



2 Megapixel Speed Dome
Network Camera
OSD-200 20xp
User's Manual

Product name: Network Camera (OSD-200A 20xp)

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Before You Use This Product

In many countries, there are laws prohibiting or restricting the use of surveillance devices. This Network Camera is a high-performance, web-ready camera which can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of this camera is legal before installing this unit for its intended use.

Upon opening the product's package, verify that all the accessories listed on the "Package Contents" are included. Before installing the Network Camera, read the warnings in the "Quick Installation Guide" to avoid misuse. When installing the Network Camera, carefully read and follow the instructions in the "Installation" chapters to avoid damages due to faulty assembly or installation.

Regulatory Information

Federal Communication Commission Interference Statement

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

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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



IMPORTANT NOTE:

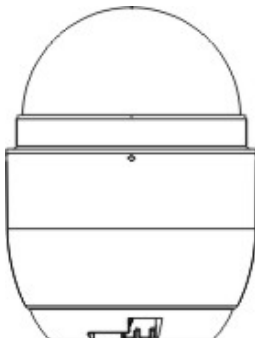


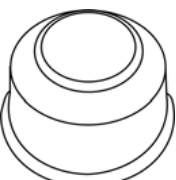



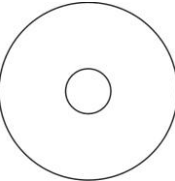

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Chapter 1 - Package Contents

| | | | |
|--|---|--|--|
| <p>a. Network Camera</p>  | <p>b. M3 Standard Screw (x1)M3 Security Screw (x1) M5 Standard Screw (x1) M5 Security Screw (x1)</p>  <p>Security Torx Lubricant</p>  | | |
| <p>c. Waterproof Rubber</p>  | <p>d. Power Connector Alarm I/O Connector Audio Connector</p>  | | |
| <p>e. Outdoor Mount Kit</p>  | <p>f. Easy Installation Guide</p>  | <p>g. Product CD</p>  | <p>h. Warranty Card</p>  |

Chapter 2 - 20x Outdoor Speed Dome Network Camera Overview

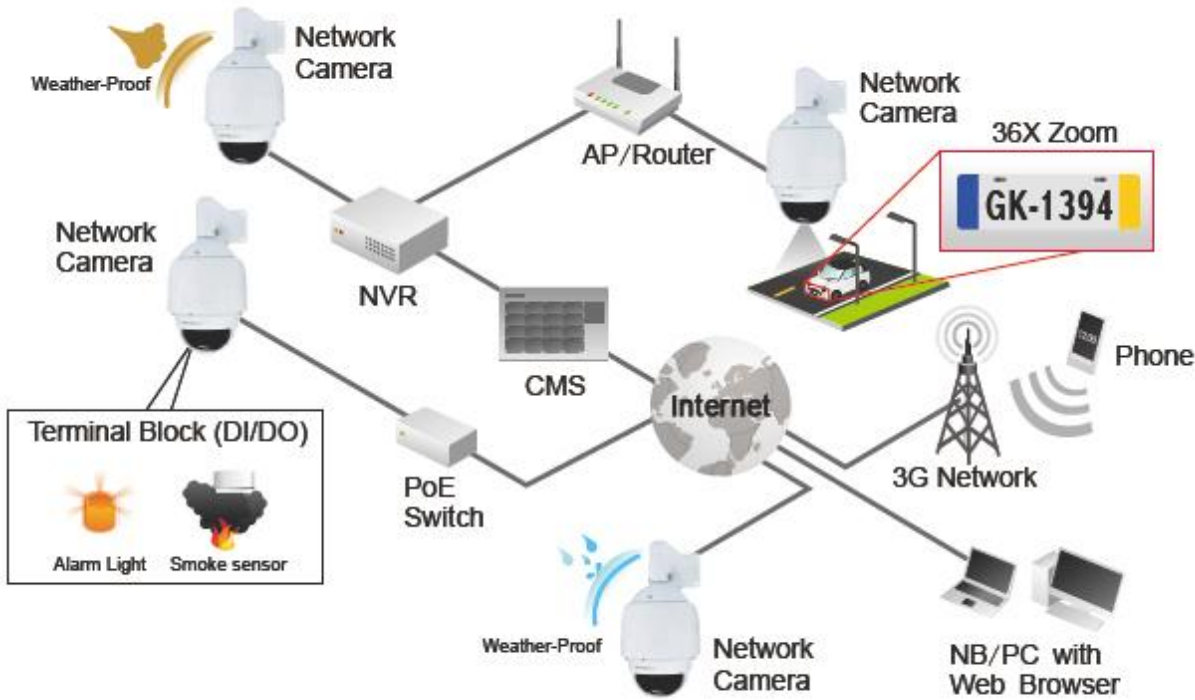
The Brickcom OSD-200A 20xp transmits digital video and audio data using wire connection. The video encoder supports real-time H.264 Full HD resolution. Simultaneous Quad Codecs, H.264 Baseline / Main / High Profile, MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support.

By adopting a powerful 20x optical zoom lens with auto focus, OSD-200A 20xp can easily provide clear close-up shots of objects. The Sony Progressive CMOS sensor and removable IR-cut filter significantly improve the light sensitivity of the OSD-200A 20xp, providing excellent surveillance in both day and night settings. When its Wide Dynamic Range (WDR) sensor, the camera can handle extreme variations of brightness within the same sense.

Along with high-level sensors, the OSD-200A 20xp is equipped with a fast and precise pan/tilt mechanical design. The 360° continuous pan and -10° ~190° tilt combine with a preset speed of 5° ~400° per second to provide complete coverage of every angle. With such powerful pan, tilt and zoom capabilities and a weather-proof casing (IP66), this camera is perfect for environments where precision and reliability are key; such as railway stations, airports, warehouses, and production facilities.

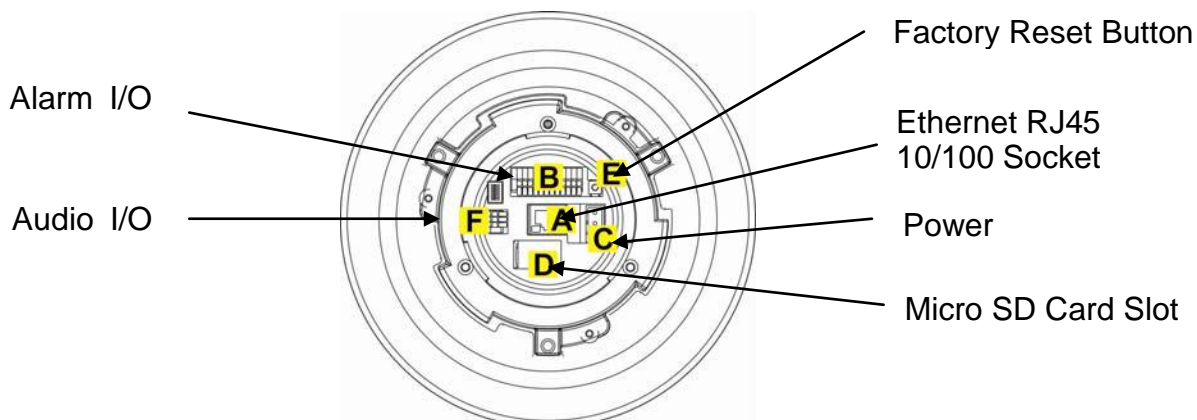
Features

- 2 Megapixel High Resolution Outdoor Speed Dome Camera
- SONY 2M Progressive CMOS sensor
- 20x Optical Zoom, 10x Digital Zoom
- Preset speed Up to 400°/s
- Brickcom WDR Enhancement® Technology inside
- Removable IR-Cut Filter for Day and Night Function
- H.264 HP/MP/BL&MJPEG compression, Quad stream support
- 1080p + D1 @30fps for dual stream
- 3D Privacy Masks for Private Area Protection
- 4sets DI/ 2 sets DO for External Alarm and Sensor Device
- Built-In Micro SD slot/ 802.3at PoE
- Weather-Proof (IP66) Casing with Built-in Fan and Heater



Chapter 3 - Device Appearance Description

< Bottom View >



Please refer to the illustrations below to connect power core through the supplied power adaptor, and set up the audio according to the Audio pin definition.

< Power Connector >

| Pin | Definition |
|-----|------------|
| 1 | AC 24_1 |
| 2 | FG |
| 3 | AC 24_2 |

<Audio Connector >

| Pin | Definition |
|-----|------------|
| 1 | LINE_OUT |
| 2 | GND |
| 3 | LINE_IN |

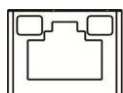


NOTE- To power up the camera, please plug the AC 24V cable into the camera's power connector (Operating Temperature: -40°C -50°C); Or connect the Ethernet cable to the camera's Ethernet port and plug the other end of cable into an IEEE 802.3at High Power over Ethernet (PoE plug)switch (Operating Temperature: -7°C -50°C)

< Ethernet Cable>

Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the Network Speed Dome Camera, and the other end of the cable to the network switch or PC.

Check the status of the link indicator and activity indicator LEDs. If the LEDs are unlit, please check LAN connection.

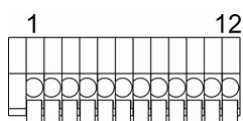


Green Link Light indicates good network connection.

Orange Activity Light flashes for network activity indication.

<Alarm I/O Connector>

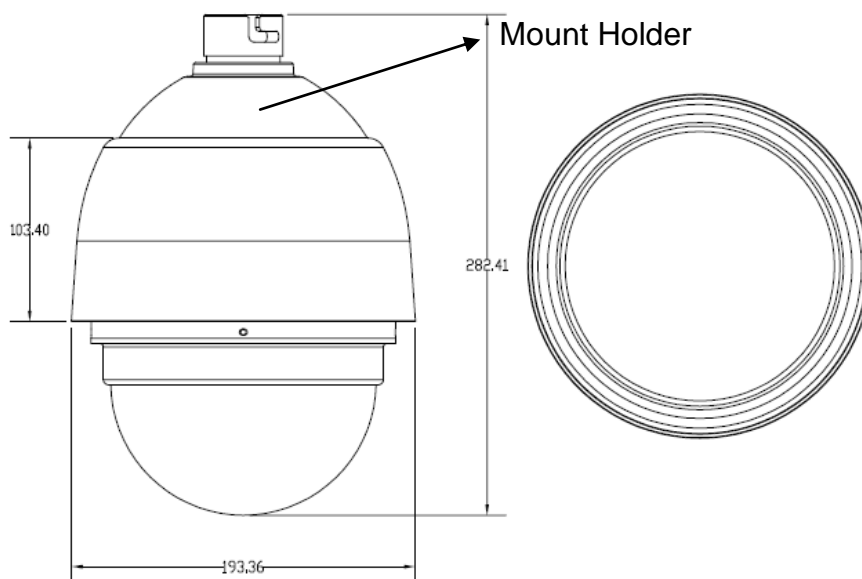
When cabling, please refer to the table below for pin definition of Alarm I/O setting. Please make sure the alarm connections are properly.



| Pin | Definition |
|-----|-----------------|
| 1 | ALARM_OUT_NO_1 |
| 2 | ALARM_OUT_NC_1 |
| 3 | ALARM_OUT_COM_1 |
| 4 | GND |
| 5 | ALARM_OUT_NO_2 |
| 6 | ALARM_OUT_NC_2 |

| Pin | Definition |
|-----|-----------------|
| 7 | ALARM_OUT_COM_2 |
| 8 | GND |
| 9 | ALARM_IN_4 |
| 10 | ALARM_IN_3 |
| 11 | ALARM_IN_2 |
| 12 | ALARM_IN_1 |

< Dimension >



Chapter 4 - Installation

4.1 Hardware Installation

A. Before Installation

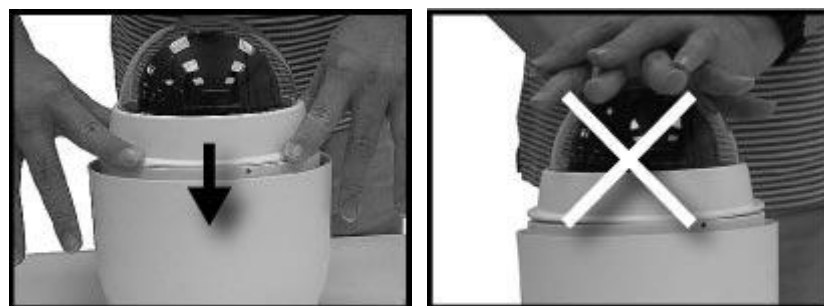
The OSD-200A 20xp is supplied with a dome cover to protect the camera unit. Before installation, follow these instructions to attach the dome cover and the mount holder.

