

GEUTEBRÜCK



G-Cam/EFD-3131

Full HD Ultra-WDR Dome IP Camera

Webbrowser Handbuch

Preface

The information given in this manual was current when published. The company reserves the right to revise and improve its products. All specifications are subject to change without notice.

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1. Overview

In this manual, information about main page introduction, system related settings and camera settings will be described in details.

2. Menu Tree

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

Home

Users can monitor the live video of the targeted area.

System setting

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

Streaming setting

The administrator can configure video format, video resolution, video OCX protocol, video frame rate, video mask and audio compression in this page.

Camera setting

The administrator and users with the rights to remote control the camera can configure the following camera parameters:

<Exposure>, <White Balance>, <Picture Adjustment>, <IR>, <Misc>, <Profile> and <TV System>.

Logout

Click on the tab to re-login to the IP camera with another username and password.



2.1 Home Page

Click on the tab <Home> to access the Home Page. There are several function buttons on the Home page. Detailed information of each item is as described in the following chapter.

2.1.1 Function Items on Home Page

Multiple Languages Support

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

Digital Zoom Control

In the full screen mode, users can implement digital PTZ by rotating the mouse wheel.

Screen Size Adjustment

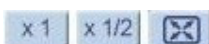


Image display size can be adjusted to x1, x1/2 and full screen.

Talk button



(On / Off) (not supported by GEUTEBRUCK DVRs)

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 [Security: Add user > Talk / Listen](#) for further details.



NOTE: This function is only available for user accounts who have granted this privilege by the administrator.

Speaker button



(On / Off) (not supported by GB DVRs)

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



NOTE: This function is only available for user accounts who have granted this privilege by the administrator.

Snapshot button



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



NOTE: With Windows 7 or Windows 8 operating system, to implement the Web Recording function, users must run IE as administrator. To run IE as administrator, right click on the IE browser icon and select "Run as Administrator" to launch IE.

Video Streaming Pause / Restart button   (Pause / Restart)

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

Web Recording button   (On / Off)

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



NOTE: With Windows 7 or Windows 8 operating system, to implement the Web Recording function, users must run IE as administrator. To run IE as administrator, right click on the IE browser icon and select “Run as administrator” to launch IE.

Zoom Adjustment (NOT with box cameras!)

- **Wide / Tele buttons**



Hold the <Wide / Tele> button, and implement continuous zoom adjustment.

- **Tele / Wide Steps buttons**



Select a Tele / Wide step value from the drop-down menu. Then click on the <Tele / Wide Steps> button to shift the zoom lens according to the defined value.

- **Reset button**



Click on the <Reset> button, and the zoom lens will be calibrated to the maximum wide end.

Manual Focus Adjustment (with box cameras, too)

- **Near / Far buttons**



Hold the <Near / Far> button, and implement continuous focus adjustment.

- **Near / Far Steps buttons**



Select a Near / Far step value from the drop-down menu. Then click on the <Near / Far Steps> button to shift the focus lens according to the defined value.

- **Reset button**



Click on the <Reset> button, and the focus lens will be reset to the maximum near end. Then the lens will be calibrated to a suitable position according to the monitoring environment.

- **Push AF**



The One Push AF function is for fixing the focus in one click.

Auto Focus (AF) Adjustment (with box cameras, too)

The AF mode can be defined as manual, zoom trigger AF and push AF.

- **Manual button**



Click on the <Manual> button, and users can adjust focus manually via the <Near / Far> buttons.

- **Zm Trig (Zoom Trigger AF)**

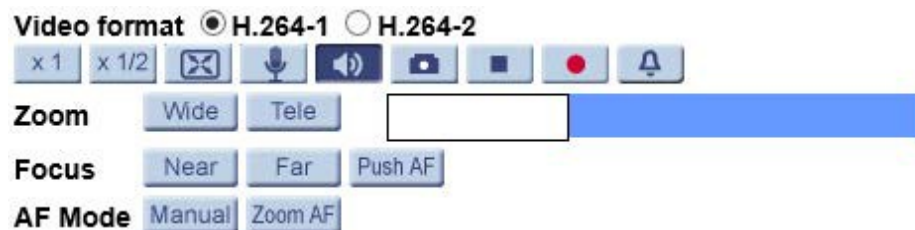


In this mode, AF is activated every time when zoom is adjusted.

- **Push AF**



Push AF function is for fixing the focus in one click (not permanent).



- **Zoom: Wide/Tele**



Click on <Wide> or <Tele> and hold the mouse button pressed, to permanently change the zoom of the camera.

- **Focus: Near/Far**



Click on <Near> or <Far> and hold the mouse button pressed, to permanently change the focus of the camera.

2.2 System

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



NOTE: The System configuration page is only accessible by the administrator.

2.2.1 System

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

Host Name

The name is for camera identification. If alarm function (refer to section [Application](#)) is enabled and is set to send the alarm message by Mail / FTP, the host name entered here will be displayed in the alarm message. The maximum length of the host name is 30 characters.

Time Zone

Select the time zone from the drop-down menu according to the location of the camera.

Enable Daylight Saving Time

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

Sync with Computer Time

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



NOTE: Users **MUST** click on <Save> to confirm and save the settings. Otherwise the time will not be synced.

Manual

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

Sync with NTP server

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



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

Click on <Save> to save the settings.

2.2.2 Security

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

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

2.2.2.1 User

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

Admin Password

This item is for the administrator to reset password. Enter the new password in <Admin password> and <Confirm password>. The maximum length is 14 characters. The input characters / numbers will be displayed as dots for security purposes. Click on <Save> to confirm the changes. After the changes are confirmed, the web browser will ask the administrator to re-login to the camera with the new password.



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

Add user

This item is for the administrator to add new users. Enter the new user's name in <User name> and the password in <User password>. Username can be up to 16 characters, and the maximum length of the password is 14 characters. Tick the boxes below to give privileges for functions, including “**Camera control**”, “**Talk**” and “**Listen**”. Click on <Add> to add the new user. The name of the new added user will be displayed in the <User name> drop-down list.

There is a maximum of twenty user accounts.

- **I/O access**
This item supports fundamental functions that enable users to view the live video when accessing to the camera.
- **Camera control**
This item allows the appointed users to change camera parameters on the <Camera> setting page.
- **Talk / Listen (listen only is supported by GEUTEBRUCK DVRs)**
Talk and Listen functions allow the appointed user in the local site (PC site) communicating with, for instance, the administrator in the remote site.

Manage User

- **Delete user**

To delete a user, pull down the user list, and select the username that is wished to delete. Then click on <Delete> to remove it.

- **Edit user**

Pull down the <User name> drop-down list and select a username. Click on <Edit> and a popup window will appear. In the appeared window, enter the new user password and reset the privileges. Click on <Save> to confirm the changes. Then click on <Close> to complete the editing.

Streaming Authentication Setting

This setting provides security against unauthorized users from getting streaming via Real Time Streaming Protocol (RTSP). If the setting is enabled, users will be requested to enter username and password before viewing the live streams. There are three security modes available: Disable, Basic and Digest. Refer to the descriptions below for more details.

- **Disable**

If disable mode is selected, there will be no security provided against unauthorized access. Users will not be asked to input username and password for authentication.

- **Basic**

This mode can only provide basic protection for the live streams. There will still be risks for the password being intercepted.

- **Digest**

Digest mode is a safer option for protection. The password is sent in an encrypted format to prevent it from being stolen.

