

network High Speed Dome IP Camera User's Manual

Indoor/Outdoor

Ver1.1

Table of Contents

1. Overview	3
2. Menu Tree	4
2.1 Home Page	5
2.1.1 Function Items on Home Page	5
2.2 System	9
2.2.1 System	9
2.2.2 Security	10
2.2.2.1 User	10
2.2.2.2 HTTPS	11
2.2.2.3 IP Filter	13
2.2.2.4 IEEE 802.1X	14
2.2.3 Network	15
2.2.3.1 Basic	15
2.2.3.2 QoS	17
2.2.3.3 SNMP	18
2.2.3.4 UPnP	19
2.2.4 DDNS	20
2.2.5 Mail	21
2.2.6 FTP	21
2.2.7 HTTP	21
2.2.8 Application	22
2.2.9 Motion Detection	27
2.2.10 Network Failure Detection	32
2.2.11 Storage Management (Local Recording)	34
2.2.12 Recording (Local Recording)	36
2.2.13 File Location (Snapshots and Web Recording)	37
2.2.14 View Information	38
2.2.14.1 Log File	38
2.2.14.2 User Information	38
2.2.14.3 Parameters	39
2.2.15 Factory Default	40
2.2.16 Software Version	40
2.2.17 Software Upgrade	40
2.2.18 Maintenance	41
2.3 Streaming	42
2.3.1 Video Format (Resolution and Video Deinterlacing)	42
2.3.2 Video Compression	44
2.3.3 Video OCX Protocol	45

2.3.4	Video Frame Skip.....	45
2.3.5	Audio (Audio Mode and Bit Rate Settings)	46
2.4	PTZ Settings.....	47
2.4.1	Preset.....	47
2.4.2	Cruise.....	48
2.4.3	Auto Pan	49
2.4.4	Sequence Line	50
2.4.5	Home	52
2.4.6	Tilt Angle	53
2.4.7	Privacy Mask.....	53
2.4.8	Camera— Exposure.....	55
2.4.9	Camera—WB Mode	56
2.4.10	Camera—Misc 1 (Miscellaneous Setups Menu 1)	57
2.4.11	Camera—Misc 2 (Miscellaneous Setups Menu 2)	59
2.4.12	Camera—Default.....	60
2.5	Logout	60
Appendix A: Install UPnP Components.....		61

1. Overview

The network Speed Dome Camera transmits digital video and audio data using wire connection. Live video can be monitored and recorded from window-based computer via network.

The video encoder supports real-time Main Profile H.264 D1 resolution which compresses the image size up to 40% off. Simultaneous dual streams, H.264/H.264 and H.264/MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support. Additionally, 3D de-interlaced technology provides superior image quality. It eliminates the “combing” effect due to scene change and performs more stabilized image.

With IP solution, multiple and authorized users can view the immediate image from any location through network even using a standard web-browser. It enables users to access and remote the camera without at specific locations.

2. Menu Tree

There are six main tabs including <Home>, <System>, <Streaming>, <PTZ> and <Logout> on the Home Page.

There are five tabs: Home, System, Streaming, PTZ and Logout on the top panel.

Home

Users can monitor live video of the targeted area.

System Setting

The Administrator can set host name, system time, root password, network related settings, etc. Further details will be interpreted in section [System Related Settings](#).

Streaming Setting

The Administrator can modify video resolution and rotate type and select video compression mode in this page.

PTZ Setting

Users are allowed to program Preset Point(s), Cruise Line(s), Auto Pan Path(s) and Sequence Line(s) via PTZ controls, and adjust various camera parameters including Auto Exposure (AE), White Balance (WB), Back Light Compensation (BLC), Sharpness, Exposure Compensation, Digital Zoom, etc.

Logout

Click on the tab to re-login the network Speed Dome Camera with another username and password.

2.1 Home Page

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.

2.1.1 Function Items on Home Page

Multiple Languages Support

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

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

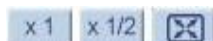
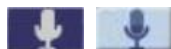


Image display size can be adjusted to x1/2 and full screen.

Talk button



(on/off)

Talk function allows the local site talks to the remote site. Click on the button to switch it to on/off. Please refer to [Security: Add user > Talk/Listen](#) for further details. This function is only open to “User” who has been granted this privilege by the Administrator.



NOTE: This function is only available for User who has granted this privilege by the Administrator.

Speaker button



(on/off)

Click on the <Speaker> button to mute/activate the audio.