- 1) Pull out the Dome cover and take out the mounting tape; and then apply lubricant to the Dome cover's water-proof rubber to make the installation process smoother.



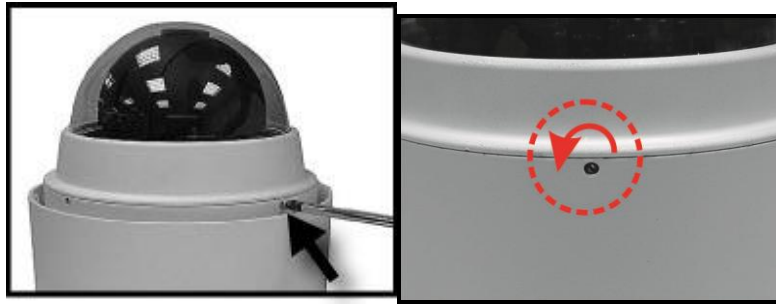
NOTE - The tiny *protrusion* on the dome cover must align with one of the four holes on the dome body.

- 2) Attach the Dome cover to the Dome body by gently pressing down on the sides of the Dome cover with both hands.



NOTE - DO NOT press the cover from the top as this may cause damage to the Dome body.

- 3) Use a flat screw drive to fasten two supplied Flat Screws on the Dome Cover.



- 4) Pass through all the power cable, I/O cable, audio cable, and Ethernet cable into the mounting hold, and then attach the mount holder tightly on the Dome body.



Optional Dome Camera Accessories

Transparent Cover (Standard) / Vandal Proof Cover (Optional)

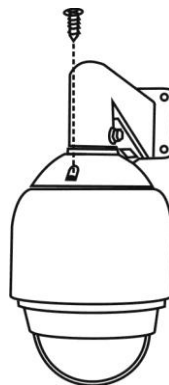


B. Install Camera with Mount Kit

- 1) Make a cable entry hole on the wall/ ceiling to insert the cable(s).
- 2) Attach the waterproof rubber to the selected mount kit.
- 3) Route the Ethernet and I/O cables through the top holder and join the selected mount kit with supplied screws and washers. Then adjust the Waterproof Rubber over the joint.
- 4) Connect the Ethernet and I/O cables and hook the safety wired to the camera.
- 5) Attach the camera to the top cover with the supplied screw and washers.



Wall Mounting: Pendant Mount (mounting example)



NOTE - Refer to the mounting instruction in the “Speed Dome Mounting Accessories Installation Guide” for more details.

4.2 Camera Connection

- 1) Connect the camera to a switch using an Ethernet cable.
- 2) Connect supplied I/O cable to the camera.
- 3) To attach external devices, such as sensors and alarms, connect them to the extension I/O terminal block.

Optional Dome Camera Accessories

Power Adapter

77H07-A1015 (Input: 100~115 VAC / Output: 24 VAC 36 VA)

77H07-A2015 (Input: 220~230 VAC / Output: 24 VAC 36 VA)



NOTE: When wiring, make sure the G / Y wire (Ground) inserted into the mid-pin of the terminal block.

4.3 System Requirements

Operating System:

Windows VISTA / Windows XP / Windows 7

Computer:

Intel® Pentium® IV, 3 GHz or higher/ Intel® Core2 Duo, 2 GHz or higher

Memory:

1GB or more

Monitor:

1024 x 768 pixels or more, 24-bit True color or better

Network Interface:

10/100Mbps Network interface card must be installed

Web Browser:

Internet Explorer 6.0 or later, Firefox, Chrome, Safari

Adobe Reader:

Adobe Reader 8.0 or higher

Viewer:

ActiveX control plug-in for Microsoft IE

| Items | Minimum Requirement |
|-------------------|---|
| Personal Computer | 3. AGP graphics card 64 MB RAM, DirectDraw |
| Network Card | 10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation |

4.4 Software Installation

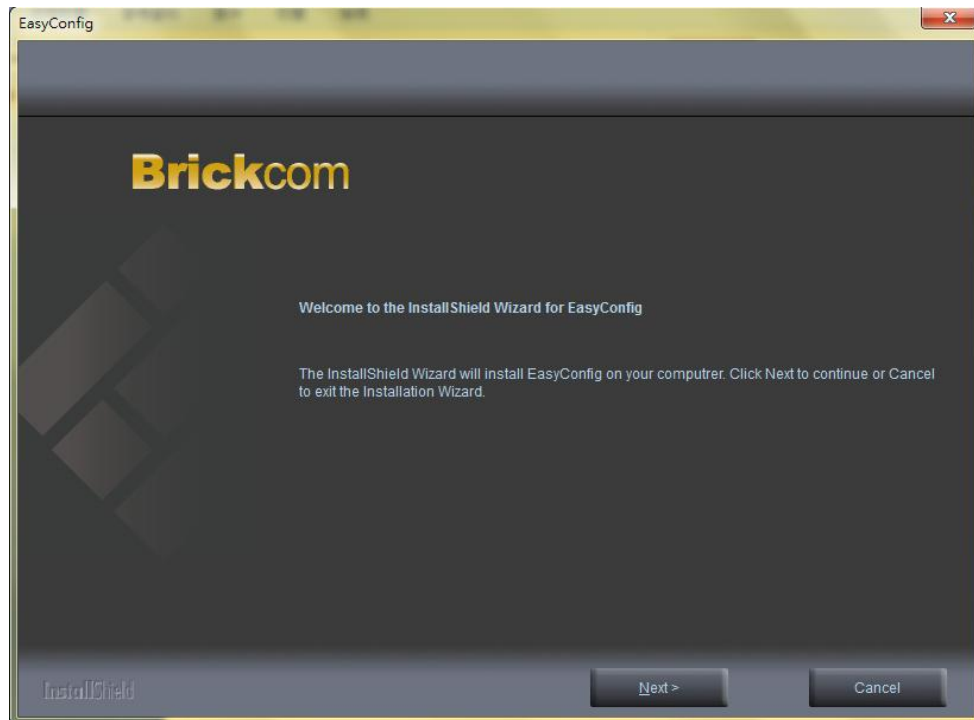
In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and the bottom of the camera.

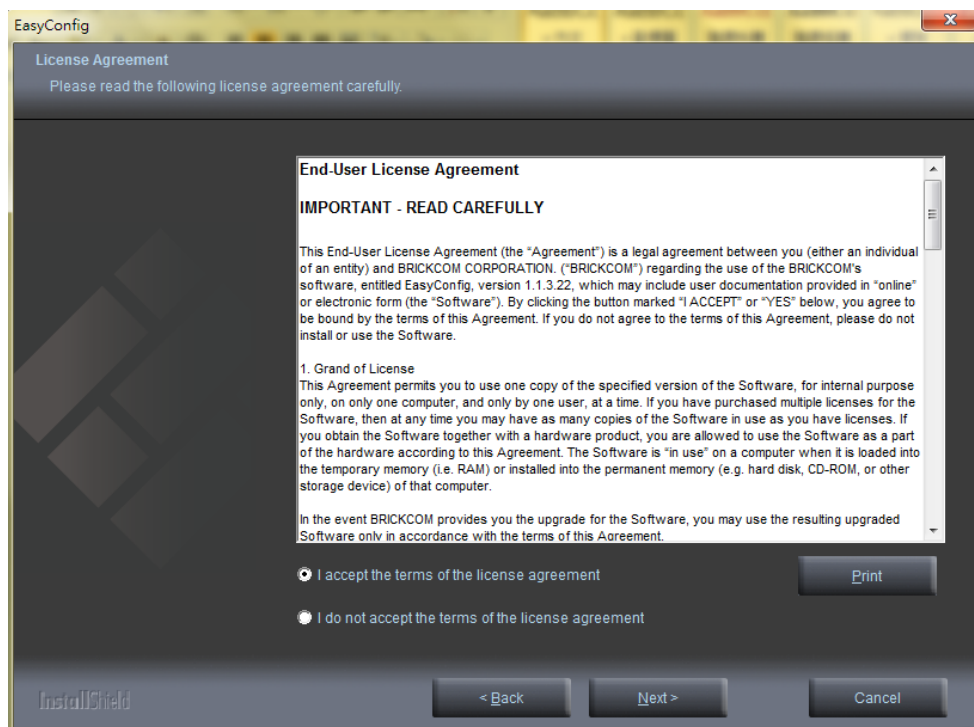
- A. Insert the Installation CD into the CD-ROM driver. Run AutoRun Tool directly from the CD-ROM to start the installation. When installing the Brickcom software kit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click **<Install>** and follow the steps to install the EasyConfig wizard on the desired computer.



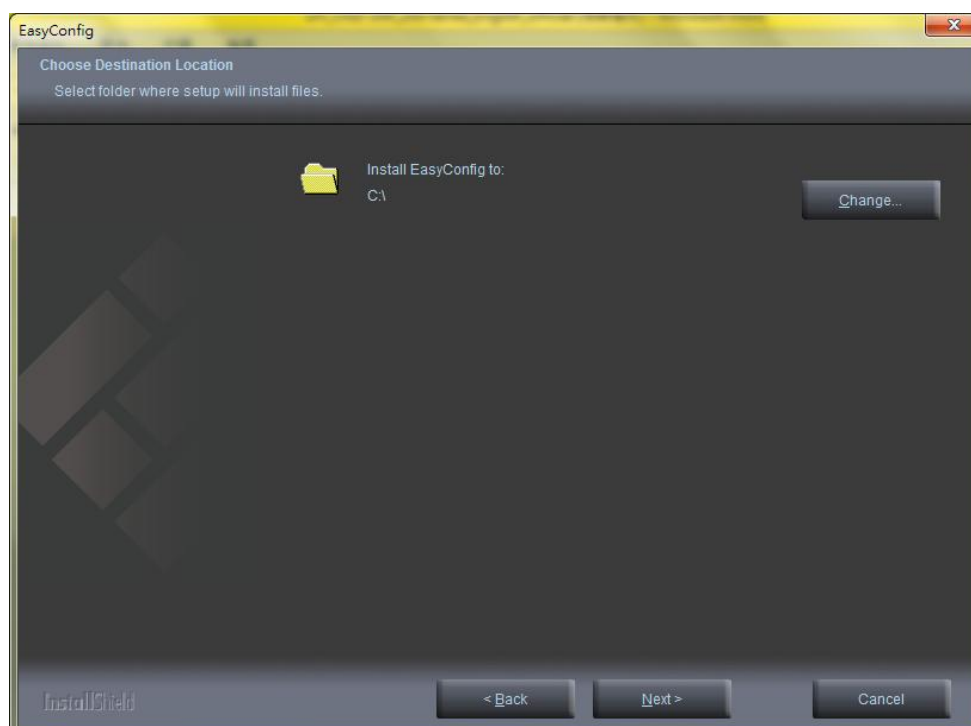
B. In the Install Shield Wizard dialog box, click <Next> to continue.



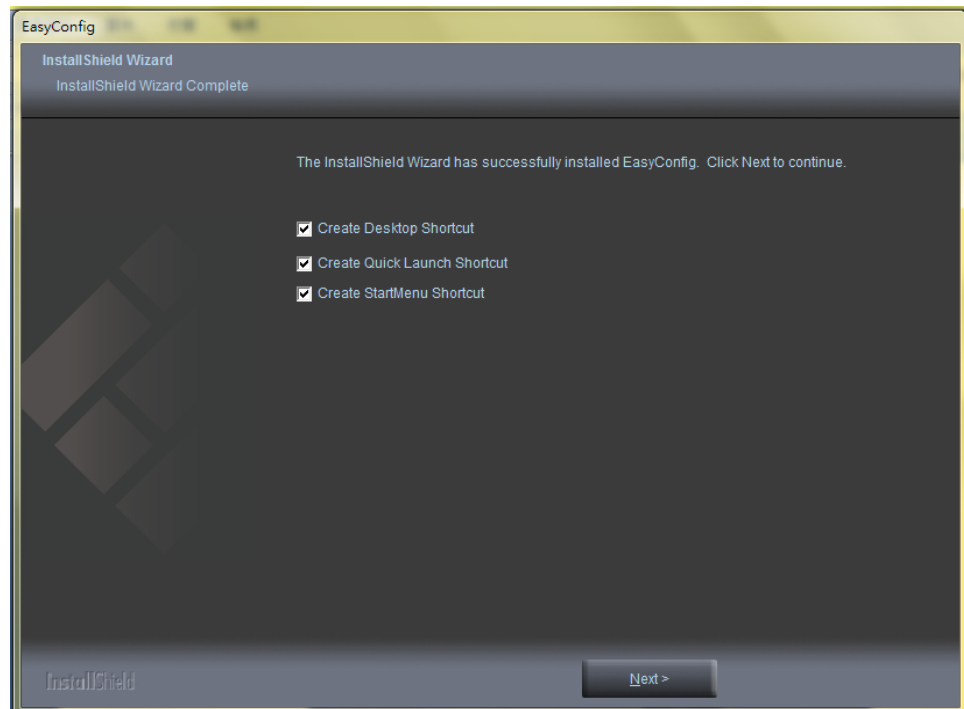
C. Read the End-User License Agreement and check the option "I accept the terms of the license agreement". Click <Next> to continue.



