this function can eliminate the need to additionally access the router for port forwarding.

Note: Before using this function, make sure the UPnP function of your router is also enabled.

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.



The screenshot shows the "Port Mapping Configuration" window. At the top, "Port Mapping" is set to "Enable" (selected with a radio button) and "Disable" is unselected. Below this, the text "Loading..." is displayed. The "Router IP" field contains "192.168.0.1" and is labeled "(LAN IP Address)". The "HTTP Port" field contains "115". A note below the fields states: "*If set to blank or 0, a port number will be set automatically upon enable." At the bottom, there are two buttons: "Save" and "Reload".


Note: When the configurations are saved successfully, you'll see a message indicating the IP address and port number assigned to your device.

4.7 Camera

4.7.1 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 this page and adjust the image color.

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



The screenshot shows the "Color Configuration" window. On the left, there are four sliders: "Brightness" (value 128), "Contrast" (value 128), "Hue" (value 128), and "Saturation" (value 128). On the right, there is a "Live View" window showing a camera feed of a street scene with buildings and a balcony with plants. At the bottom, there are two buttons: "Back to Default" and "Reload".

4.7.2 Time

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

Time

Time Configuration

Date:

Time: : :

Daylight Saving Time

Daylight Saving Time Configuration

Daylight Saving Time: Enable Disable

Start Time: : (HH:MM)

End Time: : (HH:MM)

Adjust Time: : (HH:MM)

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).

4.7.3 Device

When the connected camera is a PTZ camera, go to this menu to configure the PTZ camera for the PTZ operation to work normally.

Device Configuration

Device:

ID:

Protocol:

Rate:

- a) Select the device to “PTZ”.
- b) Set the ID to the value the same as the one set in the PTZ camera.

Note: For details, please refer to the user manual of the PTZ camera.

- c) Select the protocol to “NORMAL” if the connected camera is AVTECH camera. If not, select “P-D” (Pelco-D) or “P-P” (Pelco-P) based on the camera you connected.
- d) Set the baud rate to the value the same as the one set in the PTZ camera.

Note: For details, please refer to the user manual of the PTZ camera.

4.8 General

4.8.1 General

In “General”, you can select the UI language to English or Chinese, and check the MAC address of your camera.

General Configuration

Language: English

MAC Address: 00:0E:53:15:74:E3

Save Reload

4.8.2 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”.

No.	Event	Time	Result
1	Remote Login	2010/06/09 19:10:40	admin
2	Remote Login	2010/06/09 19:08:24	admin
3	Remote Login	2010/06/09 19:07:09	admin
4	Remote Login	2010/06/09 19:02:50	admin
5	Remote Login	2010/06/09 18:52:43	admin
6	Remote Login	2010/06/09 18:49:10	admin
7	Remote Login	2010/06/09 18:47:32	admin
8	Remote Login	2010/06/09 18:42:53	admin
9	Remote Login	2010/06/09 18:42:08	guest
10	Remote Login	2010/06/09 18:41:35	guest
11	Remote Login	2010/06/09 18:38:10	admin
12	Remote Login	2010/06/09 18:35:53	admin
13	Remote Login	2010/06/09 18:29:27	admin
14	Remote Login	2010/06/09 18:11:39	admin
15	Remote Login	2010/06/09 18:06:14	admin
16	Remote Login	2010/06/09 17:55:06	admin
17	Remote Login	2010/06/09 17:47:51	admin
18	Remote Login	2010/06/09 17:44:53	guest
19	Remote Login	2010/06/09 17:42:45	admin
20	Remote Login	2010/06/09 17:38:22	admin

Prev. Page Next Page Reload Clean All

4.8.3 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”.

