TruVision IP PTZ Camera Configuration Manual

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Chapter 1

Introduction

This is the configuration manual for the following TruVision IP PTZ camera models:

- TVP-1101 (1.3MPX pendant, PAL)
- TVP-3101 (1.3MPX pendant, NTSC)
- TVP-1102 (1.3MPX surface, PAL)
- TVP-3102 (1.3MPX surface, NTSC)
- TVP-1103 (1.3MPX flush, PAL)
- TVP-3103 (1.3MPX flush, NTSC)
- TVP-1104 (2MPX pendant, PAL)
- TVP-3104 (2MPX pendant, NTSC)
- TVP-1105 (2MPX surface, PAL)
- TVP-3105 (2MPX surface, NTSC)
- TVP-1106 (2MPX flush, PAL)
- TVP-3106 (2MPX flush, NTSC)
Chapter 2
Network connection

This manual explains how to configure the camera over the network with a web browser.

TruVision IP PTZ cameras can be configured and controlled using Microsoft Internet Explorer (IE) and other browsers. The procedures described use Microsoft Internet Explorer (IE) web browser.

Checking your web browser security level

When using the web browser interface, you can install ActiveX controls to connect and view video using Internet Explorer. However, you cannot download data, such as video and images due to the increased security measure. Consequently, you should check the security level of your PC so that you are able to interact with the cameras over the web and, if necessary, modify the Active X settings.

Configuring IE ActiveX controls

You should confirm the ActiveX settings of your web browser.

To change the web browser’s security level:
1. In Internet Explorer click Internet Options on the Tools menu.
2. On the Security tab, click the zone to which you want to assign a web site under “Select a web content zone to specify its security settings”.
3. Click Custom Level.
4. Change the ActiveX controls and plug-ins options that are signed or marked as safe to Enable. Change the ActiveX controls and plug-ins options that are unsigned to Prompt or Disable. Click OK.

- or -

Under Reset Custom Settings, click the security level for the whole zone in the Reset To box, and select Medium. Click Reset.

Then click OK to the Internet Options Security tab window.

5. Click Apply in the Internet Options Security tab window.

Windows Vista and 7 users

Internet Explorer for Windows Vista and Windows 7 operating systems have increased security measures to protect your PC from any malicious software being installed.

To have complete functionality of the web browser interface with Windows Vista and Windows 7, do the following:

- Run the Browser interface as an administrator in your workstation
• Add the camera’s IP address to your browser’s list of trusted sites

To add the camera’s IP address to Internet Explorer’s list of trusted sites:

1. Open Internet Explorer.
2. Click Tools, and then Internet Options.
3. Click the Security tab, and then select the Trusted sites icon.
4. Click the Sites button.
5. Clear the “Require server verification (https:) for all sites in this zone box.
6. Enter the IP address in the “Add this website to the zone” field.
7. Click Add, and then click Close.
8. Click OK in the Internet Options dialog window.
9. Connect to the camera for full browser functionality.

Accessing the camera over the internet

Use the web browser to access and configure the camera over the internet.

It is recommended that you change the administrator password once the setup is complete. Only authorized users should be able to modify camera settings. See “User management” on page 45 for further information.

To access the camera online:

1. In the web browser enter the camera’s IP address (default is 192.168.1.70).
   Use the tool, TruVision Device Finder, enclosed on the CD to find the IP address of the camera.
   The Login dialog box appears.
   Note: Ensure that the Active X controls are enabled.
2. Enter your user name and password.
   User name: admin
   Password: 1234
3. Click Login. The web browser window appears in live view mode.

Overview of the camera web browser

The camera web browser lets you view, record, and play back recorded videos as well as manage the camera from any PC with Internet access. The browser’s easy-to-use controls give you quick access to all camera functions. See Figure 1 on page 6.
If there is more than one camera connected over the network, open a separate web browser window for each individual camera.

Figure 1: Web browser interface

Table 1: Overview of the web browser interface

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Live view</td>
<td>Click to view live video.</td>
</tr>
<tr>
<td>2.</td>
<td>Playback</td>
<td>Click to play back video.</td>
</tr>
<tr>
<td>3.</td>
<td>Log</td>
<td>Click to search for event logs. There are three main types: Alarm, Exception, and Operation.</td>
</tr>
<tr>
<td>4.</td>
<td>Configuration</td>
<td>Click to display the configuration window for setting up the camera.</td>
</tr>
<tr>
<td>5.</td>
<td>Current user</td>
<td>Displays current user logged on.</td>
</tr>
<tr>
<td>6.</td>
<td>Logout</td>
<td>Click to log out from the system. This can be done at any time.</td>
</tr>
<tr>
<td>7.</td>
<td>PTZ controls</td>
<td>Direction actions, zoom, focus, iris, light, and wiper control.</td>
</tr>
<tr>
<td>8.</td>
<td>Viewer</td>
<td>View live video. Time, date and camera name are displayed here.</td>
</tr>
<tr>
<td>9.</td>
<td>Stream type and aspect ratio</td>
<td>Click to select dual or substream and to select the aspect ratio (4×3, 16×9, or ×1).</td>
</tr>
<tr>
<td>10.</td>
<td>Start/stop live view</td>
<td>Click to start/stop live view.</td>
</tr>
<tr>
<td>11.</td>
<td>Audio</td>
<td>Adjust volume.</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Bidirectional audio</td>
<td>Turn on/off microphone.</td>
</tr>
<tr>
<td>13</td>
<td>Capture</td>
<td>Click to take a snapshot of the video. The snapshot will be saved to the default folder in JPEG format.</td>
</tr>
<tr>
<td>14</td>
<td>Start/stop recording</td>
<td>Click to record live video.</td>
</tr>
<tr>
<td>15</td>
<td>3D Zoom</td>
<td>Click to enable 3D zoom.</td>
</tr>
<tr>
<td>16</td>
<td>Manual Tracking</td>
<td>Click to enable manual tracking.</td>
</tr>
</tbody>
</table>
Chapter 3
Camera configuration

This chapter explains how to configure the cameras through a web browser. Once the camera hardware has been installed, configure the camera’s settings through the web browser. You must have administrator rights in order to configure the cameras over the internet.

