ADVANCED NETWORK SURVEILLANCE OUTDOOR CAMERA

Manual

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

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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.

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This is a Safety Class 1 Product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the instrument is likely to make the instrument dangerous. Intentional interruption is prohibited.

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Do not expose this product to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the product.

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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. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

Version

Firmware: 1043-1015-1017-1005-B9
Video Viewer Software: 0156

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1. OVERVIEW

1.1 Product Features

- Free CMS software with E-Map for multiple devices control & surveillance
- Powerful mobile surveillance
  - Free mobile surveillance program, EagleEyes
  - Suitable for many popular mobile platforms such as iPhone, WinCE & J2ME
  - Supports iPhone Push Notification to send event notifications to your iPhone within 5 seconds
- Hot Point support to quickly move the camera to the specified point remotely
- Low-latency video streaming with H.264 compression format
- Advanced Auto Tracking accuracy to follow moving objects
- Smart Zoom to automatically zoom in the moving object & auto-focus zoom lens
- Rigid & high-speed pan / tilt mechanism with two-million rotation test passed for longer operating lifetime
- Up to 16 preset points & four sequence groups, and Auto Scan
- Motion detection and alarm notification functions

1.2 Package Content

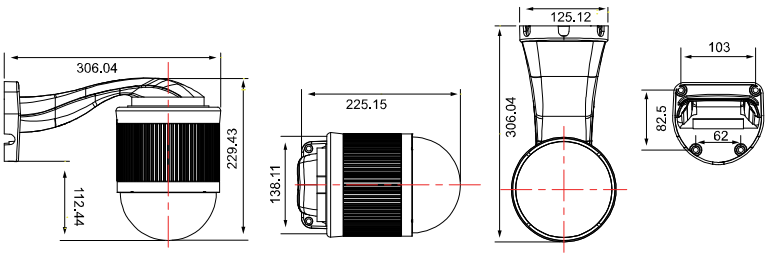
◎ In the camera package:

- ☐ PTZ network camera
- ☐ CD-ROM disc (including user manuals & CMS software “Video Viewer”)
- ☐ Quick Start
- ☐ RJ45 cable extender adapter

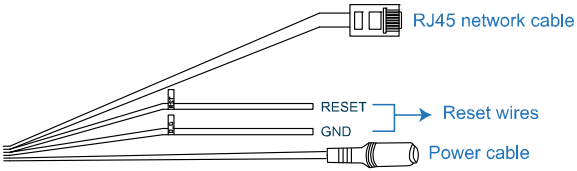
◎ In the bracket package (Optional) :

- ☐ Wall mounting screws x 4
- ☐ Cap x 1
- ☐ M6 Nylok screws (short) x 2
- ☐ M4 screw x 1
- ☐ Spirit level x 1
- ☐ Wall plugs x 4
- ☐ Bracket screw x 1
- ☐ M6 Nylok screws (long) x 3
- ☐ Mounting base screw x 2
- ☐ Hex screw nuts x 3

1.3 Dimensions



1.4 Cable Overview



CABLE	DESCRIPTION
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.
Reset wires	Remove the insulating coating of these two wires, and twist them together to reset default. This will reset all parameters, including the IP address to factory default settings. **Note:** Disconnect power before twisting these two wires together, and connect to power again for reset default.
Power cable	Connect to DC12V power supply.

2. BEFORE USING YOUR NETWORK CAMERA

Before using the network camera, make sure:

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

If not, please refer to your the installation guide.

This network camera can be accessed via our supplied CMS software “Video Viewer”, or the web browser “Microsoft Internet Explorer” or “Mozilla Firefox” depending on different using situations.

- 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 4, and “4. SYSTEM CONFIGURATION” at page 12.

- To check or configure this network camera 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 “5. ACCESSING THE CAMERA VIA YOUR WEB BROWSER” at page 26.

3. ACCESSING THE CAMERA VIA VIDEO VIEWER

3.1 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: Click " " to select the IP address of the camera you intend to connect, and double-click it.

Step3: The live view is displayed in the Video Viewer.

3.2 Control panel overview

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

3.2.1 Simplified Version (Default)

3.2.2 Full Function Version

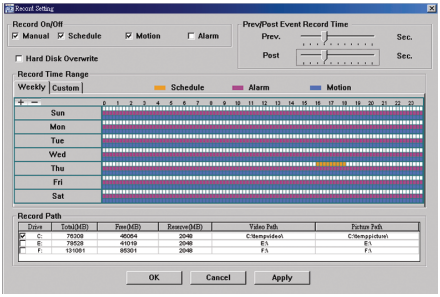
3.2.3 Main Button Overview

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. SYSTEM CONFIGURATION” at page 12.
				Record Setting	Click to go to the detailed record setting. For details, please refer to “3.3.1 Record” at page 6.
				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 “3.3.1 Record” at page 6.		
		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.		
		PTZ Control	Click to enter the PTZ control panel. For details, please refer to “3.3.5 PTZ Control’ at page 11.		

3.3 Frequently-used functions

3.3.1 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

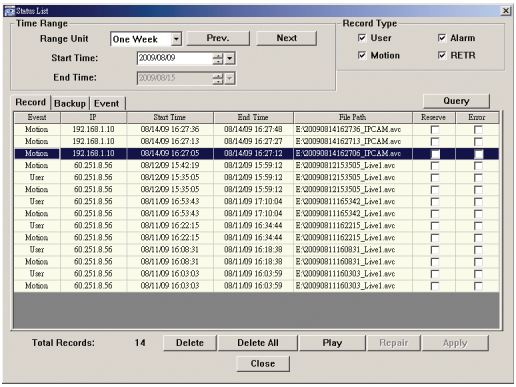
Note: The record function will be disabled when the reserved disk capacity in "Reserved(MB)" is larger than the current disk capacity in "Free(MB)".

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".

3.3.2 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.



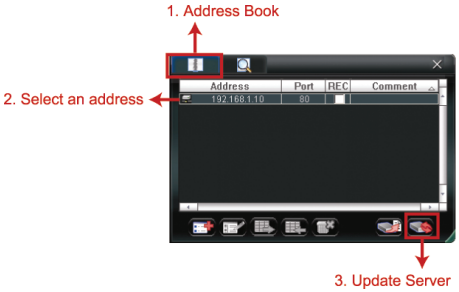
3.3.3 Firmware Upgrade

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

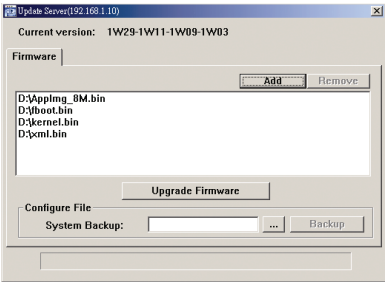
Note: Before using this function, make sure you have the correct upgrade files provided by your installer or distributor.

Step1: Click "", and select the IP address of your network camera in the address book.

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



Step3: Click "Add" to browse to the upgrade files.



Step3: Back up all your configurations if necessary.
Firmware upgrade might reset all configurations to default. To keep all your configurations, select "System Backup" to back up all your configurations and a "system.bin" file will be generated.

Note: To restore all your configurations after system upgrade, upgrade "system.bin".

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 camera will reboot after the upgrade.

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

3.3.4 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.