NOTE: This function is only available for User who has granted this privilege by the Administrator.

Snapshot button  (on/off)

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 section [File Location](#) for further details.



NOTE: 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   (pause/restart)

Click on the <stop> button to disable video streaming, the live video will be displayed as black. Click on the <restart> button to show the live video again.

Web Recording button   (on/off)

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.



NOTE: 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   (close/open)

Click on the <Control Panel> button to open and close the Control Panel on the homepage.

Zoom Adjustment   (Wide/ Tele)

Click on the buttons <wide/tele> to control zoom in/out. Or move the cursor closely onto the zoom adjustment bar to the desired zoom ratio.

Focus Adjustment

• **Auto Focus (Continuous AF)**



Click on the <Auto> button 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**



Click on the <Manual> button, and 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.

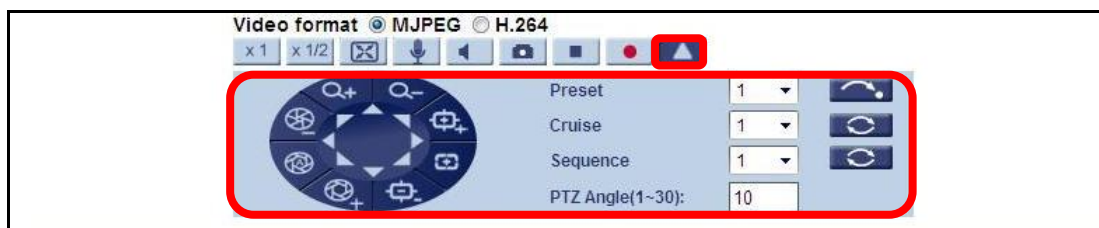
Pan/Tilt Control

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.

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 [Camera—Misc 1](#) for details. When the camera reaches the limit of its optical range, it will automatically switch to digital zoom.

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



Control Panel

- **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 near, far or automatically.


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 (/ / ).

PTZ Angle (1~30)

Set a number between 1 and 30 as the angle range every time users pan or tilt the Camera via the Pan & Tilt Direction Control Panel.

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.

2.2 System

Under the tab <**System**>, there are submenus including: <System>, <Security>, <Network>, <DDNS>, <Mail>, <FTP>, <HTTP>, <Application>, <Motion Detection>, <Network Failure Detection>, <Storage Management>, <Recording>, <File Location>, <Iris Adjustment>, <View Information>, <Factory Default>, <Software Version>, <Software Upgrade>, and <Maintenance>.



NOTE: The System configuration page is only accessible by Administrator.

2.2.1 System

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

Host Name

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

Time Zone

Select the time zone you are in from the drop-down menu.

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.

Sync With Computer Time

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

Manual

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

Sync with NTP Server

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

2.2.2 Security

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

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

2.2.2.1 User

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

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, !#\$%&'-.@^_~.

Add user

Type the new user's name and password and click on <Add> to add the new user. User name can be up to 16 characters, and the maximum length of the password is 14 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>.

- **I/O access**
This item supports fundamental functions that enable users to view video when accessing to the camera.
- **Camera control**
This item allows the appointed User to change camera parameters on the Camera Setting page.
- **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.

Manage User

- **Delete user**

To delete a user, pull down the user list, and select the user name you wish to delete. Then click on <Delete> to remove it.

- **Edit user**

Pull down the user list and select a user name. 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.

2.2.2.2 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.

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.

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 your selected CA.

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

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 2-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.

- **Organization Unit**
Enter the name of the organizational unit to which the entity identified in “Common Name” belongs.
- **Common Name**
Indicate the name of the person or other entity that the certificate identifies (often used to identify the website).
- **Valid days (Self-signed Certificate Only)**
Enter the period in days (1~9999) to indicate the valid period of certificate.

Click on <OK> to save the Certificate Information after complete.

2.2.2.3 IP Filter

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

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

- **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.

- **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 on the <Delete> button.

2.2.2.4 IEEE 802.1X

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

The 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.

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.

Client Certificate/ Private Key

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

Settings

- **Identity**
Enter the user identity associated with the certificate. Up to 16 characters can be used.
- **Private Key Password**
Enter the password (maximum 16 characters) for your user identity.

Enable IEEE 802.1X

Check the box to enable IEEE 802.1X.