2.2.2.2 HTTPS

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

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

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

Create Self-signed Certificate

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

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



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

Install Signed Certificate

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

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

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

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

Provide the Certificate Information

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

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

- **Country**

Enter a 2-letter combination code to indicate the country which the certificate will be used in.

For instance, type in “US” to indicate United States.

- **State or province**
Enter the local administrative region.
- **Locality**
Enter other geographical information.
- **Organization**
Enter the name of the organization to which the entity identified in “Common Name” belongs.
- **Organization Unit**
Enter the name of the organizational unit to which the entity identified in “Common Name” belongs.
- **Common Name**
Indicate the name of the person or other entity that the certificate identifies (often used to identify the website).
- **Valid days**
Enter the period in days (1 to 9999) to indicate the valid period of certificate.

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

2.2.2.3 IP Filter

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

With IP Filter, users can allow or deny specific IP addresses from accessing the camera.

- **Enable IP Filter**

Check the box to enable the IP Filter function. Once enabled, the listed IP addresses (IPv4) in the <Filtered IP Addresses> list box will be allowed / denied to access the camera.

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

- **Add / Delete IP Address**

Input IP address at the blank space below the <Filtered IP Address> list and click <Add>.

The newly-added address will be shown in the list. Up to 256 IP address entries can be specified.

To delete an IP address, mark it and press <Delete>.

Details for filtering IP addresses see under **Appendix B**.

2.2.2.4 IEEE 802.1X

The IEEE 802.1X setting can be found under this path:

System > Security > IEEE 802.1X.

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

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

CA Certificate

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

Client Certificate / Private Key

Upload the Client Certificate and Private Key for authenticating the camera itself.

Settings

- **Identity**

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

- **Private Key Password**

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

Enable IEEE 802.1X

Check the box to enable IEEE 802.1X.

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

2.2.3 Network

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

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

2.2.3.1 Basic

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

This setting page is for setting a new IP address for the camera, configuring other network-related parameters and activating IPv6 address (if network supports it).

General

This setting menu is for configuring a new IP address for the camera. To setup an IP address, please find out the network type first. Contact the network provider for it. Then refer to the network type and follow the instructions to setup the IP address.



NOTE: If the network type is Point-to-Point Protocol over Ethernet (PPPoE), please obtain the PPPoE username and password from the network provider.

- **Get IP address automatically (DHCP)**

Select the item and click <Save> to confirm the new setting. A note for camera system restart will appear. Click <OK> and the camera system will be restarted. The camera will be assigned with a new IP address. Close the web browser and search the camera through the installer program: DeviceSearch.exe, which can be found in "DeviceSearch" folder in the supplied CD.



NOTE: Before searching the camera through DeviceSearch.exe, please record the camera's MAC address, which can be found on the label or on the package container of the camera, for later use and identification in the future.

- **Use fixed IP address**

Select the item and insert the new IP address, ex. 192.168.7.123. Note that the inserted IP address should be in the same LAN as the PC's IP address. Then go to the Default gateway (explained later) blank and

change the setting, ex. 192.168.7.254. Click on <Save> to confirm the new setting. A note for system restart will appear, click <OK> and the system will restart. Wait for 15 seconds. The camera's IP address in the URL bar will be changed, and users have to login again.

When using a static IP address to connect the camera, users can access the camera by inputting the IP address in the URL bar and hit <Enter> on the keyboard. Alternatively, users can access the camera by the installer program: DeviceSearch.exe, which can be found in "DeviceSearch" folder in the supplied CD.

➤ **IP address**

This is necessary for network identification.

➤ **Subnet mask**

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

➤ **Default gateway**

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

➤ **Primary DNS**

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

➤ **Secondary DNS**

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

● **Use PPPoE**

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

Advanced

The following introduces the camera's Web Server port, RTSP port, MJPEG over HTTP port, and HTTPS port.

● **Web Server port**

The default web server port is 80. With the default web server port '80', users can simply input the IP address of the camera in the URL bar of a web browser to connect the camera. When the web server port is changed to any number other than 80, users have to enter the camera's IP address followed by a colon and the port number. For instance, a camera whose IP address as 192.168.0.100 and web server port as 8080 can be connected by entering "<http://192.168.0.100:8080>" in the URL bar.

- **RTSP port**
The default setting of RTSP Port is 554; the setting range is from 1024 to 65535.
- **MJPEG over HTTP port**
The default setting of MJPEG over HTTP Port is 8008; the setting range is from 1024 to 65535.
- **HTTPS port**
The default setting of HTTPS Port is 443; the setting range is from 1024 to 65535.



NOTE: Please make sure the port numbers set above are not the same with each other, otherwise network conflict may occur.

IPv6 Address Configuration

If the network supports IPv6, users can check the box beside <Enable IPv6> and click <Save>. An IPv6 address will appear beside <Address>, and users can use it to connect to the camera.

2.2.3.2 QoS

The QoS (Quality of Service) setting can be found under this path:

System > Network > QoS.

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

DSCP Settings

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

- **Video DSCP**
The class consists of applications such as MJPEG over HTTP, RTP/RTSP and RTSP/HTTP.
- **Audio DSCP**
This setting is only available for the cameras that support audio.
- **Management DSCP**
The class consists of HTTP traffic: Web browsing.



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

Click on <Save> to save the settings.

2.2.3.3 SNMP

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

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

SNMP v1 / v2

- **Enable SNMP v1 / v2**
Select the version of SNMP to use by checking the box.
- **Read Community**
Specify the community name that has read-only access to all supported SNMP objects. The default value is “public”.
- **Write Community**
Specify the community name that has read / write access to all supported SNMP objects (except read-only objects). The default value is “private”.

SNMP v3

SNMP v3 supports an enhanced security system that provides protection against unauthorized users and ensures the privacy of the messages. Users will be requested to enter security name, authentication password and encryption password while setting the camera connections in the network management system. With SNMP v3, the messages sent between the cameras and the network management system will be encrypted to ensure privacy.

- **Enable SNMP v3**
Enable SNMP v3 by checking the box.
- **Security Name**
The maximum length of the security name is 32 characters.



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

- **Authentication Type**
There are two authentication types available: MD5 and SHA.
Select SHA for a higher security level.
- **Authentication Password**
The authentication password must be 8 characters or more. The input characters / numbers will be displayed as dots for security purposes.



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

- **Encryption Type**
There are two encryption types available: DES and AES. Select AES for a higher security level.

- **Encryption Password**

The minimum length of the encryption password is 8 characters and the maximum length is 512 characters. The input characters / numbers will be displayed as dots for security purposes. The encryption password can also be left blank. However, the messages will not be encrypted to protect privacy.



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

Traps for SNMP v1 / v2 / v3

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

- **Enable Traps**

Check the box to activate trap reporting.

- **Trap address**

Enter the IP address of the management server.

- **Trap community**

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

Trap Option

- **Warm Start**

A Warm Start SNMP trap signifies the SNMP device, e.g. IP camera, performs a software reload.

Click on <Save> when finished.

2.2.3.4 UPnP

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

UPnP Setting

- **Enable UPnP**

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



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

- **Enable UPnP port forwarding**

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



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

- **Friendly name**

Set a name for the IP camera for identity.

Click on <Save> to save the settings.

2.2.4 DDNS

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

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

Enable DDNS

Check the item to enable DDNS.