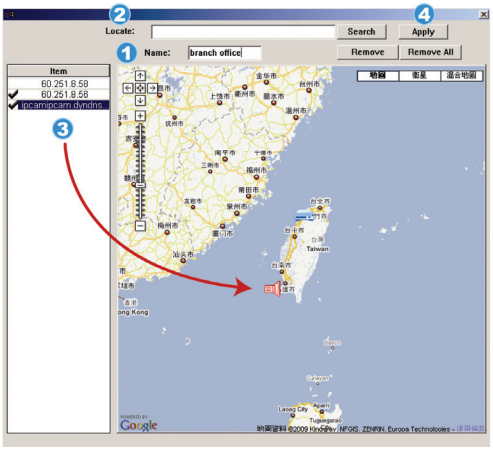
E-Map is **ONLY** available when the control panel is switch to the full function version.

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.

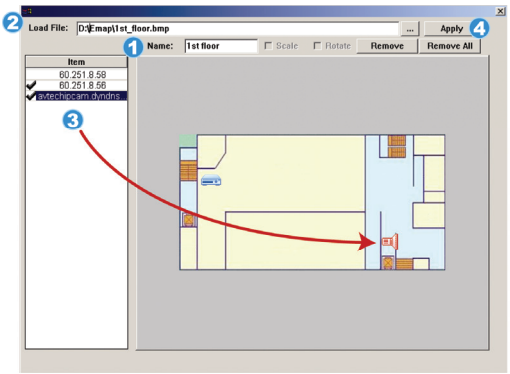
Note: To know where the buttons are, please refer to "3.2.1 Simplified Version (Default)" at page 4, and "3.2.2 Full Function Version" at page 5.

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.



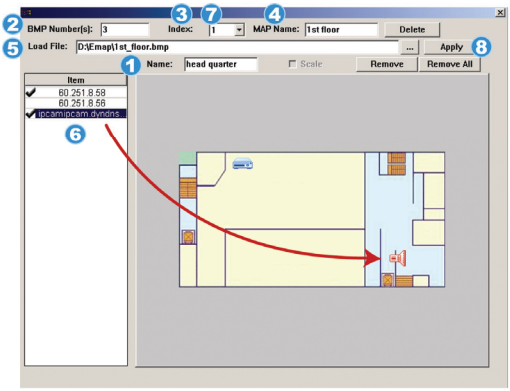
How to add a Google E-Map group:

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.

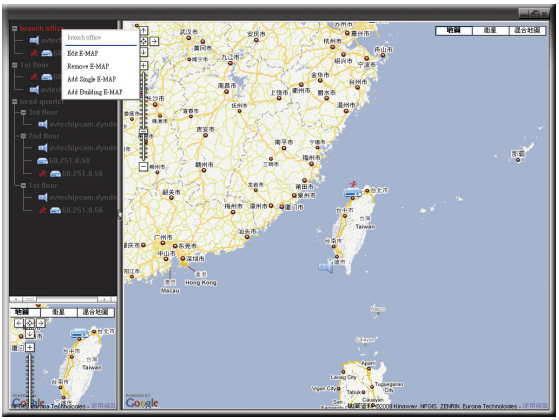
Icon	Description
	The connected device is camera. When it's selected, it will become red.
	The connected device is DVR. When it's selected, it will become red.
	For any motion or alarm event, it will appear on the screen to catch your attention. To know what's happening quickly, double-click the device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

How to Edit / Remove an Existing E-Map Group

- For Google E-Map Group

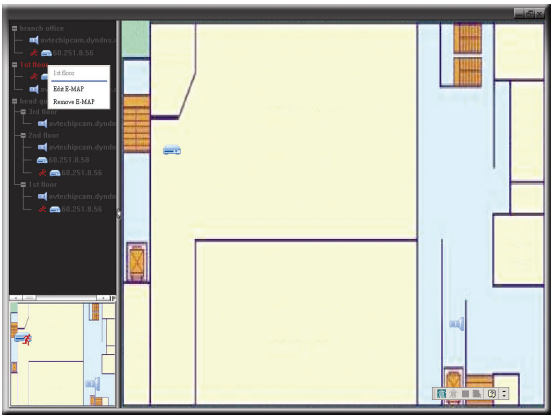
  Right-click on the group name to show the shortcut menu list, and select "Edit E-MAP" or "Remove E-MAP" as needed.

  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.



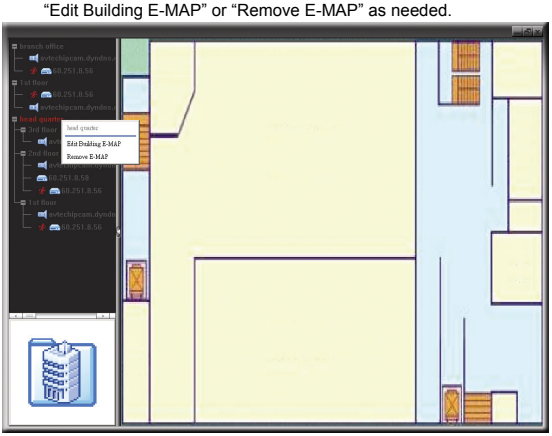
- For Single E-Map Group

  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.



3.3.5 PTZ Control

Click or to display the PTZ control panel as follows.

Simplified Version

Full Function Version

Function	Button		Description
	Simplified	Full Function	
Preset Point	--	--	Click the numbering of the preset point you want to move the PTZ camera to the selected preset point. To set preset points, please refer to “4.4.1 Preset” at page 22.
Auto Pan			Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when “AUTO” is clicked. For details, please refer to “4.4.2 Cruise” at page 23.
Auto Tracking			Click to activate the auto tracking function. For setting details, please refer to “4.4.3 Tracking” at page 24.
Zoom In / Out			Click to zoom in / out the image.
Focus Near / Far			Click to adjust the focus of the image.
Max Zoom In / Out			Click to zoom in the image to the largest / zoom out the image to its original size.
Arrow Keys	--	--	Click to move the camera lens up / up-left / down / up-right / left / down-right / right / down-left.
Turbo Step			Speed up the menu selection from 1 to 10. Note: When this function is enabled, the supported buttons will turn to blue. Ex: If the value of the turbo step is set to 5, one mouse-click will function as 5 mouse-clicks when you click the arrow keys. To use this function, you need to set it in the camera configuration page first. For details, please refer to “4.4.1 System” at page 21.
Auto Move			Click to enable the auto move function. It allows the camera to move to the direction where your cursor stays.

4. SYSTEM CONFIGURATION

Before using the network camera, make sure you have installed the supplied software, "Video Viewer", and configure network settings. If not, please refer to your installer or the installation guide.

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

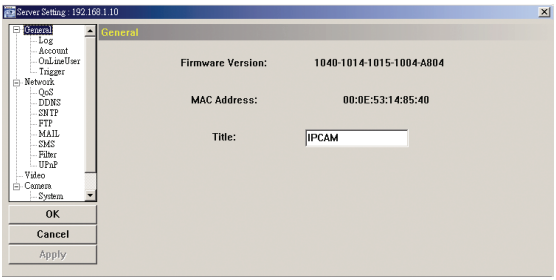
Note: You need to be the supervisor to enter the system configuration page. If not, please re-log into the camera with the supervisor user level.

Click " " and select " " to enter the system configuration page. All the system configurations are listed as a tree structure on the left panel as follows.