The camera web browser lets you configure the camera remotely using your PC. Web browser options may vary depending on camera model. The camera is configured using on-screen display (OSD) menus.

There are two main folders in the configuration panel:

- Local configuration
- Configuration

Configuration menu overview

Use the Configuration panel to configure the server, network, camera, alarms, users, transactions, and other parameters such as upgrading the firmware. See Figure 2 and Table 2 below for descriptions of the configuration folders available.
Figure 2: Configuration panel (Device Information tab of the System folder selected)

Table 2: Overview of the Configuration panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Configuration folders</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>System</td>
<td>Defines device basic information including SN and the current firmware version, time settings, and maintenance parameters.</td>
</tr>
<tr>
<td>2.</td>
<td>Network</td>
<td>Defines the network parameters required to access the camera over the internet.</td>
</tr>
<tr>
<td>3.</td>
<td>Video/Audio</td>
<td>Defines recording parameters.</td>
</tr>
<tr>
<td>4.</td>
<td>PTZ</td>
<td>Defines the PTZ parameters.</td>
</tr>
<tr>
<td>5.</td>
<td>Image</td>
<td>Defines the image parameters, OSD settings, overlay text, and privacy mask.</td>
</tr>
<tr>
<td>6.</td>
<td>Security</td>
<td>Defines who can use the camera, their passwords and access privileges, RTSP authentication, IP address filter, and telnet access.</td>
</tr>
<tr>
<td>7.</td>
<td>Events</td>
<td>Defines motion detection, tamper-proof, alarm input/output, exception, and snapshot configuration.</td>
</tr>
<tr>
<td>8.</td>
<td>Storage</td>
<td>Defines recording schedule, storage management, and NAS configuration.</td>
</tr>
</tbody>
</table>

Local configuration

Use the Local menu to manage the protocol type, live view performance, and local storage paths. In the Configuration panel, click Local Configuration to display the local configuration window. See Figure 3 and Table 3 below for descriptions of the different menu parameters.
Figure 3: Example of a configuration window (Local configuration shown)

Table 3: Overview of the Local configuration window

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Live View Parameters</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Protocol</td>
<td>Specifies the network protocol used. Options include: TCP, UDP, MULTICAST and HTTP.</td>
</tr>
<tr>
<td>2.</td>
<td>Live View Performance</td>
<td>Specifies the transmission speed. Options include: Least Delay, Balanced or Best Fluency.</td>
</tr>
<tr>
<td></td>
<td>Record File Settings</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Record File Size</td>
<td>Specifies the maximum file size. Options include: 256 MB, 512 MB and 1G.</td>
</tr>
<tr>
<td>4.</td>
<td>Save Record Files to</td>
<td>Specifies the directory for recorded files.</td>
</tr>
<tr>
<td>5.</td>
<td>Save Downloaded Files to</td>
<td>Specifies the directory for downloaded files.</td>
</tr>
<tr>
<td></td>
<td>Picture and Clip Settings</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Save Snapshots In Live View To</td>
<td>Specifies the directory for saving snapshots in live view mode.</td>
</tr>
<tr>
<td>7.</td>
<td>Save Snapshots When Playback To</td>
<td>Specifies the directory for saving snapshots in playback mode.</td>
</tr>
<tr>
<td>8.</td>
<td>Save Clips To</td>
<td>Specifies the directory for saving video clips in playback mode.</td>
</tr>
</tbody>
</table>
System time

NTP (Network Time Protocol) is a protocol for synchronizing the clocks of network devices, such as IP cameras and computers. Connecting network devices to a dedicated NTP time server ensures that they are all synchronized.

To define the system time and date:

1. In the System folder, click the Time Settings (1) tab to open its window.

2. From the Time Zone drop-down menu (2), select the time zone that is the closest to the camera’s location.

3. Under Time Sync (3), check one of the options for setting the time and date:

   - **NTP**: Check the NTP enable box and enter the server NTP address to synchronize with an NTP server. The time interval can be set from 1 to 10080 minutes.
   - Or -

   **Manual Time Sync.**: Enable the Manual Time Sync function and then click to set the system time from the pop-up calendar.

   **Note**: You can also check the Sync with computer time checkbox to synchronize the time of the camera with the time of your computer.

4. Check Enable DST (4) to enable the DST function, and set the date of the DST period.

5. Click Save to save changes.
Network settings

Accessing the camera through a network requires that you define certain network settings. Use the “Network” folder to define the network settings. See Figure 4 and Table 4 below for further information.

