

FOR A GOOD **REASON** **GRUNDIG**

en

Owner's Manual

IP Cameras & Domes

GCI-C0735P Mini Smart Dome IP-Camera, Colour/B&W, 12x Zoom

GCI-C0745P Outdoor PTZ Dome IP-Camera 36x Zoom WDR

GCI-C0735P.13.1.04.02.2011

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1. Introduction

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

The video encoder supports the real-time Main Profile H.264 D1 resolution which compresses the image size up to 40%. 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, the 3D de-interlaced technology provides superior image quality. It eliminates the "combing" effect due to scene change and performs a more stabilised image.

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

2. Important Safety Instructions

Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.

Do not place conductive objects (e.g. screwdrivers, coins or any metal items) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.

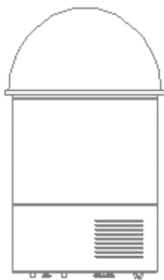
If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (GRUNDIG is not liable for problems caused by unauthorized modifications or attempted repair.)

To prevent fire or electric shock, do not expose the inside of this device to rain or moisture.

3. Package Contents

These parts are included for GCI-C0735P:



Camera



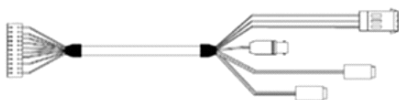
Optical Cover



Hard ceiling Mount
and Decoration Ring



M3 Screw, Fixing Plate



Data Cable for Power Supply
- Video and Audio (AC 24 V)



Quick Guide



CD (Manuals)

These parts are included for GCI-C0745P:



4. Installation

Do not install in a location subject to high temperature (over 50°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock. Keep out of direct sunlight and heat radiation sources. It may cause fire. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the image sensor.

Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock. Install it in a place with good ventilation.

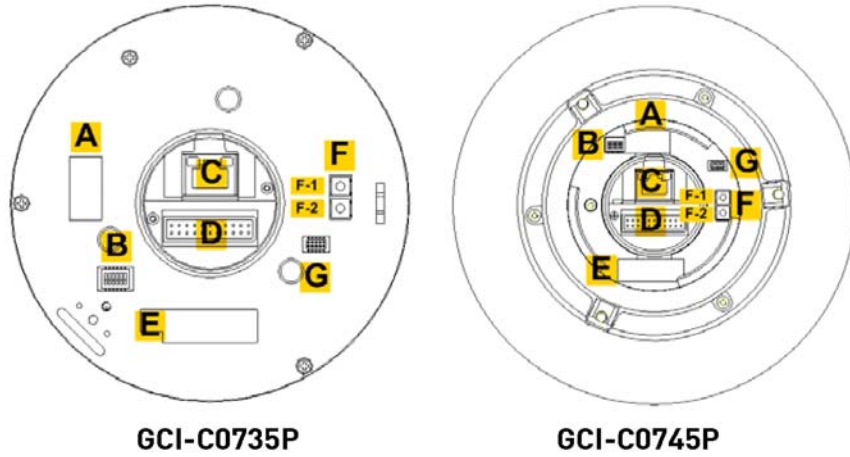
When installing the camera, fasten it securely and firmly. A falling camera may cause personal injury.

If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.

4.1. Switch & Connector Definition

There are various switches and connectors located on the Dome Camera's back plate as shown in the pictures below.

Please refer to the diagrams and tables for use of each switch/connector.



A	None	
B	Communication Switch (Reserved)	
C	RJ45 Connector	
D	22-Pin Connector	
E	None	
F	F-1	Reboot Button
	F-2	Factory Reset Button
G	ISP Connector (for FW upgrade)	

NOTE: DO NOT change the network Speed Dome Camera's Communication Switch factory default settings.

4.2. System Requirements

To perform the IP Camera via web browser, please ensure your PC is in good network connection, and meets the system requirements as described below.

Personal Computer :

- 1.) Intel Pentium M, 2.16 GHz or Intel Core 2 Duo, 2.0 GHz
- 2.) 2 GB RAM or more

Operating System :

Windows XP / Windows VISTA / Windows 7

Web Browser :

Microsoft Internet Explorer 6.0 or later
 Firefox
 Chrome
 Safari

Network Card :

10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation

Viewer :

ActiveX control plug-in for Microsoft IE

4.3. Cable Connection

Before logging in, please complete power, alarm (if available) and network connections and check the system requirements. For further details and instructions on cable connection, please refer to the following sections.

Please refer to the illustrations below for connector definition of each kind of data cable (AC 24V) before wiring. On the power connector you find a sticker with a definition of the pin allocation.

When cabling, please refer to the table below for pin definition of the 22-pin connector on the data cable.

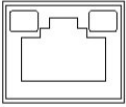


Ethernet Cable Connection:

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 RJ45 connector of the IP Camera, and the other end of the cable to the network switch or PC.

NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the IP Camera directly to the 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.

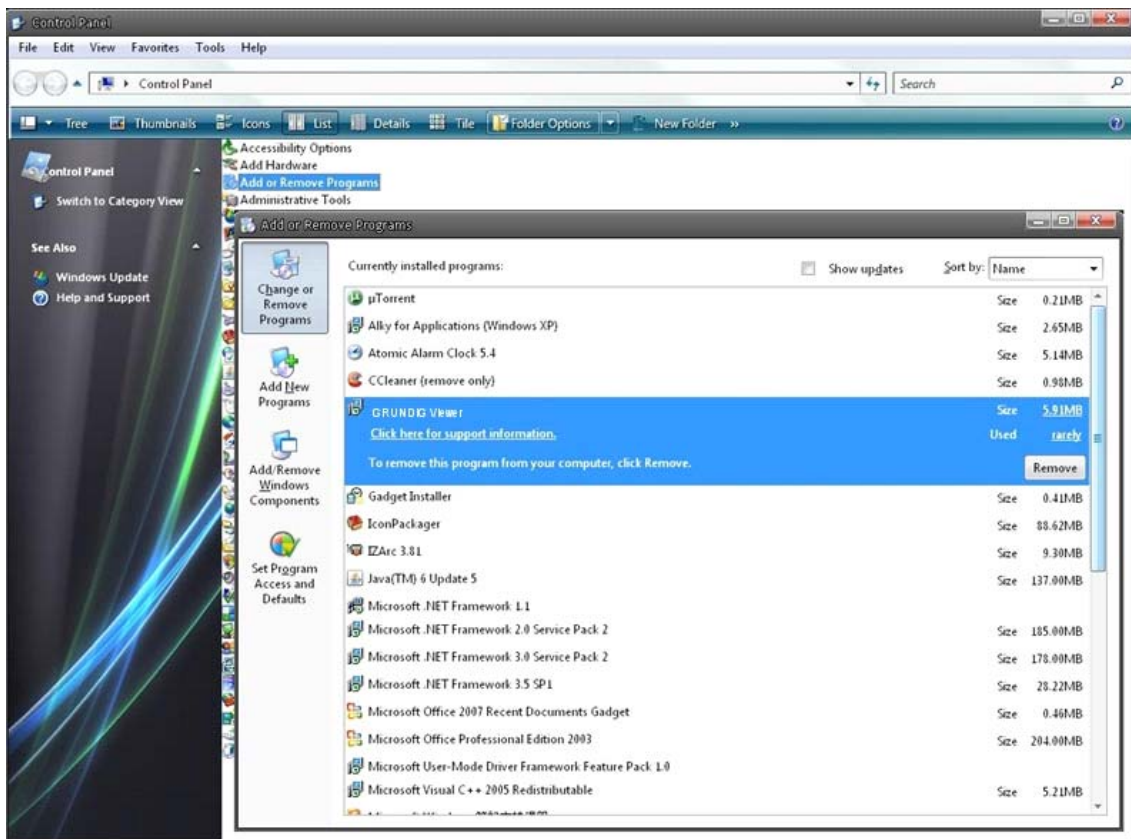
Orange Activity Light flashes for network activity indication.

5. Deleting the Existing GRUNDIG Viewer

For users who have installed the GRUNDIG Viewer for 1.3 Megapixel Series IP Cameras on the PC, please first delete the existing GRUNDIG Viewer from the PC before accessing this IP Camera.

Deleting the GRUNDIG Viewer :

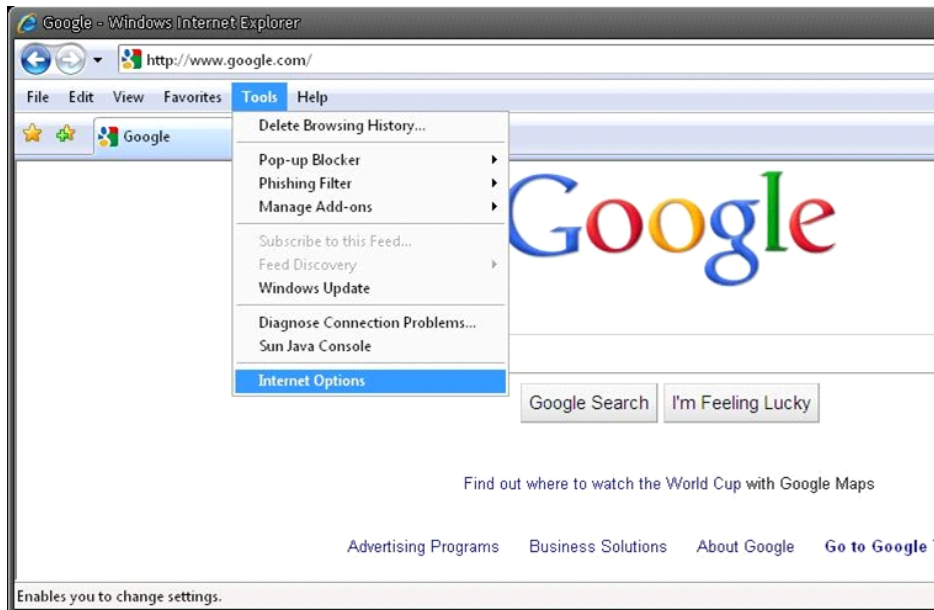
Click "Control Panel", and then click on "Add or Remove Programs". In the "Currently installed programs" list, select "GRUNDIG Viewer" and click the button "Remove" to uninstall the existing GRUNDIG Viewer as shown in the figure below.



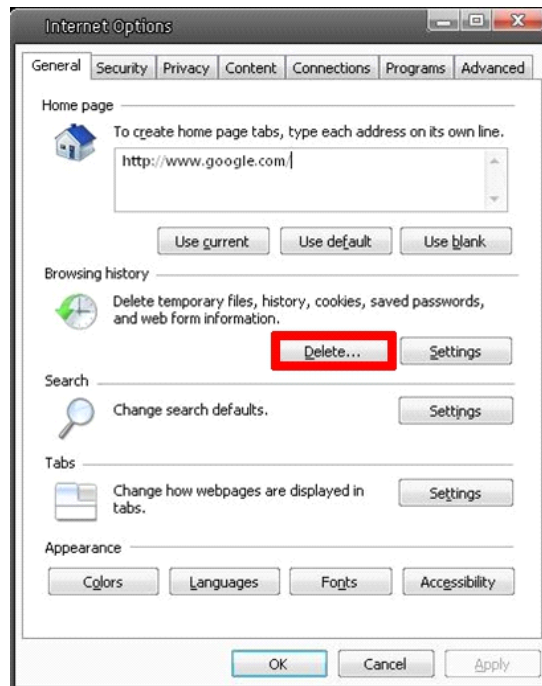
Deleting Temporary Internet Files :

To improve the browser performance, it is suggested to clean up all the files in the Temporary Internet Files. The procedure is as follows (for other web browsers please read the corresponding manuals):

STEP 1: Click on the "Tools" tab and select the option "Internet Options".



STEP 2: Click on "Delete" in the first pop-up window. Then tap the "Delete Files" in the "Temporary Internet files" section in the next pop-up window.



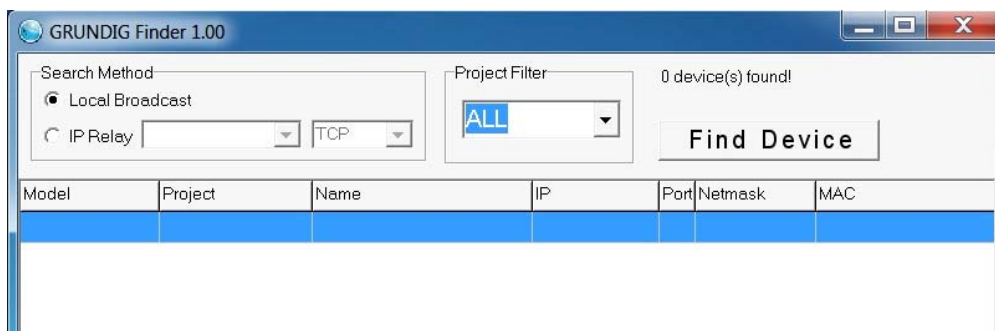


6. Accessing the Camera

For initial access to the IP Camera, users can search the camera through the installer program: GRUNDIG Finder.exe, which can be found on the supplied CD.

GRUNDIG Finder Software Setup :

Step 1: Double-click on the program GRUNDIG Finder.exe (see the icon below); its window will appear as shown below. Then click the "Find Device" button.

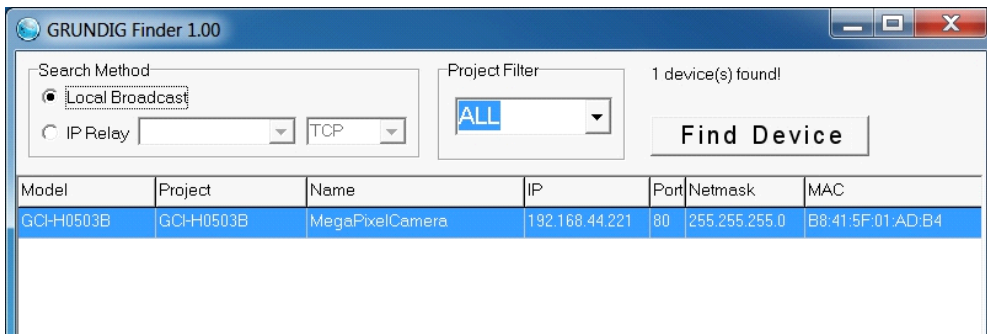


Step 2: The security alert window will pop up. Click "Unblock" to continue.

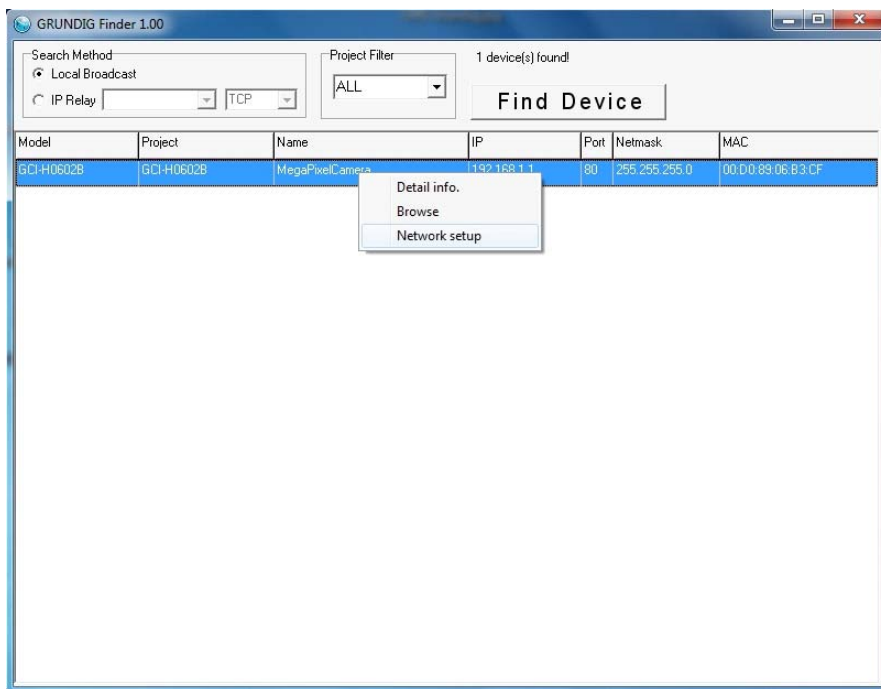


Device Search :

Step 3: Click "Find Device" again, and all the IP devices found will be listed on the page, as shown in the picture below. The IP Camera's default IP address is: 192.168.1.1.



Step 4: Double-click or right-click and select "Browse" to access the camera directly via web browser.



Step 5: Then the dialogue box for entering the default username and password (as shown below) will appear for logging in to the IP Dome Camera.



The default login ID and password for the Administrator are:

Login ID: admin
Password: 1234

NOTE: ID and password are case sensitive.

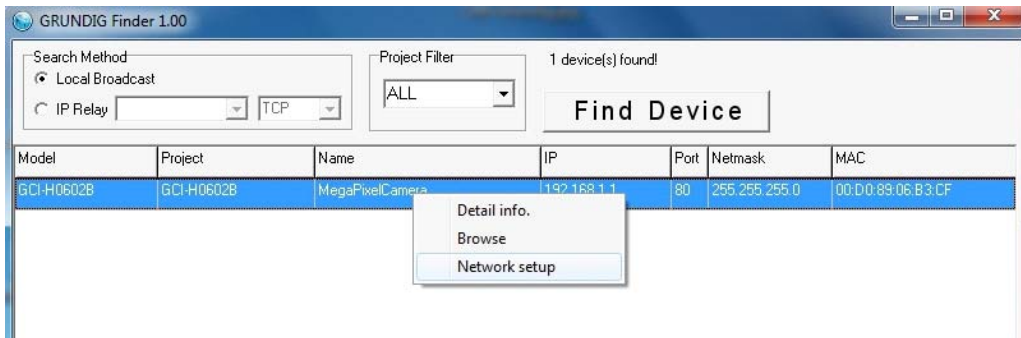
It is strongly advised that administrator's password be altered for security concerns. Refer to section 9.2. Security for further details.

Additionally, users can change the IP Camera's network property, either DHCP or Static IP, directly in the device finding list. Refer to the following section for changing the IP Camera's network property.

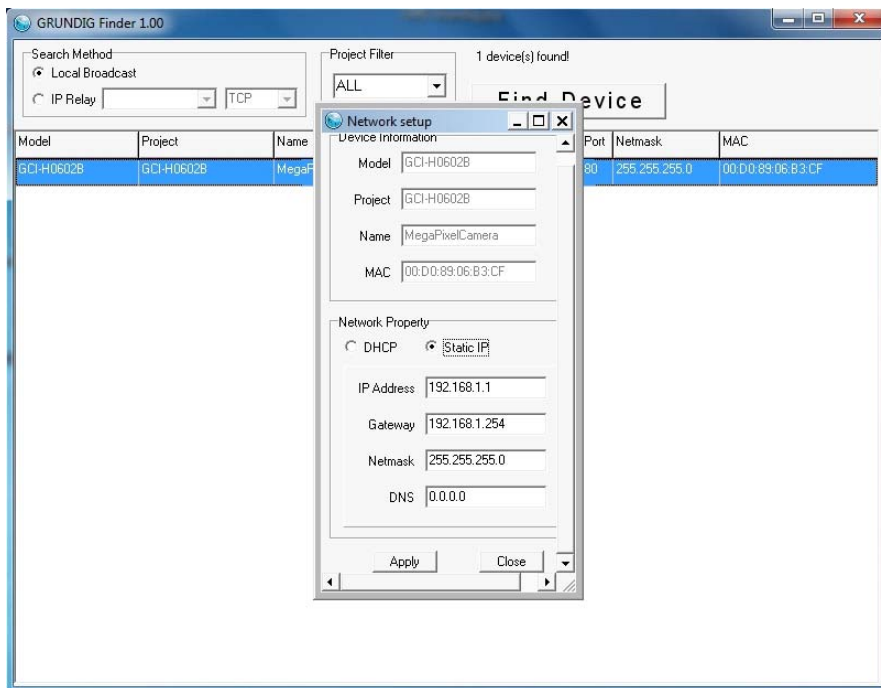
Example of changing IP Camera's network property :

Users can directly change an IP Camera's network property, e.g. from static IP to DHCP, in the finding device list. The way to change the IP Camera's network property is specified below:

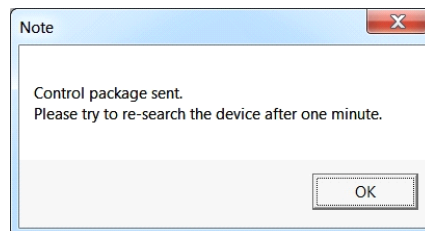
Step 1: In the finding device list, click on the IP Camera of which you would like to change the network property. On the selected item, right-click and select "Network Setup". Meanwhile, record the IP Camera's MAC address, for future identification.



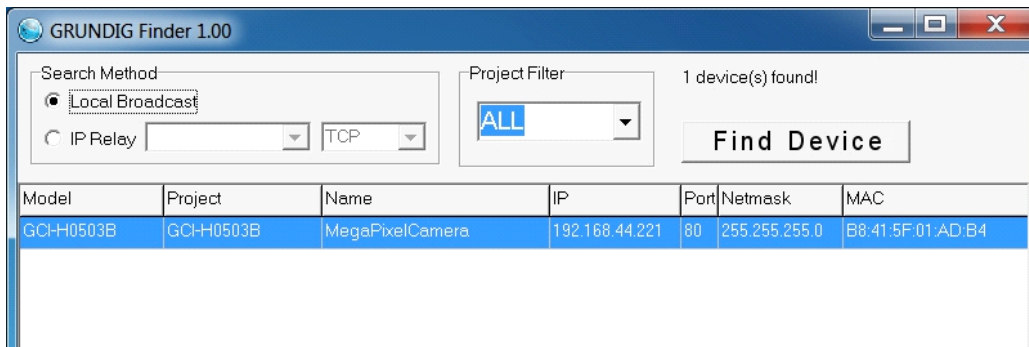
Step 2: The "Network Setup" page will come out. Select "DHCP," and press the "Apply" button down the page.



Step 3: Click "OK" on the Note of setting change. Wait for one minute to re-search the IP Camera.



Step 4: Click the “Find Device” button to search all the devices. Then select the IP Camera with the correct MAC address. Double-click on the IP Camera, and the login window will come out.



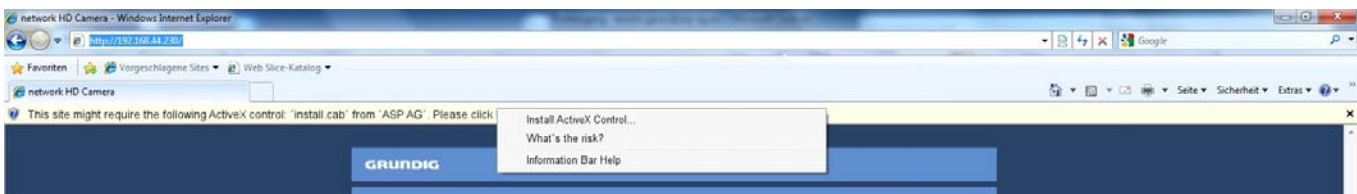
Step 5: Enter User name and Password to access the IP Camera.

Installing the GRUNDIG Viewer Software Online :

For initial access to the IP Camera, a client program, GRUNDIG Viewer, will be automatically installed to your PC when connected to the IP Camera.

If the Web browser doesn't allow the GRUNDIG Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (see 14. Internet Security Settings) to continue the process.

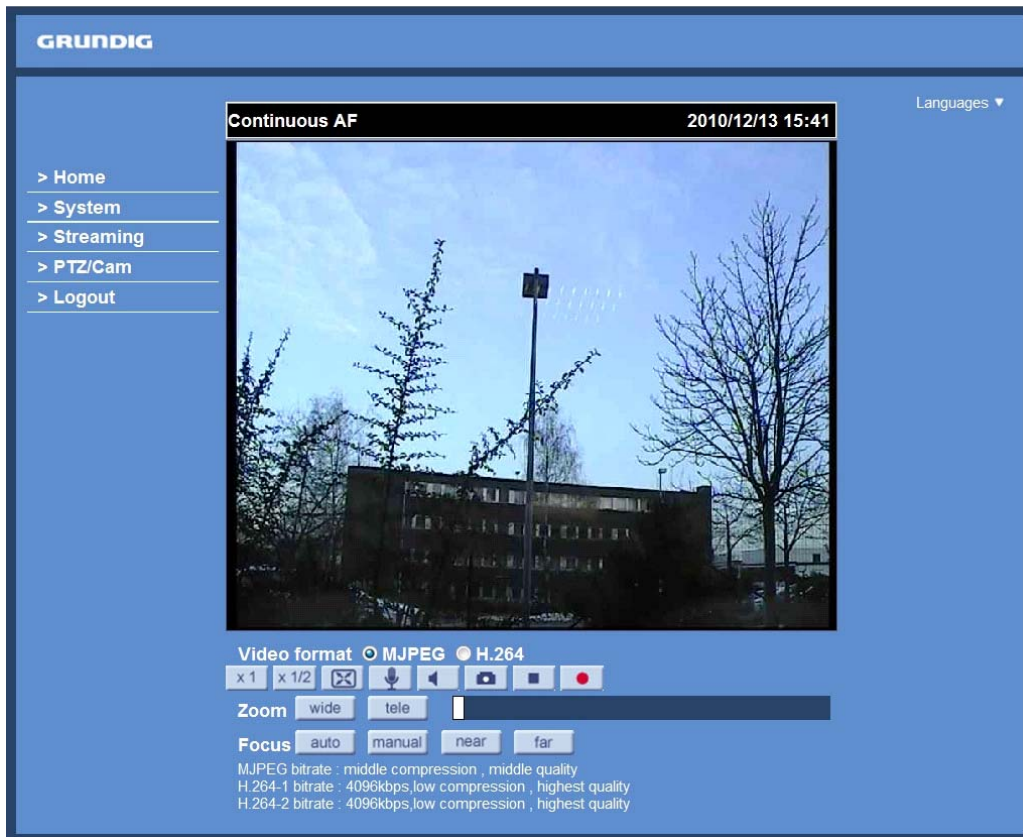
The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in browser (see the picture below). Right-click on the Information Bar and select “Install ActiveX Control...” to allow the installation.