Provider

Select one DDNS host from the provider list.

Host name

Enter the registered domain name in the field.

Username/E-mail

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

Password/Key

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

Click <Save> to save the settings.

2.2.5 Mail

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

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

Two sets of SMTP can be configured. Each set includes SMTP Server, Server Port, Account Name, Password and E-mail Address settings. Check the box "SMTP SSL" to send emails via encrypted transmission. For SMTP server, contact the network service provider for more specific information.

Click on <Save> to save the settings.

2.2.6 FTP

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

The administrator can set the camera to send the alarm message by a specific File Transfer Protocol (FTP) site when event is triggered. Users can assign alarm message to up to two FTP sites. Enter the FTP details, which include server, server port, username, password and remote folder, in the fields. Check the box "passive mode" to connect with the FTP server by passively receiving the FTP server's IP address through a dynamic port. Alternatively, uncheck the box to connect the FTP server via active mode. After the FTP details are entered, press the <Test> button to test the connection of the specified FTP server. Then click on <Save> to save the settings.

2.2.7 HTTP

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

A HTTP Notification server can listen for notification messages from IP cameras by triggered events. Enter the HTTP details, which include server name (for instance, <http://192.168.0.1/admin.php>), username, and password in the fields. <Alarm> triggered and <Motion Detection> notifications can be sent to the specified HTTP server. Click on <Save> to save the settings.



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

2.2.8 Events

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

Click on the Events category, there will be a drop-down menu with tabs including <Application>, <Motion Detection>, <Network Failure Detection>, <Tampering>, <Periodical Event> and <Manual Trigger>.

2.2.8.1 Application (Alarm I/O; not for G-Cam/EFD-3261)

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

The camera equips one alarm input and one relay output for cooperating with alarm system to catch events' images. Refer to alarm pin definition below to connect alarm devices to the camera if needed.

Alarm Pin Definition

Please refer to the Installation Manual for Alarm Pin Definition to connect the alarm devices.

Alarm Switch

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

Alarm Type

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

Alarm Output

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

Triggered Action (Multi-option)

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

- **Enable Alarm Output**
Select the item to enable alarm relay output.
- **IR Cut Filter**
The camera's IR cut filter (ICR) will be removed in front of the sensor (on) or blocked (off) when alarm input is triggered.



Note: The IR Function (Refer to section [IR Function](#)) could not be set as <Auto> mode if this triggered action is enabled.

- **Send Message by FTP/E-Mail**

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

- **Upload Image by FTP**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after the alarm input is triggered.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

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



NOTE: Make sure FTP configuration has been completed. Refer to section [FTP](#) of this chapter for further details.

- **Upload Image by E-Mail**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after alarm input is triggered.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

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



NOTE: Make sure SMTP configuration has been completed. Refer to section [Mail](#) of this chapter for further details.

- **Send HTTP notification**

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

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

- **Record Video Clip**

Select the item and the alarm-triggered recording will be saved on the microSD card or to a <NAS> (Network Attached Storage).

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds.

Select <Upload for __ sec> to set the recording duration after alarm is triggered. The setting range is from 1 to 99999 seconds.

Select <Upload during the trigger active> to record the triggered video until the trigger is off.



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

File Name

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

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXX.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 up to "10," the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**

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

Save

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

2.2.8.2 Motion Detection

The Motion Detection setting can be found under this path:

System > Events > Motion Detection.

Motion Detection function allows the camera to detect suspicious motion and trigger alarms when motion volume in the detected area reaches / exceeds the determined sensitivity threshold value.

The function supports up to 4 sets of Motion Detection Settings. Settings can be chosen from the drop-down menu beside <Motion Detection>. In each set of setting, there is a **Motion Detection Window** (the red frame shown in the figure below) displayed on the Live Video 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.

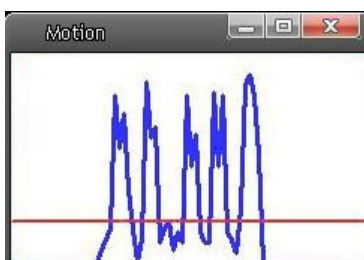


Users can configure up to 10 sets of Motion Detection Windows in each set of Motion Detection Setting. Click on the <add> button under the Live Video Pane to add a Motion Detection Window. To cancel a Motion Detection Window, move the mouse cursor to the selected window, and click on the <delete> button.

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



When motion is detected, the signals will be displayed on the Motion window as shown below. Motion is detected by comparing sampling pixels in the detection area of two consecutive live images.



Motion Detection

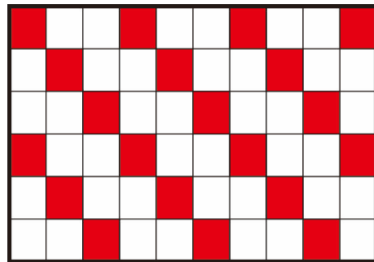
In each set of Motion Detection Setting, the default setting for the Motion Detection function is <Off>. Enable the function by selecting <On>. Users can also activate the function according to the schedule previously set in the <Schedule> setting page. Select <By schedule> and click <Please select...>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

Motion Detection Setting

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

- **Sampling pixel interval [1-10]:**

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



- **Detection level [1-100]:**

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

- **Sensitivity level [1-100]:**

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

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

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

Triggered Action (Multi-option)

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

- **Enable Alarm Output**

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

- **Record Video Clip**

Select this item and the Motion Detection recording will be stored on microSD / SDHC card or <NAS> (Network Attached Storage).

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds.

Select <Upload for ___sec> to set the recording duration after motion event occurs. The setting range is from 1 to 99999 seconds.

Select <Upload during the trigger active> to record the triggered video until the trigger is off.



NOTE: Please make sure the local recording (with microSD / SDHC card) or external (NAS) is activated so that this function is implemented. Refer to [Recording](#) of this chapter for section further details.

- **Send Alarm Message by FTP/E-Mail**

The administrator can select whether to send warning messages by FTP and/or E-mail when motion is detected.

- **Upload Image by FTP**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after motion event occurs.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

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



NOTE: Make sure FTP configuration has been completed. Refer to section [FTP](#) of this chapter for further details.

- **Upload Image by E-Mail**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after the motion event occurs.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

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



NOTE: Make sure SMTP configuration has been completed. Refer to section [Mail](#) of this chapter for further details.

- **Send HTTP notification**

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

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

File Name

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

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXXX.jpg

X: Sequence Number

- **Add sequence number suffix 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 up to “10”, the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**

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

Save

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

2.2.8.3 Network Failure Detection

Find the page under: **System > Events > Network Failure Detection**

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

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

Detection Switch

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

Detection Type

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

Triggered Action (Multi-option)

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

- **Enable Alarm Output**

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

- **Record Video Clip**

Select the item and the alarm-triggered recording will be saved on the microSD card or to a <NAS> (Network Attached Storage).

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



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

- **Send Message by FTP/E-Mail**

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

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

2.2.8.4 Tampering

The Tampering setting can be found under this path:

System > Events > Tampering

Tampering Alarm function helps the camera against tampering such as deliberate redirection, blocking, paint spray, and lens cover, etc. through video analysis and reaction to such events by sending out notifications or uploading snapshots to the specified destination(s).

Detection of camera tampering is achieved by measuring the differences between the older frames of video (which are stored in buffers) and more recent frames.