Figure 4: Network window (TCP/IP tab shown)

Table 4: Network parameters

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1.  | TCP/IP     | **NIC Type**: Specifies the NIC type. Default is Auto. Other options include: 10M Half-dup, 10M Full-dup, 100M Half-dup and 100M Full-dup.  
**DHCP**: Enable to automatically obtain an IP address and other network settings from that server.  
**IPv4 Address**: Specifies the IPv4 address of the camera.  
**IPv4 Subnet Mask**: Specifies the IPv4 subnet mask.  
**IPv4 Default Gateway**: Specifies the IPv4 gateway IP address.  
**IPv6 Mode**: Specifies the IPv6 mode, including Manual, DHCP and Router Advertisement.  
**IPv6 Address**: Specifies the IPv6 address of the camera.  
**IPv6 Subnet Prefix Length**: Specifies the IPv6 prefix length.  
**IPv6 Default Gateway**: Specifies the IPv6 gateway IP address.  
**Mac Address**: Set to 00:4d:c1:33:11:d4.  
**MTU**: Specifies the valid value range of MTU. Default is 1500.  
**Multicast Address**: Specifies a D-class IP address between 224.0.0.0 to 239.255.255.255. Only specify this option if you are using the multicast function. Some routers prohibit the use of multicast function in case of a network storm.  
**DNS server**: Specifies the DNS server for your network. |
Chapter 3: Camera configuration

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2.  | Port       | **HTTP Port:** Specifies the port used for the Internet Explorer (IE) browser. Default value is 80.  
**RTSP Port:** Specifies the RTSP port. The default port number is 554.  
**HTTPS Port:** Specifies the HTTPS port. The default port number is 443.  
**SDK Port:** Specifies the SDK port. The default port number is 8000. |
| 3.  | DDNS       | Specifies IP server, DynDNS and ezDDNS. |
| 4.  | PPPoE      | Use this option to retrieve a dynamic IP address. |
| 5.  | SNMP       | Enable SNMP to get camera status and parameters related information. |
| 6.  | 802.1.X    | When the feature is enabled, the camera data is secured and user authentication is needed when connecting the camera to the network. |
| 7.  | QoS        | Enable to solve the network delay and network congestion by configuring the priority of data sending. |
| 8.  | UPnP       | Specifies the UPnP settings for port mapping. |
| 9.  | FTP        | Specifies the FTP address and folder to which snapshots of the camera can be uploaded. |
| 10. | Email      | Specifies the email address to which messages are sent when an alarm occurs. |

To define the TCP/IP parameters:

1. In the **Network** folder, click the **TCP/IP** tab to open its window.
2. Configure the NIC settings, including the NIC Type, IPv4 settings, IPv6 settings, MTU settings, and Multicast Address.
3. If the DHCP server is available, check **DHCP**.
4. If the DNS server settings are required for some applications (e.g., sending email), you should configure the **Preferred DNS Server** or **Alternate DNS Server**.
5. Click **Save** to save changes.

To define the port parameters:

1. In the **Network** folder, click the **Port** tab to open its window.
2. Set the HTTP port, RTSP port, HTTPS port and SDK port of the camera.
3. Click **Save** to save changes.

To define the DDNS parameters:

1. In the **Network** folder, click the **DDNS** tab to open its window.
2. Check **Enable DDNS** to enable this feature.
3. Select **DDNS Type**. Two options are available: DynDNS and IP Server.
   - **DynDNS**: Enter the user name and password registered to the DynDNS web site. The domain name is that of the DynDNS web site.
   - **ezDDNS**: Enter the host name, it will automatically register it online.
   - **IP Server**: Enter the address of the IP Server.
4. Click Save to save changes.

**To define the PPPoE parameters:**
1. In the Network folder, click the PPPoE tab to open its window.
2. Check Enable PPPoE to enable this feature.
3. Enter User Name, Password, and Confirm password for PPPoE access.
4. Click Save to save changes.

**To define the SNMP parameters:**

*Note:* Before setting the SNMP, please download the SNMP software and manage to receive the camera information via SNMP port. By setting the Trap Address, the camera can send the alarm event and exception messages to the surveillance center. The SNMP version you select should be the same as that of the SNMP software.

1. In the Network folder, click the SNMP tab to open its window.
2. Select the corresponding version of SNMP: v1, v2c or v3.
3. Configure the SNMP settings. The configuration of the SNMP software should be the same as the settings you configure here.
4. Click Save to save changes.

**To define the 802.1x parameters:**

*Note:* The switch or router to which the camera is connected must also support the IEEE 802.1X standard, and a server must be configured. Please apply and register a user name and password for 802.1X in the server.

1. In the Network folder, click the 802.1X tab to open its window.
2. Check Enable IEEE 802.1X to enable the feature.
3. Configure the 802.1X settings, including EAPOL version, user name, and password. The EAPOL version must be identical with that of the router or the switch.
4. Click Save to save changes.

**To define the QoS parameters:**

1. In the Network folder, click the QoS tab to open its window.
2. Configure the QoS settings, including Video / Audio DSCP, Event / Alarm DSCP and Management DSCP. The valid value range of the DSCP is 0-63. The bigger the DSCP value is the higher the priority is.
3. Click Save to save changes.
To define the FTP parameters:
1. In the Network folder click the FTP tab to open its window.
2. Configure the FTP settings, including server address, port, user name, password, directory, and upload type.
   
   **Directory:** In the Directory Structure field, you can select the root directory, main directory and tab. When the main directory is selected, you have the option to use the Device Name, Device Number or Device IP for the name of the directory; and when the tab is selected, you can use the Camera Name or Camera No. as the name of the directory.

   **Upload type:** To enable uploading the snapshots to the FTP server.

3. Click Save to save changes.

To define the UPnP parameters:
1. In the Network folder click the UPnP tab to open its window.
2. Check the checkbox to enable the UPnP function. The name of the device when detected online can be edited.
3. Check the Port Mapping, and select Auto or Manual mode to modify the port number.
4. Click Save to save changes.