Then the security warning window will pop up. Click “Install” to carry on software installation.

Click “Finish” to close the GRUNDIG Viewer window when download is finished. For the detailed software download procedure, please refer to chapter 10. GRUNDIG Viewer Download Procedure.

Once logged in to the IP Camera, users will see the Home page as shown below:



Administrator/User Privileges :

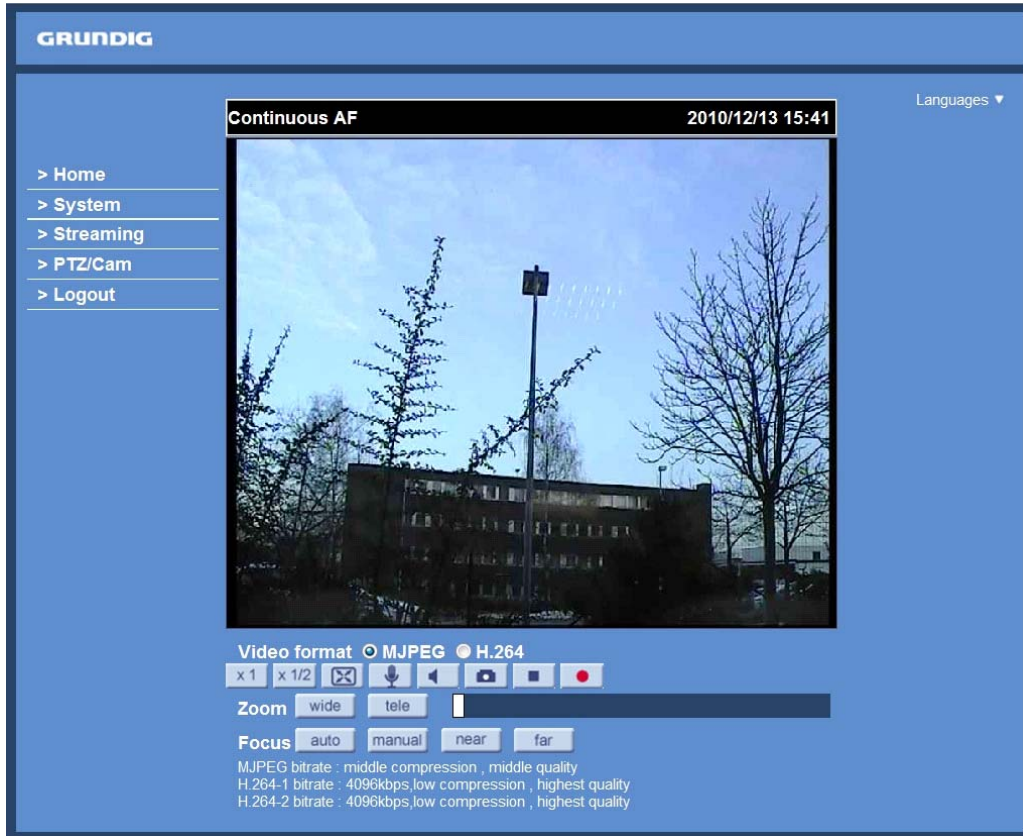
“Administrator” represents the person who can configure the IP Camera and who authorizes users to have access to the camera; “User” refers to whoever has access to the camera with limited authority, i.e. to enter Home and Camera setting pages.

Image and Focus Adjustment :

This image appears on the Home page when successfully accessing to the IP Camera. Adjust zoom and focus as necessary to produce a clear image.

7. Browser-based Viewer Introduction

The picture below shows the Home page of the IP Camera's viewer window.



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

Home :

Users can monitor the live video of the targeted area.

System setting :

The administrator can set host name, system time, admin password, network related settings, etc. Further details will be interpreted in chapter 9. System Related Settings.

Streaming setting :

The Administrator can configure a specific video resolution, video compression mode, video protocol, audio transmission mode, etc. in this page.

PTZ setting :

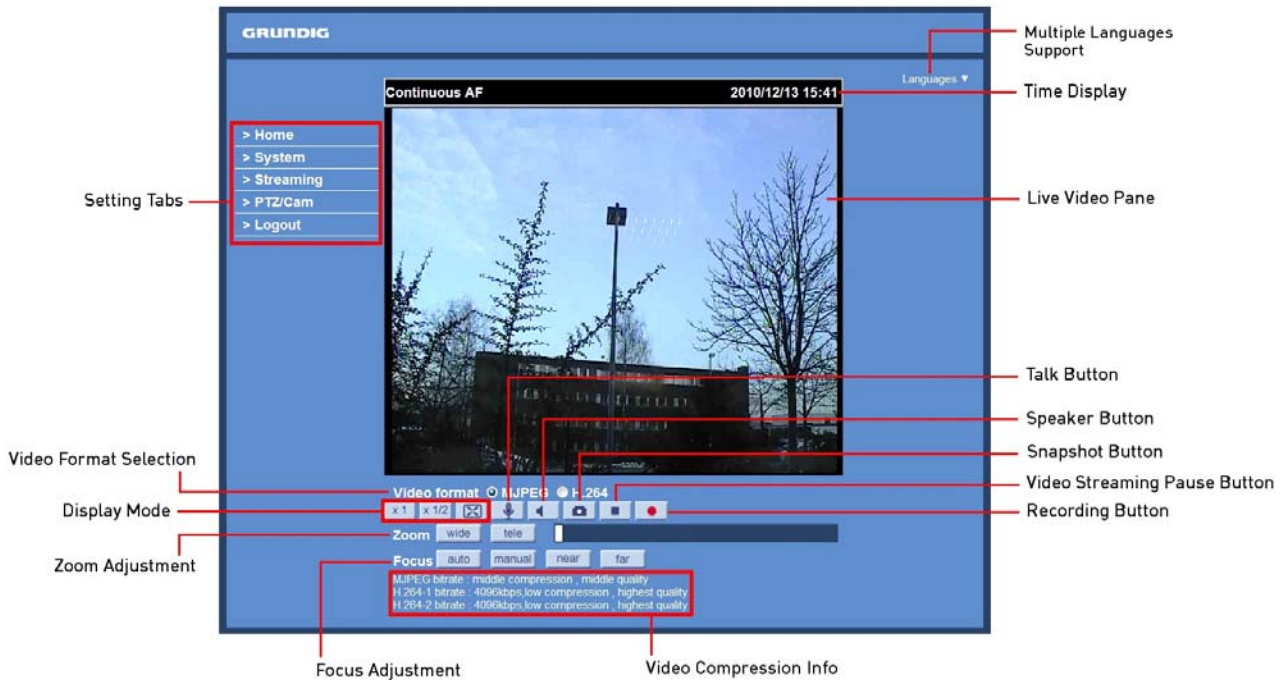
Users can adjust various camera parameters including Presets, Cruises, Privacy Masks, Exposure, White Balance, Brightness, Sharpness, Contrast, Digital Zoom, etc.

Logout :

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

8. Home Page

In the Home page, there are several function buttons right down the displayed image.



NOTE: Please note that the function buttons will vary depending on the camera model.

Display Mode (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 to talk to the remote site. Click on the button to switch it to on/off. Please refer to section 9.2. Security: User >> Add user >> Talk/Listen for further details. This function is only open to the "User" who has been granted this privilege by the Administrator.

Please note that additional equipment will be necessary.

Speaker button (on/off) :

Press the Speaker button to mute/activate the audio.

Snapshot button :

Press the button, and the JPEG snapshots will automatically be saved in the appointed place. The default place of saving snapshots is: C:\. For changing the storage location, please refer to section 9.11. File Location for further details.

NOTE: Users with Windows 7 operating system need to follow the following procedure to be able to use the Snapshot function. First you need to log on to your computer as an Administrator. Then you go to Windows Start menu, click with the right mouse button on your Internet Browser and select in the appearing pop-up window "Run as Administrator". Afterwards you can log in to your camera as usual (as an administrator or user).

Video Streaming Pause/Restart button (stop/restart) :

If you press 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.

Recording button (on/off) :

Press the button and the recordings from the Live View will be saved to the location specified in the “File Location” (snapshot) page. The default storage location for the recording is: C:/. See section 9.11. File Location for further details.

NOTE: Users with Windows 7 operating system who want to use the Recording function, need to follow the procedure in the NOTE below the “Snapshot button” section in this chapter.

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. 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; see section 11.10. Camera—Miscellaneous Setups 1 for details. When the camera reaches the limit of its optical range, it will automatically switch to digital zoom.

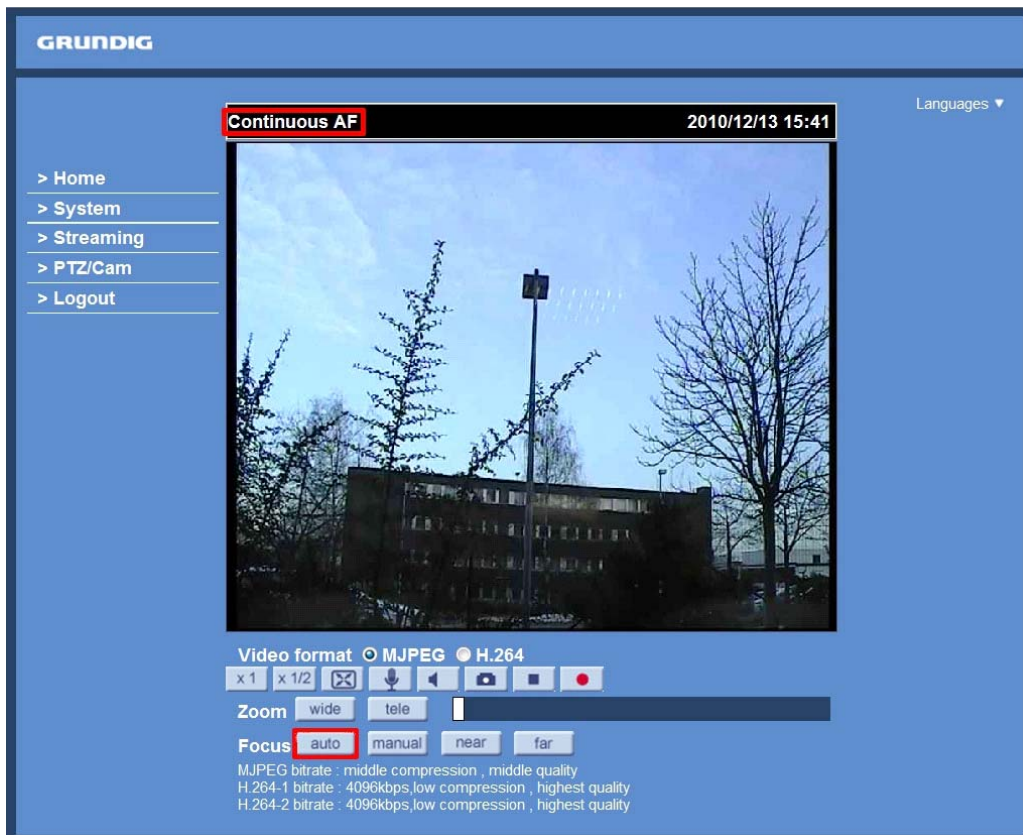
Zoom Adjustment :

Click on the buttons wide/tele to control zoom in/out. Move the cursor closely onto the zoom adjustment bar and click on the desired position to change the room ratio.

Focus Adjustment :

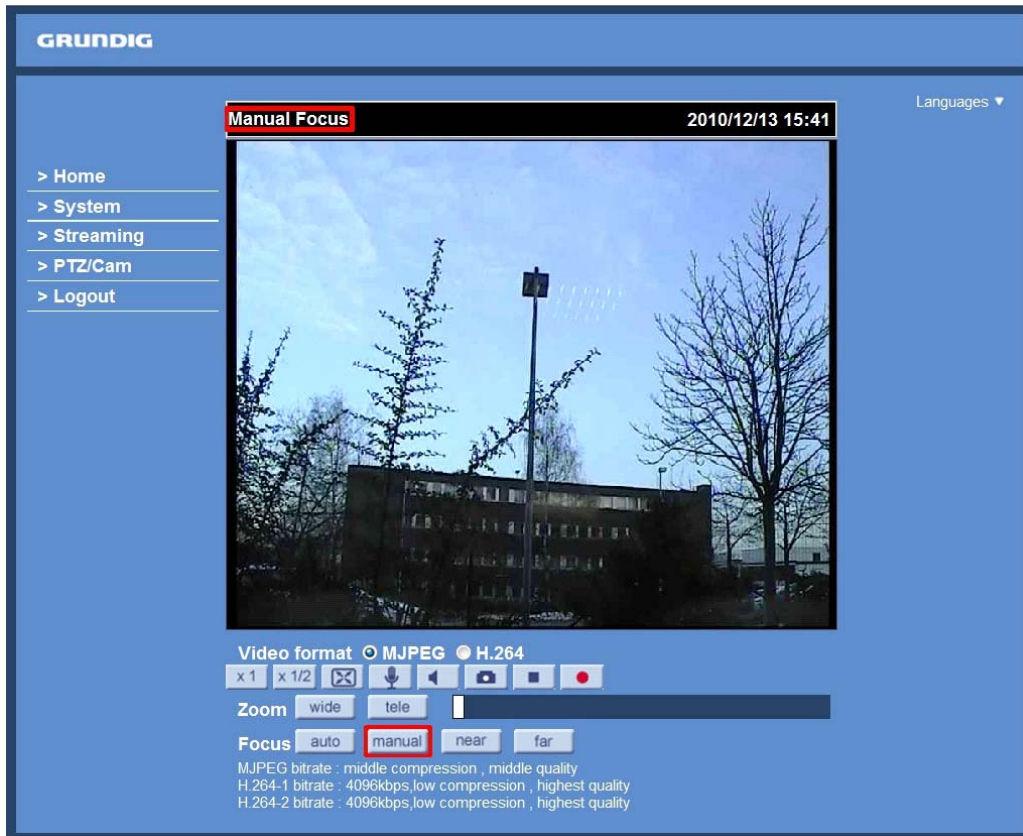
- Auto Focus (Continuous AF):

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 Focus:

Click on the “manual” button, and users can adjust the focus manually via “near” and “far” buttons. The status will also be displayed above the screen as shown below.



Multiple Languages Support :

Multiple languages are supported for the viewer window interface.

9. System Related Settings

The picture below shows all categories under the “System” tab. Each category in the left column will be explained in the following sections.

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

The screenshot displays the Grundig System configuration interface. On the left is a navigation menu with categories: System, Security, Network, DDNS, Mail, FTP, Application, Motion detection, Storage management, Recording, File location, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, and Back. The main content area is titled 'System' and contains the following settings:

- Host Name: NetworkPTZ
- Time zone: GMT+01:00 Tunisia, France, Germany, Italy
- Enable daylight saving time
 - time offset: 01:00:00
 - Start date: Jan 1st Sun Start time: 00:00:00
 - End date: Jan 1st Sun End time: 00:00:00
- Sync with computer time
 - PC date: 2010/12/10 [yyyy/mm/dd]
 - PC time: 10:20:29 [hh:mm:ss]
- Manual
 - Date: 2007/01/01 [yyyy/mm/dd]
 - Time: 00:00:00 [hh:mm:ss]
- Sync with NTP server
 - NTP server: 0.0.0.0 [host name or IP address]
 - Update interval: Every hour
 - Save button

9.1. Host Name & System Time Setting

Press the first category: <System> in the left column; the page is shown below.

This screenshot is identical to the one above, showing the Grundig System configuration page with the same navigation menu and settings: Host Name (NetworkPTZ), Time zone (GMT+01:00 Tunisia, France, Germany, Italy), Daylight saving time options, Sync with computer time (PC date: 2010/12/10, PC time: 10:20:29), Manual settings (Date: 2007/01/01, Time: 00:00:00), and Sync with NTP server (NTP server: 0.0.0.0, Update interval: Every hour, Save button).

Host Name :

The name is for camera identification (max. 30 characters). If alarm function (see section 9.7. Application) is enabled and is set to send an 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 synchronise with the PC's.

Manual :

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

Sync with NTP server :

Network Time Protocol (NTP) is an alternate way to synchronise your camera's clock with a NTP server. Please specify the server you wish to synchronise 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.

NOTE: Press < Save > to confirm the new setting.

9.2. Security

Click the category: <Security>, and the following page will be shown:

The screenshot shows the Grundig web interface for security settings. The left sidebar lists various system settings, with 'Security' selected. The main panel is titled 'Security' and includes sections for changing the admin password, adding new users with specific permissions, and managing existing users.

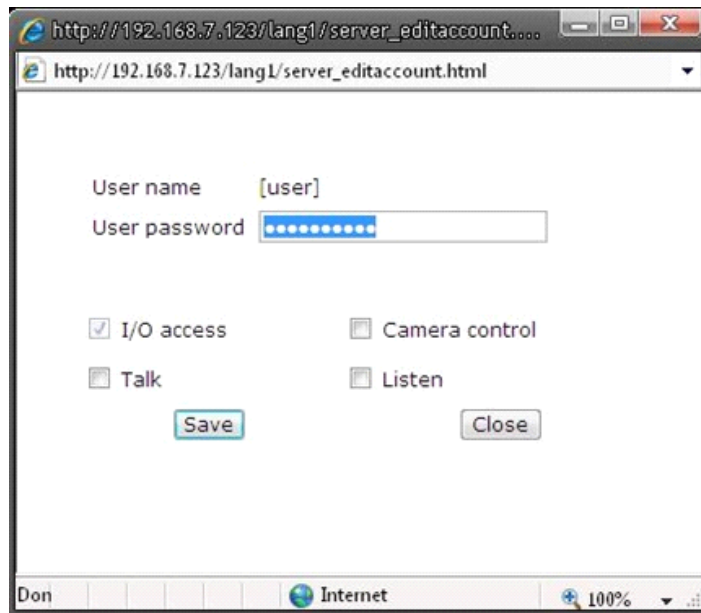
Admin Password :

Change the administrator's password by putting in the new password in both text boxes. The input characters/numbers will be displayed as dots for security purposes. After clicking <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 <Add> to add the new user. The user name can have up to 16 characters, the password up to 14 characters. The new user will be displayed in the user name list. A maximum of 20 user accounts can be set. To each user the privileges of "Camera control", "Talk" and "Listen" can be assigned.



- I/O access:

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

- Camera control:

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

- Talk/Listen:

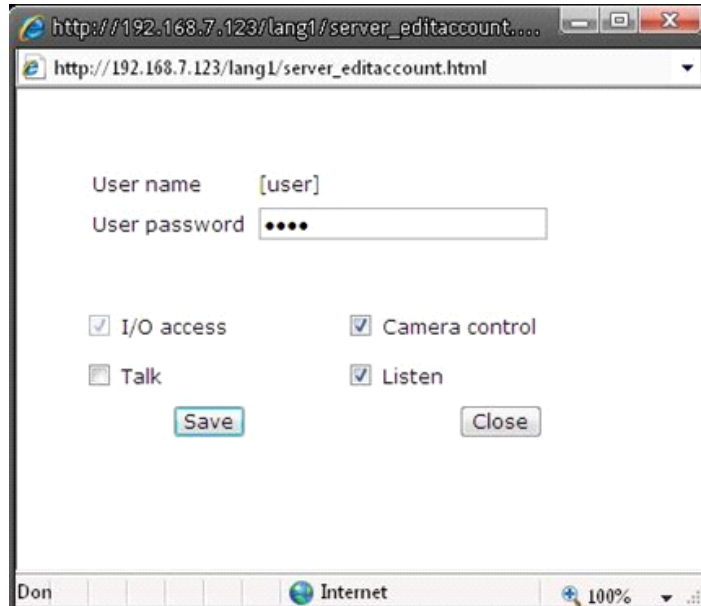
Talk and Listen functions allow the appointed user in the local site (PC site) communicating with, for instance, the administrator in the remote site.

Manage User :

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

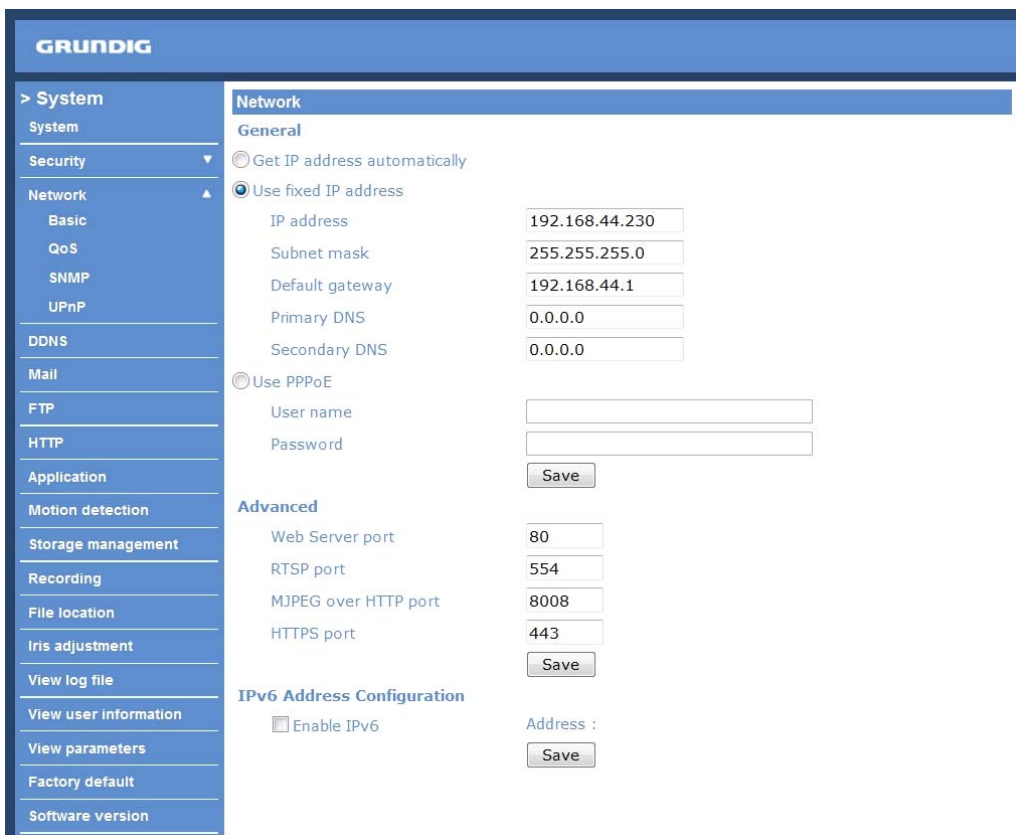
To edit a user, pull down the user list and select a user name. Click <Edit> to edit the user's password and privilege.

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



9.3. Network

Click <Network> in the left column, and the following page will display:



Users can choose to connect to the IP Camera through a fixed or dynamic (DHCP) IP address. The following is descriptions for the two ways of setting an IP address.

Get IP address automatically (DHCP):

The camera's default setting is "Use fixed IP address". Please refer to the previous section 6. Accessing the Camera for login with the default IP address.

If "Get IP address automatically" is selected, after the IP Camera restarts, users can search the IP address through the installer program "GRUNDIG Finder.exe", which can be found in the "GRUNDIG Finder" folder on the supplied CD.

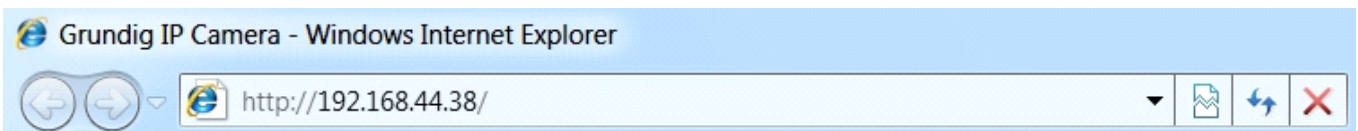
NOTE: Please make a record of the IP Camera's MAC address, which can be found in the label of the camera, for identification in the future.