Tampering Alarm

The default setting for the Tampering Alarm function is <Off>.

Enable the function by selecting <On>.

Users can also activate the function according to the schedule previously set in the <Schedule> setting page.

Select <By schedule> and click <Please select...> to choose the desired schedule from the drop-down menu.

Tampering Duration

This item allows the administrator to decide how long the alarm will last when tampering is detected. During the defined duration, whether the tampering action stops or not, the alarm will not be terminated or re-triggered.

The default duration value is 20 seconds.

The setting range is from 10 to 3600 seconds.

Triggered Action (Multi-option)

Administrator can specify the alarm actions that will take when tampering is detected. All options are listed as follows.

- **Enable Alarm Output**

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

- **Record Video Clip**

Select this item and the Tampering Alarm recording will be stored on microSD / SDHC card or to a <NAS> (Network Attached Storage).

Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds.

Select <Upload for __ sec> to set the recording duration after tampering occurs. The setting range is from 1 to 99999 seconds.

Select <Upload during the trigger active> to record the triggered video until the trigger is off.



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

- **Send Message by FTP/E-Mail**

The administrator can select whether to send an alarm message by FTP and/or E-mail when tampering is detected.

- **Upload Image by FTP**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after tampering is triggered.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off.

Select <Upload for _ sec> and enter the duration in the blank. The images of the duration will be uploaded to FTP when tampering is triggered.

The setting range is from 1 to 9999 seconds.

Select <Upload during the trigger active> to make the images keep being uploaded to FTP during the trigger active until the tampering stops.

Set the Image frequency as the upload frame rate.

The setting range is from 1 frame to 15 frames.



NOTE: Make sure FTP configuration has been completed. Refer to section [FTP](#) of this chapter for further details.

- **Upload Image by E-Mail**

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

<Pre-trigger buffer> function allows users to check what happened to cause the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after tampering occurs.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off.

Select <Upload for _ sec> and enter the duration in the blank. The images of the duration will be uploading by E-mail when tampering is triggered.

The setting range is from 1 to 9999 seconds.

Select <Upload during the trigger active> to make the images keep being upload to E-mail during the trigger active until tampering stops. Set the Image frequency as the upload frame rate.

The setting range is from 1 frame to 20 frames.



NOTE: Make sure SMTP configuration has been completed. Refer to section [Mail](#) of this chapter for further details.

- **Send HTTP notification**

Check this item, select the destination HTTP address, and specify the parameters for HTTP notifications. When the Tampering Alarm is triggered, the HTTP notifications can be sent to the specified HTTP server.

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

File Name

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

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXX.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 up to “10,” the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**

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

Save

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

2.2.8.5 Periodical Event

The Periodical Event setting can be found under this path:

System > Events > Periodical Event.

With Periodical Event setting, users can set the camera to upload images periodically to a FTP site or an E-mail address. For example, if the time interval is set to 60 seconds, the camera will upload images to the FTP site or the E-mail address every 60 seconds. The images to be uploaded are the images before and after the triggered moment. Users can define how many images to be uploaded in the <Triggered Action> section of this setting page.

Periodical Event

The default setting for the Periodical Event function is <Off>. Enable the function by selecting <On>.

Time Interval

The default value of the time interval is 60 seconds. The setting range of the time interval is from 60 to 3600 seconds

Triggered Action

- **Upload Image by FTP**

Select this item and the administrator can assign a FTP site and configure various parameters. Images will be uploaded to the appointed FTP site periodically.

The <Pre-trigger buffer> function can define how many images to be uploaded before the triggered moment. The <Post-trigger buffer> function can define how many images to be uploaded after the triggered moment.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.



NOTE: Make sure FTP configuration has been completed. Refer to section [FTP](#) of this chapter for further details.

- **Upload Image by E-Mail**

Select this item and the administrator can assign an E-mail address and configure various parameters. Images will be uploaded to the appointed E-mail address periodically.

The <Pre-trigger buffer> function can define how many images to be uploaded before the triggered moment. The <Post-trigger buffer> function can define how many images to be uploaded after the triggered moment.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.



NOTE: Make sure SMTP configuration has been completed. Refer to section [Mail](#) of this chapter for further details.

File Name

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

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXX.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 up to "10", the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**

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

Save

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

2.2.8.6 Manual Trigger

The Manual Trigger setting can be found under this path:

System > Events > Manual Trigger.

With Manual Trigger setting, the current image(s) or video can be uploaded to the appointed destination, such as an FTP site or an E-mail address.

The administrator can specify the triggered actions that will take when the users switched the Manual Trigger button to ON. All options are listed as follows.

Manual Trigger

The default setting for the Manual Trigger function is <Off>. Enable the function by selecting <On>. After the Manual Trigger function is enabled, click the Manual Trigger button on the Home page to start uploading data.

Click again to stop uploading.

Triggered Action (Multi-option)

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

- **Enable Alarm Output**

Select the item to enable alarm relay outputs.

- **IR Cut Filter**

Select the item and the IR cut filter (ICR) of the camera will be removed (on) or blocked (off) when alarm input is triggered.



NOTE: The IR Function (Refer to section [IR Function](#)) could not be set as <Auto> mode if this triggered action is enabled.

- **Send Message by FTP/E-Mail**

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

- **Upload Image by FTP**

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

<Pre-trigger buffer> function allows users to check what caused the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after the alarm input is triggered.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off.

Select <Upload for _sec> and enter the duration in the blank.

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



NOTE: Make sure the FTP configuration has been completed. Refer to section [FTP](#) for further details.

- **Upload Image by E-Mail**

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

<Pre-trigger buffer> function allows users to check what caused the trigger. The <Pre-trigger buffer> frame rate could be pre-determined. On the other hand, <Post-trigger buffer> is for users to upload certain amount of images after alarm input is triggered.



NOTE: Normally the setting range of the <Pre-trigger buffer> is 1 to 20. However, the setting range will change accordingly if the frame rate of MJPEG on the <Video Frame Rate> setting page is 6 or smaller.

Check the box <Continue image upload> to upload the triggered images during certain time or keep uploading until the trigger is off.

Select <Upload for _sec> and enter the duration in the blank.

The images of the duration will be uploading by E-mail when the alarm input is triggered. The setting range is from 1 to 9999 seconds.

Select <Upload during the trigger active> to make the images keep being uploaded to E-mail during the trigger active until the alarm is released.

Set the Image frequency as the upload frame rate.

The setting range is from 1 frame to 15 frames.



NOTE: Make sure SMTP configuration has been completed. Please refer to section [Mail](#) for further details.

- **Send HTTP notification**

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

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

- **Record Video Clip**

Check the item and select a video recording storage type, <SD Card> or <NAS> (Network Attached Storage). The alarm-triggered recording will be saved into the microSD card or the NAS.

<Pre-trigger buffer> recording function allows users to check what caused the trigger. The pre-trigger buffer time range is from 1 to 3 seconds.

Select <Upload for __ sec> to set the recording duration after alarm is triggered. The setting range is from 1 to 99999 seconds.

Select <Upload during the trigger active> to record the triggered video until the trigger is off.



NOTE: Please make sure the local recording (with microSD / SDHC card) or the remote recording (with NAS) is activated so that this function can be implemented.

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

File Name

Enter a file name in the File name field, ex. image.jpg. The uploaded image's file name format can be set in this section.

Please select the one that meets the requirements.