Main Menu	Sub-menu	What you can do for this function?
General		1. Check the firmware version & MAC address of the camera. 2. Change the camera title.
	Log	Check the system event logs.
	Account	1. Create a new user account with different access privilege. 2. Modify or delete an existing user account.
	OnLineUser	Check the current online user(s).
	Trigger	1. Enable / disable the motion detection. 2. Set the motion detection area. 3. Select the event notification method. 4. Enable iPhone Push Notification support.
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	Allow this camera to be detected among devices within the same network area for easy and quick usage.
Video		Set the image resolution, quality and frame rate.
Camera		Adjust the camera parameters if necessary.
	System	Adjust the camera parameters if necessary.
	Preset	Set a preset point that can be used to quickly move the camera to the specific location.
	Cruise	Set the left and right boundaries, and the pan speed when "Auto Pan" is selected, or select a few preset points to form a sequence group when "Sequence" is selected.
	Tracking	Set the surveillance area for auto tracking, and the tracking timeout.
	Color	Adjust the color performance.
	Time	Set daylight saving time and the current time.

4.1 General

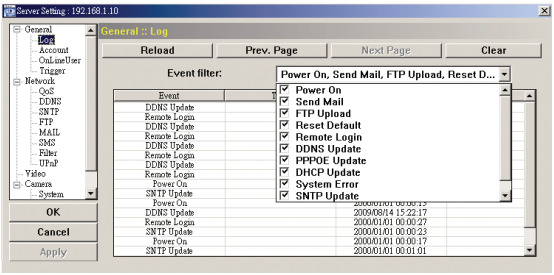
In “General”, you can check the general information for your network camera, such as the firmware version and MAC address, and also modify the identification name of your camera (up to 15 alphanumeric characters).



4.1.1 Log

To quickly search the system log you want by event type, click the drop-down list to select the system log type you want to check, and click “Reload” to refresh the list.

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

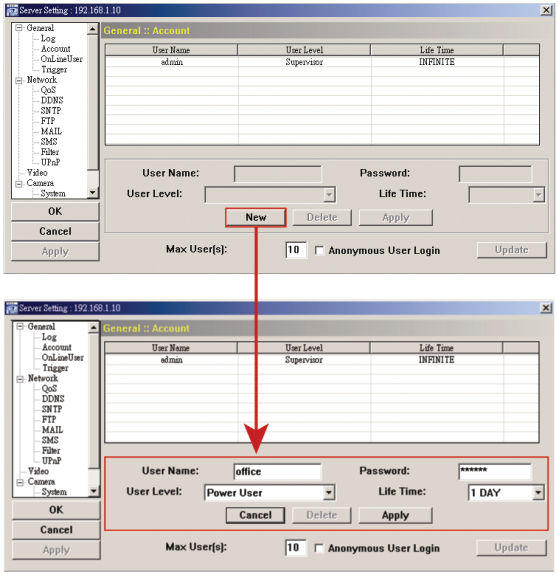


4.1.2 Account

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.
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)

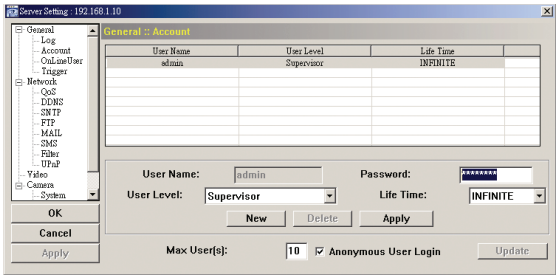
Step2: Then, click “Apply” to save your setting and create a new account.

How to modify or delete an existing account

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

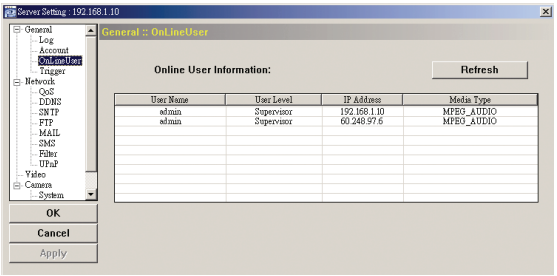
Step2: To modify the account, change the setting directly, and click “Apply”.
To remove the account, click “Delete”.

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



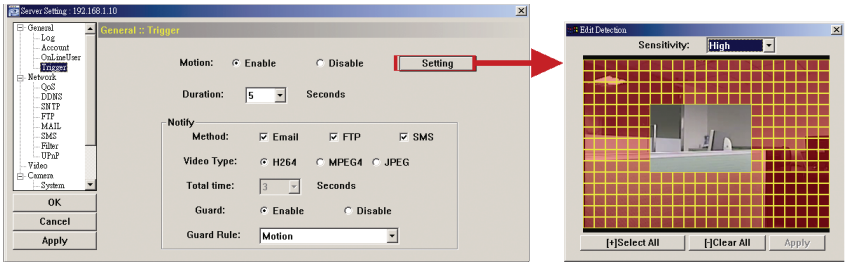
4.1.3 OnLineUser

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



4.1.4 Trigger

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



◆ Trigger Setting

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

Item	Description
Motion	Select to enable or disable the motion detection function.
	• **Motion Detection Area Setting** When “Enable” is selected, click “Setting” to enter the motion detection area setting page as follows:
	Sensitivity: Set the detection sensitivity (High / Normal / 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).

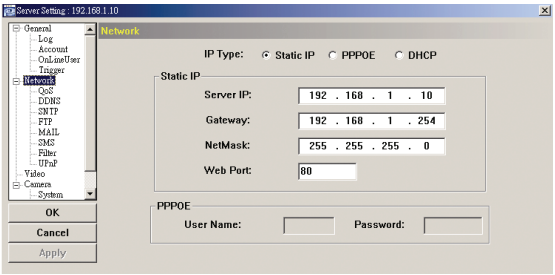
◆ Notification Setting

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

Item	Description
Method	• **Email** When this option is checked, the network camera will send the captured video clip or image to the assigned E-mail address(s) once motion or alarm recording happened. • **FTP** When this option is checked, the network camera will upload the captured video clip or image to the specified FTP site once motion or alarm recording happened. • **SMS** When this option is checked, the network camera will send a text message to the specified mobile phone number once motion or alarm recording happened. For details, please refer to "4.2.6 SMS" at page 18.
Video Type	Select the file type of the notification files: H264 (video) / MPEG4 (video) / JPEG (image).
Total	Set the record time of the notification video clip (1 ~ 5 seconds).
Guard	Select "Enable" to activate iPhone Push Notification function. When the event specified in "Guard Rule" happens, the camera will send a push notification to your iPhone within 5 seconds. Note: To use this function, your iPhone needs to have our mobile surveillance program, EagleEyes, installed. For details, please refer to "6.2.1 For iPhone" at page 31.
Guard Rule	Set the event type to "Motion".

4.2 Network

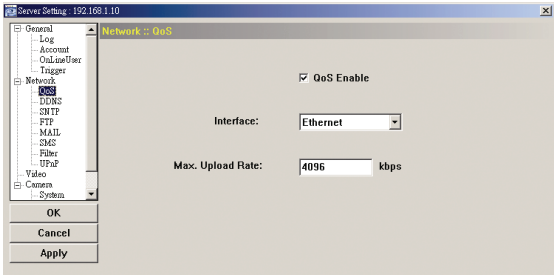
You can set the network configuration of the network camera depending on your network type. For details, please refer to your installation guide.



4.2.1 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.

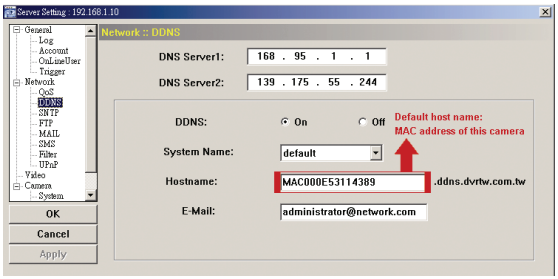
Check "QoS Enable", and set the max. upload rate from 256 to 10240 kbps.