Use a fixed IP address :

To setup a 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, e.g. 192.168.7.123; then go to the Default Gateway (explained later) and type in the appropriate setting, e.g. 192.168.7.254. Press "Save" to confirm the new setting.

The screenshot shows the GRUNDIG web interface for network configuration. On the left is a navigation menu with categories like System, Security, Network, and Application. The 'Network' section is expanded to show 'General' settings. Under 'General', the 'Use fixed IP address' radio button is selected. The 'IP address' field is set to 192.168.44.230, the 'Subnet mask' is 255.255.255.0, and the 'Default gateway' is 192.168.44.1. Below these are fields for Primary and Secondary DNS, both set to 0.0.0.0. There are also fields for 'User name' and 'Password' under the 'Use PPPoE' section, and a 'Save' button. The 'Advanced' section includes ports for Web Server (80), RTSP (554), MJPEG over HTTP (8008), and HTTPS (443), with a 'Save' button. At the bottom, there is an 'IPv6 Address Configuration' section with an 'Enable IPv6' checkbox and an 'Address' field with a 'Save' button.

When using a static IP address to login to the IP Camera, users can access it either through the "GRUNDIG Finder" software (see 6. Accessing the Camera) or input the IP address in the URL bar and press "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 subnets. An invalid gateway setting will fail the transmission to destinations in different subnets.

- 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 users must be informed about 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 users 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:

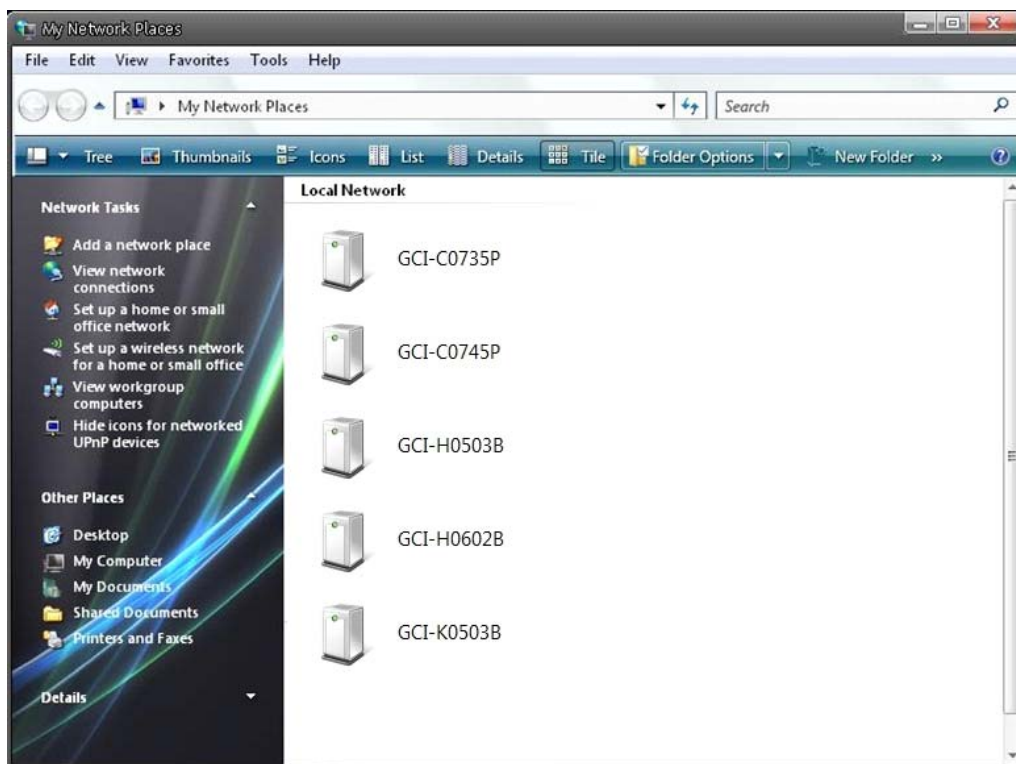
The default setting of MJPEG over HTTP Port is 8008; the setting range is from 1024 to 65535.

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

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 as shown below.



NOTE: To enable this function, please make sure the UPnP component is installed on your computer. Please refer to chapter 16. 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 is activated.

- Friendly name:

Set the name for the IP Camera for identity.

9.4. DDNS

The Dynamic Domain Name System (DDNS) allows a host name to be constantly synchronised 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 that others can connect to it through this name.

The screenshot shows the Grundig DDNS configuration interface. The left sidebar contains a menu with the following items: > System, System, Security, Network, DDNS, Mail, FTP, HTTP, Application, Motion detection, Storage management, Recording, File location, Iris adjustment, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled 'DDNS' and includes the following elements:

- Dynamic DNS
- Use Dynamic DNS If You Want To Use Your DDNS Account.
- Enable DDNS
- Provider: DynDNS.org(Dynamic) (dropdown menu)
- Host name: [text input field]
- Username/E-mail: [text input field]
- Password/Key: [text input field]
- Save (button)

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 :

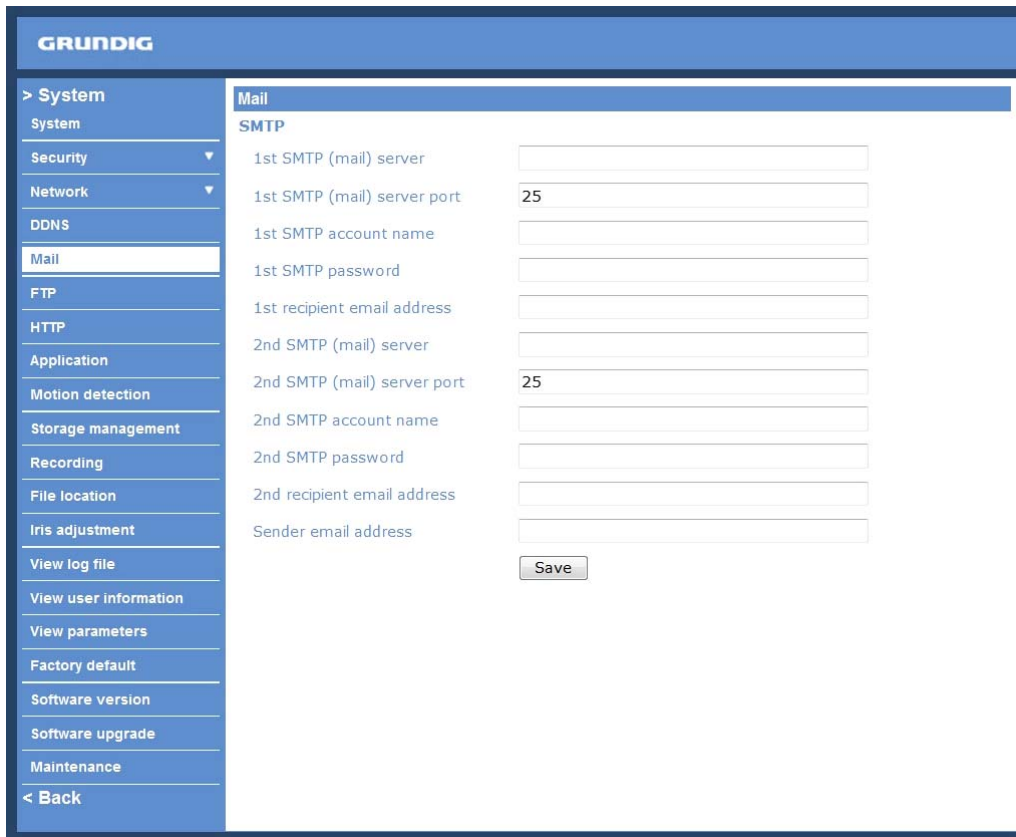
Enter the username or e-mail required by the DDNS provider for authentication.

Password/Key :

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

9.5. Mail

The Administrator can send an e-mail via Simple Mail Transfer Protocol (SMTP) when a motion is detected. 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 to whom the message text is transferred. The configuration page is shown below:



The screenshot shows the Grundig web interface for configuring mail settings. On the left is a navigation menu with the following items: > System, System, Security, Network, DDNS, Mail (highlighted), FTP, HTTP, Application, Motion detection, Storage management, Recording, File location, Iris adjustment, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled 'Mail' and contains an 'SMTP' section with the following fields:

Field	Value
1st SMTP (mail) server	<input type="text"/>
1st SMTP (mail) server port	25
1st SMTP account name	<input type="text"/>
1st SMTP password	<input type="text"/>
1st recipient email address	<input type="text"/>
2nd SMTP (mail) server	<input type="text"/>
2nd SMTP (mail) server port	25
2nd SMTP account name	<input type="text"/>
2nd SMTP password	<input type="text"/>
2nd recipient email address	<input type="text"/>
Sender email address	<input type="text"/>

At the bottom right of the form is a 'Save' button.

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

Click the "Save" button to save the changes.

9.6. FTP

The Administrator can set to sending alarm messages to a specific File Transfer Protocol (FTP) site when motion is detected. Users can assign an 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 "Save" when the setting is finished.

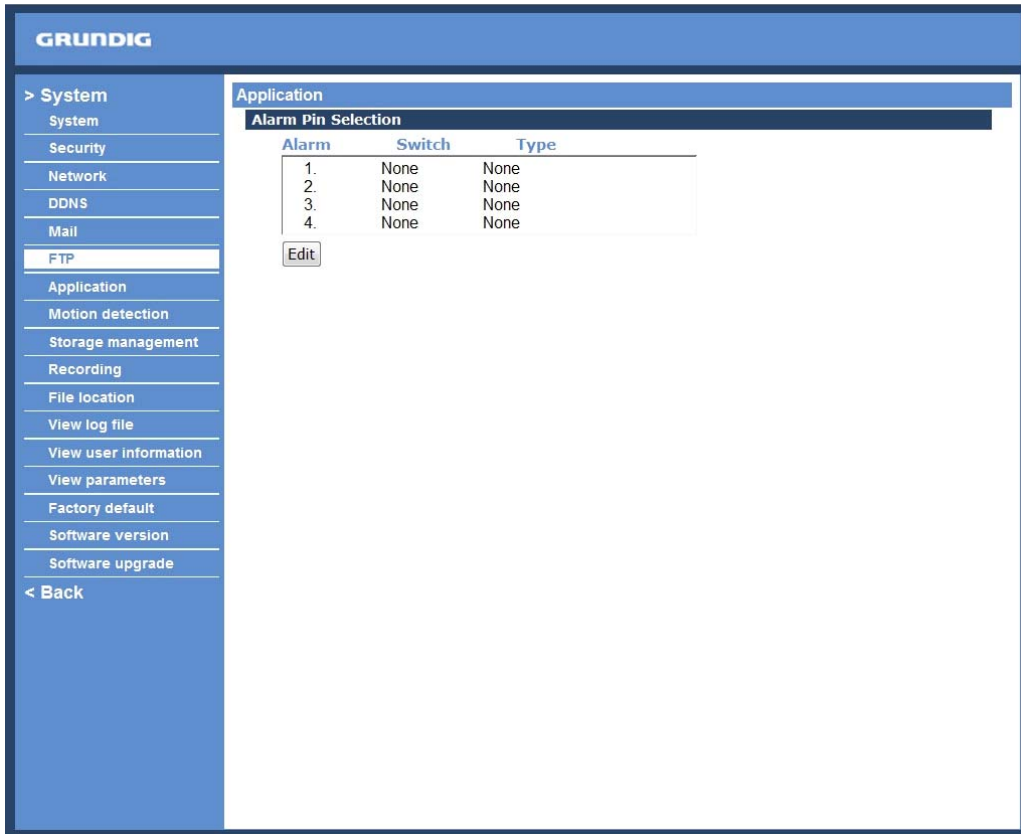
9.7. Application (Alarm Settings)

The network Speed Dome Camera supports 4 alarm inputs and 1 alarm output (NC/NO). 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.



Pin	Definition	Cable
1	AC 24-1/DC (+)	20AWG/18AWG
2	ALM NC	
3	AC 24-2/DC (-)	20AWG/18AWG
4	ALM NO	
5	FG	20AWG18AWG
6	ALM COM	
7	Audio-In	24AWG
8	Audio-Out	
9	Audio GND	
10	Audio GND	
11	ISOG	

Pin	Definition	Cable
12	ALM-1	
13	ALM-3	
14	ALM-2	
15	ALM-4	
16	Reserved	
17	Reserved	
18	Reserved	
19	Reserved	
20	ALM GND	
21	VGND	20AWG
22	Video	

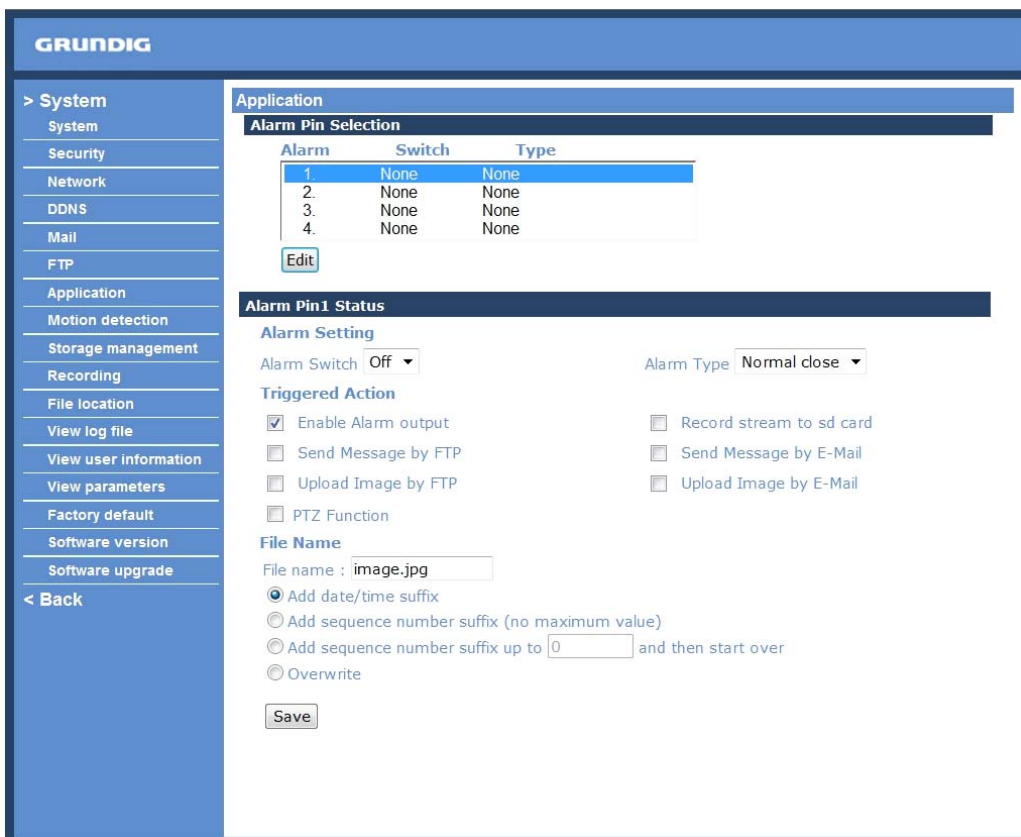


Alarm Pin Selection :

Select an alarm pin which is to be configured from the “Alarm Pin Selection” field. Then press the button “Edit” below the field to carry on alarm programming.

Alarm Status Settings :

The specific alarm pin’s property can be programmed in this section as shown below.



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.

Alarm Output :

Define alarm output signal as "high" or "low" for the normal alarm output status according to the current alarm application.

Triggered Action (Multi-option) :

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

- Enable Alarm Output:

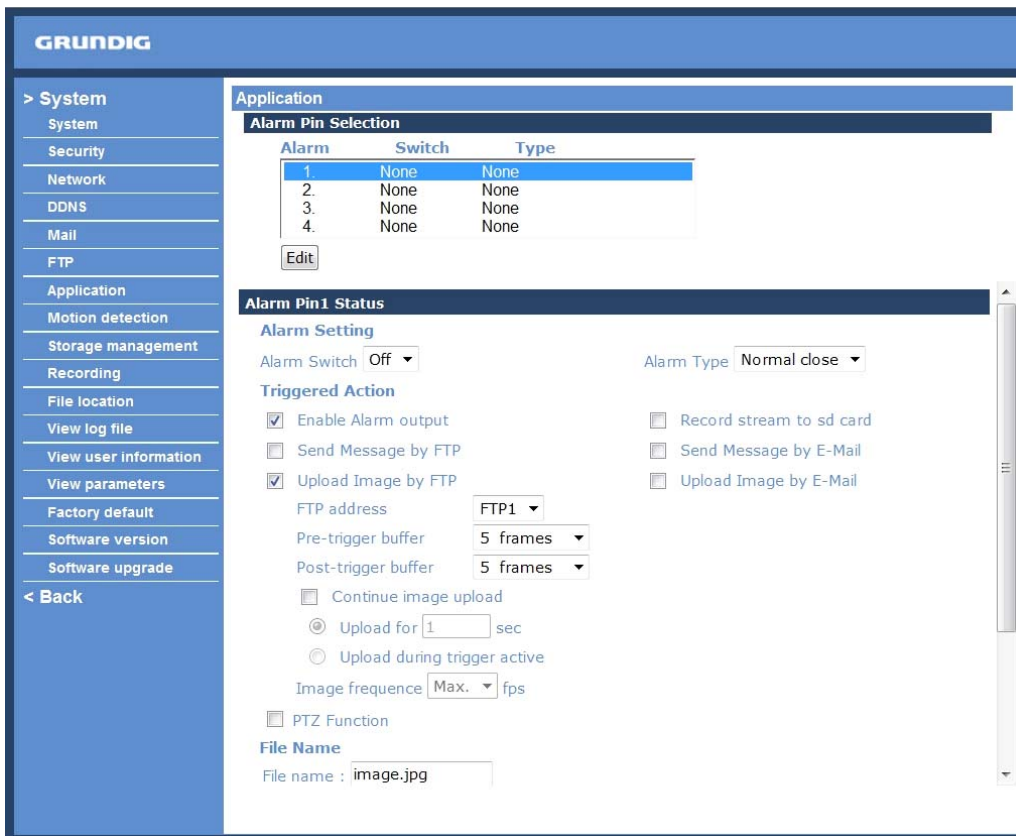
Select the item to enable alarm relay output.

- Send Alarm Message by FTP/E-Mail:

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

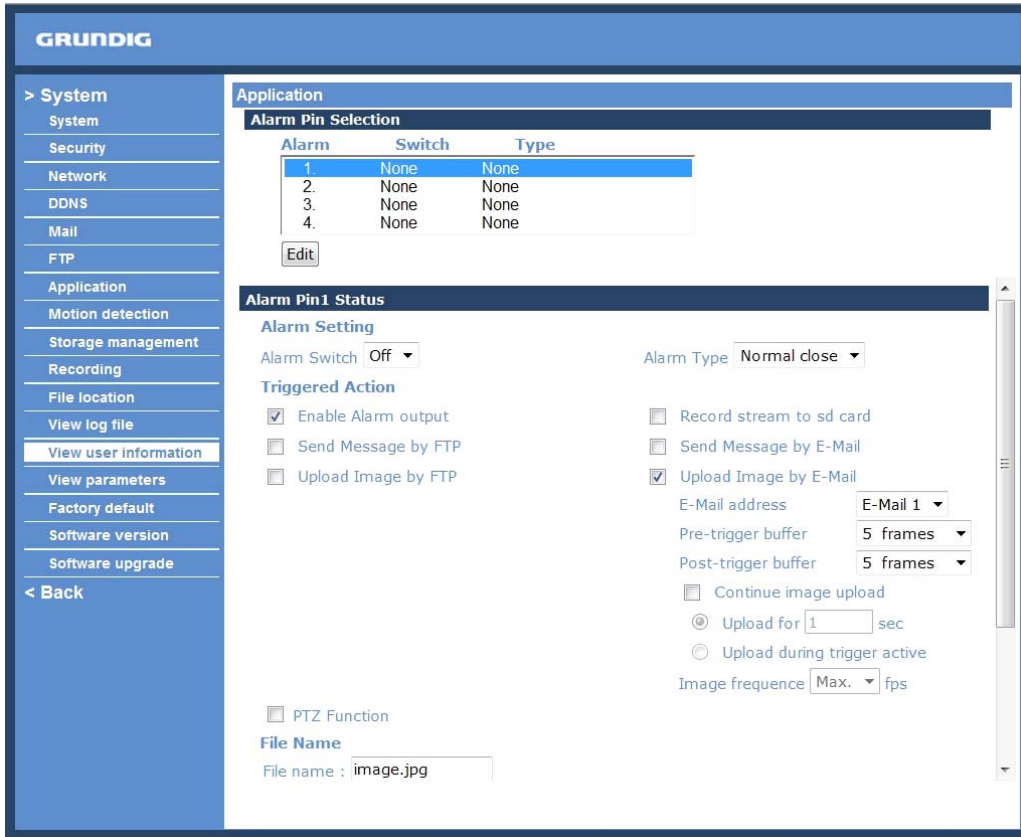
- Upload Image by FTP:

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



- 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.



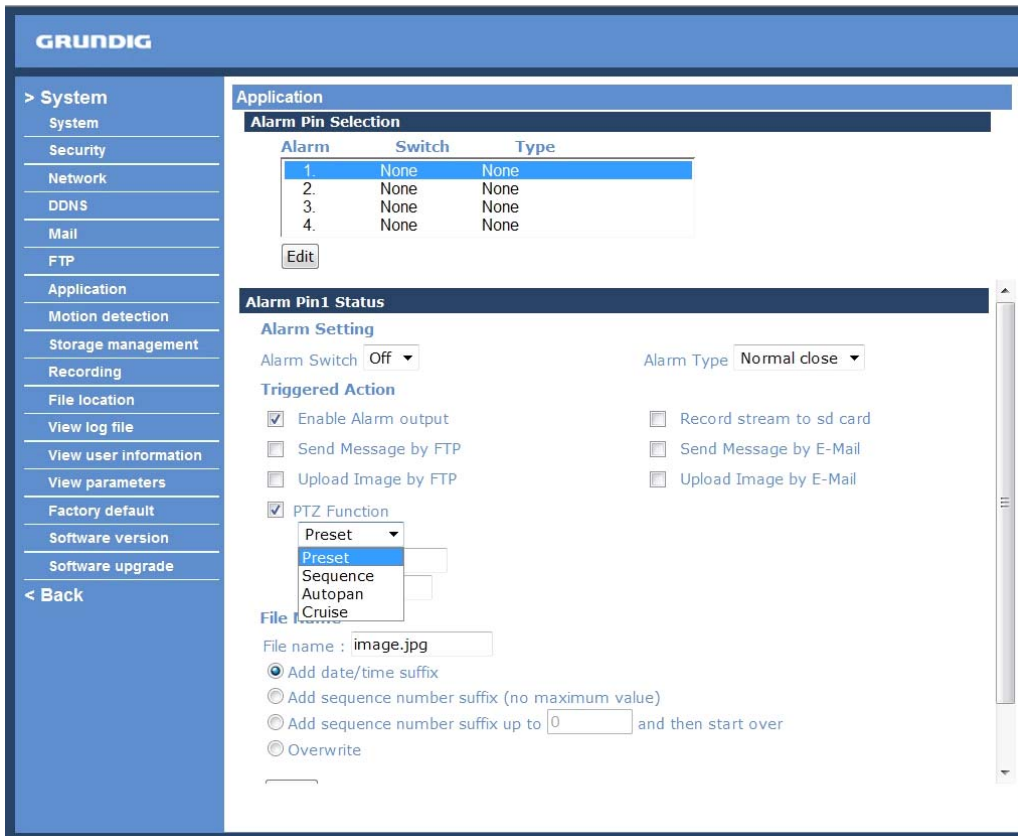
NOTE: Make sure SMTP or FTP configuration has been completed. See section 9.5. Mail and 9.6. FTP for further details.

- Function:

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

NOTE: Please refer to the sections through 11.1. Preset Programming to 11.4. Sequence Line Programming for details of Preset Point / Sequence Line / Auto Pan 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.