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXX.jpg

X: Sequence Number

- **Add sequence number suffix (limited value)**

File Name: imageXX.jpg

X: Sequence Number

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

- **Overwrite**

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

Save

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

2.2.9 Storage Management (Local Recording)

The Storage Management setting can be found under this path:

System > Storage Management.

Click on the <Storage Management> category, there will be a drop-down menu with tabs including <SD Card> and <Network Share>.

2.2.9.1 SD Card

The SD Card setting can be found under this path:

System > Storage Management > SD Card.

Users can implement local recording to the microSD / SDXC card up to 32 GB. This page shows the capacity information of the microSD 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 microSD card recording, please go to the <Recording> page (refer to section [Recording](#)) for activation.



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



NOTE: It is not recommended to record with the microSD card for 24/7 continuously, as it may not be able to support long-term continuous data read/write. Please contact the manufacturer of the microSD card for information regarding the reliability and the life expectancy.

Device information

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

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

Device setting

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

Disk cleanup setting

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

Recording List

Each video file on the microSD / SDXC card will be listed in the Recording list. The maximum file size is 60 MB (60 MB per file). When the recording mode is set as “Always” (consecutive recording) and the microSD / SDXC card recording is also allowed to be enabled by events triggered. Once events occurred, the system will immediately implement events recording to the memory card.

Then the camera will return to the regular recording mode after events recording.

- **Remove**

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

- **Sort**

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



NOTE: The capital letter A / M / N / R / T / V appears in the very beginning of name denotes the sort of the recording:

A stands for Alarm; M stands for Motion; N stands for Network Failure; R stands for Regular Recording, T stands for Tampering, and V stands for Manual Trigger.

- **Download**

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

2.2.9.2 Network Share (NAS; Network Attached Storage)

The Network Share setting can be found under this path:

System > Storage Management > Network Share.

Users can store the recording videos to a network share folder, or NAS (Network Attached Storage). A NAS device is used for data storage and data sharing via network. This page displays the capacity information of the network device and a recording list with all the recording files saved on the network device. Users can also format the NAS and implement automatic recording cleanup through the setting page.

Device information

When a NAS is successfully installed, the device information such as the memory capacity and status will be shown at the <Device Information> section.

Storage setting

The administrator can set the camera to send the alarm messages to a specific NAS site when an alarm is triggered. Enter the network device details, which include host (the IP of the NAS), share (the folder name of the NAS), username, and password, in the fields.

Click on <Save> when finished.

Storage Tools

Click on the <Format> button to format the NAS.

Disk cleanup setting

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

Recording List

Each video file on the Network Share will be listed in the Recording list.

The maximum file size is 60 MB.

When the recording mode is set as <Always> (consecutive recording) and the NAS recording is also allowed to be enabled by events triggered, once events occur, the system will immediately implement events recording to the memory card. After the recording of the events are finished, the camera will return to the regular recording mode.

- **Remove**

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

- **Sort**

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



NOTE: The capital letter A / M / N / R / T / V appears in the very beginning of name denotes the sort of the recording:

A stands for Alarm; M stands for Motion; N stands for Network Failure; R stands for Regular Recording, T stands for Tampering, and V stands for Manual Trigger.

- **Download**

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

2.2.10 Recording (Local Recording)

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

In the Recording setting page, the microSD Card recording schedule supports up to ten sets of time frames. User can specify the recording schedule to fit the present surveillance requirement.

Recording

Recording Storage

☒ SD Card

☐ Network Share

Recording Schedule

☐ Disable

☐ Always

☒ Only during time frame

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

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

Start time : 00:00

Duration : 24:00

Save

Delete

Recording Storage

Select a recording storage type, <SD Card> or <Network Share>.

Activating the Recording Schedule

Two types of schedule mode are offered: <Always> and <Only during time frame>. Users can select <Always> to activate microSD / SDHC card or Network Share Recording all the time. Or select a set of schedule from the time frame blank, check specific weekdays and setup the start time (hour:minute) and time period (hour:minute) to activate the recording at certain time frames. The setting range for time period is from 0 to 168 hours and 59 minutes. Please click on <Save> to save the setup.

Select a recording schedule from the schedule list, and click <Delete> to delete the recording schedule.

Terminating the Recording Schedule

Select <Disable> to terminate the recording function.

2.2.11 Schedule

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

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

Schedule									
	Weekday							Start time	Duration
1	-	-	-	-	-	-	O	12:00	01:00
2	O	-	-	-	-	-	O	00:00	10:00
3	-	-	-	-	-	-	-	----	----
4	-	-	-	-	-	-	-	----	----
5	-	-	-	-	-	-	-	----	----
6	-	-	-	-	-	-	-	----	----
7	-	-	-	-	-	-	-	----	----
8	-	-	-	-	-	-	-	----	----
9	-	-	-	-	-	-	-	----	----
10	-	-	-	-	-	-	-	----	----

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

Start time :
 Duration :

Setting Schedules

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



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

2.2.12 File Location (Snapshots and Web Recording)

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

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



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



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

2.2.13 View Information

The View Information function can be found under this path:

System > View Information.

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

2.2.13.1 Log File

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

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

2.2.13.2 User Information

The User Information function can be found under this path:

System > View Information > User Information.

This page allows the administrator to view the login information and privileges of each added user (refer to section [Security](#)).

Get User Information

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

User: 4321

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

Get User Privacy

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

User: 1:1:0:1

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

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

2.2.13.3 Parameters

The Parameters function can be found under this path:

System > View Information > Parameter.

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

2.2.14 Factory Default

The Factory Default setting can be found under this path:

System > Factory Default.

Users can follow the instructions on this page to reset the camera to factory default setting if needed.

Full Restore (includes the IP address)

Click on <Full Restore> to recall the factory default settings. The system will restart in 30 seconds. The default setting is **DHCP**.



NOTE: After the system is restarted, the camera uses the DHCP function to get an IP address from the DHCP server automatically.

If no DHCP server is in network the camera sets itself to IP address **192.168.0.250**.

Partial Restore (w/o IP address)

Click on <Partial Restore> to recall the factory default settings. The system will restart in 30 seconds. Refresh the browser page after the system is restarted.



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

Reboot

Click on <Reboot> and the system will restart without changing current settings. Browser page needs to be refreshed after the system is restarted.

2.2.15 Software Version

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

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

2.2.16 Software Upgrade

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



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

The procedure of software upgrade is as below:

Step 1. Click on “Browse” and select the binary file to be uploaded, ex. “gb20161221NSX”.



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 drop-down list and select “ulmage+userland.img”.

Step 3. Click on the <Upgrade> button. The system first will check whether the upgrade file exists or not, and then begin to upload the upgrade file. Subsequently, the upgrade status bar will display on the page. When it runs to 100%, the upgrade process is finished.

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

Step 4. Close the video browser.

Step 5. Start <Control Panel> on the PC, and then double click on: <Add or Remove Programs>.

In the <Currently installed programs> list, select <DCViewer> and click on the button “Remove” to uninstall the existing DC Viewer.

Step 6. Open a new web browser and re-login the camera. Users will be prompted to download the DC Viewer. Once the DC Viewer is downloaded and installed, the live video will be available.

2.2.17 Maintenance

The Maintenance setting can be found under this path:

System > Maintenance.

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



NOTE! Config files can be transferred only, if **NO** update has been done between ex- and import!