4.2.2 DDNS

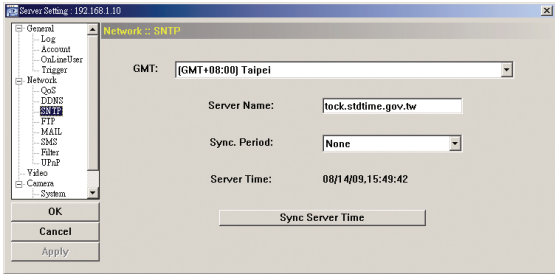
Select "On" when the selected network type in "Network" is "PPPOE" or "DHCP". For details,

please refer to the installation guide.



4.2.3 SNTP

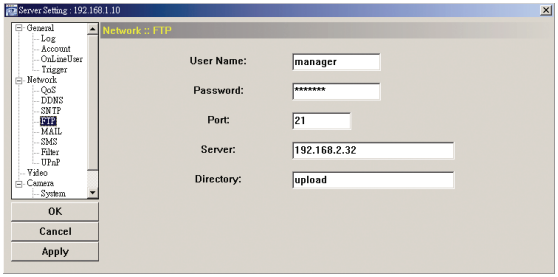
SNTP (Simple Network Time Protocol) is used to synchronize your camera time with the networked computer systems.



Function	Description
GMT (Greenwich Mean Time)	Once users choose the time zone, the network camera will adjust the local area time of the system automatically.
Server Name	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 Server Time	Click and the network camera will synchronize the time with the network time.

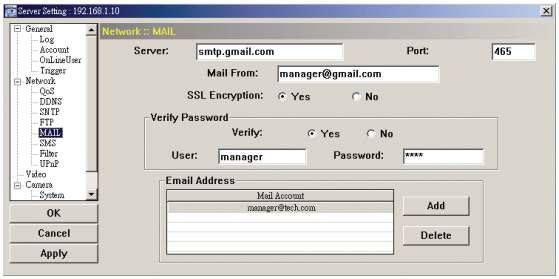
4.2.4 FTP

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



4.2.5 MAIL

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

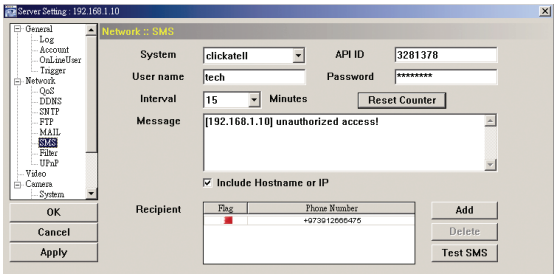


Function	Description
Server	Enter the SMTP server address provided from your e-mail system supplier.
Port	Enter the port number provided from your e-mail system supplier. If this column is left blank, the e-mail server will use port 25 to send e-mails.
Mail From	Enter the entire mail address to ensure 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”.
Email Address	Add the e-mail address(s) of the assigned recipient(s).

4.2.6 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 34.

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

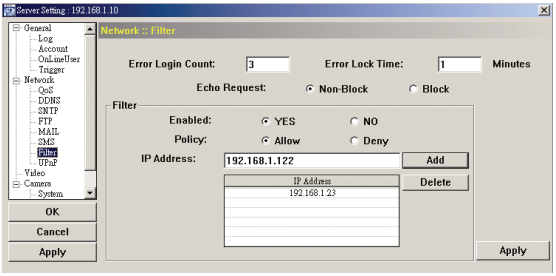


Function	Description
System	The text messaging service provider is Clickatell.
API ID	Enter the API ID you applied from Clickatell.
User name / Password	Enter the account user name and password you created in Clickatell.
Interval	Set the interval time in minutes between two-message sending. The options are 0, 15, 30 & 60. For example, when the interval is set to 15, the SMS will be sent after 15 minutes, 30 minutes, & 45 minutes, etc.
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. To know where the event comes from, check “Include Hostname or IP”, and the IP address or host name of the device will be prefixed automatically to the message.

Function	Description
Recipient	Click “Add” to enter the phone number, including the country code, to receive the text message. Five sets of phone numbers are allowed.
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.

4.2.7 Filter

Choose to permit or block the IP address(es) which can access this camera.

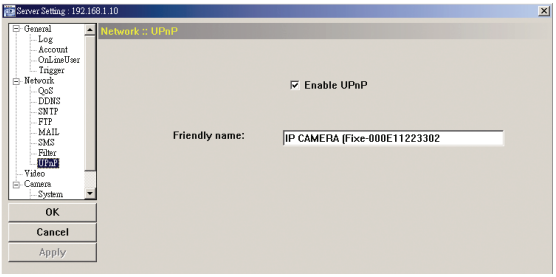


Function	Description
Error Login Count	Set the maximum count for login failure. When the maximum count is reached, the IP address trying to access the network camera will be locked.
Error Lock Time	Set the lock time in minutes when the maximum count of error login for an IP address is reached.
Echo Request	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.
Filter	Choose to enable (YES) or disable (NO) the filter function.
	If “YES” is selected, choose whether you want to permit (Allow) or block (Deny) the IP address list below.
	• To add an item to the IP address list, key in the IP address in “IP Address”, and click “Add”. • To remove an existing item in the IP address list, click the item you want to remove, and click “Delete”.
Apply	Click “Apply” on the bottom right corner when any change is made in this menu, or the change will not be recorded in the system.

4.2.8 UPnP

“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.

Check “Enable UPnP” 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”.

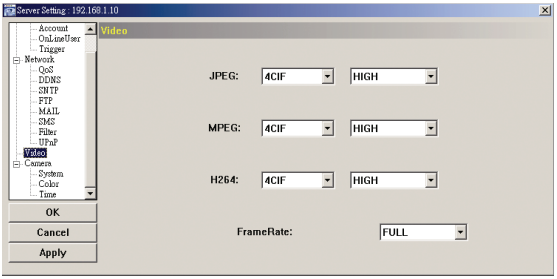


When this function is activated, the other PC within the same domain as this camera will be able to search this camera in “Network Neighbor” with the identification name set in “Friendly name”. Double-click it to quickly open the web browser for camera access.

For details about camera access via your web browser, please refer to “5. ACCESSING THE CAMERA VIA YOUR WEB BROWSER” at page 26.

4.3 Video

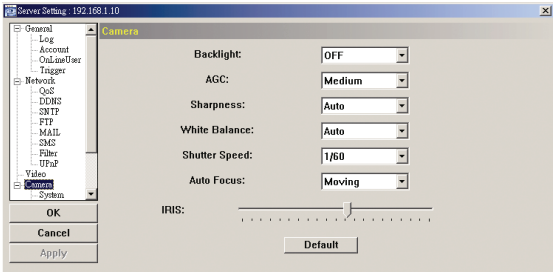
Set the image resolution, quality and frame rate.



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.

4.4 Camera

Adjust the camera parameters if necessary.



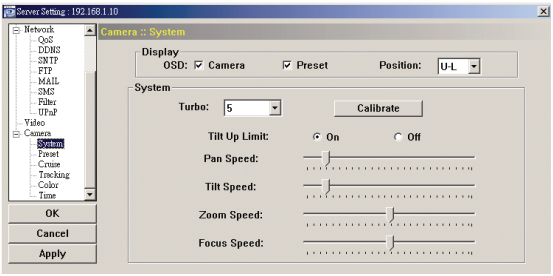
Note: To preview the changes, click “Apply”.