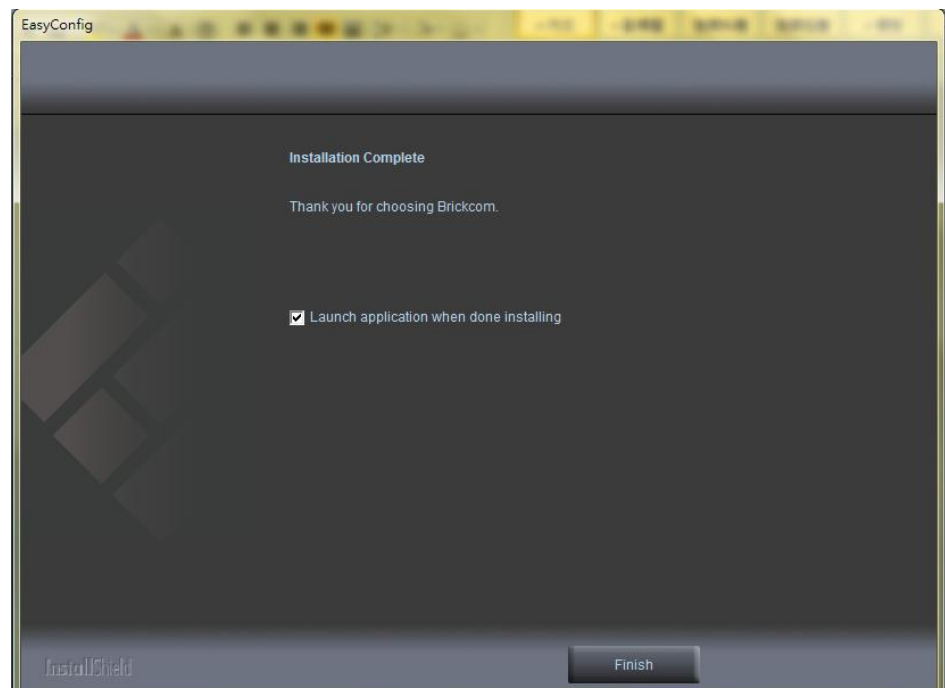
- D. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



E. Select to create shortcuts. Click <Next> to continue.



F. Select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



4.4.1 EasyConfig

To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.



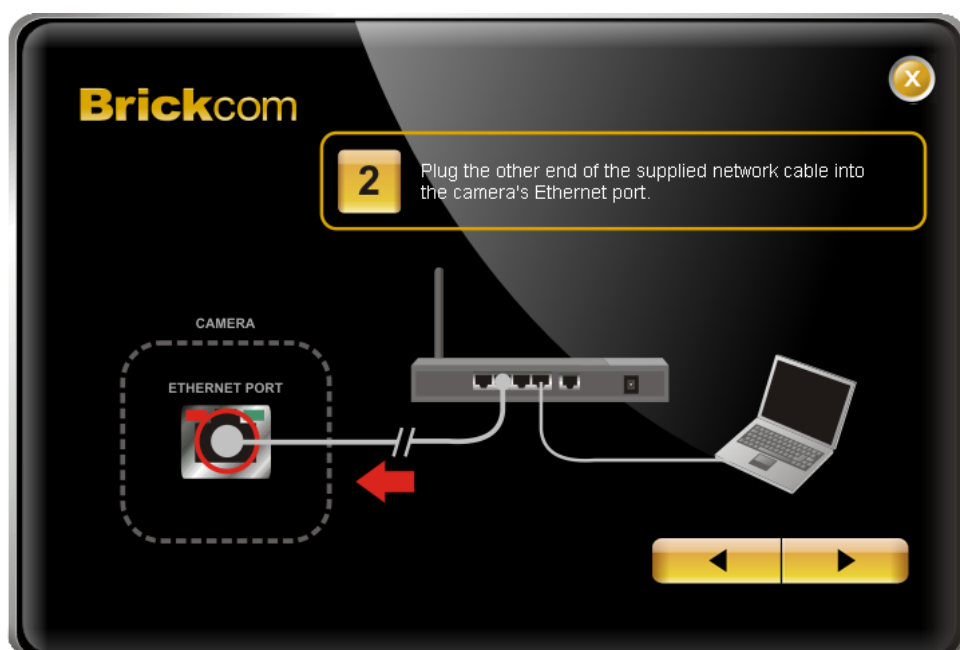
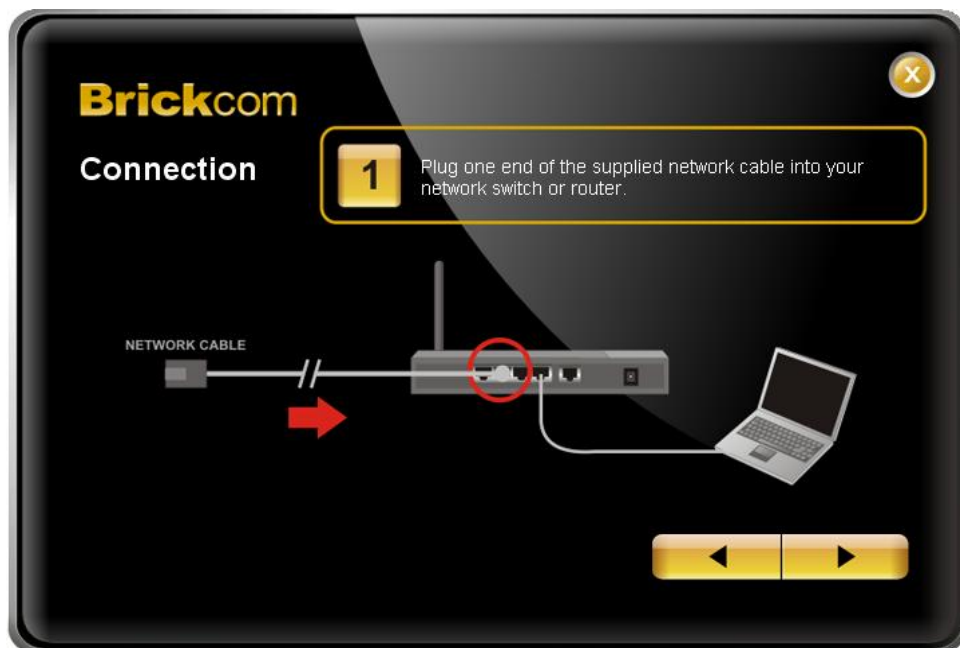
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

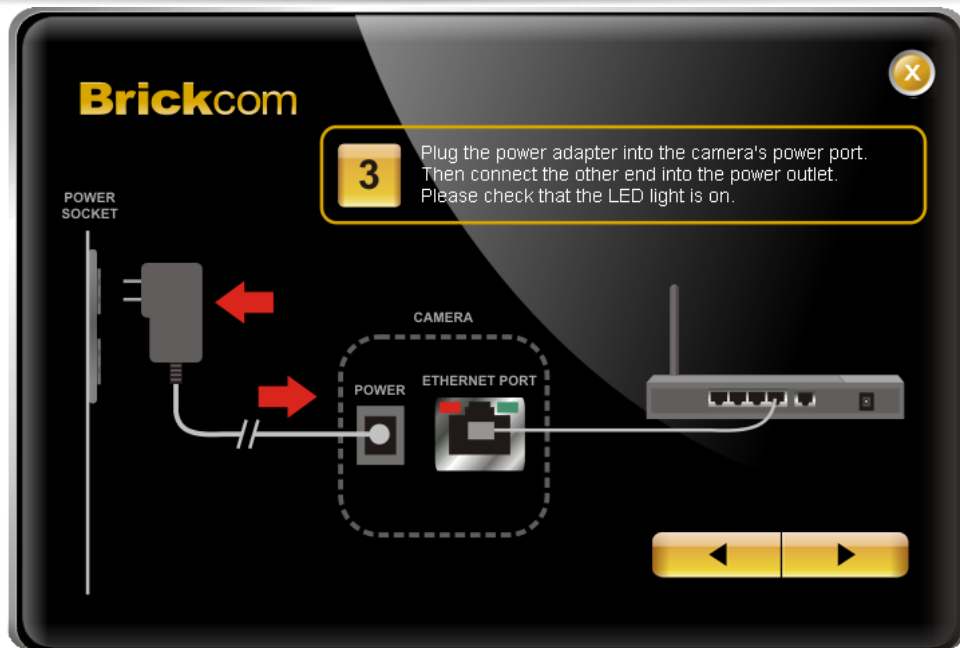
- A. Click <Start> to continue. The program will automatically search for the camera in the intranet.



NOTE - Check “Skip the hardware installation guide” to skip checking the hardware connection. To check the hardware installation settings, do not check the option box.



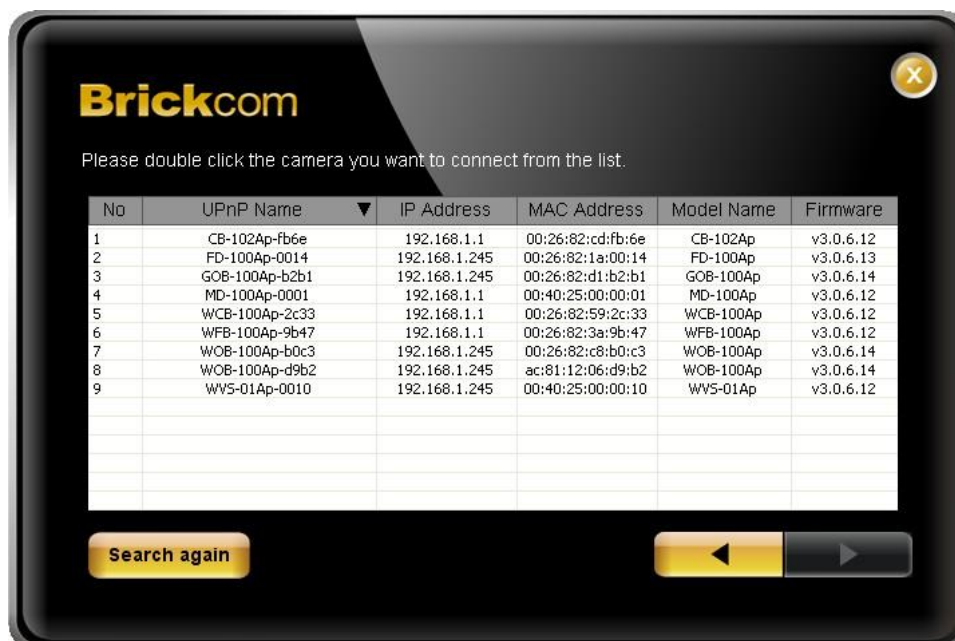




- B. Select either "Simple Mode" or "Professional Mode" to obtain the camera's IP settings. If "Simple Mode" is selected, EasyConfig will set up the connection automatically. If "Professional Mode" is selected, the user will need to configure the IP settings manually.



- C. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.



- D. If the connection was successful, the user will see the message:
“Congratulations. The installation of the camera is complete.”

When this window is displayed, click <PC-NVR> to start the PC-NVR program, <Live View> to view the live video from the connected IP camera, or <X> in the top right corner of the screen to close the installation window. If the user starts the PC-NVR program, please refer to the PC-NVR user manual.



Once installation is complete, the Administrator should proceed to the next section "Accessing the Network Camera" for necessary changes and configurations.

Chapter 5 - Accessing the Network Camera

5.1 Check Network Settings

The camera can be connected either before or immediately after the software installation. The Administrator should complete the network settings on the configuration page, including entering the correct subnet mask and IP address of gateway and DNS. Ask the network administrator or Internet service provider for the detail information.