File Name :

Enter a file name into the blank box, e.g. 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: imageXXXXXX.jpg

X: Sequence Number

- Add sequence number suffix up to _ and then start over:

File Name: imageXX.jpg

X: Sequence Number

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

- Overwrite:

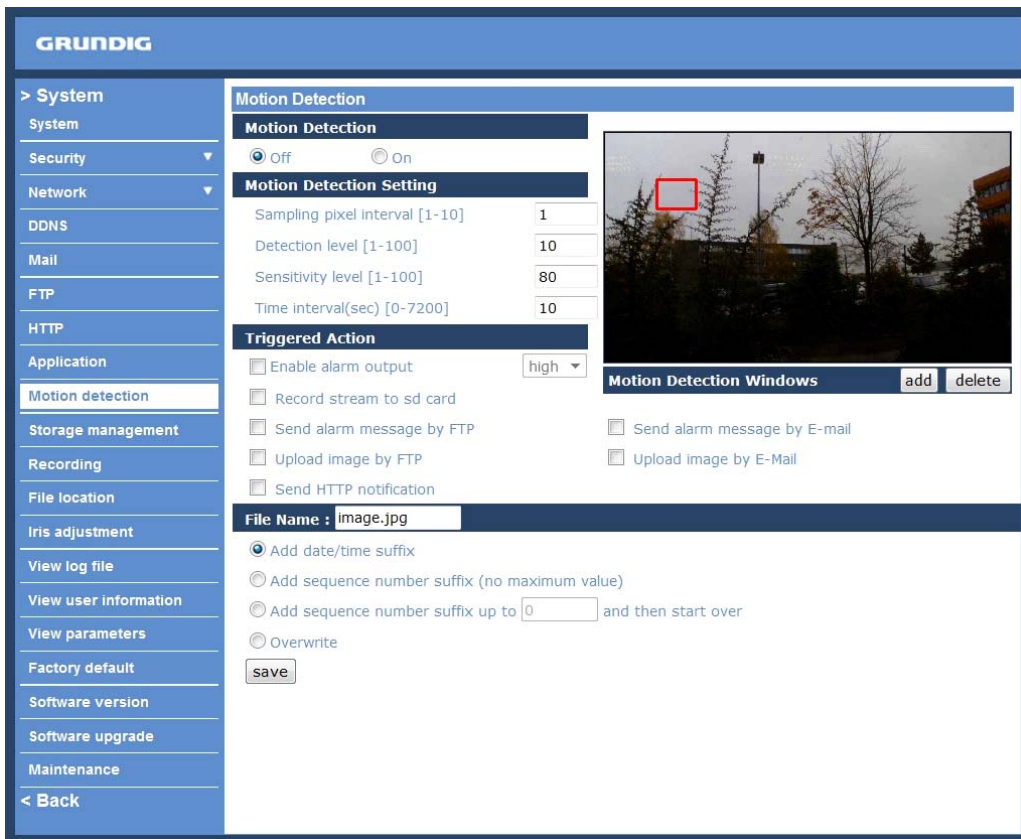
The original image in the FTP site will be overwritten by the new uploaded file with a static filename.

Save :

After completing all the settings mentioned above, please click on the Save button to save all the settings in this page.

9.8. Motion Detection

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



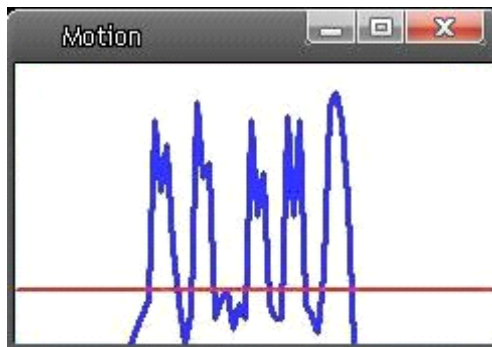
In the Motion Detection setting page is a frame (Motion Detection Window) displayed in the Live View Pane. The Motion Detection Window is for defining the motion detection area. To change the size of the Motion Detection Window, move the mouse cursor to the edge of the frame and draw it outward/inward. 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. Press 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 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 in 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 the System section: Motion Detection. The default setting is Off.

Motion Detection Setting :

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

- Sampling pixel interval [1-10]:

The default value is 10, which means the system will take one sampling pixel for every 10 pixel.

- Detection level [1-100]:

The default level is 10. This item is to set the 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 as changing, the 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 accordingly lower.

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

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

Triggered Action (Multi-option) :

The Administrator can specify alarm actions that will take place when the alarm is triggered. 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 on a Micro SD/SDHC card when motion is detected.

NOTE: Please make sure the local recording (with Micro SD/ SDHC card) is activated so that this function can be implemented. See section 9.10. Recording for further details.

- Send Alarm Message by FTP/E-Mail:

The Administrator can choose to send an alarm message by FTP and/or by E-Mail when a 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 picture below. When a motion is detected, event images will be uploaded to the appointed FTP site.

The screenshot shows a configuration panel for 'Upload image by FTP'. It includes a checked checkbox, a dropdown for 'FTP address' (FTP1), two dropdowns for 'Pre-trigger buffer' and 'Post-trigger buffer' (both 5 frames), an unchecked checkbox for 'Continue image upload', two radio buttons for 'Upload for 1 sec' (selected) and 'Upload during the trigger active', and a dropdown for 'Image frequency' (Max. fps).

- 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 picture below. When a motion is detected, event images will be sent to the appointed e-mail address.

The screenshot shows a configuration panel for 'Upload image by E-Mail'. It includes a checked checkbox, a dropdown for 'E-Mail address' (E-Mail 1), two dropdowns for 'Pre-trigger buffer' and 'Post-trigger buffer' (both 5 frames), an unchecked checkbox for 'Continue image upload', two radio buttons for 'Upload for 1 sec' (selected) and 'Upload during the trigger active', and a dropdown for 'Image frequency' (Max. fps).

- Send HTTP notification:

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

The screenshot shows a configuration panel for 'Send HTTP notification'. It includes a checked checkbox, a dropdown for 'HTTP address' (HTTP1), and a text input field for 'Custom parameters'.

NOTE: Make sure SMTP or FTP configuration has been completed. See section 9.5. Mail and 9.6. FTP for further details.

File Name :

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

Save :

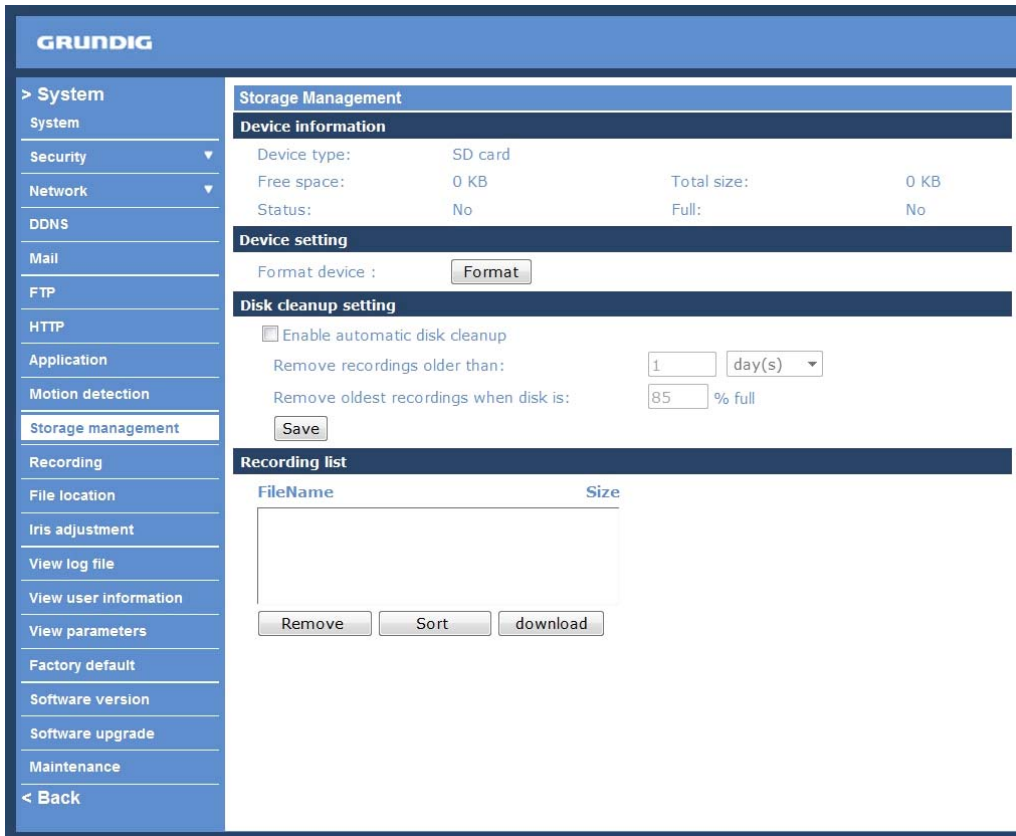
Click the "Save" button to save all the Motion Detection alarm settings mentioned above.

9.9. Storage Management

Users can store local recordings on a Micro SD/SDHC card up to 16GB. 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 (see 9.10. Recording) for activation.

NOTE: Please format the Micro SD/SDHC card when using it for the first time. Formatting will also be required when a memory card has already been used on one camera and was later transferred to another camera with a 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 in the Device Information section. For the memory card being successfully installed, its status shall be shown in the "Device information" section in the Storage Management page.

Device Setting :

Press the "Format" button to format the memory card.

Disk Cleanup Setting :

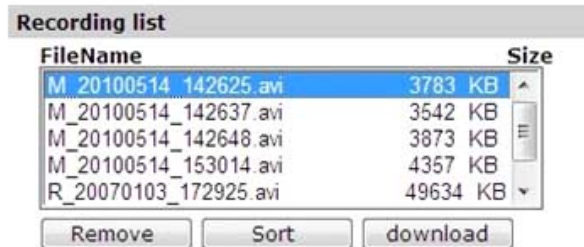
Users can enable an automatic recordings cleanup by specifying the time and storage limits.

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).

If the recording modus is set to Always and at the same time the event recording (when a motion detection or an alarm takes place) is also turned on, in this case, when an event occurs, the event will be recorded first, afterwards the camera will return to normal recording mode.

When the recording mode is set to "Always" (consecutive recording) in the submenu "Recording" and the Micro SD/SDHC card recording is also allowed to be enabled when triggered by events, once the events occur, the system will immediately implement the recorded events to the memory card. After events recording, the IP Camera will return to regular recording mode.



FileName	Size
M_20100514_142625.avi	3783 KB
M_20100514_142637.avi	3542 KB
M_20100514_142648.avi	3873 KB
M_20100514_153014.avi	4357 KB
R_20070103_172925.avi	49634 KB

Remove Sort download

- Remove:

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

- Sort:

Press the "Sort" button, and the files in the Recording list will be listed in name and date order.

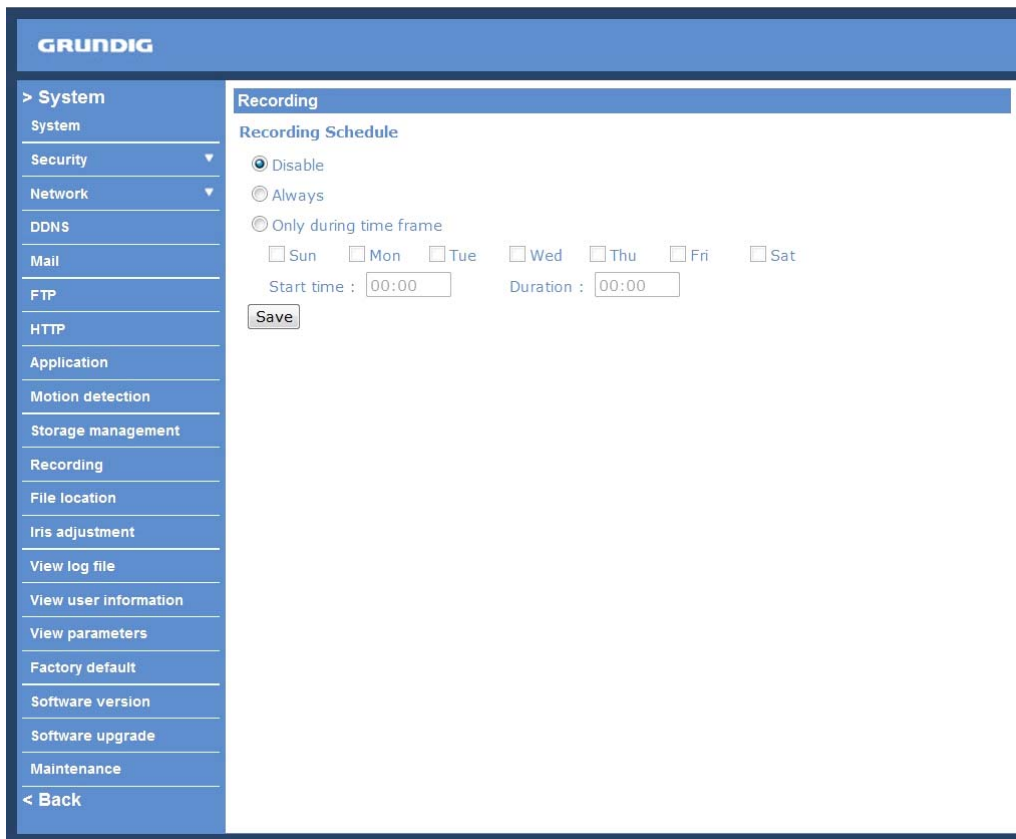
- Download:

To open/download a video clip, select the file first, and then press 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.



9.10. Recording

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



The screenshot shows the GRUNDIG web interface for configuring recording settings. On the left is a navigation menu with categories: > System, System, Security, Network, DDNS, Mail, FTP, HTTP, Application, Motion detection, Storage management, Recording, File location, Iris adjustment, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled 'Recording' and 'Recording Schedule'. It features three radio button options: 'Disable' (selected), 'Always', and 'Only during time frame'. Below these are checkboxes for days of the week: Sun, Mon, Tue, Wed, Thu, Fri, and Sat. There are also input fields for 'Start time' (00:00) and 'Duration' (00:00), and a 'Save' button.

Activating Micro SD/SDHC Card Recording :

Two types of schedule mode are offered: "Always" and "Only during time frame". Users can setup the time frame to fit the recording schedule or choose "Always" to allow the Micro SD/SDHC Card Recording to be activated all the time.

Please click on the "Save" button to confirm the schedule mode.

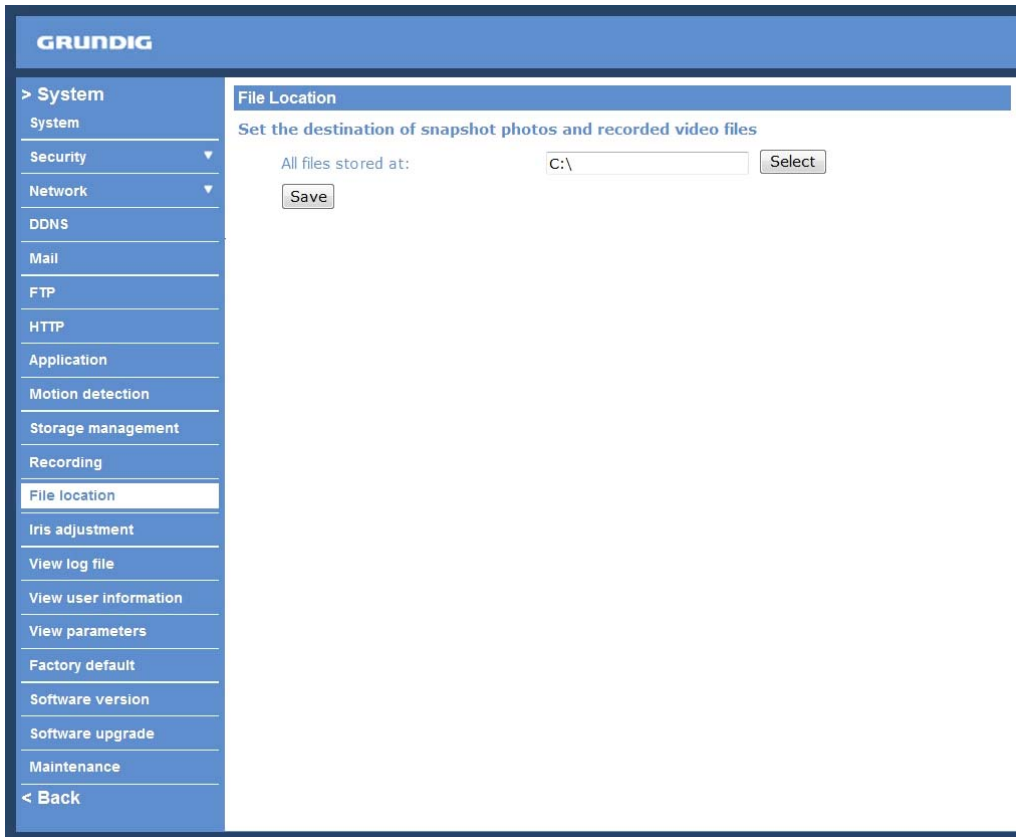
Terminating Micro SD/SDHC Card Recording :

Select "Disable" to terminate the recording function.

9.11. File Location

Users can specify a storage location for the snapshots and the live video recording. The default setting is: C:\. Once the setting is confirmed, press "Save," and all the snapshots and recordings will be saved in the designate location.

NOTE: Please make sure the selected file path contains valid characters such as letters and numbers.

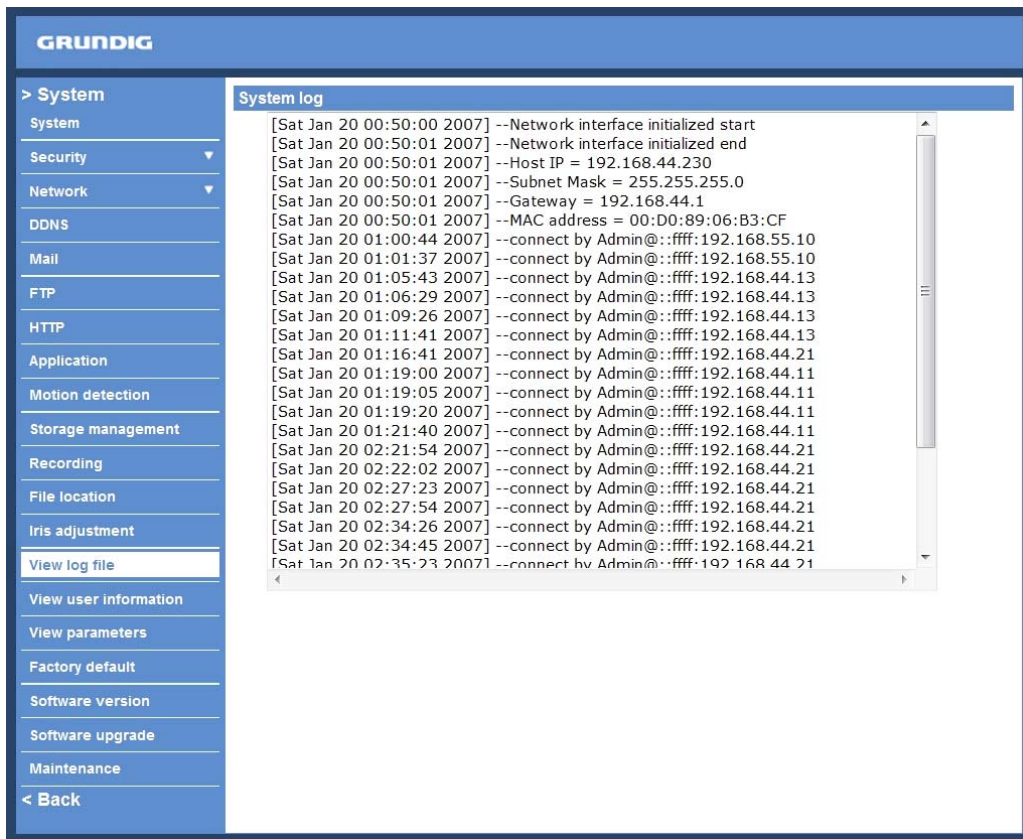


The screenshot displays the GRUNDIG web interface. On the left is a navigation menu with the following items: > System, System, Security, Network, DDNS, Mail, FTP, HTTP, Application, Motion detection, Storage management, Recording, File location (highlighted), Iris adjustment, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled "File Location" and contains the instruction "Set the destination of snapshot photos and recorded video files". Below this, there is a label "All files stored at:" followed by a text input field containing "C:\", a "Select" button, and a "Save" button.

NOTE: Users with Windows 7 operating system need to follow the following procedure to be able to use the Snapshot and Recording function. First you need to log on to your computer as an Administrator. Then you go to the Start menu of Windows, click with the right mouse button on your Internet Browser and select in the appearing pop-up window "Run as Administrator". Afterwards you can log in to your camera as usual (as an administrator or user).

9.12. View Log File

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



The screenshot displays the Grundig web interface. On the left is a blue sidebar menu with the following items: > System, System, Security, Network, DDNS, Mail, FTP, HTTP, Application, Motion detection, Storage management, Recording, File location, Iris adjustment, View log file (highlighted), View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled 'System log' and contains a scrollable list of log entries. The entries are as follows:

```
[Sat Jan 20 00:50:00 2007] --Network interface initialized start
[Sat Jan 20 00:50:01 2007] --Network interface initialized end
[Sat Jan 20 00:50:01 2007] --Host IP = 192.168.44.230
[Sat Jan 20 00:50:01 2007] --Subnet Mask = 255.255.255.0
[Sat Jan 20 00:50:01 2007] --Gateway = 192.168.44.1
[Sat Jan 20 00:50:01 2007] --MAC address = 00:D0:89:06:B3:CF
[Sat Jan 20 01:00:44 2007] --connect by Admin@: :ffff:192.168.55.10
[Sat Jan 20 01:01:37 2007] --connect by Admin@: :ffff:192.168.55.10
[Sat Jan 20 01:05:43 2007] --connect by Admin@: :ffff:192.168.44.13
[Sat Jan 20 01:06:29 2007] --connect by Admin@: :ffff:192.168.44.13
[Sat Jan 20 01:09:26 2007] --connect by Admin@: :ffff:192.168.44.13
[Sat Jan 20 01:11:41 2007] --connect by Admin@: :ffff:192.168.44.13
[Sat Jan 20 01:16:41 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 01:19:00 2007] --connect by Admin@: :ffff:192.168.44.11
[Sat Jan 20 01:19:05 2007] --connect by Admin@: :ffff:192.168.44.11
[Sat Jan 20 01:19:20 2007] --connect by Admin@: :ffff:192.168.44.11
[Sat Jan 20 01:21:40 2007] --connect by Admin@: :ffff:192.168.44.11
[Sat Jan 20 02:21:54 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:22:02 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:27:23 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:27:54 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:34:26 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:34:45 2007] --connect by Admin@: :ffff:192.168.44.21
[Sat Jan 20 02:35:23 2007] --connect by Admin@: :ffff:192.168.44.21
```

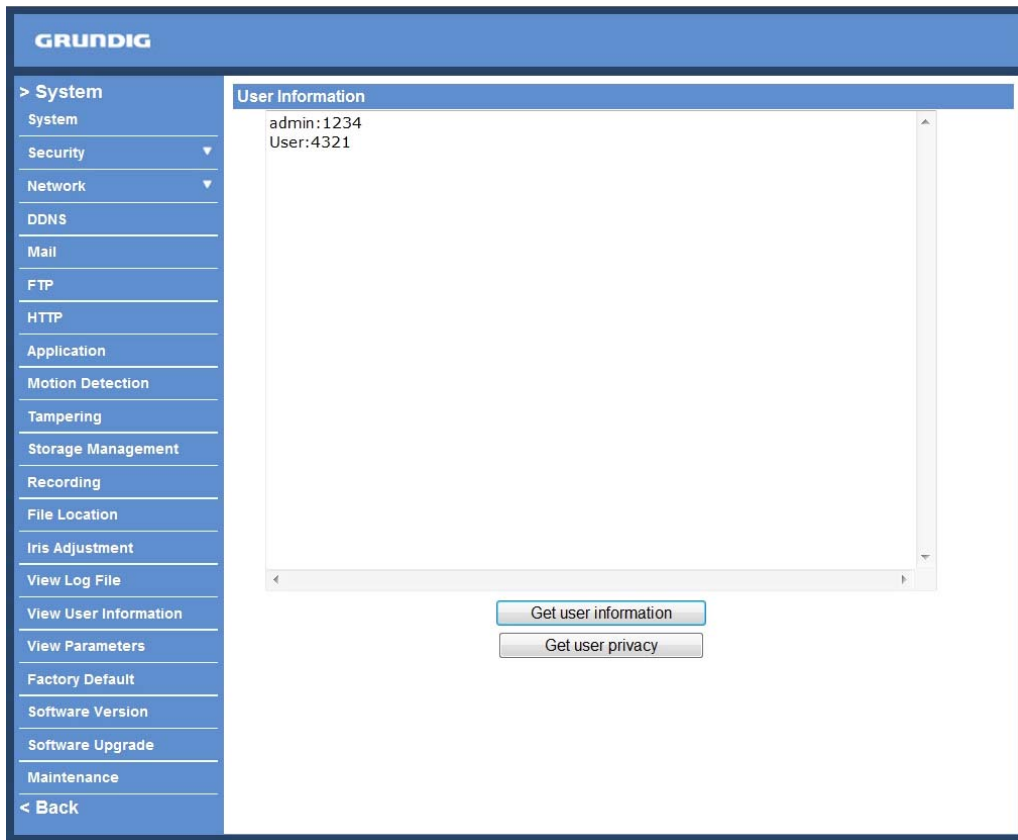
9.13. View User Information

The Administrator can view each user's login information and their privileges (see section 9.2. Security).