Item	Description
Backlight	Enabling backlight compensation makes the subject clearer if the image background is too bright, or if the subject is too dark.
AGC	Auto Gain Control is a function that can adjust the amplitude of the signal input according to the light conditions. There are four options: “Low”, “Medium”, “High” and “Off”).
	Low: When the light condition is too bright, you can select “Low” for lower sensitivity.
	Medium: When the light condition is normal, you can select “Medium” for normal sensitivity.
	High: When the light condition is too dark, you can select “High” for higher sensitivity.
	Off: Disable the auto gain control function.
	P.S. The higher the sensitivity is, the more the signal noise will be.
Sharpness	Sharpness is a function that can enhances image detail by increasing the aperture gain of the camera and sharpening the edges in the images. There are four options: “Auto”, “Low”, “Medium” and “High”).

Item	Description
	Auto: The camera automatically maintains a normal sharpness level.
	Low / Medium / High: The sharpness of the image can be set manually by choosing different sharpness level.
White Balance	White Balance is a function that processes the viewed image to retain color balance over a color temperature range. According to different color temperature and installation place, choose different white balance mode (“Auto”, “Indoor 1”, “Indoor 2”, “Sun” and “Cloudy”).
	Auto: Balance the color automatically depending on the different color temperature.
	Indoor 1 / Indoor 2 / Sun / Cloudy: According to different color temperature and installation place, choose different white balance mode.
	Note: The color temperature of the “Indoor 1” mode is about 9000K. The color temperature of the “Indoor 2” mode is about 3000K. The color temperature of the “Sun” mode is about 5500K. The color temperature of the “Cloudy” mode is about 7000K.
Shutter Speed	Shutter Speed is a function that can adjust the duration of the electronic shutter to produce optimum image quality. 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 be blurry during motion.
Auto Focus	There are three types of auto focus mode: “Always”, “Moving” and “Zooming”.
	Always: Automatically adjusts the image focus.
	Moving: Adjusts the image focus only when the PTZ camera is under the movement of panning/tilting.
	Zooming: Adjusts the image focus only when the PTZ camera is under the movement of zooming.
IRIS	IRIS level is used to adjust the amount of light reaching the image sensor for best image results. By pressing and dragging the slider, you can increase the value to brighten the image or decrease the value to darken the image (50 ~ 250, default value is 162).
Default	Click to restore all settings to default.

4.4.1 System

Adjust the camera parameters if necessary.

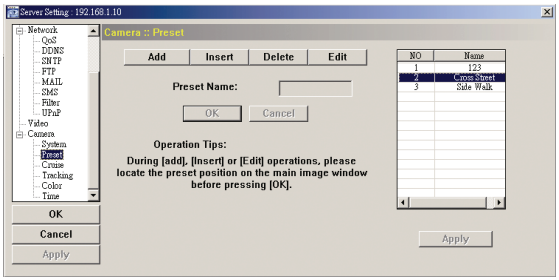


Function	Description
Display	Check to display the camera title and preset point title, and choose the display position.
	Camera: Check this checkbox to display the customized camera title that you set in the “General” page.
	Preset: Check this checkbox to display the customized preset point title that you set in the “Preset” page.
	Position: Choose the display position (Upper Left (U-L) / Upper Right (U-R) / Bottom Left (D-L) / Bottom Right (D-R)) from the drop-down list.
Turbo	To speed up the camera control in the PTZ control panel of the video viewer, you can choose the turbo steps (1 ~ 10). The TURBO function can be activated in the PTZ control panel of the video viewer. Ex: If you activate TURBO function and set the value of the turbo step as 3, one mouse-click will function as clicking 3 times when you click one of the following buttons: Zoom In / Zoom Out / Focus Near / Focus Far / Max Zoom In / Max Zoom Out / Direction Navigation Buttons.
Calibrate	This function is only used when the camera is not focused at the wide (1x) mode after installation. Click this button and choose “Start” to start calibration function. Once the focus is

Function	Description
	clear, press “Storage” to save the setting or press “Exit” to quit.
Tilt Upper Limit	Check to activate the tilt upper limit function or not (On / Off). When this function is on, the camera tilt movement will be limited to a certain angle to avoid the lens being covered by the black shield.
Pan Speed	By pressing and dragging the slider, you can increase the value to accelerate the pan speed or decrease the value to slower the pan speed (1 ~ 255, default value is 29).
Tilt Speed	By pressing and dragging the slider, you can increase the value to accelerate the tilt speed or decrease the value to slower the tilt speed (1 ~ 255, default value is 29).
Zoom Speed	By pressing and dragging the slider, you can increase the value to accelerate the zoom speed or decrease the value to slower the zoom speed (1 ~ 255, default value is 129).
Focus Speed	By pressing and dragging the slider, you can increase the value to accelerate the focus speed or decrease the value to slower the focus speed (1 ~ 255, default value is 129).

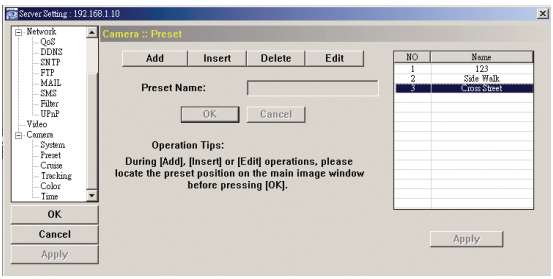
4.4.1 Preset

Set a preset point that can be used to quickly move the camera to the specific location. Up to 16 preset points can be set.



Item	Description
Add	Move the camera lens position (pan and tilt) and set the zoom ratio as needed, and click “Add” to assign the preset name of the preset point. After setup, click “OK” to confirm the setting. A new preset point item will be added in the list on the right.
Insert	Click one preset point item in the list. The inserted preset point item will be added before the item you click in the list. Then, move the camera lens position (pan and tilt) and set the zoom ratio as needed, and click “Insert” to assign the preset name of the preset point. After setup, click “OK” to confirm the setting.
Delete	Click one preset point item in the list. Then, click “Delete” to delete the selected preset point.
Edit	Click one preset point item in the list, and click “Edit” to modify the camera lens position (pan and tilt), zoom ratio and preset point name. After modification, click “OK” to confirm the setting.

Example for the preset point operation



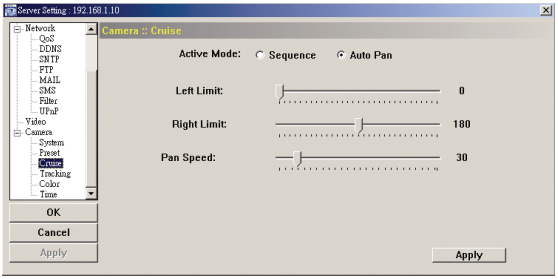
Three preset points are set.

In the control panel, three preset point buttons will be enabled. Click one of them to move the camera to the pre-defined position.

4.4.2 Cruise

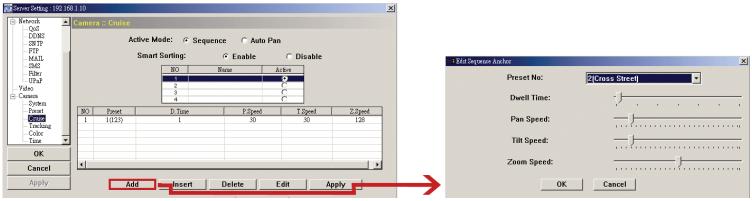
Set the left and right boundaries, and the pan speed when “Auto Pan” is selected, or select up to 16 preset points to form a sequence group (up to 4 sequence groups can be set) when “Sequence” is selected.