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

2.2.3 Network

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

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

2.2.3.1 Basic

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

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

General

- **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: DeviceSearch.exe, which can be found in "DeviceSearch" folder 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.

- **Use fixed IP address**

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

When using static IP address to login into the Camera, users can access it either through "DeviceSearch" software (refer to User's Manual) or input the IP address in the URL bar and click on <Enter>.

- 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.

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.

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 of the IP Camera whose IP address is 192.168.0.100 from 80 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 assign a different port number for each separate service mentioned above.

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.

2.2.3.2 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.

DSCP Settings

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

- **Video**

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

- **Audio**

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

- **Management**

The class consists of HTTP traffic: Web browsing.



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

2.2.3.3 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.

SNMP v1/ v2

- **Enable SNMP**
Select the version of SNMP to use by checking the box.
- **Read Community**
Specify the community name that has read-only access to all supported SNMP objects. The default value is <public>.
- **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>.

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.

- **Enable Traps**
Check the box to activate trap reporting.
- **Trap address**
Enter the IP address of the management server.
- **Trap community**
Enter the community to use when sending a trap message to the management system.

Trap Option

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

Click on the <Save> button when complete.

2.2.3.4 UPnP

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

UPnP Setting

- **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 your 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 your router supports UPnP and it is activated

- **Friendly name**

Set the name for the IP Camera for identity.

2.2.4 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.

Enable DDNS

Check the item to enable DDNS.

Provider

Select one DDNS host from the provider list.

Host name

Enter the registered domain name in the field.

Username/E-mail

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

Password/Key

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

2.2.5 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. The configuration page is shown as follows:

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

2.2.6 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. The FTP setting page is shown below. Enter the FTP details, which include server, server port, user name, password and remote folder, in the fields. Click on <Save> when finished.

2.2.7 HTTP

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

A HTTP Notification server can listen for notification messages from IP Cameras by triggered events. Enter the HTTP details, which include 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.



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

2.2.8 Application

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

The network Speed Dome Camera supports 4 alarm inputs and 1 alarm output. Please make sure the alarm connections are properly wired before starting to configure alarm related settings on this <Application> page. Please refer to the pin definition table below for alarm system wiring.

Alarm Pin Definition

Please refer to User's Manual for Alarm Pin Definition to connect the alarm devices.

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.

Alarm Switch

The Administrator can enable or disable the alarm function.

Alarm Type

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

Triggered Action (Multi-option)

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

- **Enable Alarm Output**
Select the item to enable alarm relay output.
- **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.
- **Upload Image by FTP**
Select this item and the Administrator can assign a FTP site and configure various parameters as shown in the figure below. 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.

- **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.

- **Upload Image by E-Mail**

Select this item and the Administrator can assign an e-mail address and configure various parameters as shown in the figure below. 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 / Sequence Line / Autopan Path / Cruise 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 network Speed Dome 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 alarm is triggered.

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 your 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.

Save

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

2.2.9 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.

In the Motion Detection setting page, there is a frame (**Motion Detection Window**) displayed on the Live View Pane. 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.

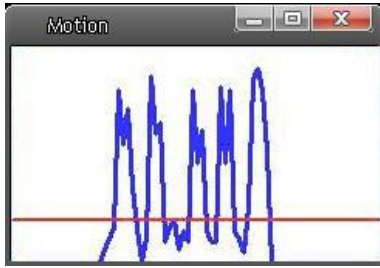


Up to 10 Motion Detection Windows can be set. Click on the <add> button under the Live View Pane to add a Motion Detection Window. To cancel a Motion Detection Window, move the mouse cursor to the selected Window, and click on the <delete> button.

If Motion Detection function is activated, the pop-off 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.



Detailed settings of Motion Detection are described as follows:

Motion Detection

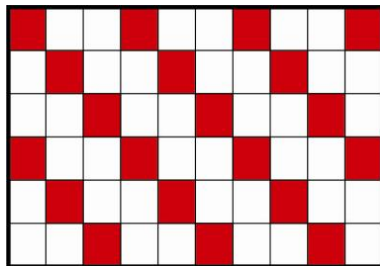
You will be able to turn on/off Motion Detection in System section. Default setting is Off.

Motion Detection Setting

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

- **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).



- **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.

- **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.

- **Time interval (sec) [0-7200]**

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

Triggered Action (Multi-option)

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

- **Enable Alarm Output**

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

- **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.

- **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.

- **Upload image by FTP**

Select this item and the Administrator can assign a FTP site and configure various parameters as shown in the figure below. 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.