View User Login Information :

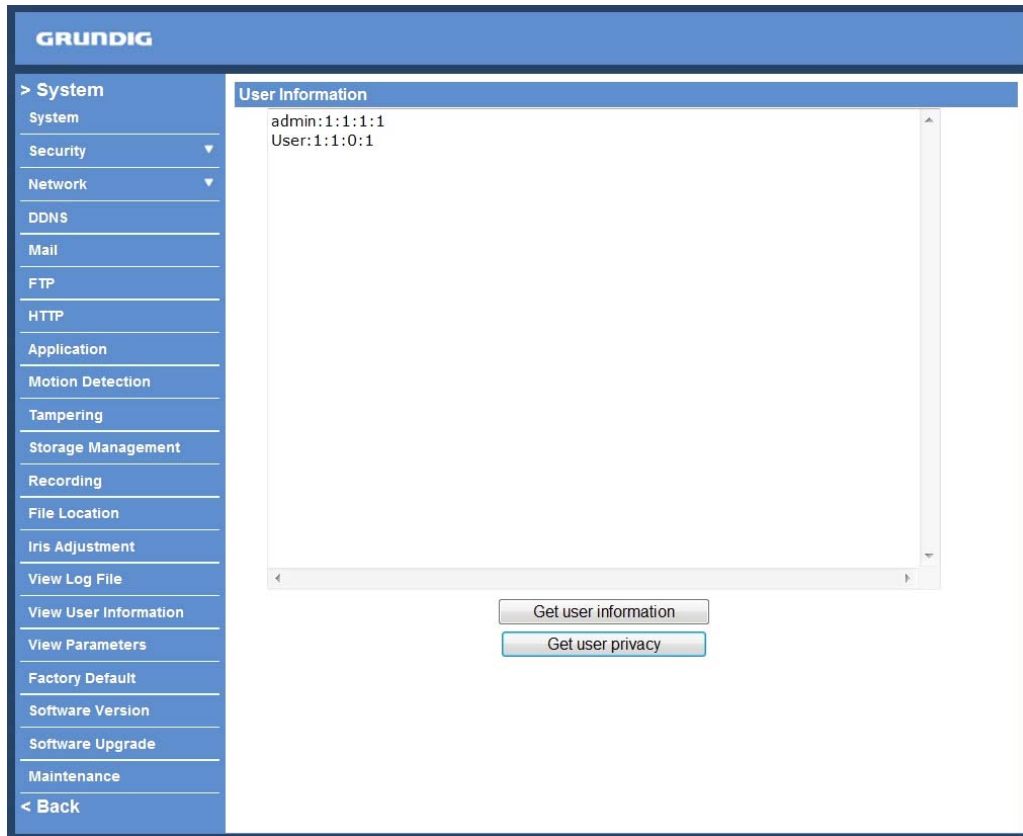
All the users in the network will be listed in the "User Information" zone, as shown below. The picture below shows: User: 4321

This indicates that one user's login username is: User, and the password is: 4321



View User Privilege :

If you press "Get user privacy" at the bottom of the page, the Administrator will be able to view each user's privileges.



As the picture above shows: User: 1:1:0:1

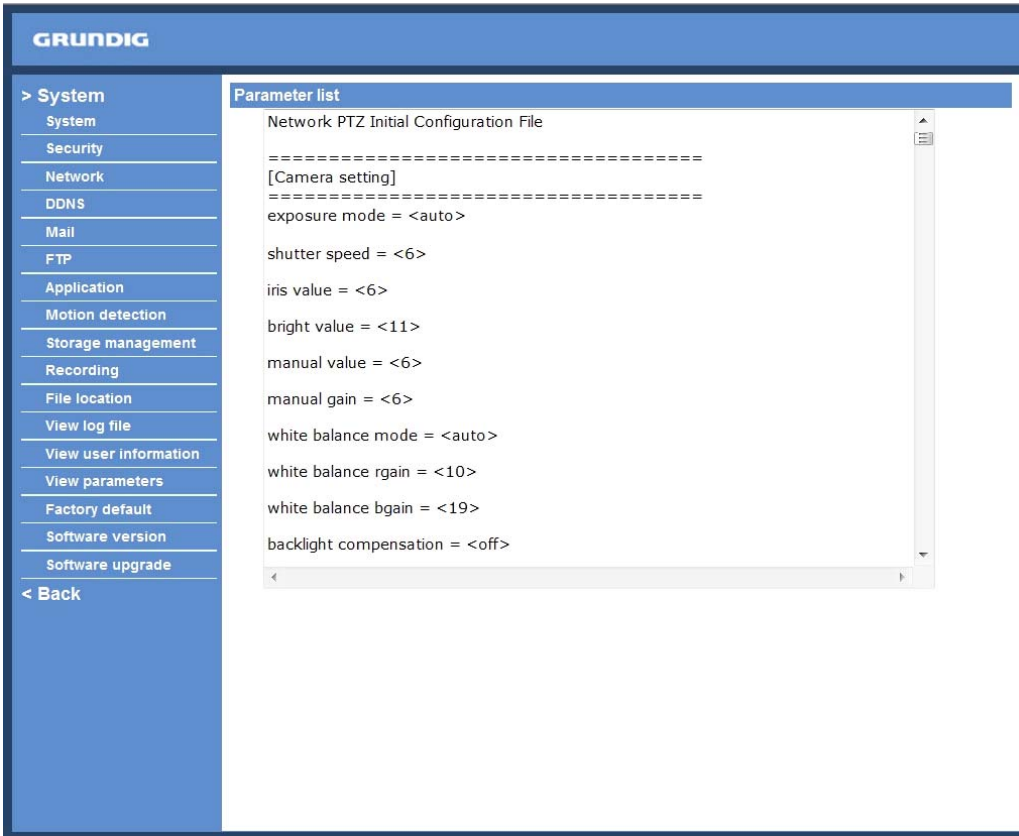
1:1:0:1 = I/O access : Camera control : Talk : Listen (see 9.2. Security)



This denotes that the user has been granted the privileges of I/O access, Camera control and Listen.

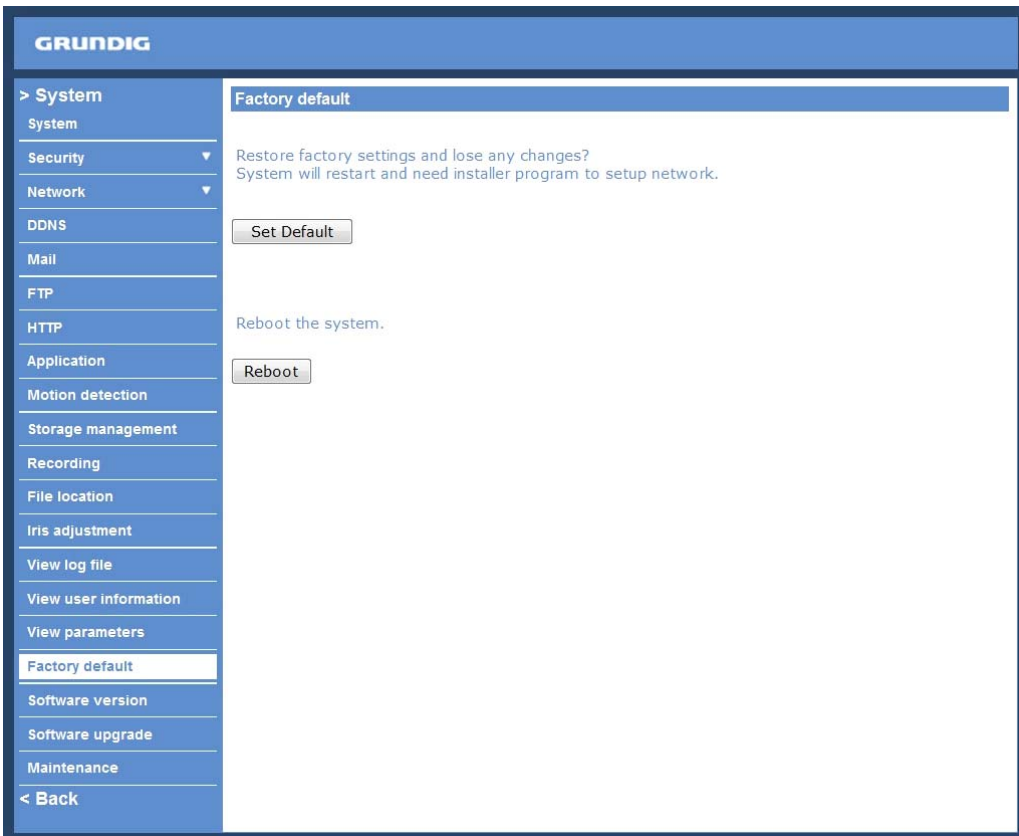
9.14. View Parameters

Click on this item to view the entire system's parameter setting.



9.15. Factory Default

The factory default setting page is shown below. Follow the instructions to reset the IP Camera to factory default setting if needed.



Set Default :

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

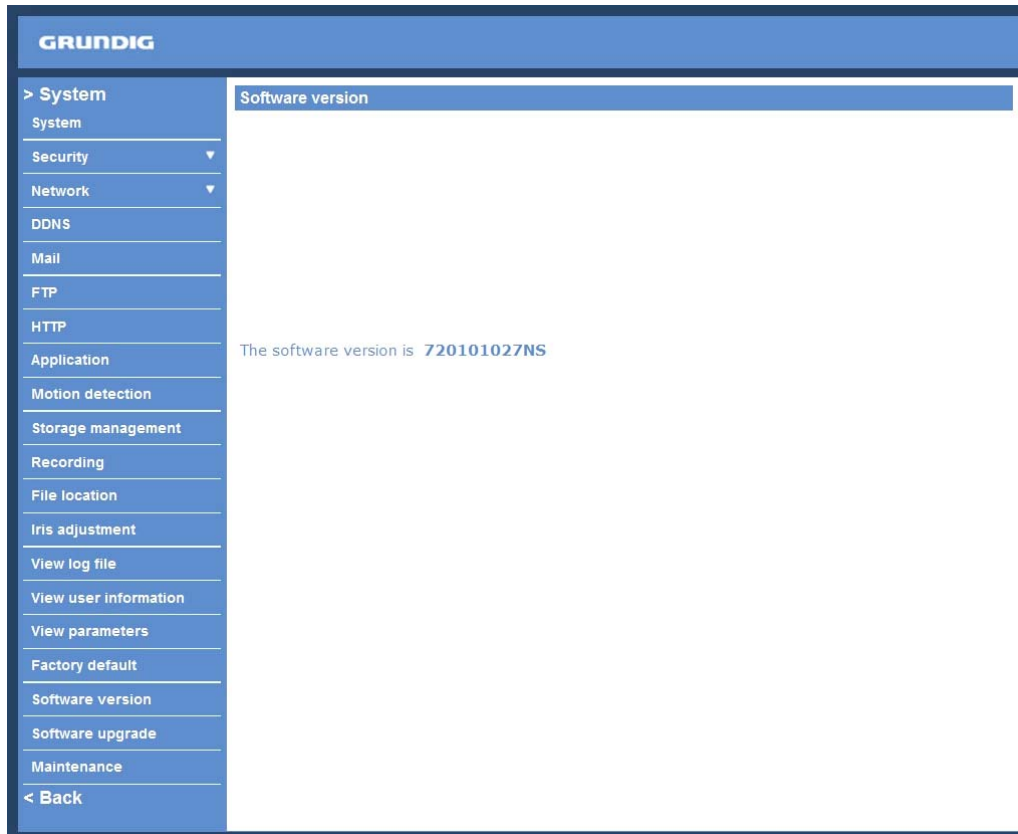
NOTE: The IP address will be restored to default.

Reboot :

Click on the “Reboot” button, and the system will restart without changing the current settings.

9.16. Software Version

The current software version is displayed in the software version page, which is shown in the picture below.



9.17. Software Upgrade

Software upgrade can be carried out on the “Software Upgrade” page, as shown below.

The screenshot shows the GRUNDIG web interface for software upgrade. The left sidebar contains a menu with the following items: > System, System, Security, Network, DDNS, Mail, FTP, HTTP, Application, Motion detection, Storage management, Recording, File location, Iris adjustment, View log file, View user information, View parameters, Factory default, Software version, Software upgrade, Maintenance, and < Back. The main content area is titled 'Upgrade' and contains the following steps:

- Step1:** Upload the binary file. There is a text input field and a 'Browse...' button.
- Step2:** Select binary file you want to upgrade. There is a dropdown menu with 'userland.jffs2' selected.
- Step3:** Click the upgrade button to start the upgrade process. There is an 'Upgrade' button.

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

The procedure of a software upgrade is as follows:

Step 1: Click “Browse” and select the binary file to be uploaded, e.g. 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: Press “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 100% is reached, the upgrade process is finished.

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

Step 4: Close the video browser.

Step 5: Click “Control Panel”, and then double-click on “Add or Remove Programs.” In the “Currently installed programs” list, select “GRUNDIG Viewer” and click the button “Remove” to uninstall the existing GRUNDIG Viewer.

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

10. Streaming Settings

Press the tab "Streaming" on the top of the page, and the configurable video and audio items will display in the left column. 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.

10.1. Video Format

The video setting page is shown below:

The screenshot shows the Grundig web interface for configuring video settings. The left sidebar contains a menu with the following items: > Streaming, Video Format (highlighted), Video Compression, Video OCX Protocol, Video Frame Skip, Audio, and < Back. The main content area is titled 'Video Format' and includes the following sections:

- Video Resolution :** Four radio button options:
 - H.264 D1 (25fps) + MJPEG D1 (25fps)
 - H.264 D1 (25fps) + MJPEG CIF (25fps)
 - H.264 D1 (25fps) + H.264 D1 (25fps)
 - H.264 D1 (25fps) + H.264 CIF (25fps)A 'Save' button is located below these options.
- Note :** Image attachment by FTP or E-mail will be available only while MJPEG streaming is selected.
- Text Overlay Settings :** Three checkboxes: 'Include date', 'Include time', and 'Include text string' (with an adjacent text input field). A 'Save' button is below.
- Video Deinterlace :** Three radio button options:
 - 3D Deinterlacing
 - Intra Field Deinterlacing
 - Inter Field Deinterlacing (off)A 'Save' button is below.
- GOV Settings :** A label 'H.264-1 GOV Length' followed by an input field containing the value '30'.

Video Resolution :

The network Speed Dome Camera provides two sets of video dual streaming formats:

- H.264 D1 (25fps) + MJPEG D1 (25fps)
- H.264 D1 (25fps) + MJPEG CIF (25fps)
- H.264 D1 (25fps) + H.264 D1 (25fps)
- H.264 D1 (25fps) + H.264 CIF (25fps)

Click "Save" to confirm the Video Format setting.

Video Deinterlace :

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

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

Click "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. Longer GOV means decreasing the frequency of I-frames. The setting range for the GOV length is from 2 to 64.

Click "Save" to confirm the GOV setting.

10.2. Video Compression

Users can specify the values for MJPEG/H.264 compression mode in the video compression page (see the picture below), depending on the application.

The screenshot shows the Grundig Video Compression settings page. The left sidebar contains a navigation menu with the following items: > Streaming, Video Format, Video Compression (highlighted), Video OCX Protocol, Video Frame Skip, Audio, and < Back. The main content area is titled 'Video Compression' and contains the following settings:

- MJPEG Compression setting :**
 - high compression , low bitrate , low quality
 - middle compression , default
 - low compression , high bitrate , high quality
 -
- H.264-1 Compression setting :**
 - 1024kbps,highest compression , lowest quality
 - 2048kbps,middle compression
 - 4096kbps,low compression , highest quality ,default
 -
- H.264-2 Compression setting :**
 - 1024kbps,highest compression , lowest quality
 - 2048kbps,middle compression
 - 4096,low compression , highest quality ,default
 - Display compression information in the home page
 -
- CBR mode setting :**
 - enable H.264-1 CBR mode
 - enable H.264-2 CBR mode
 -

MJPEG compression settings include:

- high compression, low bit rate, low quality
- middle compression, default
- low compression, high bit rate, high quality

H.264 compression settings include:

- highest compression, lowest quality
- middle compression, default
- low compression, highest quality

Users can also choose whether to display compression information in Home page.

Click "Save" to confirm the setting.

CBR Mode Setting :

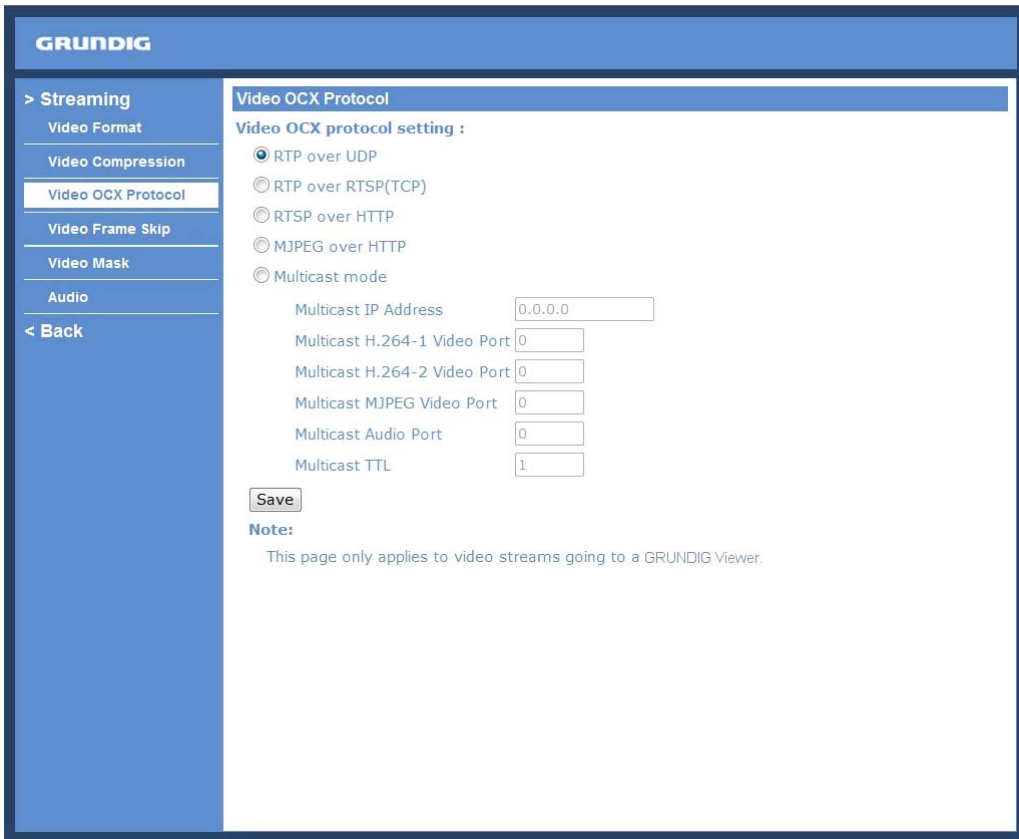
The CBR (Constant Bit Rate) mode can become the preferred bit rate mode if the bandwidth available is limited. It is important to take into account the image quality when you choose to use CBR mode.

Click "Save" to confirm the setting.

The screenshot shows the Grundig web interface for video compression settings. On the left is a navigation menu with options: Streaming, Video Format, Video Compression (selected), Video OCX Protocol, Video Frame Skip, Video Mask, Audio, and < Back. The main content area is titled 'Video Compression' and contains several sections: 'MJPEG Compression setting' with an input field for 'MJPEG Q factor' set to 35 and a 'Save' button; 'H.264-1 Compression setting' with an input field for 'H264-1 bit rate' set to 4096 kbit/s and a 'Save' button; 'H.264-2 Compression setting' with an input field for 'H264-2 bit rate' set to 4096 kbit/s and a 'Save' button; 'Compression information setting' with a checked checkbox for 'Display compression information in the home page' and a 'Save' button; and 'CBR mode setting' which is highlighted with a red box. This section contains two unchecked checkboxes: 'enable H.264-1 CBR mode' and 'enable H.264-2 CBR mode', followed by a 'Save' button.

10.3. 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. The Video OCX Protocol page is as follows:



Video OCX protocol setting options include:

- RTP over UDP / RTP over RTSP (TCP) / RTSP over HTTP / MJPEG over HTTP
(Select a mode according to your data delivery requirements.)

- Multicast Mode:

Enter all required data, including multicast IP address, H.264 video port, MJPEG video port, audio port and TTL into each blank.

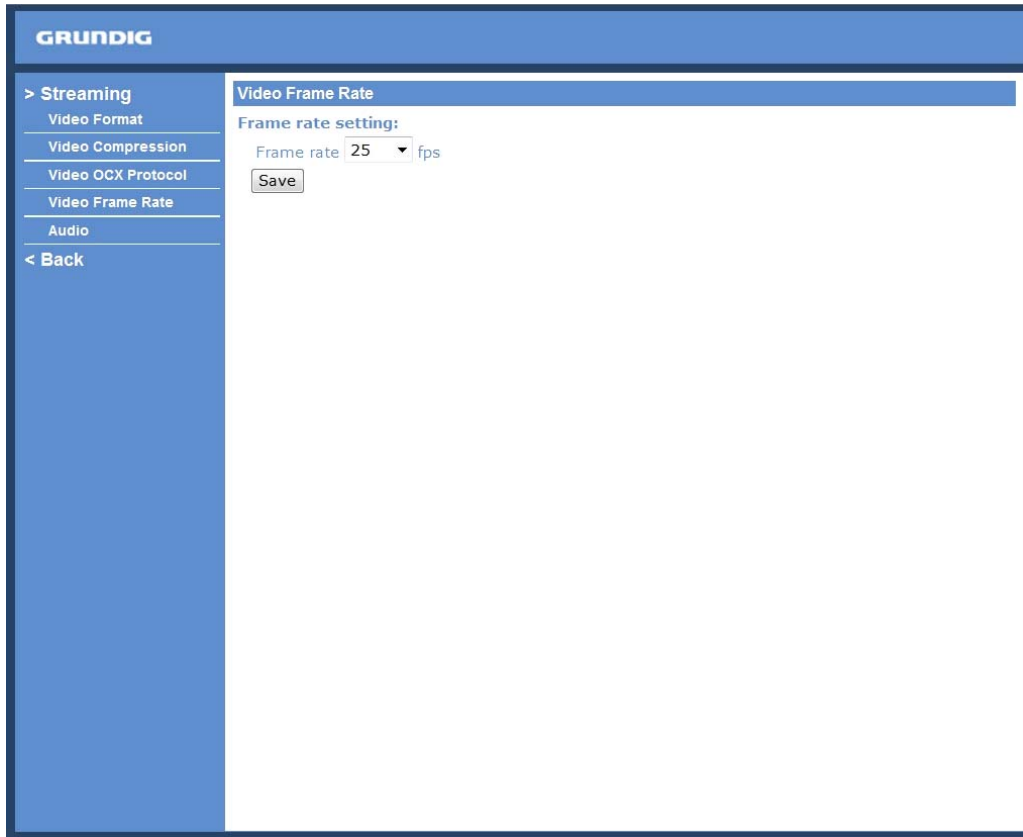
Click "Save" to confirm the setting.

10.4. Video Frame Rate

The Frame rate options include:

- 25 fps
- 12.5 fps
- 5 fps
- 2.5 fps
- 1.5 fps

Click "Save" to confirm the setting.



The screenshot shows a web interface for Grundig. At the top, there is a blue header with the "GRUNDIG" logo. Below the header is a navigation menu on the left side with the following items: "> Streaming", "Video Format", "Video Compression", "Video OCX Protocol", "Video Frame Rate", "Audio", and "< Back". The "Video Frame Rate" item is currently selected. The main content area is titled "Video Frame Rate" and contains the following text: "Frame rate setting:", "Frame rate 25 fps", and a "Save" button.

10.5. Audio

The audio setting page is shown below. In the Audio page, the Administrator can select one transmission mode and audio bit rate.

The screenshot shows the Grundig Audio configuration interface. The left sidebar contains a navigation menu with the following items: '> Streaming', 'Video Format', 'Video Compression', 'Video OCX Protocol', 'Video Frame Skip', 'Video Mask', 'Audio', and '< Back'. The 'Audio' section is currently selected. The main content area is titled 'Audio' and includes the following settings:

- Transmission Mode:** A group of radio buttons with the following options:
 - Full-duplex (Talk and listen simultaneously)
 - Half-duplex (Talk or listen, not at the same time)
 - Simplex (Talk only)
 - Simplex (Listen only)
 - Disable (This option is selected)
- Server Gain Setting:** Two dropdown menus labeled 'Input gain:' and 'Output gain:', both currently set to '3'.
- Bit Rate:** A dropdown menu currently set to 'uLAW'.