To set up the Email parameters:
1. In the Network folder, click the Email tab to open its window.
2. Configure the following settings:
   
   **Sender:** The name of the email sender.

   **Sender’s Address:** The email address of the sender.

   **SMTP Server:** The SMTP Server IP address or host name.

   **SMTP Port:** The SMTP port. The default is 25.

   **Enable SSL:** Check the checkbox to enable SSL if it is required by the SMTP server.

   **Attached Image:** Check the checkbox of Attached Image if you want to send emails with attached alarm images.

   **Interval:** This is the time between two actions of sending attached images.

   **Authentication:** If your email server requires authentication, check this checkbox to use authentication to log in to this server. Enter the login user name and password.

   **Receiver:** The name of the user to be notified.

   **Receiver’s Address:** The email address of user to be notified.

3. Click Save to save changes.
Recording parameters

You can adjust the video and audio recording parameters to obtain the picture quality and file size best suited to your needs. Figure 5 and Table 5 below list the video and audio recording options you can configure for the camera.

Figure 5: Video/Audio Settings menu (Video tab shown)

Table 5: Video setting parameters

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Stream Type</td>
<td>Specifies the dual streaming method used. Options include: Main Stream (Normal) and Sub Stream.</td>
</tr>
<tr>
<td>2.</td>
<td>Video Type</td>
<td>Specifies the stream type you wish to record. Select Video Stream to record video stream only. Select Video&amp;Audio to record both video and audio streams.</td>
</tr>
<tr>
<td>3.</td>
<td>Resolution</td>
<td>Specifies the recording resolution. A higher image resolution provides a higher image quality but also requires a higher bit rate. The resolution options listed depend on the type of camera and on whether main or sub stream is being used. <strong>Note</strong>: Resolutions can vary depending on the camera model.</td>
</tr>
<tr>
<td>4.</td>
<td>Bitrate Type</td>
<td>Specifies whether variable or fixed bit rate is used. Variable produces higher quality results suitable for video downloads and streaming. Default is Constant.</td>
</tr>
<tr>
<td>5.</td>
<td>Video Quality</td>
<td>Specifies the quality level of the image. It can be set when variable bit rate is selected. Options include: Lowest, Lower, Medium, Higher, and Highest.</td>
</tr>
</tbody>
</table>
### Video image

You may need to adjust the camera image depending on the camera model or location background in order to get the best image quality. You can adjust the brightness, contrast, saturation, hue, and sharpness of the video image. See Figure 6 below.

Use this menu to also adjust camera behavior parameters such as exposure time, iris mode, video standard, day/night mode, image flip, WDR, digital noise reduction, white balance, and indoor/outdoor mode. See Figure 6 and Table 6 below for more information.

---

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Frame Rate</td>
<td>Specifies the frame rate for the selected resolution. The frame rate is the number of video frames that are shown or sent per second. Note: The maximum frame rate depends on the camera model and selected resolution. Please check the camera specifications in its datasheet.</td>
</tr>
<tr>
<td>7.</td>
<td>Max bit rate</td>
<td>Specifies the maximum allowed bit rate. A high image resolution requires that a high bit rate must also be selected. Options include: 128, 160, 192, 224, 256, 320, 384, 448, 512, 640, 768, 896, 1024, 1536, 1792, 2048, 3072, 4096, 8192, 16384 and Custom (enter a value manually).</td>
</tr>
<tr>
<td>8.</td>
<td>Video Encoding</td>
<td>Specifies the video encoder used.</td>
</tr>
<tr>
<td>9.</td>
<td>Profile</td>
<td>Different profile indicates different tools and technologies used in compression. Options include: High Profile, Main Profile and Basic Profile.</td>
</tr>
<tr>
<td>10.</td>
<td>I-frame Interval</td>
<td>A video compression method. It is strongly recommended not to change the default value 25.</td>
</tr>
<tr>
<td>11.</td>
<td>Audio Encoding</td>
<td>G.711ulaw, G.711alaw and G.726 are optional.</td>
</tr>
</tbody>
</table>
Table 6: Image parameters

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Brightness, Contrast Saturation, Sharpness</td>
<td>Modifies the different elements of picture quality by adjusting the position of the values for each of parameter.</td>
</tr>
<tr>
<td>2.</td>
<td>Limit Gain</td>
<td>This feature is used to adjust gain of the image. The value ranges from 0 to 100.</td>
</tr>
<tr>
<td>3.</td>
<td>Focus Mode</td>
<td>The Focus Mode can be set to Auto, Manual, and Semi-auto.</td>
</tr>
<tr>
<td></td>
<td>Auto: The camera focuses automatically at any time according to objects in the scene.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semi-auto: The camera focuses automatically only once after panning, tilting and zooming.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manual: You need to use zoom button on the control panel to focus manually.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Minimum Focusing</td>
<td>This function is used to limit the minimum focus distance. The value can be set to 1.5m, 3m, 6m, 10cm and 50cm.</td>
</tr>
<tr>
<td>5.</td>
<td>Exposure Mode</td>
<td>The Exposure Mode can be set to Auto, Iris Priority, Shutter Priority, and Manual.</td>
</tr>
<tr>
<td></td>
<td>Auto: The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iris Priority: The value of iris needs to be adjusted manually. The shutter and gain values will be adjusted automatically according to the brightness of the environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shutter Priority: The value of shutter needs to be adjusted manually. The iris and gain values will be adjusted automatically according to the brightness of the environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manual: You can adjust the values of Gain, Shutter, and Iris manually.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Video Standard</td>
<td>The camera cannot auto-sense the power supply. Select 50 Hz (PAL) or 60 Hz (NTSC) depending on your region.</td>
</tr>
</tbody>
</table>
Chapter 3: Camera configuration