Online Configuration

Anonymous Viewer Login: Enable Disable

Login with CAPTCHA Image: Yes No

Max Online User: 10

Username	IP Address	User Level	Media Type
admin	211.75.84.96	SUPERVISOR	H.264

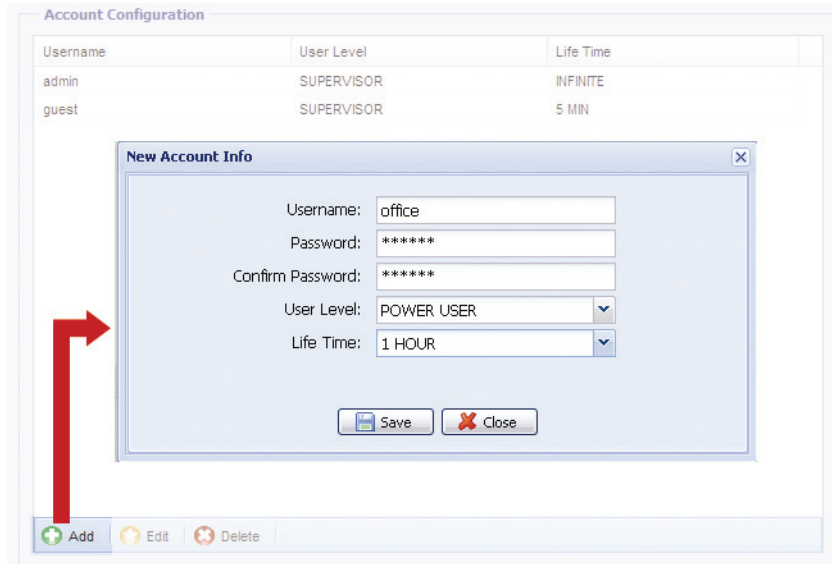
Reload

4.8.4 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.

4.8.5 Trigger

You can set the alarm or motion detection, and select the notification function.

Note: Motion detection is not supported when the streaming format is Motion JPEG.

◆ Trigger Setting

In this section, you can select to enable or disable motion & alarm detection.

Item	Description
Alarm	Select to enable or disable the alarm function. When it's enabled, go to "Alarm Input" or Alarm Output" for alarm setup based on the alarm device you connected.
Motion	<p>Select to enable or disable the motion detection function.</p> <ul style="list-style-type: none"> • Motion Detection Area Setting <p>When "Enable" is selected, click "Detection" to enter the motion detection area setting page as follows:</p> <p>Level of Sensitivity: Set the detection sensitivity: High / Normal / Low.</p> <p>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.</p>
Trigger Duration	Set the duration time for trigger recording (5 / 10 / 20 / 40 seconds).

◆ Notification Setting

In this section, you can select to enable e-mail and/or FTP notification when an alarm or a motion happened.

Item	Description
Method	<ul style="list-style-type: none"> • Email When this option is checked, the device will upload the captured video clip to the assigned e-mail address(s) once motion or alarm recording happened. • FTP When this option is checked, the device will upload the captured video clip to the specified FTP site once motion or alarm recording happened. • SMS When this option is checked, the device will send a text message to the specified mobile phone number once a motion detection event occurs. For details, please refer to “4.6.7 SMS” at page 19.
Trigger Duration	Set the duration when a motion detection event occurs (5 / 10 / 20 / 40 seconds).
Record Time	Set the record time of the notification video clip (1 ~ 5 seconds).

4.8.6 Video

Set the image resolution, quality and frame rate.

The screenshot shows a web interface for video configuration. It has a title 'Video' and a sub-section 'Video Configuration'. Inside this section, there are four rows of dropdown menus:

- H.264: Resolution set to 'CIF', Quality set to 'BEST'.
- MPEG4: Resolution set to '4CIF', Quality set to 'NORMAL'.
- JPEG: Resolution set to '4CIF', Quality set to 'HIGH'.
- Frame Rate: Set to 'FULL'.

 At the bottom of the configuration area, there are two buttons: 'Save' and 'Reload'.

Item	Description
JPEG / MPEG / H264	Select the image resolution and quality. Image Resolution: CIF / 4CIF Image Quality: BEST / HIGH / NORMAL / LOW
Frame Rate	The frame rate allowed to each viewer can be adjusted to adapt to the bandwidth on the network. Set the desired image frequency to the maximum (FULL) or to a specified frame rate (1/2; 1/3; 1/4; 1/5; 1/10; 1/15; 1/20; 1/25; 1/30). The actual frame rate depends on the actual network connection, and may be lower than the specified one.