The network Speed Dome Camera's default IP address is: 192.168.1.245. Therefore, to access the camera for the first time, set the PC's IP address as: 192.168.1.XXX; for example:

IP Address: 192.168.1.100

Subnet Mask: 255.255.255.0

5.2 Add Password to Prevent Unauthorized Access

The Administrator should immediately implement a new password as a matter of prudent security practice. For first time use, the user name and password for the Administrator are assigned as “admin/admin”. After the Administrator changes the Administrator password, the web browser will display an authentication window to confirm the new password. **Once the password is set, there is no provision to recover the Administrator's password. If the Administrator's password is lost, the only option is to restore the original factory default settings.**

The Administrator can set up a maximum of ten (10) user accounts. Users will be able to access the Network Camera, but will not be allowed to access the system and streaming configurations.

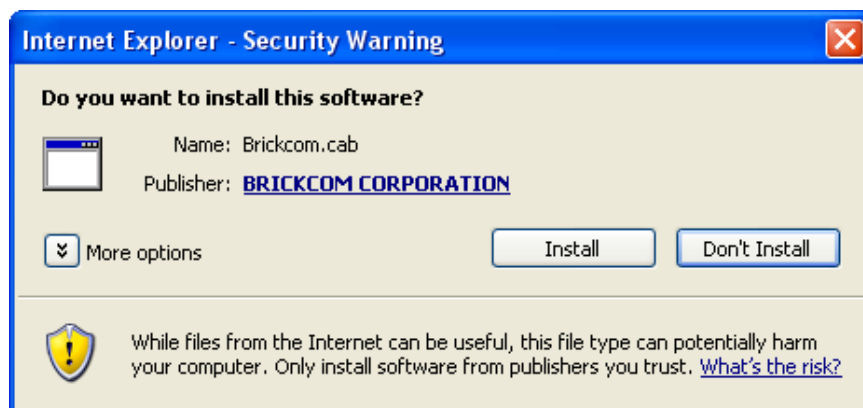
5.3 Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password. As stated on the previous page, for the default username and password for the Administrator are assigned as "**admin/admin**". For accounts other than the administrator's account, the user can choose to remember the password for future convenience. It is not recommended to check this box when viewing the camera feed from a public computer.



5.4 Installing the Plug-In

For the initial access to the camera in Windows, the web browser may prompt the administrator for permission to install a new plug-in for on Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser. Click "Install" to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security option and lower the security levels or contact the networking supervisor or IT for help.



NOTE – If an error occurred or the plug-in fails to install, it is because the version of the Electronic Signature is newly released and the VeriSign has not been submitted to Microsoft Windows update for validation. Therefore, plug-in will not have its root certificate. If IE discovers that there is no root certificate after the user's PC connects to the camera, it will automatically redirect to VeriSign Web site to download and install the latest root certificate to make the installation successfully. If the user's computer is able to connect to camera but unable to access the internet, then the installation will fail because the computer will not be able to download the latest root certificate. This problem can be resolved if computer can be connect to the internet and the camera at the same time and will not recur when Windows update patches become available.

Chapter 6 - Home

Home is the default page that opens when accessing the camera. Live video is displayed directly in the browser window. Click on the tab <Home> to access the Home Page. There are several function buttons on the Home page. Detailed information of each item is as described in the following chapter.

A. Function Items on Home Page

a. Multiple Languages Support

Multiple languages are supported, including German, English, Spanish, French, Italian, Japanese, Portuguese, Russian, Simplified Chinese, Traditional Chinese, for the viewer window interface.

b. Digital Zoom Control

In the full screen mode, users can implement digital PTZ by rotating the mouse wheel (for zoom in / out), and drag the mouse into any direction.



Screen Size Adjustment - Image display size can be adjusted to x1/2 and full screen.



Talk Button- Talk function allows the local site talks to the remote site. Click on the button to switch it to on / off. This function is only available for User who has granted this privilege by the Administrator.



Speaker Button- to mute / activate the audio. This function is only available for User who has granted this privilege by the Administrator.



Snapshot Button- Click on the button and the JPEG snapshots will automatically be saved in the appointed place. The default place of saving snapshots is: C:\. To change the storage location, please refer to [File Location](#) for further details.



For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Web Recording function.

Video Streaming Pause / Restart button- Click on the <Stop> button to disable video streaming; the live video will be displayed as black. Press the <restart> button to show the live video again.



Web Recording button- Click on the <Recording> button and the Live View through the web browsing will be directly recorded to the specific location on the local hard drive, which could be configured in the <File Location> page. The default storage location for the web recording is: C:\. Please refer to [File Location](#) for further details.

For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Web Recording function.



Control Panel Button- to open and close the Control Panel on the homepage.



Zoom Adjustment- to control zoom in / out. Or move the cursor closely onto the zoom adjustment bar to the desired zoom ratio.



Auto Focus (Continuous AF)- to enable AF mode. In this mode, the camera will keep in focus automatically and continuously regardless of zoom changes or any view changes. The Focus status will also be displayed above the live video pane as shown below.



Manual Button- users can adjust focus manually via Near / Far buttons.



Near / Far buttons- Click on the <Manual> button first, and users can adjust focus manually via <Near> and <Far> buttons. The status will also be displayed above the screen as shown below.

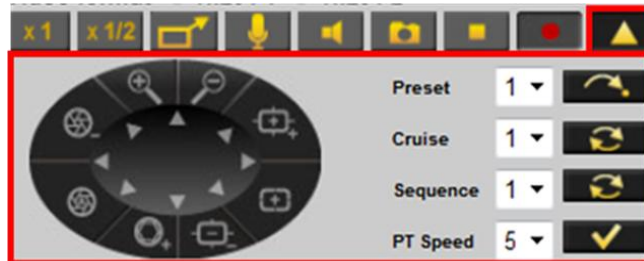
c. Pan/Tilt Control

Users can implement pan/tilt control by first moving the cursor to the live video pane; then left click and drag the pointer  in any direction.

d. Optical / Digital Zoom Control

In Normal View display mode, users can implement zoom in / out by first moving the cursor to the live video pane and then rotating the mouse wheel. As in Full Screen mode, users can directly rotate the mouse wheel to zoom in / out on the image. Digital zoom is only available when the function is activated and which is set in <Camera-Misc1> page under the <PTZ> tab; refer to the [Section Camera—Misc 1](#) for details. When the camera reaches the limit of its optical range, it will automatically switch to digital zoom.

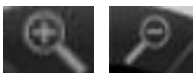
Furthermore, after clicking the <Control Panel> Button, the Control Panel will be shown as the figure below.



Pan & Tilt Direction Control- The <Pan and Tilt Direction Control> on the Control Panel allows users to control the Camera with browser viewers other than IE.



Iris Control (Auto Iris / Iris+ / Iris-) - Click on the buttons (Auto Iris / Iris+ / Iris-) to adjust the Iris parameters.






Zoom (Zoom In/ Zoom Out) - Click on the buttons to zoom in or zoom out.



Focus (Auto Focus / Focus Near / Focus Far) - Click on the buttons to adjust the focus as near, far or automatic.

e. Run Preset / Cruise / Sequence


After setup the Preset / Cruise / Sequence lines according to [PTZ Settings](#), select a Preset / Cruise / Sequence line and start it by clicking on the <Run> button ( /  / ).

f. PT Speed (1~10)

Set a number between 1 and 10 as the PT Speed every time users pan or tilt the Camera via the Pan & Tilt Direction Control Panel. 1 is the slowest, 10 is the fastest.

g. Set Center Mode

Right click on the Live Video Pane and select <Set Center Mode>. Then users can position the interest area in the center of the Live Video Pane automatically by clicking on the point of interest. In <Set Center Mode>, right click on the Live

Video Pane again and select <Set Emulated Joystick Mode> to return to control the Camera direction by left clicking and dragging the pointer  on the Live Video Pane.

Chapter 7 - System

Under the tab <System>, there are categories as the table below:

| | |
|--------|--|
| System | System Security Network DDNS Mail FTP HTTP Application Motion Detection Network Failure Detection Storage Management Recording Schedule File Location View Information Factory Default Software Version Software Upgrade Maintenance |
|--------|--|



NOTE- The System configuration page is only accessible by the Administrator.

7.1 System

The System Setting can be found under the path: **System> System**.

A. Host Name

The name is for camera identification. If alarm function is enabled and is set to send alarm message by Mail / FTP, the host name entered here will display in the alarm message.

B. Time Zone

Select the time zone from the drop-down menu.

C. Enable Daylight Saving Time

To enable DST, please check the item and then specify time offset and DST duration. The format for time offset is [hh:mm:ss]; for instance, if the amount of time offset is one hour, please enter “01:00:00” into the field.

D. Time format

Choose a time format (yyyy/mm/dd or dd/mm/yyyy) from the drop-down menu. The time format for “PC date” under <Sync with Computer Time> and “Date” under <Manual> will be changed according to the selected format.

E. Sync with Computer Time

Select the item and video date and time display will synchronize with the PC's.



NOTE- Users **MUST** click on the <Save> button to confirm the setting.

Otherwise the time will not be synced.

F. Manual

The Administrator can set video date, time and day manually. Entry format should be identical with that shown next to the center field.

G. Sync with NTP Server

Network Time Protocol (NTP) is an alternate way to synchronize the camera's clock with a NTP server. Please specify the server that is wished to synchronize in the center field. Then select an update interval from the drop-down menu. For further information about NTP, please see the web site: www.ntp.org.



NOTE- The synchronization will be done every time the camera boots up.

7.2 Security

The Security setting can be found under this path: **System> Security**.

Click the Security category, there will be a drop-down menu with tabs including <User>, <HTTPS>, <IP Filter>, and <IEEE 802.1X>.

7.2.1 User

The User setting can be found under this path: **System> Security> User**.

A. Admin Password

Change the administrator's password by inputting the new password in both text boxes. The input characters/numbers will be displayed as dots for security purposes. After clicking on <Save>, the web browser will ask the Administrator for the new password for access. The maximum length of the password is 14 digits.



NOTE-The following characters are valid: A-Z, a-z, 0-9, !#\$%&'-.@^_~.

B. Add user

Type the new user's name and password and click on <Add> to add the new user. Both user name and password can be up to 16 characters. The new user will be displayed in the user name list. There is a maximum of twenty user accounts. Each user can be assigned the privileges of <Camera control>, <Talk> and <Listen>.

a. I/O access

This item supports fundamental functions that enable users to view video when accessing to the camera.

b. Camera control

This item allows the appointed User to change camera parameters on the Camera Setting page.

c. Talk/Listen

Talk and Listen functions allow the appointed user in the local site (PC site) communicating with, for instance, the administrator in the remote site.

C. Manage User

a. Delete user

To delete a user, select the user name that is wished like to delete from the drop-down user list and then click on <Delete> to remove it.

b. Edit user

Select a user name from the drop-down user list and click on <Edit> to edit the user's password and privilege.



NOTE- It is required to enter the User password as well as select the function open to the user. When finished, click on <Save> to modify the account authority.

7.2.2 HTTPS

The HTTPS setting can be found under this path: **System> Security> HTTPS**.

<HTTPS> allows secure connections between the IP Camera and web browser using <Secure Socket Layer (SSL)> or <Transport Layer Security (TLS)>, which ensure camera settings or Username / Password info from snooping. It is required to install a self-signed certificate or a CA-signed certificate for implementing <HTTPS>.

To use HTTPS on the IP Camera, a HTTPS certificate must be installed. The HTTPS certificate can be obtained by either creating and sending a certificate request to a Certificate Authority (CA) or creating a self-signed HTTPS certificate, as described below.

A. Create Self-signed Certificate

Before a CA-issued certificate is obtained, users can create and install a self-signed certificate first.

Click on <Create> button under "Create self-signed certificate" and provide the requested information to install a self-signed certificate for the IP Camera. Please refer to the last part of this section: [Provide the Certificate Information](#) for more details.



NOTE- The self-signed certificate does not provide the same high level of security as when using a CA-issued certificate.

B. Install Signed Certificate

Click on the <Create Certificate Request> button to create and submit a certificate request in order to obtain a signed certificate from CA.

Provide the request information in the create dialog. Please refer to the following [Provide the Certificate Information](#) for more details.

When the request is complete, the subject of the Created Request will be shown in the field. Click on <Properties> below the Subject field, copy the PEM-formatted request and send it to the selected CA.

When the signed certificate is returned, install it by uploading the signed certificate.