A 'Save' button is located at the bottom of the settings area.

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.

Bit Rate :

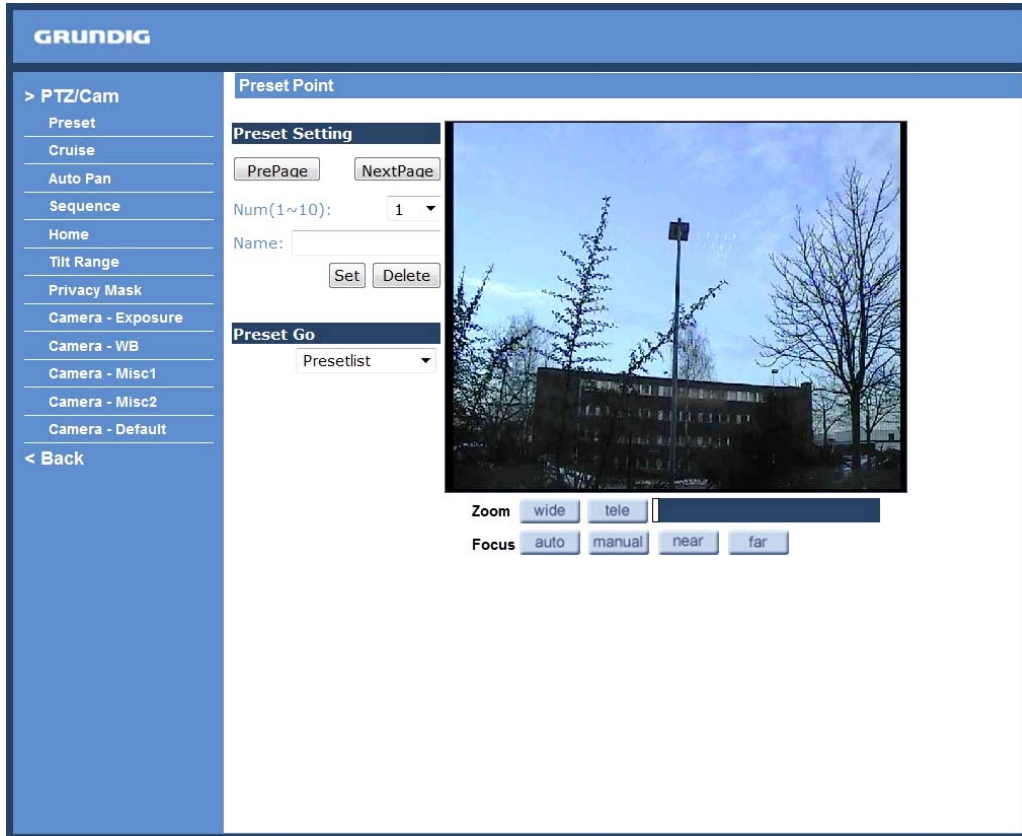
Selectable audio transmission bit rate include 16 Kbps (G.726), 24 Kbps (G.726), 32 Kbps (G.726), 40 Kbps (G.726), uLAW (G.711) and ALAW (G.711). Both uLAW and ALAW signify 64 Kbps but in different compression formats. A higher bit rate signifies a higher audio quality and requires a bigger bandwidth.

Click "Save" to confirm the setting.

11. PTZ Settings

Under the "PTZ" category, users are allowed to program Preset Point(s), Cruise Line(s), Auto Pan Path(s) and Sequence Line(s) via PTZ controls. Additionally, various camera settings including Auto Exposure (AE), White Balance (WB), Back Light Compensation (BLC), Sharpness, Exposure Compensation, Digital Zoom, etc. can also be set here.

11.1. Preset Programming



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

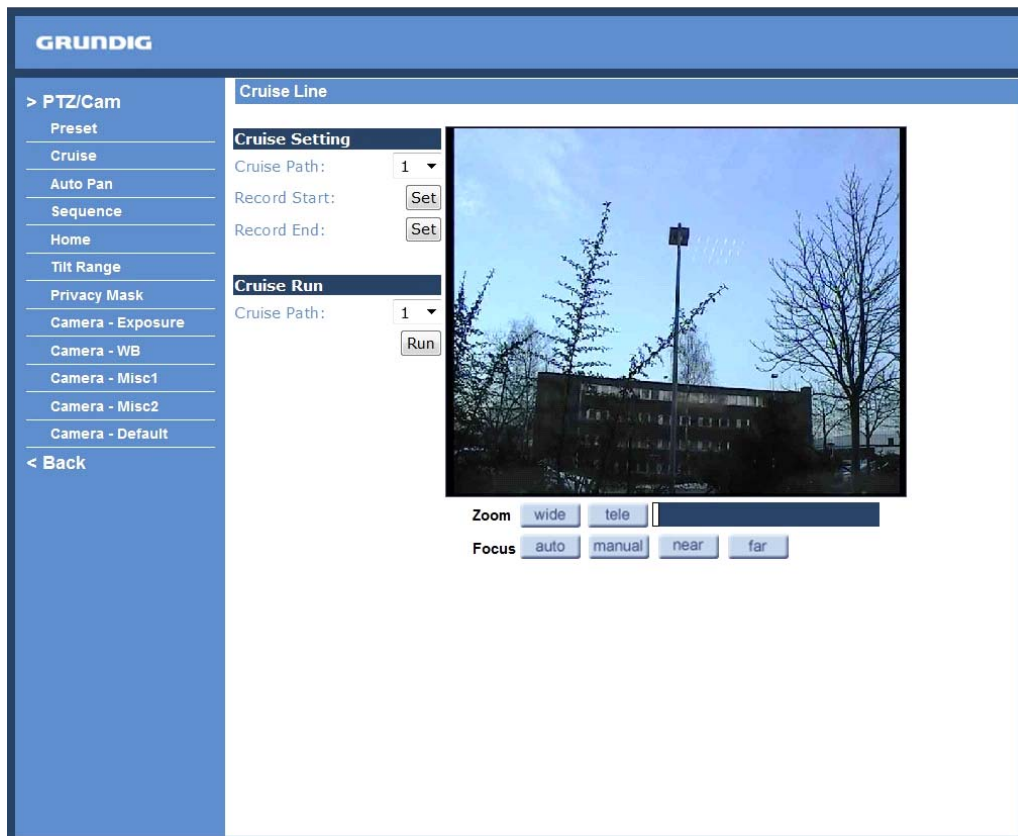
Preset Setting :

To set up a Preset Point, please first move the cursor to the live view pane. Then left-click and drag the red pointer with the PTZ controls to a desired position. Subsequently, assign a number for the current position from the drop-down Number List, and enter its descriptive name. Press the button "Set" to save the setting.

Preset Go :

To have the camera move to a specified Preset position, please select the Preset Point from the drop-down Preset List. Then the camera shall readily move to the target position.

11.2. Cruise Programming



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

Cruise Setting :

To set up 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. Press the "Set" button of "Record Start" and start programming the Cruise Path via PTZ controls. When finishing programming, press the "Set" button of "Record End" to quit. Then this Cruise Path will be automatically recorded.

Cruise Run :

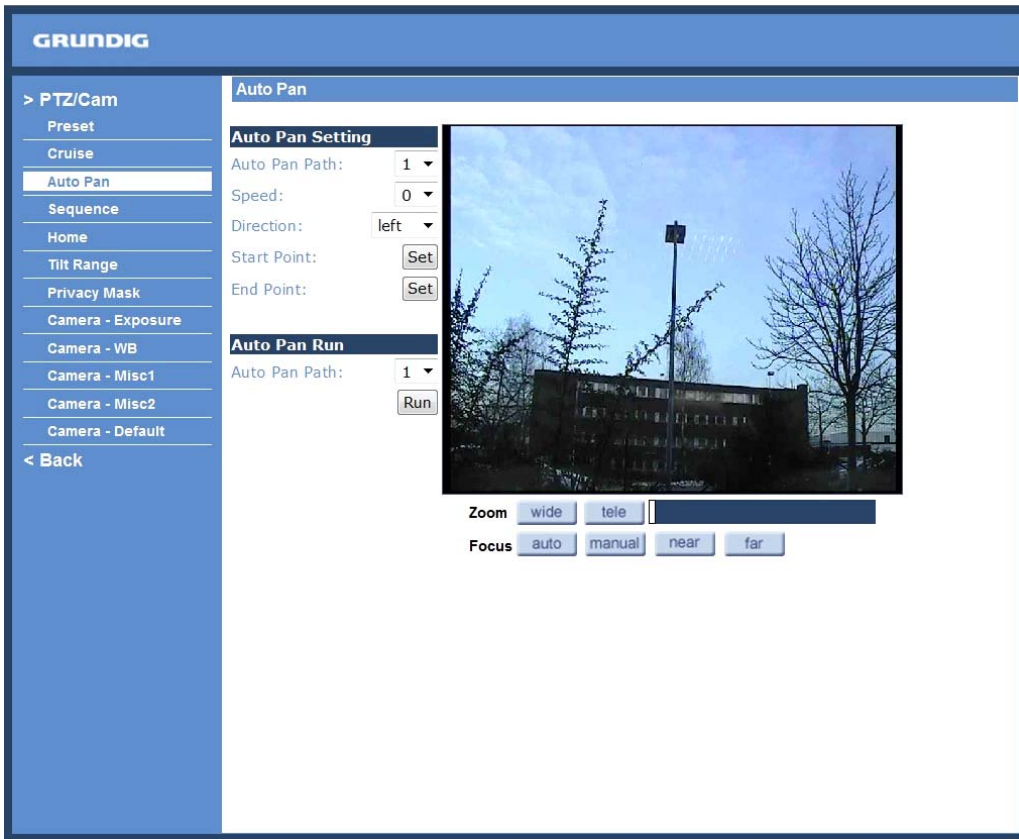
Select the specified Cruise Path from the drop-down list, press the "Run" button, and then the camera will start touring around as recorded.

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 "full screen". Then users can view the camera navigation in full screen.

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

11.3. Auto Pan Programming

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 set up 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 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 the “Set” button of the “End Point” for saving the setting.

Auto Pan Run :

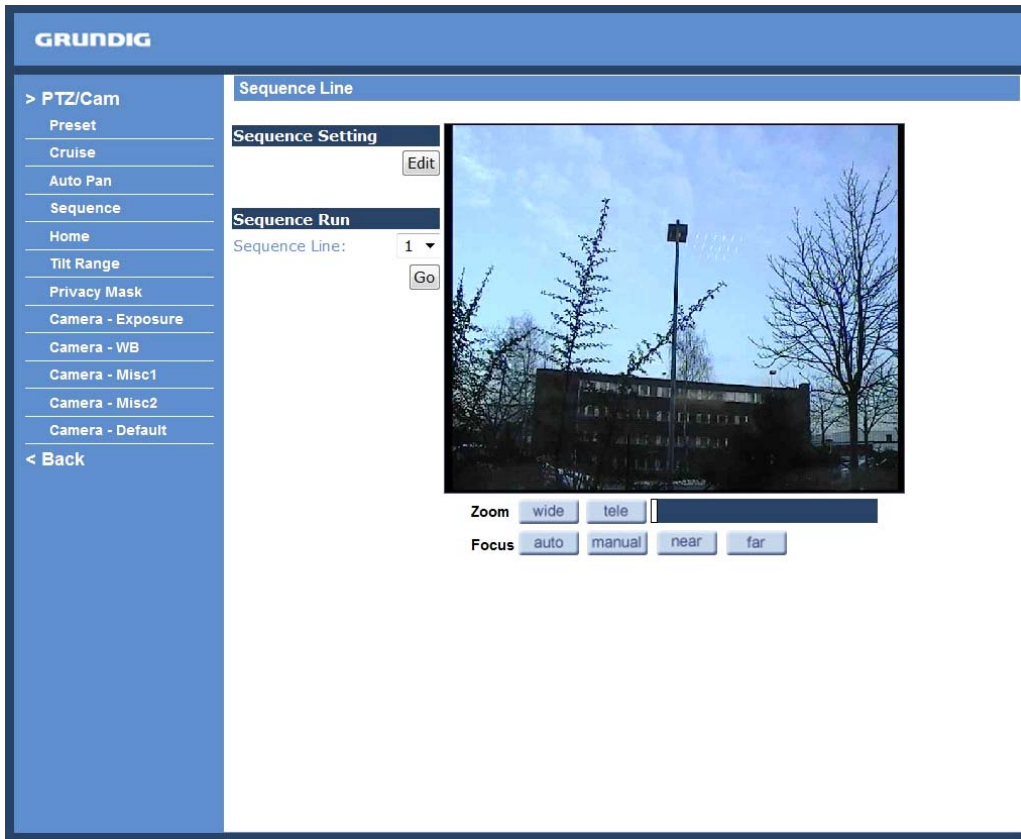
Select the specified Auto Pan Path from the drop-down list, press the “Run” button, and then the camera will start moving horizontally as recorded.

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 “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.

11.4. Sequence Line Programming

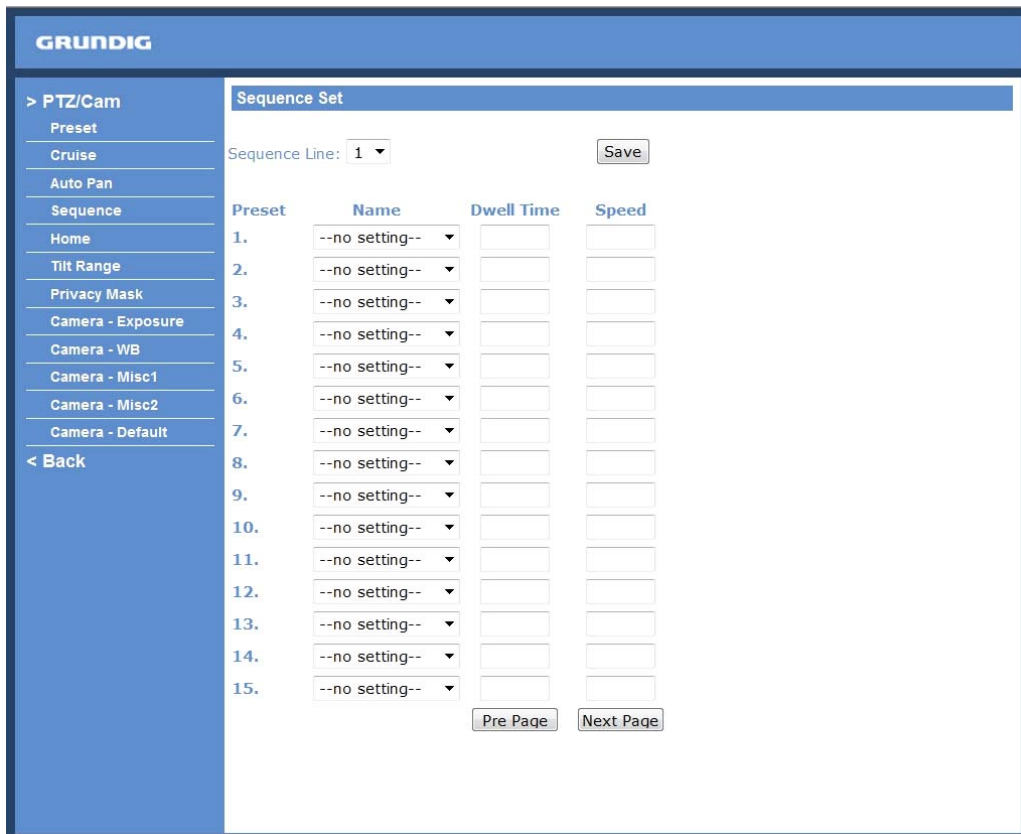
The network Speed Dome Camera supports in total eight Sequence Lines; each Sequence Line consists of up to 64 Preset Points. Please refer to the instructions below to program a Sequence Line.



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

Sequence Setting :

Please press the "Edit" button in "Sequence Setting" section to enter the Sequence setting menu as shown in the next page.



- Sequence Line:

Please select the number of Sequence Lines to be set from the drop-down list on the top of the Sequence setting menu.

- Sequential Preset Points Setting:

Please set up each Preset Point of the programmed Sequence Line in order, by assigning a Preset Point from the "Name" list to the specified number of Preset Point and entering both Dwell Time (0~225) and Speed (0~20) into the corresponding fields.

When finishing the sequential Preset Points setting, please click the button "Save" in the top of the Sequence setting menu.

Sequence Run :

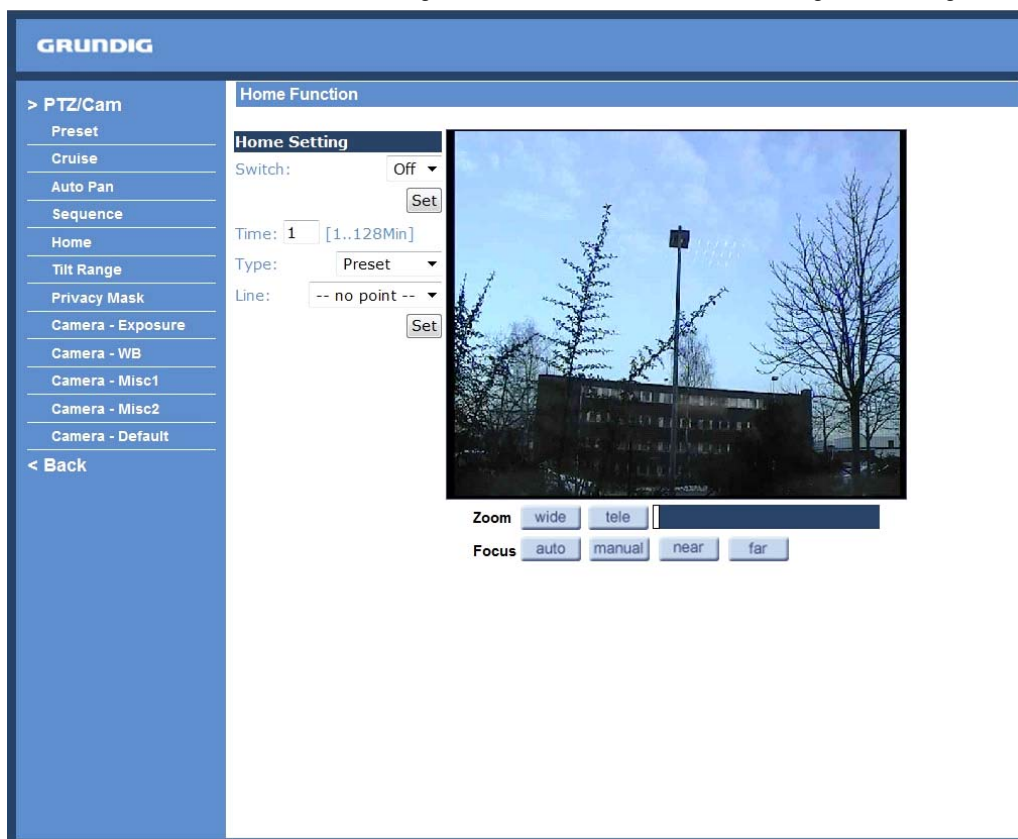
Select the specified Sequence Line from the drop-down list, press the "Go" button, and then the camera will start moving forward each scene sequentially as programmed.

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 "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.

11.5. Home Function

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 press the "Set" button to save the setting.

- Time:

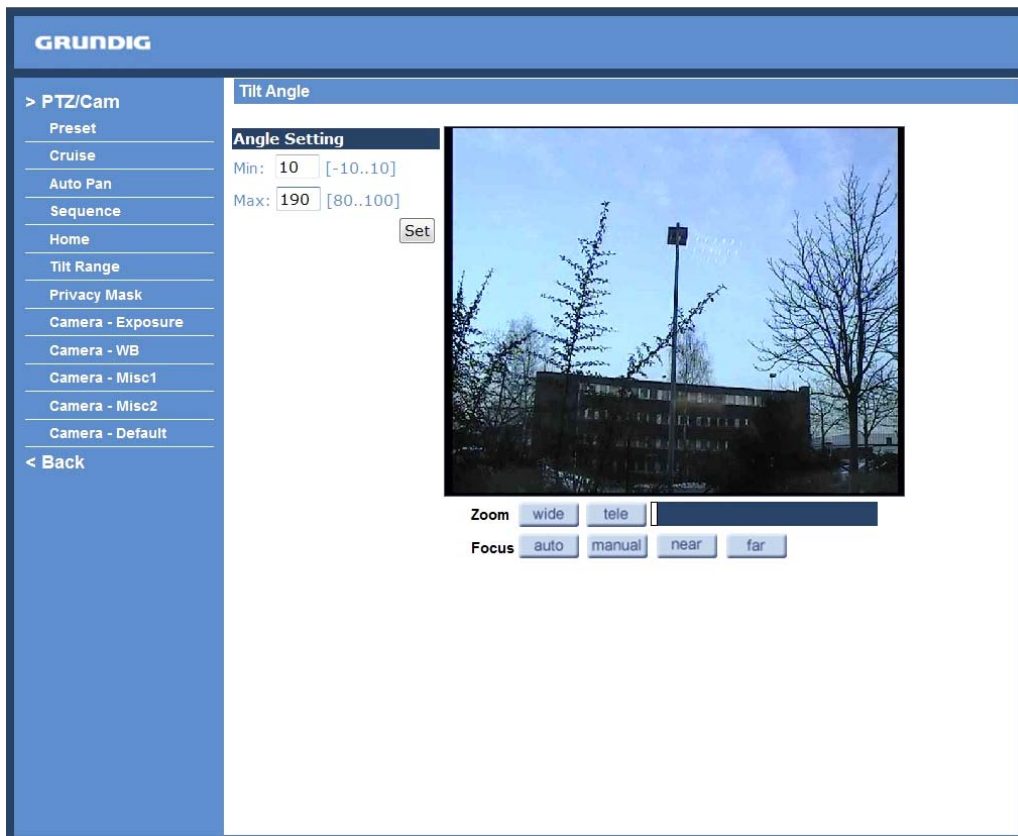
The time here represents the duration of camera idle time previous to running a Preset Point/Cruise Line/Auto Pan Path/Sequence Line. When the Home function is activated, the Dome Camera will start to count down when it idles, and then execute the predefined action as time expires. The time period ranges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

- 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. Press the button "Set" to save the Home settings.

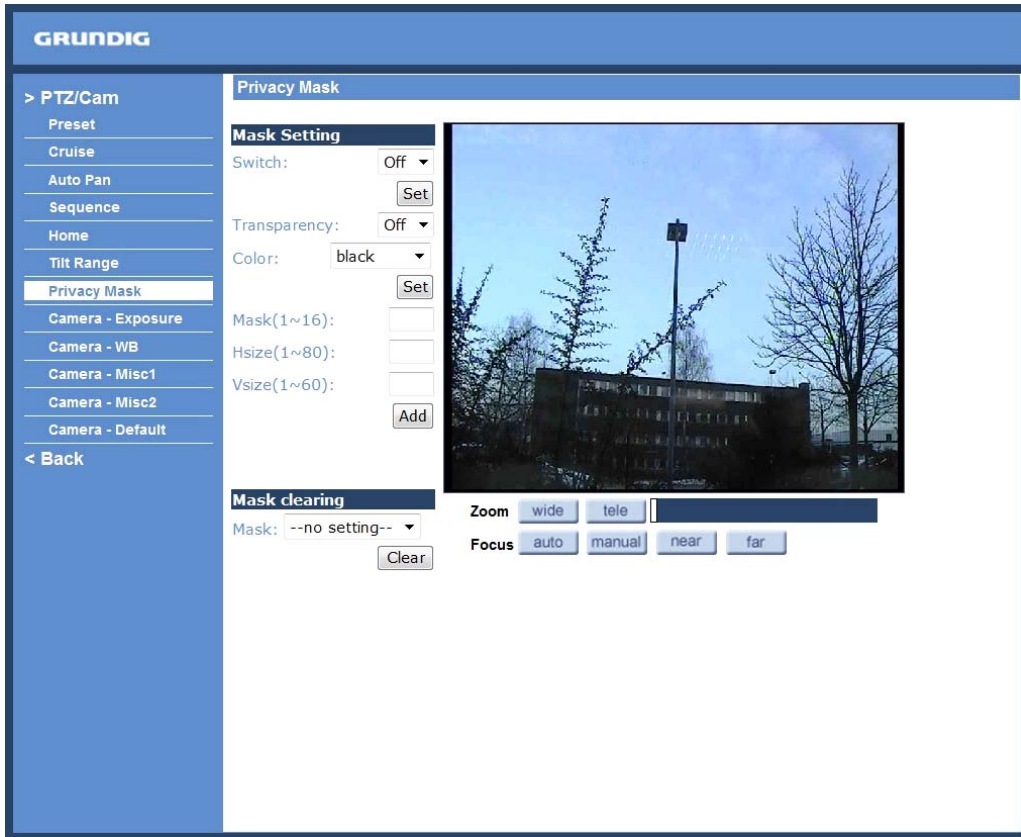
11.6. Tilt Angle Settings

The network Speed Dome Camera's tilt angle is adjustable from minimum -10° to maximum 100° . Please enter the desired min. and max. tilt angle into the corresponding fields. Press the "Set" button to save the tilt angle settings.