- Auto Pan (Check the “Auto Pan” checkbox)



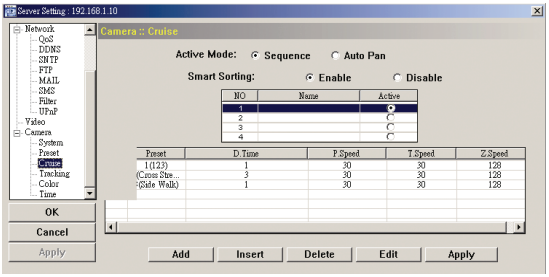
Function	Description
Left Limit / Right Limit	By clicking and dragging the slider, set the left / right end of surveillance area from 0º ~ 360º. The current value is displayed on the right.
Pan Speed	By clicking and dragging the slider, set the speed from 1 ~ 255. The current value is displayed on the right.

- Sequence (Check the “Sequence” checkbox)



Function	Description
Add	Click “Add” to enter the sequence anchor edit page and arrange the sequence of the preset points. In this page, select the preset point from the drop-down list of “Preset No”. By clicking and dragging the slider, set the dwell time, pan speed, tilt speed and zoom speed of the PTZ network camera. After setup, click “OK” to confirm.
Apply	After setup, click “Apply” on the bottom right to confirm.

Example for the cruise function operation



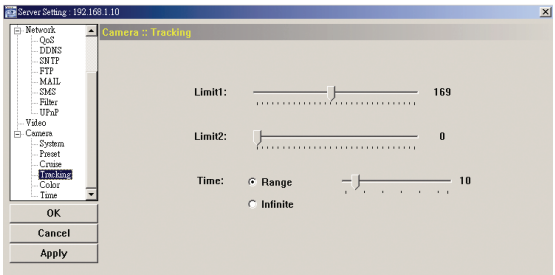
The sequence including three preset points is set.

In the control panel, click “AUTO” to activate the cruising function. The camera will move to the three preset points accordingly in a cycle.

4.4.3 Tracking

Set the surveillance area for auto tracking, and the tracking timeout.

When the locked target is out of the pre-defined surveillance area or stops moving for a pre-defined period of time, the camera returns to the point it originally monitors.

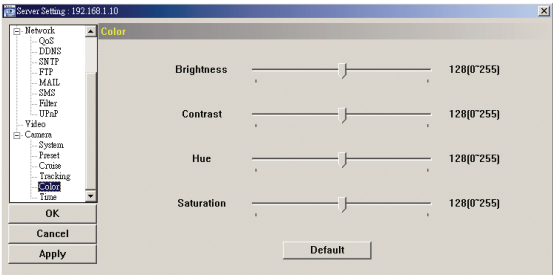


Function	Description
Limit 1	When the locked target moves out of the surveillance area, the camera returns to the point it originally monitors after the preset tracking timeout. By clicking and dragging the slider, set the left end of the surveillance area from 0º ~ 360º.
Limit 2	When the locked target moves out of the surveillance area, the camera returns to the point it originally monitors after the preset tracking timeout. By clicking and dragging the slider, set the right end of the surveillance area from 0º ~ 360º.
Time	When the locked target stops moving longer than the pre-defined tracking timeout, the camera returns to the point it originally monitors after the preset tracking timeout. By clicking and dragging the slider, set pre-defined tracking timeout of the camera from 5 ~ 60 seconds, or you can choose to have no time limit (Infinite).

4.4.4 Color

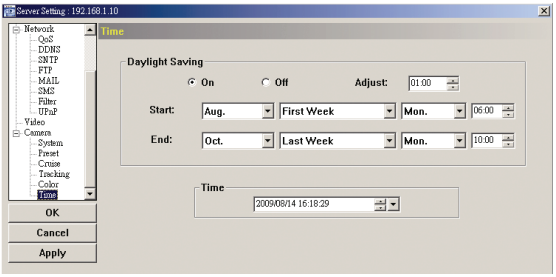
Adjust the color performance from Brightness, Contract, Hue and Saturation. Click and drag the slider to preview the color change on the live view panel and adjust the image color. Then, click “Apply” to confirm the change.

To restore the default values, click “Default”, and click “Apply” to confirm the change.



4.4.5 Time

Set daylight saving time and the current time.



Function	Description
Daylight Saving	Specify whether to use daylight saving time (ON / OFF). If this function is enabled, set the time period (START / END), and adjust the daylight saving time in hours (ADJUST).
Time	Set the current time.

5. ACCESSING THE CAMERA VIA YOUR WEB BROWSER

Users can also access the network camera via a web browser, such as Microsoft Internet Explorer or Mozilla Firefox.

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 4.

Before using the network camera, 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.

5.1 Accessing the camera

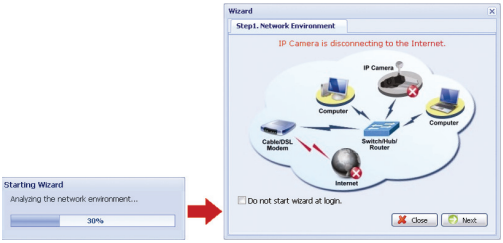
Step1: Open your web browser, and key in http://*ipaddress:portnum* in the URL address box.

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. Then, click "LOGIN".

Step3: The wizard is then starting analyzing your network environment, and shows your network environment.

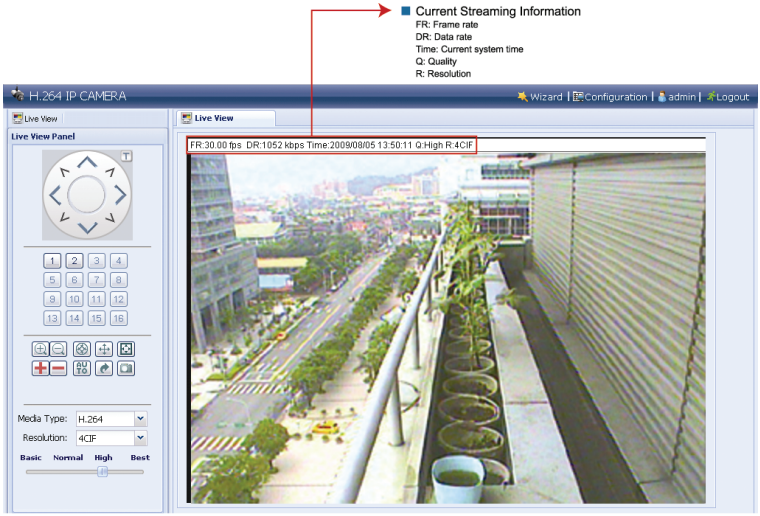
- To continue setting the password, date & time, and network, click "Next" and follow the step-by-step instructions.
- To skip the wizard and directly access the camera live view, click "Close".
- To directly access the camera live view without starting the wizard for the login next time, check "Do not start wizard at login".



Step3: When the login is successful, the live view is shown similar as follows.