C. Provide the Certificate Information

To create a Self-signed HTTPS Certificate or a Certificate Request to CA, please enter the information as requested:

| | Create Self Signed Certificate | Create Certificate Request |
|---------------------|--------------------------------|----------------------------|
| Country | √ | √ |
| State or Province | √ | √ |
| Locality | √ | √ |
| Organization | √ | √ |
| Organizational Unit | √ | √ |
| Common Name | √ | √ |
| Valid Day | √ | - |

- Country-** Enter a two-letter combination code to indicate the country the certificate will be used in. For instance, type in “US” to indicate United States.
- State or province-** Enter the local administrative region.
- Locality-** Enter other geographical information.
- Organization-** Enter the name of the organization to which the entity identified in “Common Name” belongs.

- e. **Organization Unit-** Enter the name of the organizational unit to which the entity identified in “Common Name” belongs.
 - f. **Common Name-** Indicate the name of the person or other entity that the certificate identifies (often used to identify the website).
 - g. **Valid days-** Enter the period in days (1~9999) to indicate the valid period of certificate.
- Click on <OK> to save the Certificate Information after complete.

7.2.3 IP Filter

The IP Filter setting can be found under this path: **System> Security> IP Filter**.

Using the IP filter, access to the IP Camera can be restricted by denying / allowing specific IP addresses.

A. *Enable IP Filter*

Check the box to enable the IP Filter function. Once enabled, the listed IP addresses (IPv4) will be allowed / denied access to the IP Camera.

Select <Allow> or <Deny> from the drop-down list and click on the <Apply> button to determine the IP Filter behavior.

B. *Add / Delete IP Address*

Input the IP address and click on the <Add> button to add a new filtered address.

The Filtered IP Addresses list box shows the currently configured IP addresses. Up to 256 IP address entries may be specified.

To remove an IP address from the list, please select the IP and then click the <Delete> button.

7.2.4 IEEE 802.1X

The IEEE 802.1X setting can be found under this path: **System> Security> IEEE 802.1X**.

The IP Camera is allowed to access a network protected by 802.1X/ EAPOL (Extensible Authentication Protocol over LAN).

Users need to contact with the network administrator for gaining certificates, user IDs and passwords

A. CA Certificate

The CA certificate is created by the Certification Authority for the purpose of validating itself. Upload the certificate for checking the server's identity.

B. Client Certificate / Private Key

Upload the Client Certificate and Private Key for authenticating the IP Camera itself.

C. Settings

a. Identity

Enter the user identity associated with the certificate. Up to 16 characters can be used.

b. Private Key Password

Enter the password (maximum 16 characters) for user identity.

c. Enable IEEE 802.1X

Check the box to enable IEEE 802.1X.

Click on <Save> to save the IEEE 802.1X / EAP- TLS setting.

7.3 Network

The Network setting can be found under this path: **System> Network**.

Click on the <Network> category, there will be a drop-down menu with tabs including <Basic>, <QoS>, <SNMP>, and <UPnP>.

7.3.1 Basic

The Basic setting can be found under this path: **System> Network> Basic**.

Users can choose to connect to the IP Camera with fixed or dynamic (DHCP) IP address. The IP Camera also provides PPPoE support for users who connect to the network via PPP over Ethernet (PPPoE).

A. General

a. *Get IP address automatically (DHCP)*

The camera's default setting is <Use fixed IP address>. Please refer to User's Manual for login with the default IP address.

If select <Get IP address automatically>, after the IP Camera restarts, users can search it through the installer program: EasyConfig, which can be found in AutoRun Tool in the supplied CD.



NOTE- Please make the record of the IP Camera's MAC address, which can be found in the label of the camera, for identification in the future.

b. *Use fixed IP address*

To setup static IP address, select <Use fixed IP address> and move the cursor to the IP address blank and insert the new IP address, ex. 192.168.7.123; then go to the Default gateway (explained later) blank and change the setting, ex. 192.168.7.254. Press <Save> to confirm the new setting.

- IP address- This is necessary for network identification.
- Subnet mask

It is used to determine if the destination is in the same subnet. The default value is "255.255.255.0".

➤ **Default gateway**

This is the gateway used to forward frames to destinations in different subnet. Invalid gateway setting will fail the transmission to destinations in different subnet.

➤ **Primary DNS**

Primary DNS is the primary domain name server that translates hostnames into IP addresses.

➤ **Secondary DNS**

Secondary DNS is a secondary domain name server that backups the primary DNS.

c. Use PPPoE

For the PPPoE users, enter the PPPoE Username and Password into the fields, and click on the <Save> button to complete the setting.

d. Advanced

➤ **Web Server port**

The default web server port is 80. Once the port is changed, the user must be notified the change for the connection to be successful. For instance, when the Administrator changes the HTTP port for the IP Camera with IP address 192.168.0.100 to 8080, the user must type in the web browser "http://192.168.0.100:8080" instead of "http://192.168.0.100".

➤ **RTSP port**

The default setting of RTSP Port is 554; the setting range is from 1024 to 65535.

➤ **MJPEG over HTTP port**

The default setting of MJPEG over HTTP Port is 8008; the setting range is from 1024 to 65535.

➤ **HTTPS port**

The default setting of HTTPS Port is 443; the setting range is from 1024 to 65535.



NOTE- Be aware to choose the different port from the one set for the web server port.

e. IPv6 Address Configuration

With IPv6 support, users can use the corresponding IPv6 address for browsing. Enable IPv6 by checking the box and click on <Save> to complete the setting.

7.3.2 QoS

The QoS (Quality of Service) setting can be found under this path: **System> Network> QoS**.

QoS allows providing differentiated service levels for different types of traffic packets, which guarantees delivery of priority services especially when network congestion occurs. Adapting the Differentiated Services (DiffServ) model, traffic flows are classified and marked with DSCP (DiffServ Codepoint) values, and thus receive the corresponding forwarding treatment from DiffServ capable routers.

A. DSCP Settings

The DSCP value range is from 0 to 63. The default DSCP value is 0, which means DSCP is disabled. The IP Camera uses the following QoS Classes: Video, Audio and Management.

a. Video DSCP

The class consists of applications such as MJPEG over HTTP, RTP/RTSP and RTSP/HTTP.

b. Audio DSCP

This setting is only available for the IP Cameras that support audio.

c. Management DSCP

The class consists of HTTP traffic: Web browsing.



NOTE- To enable this function, please make sure the switches / routers in the network support QoS.

7.3.3 SNMP

The SNMP (Simple Network Management Protocol) setting can be found under this path: **System> Network> SNMP**.

With Simple Network Management Protocol (SNMP) support, the IP Camera can be monitored and managed remotely by the network management system.

A. SNMP v1 / v2

a. Enable SNMP v1 / v2

Select the version of SNMP to use by checking the box.

b. Read Community

Specify the community name that has read-only access to all supported SNMP objects. The default value is “public”.

c. Write Community

Specify the community name that has read / write access to all supported SNMP objects (except read-only objects). The default value is “write”.

B. Traps for SNMP v1 / v2

Traps are used by the IP Camera to send messages to a management system for important events or status changes.

a. Enable Traps

Check the box to activate trap reporting.

b. Trap address

Enter the IP address of the management server.

c. Trap community

Enter the community to use when sending a trap message to the management system.

d. Trap Option

➤ Warm Start

A Warm Start SNMP trap signifies that the SNMP device, i.e. IP Camera, performs software reload.

Click on <Save> button when complete.

7.3.4 UPnP

The UPnP setting can be found under this path: **System> Network> UPnP**.

A. UPnP Setting

a. Enable UPnP

When the UPnP is enabled, whenever the IP Camera is presented to the LAN, the icon of the connected IP Cameras will appear in My Network Places to allow for direct access.



NOTE- To enable this function, please make sure the UPnP component is installed on the computer. Please refer to [Install UPnP components](#) for UPnP component installation procedure.

➤ Enable UPnP port forwarding

When the UPnP port forwarding is enabled, the IP Camera is allowed to open the web server port on the router automatically.



NOTE- To enable this function, please make sure that the router supports UPnP and it is activated.

➤ Friendly name

Set the name for the IP Camera for identity.

7.4 DDNS

The DDNS setting can be found under this path: **System> DDNS**.

Dynamic Domain Name System (DDNS) allows a host name to be constantly synchronized with a dynamic IP address. In other words, it allows those using a dynamic IP address to be associated to a static domain name so others can connect to it by name.

A. Enable DDNS

Check the item to enable DDNS.

a. Provider

Select one DDNS host from the provider list.

b. Host name

Enter the registered domain name in the field.

c. Username/E-mail

Enter the username or e-mail required by the DDNS provider for authentication.

d. Password/Key

Enter the password or key required by the DDNS provider for authentication.

7.5 Mail

The Mail setting can be found under this path: **System> Mail**.

The Administrator can send an e-mail via Simple Mail Transfer Protocol (SMTP) when an alarm is triggered. SMTP is a protocol for sending e-mail messages between servers. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified and the message text is transferred.

Two sets of SMTP can be configured. Each set includes SMTP Server, Account Name, Password and E-mail Address settings. For SMTP server, contact the network service provider for more specific information.

7.6 FTP

The FTP setting can be found under this path: **System> FTP**.

The Administrator can set as sending alarm message to a specific File Transfer Protocol (FTP) site when an alarm is triggered. Users can assign alarm message to up to two FTP sites. Enter the FTP details, which include server, server port, user name, password and remote folder, in the fields.

Click on <Save> when finished.

7.7 HTTP

The HTTP setting can be found under this path: **System> HTTP**.

An HTTP Notification server can listen for the event notification messages from the IP Cameras. Enter the HTTP details, which includes server name (for instance, <http://192.168.0.1/admin.php>), user name, and password in the fields. <Alarm> triggered and <Motion Detection> notifications can be sent to the specified HTTP server.

Click on <Save> when finished.



NOTE- Please refer to: [Application> Send HTTP notification / Motion Detection](#) for HTTP Notification settings.

7.8 Application (Alarm Settings)

The Application setting can be found under this path: **System> Application**.

The Camera equips four alarm inputs and two relay outputs for cooperating with alarm system to catch events' images.

A. Alarm Pin Selection

Select an alarm pin which is to be configured from the <Alarm Pin Selection> field. Then click on the button <Edit> below the field to carry on alarm programming.

a. Alarm Setting

➤ Alarm Switch

The default setting for the Alarm Switch function is <Off>. Enable the function by selecting <On>. Users can also activate the function according to the schedule previously set in the <Schedule> setting page. Select <By schedule> and click <Please select...> to choose the desired schedule from the drop-down menu.

➤ Alarm Type

Select an alarm type, <Normal close> or <Normal open>, that corresponds with the alarm application.

b. Triggered Action (Multi-option)

The Administrator can specify alarm actions that will take at an alarm occurrence. All options are listed as follows:

➤ Enable Alarm Output 1/2

Select these items to enable alarm relay outputs.

➤ Send Message by FTP/E-Mail

The Administrator can select whether to send an alarm message by FTP and/or E-Mail when an alarm is triggered.

➤ Upload Image by FTP

Select this item and the Administrator can assign a FTP site and configure various parameters. When the alarm is triggered, event images will be uploaded to the appointed FTP site.

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined.

On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after the alarm input is triggered.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off. Select <Upload for ___sec> and enter the duration in the blank.

The images of the duration will be uploaded to FTP when the alarm input is triggered. The setting range is from 1 to 9999 seconds. Select <Upload during the trigger active> to make the images keep being uploaded to FTP during the trigger active until the alarm is released. Set the Image frequency as the upload frame rate. The setting range is from 1 frame to 15 frames.



NOTE- Make sure FTP configuration has been completed.

Refer to [FTP](#) for further details.

➤ Upload Image by E-Mail

Select this item and the Administrator can assign an e-mail address and configure various parameters. When the alarm is triggered, event images will be sent to the appointed e-mail address.

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined.

On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after alarm input is triggered.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off. Select <Upload for __sec> and enter the duration in the blank. The images of the duration will be uploading by E-mail when the alarm input is triggered. The setting range is from 1 to 9999 seconds. Select <Upload during the trigger active> to make the images keep being uploaded to E-mail during the trigger active until the alarm is released. Set the Image frequency as the upload frame rate. The setting range is from 1 frame to 15 frames.



NOTE- Make sure SMTP configuration has been completed.

Please refer to [Mail](#) for further details.

➤ PTZ Function

Assign a camera function: Preset, Sequence, Autopan or Cruise, and specify a Preset Point / Sequence Line / Autopan Path / Cruise Line for the camera to perform at an alarm occurrence.



NOTE- Please refer to the sections through [Preset Programming](#) to [Sequence Line Programming](#) for details of Preset Point / Cruise Line / Autopan Path / Sequence Line setups.