4.8.7 Google Maps

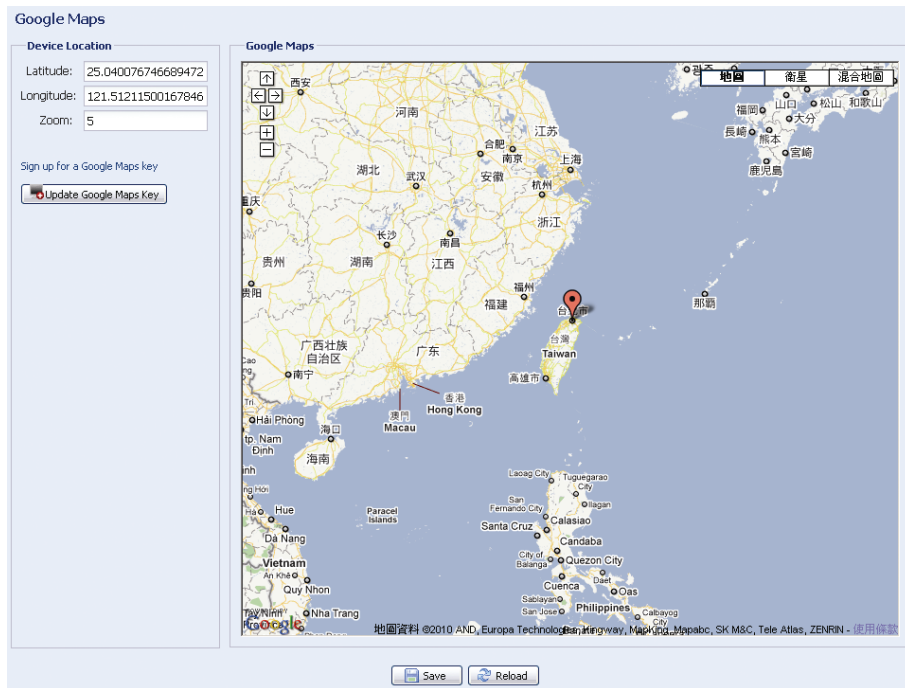
This function is used to let you know where the network camera is.

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.

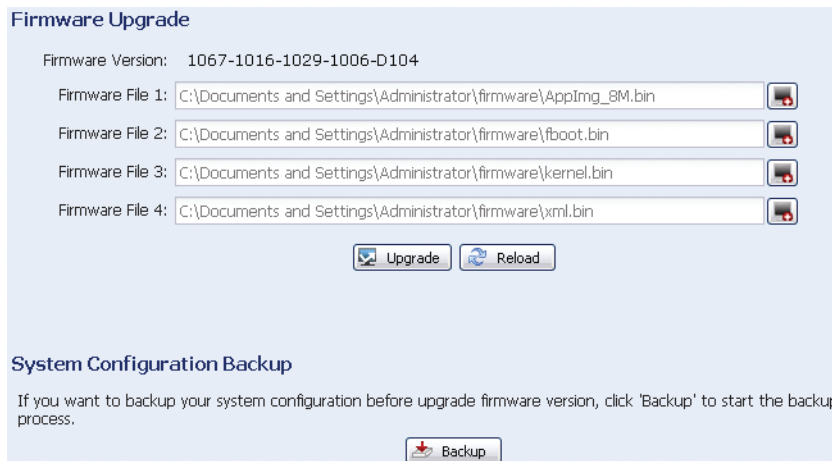


4.8.8 Upgrade

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

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

Step1: Click “” 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: To make a system backup for restore all camera configurations later, click “Backup”.

Step3: Click “Upgrade” to start system upgrading.

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.

APPENDIX 1 PRODUCT SPECIFICATIONS

	DN-16100
Video Input	1 channel for analog & digital products, 1.0 Vp-p 75 composite, BNC
Audio	1 channel audio input / 1 channel audio output
Alarm I/O	1 input / 1 output
Watch dog	Yes
RS-485 Port	Yes
Network Interface	Ethernet (10/100 Base-T)
Image Compression	H.264 / MPEG4 / JPEG
Video Adjustment	Brightness, Contrast, Saturation and Hue
Supported Protocols	DDNS, PPPoE, DHCP, NTP, SNTP, TCP/IP, ICMP, SMTP, FTP, HTTP, RTP, RTSP, RTCP, IPv4, Bonjour, UPnP, DNS, UDP
Resolution	704x480, 352x240 (NTSC) / 704x576, 352x288 (PAL)
Frame Rate	NTSC: 30, PAL: 25
Motion Trigger Recording	Yes
Motion Detection	3 adjustable factors
Trigger & Action	Triggered by GPIO Input or Motion detection, Action: E-mail video/images or video/images upload to FTP site
ONVIF	Yes
Mobile Phone support	Yes
Mac PC support	Yes
Multiple Video streaming	Yes (H.264 / MPEG4 / MJPEG)
Number of Online Users	10
Security	Multiple user access levels with password, IP address filtering
Speed Dome Control	Yes (PELCO-D / PELCO-P)
De-blocking	Yes
De-interlace	Yes
Security	Password protection
Power Source	DC12 V/1A
Current consumption (± 10mm)	About 0.6A
Operating Temperature	0℃~40℃
Dimensions (mm)**	118.6 x 75 x 28.6