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| 7.  | Day/Night Switch| Defines whether the camera is in day or night mode. The day (color) option could be used, for example, if the camera is located indoors where light levels are always good. Options:  
**Day**: Camera is always in day mode.  
**Night**: Camera is always in night mode.  
**Auto**: The camera automatically detects which mode to use. Default is Auto. |
| 8.  | Sensitivity     | Adjusts the sensitivity of the camera from night to day. Options: Low, Normal or High. Default is Normal.                                                                                                   |
| 9.  | Mirror          | Use this function to flip the original image into a mirror image. The image can be flipped centered. Default is Close. Note: The on-screen text does not flip.                                                      |
| 10. | DWDR            | When enabled, this feature allows you to see details of objects in shadows or details of objects in bright areas of frames that have high contrast between light and dark areas. Note: DWDR is not the real WDR. |
| 11. | Wide Dynamic Level | Adjusts the DWDR level. Set a high value if the backlight is too strong.                                                                                                                                  |
| 12. | Lens Initialization | The lens operates the movements for initialization when you check the check box of Lens Initialization.                                                                                             |
| 13. | White Balance   | White balance (WB) tells the camera what the color white looks like. Based on this information, the camera will then continue to display all colors correctly even when the color temperature of the scene changes such as from daylight to fluorescent lighting, for example. Select one of the options:  
**Auto**: White balance is determined automatically.  
**Outdoor**: Apply for outdoor environments.  
**Indoor**: Apply for indoor environments.  
**MWB**: You can adjust the color temperature manually to meet your own demand.  
**Fluorescent Lamp**: Apply for scene where there are fluorescent lamps installed near the camera.  
**Sodium Lamp**: Apply for scene where there are incandescent lamp near the camera.  
**Auto-track**: White balance is continuously being adjusted in real-time according to the color temperature of the scene illumination  
Note: Options can vary depending on the camera models. |
<p>| 15. | Noise Reduction Level | Set the level of noise reduction in the Normal Mode. Higher value has a stronger noise reduction.                                                                                                           |
| 16. | Zoom Limit      | Set Zoom Limit value to limit the maximum value of zooming. The value can be set to 20, 40, 80, 160 and 320.                                                                                              |
| 17. | Chroma Suppress | Adjust this value to control the color especially in low night scene.                                                                                                                                       |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.</td>
<td>Local Output</td>
<td>When enabled, the BNC output can display image.</td>
</tr>
</tbody>
</table>

**Note:** Not all models support all these parameter settings.

**OSD**

In addition to the camera name, the camera also displays the system date and time on screen. You can also define how the text appears on screen.

*Figure 7: OSD settings menu*

To position the date/time and name on screen:

1. In the Image folder (1), click the OSD Settings tab (2) to open its window.
2. Check the Display Name (3) box to display the camera’s name on screen. You can modify the default name in the text box of Camera Name.
3. Check the Display Date box (3) to display the date/time on screen.
4. Check the Display Week box (3) to include the day of the week in the on-screen display.
5. Select the time format from the Time format list box (4).
6. Select the date format from the Date format list box (4).
7. Select a display mode for the camera from the Display Mode list box (5). Display modes include:
   - **Transparent & Not flickering.** The image appears through the text.
• **Transparent & Flickering.** The image appears through the text. The text flashes on and off.

• **Not transparent & Not flickering.** The image is behind the text. This is default.

• **Not transparent & Flickering.** The image is behind the text. The text flashes on and off.

8. Select the OSD size that you want.

9. Click **Save** to save changes.

**Note:** If you set the display mode as transparent, the text varies according the scenery. With some sceneries, the text may be not clear.

### Overlay text

You can add up to four lines of text on screen. This option can be used, for example, to display emergency contact details. Each text line can be positioned anywhere on screen. See Figure 8 below.

**Figure 8: Text overlay menu**

To add on-screen text:

1. In the **Image** folder (1), click the **Text Overlay** tab (2) to open its window.

2. Check the box for the first line of text.

3. Enter the text in the text box.

4. Use the mouse to click and drag the red text in the live view window to adjust the text overlay position.
5. Repeat steps 2 to 4 for each extra line of text, selecting the next string number.

6. Click Save to save changes.

**ROI encoding of an image**

This feature helps you to optimize image bandwidth and storage. You can select an important area of detail or ROI (Region of interest) in a stream, such as a number plate or face. The ROI area will have a higher quality image and the non-ROI areas will have a lower image quality thereby saving bandwidth.

You can define up to eight ROIs.

**To define an ROI:**

1. In the Video/Audio folder (1), click the ROI tab (2) to open its window.

2. Using the PTZ panel (3), move the lens to the desired location.

3. Select the stream type (4): main stream or substream.

4. Enable Fixed Region (5). This lets you manually configure the image quality enhancement level as well as name the region.

5. Select the region number and enhancement level. Enter the region’s name.

6. Draw an area in the image.
7. Enable Dynamic Tracking (6), if required. This is an intelligent analysis feature that facilitates in face recognition.

8. Repeat steps 2 to 7 to set other regions. Up to eight regions can be set.

9. Click Save to save changes.

**Intelligent tracking**

Intelligent tracking is used to track a moving object or person in a selected region.

**To define intelligent tracking:**

1. In the PTZ folder (1), click the Intelligent Tracking tab (2) to open its window.

2. Click Enable Intelligent Tracking (3).

3. Set the duration time.

4. Set the zoom ratio (4). This is the zoom level used when you start to track the person or object.

5. Click Save to save changes.
PTZ parameters
The following sections explain how to configure the different PTZ parameters.

PTZ home position
The initial position is the PTZ home coordinates. It can be the factory default position or you can customize the initial position to your own requirements.