If the selected function is <Preset>, it is required to enter its dwell time (1 ~ 256 sec.) in the corresponding field as shown below. When the alarm is triggered, the camera will go to the selected Preset Point and stay there for a user-defined period of time. As for other function modes, the camera will keep executing the specified function; to stop the performance, simply change the camera's status.



NOTE- The dwell time is only adjustable when selecting **Preset** as the alarm action. When the dwell time is up, the Camera will go back to its trigger position and recheck alarm pin status.

➤ Send HTTP notification

Check this item, select the destination HTTP address, and specify the parameters for event notifications by <Alarm> triggered. When an alarm is triggered, the notification can be sent to the specified HTTP server.

For instance, if the custom parameter is set as "action=1&group=2", and the HTTP server name is "http://192.168.0.1/admin.php", the notification will be sent to HTTP server as "http://192.168.0.1/admin.php?action=1&group=2" when the alarm is triggered.

➤ Record Stream to SD Card

Select the item and the alarm-triggered recording will be saved into the Micro SD card.

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds. Select <Upload for __ sec> to set the recording duration after alarm is triggered. The setting range is from 1 to 99999 seconds. Select <Upload during the trigger active> to record the triggered video until the trigger is off.



NOTE- Please make sure the local recording (with Micro SD / SDHC card) is activated so that this function can be implemented. Refer to [Recording](#) for further details.

c. File Name

Enter a file name in the File name field, ex. image.jpg. The uploaded image's file name format can be set in this section. Please select the one that meets the requirements.

➤ Add date/time suffix

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

➤ Add sequence number suffix (no maximum value)

File name: imageXXXXXXXXX.jpg

X: Sequence Number

➤ Add sequence number suffix (limited value)

File Name: imageXX.jpg

X: Sequence Number

The file name suffix will end at the number being set. For example, if the setting is up to "10," the file name will start from 00, end at 10, and then start all over again.

➤ **Overwrite**

The original image in the FTP site will be overwritten by the new uploaded file with a static filename.

d. Save

After complete all the settings mentions above, please click on the <Save> button to save all the settings on this page.

7.9 Motion Detection

The Motion Detection setting can be found under this path: **System> Motion Detection**.

Motion Detection function allows detecting suspicious motion and triggering alarms when motion volume in the detected area reaches / exceeds the determined sensitivity threshold value.

The function supports up to 4 sets of Motion Detection Settings. Settings can be chosen from the drop-down menu beside <Motion Detection>. In each set of setting, there is a frame (**Motion Detection Window**) displayed on the Live Video Pane (shown as the figure below). The Motion Detection Window is for defining the motion detection area. To change the size of the Motion Detection Window, move the mouse cursor to the edge of the frame and draw it outward / inward. Moving the mouse to the center of the frame can shift the frame to the intended location.

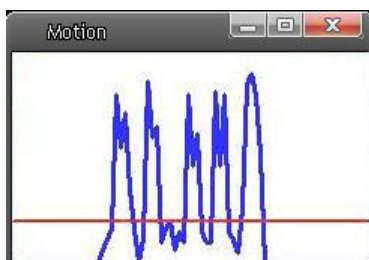


Users can configure up to 10 sets of Motion Detection Windows in each set of Motion Detection Setting. Click on the <add> button under the Live Video Pane to add a Motion Detection Window. To cancel a Motion Detection Window, move the mouse cursor to the selected Window, and click on the <delete> button.

If the Motion Detection function is activated, the pop-up window (Motion) with indication of motion will be shown.



When motion is detected, the signals will be displayed on the Motion window as shown below.



A. Motion Detection

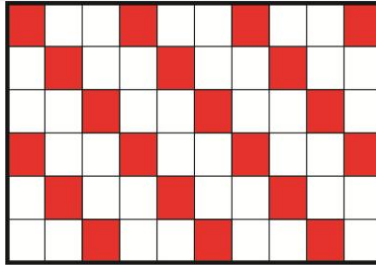
In each set of Motion Detection Setting, the default setting for the Motion Detection function is <Off>. Enable the function by selecting <On>. Users can also activate the function according to the schedule previously set in the <Schedule> setting page. Select <By schedule> and click <Please select...> to choose the desired schedule from the drop-down menu.

B. Motion Detection Setting

Users could adjust various parameters of Motion Detection in this section.

a. Sampling pixel interval [1-10]:

The default value is 1. If the value is set as 3, it means within the detection region, system will take one sampling pixel for every 3 pixels by each row and each column (refer to the figure below).



b. Detection level [1-100]:

The default level is 10. The item is to set detection level for each sampling pixel; the smaller the value, the more sensitive it is.

c. Sensitivity level [1-100]:

The default level is 80, which means if 20% or more sampling pixels are detected differently, system will detect motion. The bigger the value, the more sensitive it is. Meanwhile, when the value is bigger, the red horizontal line in the motion indication window will be lower accordingly.

d. Time interval (sec) [0-7200]:

The default interval is 10. The value is the interval between each detected motion.

C. Triggered Action (Multi-option)

The Administrator can specify alarm actions that will take when motion is detected. All options are listed as follows:

a. Enable Alarm Output 1/2

Check the item and select the predefined type of alarm output to enable alarm relay output when motion is detected.

b. Send Alarm Message by FTP/E-Mail

The Administrator can select whether to send an alarm message by FTP and/or E-Mail when motion is detected.

c. Upload Image by FTP

Select this item and the Administrator can assign a FTP site and configure various parameters. When motion is detected, event images will be uploaded to the appointed FTP site.

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined.

On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after motion event occurs.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off. Select <Upload for __sec> and enter the duration in the blank. The images of the duration will be uploaded to FTP when the motion event occurs. The setting range is from 1 to 9999 seconds. Select <Upload during the trigger active> to make the images keep being uploaded to FTP during the trigger active until the event stops. Set the Image frequency as the upload frame rate. The setting range is from 1 frame to 15 frames.



NOTE- Make sure FTP configuration has been completed.

Refer to [FTP](#) for further details.

d. Upload Image by E-Mail

Select this item and the Administrator can assign an e-mail address and configure various parameters. When motion is detected, event images will be sent to the appointed e-mail address.

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined.

On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after the motion event occurs.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off. Select <Upload for __sec> and enter the duration in the blank. The images of the duration will be uploading by E-mail when the motion event occurs. The setting range is from 1 to 9999 seconds. Select <Upload during the trigger active> to make the images keep being uploaded to E-mail during the trigger active until the event stops. Set the Image frequency as the upload frame rate. The setting range is

from 1 frame to 15 frames.



NOTE- Make sure SMTP configuration has been completed.

Refer to [Mail](#) for further details.

e. Send HTTP notification

Check this item, select the destination HTTP address, and specify the parameters for event notifications by <Motion Detection> triggered. When an alarm is triggered, the notification can be sent to the specified HTTP server.

For instance, if the custom parameter is set as " [action=1&group=2](#)", and the HTTP server name is "http://192.168.0.1/admin.php", the notification will be sent to HTTP server as "http://192.168.0.1/admin.php?action=1&group=2" when alarm is triggered.

f. Record stream to SD Card

Select this item and the Motion Detection recording will be stored in Micro SD / SDHC card when motion is detected.

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds. Select <Upload for ___ sec> to set the recording duration after motion is triggered. The setting range is from 1 to 99999 seconds. Select <Upload during the trigger active> to record the triggered video until the trigger is off.



NOTE- Please make sure the local recording (with Micro SD / SDHC card) is activated so that this function can be implemented.

Refer to [Recording](#) for further details.

D. File Name

The uploaded image's filename format can be set in this section. Please select the one that meets your requirements.

E. Save

Please click on the <Save> button to save all the Motion Detection settings mentioned above.

7.10 Network Failure Detection

The Network Failure Detection setting can be found under this path:
System> Network Failure Detection.

Network Failure Detection allows the IP Camera to ping another IP device (e.g. NVR, VSS, Video Server, etc.) within the network periodically and generates some actions in case of network failure occurs, for instance, a Video Server is somehow disconnected.

Being capable of implementing local recording (through Micro SD card) when network failure happens, the IP Camera could be a backup recording device for the surveillance system.

A. Detection Switch

The default setting for the Detection Switch function is <Off>. Enable the function by selecting <On>. Users can also activate the function according to the schedule time that is previously set in the <Schedule> setting page. Select <By schedule> and click <Please select...> to choose the desired schedule from the drop-down menu.

B. Detection Type

Input the IP device address and the period of ping time to ping. The ping time setting range is from 1 to 99 minutes.

C. Triggered Action (Multi-option)

The Administrator can specify alarm actions that will take when network failure is detected. All options are listed as follows:

D. Enable Alarm Output 1 /2

Select the item to enable alarm relay output.

E. Record Stream to SD Card

Select the item and the alarm-triggered recording will be saved into your Micro SD card.

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds. Select <Upload for ___ sec> to set the recording duration after alarm is triggered. The setting range is from 1 to 99999 seconds. Select <Upload during the trigger active> to record the triggered video until the trigger is off.



NOTE- Please make sure the local recording (with Micro SD / SDHC card) is activated so that this function can be implemented. Refer to [Recording](#) for further details.

F. Send Alarm Message by FTP/E-Mail

The Administrator can select whether to send an alarm message by FTP and/or E-Mail when an alarm is triggered.

G. Save

Click on the <Save> button to save all the settings mentioned above.

7.11 Storage Management (Local Recording)

The Storage Management setting can be found under this path: **System> Storage Management**.

Users can implement local recording to the Micro SD / SDHC card up to 32GB. This page shows the capacity information of the Micro SD card and a recording list with all the recording files saved on the memory card. Users can also format the SD card and implement automatic recording cleanup through the setting page.

To implement Micro SD card recording, please go to the <Recording> page (refer to the section [Recording](#)) for activation.



NOTE- Please format the Micro SD / SDHC card when using for the first time. Formatting will also be required when a memory card already being used on one camera and later transferred to another camera with different software platform.

A. Device information

When users insert the Micro SD / SDHC card, the card information such as the memory capacity and status will be shown at Device Information section.

When the memory card is successfully installed, the memory card status shall be shown at <Device information> section in the Storage Management page.

B. Device setting

Click on the <Format> button to format the memory card.

C. Disk cleanup setting

Users can enable automatic recordings cleanup by specifying the time and storage limits.

D. Recording List

Each video file on the Micro SD / SDHC card will be listed in the Recording list. The maximum file size is 60 MB/per file.

When the recording mode is set as <Always> (consecutive recording) and the Micro SD / SDHC card recording is also allowed to be enabled by events triggered, once events occur, the system will immediately implement events recording to the memory card. Then the IP Camera will return to the regular recording mode after events recording.

a. Remove

To remove a file, select the file first, and then click on the <Remove> button.

b. Sort

Click on the <Sort> button, and the files in the Recording list will be listed in name and date order.



NOTE- The capital letter A/M/R appears in the very beginning of name denotes the sort of the recording: A stands for Alarm; M stands for Motion; R stands for regular recording.

c. Download

To open / download a video clip, select the file first, and then click on the <download> button below the Recording list field. The selected file window will pop up. Click on the AVI file to directly play the video in the player or download it to a specified location.

7.12 Recording (Local Recording)

The Recording setting can be found under this path: **System> Recording**.

In the Recording setting page, users can specify the recording schedule that fits the present surveillance requirement.

Recording

Recording Schedule

☒ Disable
☐ Always
☐ Only during time frame

| | Weekday | Start time | Duration |
|----|-----------|------------|----------|
| 1 | - - - - - | ---- | ---- |
| 2 | - - - - - | ---- | ---- |
| 3 | - - - - - | ---- | ---- |
| 4 | - - - - - | ---- | ---- |
| 5 | - - - - - | ---- | ---- |
| 6 | - - - - - | ---- | ---- |
| 7 | - - - - - | ---- | ---- |
| 8 | - - - - - | ---- | ---- |
| 9 | - - - - - | ---- | ---- |
| 10 | - - - - - | ---- | ---- |

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

Start time : Duration :

A. Activating Micro SD / SDHC Card Recording

Two types of schedule mode are offered: <Always> and <Only during Time Frame>. Users can select <Always> to activate Micro SD / SDHC Card Recording all the time. Or select a set of schedule from the time frame blank, check specific weekdays and setup the start time (hour:minute) and time period (hour:minute) to activate Micro SD / SDHC Card Recording at certain time frames. The setting range for time period hour is from 0 to 168. Please click on <Save> to save the setup.