- **Upload Image by E-Mail**

Select this item and the Administrator can assign an e-mail address and configure various parameters as shown in the figure below. 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.

- **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.

File Name

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

Save

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

2.2.10 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.

Detection Switch

You will be able to turn on/off Network Failure Detection in System section. Default setting is Off.

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.

Triggered Action (Multi-option)

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

- **Enable Alarm Output**
Select the item to enable alarm relay output.
- **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.

- **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.

Save

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

2.2.11 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 [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.

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.

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

Device setting

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

Disk cleanup setting

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

Recording List

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

- **Remove**

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

- **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.

- **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 as shown below. Click on the AVI file to directly play the video in the player or download it to a specified location.

2.2.12 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.

	Weekday	Start time	Duration
1	- 0 0 0 0 0 -	1:1	00:59
2	0 - - - - 0	00:00	24:00
3	- - - - -	----	----
4	- - - - -	----	----
5	- - - - -	----	----
6	- - - - -	----	----
7	- - - - -	----	----
8	- - - - -	----	----
9	- - - - -	----	----
10	- - - - -	----	----

Sun Mon Tue Wed Thu Fri Sat

Start time : 1:1 Duration : 00:59

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.

Terminating Micro SD/SDHC Card Recording

Select <Disable> to terminate the recording function.

2.2.13 File Location (Snapshots and Web Recording)

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

The network Speed Dome Camera supports JPEG snapshot function. Users can specify a storage location for the snapshots. The default setting is: C:\. Once confirm the setting, click on <Save>, and all the snapshots 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.

2.2.14 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>.

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

2.2.14.1 Log File

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

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

2.2.14.2 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](#)).

View User Login Information

All the users in the network will be listed in the <User information> zone, as shown below.

User: 4321

It indicates that one user's login username is "User", and password is "4321".

View User Privilege

Click on <get user privacy> down 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.

2.2.14.3 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.

2.2.15 Factory Default

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

The factory default setting page is shown as below. Follow the instructions to reset the network Speed Dome Camera to factory default settings if needed.

Set Default

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



NOTE: The IP address will be restored to default.

Reboot

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

2.2.16 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.

2.2.17 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 like the following:

Step 1: Click on <Browse> and select the binary file to be uploaded, ex. userland.jffs2.



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.jffs2>.

Step 3: Click on <Upgrade>. The system will first check whether the upgrade file exists or not, and then begin to upload the upgrade file. Subsequently, the upgrade status bar will display 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: Enter “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.

2.2.18 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.

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 as shown below. Click on <Save> and specify a desired location for saving the configuration file.

Upload

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

2.3 Streaming

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

In the Streaming submenus, 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.

2.3.1 Video Format (Resolution and Video Deinterlacing)

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

Video Format

Under Video Resolution section, the available video resolution formats are including MJPEG and H.264. Please refer to the User's Manual for more combination details.

Click on <Save> to confirm the setting.

Text Overlay Settings

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

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

Video Deinterlace

The network Speed Dome Camera supports de-interlacing function. Users can either choose to activate de-interlacing function or disable the function by selecting a mode from the list as shown below:

- 3D Deinterlacing
- Intra Field Deinterlacing
- Inter Field Deinterlacing (off)

Click on <Save> to confirm the Video Format setting.

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's one I-frame every 60 frames. Longer GOV means decreasing the frequency of I-frames.

Click on <Save> to confirm the GOV setting.

2.3.2 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 (see the figure below), depending on the application.

MJPEG Q (Quality) factor

Higher value implies higher bit rates and higher visual quality. The default setting of MJPEG Q factor is 35; the setting range is from 1 to 70. Click on <Save> to confirm the setting.

H.264-1/ H.264-2 bit rate

The default setting of H.264-1 is 4096 kbit/s and for H.264-2 is 1024 kbit/s; the setting range for H.264-1 is from 64 to 8192 kbit/s and for H.264-2 is from 64 to 2048 kbit/s. Click on <Save> to confirm the setting.

Display Compression Information

Users can also decide whether to display compression information on the Home page. Click on <Save> to confirm the setting.

CBR Mode Setting

The CBR (Constant Bit Rate) mode could be the preferred bit rate mode if the bandwidth available is limited. It is important to take account of image quality while choosing to use CBR mode. Click on <Save> to confirm the setting.