** The specifications are subject to change without notice.

** Dimensional tolerance: ± 5mm

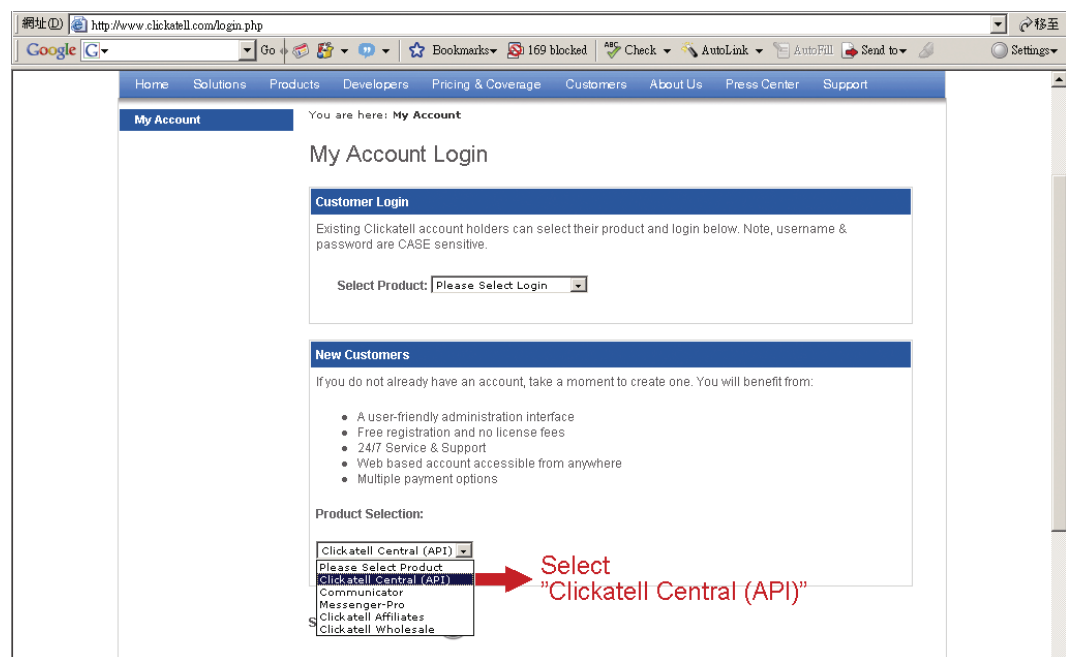
APPENDIX 2 API ID APPLICATION FOR SMS MESSAGING

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.

The screenshot shows the account creation process in three steps:

- Step 1 of 4 - Select Product:** Two options are available: **Clickatell Central** (selected) and **Communicator**.
- Step 2 of 4 - Account Setup:** The user selects an account type: **International Coverage Account** (selected) or **Local Coverage Account**. Under International, the user selects **INTERNATIONAL**. Under Local Coverage, options for USA, UK, SA, IN, and IE are shown. The user provides a **Create Username** of 'tech', a **Create Password** of '*****', and a **Security Code** of 'EA9 PG'.
- Step 3 of 4 - Personal Information:** The user provides ***First Name** 'tom', ***Last Name** 'lin', and ***Email Address** 'hien@avtech.com.tw'. The ***Country** is 'Taiwan' and the ***Mobile Number** is '886 912666475'. The user selects ***Company** 'secutech', **Company Size** '101 to 500', **Job Description** 'Developer', **Industry** 'IT/Software/Products and Services', and **Subindustry** 'Mobile Applications Provider'. There are checkboxes for email format (Text/html) and a newsletter subscription, and a checked box for accepting terms and conditions. A **CONTINUE** button is at the bottom.

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

The screenshot shows the **Customer Login** page. It includes a dropdown for **Select Product** set to 'Clickatell Central (API)'. The login fields are: **Username** 'tech', **ClientID** 'CTH043', and **Password** '*****'. A **Login** button is present. A red arrow points to the password field with the text **Enter the password you set to log in.** A **Lost password?** link is also visible.

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.

My Connections:

Add Connection Show All Connection Types

Name	Type	API ID	Dialing Code
IP_SMS	SMTP API	3218637	886 Taiwan
IP_MSG	HTTP	3220810	886 Taiwan

1 to 2 of 2