B. Terminating Micro SD / SDHC Card Recording

Select <Disable> to terminate the recording function.

7.13 Schedule

The Schedule setting can be found under this path: **System> Schedule**.

This function allows the users to setup schedules for features including: <Alarm Switch>, <Motion Detection> and <Network Failure Detection>. The function supports up to 10 sets of time frames in the time frame list.

| | Weekday | Start time | Duration |
|----|-----------|------------|----------|
| 1 | - - - - - | ---- | ---- |
| 2 | - - - - - | ---- | ---- |
| 3 | - - - - - | ---- | ---- |
| 4 | - - - - - | ---- | ---- |
| 5 | - - - - - | ---- | ---- |
| 6 | - - - - - | ---- | ---- |
| 7 | - - - - - | ---- | ---- |
| 8 | - - - - - | ---- | ---- |
| 9 | - - - - - | ---- | ---- |
| 10 | - - - - - | ---- | ---- |

☐ Sun
 ☐ Mon
 ☐ Tue
 ☐ Wed
 ☐ Thu
 ☐ Fri
 ☐ Sat

Start time :
 Duration :

A. Setting Schedules

To set a schedule, please select a time frame from the time frame list first. Then check the boxes from below to choose the specific weekdays. At last, type in the start time (hour:minute) and the duration time (hour:minute) for activation of the schedule triggered features. The setting range for the duration time is from 00:00 to 168:59. Click <Delete> to delete a chosen time frame. Please click on <Save> to save the setup.



NOTE- Users **MUST** select <By schedule> under each feature setting page to enable the schedule function.

7.14 File Location (Snapshots and Web Recording)

The File Location setting can be found under this path: **System> File Location**.

Users can specify a storage location on the PC or in the hard drive for the snapshots and live video recording. The default setting is: C:\. Once confirm the setting, click on <Save>, and all the snapshots and web recording will be saved in the designate location.



NOTE- Make sure the selected file path contains valid characters such as letters and numbers.



NOTE- For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Snapshot and Web Recording function.

7.15 View Information

The View Information function can be found under this path: **System> View Information**.

Click on the category: <View Information>, there will be a drop-down menu with tabs including <Log File>, <User Information>, and <Parameters>.

7.15.1 Log File

The Log File function can be found under this path: **System> Log File**.

Click on the tab to view the system log file. The content of the file provides useful information about connections after system boot-up.

7.15.2 User Information

The User Information function can be found under this path: **System> User Information**.

The Administrator can view each added user's login information and privileges (refer to [Security](#)).

A. Get User Information

All the user accounts registered to the network camera will be listed in the <User information> zone in the form of **User:Password**

It indicates that the login username is “User”, and the password is “Password”.

B. Get User Privacy

Click on <get user privacy> at the bottom of the page, and the Administrator can view each user’s privileges as shown below:

User: 1:1:0:1

1:1:0:1= I/O access : Camera control : Talk : Listen (refer to [Security](#))

Therefore, it denotes the user is granted privileges of I/O access, Camera control and Listen.

7.15.3 Parameters

The Parameters function can be found under this path: **System> Parameter**.

Click on this item to view the entire system’s parameter setting such as Camera Settings, Mask Information and Network Information.

7.16 Factory Default

The Factory Default setting can be found under this path: **System> Factory Default**.

Users can follow the instructions on this page to reset the IP Camera to factory default settings if needed.

A. Full Restore

Click on the <Full Restore> button to recall the factory default settings. Then the system will restart in 30 seconds.



NOTE- The IP address will be restored to default.

B. *Partial Restore*

Press the <Partial Restore> button to recall partial default setting. Then the system will restart in 30 seconds.



NOTE- The IP address will not be restored to default.

C. *Reboot*

Click on the <Reboot> button, and the system will restart without changing current settings.

7.17 Software Version

The Software Version can be found under this path: **System> Software Version**.

The current software version is displayed in the software version page.

7.18 Software Upgrade

The Software Upgrade setting can be found under this path: **System> Software Upgrade**.



NOTE- Make sure the upgrade software file is available before carrying out software upgrade.

The procedure of software upgrade is as below:

Step 1: Click on <Browse> and select the binary file to be uploaded, ex. userland.



NOTE- Do not change the upgrade file name, or the system will fail to find the file.

Step 2: Pull down the upgrade binary file list and select the file you want to upgrade; in this case, select “userland.img.”

Step 3: Click on the <Upgrade> button. The system will check whether the upgrade file exists or not, and then begin to upload the upgrade file.

Subsequently, the upgrade status bar will be displayed on the page. When it runs to 100%, the upgrade process is finished.

After the upgrade process is finished, the viewer will return to Home page.

Step 4: Close the video browser.

Step 5: Go to <Start>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently install programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing DC Viewer.

Step 6: Open a new web browser, re-login the IP Camera, and then allow the automatic download of DC Viewer.

7.19 Maintenance

The Maintenance setting can be found under this path: **System> Maintenance**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the IP Camera.

A. Export

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

B. Upload

To copy an existing configuration file to the IP Camera, please click on <Browse> to select the configuration file first, and then click on the <Upload> button for uploading.

Chapter 8 - Streaming

Under the tab **<Streaming>**, there are categories including: **<Video Format>**, **<Video Compression>**, **<Video OCX Protocol>**, **<Video Frame Rate>**, and **<Audio>**.

In Streaming, the Administrator can configure specific video resolution, video compression mode, video protocol, audio transmission mode, etc. Further details of these settings will be specified in the following sections.

8.1 Video Format (Video Resolution / Video Deinterlace)

The Video Format setting can be found under this path: **Streaming> Video Format**.

A. Video Resolution

Under Video Resolution section, the available video resolution formats are including MJPEG and H.264. Up to 4 simultaneous channels can be configured.

Click on **<Save>** to confirm the setting.

B. Text Overlay Settings

Users can select the items to display on the live video, including date, time and text. The maximum length of the text string is 20 alphanumeric characters.

Click on **<Save>** to confirm the Text Overlay setting.

C. Video Rotate Type

Users can change video display type if necessary. Selectable video rotate types include Normal, Flip, Mirror, 90 degree clockwise, 180 degree rotate and 90 degree counterclockwise.

The following is descriptions for different video rotate type.

➤ Flip

If select **<Flip>**, the image will be rotated vertically.

➤ **Mirror**

If select <Mirror>, the image will be rotated horizontally.

➤ **90 Degree Counterclockwise / Clockwise**

Selecting <90 degree counterclockwise> / <90 degree clockwise> will make the image rotate 90° counterclockwise / clockwise.

➤ **180 Degree Rotate**

Selecting <180 Degree> will make the image rotate 180°.

Click on <Save> to confirm the setting.

D. GOV Settings

Users can set the GOV length to determine the frame structure (I-frames and P-frames) in a video stream for saving bandwidth. The setting range is from 2 to 64. Default value is 60, which means there is one I-frame in every 60 frames. A longer GOV length means lower I-frame frequency. The default value for H.264-1 / H.264-2 / H.264-3 / H.264-4 is 60 / 60 / 30 / 30.

Click on <Save> to confirm the GOV setting.

E. H.264 Profile

Users can set each H.264 channel to <Baseline Profile>, <Main Profile> or <High Profile> according to its compression needs. The default setting is <Main Profile>.

8.2 Video Compression

The Video Compression setting can be found under this path: **Streaming> Video Compression**.

Users can select a proper MJPEG/H.264 compression mode on the video compression page, depending on the application.

A. MJPEG Q (Quality) factor

A higher value implies higher bit rates and higher video quality. The default setting of MJPEG Q factor is 35; the setting range is from 1 to 70.

B. H.264-1 / H.264-2 / H.264-3 / H.264-4 bit rate

The default setting of H.264-1 is 4096 kbit/s, and for H.264-2 / H.264-3 / H.264-4 is 1024 kbit/s; the setting range for H.264-1 is from 64 to 8192 kbps, and for H.264-2 / H.264-3 / H.264-4 is from 64 to 2048 kbit/s.

C. Display Compression Information

Users can decide whether to display the compression information on the home page.

D. CBR Mode Setting

The CBR (Constant Bit Rate) mode could be the preferred bit rate mode if the available bandwidth is limited. It is important to take the image quality into account while choosing the CBR mode.

Click on <Save> to confirm the setting.

8.3 Video OCX Protocol

The Video OCX Protocol setting can be found under this path: **Streaming> Video OCX Protocol**.

In the Video OCX protocol setting page, users can select RTP over UDP, RTP over RTSP(TCP), RTSP over HTTP, or MJPEG over HTTP, for streaming the media over the network. In the case of multicast networking, users can select the Multicast mode. Click on <Save> to confirm the setting. Video OCX protocol setting options include:

A. RTP over UDP / RTP over RTSP(TCP) / RTSP over HTTP / MJPEG over HTTP

B. Multicast Mode

Fill in all the blanks, including <Multicast IP Address>, <Multicast H.264-1 / H.264-2 / H.264-3 / H.264-4 Video Port>, <Multicast MJPEG Video Port>, <Multicast Audio Port> and <Multicast TTL>.

8.4 Video Frame Rate

The Video Frame Rate setting can be found under this path: **Streaming> Video Frame Rate**. It is for setting the frames per second (fps) if necessary.

A. MJPEG / H.264-1 / H.264-2 / H.264-3 / H.264-4 Frame Rate

The default setting of MJPEG / H.264-1 / H.264-2 / H.264-3 / H.264-4 Frame Rate is 30 fps; the setting range is from 1 to 30.

Click on <Save> to confirm the setting.



NOTE- A lower frame rate will decrease the video smoothness.

8.5 Audio (Audio Mode and Bit Rate Settings)

The audio setting can be found under this path: **Streaming> Audio**.

In the Audio page, the Administrator can select the transmission mode and the audio bit rate.

A. Transmission Mode

a. Full-duplex (Talk and listen simultaneously)

In the Full-duplex mode, the local and remote sites can communicate with each other simultaneously, i.e. both sites can speak and listen at the same time.

b. Half-duplex (Talk or listen, not at the same time)

In the Half-duplex mode, the local / remote site can only talk or listen to the other site at a time.

c. Simplex (Talk only)

In the Talk only Simplex mode, the local site can only talk to the other site, and cannot listen to the other site.

d. Simplex (Listen only)

In the Listen only Simplex mode, the local site can only listen to the other site, and cannot talk to the other site.

e. Disable

Select the item to turn off the audio transmission function.

B. Server Gain Setting

Set the audio input/output gain levels for sound amplification. The audio gain values are adjustable from 1 to 6. The sound will be turned off if the audio gain is set to "Mute".

C. Bit Rate

The available audio transmission bit rates include 16 kbps (G.726), 24 kbps (G.726), 32 kbps (G.726), 40 kbps (G.726), uLAW (G.711) and ALAW (G.711). Both uLAW and ALAW signify 64 kbps but in different compression formats. A higher bit rate means higher audio quality and more bandwidth consumption.

D. Recording to Storage

Select <Enable> from the drop-down menu to record the audio along with the video into the SD card.

Click on <Save> to confirm the setting.

Chapter 9 - PTZ

Under the tab **<PTZ>**, there are categories including: <Preset>, <Cruise>, <Auto Pan>, <Sequence>, <Home>, <Tilt Range>, <Privacy Mask>, <Camera - Exposure>, <Camera - WB>, <Camera - Misc1>, <Camera - Misc2>, and <Camera - Default>.

9.1 Preset

The Preset Programming can be found under this path: **PTZ> Preset**.

Totally 256 Preset Points can be programmed for the IP Camera. Please refer to the instructions below to set a Preset Point.

A. Preset Setting

To setup a Preset Point, please first move the cursor to the live view pane. Then left click and drag the red pointer with PTZ controls to a

desired position and adjust the fine zoom / focus ratio. Subsequently, assign a number to the current position from the drop-down Num list (click on <PrePage> or <NextPage> button to reach number 1 to 256), and enter its descriptive name. Click on the button <Set> to save the settings mentioned above.

B. Preset Go

To have the camera move to a specified Preset position, please select the Preset Point from the drop-down Presetlist (click on <PrePage> or <NextPage> button to reach preset number 1 to 256). Then the camera will move to the specified Preset Point.

9.2 Cruise

The Cruise Programming can be found under this path: **PTZ> Cruise**.

The IP Camera supports up to eight Cruise Paths. Please follow the instructions below for Cruise Path setup.