11.7. Privacy Mask Settings

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 positioned in the center of the scene. Refer to the following descriptions for setting a privacy mask.



NOTE: The Image Flip function (see section 11.10. Camera — Miscellaneous Setups 1) and the Image Inverse function (see section 11.11. Camera — Miscellaneous Setups 2) will be disabled automatically when the Privacy Mask function is enabled.

Mask Setting :

- Activate/Disable Privacy Mask Function:

The Privacy Mask function can be activated or disabled. Press the button “Set” to save the setting.

- Activate/Disable Transparency Mask:

The Privacy Mask can be set as transparent if necessary.

- Colour Setting:

Select a desired colour from the “Colour” drop-down list for the specified Privacy Mask.

Press the button “Set” to save the Privacy Mask’s colour 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 the “Horizontal Size” ranges from 1 ~80, while that of “Vertical Size” ranges from 1 ~60.

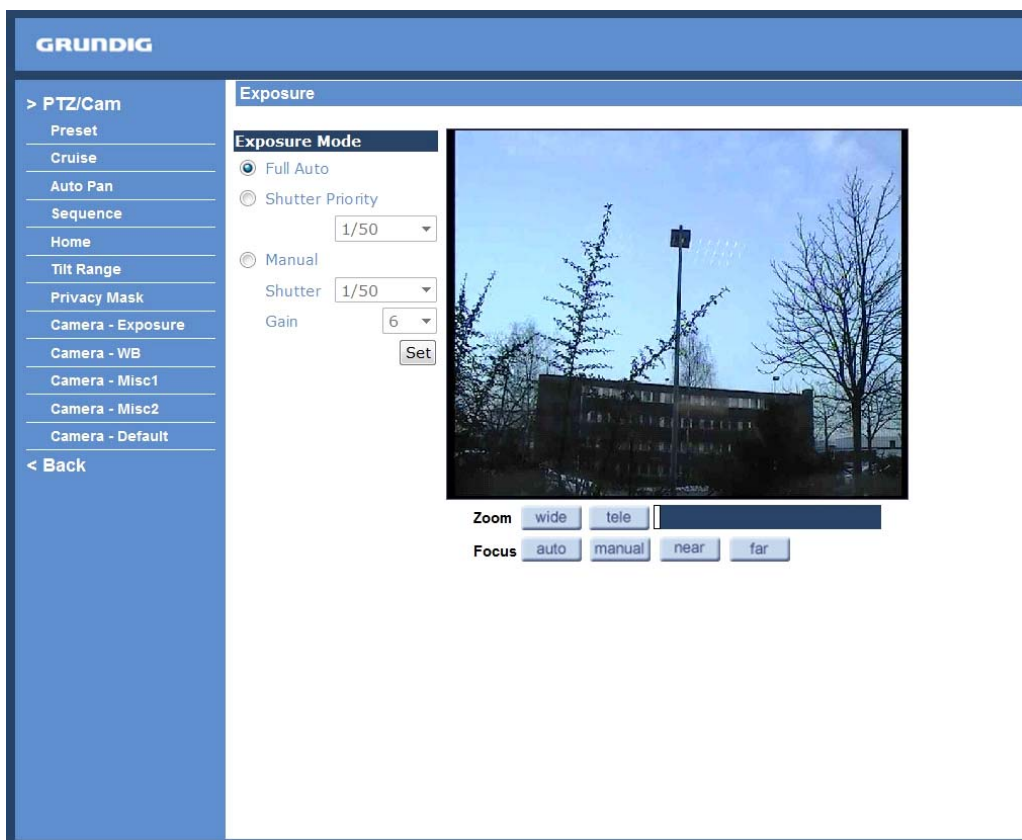
After finishing the setup of a Privacy Mask, press the button “Add” to save the programmed Privacy Mask.

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 press the button "Clear". Then the selected Privacy Mask will readily disappear.

11.8. Camera - AE Mode

In the AE 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.



Shutter Priority Mode :

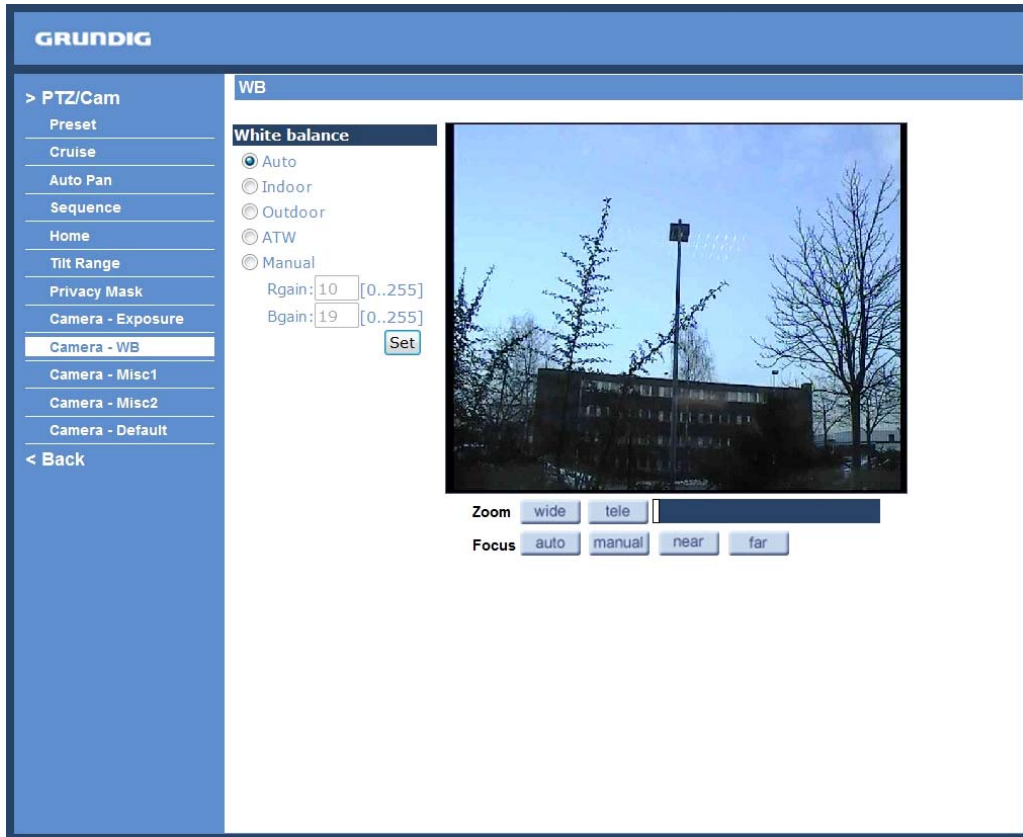
In this mode, it is shutter speed that takes main control of exposure. The range of shutter speed is from 1/10000 ~ 1/50.

Manual :

In this mode, the shutter speed is adjusted manually. Only use this setting when the light conditions are consistent. The shutter speed is adjustable from 1 to 1/10000. The Gain can be adjusted from 1 to 15.

11.9. Camera - WB Mode

A camera needs to find a reference colour temperature, which is a way of measuring the quality of a light source, for calculating all the other colours. 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 colour temperature of some light sources for reference.



Light Sources :

Cloudy Sky (Colour Temperature: 6,000 to 8,000 K)

Noon Sun and Clear Sky (Colour Temperature: 6,500 K)

Household Lighting (Colour Temperature: 2,500 to 3,000 K)

75-watt Bulb (Colour Temperature: 2,820 K)

Candle Flame (Colour Temperature: 1,200 to 1,500 K)

Auto Mode :

In this mode, white balance works within its colour temperature range and calculates the best-fit white balance.

Indoor/Outdoor Mode :

Select Indoor or Outdoor.

ATW Mode (Auto Tracing White Balance) :

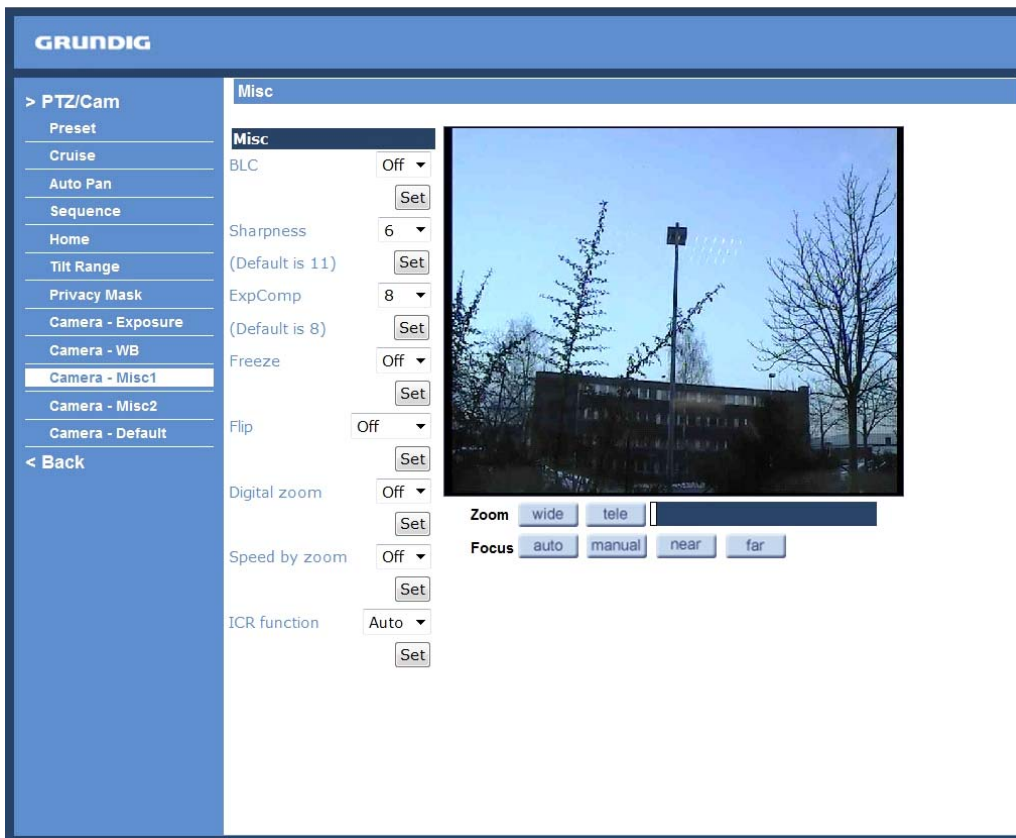
The Dome Camera takes out the signals in a screen in the range from 2000 K to 10000 K.

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.

11.10. Camera - Miscellaneous Setups 1

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



BLC :

Users can choose to activate or disable the BLC function. Press the button “Set” to save the 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.

Sharpness :

Increasing the sharpness level can make the image look sharper; it especially enhances the object’s edges. The Sharpness value is adjustable from 1 to 15. Press the button <Set> to confirm the setting.

ExpComp :

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

Freeze :

The 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. Press the button “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: The Flip setting can only be controlled manually. If a Preset Position or a point for another function (e.g. 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° or -10° ~ +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.

- Image Mode:

IMAGE represents digital IMAGE FLIP, which enables users to keep tracking objects seamlessly; in this mode, almost no delay occurs in comparison with 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 support a Digital Zoom up to 12x. Press the button "Set" to save the setting

ICR Function :

When you detach the IR cut filter from the image sensor and turn off the colour burst function, you will get a black-and-white picture. The light does not have to go through the filter any more, therefore more light enters the image sensor and a clearer picture during the same light conditions will be displayed. As a result, the sensor's sensitivity to light will be enhanced. Without the IR cut filter the image sensor can now also process IR-"light".

- Auto:

In the Auto mode, the internal circuit will automatically decide to remove the IR cut filter according to the image brightness level (if necessary).

- On:

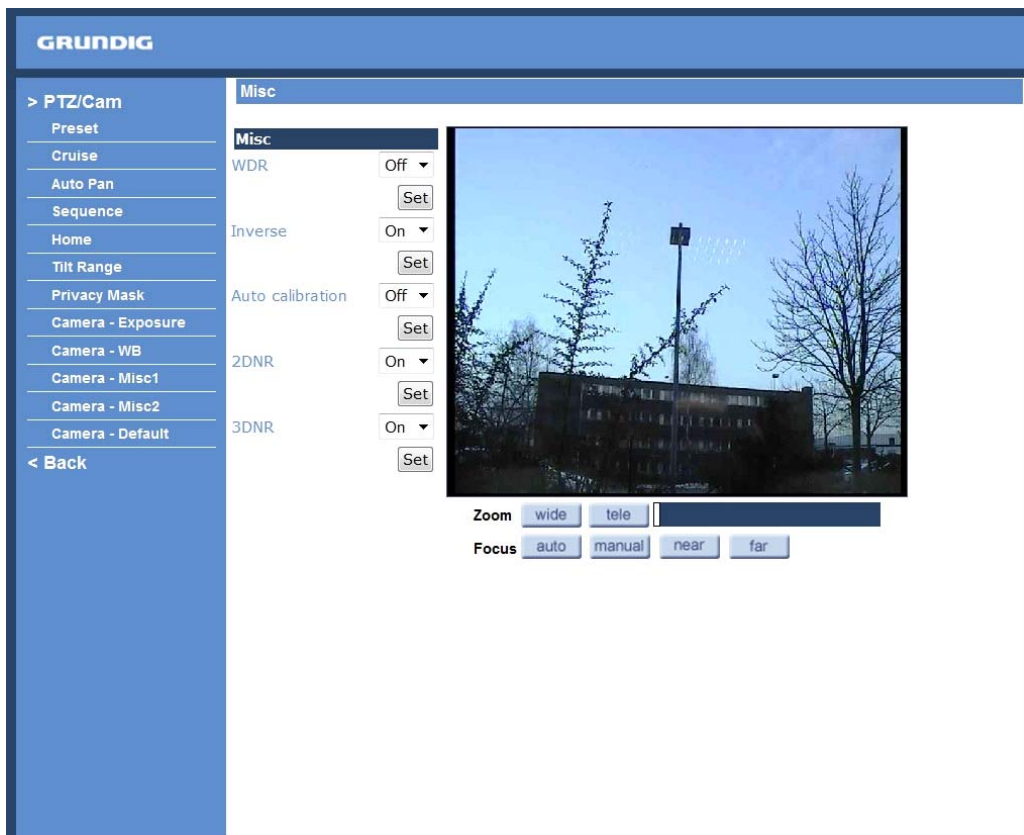
Select this item to remove the IR cut filter.

- Off:

Select this item to disable the IR function.

11.11. Camera - Miscellaneous Setups 2

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



WDR :

The WDR function is especially effective in an environment with extreme contrast. Press the button "Set" when finishing the setting.

Inverse :

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

Auto Calibration :

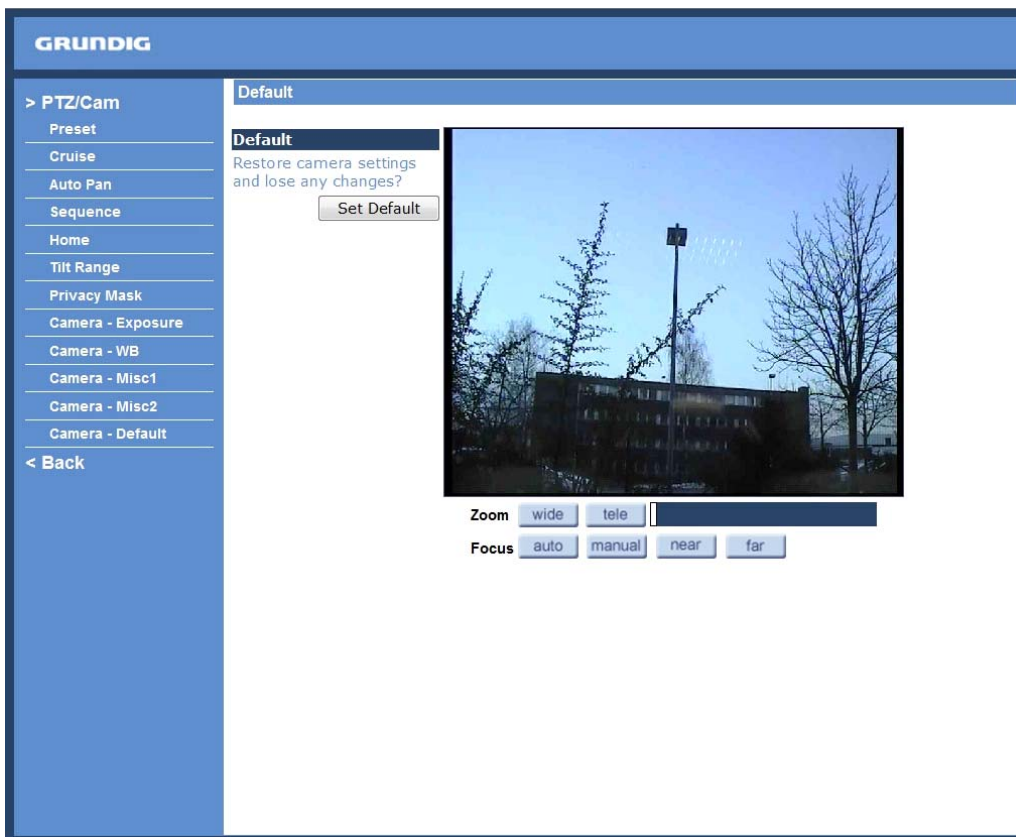
With the Auto Calibration function, the network Speed Dome Camera calibrates when the deviation of dome pivot is detected. Press the button "Set" when finishing setting.

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 image quality can be produced, even in low light conditions. In comparison with 2DNR, 3DNR it can generate de-noising effects better. Press the button "Set" when finishing the setting.

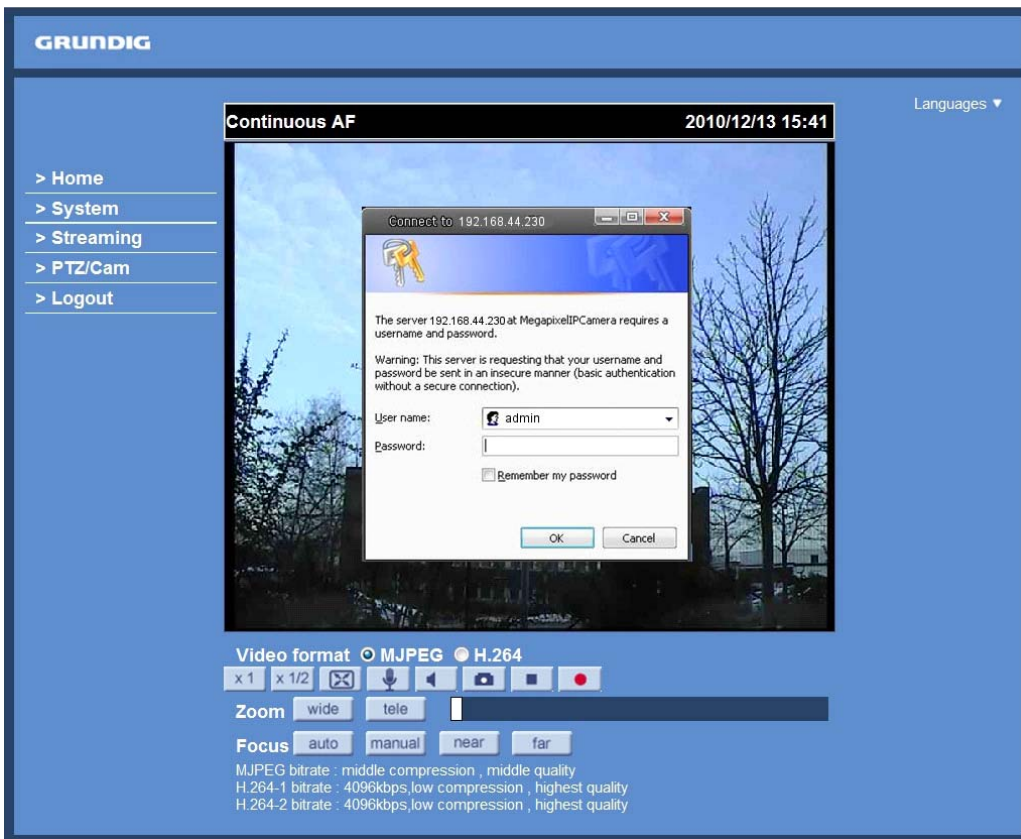
11.12. Default Settings

In the Camera Default page, users can set the camera back to factory default settings simply by pressing the "Set Default" button.



12. Logout

Press the tab "Logout" at the top of the page, and the login window will pop up. This permits login with another user name.



13. CMS Software Introduction

The Central Management System (CMS) software bundles the IP cameras into one system. Offering powerful functionalities via intuitive interface, it is a centralized monitoring solution for your video surveillance equipments.

It gives the user access to monitor multiple IP Cameras, and allows the user to simultaneously monitor 16 sites per group (up to 10 groups) within several clicks.

For further information on CMS software, please refer to the supplied CD.

NOTE: The free bundle CMS is a function-limited software. For additional features, please purchase a licensed CMS.



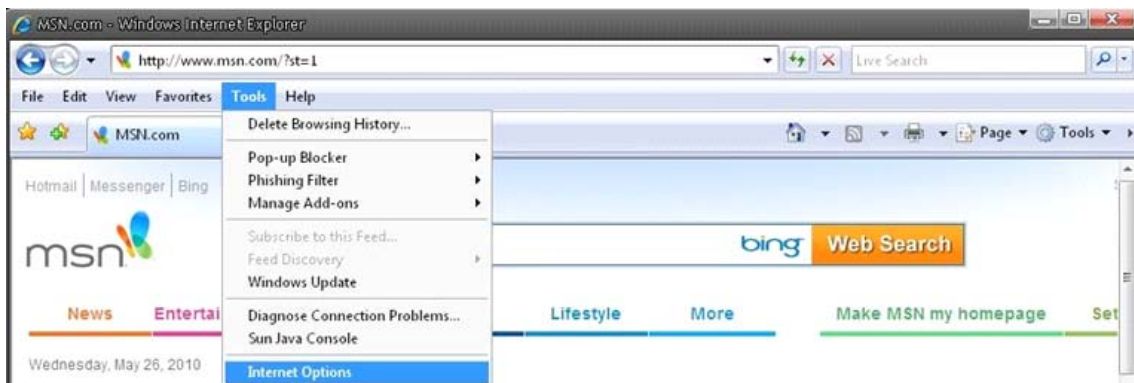
14. Internet Security Settings

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-in settings.

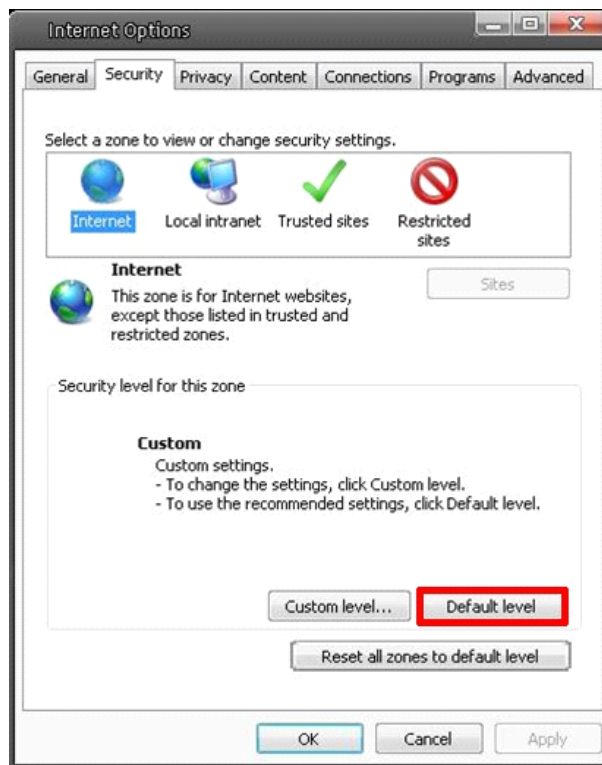
Internet Security Level : Default

Step 1: Start the Internet Explorer (IE).

Step 2: Select <Tools> from the main menu of the browser. Then Click <Internet Options>.



Step 3: Click the <Security> tab, and select <Internet>.