2.3.3 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 TCP, RTSP over HTTP or MJPEG over HTTP, for streaming media over the network. In the case of multicast networking, users can select the Multicast mode.

Video OCX protocol setting options include:

- **RTP over UDP/ RTP over RTSP(TCP)/ RTSP over HTTP/ MJPEG over HTTP**
- **Multicast Mode**
Enter all required data, including multicast IP address, H.264 video port, MJPEG video port, audio port and TTL into each blank.

Click on <Save> to confirm the setting.

2.3.4 Video Frame Skip

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

Video frame skipping is for saving bandwidth, if necessary. MJPEG/ H.264 Frame Skip options include:

- No skipping, default
- Frame skipping at 2 frame interval
- Frame skipping at 3 frame interval
- Frame skipping at 4 frame interval
- Frame skipping at 5 frame interval
- Frame skipping at 10 frame interval
- Frame skipping at 15 frame interval

Click on <Save> to confirm the setting.



NOTE: Higher frame skipping rate will decrease video smoothness.

2.3.5 Audio (Audio Mode and Bit Rate Settings)

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

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

Transmission Mode

- **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 be heard at the same time.
- **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.
- **Simplex (Talk only)**
In the Talk only Simplex mode, the local/remote site can only talk to the other site.
- **Simplex (Listen only)**
In the Listen only Simplex mode, the local/remote site can only listen to the other site.
- **Disable**
Select the item to turn off the audio transmission function.

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>.

Bit Rate

Selectable audio transmission bit rate 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. Higher bit rate will let higher audio quality and require bigger bandwidth.

Click on <Save> to confirm the setting.

2.4 PTZ Settings

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>.

2.4.1 Preset

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

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

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 for the current position from the drop-down Number 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.

Preset Go

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

2.4.2 Cruise

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

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

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 (PTZ controls) as the start point of a Cruise Path. Click the <Set> button of <Record Start> and start programming the Cruise Path via PTZ controls. When finishing programming, click the <Set> button of <Record End> to quit. Then this Cruise Path will be automatically recorded.

Cruise Run

Select the specified 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 full screen mode, please move the cursor onto the live view pane, right-click and left-click to select “fullscreen”. Then users can view 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.

2.4.3 Auto Pan

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

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

Auto Pan Setting

To setup an Auto Pan 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 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 room 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> for saving the setting.

Auto Pan Run

Select the specified Auto Pan Path from the drop-down list, press 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 "fullscreen". 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.

2.4.4 Sequence Line

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

The Network Speed Dome Camera supports totally 8 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.

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 in the top of the Sequence setting menu.
- **Sequential Preset Points Setting**
Please setup each Preset Point of the programmed Sequence Line in order, assigning a Preset Point from the <Name> list for the specified number of Preset Point (click on <Pre Page> or <Next Page> button to reach preset point 1 to 256) and entering both Dwell Time (0~255) and Speed (0~14) into the corresponding fields.

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

Sequence Run

Select the specified Sequence Line from the drop-down list, click on the <Go> button, and then the camera will start moving forward each scene 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 “fullscreen”. 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.

2.4.5 Home

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

Users are able to set an operation mode to ensure constant monitoring. If the network Speed Dome Camera idles for a period of time, the selected function will be activated automatically; this is the HOME function. The HOME function allows constant and accurate monitoring to avoid the Dome Camera idling or missing events.

Home Setting

- **Activate/Disable Home Function**
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 previous to 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.
- **Action Type**
Please select a Home action type (Preset Point/Cruise Line/Auto Pan Path/Sequence Line) and specify the number of Preset Point/Cruise Line/Auto Pan Path/Sequence Line from the drop-down “Type” and “Line” lists. Click on <Set> to save the Home settings.

2.4.6 Tilt Angle

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

The network Speed Dome 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. Press the "Set" button to save the tilt angle settings.

2.4.7 Privacy Mask

The Privacy Mask Setting 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: The Image Flip function (refer to section [Camera—Misc 1](#)) and the Image Inverse function (refer to section [Camera—Misc 2](#)) will be disabled automatically while the Privacy Mask function is enabled.

Mask Setting

- **Activate/Disable Privacy Mask Function**

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

- **Activate/Disable Transparency Mask**

The Privacy Mask can be set as transparency if necessary.

- **Color Setting**

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 Number**

Specify the number of the programmed Privacy Mask in the corresponding field. The numbers of Privacy Masks vary with camera models.