5.2 Control panel overview

5.2.1 Live View Panel



Function	Icon	User Level	Description
Arrow keys	--	Supervisor / Power User / Normal User	Click to move the camera lens up / up-left / down / up-right / left / down-right / right / down-left.
Turbo	T	Supervisor / Power User / Normal User	Speed up the menu selection from 1 to 10. Note: When this function is enabled, the supported buttons will turn to blue. Ex: If the value of the turbo step is set to 5, one mouse-click will function as 5 mouse-clicks when you click the arrow keys. To use this function, you need to set it in the camera configuration page first. For details, please refer to “4.4.1 System” at page 21.
Preset points	--	Supervisor / Power User / Normal User	Click the numbering of the preset point you want to move the PTZ camera to the selected preset point. To set preset points, please refer to “4.4.1 Preset” at page 22.

Function	Icon	User Level	Description
Zoom-in / out		Supervisor / Power User / Normal User	Click to zoom in / out the current image.
Max. Zoom-in / out		Supervisor / Power User / Normal User	Click to zoom in the image to the largest / zoom out the image to its original size.
Auto Tracking		Supervisor / Power User / Normal User	Click to activate the auto tracking function. For setting details, please refer to “4.4.3 Tracking” at page 24.
Auto Mode		Supervisor / Power User / Normal User	Click to activate the auto function. Before using it, you need to assign a specific function that will be enabled when “AUTO” is clicked. For details, please refer to “4.4.2 Cruise” at page 23.
Auto Move		Supervisor / Power User / Normal User	Click to enable the auto move function. It allows the camera to move to the direction where your cursor stays.
Flip		Supervisor / Power User / Normal User	Click to rotate the image 180^0 counterclockwise when necessary.
Full Screen		Supervisor / Power User / Normal User	Click to display the image in full screen.
Snapshot		Supervisor / Power User / Normal User	Click to take a snapshot for the current view, and a new browser window will be opened to display the captured image.
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, only “QuickTime” is selectable. QuickTime is Apple Inc.’s multimedia software. You need to have QuickTime installed in you 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 Resolution		Supervisor / Power User / Normal User	Select the video resolution from the drop list: 4CIF / CIF.
Video Quality	--	Supervisor / Power User / Normal User	Click & drag the slider to select the video quality: Basic / Normal / High / Best.

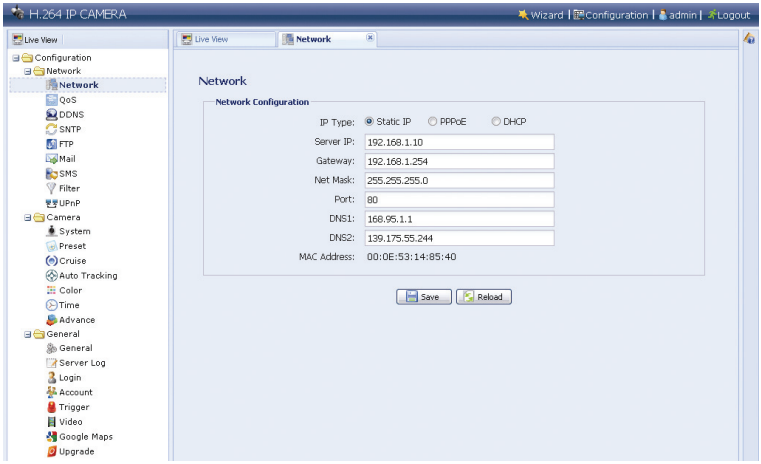
5.2.2 System Configuration Panel

Click “Configuration” to enter the configuration page.

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.

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

- For details about “Network”, please refer to “4.2 Network” at page 16.
- For details about “Camera”, please refer to “4.4 Camera’ at page 20.
- For details about “General”, please refer to “4.1 General” at page 13, and “4.3 Video” at page 20.


H.264 IP CAMERA
Wizard | Configuration | admin | Logout
Live View
Configuration
Network
Network
QoS
DDNS
SNTP
FTP
Mail
SMS
Filter
UPnP
Camera
System
Preset
Cruise
Auto Tracking
Color
Time
Advance
General
General
Server Log
Login
Account
Trigger
Video
Google Maps
Upgrade
Live View
Network
Network
Network Configuration
IP Type: Static IP PPPoE DHCP
Server IP: 192.168.1.10
Gateway: 192.168.1.254
Net Mask: 255.255.255.0
Port: 80
DNS1: 168.95.1.1
DNS2: 139.175.55.244
MAC Address: 00:0E:53:14:85:40
Save
Reload

Main Menu	Sub-menu	Reference
Network	Network	→ Remote Config → Network
	QoS	→ Remote Config → Network → QoS
	DDNS	→ Remote Config → Network → DDNS
	SNTP	→ Remote Config → Network → SNTP
	FTP	→ Remote Config → Network → FTP
	Mail	→ Remote Config → Network → MAIL
	SMS	→ Remote Config → Network → SMS
	Filter	→ Remote Config → Network → Filter
	UPnP	→ Remote Config → Network → UPnP
Camera	System	→ Remote Config → System
	Preset	→ Remote Config → System → Preset
	Cruise	→ Remote Config → System → Cruise
	Auto Tracking	→ Remote Config → System → Auto Tracking
	Color	→ Remote Config → Color
	Time	→ Remote Config → Time
	Advance	→ Remote Config → Camera
General	General	→ Custom Setting
	Server Log	→ Remote Config → General → Log
	Login	→ Remote Config → General → Account
	Account	→ Remote Config → General → Account
	Trigger	→ Remote Config → General → Trigger
	Video	→ Remote Config → Video
	Google Maps	Allows you to know where the network camera is. The system will prompt you to apply a Goole Maps Key if your access is denied. Please follow the instructions below when you're denied: 1. Click "Sign up for a Google Maps key" to enter the application page. 2. Check the terms and conditions, and enter the IP address of the network camera. Then, click "Generate API Key". 3. Copy the generated API key, and click "Update Google Maps Key" on the web browser to paste it.
	Upgrade	→ . For details, please refer to "3.3.3 Firmware Upgrade" at page 7.

6. ACCESSING THE CAMERA VIA YOUR MOBILE PHONE

6.1 Checklist Before Using

Make sure your PDA or mobile phone conform to the following requirements:

Device	Make sure …
WinCE-Based PDA	The operating system is Windows Mobile 5.0 Packet PC / 6.0 Professional*. Windows Mobile 5.0 Smartphone / 6.0 Standard is NOT supported.
	J2ME MIDP2.0 is supported.
	Internet services via Wireless or GPRS / 3G networks are subscribed and available to use. For details, please check with your local network operator or service provider.
J2ME-Based Mobile Phone	J2ME is supported.
	Internet services via GPRS / 3G networks are subscribed and available to use. For details, please check with your local network operator or service provider.
	The port number of the connected device is NOT 80. The suggested port number is 88.
iPhone	Internet services via 3G networks are subscribed and available to use. For details, please check with your local network operator or service provider.
	Your mobile phone is available to access “App Store”.

* We do not guarantee the compatibility of the mobile surveillance software in every touch panel PDA brand with the operating system of Windows Mobile 5 Packet PC / 6.0 Professional. Please check with your distributor for details.

6.2 Program Download / Installation

6.2.1 For iPhone

STEP1: Go to “App Store” via your iPhone, and search our program with one of the following keywords: EagleEyes / PTZ / IPCAM / Surveillance.

Note: You might be charged for Internet access via wireless or 3G networks. For the Internet access rate details, please check with your local network operator or service provider.

STEP2: Follow the on-screen instructions to download and install the program.

“ ” will be shown on the iPhone desktop for quick access when the program is installed successfully.