To set the initial position:
1. In the PTZ folder, click the Initial Position tab to open its window.
2. Click the PTZ control buttons to find a position as the initial position of the camera. You can also call a defined preset and set it as the initial position.
3. Click Set to save the position.

To call and delete the initial position:
Click Goto to call the initial position. Click Clear to delete the initial position and restore the factory default initial position.

Basic PTZ parameters
You can configure the basic PTZ parameters, such as proportional pan, preset freezing, preset speed, keyboard control speed, auto scan speed, and PTZ OSD.

To define basic PTZ parameters:
1. In the PTZ folder (1), click the Basic tab (2) to open its window.

2. Configure the following settings:
   Proportional pan: If you enable this function, the pan/tilt speeds change according to the amount of zoom. When there is a large amount of zoom, the
pan/tilt speed will be slower for keeping the image from moving too fast on the live view image.

**Preset freezing**: This function enables the live view to switch directly from one scene defined by a preset to another, without showing the middle areas between these two, to ensure the surveillance efficiency. It can also reduce the use of bandwidth in a digital network system.

**Note**: Preset freezing function is invalid when you calling a pattern.

**Preset speed**: You can set the speed of a defined preset from 1 to 8.

**Keyboard control speed**: Define the speed of PTZ control by a keyboard as Low, Normal or High.

**Auto scan speed**: The camera provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan. The scan speed can be set from level 1 to 40.

**PTZ OSD**: Set the on-screen display duration of the PTZ status.

**Zoom status**: Set the OSD duration of zooming status as 2 seconds, 5 seconds, 10 seconds, Always Close, or Always Open.

**PT status**: Set the azimuth angle display duration while panning and tilting as 2 seconds, 5 seconds, 10 seconds, Always Close, or Always Open.

**Preset status**: Set the preset name display duration while calling the preset as 2 seconds, 5 seconds, 10 seconds, Always Close, or Always Open.

**Power-off memory**: The dome resumes its previous PTZ status or actions after it restarts from a power-off. You can set the time point of which the dome resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds, or 600 seconds before power-off.

3. Click **Save** to save changes.

### Limit camera movement

The camera can be programmed to move only within a defined area. It is limited in how much it can move left/right and up/down. This can be useful when you do not want an area, such as a neighboring building, to be included in the camera view.

**To define the limit stop parameters**:

1. In the **PTZ** folder (1), click the **Limit** tab (2) to open its window.
2. Click the Enable Limit checkbox (3) and choose the limit type:

**Manual Stops:** When manual limit stops are set, you can operate the PTZ control panel manually only within the restricted surveillance area.

**Scan Stops:** When scan limit stops are set, the random scan, frame scan, auto scan, tilt scan, panorama scan are performed only within the restricted surveillance area.

**Note:** Manual Stops has priority over Scan Stops. If these two functions are set at the same time, only Manual Stops is enabled.

3. Click the PTZ control buttons to find the left/right/up/down limit stops. You can also call the defined presets and set them as the limits of the camera.

4. Click **Set** to save the limits or click **Clear** to clear the limits.

5. Click **Save** to save changes.

**Schedule tasks**

You can configure the network camera to perform a certain action automatically during a user-defined time period.

**To define a schedule task:**

1. In the PTZ folder (1), click the **Schedule Tasks** tab (2) to open its window.
2. Check the checkbox of **Enable Scheduled Task** (3).

3. Set the **Dwell Time** (4). You can set the dwell time in seconds (a period of inactivity) before the camera starts the scheduled tasks.

4. Set the schedule and task details. Click **Edit Tasks** (5) to set the task schedule. The **Timing Tasks** window appears:

   Select **All Day** to set the schedule as all day, or **Customize** and input the start and end times for each task. Click **Enter** on your keyboard to enter the time.
5. Choose the task type from the drop-down list. You can choose scan, preset, preset tour, etc.

6. Click Save (6) to save changes.

**Park actions**

This is the action that will run automatically after the dwell time. A park action can be, for example, a scan, preset, preset tour, or a shadow tour.

**Note:** The Scheduled Tasks function (see page 27) has priority over the Park Action function. If these two functions are set at the same time, only Scheduled Tasks is enabled.

To define a park action:

1. In the PTZ folder (1), click the Park Action tab (1) to open its window.

2. Check the Enable Park Action checkbox (3).

3. Set the Dwell Time, which is the inactivity time of the dome before it starts the park actions.

4. Select an action from the Action Type drop-down list (4).

5. Click Save (5) to save changes.

**Privacy masks**

Privacy masks let you conceal sensitive areas (such as neighboring windows) to protect them from view on the monitor screen and in the recorded video. The masking appears as a blank area on screen. You can create up to four privacy masks per camera.

**Note:** There may be a small difference in size of the privacy mask area depending on whether local output or the web browser is used.
To add privacy mask area:

1. In the PTZ folder (1), click the Privacy Mask tab (2) to open its window.

![PTZ Configuration Interface]

2. Check the Enable Privacy Mask (3).

3. Click the PTZ control buttons to point the camera at the area where you want to set the privacy mask. Click Draw Area (4).

4. Click and drag the mouse in the live video window to draw the mask area.

5. Click Stop Drawing to finish drawing, or click Clear All to clear all of the areas you set without saving them.

6. Click Add (5) to add the area. Enter its name, color, and active zoom ratio. Each mask can be individually set.

![Privacy Mask List]

Note: The active zoom ratio is the magnification level the camera will zoom into when motion is detected.

7. Click Save to save changes.
Clear PTZ configurations

Use the PTZ configurations menu to clear all presets, preset tours, shadow tours, privacy masks, PTZ limits, scheduled tasks, and park actions.