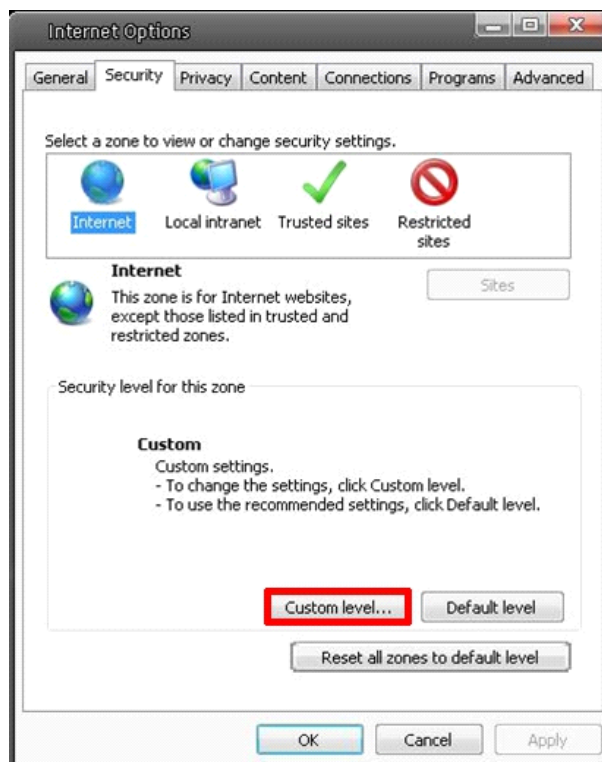


Step 4: Down the page, press “Default Level” (see the picture above) and click “OK” to confirm the setting. Close the browser window, and open a new one later when accessing the IP Camera.

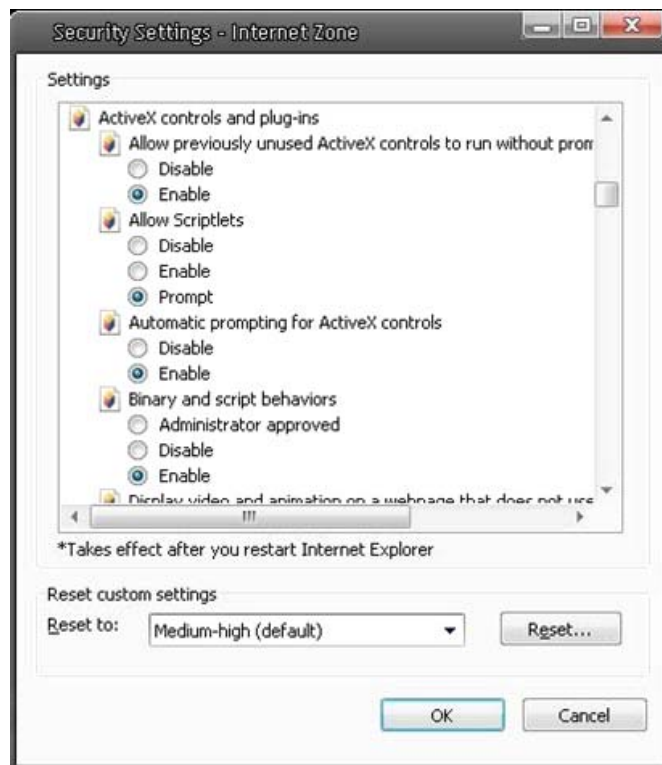
ActiveX Controls and Plug-in Settings :

Step 1~3: Refer to the previous section above.

Step 4: Down the page, press “Custom Level” (see the picture below) to change ActiveX controls and plug-in settings.



The Security Settings screen is displayed as shown below:



Step 5: Under “ActiveX controls and plug-ins”, set ALL items (as listed below) to <Enable> or <Prompt>. Please note that the items may vary depending on the Internet Explorer version you are using.

ActiveX controls and plug-in settings:

1. Allow previously unused ActiveX controls to run without prompt
2. Allow Scriptlets
3. Automatic prompting for ActiveX controls.
4. Binary and script behaviors
5. Display video and animation on a webpage that does not use external media player
6. Download signed ActiveX controls
7. Download unsigned ActiveX controls
8. Initialize and script ActiveX controls not marked as safe for scripting
9. Run ActiveX controls and plug-ins
10. Script ActiveX controls marked as safe for scripting

Step 6: Click <OK> to accept the settings and to close the Security screen.

Step 7: Click <OK> to close the Internet Options screen.

Step 8: Close the browser window, and restart a new one later for accessing the IP Camera.

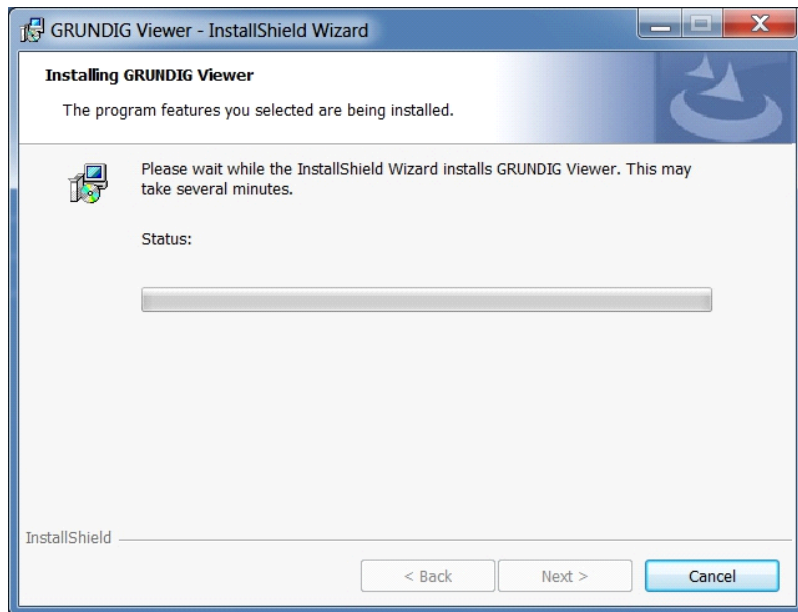
15. GRUNDIG Viewer Download Procedure

The procedure of GRUNDIG Viewer software download is specified as follows:

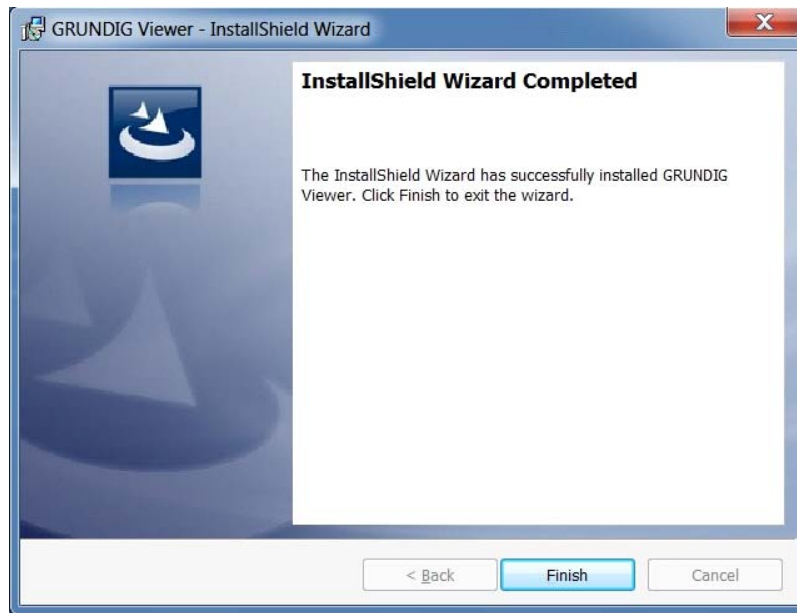
Step 1: In the GRUNDIG Viewer installation page, click “Next” for starting the installation.



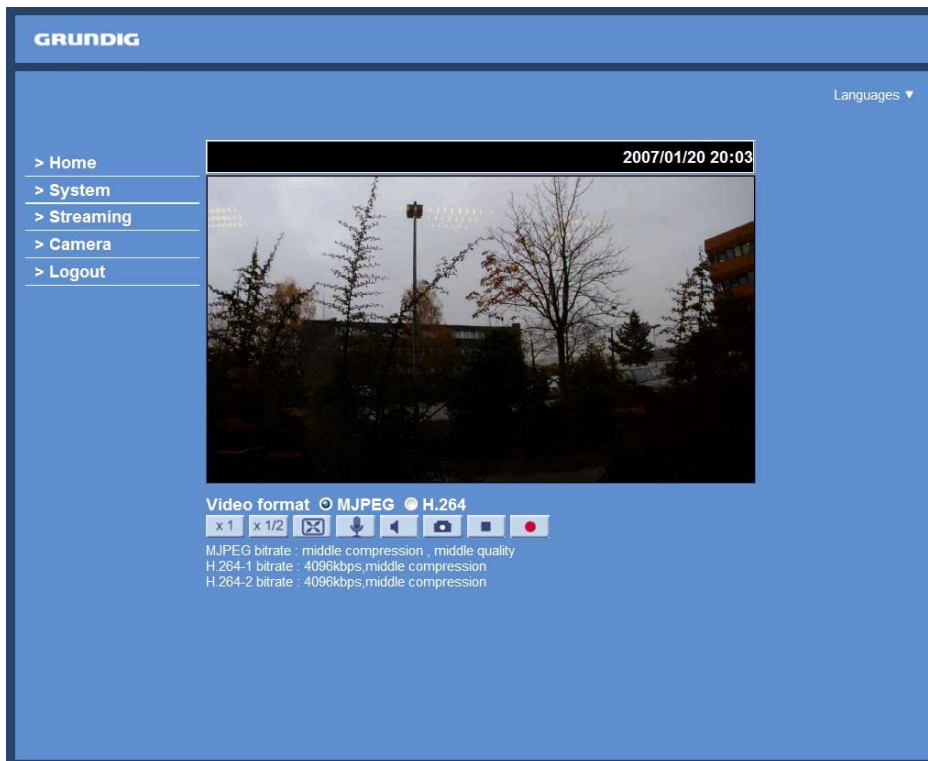
Step 2: Setup starts. Please wait for a while until the loading bar runs out.



Step 3: Click "Finish" to close the GRUNDIG Viewer installation page.



Then, the IP Camera's Home page will display as follows:

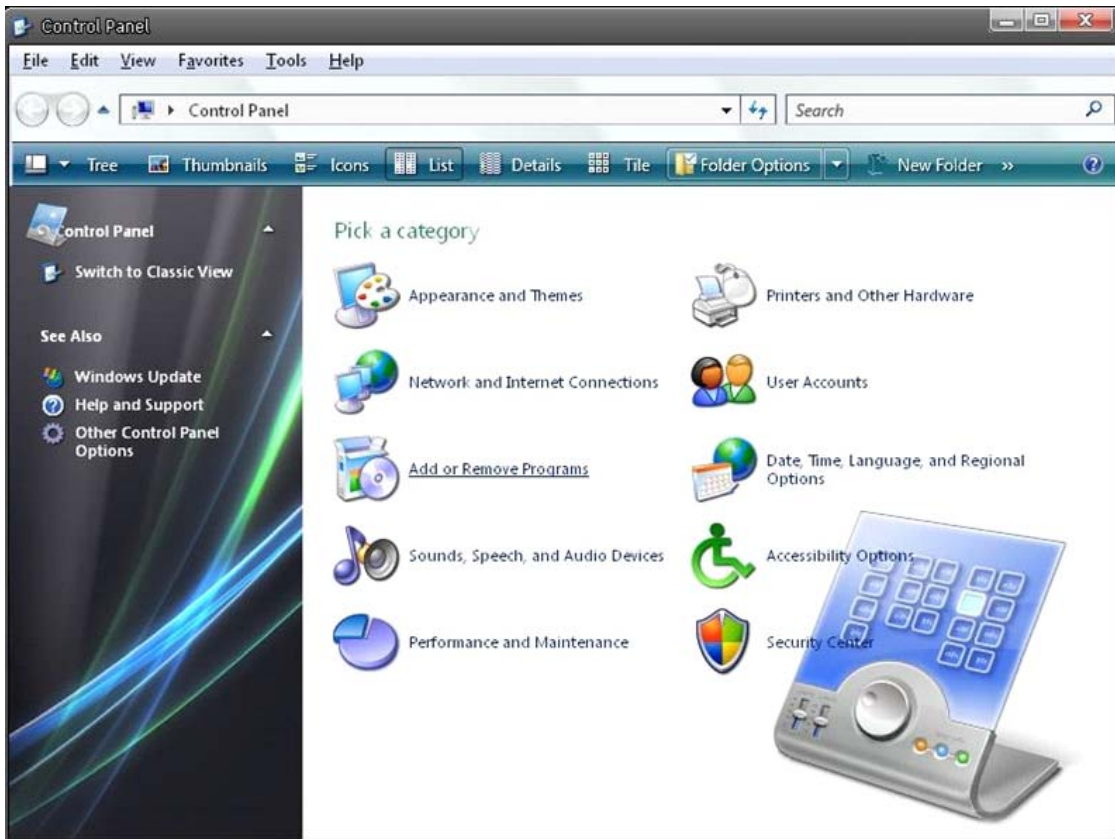


NOTE: Please note that the function buttons may vary depending on the camera model.

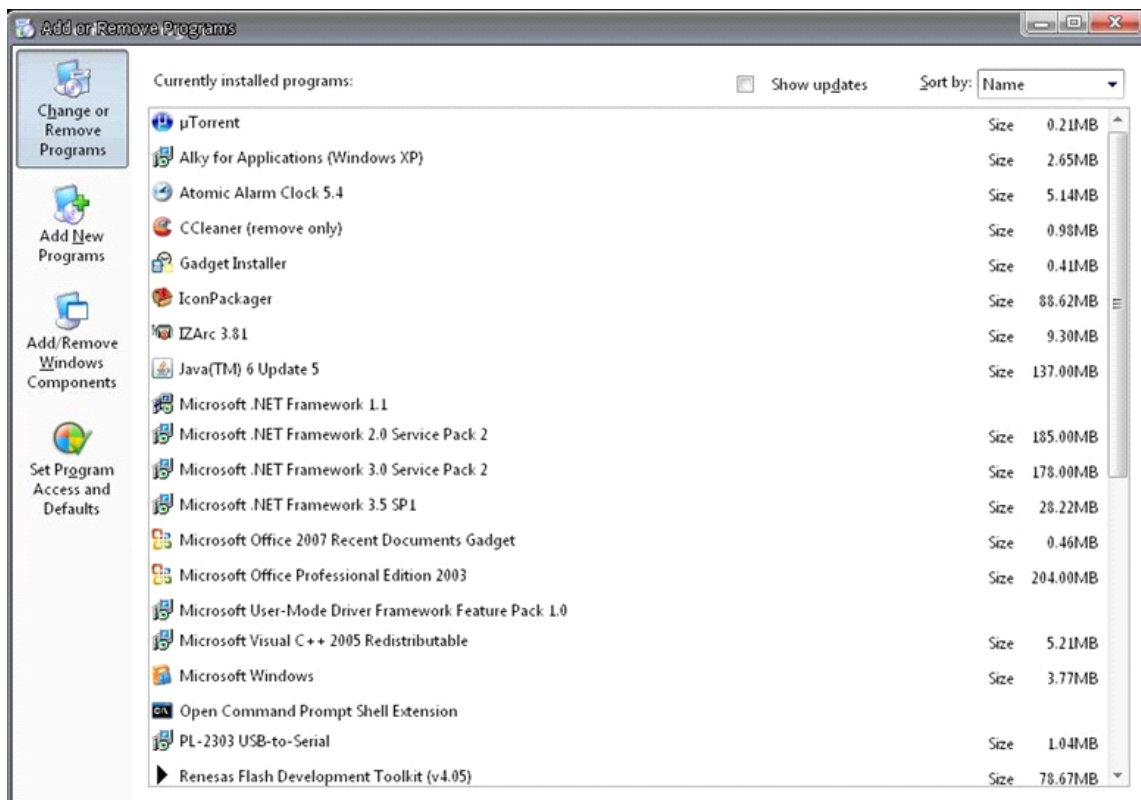
16. Install UPnP Components

Please follow the instructions below to install UPnP components. (The procedure is for Windows XP, for other systems please refer to the corresponding manuals.)

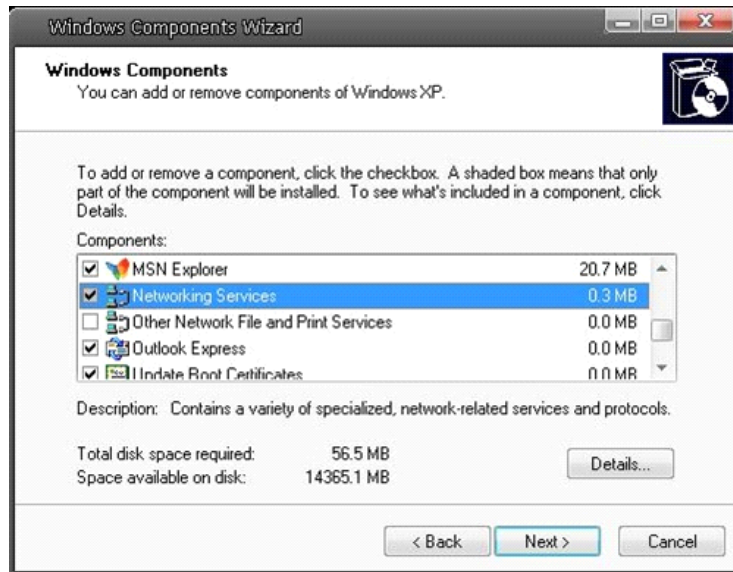
Step 1: Go to "Start", click on "Control Panel", and then double-click on "Add or Remove Programs".



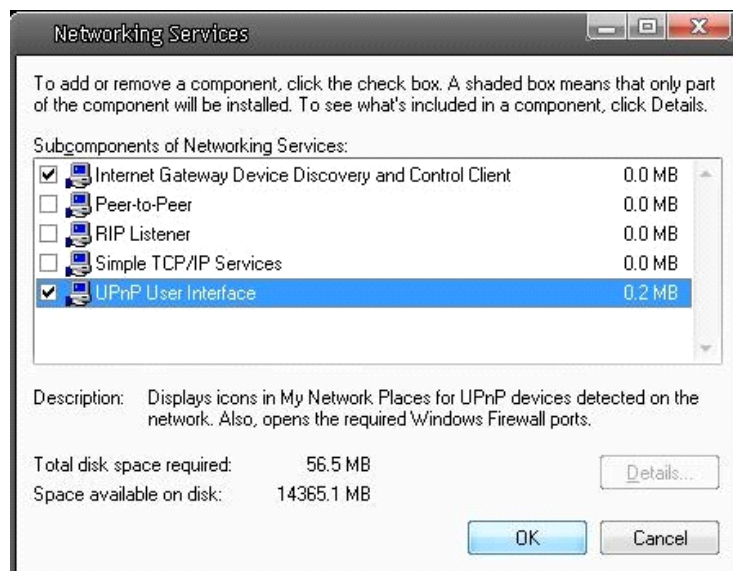
Step 2: Click on "Add/Remove Windows Components" in the Add or Remove Programs page.



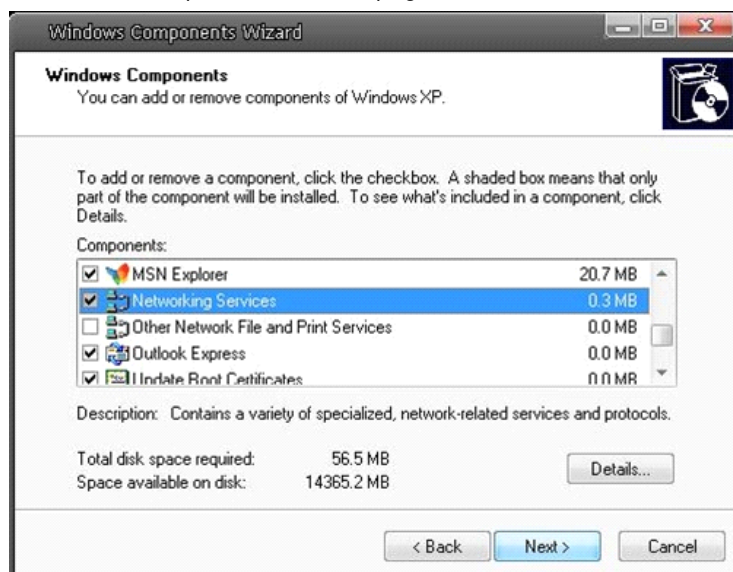
Step 3: Select "Networking Services" from the Components list in the Windows Components Wizard window, and then click "Details".



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



Step 5: Click "Next" in the Windows Components Wizard page.



Step 6: Click "Finish" to complete the installation.



Specifications GCI-C0735P

Image Sensor	1/4" CCD (Sony ExView HAD)
Digital Signal Processor (DSP)	Sony EFF10 DSP solution
Col/B&W	On/Off/Auto, IR-cut filter removable (ICR)
Pixels - total	795 x 596
Sensitivity	0.1 lux (Colour) / 0.01 lux (B&W)
S/N Ratio	50 dB
Resolution	650(H) lines
BLC	On/Off + WDR
White Balance	Auto, Manual, Indoor, Outdoor, ATW
Shutter Speed	1 sec to 1/10,000 sec
Camera ID	20 character
Number of Privacy Zones	16
Pan Speed	Manual: 1°/s ~ 80°/s, Preset: 400°/s (max.)
Tilt Speed	Manual: 1°/s ~ 80°/s, Preset: 400°/s (max.)
Range Panning	360° endless
Range Tilting	-10° ~ 190°
Number of Preset	256
Number of Pattern	8
Lens Drive Type	Auto iris, DC
Focal Length	3.8 ~ 45.6 mm
Zoom Ratio	x 12
Digital Zoom	Off/1 ~ 12x
OSD	Yes
Video Outputs	1Vpp, BNC
Alarm Inputs	4
Alarm Outputs	1
Web Browser	MS Internet Explorer 6.0 (or higher)
Video Compression	Dual stream: H.264+H.264, H.264+MJPEG
Video Resolution	D1 (720x576), CIF (352x288)
Network Protocol	IPv4, IPv6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, 802.1X and SNMP
SD memory	Micro SD/SDHC
Alarm Event	Alarm Input, Motion Detection or Schedule: Image transfer or alarm message by FTP, Image transfer or alarm message by E-mail, recording on SD-card and enable alarm output
Audio Compression	G.726 ADPCM, G.711
Firmware Upgrade	Firmware upgrade by Web Browser
Regulation	CE, FCC, RoHS Compliant
Operating Temperature	0°C ~ +40°C
Supply Voltage	24 VAC
Power Consumption	18 W
Weight	1.2 kg
Dimensions (wxhxd)	Ø 156 X 203 mm

Specifications GCI-C0745P

Image Sensor	1/4" CCD (Super HAD 2 CCD)
Digital Signal Processor (DSP)	Sony EFF10 DSP solution
Col/B&W	On/Off/Auto, IR-cut filter removable (ICR)
Pixels - total	795 x 596
Sensitivity	0.1 lux (Colour) / 0.01 lux (B&W)
S/N Ratio	50 dB
Resolution	650(H) lines
BLC	On/Off + WDR
White Balance	Auto, Manual, Indoor, Outdoor, ATW
Shutter Speed	1 sec to 1/10,000 sec
Camera ID	20 character

Number of Privacy Zones	16
Pan Speed	Manual: 0.5°/s ~ 90°/s, Preset: 400°/s (max.)
Tilt Speed	Manual: 0.5°/s ~ 90°/s, Preset: 400°/s (max.)
Range Panning	360° endless
Range Tilting	-10° ~ 190°
Number of Preset	256
Number of Pattern	8
Lens Drive Type	Auto iris, DC
Focal Length	3.4 ~ 122.4 mm
Zoom Ratio	x 36
Digital Zoom	Off/1 ~ 12x
OSD	Yes
Video Outputs	1Vpp, BNC
Alarm Inputs	4
Alarm Outputs	1
Web Browser	MS Internet Explorer 6.0 (or higher)
Video Compression	Dual stream: H.264+H.264, H.264+MJPEG
Video Resolution	D1 (720x576), CIF (352x288)
Network Protocol	IPv4, IPv6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, 802.1X and SNMP
SD memory	Micro SD/SDHC
Alarm Event	Alarm Input, Motion Detection or Schedule: Image transfer or alarm message by FTP, Image transfer or alarm message by E-mail, recording on SD-card and enable alarm output
Audio Compression	G.726 ADPCM, G.711
Firmware Upgrade	Firmware upgrade by Web Browser
Regulation	CE, FCC, RoHS Compliant
Protection Rating	IP66
Operating Temperature	-45°C ~ +50°C
Supply Voltage	24 VAC
Power Consumption	65 W
Weight	2.6 kg
Dimensions (wxhxd)	Ø 190 X 302.5 mm