Additionally, the camera models have to be identical. In the case that different camera models out of one series own the same firmware, the model name has to be the same!

Export

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

Upload

To upload an existing configuration file to the camera, click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

2.3 Streaming

Under the tab <**Streaming**>, there are the following submenus included: <Video Format>, <Video Compression>, <Video ROI>, <Video OCX Protocol>, <Video Frame Rate>, <Video Mask> and <Audio>.

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

2.3.1 Video Format (Video Resolution and Rotate Type)

The Video Format setting can be found under this path:

Streaming > Video Format.

Video Resolution

Under Video Resolution section, the available video resolution formats are including MJPEG and H.264. More stream resolutions and combinations please take out of the streaming menu of the corresponding camera. They depend on hard- and firmware. If you change these parameters you can see the availability of analog video output below the stream config lines. (N/A = No analog video output).

Video Format

Video Resolution :

H.264 + H.264 ▼

Format 1 : 1920 x 1080 (25 fps) ▼ H.264-1 ▼

Format 2 : 1920 x 1080 (25 fps) ▼ H.264-2 ▼

BNC support : Yes

Portrait support : N/A

Save

Click on <Save> to confirm the setting.

Text Overlay Settings

Users can select the items to display data, including date / time / text on the live video pane. The maximum length of the text is 20 alphanumeric characters. The selections of Text color and Text background color include transparent, black, white and red.

Click on <Save> to confirm the setting.

Video Portrait Allow (stream dependent)

To rotate the video by 90°, this setting must be enabled. The setting is only available for video resolution combinations that support video portrait (see pic. from page before: Portrait support below BNC support).

To rotate the video by 90°, please follow the steps below.

Step 1: Select <Yes> from the <Video Portrait Allow> drop-down menu. Click on <Save> to confirm the setting.

Step 2: Select <90 degree counterclockwise> from the <Video Rotate Type> drop-down menu to rotate the video. Click on <Save> to confirm the setting.

Video Rotate Type

Users can change the video display type if necessary. Selectable video rotate types include Normal video, Flip video, Mirror video, 180 degree rotate and 90 degree counterclockwise. Click on <Save> to confirm the setting.

The following is the descriptions for different video rotate type.

- **Flip video**

Select <Flip video> to rotate the image vertically.

- **Mirror video**

Select <Mirror video> to rotate the image horizontally.

- **180 degree rotate**

Select <180 degree rotate> option to rotate the image by 180°.

- **90 degree counterclockwise**

This option is only available when <Video Portrait Allow> setting is enabled. Select <90 degree counterclockwise> option to rotate the image by 90°.



NOTE: If the <Video Portrait Allow> setting is enabled, video rotate types include Normal video, Flip video, Mirror video and 180 degree rotate will not be shown in the drop-down menu.

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. Setting range is from 2 to 64. The default value for H.264-1 / H.264-2 / H.264-3 / H.264-4 is 60 / 60 / 30 / 30 (NTSC) or 50 / 50 / 25 / 25 (PAL). Click on <Save> to confirm the GOV setting.

H.264 Profile

Users can set each H.264 Profile to <Baseline profile>, <Main profile> or <High profile> according to its compression needs. With the same bit rate, the higher the compression, the better the image. Default setting is <Main profile>.



NOTE: Please make sure the higher compression ratio is supported by system before setup.

2.3.2 Video Compression

The Video Compression setting can be found under this path:

Streaming > Video Compression.

This setting page allows the administrator to adjust the bit rate of MJPEG and H.264-1 / H.264-2 / H.264-3 / H.264-4. Higher value implies higher bit rate and higher visual quality.

MJPEG Q (Quality) factor

The default setting of MJPEG Q factor is 35; the setting range is from 1 to 70.

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

The default setting of H.264-1 is 4096 Kbit/s, for H.264-2+3 is 2048 Kbit/s and H.264-4 is 1024 Kbit/s.

The setting range for H.264-1+2+3+4 is from 64 to 20480 Kbit/s.

Note that total bitrate for H.264 cannot exceed 26624 Kbit/s.

Display Compression Information

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

CBR Mode Setting

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

Click on <Save> to confirm the setting.

2.3.3 Video ROI

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

ROI stands for Region of Interest. This function allows users to select specific monitoring region for H.264-2, H.264-3, H.264-4 and MJPEG streams, instead of showing the full image.



NOTE: This function is only available when dual stream or more is selected under <Video Resolution> in Video Format Setting.

Video ROI Setting

- **Enable H.264-1/2/3/4/5 ROI Setting (see combination list below)**

Check the box and H.264-1/2/3/4/5 ROI window will be displayed. To change the size of H.264-1/2/3/4/5 ROI window, move the mouse cursor to the edge of the window and draw it outward / inward. Moving the mouse to the center of the ROI window can shift the window to the intended location.

- **Combinations for ROI:**

- ROI 1 -> only if stream 1 is NOT the stream with highest resolution*
- ROI 2 + 3 -> stream 1 + 2 + 3 @ H.264
- ROI 2 + 5 -> stream 1 + 2 @ H.264 + stream 3 @ MJPEG
- ROI 2 + 3 + 5 -> stream 1 + 2 + 3 @ H.264 + stream 4 @ MJPEG
- ROI 2 + 3 + 4 -> stream 1 + 2 + 3 + 4 @ H.264

* with 3 active streams min. and Format 1 as H.264-2 + Format 2 as H.264-1 (change stream 1 and 2).

2.3.4 Video OCX Protocol

The Video OCX Protocol setting can be found under this path:

Streaming > Video OCX Protocol.

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

Video OCX protocol setting options include:

- **RTP over UDP / RTP over RTSP(TCP) / RTSP over HTTP / MJPEG over HTTP**
- **Multicast Mode**
Enter all required data, including <Multicast H.264-1 / H.264-2 / H.264-3 / H.264-4 / MJPEG Video Address>, <Multicast H.264-1 / H.264-2 / H.264-3 / H.264-4 / MJPEG Video Port>, <Multicast Audio Address>, <Multicast Audio Port> and <Multicast TTL> into each blank.

2.3.5 Video Frame Rate

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

Video frame rate is for setting the frames per second (fps) if necessary.

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

The default setting of MJPEG / H.264-2 / H.264-3 / H.264-4 Frame Rate is 30 fps (NTSC) or 25fps (PAL), and H.264-1 Frame Rate is 60 fps (NTSC) or 50 fps (PAL); the setting range is from 1 to 60 (NTSC) or 1 to 50 (PAL). The maximum range of MJPEG / H.264-1 / H.264-2 / H.264-3 / H.264-4 Frame Rate will change according to the selected video resolution on the <Video Format> page.

Click on <Save> to confirm the setting.



NOTE: Low frame rate will decrease video smoothness.

2.3.6 Video Mask

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

Active Mask Function

- **Add a Mask**

Check a Video Mask checkbox, and a red frame will come out in the Live Video pane at the right side. Use the mouse to drag and drop to adjust the size of the mask and place it on the target zone.



NOTE: It is suggested to set the Video Mask bigger than the object (setting in wide angle mode!).

- **Cancel a Mask**

Uncheck the checkbox of the Video Mask that is meant to be deleted, and the selected mask will disappear from the Live Video pane instantly.

Mask Setting

- **Mask color**

The selections of Mask color include black, white, yellow, red, green, blue, cyan and magenta. Click on <Save> to confirm the setting.