To clear PTZ configurations:

1. In the PTZ folder (1), click the Clear Config tab (2) to open its window.

2. Check the checkbox of the items (3) you want to clear.

3. Click Save (4) to save changes.

Motion detection alarms

You can define motion detection alarms. A motion detection alarm refers to an alarm triggered when the camera detects motion. However, the motion alarm is only triggered if it occurs during a programmed time schedule.

Select the level of sensitivity to motion as well as the target size so that only objects that could be of interest can trigger a motion recording. For example, the motion recording is triggered by the movement of a person but not that of a cat.

You can define the area on screen where the motion is detected, the level of sensitivity to motion, the schedule when the camera is sensitive to detecting motion as well as which methods are used to alert you to a motion detection alarm.

You can also enable dynamic analysis for motion. When there is motion, the area will be highlighted in green.

Defining a motion detection alarm requires the following tasks:

1. **Area Settings**: Define the on-screen area that can trigger a motion detection alarm as well as the detection sensitivity level.

2. **Arming Schedule**: Define the schedule which the system detects motion.
3. **Recording schedule**: Define the schedule when motion detection can be recorded. See “Recording schedule” on page 41 for further information.

4. **Linkage**: Specify the method of response to the alarm.

To set up motion detection:

1. In the Events folder (1), click the Motion Detection tab (2) to open its window.

2. Check the Enable Motion Detection box (3). Check Enable dynamic analysis for motion if you want to see in live view where the detected motion has occurred.

   **Note**: Deselect the “Enable Motion Detection” option to disable the motion detection alarm.

3. Click Draw Area (4). Click and drag the mouse on the live video image to draw an area sensitive to motion detection.

   **Note**: You can draw up to eight motion detection areas on the same image.

4. Click Stop Drawing to finish drawing. Click Clear All to delete all areas marked and restart drawing.

5. Move the Sensitivity slider (5) to set the sensitivity of the detection. All areas will have the same sensitivity level.

6. Click Edit to edit the arming schedule. The Edit Schedule Time window opens:
7. Select the day and click 📆 to set the start and end time periods. You can copy the schedule to other days or to the whole week.

8. Click OK to save changes.

9. Specify the linkage method when an event occurs. Check one or more response methods for the system when a motion detection alarm is triggered.

<table>
<thead>
<tr>
<th>Notify Alarm Host</th>
<th>Send an exception or alarm signal to remote management software when an event occurs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send Email</td>
<td>Sends an email to a specified address when there is a motion detection alarm.</td>
</tr>
<tr>
<td>Upload Snapshot</td>
<td>Capture the image when an alarm is triggered and upload the picture to NAS or FTP server.</td>
</tr>
<tr>
<td>Trigger Channel</td>
<td>Triggers the recording to start in the camera.</td>
</tr>
<tr>
<td>Trigger Alarm Output</td>
<td>Trigger external alarm outputs when an event occurs.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This option is only supported by cameras that support alarm output.</td>
</tr>
</tbody>
</table>

10. Click Save to save changes.

**Tamper-proof alarms**

You can configure the camera to trigger an alarm when the lens is covered and to take an alarm response action.

**To set up tamper-proof alarms:**

1. In the Events folder (1), click the Tamper-proof tab (2) to open its window.
2. Check the Enable Tamper-proof box (3).

3. Click Draw Area (4). Click and drag the mouse on the live video image to draw a tamper-proof area.

4. Click Stop Drawing to finish drawing. Click Clear All to delete all areas marked and restart drawing.

5. Move the Sensitivity slider to set the sensitivity of the detection.
   All areas will have the same sensitivity level.

6. Click Edit to edit the arming schedule for tamper-proof alarms. The arming schedule configuration is the same as that for motion detection. See “To set up motion detection” for more information.

7. Check the checkbox to select the linkage method taken for the tamper-proof.

8. Click Save to save changes.

Exception alarms
You can set up the camera to notify you when irregular events occur and how you should be notified. These exception alarms include:

- **HDD Full**: All recording space of NAS is full.
- **HDD Error**: Errors occurred while files were being written to the storage, no storage or storage had failed to initialize.
- **Network Disconnected**: Disconnected network cable.
- **IP Address Conflicted**: Conflict in IP address setting.
- **Illegal Login**: Wrong user ID or password used to login to the cameras.
To define exception alarms:

1. In the Events folder (1), click the Exception tab (2) to open its window.

2. Under Notification Type (3), select one of the exception alarms from the drop-down list.

3. Check the checkbox to select the linkage method (4): Notify alarm host, send email, or trigger alarm output. If “Trigger alarm output” is selected, check which type is required: Select all, A->1, or A>2.

4. Repeat steps 2 and 3 for each of the exception alarms to be configured.

5. Click Save (5) to save changes.

Alarm inputs and outputs

To define an external alarm input:

1. In the Events folder (1), click the Alarm Input tab (2) to open its window.
2. Choose the Alarm Input No. and the Alarm Type (3). The alarm type can be NO (Normally Open) or NC (Normally Closed). Enter a name for the alarm input.

3. Click Edit (4) to set the arming schedule for the alarm input. See “Motion detection alarms” on page 31 for more information.

4. Check the checkbox to select the linkage method.

5. Click Save to save changes.

To define an alarm output:
1. In the Events folder (1), click the Alarm Output (2) tab to open its window.
2. Select one alarm output channel from the Alarm Output drop-down list (3). You can also set a name for the alarm output.

3. The delay time can be set to 5sec, 10sec, 30sec, 1min, 2min, 5min or 10min. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.