6.2.2 For WinCE- & J2ME-Based Mobile Phone

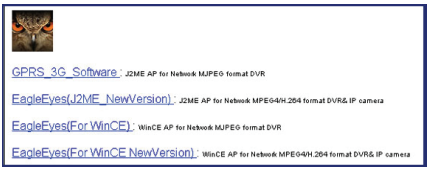
STEP1: To download the program for mobile surveillance, please visit the following website address from your PDA or mobile phones:

http://211.75.84.102/fae/MobileAP/index.html

Note: The Internet access setting via wireless or GPRS / 3G networks varies depending on different PDA or mobile phone brand. For details, please refer to its individual user manual, or check with your local network operator or service provider.

Note: You might be charged for Internet access via wireless or GPRS / 3G networks. For the Internet access rate details, please check with your local network operator or service provider.

You will see the following four programs available:



STEP2: Download the program as instructed:

- Select "**EagleEyes (J2ME New version)**" if you're using the J2ME-based mobile phone.
- Select "**EagleEyes (For WinCE New Version)**" if you're using the WinCE-Based PDA phone.

STEP3: Follow the on-screen instructions after downloading.

For mobile phones, the program will be saved to the location you specified.
For WinCE-Based PDA, the program will be saved to "Programs".

6.3 Program Setup

STEP1: Get the necessary information for accessing your network camera, such as the IP address, user name, password, port number, etc.

STEP2: Activate the program, and go to its setting page to fill in the information needed.

STEP3: Try to access your network camera to see if the connection works.

APPENDIX 1 PRODUCT SPECIFICATIONS

■ Network	
Compression	H.264 / MPEG4 / MJPEG
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
Frame Rate	NTSC:30, PAL:25
Number of Online Users	10
Security	Multiple user access levels with password
Web management	(1) Web browsers, such as Internet Explorer, Mozilla FireFox & Google Chrome for single device access, or (2) Free CMS software, Video Viewer, for up to 16 network cameras control simultaneously
■ Camera	
Image Sensor	1/4" Sony Color Super HAD CCD
Pixels	768(H) x 494(V) <NTSC> / 752(H) x 582(V)) <PAL>
Resolution	High Resolution
Lens	f3.9 ~ 85.9mm
F-number	F1.6 (Wide) ~ 3.7 (Tele)
Viewing Angle	4° ~ 60°
Pan Range	360°
Tilt Range	90°
Max. Pan / Tilt Speed	Pan 360º/s, Tilt 90º/s
Zoom	22X Optical Zoom
Max Zoom Speed	Approx. 7s (Tele ~ Wide)
Shutter Speed	1 / 60 (1/50) to 1 / 100,000 sec.
Min Illumination	0.3 Lux / F1.6
BLC	On / Off
Color Adjustment	Brightness, Contrast, Saturation and Hue
Preset Points	Up to 16 preset points can be set
Sequence Groups	1. Up to four groups can be set
	2. One group can include up to 16 preset points
S/N Ratio	More than 48dB (AGC off)
White Balance	Auto / Indoor 1 / Indoor 2 / Sun / Cloudy * Indoor1 = 9000K; Indoor2 = 3000K; Sun = 5500K; Cloudy = 7000K
IP Rating	IP67
Power Source (±10%)	DC12V, 1.5A
Operating Temperature	0℃~40℃
Humidity	85%
Dimensions (mm)**	145(D) x 209(H)
■ Others	
Mobile Surveillance	iPhone, J2ME & WinCE
Motion Detection	YES
Alarm and event Notification	By FTP and Email
Minimum Web Browsing Requirements	□Pentium 4 CPU 1.3 GHz or higher, or equivalent AMD □256 MB RAM □AGP graphics card, Direct Draw, 32MB RAM □Windows 7, Vista, XP, Windows 2000 Server, ME, 98, DirectX 9.0 or later □Internet Explorer 6.x or later

** The specifications are subject to change without notice.

** Dimensional tolerance: ± 5mm

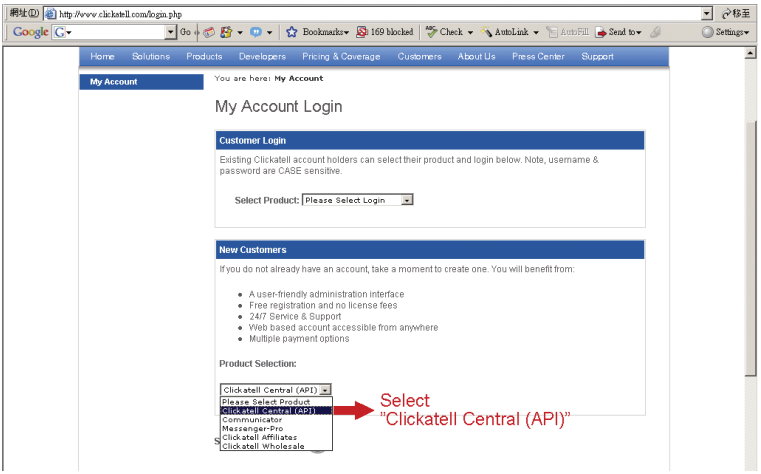
APPENDIX 2 API ID APPLICATION FOR SMS MESSAGING

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.

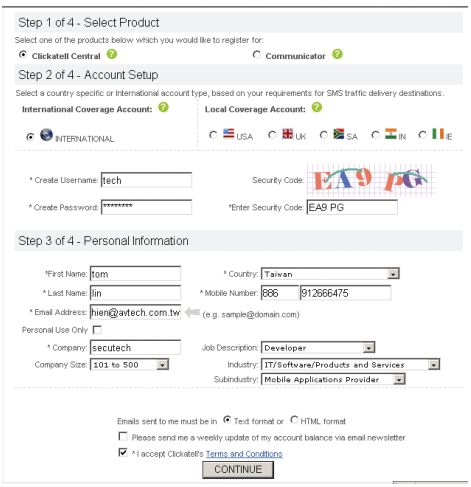
Please follow the steps below for application.

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”.

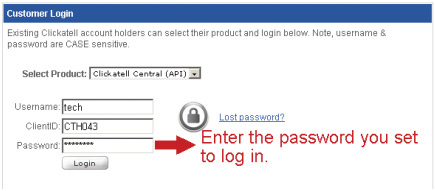
Note: Note down the user name and password, and the mobile phone number you specified here for SMS notification setting later.



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

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

My Account Login

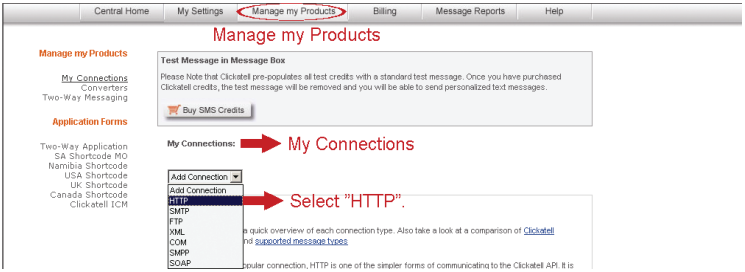


Step3: Enter the mobile phone number (including your country code) you want the text message to be sent, and click “SEND ACTIVATION CODE”. The system will send an activation code to that number for verification.

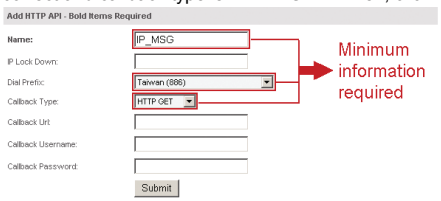
Check if you receive a text message from Clickatell.

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

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



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



Step5: You will get an API ID as follows.

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