2.3.7 Audio (Audio Mode and Bit Rate Settings)

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

On the Audio page, the administrator can select one transmission mode and audio bit rate.



Note: Transmission Mode -> listen only is supported by GEUTEBRUCK DVRs.

- **Full-duplex (Talk and Listen simultaneously)**
In the Full-duplex mode, the local and remote sites can communicate with each other simultaneously, i.e. both sites can speak and be heard at the same time.
- **Half-duplex (Talk or Listen, not at the same time)**
In the Half-duplex mode, the local / remote site can only talk or listen to the other site at a time.
- **Simplex (Talk only)**
In the Talk only Simplex mode, the local / remote site can only talk to the other site.
- **Simplex (Listen only)**
In the Listen only Simplex mode, the local / remote site can only listen to the other site.
- **Disable**
Select the item to turn off the audio transmission function.

Server Gain Setting

Set the audio input / output gain levels for sound amplification. The audio input gain value is adjustable from 1 to 10. The audio output gain value is adjustable from 1 to 6. The sound will be turned off if the audio gain is set to "Mute".

Bit Rate

Selectable audio transmission bit rate includes 16 kbps (G.726), 24 kbps (G.726), 32 kbps (G.726), 40 kbps (G.726), uLAW (G.711) and ALAW (G.711). Both uLAW and ALAW signify 64 kbps but in different compression formats. Higher bit rate allows higher audio quality, and requires bigger bandwidth.

Click on <Save> to confirm the settings.

Recording to Storage

Select <Enable> from the drop-down menu to enable audio recording with video into SD card. Click on <Save> to confirm the setting



NOTE: If the chosen bit rate is not compatible with the player, there will only be noise instead of audio during playback.

2.4 Camera

Under the tab <**Camera**>, there are submenus including: <Exposure>, <White Balance>, <Picture Adjustment>, <IR Function>, <Misc>, <Profile> and <TV System>.

2.4.1 Exposure

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

“Exposure” is the amount of light received by the image sensor, and is determined by the width of lens diaphragm opening, the amount of exposure by the sensor (shutter speed) and other exposure parameters. With these items, users can define how the Auto Exposure function works. Users can select one of the exposure modes according to the operating environment. Click on <✓> to confirm the new setting.

Each exposure mode is specified as follows.



NOTE: <Exposure> will be fixed at WDR Multiple Shutter mode when the selected video format option has “WDR” included. In the mean time, other modes will become unavailable.

Auto Mode

- **Max Gain**

Maximum gain can be set to reduce image noises. The max gain can be set from 3 dB to 72 dB. The default setting is 36 dB.

- **Auto Iris**

In this mode, the camera will automatically adjust the iris to suit the environment illumination. The minimum shutter speed can be set from 1 to 1/60 sec. (NTSC) or from 1/1.5 to 1/50 sec. (PAL). AGC (Auto Gain Control) will function automatically according to the light conditions of the subject.

- **Auto Shutter Mode**

In this mode, the camera will automatically adjust the shutter speed and the iris size according to the light intensity. It is also effective if a fixed iris lens is being used. The minimum shutter speed range is configurable from 1 to 1/500 sec. (NTSC) or from 1/1.5 to 1/425 sec. (PAL).

- **Shutter Priority Mode**

In this mode, it is the shutter speed that takes the main control of the exposure. The range is configurable from 1/60 to 1/500 sec. (NTSC) or from 1/50 to 1/425 sec. (PAL).

- **Flickerless Mode**

When the frequency of the environmental light does not match with the TV system, the image will become flickered. Select Flickerless mode to reduce flickered image. The minimum shutter speed can be set from 1 to 1/100 sec. (NTSC) or from 1/1.5 to 1/100 (PAL).

- **WDR Multiple Shutter Mode**

This mode provides Wide Dynamic Range (WDR) function that solves high contrast or light changing issues. There are two different options available (Normal and WDR First). The default setting is <WDR First>. Please refer to the following descriptions to choose a suitable option from the drop-down menu. The minimum shutter speed can be set from 1 to 1/500 sec. (NTSC) or from 1/1.5 to 1/425 sec. (PAL).

- **Normal**

In this option WDR function is less effective with less image noise in the dark environments.

- **WDR First**

In this option WDR function is more effective in the dark environments, but generates more image noise.

Manual Mode

With this mode, users can select the suitable shutter speed and gain value to define the camera exposure according to the environmental illumination.

The shutter speed range is from 1 to 1/10000 sec. (NTSC) or from 1/1.5 to 1/10000sec. (PAL). The gain value can be set from 3 dB to 72 dB. The image will become brighter when the gain is set to a higher value.

- **WDR Multiple Shutter RSS Mode**

This mode provides Rolling Shutter Suppression (RSS) function which can reduce the flash banding issues caused by sudden burst of light sources.

There are two different options available, <Normal> and <WDR First>. The default setting is <WDR First>. Please refer to the following descriptions to choose a suitable option from the drop-down menu. The minimum shutter speed can be set from 1 to 1/500 sec. (NTSC) or from 1/1.5 to 1/425 sec. (PAL).

- **Normal**

In this option, WDR function is less effective but generates less image noise in the dark environments.

➤ **WDR First**

In this option, WDR function is more effective but generates more image noise in the dark environments.



NOTE: To activate this function, the video format with “WDR” MUST be selected under <TV System>.



NOTE: In general monitoring environments, it is recommended to select the WDR Multiple Shutter Mode.

2.4.2 White Balance

The White Balance Setting can be found under this path:

Camera > White Balance.

A camera needs to find reference color temperature, which is a way of measuring the quality of a light source, for calculating all the other colors. The unit for measuring this ratio is in degree Kelvin (K). Users can select one of the White Balance Control modes according to the operating environment. The following table shows the color temperature of some light sources for reference. Click on <√> to confirm the new setting.

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

Auto Mode (Auto White Balance)

With Auto White Balance function, the white balance in a scene will be automatically adjusted while color temperature is changing.

ATW Mode (Auto Tracking White Balance)

With Auto Tracking White Balance function, the white balance in a scene will be automatically adjusted while color temperature is changing.



NOTE: ATW function has a wider color temperature range than the Auto White Balance function.

Choose the suitable function according to the monitoring environment.

Indoor Mode

Select Indoor mode to get a suitable color result for the indoor conditions. Please try with a different mode (Auto mode / ATW mode), if Indoor mode does not provide a good result.

Outdoor Mode

Select Outdoor mode to get a suitable color result for the outdoor conditions. Please try with a different mode (Auto mode / ATW mode), if Outdoor mode does not provide a good result.

Manual Mode

In this mode, users can change the White Balance value manually. Users can enter a number between 0 to 255 for “Rgain / Bgain” to gain the red / blue illuminant on the Live Video Pane.

2.4.3 Picture Adjustment

The Picture Adjustment can be found under this path:

Camera > Picture Adjustment.

Brightness

Users can adjust the image's brightness by adjusting the item. The brightness level range is from +1 to +25. To increase video brightness, select a bigger number. Click on <√> to confirm the new setting.

Sharpness

Increasing the sharpness level can make the image look sharper; especially enhance the object's edge. The sharpness level range is from +10 to -15. Click on <√> to confirm the new setting.

Contrast

Camera image contrast level is adjustable. The contrast level range is from +12 to -13. Click on <√> to confirm the new setting.

Saturation

Camera image saturation level is adjustable. The saturation level range is from +13 to -12. Click on <√> to confirm the new setting.