- **Mask Size**

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

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

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 readily disappear.

2.4.8 Camera— Exposure

The Camera 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 parameter of the Shutter/Iris/Bright Priority mode for optimized video output in accordance with the operating environment.

Full Auto Mode

In this mode, the camera's Shutter Speed, IRIS and AGC (Auto Gain Control) control circuits work together automatically to get consistent video output level.

Shutter Priority Mode

In this mode, it is shutter speed that takes main control of exposure. The range of shutter speed is from 1/10000 to 1/60. Users could select suitable shutter speed according to the environmental illuminance.

Gain Priority Mode

In this mode, it is gain that has premier priority in control of exposure. The value of iris is adjustable from F1 to F15.

Iris Priority Mode

In this mode, it is iris that has premier priority in control of exposure. The value of iris is adjustable from F1.6 to F22.

Manual Mode

In this mode, users can change the Shutter speed (1/10000 to 1), Gain (1 to 15), and Iris (F1.6 to F22) manually.

2.4.9 Camera—WB Mode

The Camera WB Mode Setting can be found under this path: **PTZ> Camera—WB Mode**.

A camera needs to find 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

Auto Mode

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

Indoor/outdoor Mode

Select for indoor or outdoor mode.

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.

Manual Mode

In this mode, users can change the White Balance value manually via specifying R gain and B gain; the range of R/B gain is from 0 to 255.

2.4.10 Camera—Misc 1 (Miscellaneous Setups Menu 1)

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

In the Camera—Misc (Miscellaneous) Setups Menu 1, users can set various camera parameters including Backlight Compensation (BLC), Sharpness, Exposures Compensation (ExpComp), Image Freeze, Image Flip, Digital Zoom, Speed by Zoom and ICR function. Each setting is specified as follows:

BLC

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

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 <Set> to save the setting.

ExpComp

Users can define the value of Exposure Compensation; the value ranges from 1 to 15. Click on <Set> to save the setting.

Freeze

Freeze function allows to hold the image while the camera is moving between preset positions such as in Preset mode and Sequence mode. Users can choose to activate or disable the function. Click on <Set> to save the setting.

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: Flip setting is manual-controlled only. 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, when 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 $+100^{\circ}$ or $-10^{\circ} \sim +190^{\circ}$, 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.



NOTE: The Privacy Mask function will be automatically disabled if the Image Flip function is enabled.

Digital Zoom

The network Speed Dome Camera can supports up to 12× Digital Zoom. Click on <Set> to save the setting.

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 decide the occasion to remove the IR cut filter according to the image brightness level.

- **On**

Select the item to remove the IR cut filter.

- **Off**

Select the item to disable IR function.

2.4.11 Camera—Misc 2 (Miscellaneous Setups Menu 2)

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

In the Camera—Misc (Miscellaneous) Setups Menu 2, users can setup various functions such as Wide Dynamic Range (WDR), Image Inverse, Auto Calibration, 2D/3D Noise Reduction (2DNR/3DNR) and Image Stabilizer.

WDR

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

Inverse

When the Image Inverse function is activated, the image will be inversed vertically and horizontally. Click the button <Set> to save the setting.

Auto Calibration

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

2D/ 3DNR

With the 2D/3D Noise Reduction function, the processor analyzes pixel by pixel and frame by frame to eliminate environmental noise signal so that the highest quality image can be produced even in low light conditions. In comparison with 2DNR, 3DNR generates better de-noising effects. Click on <Set> to save the setting.

STABILIZER

With the Image Stabilizer Function, the Speed Dome Camera can capture images that would otherwise be blurred due to the vibration. Users can select <ON> to turn on the Stabilizer. The default setting is <OFF>.

2.4.12 Camera—Default

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

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

2.5 Logout

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

Appendix A: Install UPnP Components

Please follow the instructions below to install UPnP components on Windows Vista/ Windows XP/ Windows 7.

Step 1: In the Windows, go to <Start Menu>, click on <Control Panel>, and then double click on <Add or Remove Programs>.

Step 2: Click on <Add/Remove Windows Components> in the Add or Remove Programs page.

Step 3: Select <Networking Services> from the Components list in the Windows Components Wizard window, and then click on <Details>.

Step 4: Select <UPnP User Interface> in the Networking Services' subcomponents list and then click on <OK>.

Step 5: Click on <Next> in the Windows Components Wizard page.

Step 6: Click on <Finish> to complete installation.