A. Cruise Setting

To setup a Cruise Path, please first select a path number from the drop-down list. Then move the cursor to the live view pane, and move the camera to a desired view (using the PTZ controls) as the start point of a Cruise Path. Click on the <Set> button of <Record start>, and start programming the Cruise Path via the PTZ controls. When finishing programming, click on the <Set> button of <Record End> to quit. Then this Cruise Path will be automatically recorded.

B. Cruise Run

Select the Cruise Path from the drop-down list, click on the <Run> button, and then the camera will start touring around as recorded.

To view the camera touring around in the full screen mode, please move the cursor onto the live view pane, right-click and left-click to select "full screen". Then users can see the camera navigation in full screen.

To stop running a Cruise Path, simply move the cursor to the live view pane and move the camera in any direction.

9.3 Auto Pan

The Auto Pan Programming can be found under this path: **PTZ> Auto Pan**.

The IP Camera supports four Auto Pan Paths. Please refer to the instructions below to set an Auto Pan Path.

A. Auto Pan Setting

To setup an Auto Pan Path, please select a path number from the drop-down list first. Then move the cursor to the live view pane, and move the camera to a desired view as the Start Point of an Auto Pan Path. Click on the <Set> button of the <Start Point> and the current view will be automatically saved as the start point of the Auto Pan Path.



NOTE- The zoom ratio of an Auto Pan's Start Point will persist throughout the whole path.

Enter the speed ratio into the Speed field; the speed ratio ranges from 0 (low) to 3 (fast). Then choose to run the Auto Pan Path in right/left direction from the Direction drop-down list.

Move the camera to another desired position as the end point of the Auto Pan Path. Click on the <Set> button of the <End Point> to save the setting.

B. Auto Pan Run

Select the specified Auto Pan Path from the drop-down list, click on the <Run> button, and then the camera will start moving horizontally as recorded.

To view the camera panning in full screen mode, please move the cursor onto the live view pane, right-click and left-click to select "full screen". Then users can view the camera navigation in full screen.

To stop running an Auto Pan Path, simply move the cursor to the live view pane and move the camera in any direction.

9.4 Sequence

The Sequence Line Programming can be found under this path: **PTZ> Sequence**.

The IP Camera supports totally eight Sequence Lines; each Sequence Line consists of up to 64 Preset Points. Please refer to the instructions below to program a Sequence Line.



NOTE- Before setting this function, users must pre-define at least two Preset Points.

A. Sequence Setting

Please click on the <Edit> button in <Sequence Setting> section to enter the Sequence setting menu.

➤ Sequence Line

Please select the number of Sequence Line to be set from the drop-down list at the top of the Sequence Set menu.

➤ Sequential Preset Points Setting

Please select the Preset Points for the programmed Sequence Line in order. Assign a Preset Point from the <Name> list for the specified number of Preset Point (click <Pre Page> or <Next Page> button to reach preset point 1 to 256) and enter both Dwell Time (0~127) and Speed (0~14) into the corresponding fields.

When finishing the sequential Preset Points setting, please click on the button <Save> at the top of the Sequence Set menu.

B. Sequence Run

Select the specified Sequence Line from the drop-down list, click on the <Go> button, and then the camera will start moving toward each Preset Point sequentially as programmed.

To view the camera executing a Sequence Line in full screen mode, please move the cursor onto the live view pane, right-click and left-click

to select “full screen”. Then users can view the camera navigation in full screen.

To stop running the Sequence Line, simply move the cursor to the live view pane and move the camera in any direction.

9.5 Home

The Home Function can be found under this path: **PTZ> Home**.

The HOME function allows constant and accurate monitoring to avoid the Dome Camera idling or missing events. If the IP Camera is idle for a period of time, the HOME function will be activated automatically.

A. Home Setting

➤ Switch

Select <On> or <Off> to activate or disable the Home function. Then click on the <Set> button to save the setting.

➤ Time

The time here represents the duration of camera idle time before running a Preset Point / Cruise Line / Auto Pan Path / Sequence Line. When the Home function is activated, the Dome Camera will start to count down when it idles, and then execute the predefined action as time expires. The time period ranges from 1 to 128 minutes; please specify it in the field.

➤ Type

Please select a Home action type (Preset Point / Cruise Line / Auto Pan Path / Sequence Line) and specify the index of the Preset Point / Cruise Line / Auto Pan Path / Sequence Line from the drop-down <Type> and <Line> lists. Click on the button <Set> to save the Home settings.

9.6 Tilt Range

The Tilt Range Setting can be found under this path: **PTZ> Tilt Range**.

The IP Camera's tilt angle is adjustable from minimum -10° to maximum +190°. Please enter the desired minimum and maximum tilt angle into the

corresponding fields respectively. Click on the <Set> button to save the tilt angle settings.



NOTE- The tilt angle range is between -10° to +100° when the Flip function under Misc 1 setting page is set as <Off> or <M.E.>.



NOTE- The tilt angle range is between -10° to +190° when the Flip function under Misc 1 setting page is set as <Image>.

9.7 Privacy Mask

The Privacy Mask can be found under this path: **PTZ> Privacy Mask**.

The Privacy Mask function aims to avoid any intrusive monitoring. When setting a mask, it is suggested to set it at least twice bigger (height and width) than the masked object. The Dome Camera will assume the center of the selected view as a starting point. Therefore, please keep the target object / region nearly positioned in the center of the scene. Refer to the following descriptions for setting a privacy mask.



NOTE- When the Privacy Mask function is enabled, the Flip function under Misc 1 setting page will be disabled.

A. Mask Setting

➤ Switch

The Privacy Mask function can be activated or disabled. Click on <Set> to save the setting.

➤ Transparency

The Privacy Mask can be set as transparency if necessary.

➤ Color

Select a desired color from the <Color> drop-down list for the specified Privacy Mask. Click on <Set> to save the Privacy Mask's color properties.

➤ Mask

Specify the index number of the programmed Privacy Mask in the corresponding field.

➤ **Hsize and Vsize**

The size of a Privacy Mask can be customized by specifying its horizontal and vertical size. The value of <Horizontal Size> ranges from 1 to 80, while that of <Vertical Size> ranges from 1 to 60.

After finishing the setup of a Privacy Mask, click on the button <Add> to save the programmed Privacy Mask.

B. Mask Clearing

In this section, users can delete an existing Privacy Mask. Please select the Privacy Mask to be removed from the drop-down list, and click on the button <Clear>. Then the selected Privacy Mask will be removed.

C. PT Steps (1~30)

Users can setup the location of every privacy mask with the control panel on the Privacy Mask page. Set a number from 1 to 30 as the PT Step when users adjust the privacy mask via the control panel. Each step indicates 0.225°.

9.8 Camera— Exposure

The Exposure Setting can be found under this path: **PTZ> Camera - Exposure**.

In the Exposure Mode setting page, users can select either the <Full Auto> mode or adjust the parameters of the Shutter Priority / P-Iris / Iris Priority mode for optimized video output in accordance with the operating environment.

A. Shutter Priority Mode

In this mode, it is the shutter speed that takes main control of the exposure. The range of shutter speed is from 1/10000 to 1/30.

B. P-Iris Mode

In this mode, the minimum iris opening is limited to affect the exposure. The minimum iris opening can be adjusted from F4.8 to F9.6.

C. Iris Priority Mode

In this mode, it is the iris that has premier priority in control of the exposure. The value of iris is adjustable from F1.6 to F28.

D. Manual Mode

In this mode, users can change the Shutter speed (1/10000 to 1/30), Iris (F1.6 to F28), and Gain (1 to 15) manually.

9.9 Camera—WB (White Balance)

The White Balance Setting can be found under this path: **PTZ> Camera-WB**.

A camera needs to find the reference color temperature, which is a way of measuring the quality of a light source, for calculating all the other colors. The unit for measuring this ratio is in degree Kelvin (K). Users can select one of the White Balance Control modes according to the operating environment.

The following table shows the color temperature of some light sources for reference.

| Light Sources | Color Temperature in K |
|------------------------|------------------------|
| Cloudy Sky | 6,000 to 8,000 |
| Noon Sun and Clear Sky | 6,500 |
| Household Lighting | 2,500 to 3,000 |
| 75-watt Bulb | 2,820 |
| Candle Flame | 1,200 to 1,500 |

A. Auto Mode

The Auto Balance White mode is suitable for environment with light source having color temperature in the range roughly from 2700 to 7500K.

B. Indoor / Outdoor Mode

Select for indoor or outdoor mode.

C. ATW Mode (Auto Tracing White Balance)

The Dome Camera takes out the signals in a screen in the range from 2500 K to 10000 K.

D. Manual Mode

In this mode, users can change the White Balance value manually by specifying the Rgain and Bgain; the range of Rgain and Bgain is from 0 to 255.

9.10 Camera - Misc 1

(Miscellaneous Setup Menu 1)

The Miscellaneous Setting Menu 1 can be found under this path: **PTZ> Camera- Misc 1.**

In the Camera - Misc1 (Miscellaneous) Setup Menu, users can set various camera parameters including Backlight Compensation (BLC), Sharpness,

Exposure Compensation (ExpComp), Image Flip, Speed by Zoom and ICR function. Each setting is explained as follows:

A. BLC

Users can choose to activate or disable the BLC function. Click on the button <Set> to save the setting.

B. Sharpness

Increasing the sharpness level can make the image looked sharper; especially enhancing the object's edge. The Sharpness value is adjustable from 1 to 15. Click on the button <Set> to confirm the setting.

C. ExpComp

Users can define the value of Exposure Compensation; the value ranges from 1 to 15.

D. Flip

Users can track an object continuously when it passes through under the Dome Camera with setting Flip to Mechanical (M.E.) mode or Digital Flip (Image) mode.



NOTE- If a Preset Position or a point for other function (ex. Sequence) is set in the position that can only be reached through FLIP motion, then when the Flip function is turned off, the position cannot be reached anymore.



NOTE- To make the Dome Camera tilt between a specific range, such as -10° to +100° or -10° to +190°, please go to the **Tilt Range setting page** to set the tilt angle range. Otherwise, the Dome Camera will tilt 90° as the default setting.

➤ M.E. Mode

M.E. is a standard mechanical operation. As the Dome Camera tilts to the maximum angle, it will pan 180°, and then continue tilting to keep tracking objects.

➤ **Image Mode**

IMAGE represents digital IMAGE FLIP, which enables users to keep tracking objects seamlessly; under the mode, almost no delay occurs in comparing with that under the M.E. mode.

E. Speed by Zoom

Enable this function to adjust the pan/tilt speed automatically by internal algorithm when zooming. The larger zoom ratio leads to the lower rotating speed. Click on <Set> button to save the setting.

F. ICR Function

With the IR cut filter, the camera can still catch clear image at night time or in low light conditions.

➤ **Auto**

In the Auto mode, the internal circuit will automatically determine whether to remove the IR cut filter according to the image brightness level.

➤ **On**

Select the item to enable the IR cut filter.

➤ **Off**

Select the item to disable the IR cut filter.

9.11 Camera - Misc 2

(Miscellaneous Setup Menu 2)

The Miscellaneous Setting Menu 2 can be found under this path: **PTZ> Camera- Misc 2.**

In the Camera - Misc2 (Miscellaneous) Setup Menu, users can setup various functions such as Wide Dynamic Range (WDR), Auto Calibration, 2D Noise Reduction (2DNR), and TV System.

A. WDR

The WDR function is especially effective in environment with extreme contrast. Click on <Set> button to save the setting.

B. Auto Calibration

With the Auto Calibration function, the IP Camera calibrates when the deviation of dome pivot is detected. Click on <Set> button to save the setting.

C. 2DNR

With the 2D Noise Reduction function, the processor analyzes pixel by pixel and frame by frame to eliminate the environmental noise signal so that the highest quality image can be produced even in the low light conditions. Click on <Set> button to save the setting.

D. OSD

Select <ON> on OSD Setting to turn on the OSD display on the live video. The OSD display shows the pan/tilt degree and the shooting position of the Dome Camera, such as NE 050/00, which “NE” indicates the shooting position of the Dome Camera, “050” indicates the pan degree, “00” indicates the tilt degree. Click on <Set> button to save the setting.

E. Set Pan Zero

Click on <Set> to set the Dome Camera’s currently shooting position to be where the Dome Camera would start to pan (0 degree).

F. TV System

Select the video format that matches the present TV system. Click on <Set> button to save the setting.

9.12 Camera - Default

The Default Setting can be found under this path: **PTZ> Camera- Default.**

In the Camera - Default page, users can reset the camera to the factory default settings simply by clicking on the <Set Default> button.

Chapter 10 - Logout

Click on the tab <Logout> on the top of the page, and the login window will pop up. This enables login with another user name.