Hue

Camera image hue level is adjustable. The hue level range is from +1 to +12. Click on <√> to confirm the new setting.

2.4.4 IR Function

The IR Function Setting can be found under this path: **Camera > IR Function.**

Auto / Night / Day

With the IR Cut Filter, the camera can catch clear images at night time or in low light conditions.

Smart Mode

The Smart mode enhances the monochrome/night mode stability in the scenario that IR illumination is dominant. In this mode, when the IR illumination becomes the main ambient light source, the IR Cut Filter will remain opened (i.e. monochrome/night mode) to prevent the camera from returning to the color/day mode.

Additionally, for the models with built-in IR LED module, the day/night IR switching mechanism is based on the ambient light level instead of the light sensor (Light sensor mode) on the IR LED module.

For cameras with the built-in IR LED modules, there will be three additional IR function modes (Light Sensor / Light On / Light Off) as follows:

Light Sensor Mode

IR LED lights will be turned on / off depending on the light sensor.

Light On Mode

In this mode, IR LED lights will always be on.

Light Off Mode

In this mode, IR LED lights will always be off.

Click on <√> to confirm the new setting.

2.4.5 Misc (diverse parameters; depends on TV system)

The page can be found under: **Camera > Misc**

2.4.5.1 Backlight Compensation

The Backlight Setting can be found under this path:

Camera > Misc > Backlight.

The Backlight Compensation function prevents the center object from being too dark in surroundings where excessive light is behind the center object. Click on <√> to confirm the new setting.



NOTE: This function will not be shown when video format with “WDR” is selected under <TV System>.

2.4.5.2 Digital Zoom

The Digital Zoom Setting can be found under this path:

Camera > Misc > Digital Zoom.

The camera's digital zoom is adjustable from x2 to x16.

Click on <√> to confirm the new setting.

2.4.5.3 Gamma WDR

The Gamma WDR Setting can be found under this path:
Camera > Misc > Gamma WDR.

The Gamma Wide Dynamic Range (Gamma WDR) function is for solving high contrast or changing light issues so that enhances the video display. Click on <√> to confirm the new setting.



NOTE: This function will not be shown when video format with “WDR” is selected under <TV System>.

2.4.5.4 3DNR

3DNR (3D Noise Reduction) setting can be found under:
Camera > Misc > 3DNR.

The camera provides 3DNR function for delivering optimized image quality especially in extra low-light conditions.

Different levels of options (Low / Middle / High) for 3DNR are supported. Higher level of 3DNR generates relatively enhanced noise reduction.

Click on <√> to confirm the new setting.

2.4.5.5 2DNR

2DNR (2D Noise Reduction) setting can be found under:
Camera > Misc > 2DNR.

The camera provides 2DNR function for delivering clear images without motion blurs in extra low-light conditions.

Different levels of options (Low / Middle / High) for 2DNR are supported. Higher level of 2DNR generates relatively enhanced noise reduction.

Click on <√> to confirm the new setting.

2.4.5.6 DIS

The DIS (Digital Image Stabilization) setting can be found under this path:
Camera > Misc > DIS.

DIS function can minimize blurry images caused by minor camera shake (e.g. pole mounting). The default setting is <Off>.



Click on <√> to confirm the new setting.

2.4.6 Profile


The Profile setting can be found under this path: **Camera > Profile**

Camera Profile allows users to setup the desired image parameters for specific environments with different time schedules. Users can setup several sets of camera parameter configuration under the Camera tab. To enable this function, users must setup the schedules in advance. Refer to section [Schedule](#) for further details. Then, follow the steps below to setup a camera profile.

Camera Profile Setup

- Step 1.** In the “Camera” tab, setup the camera parameters, such as Exposure, White Balance, etc.
- Step 2.** Click on Profile and its setting menu will be displayed. Select a number from the Num drop-down list.
- Step 3.** Input a name for the profile in the Name field.
- Step 4.** Click on <Save> button  below the Name field. The camera configuration is saved and applied to the profile.
- Step 5.** Select a saved camera profile from the Num drop-down list.
- Step 6.** Tick the “By schedule” box. Check the desired schedule(s) from the Schedule drop-down list. Multiple schedules can be applied to one profile.
- Step 7.** Click on <Save> button  below <By schedule>.
- Step 8.** Follow the steps above to set the rest of the profiles.

Now, the camera will automatically switch profiles according to the schedule.

Alternatively, manually select a number from the Num drop-down list. Click on <Load> button , and the camera will apply the setting of the profile.



NOTE: If users wish to set the camera parameters to factory default setting, select <Normal> from the Num drop-down list. The camera will start loading the default values.

2.4.7 TV System (-> influences Frame Rate!)

The TV System Setting can be found under this path: **Camera > TV System**.

The default setting for 1080p is <WDR autoiris 25 fps>. Select a video format according to the user's TV system (PAL / NTSC).

Click on <√> to confirm the new setting.

The frame rate of the TV system is the maximum. Possibly it can be available in single stream only.



NOTE: <Exposure> setting will be fixed at WDR Multiple Shutter mode when a video format with “WDR” is selected.



NOTE: For cameras with Auto Iris Lens, the available video format options will only be those with “autoiris”. For cameras that do not feature Auto Iris Lens, options with “autoiris” will not appear in the drop-down list.



NOTE: For cameras with C/CS Mount Lens that support Auto Iris function, the selected video format **MUST** include “autoiris”. Otherwise the Auto Iris function will not be activated, and the live video will be displayed as black.

Autoiris

Select video formats with “autoiris” to activate Auto Iris function. Power will be supplied to trigger the Auto Iris Lens and hence enable the Auto Iris function.

WDR autoiris

Select video formats with “WDR autoiris” to activate both WDR and Auto Iris functions.

2.5 Logout

Click on the <**Logout**> tab on the top of the page, and the login window will pop up. Users can use another username to login to the camera.

Appendix A: Install UPnP Components

Please follow the instructions below to install UPnP components on Microsoft Windows XP / Windows 7 / Windows 8.1.

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

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

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

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

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

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

Appendix B: IP Addresses from Decimal to Binary

Follow the example below to convert the IP addresses to binary numbers. Use the calculator on the computer for conversion.

The calculator can be found under this path:

Start> All Programs> Accessories> Calculator.

For Windows XP and Windows Vista, click <View> on the calculator and click <Scientific>. For Windows 7 and Windows 8, click <View> on the calculator and click <Programmer>. Then follow the steps in the following example to convert the IP addresses.

The example below shows how to convert 192.168.2.81 to binary numbers.

Step 1: On the left of the calculator, select <Dec>. Then enter the first decimal number of the IP address, "192". Select <Bin> and the number will be converted to binary number. Repeat the same procedure with the rest of decimal numbers. Remember to select <Dec> before entering the next decimal number. Otherwise a decimal number cannot be entered. The table below shows the binary number of each decimal number.

Decimal Numbers	Binary Numbers
192	11000000
168	10101000
2	10
81	1010001

Step 2: Each binary number should have eight digits. If a binary number does not have eight digits, please add 0 in front of it until it does. The binary number of each decimal number should be as follow.

Decimal Numbers	Binary Numbers
192	11000000
168	10101000
2	00000010
81	01010001

Step 3: Therefore, the binary numbers of IP address 192.168.2.81 is 11000000.10101000.00000010.01010001.

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