4. Click Edit (4) to set the arming schedule for the alarm input. See “To set up motion detection” for more information.

5. Click Save to save changes.

Video loss alarms

To define video loss alarm:

1. In the Events folder (1), click the Video Loss tab (2) to open its window.

2. Check the Enable Video Loss Detection checkbox (3) to enable the video loss detection.
3. Click Edit (4) to set the arming schedule for the video loss alarm. See “To set up motion detection” for more information.

4. Check the checkbox to select the linkage method.

5. Click Save to save changes.

Snapshot parameters

You can configure scheduled snapshots and event-triggered snapshots. The captured snapshots can be stored in the SD card (if supported) or the NAS. You can also upload the snapshots to an FTP server.

Note: If you have configured the FTP settings and check Upload Picture in the FTP tab, the snapshots will be uploaded to the FTP. If you also check Upload Snapshot for motion detection or alarm input, the snapshots will be uploaded to the FTP when motion detection or an alarm input is triggered.
To set up snapshots:
1. In the Events folder (1), click the Snapshot tab (2) to open its window.

[Image of snapshot configuration settings]

2. Check Enable Timing Snapshot (3) to enable continuous snapshots. Check the Enable Event-triggered Snapshot (4) to enable event-triggered snapshots.
3. Select the desired quality of the snapshot.
4. Set the time interval between two snapshots.
5. Click Save (5) to save changes.

NAS settings
You can use a network storage system (NAS) to remotely store recordings. To configure record settings, please ensure that you have the network storage device within the network.

The NAS disk should be available within the network and correctly configured to store the recorded files, log files, etc.

Notes: Up to eight NAS disks can be connected to the camera.

To set up a NAS system:
1. In the Storage folder (1), click the NAS tab (2) to open its window.
2. Enter the IP address of the network disk, (3) and the NAS folder path.
3. Click Save (4) to save changes.

Format storage devices

Use the storage management window to display the capacity, free space available, and the working status of the HDD of the NAS and the SD card in the camera. You can also format these storage devices.

Before formatting the storage device, stop all recording. Once formatting is completed, reboot the camera as otherwise the device will not function properly.

If Overwrite is enabled, the oldest files are overwritten when the storage becomes full.

To format the storage devices:

1. In the Storage folder (1), click the Storage Management tab (2) to open its window.
2. Check the HDD Number column to select the storage.
3. Click Format. A window appears to check your formatting permission.
4. Click OK to start formatting.

**Recording schedule**

You can define a recording schedule for the camera in the “Record Schedule” window. The recording is saved on to the SD card or NAS in the camera. The camera’s SD card provides a backup in case of network failure.

The selected recording schedule applies to all alarm types.

**Pre-record time**

The pre-record time is set to start recording before the scheduled time or the event. For example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the camera starts to record at 9:59:55. The pre-record time can be configured as No Pre-record, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s, or not limited.

**Post-record time**

The post-record time is set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the camera records until 11:00:05. The post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min, or 10 min.

To set up a recording schedule:

1. In the Storage folder, click the Record Schedule tab to open its window.
2. Click the Enable Record Schedule box to enable recording.
   
   **Note:** To disable recording, deselect the option.
3. Click Edit to edit the recording schedule. The following window appears:
4. Select whether the recording will be for the whole week (All Day recording) or for specific days of the week.

If you have selected “All Day” (1), select one of the record types to record from the drop-down list box:

- **Normal**: This is continuous recording.
- **Motion detection**: The video is recorded when the motion is detected.
- **Alarm**: The video is recorded when the alarm is triggered via the external alarm input.
- **Motion | Alarm**: The video is recorded when the external alarm is triggered or the motion is detected.
- **Motion & Alarm**: The video is recorded when motion and alarms are triggered at the same time.

5. If you selected “Customize” (2), click the day of the week required and then for period 1 set the start and end times during which you want the camera to begin and end recording.

From the drop-down list box, select one of the record types to record.

Repeat for additional periods in the day. Up to four time periods can be selected.

**Note**: The time periods cannot overlap.

6. Set the recording periods for the other days of the week if required.

   Click **Copy** (3) to copy the recording periods to another day of the week.

7. Click **OK** and **Save** (4) to save changes.
**Note:** If you set the record type to “Motion detection” or “Alarm”, you must also define the arming schedule in order to trigger motion detection or alarm input recording.
Chapter 4
Camera management

This chapter describes how to use the camera once it is installed and configured. The camera is accessed through a web browser.

User management

This section describes how to manage users. You can:

- Add or delete users
- Modify permission
- Modify passwords

Only the administrator can manage users. The administrator can create up to 31 individual users. When new users are added to the list, the administrator can modify permissions and password of each user. See Figure 9 below.

Figure 9: User management window

Passwords limit access to the camera and the same password can be used by several users. When creating a new user, you must give the user a password. There is no default password provided for all users. Users can not modify their password, and only the administrator can create or modify password for a user.
**Note:** Keep the admin password in a safe place. If you forget it, please contact technical support.

**Types of users**
A user’s access privileges to the system are automatically defined by their user type. There are three types of user:

- **Admin**: This is the system administrator. The administrator can configure all settings. Only the administrator can create and delete user accounts. Admin cannot be deleted.
- **Operator**: This user can only change the configuration of his/her own account. An operator cannot create or delete other users.
- **Viewer**: This user has the permission of live view, playback and log search. However, they cannot change any configuration settings.

**Adding and deleting users**
The administrator can create up to 15 users. Only the system administrator can create or delete users.

**To add a user:**
1. In the **Security** folder, click the **User** tab to open its window.
2. Select the **Add** button. The user management window appears.
3. Enter a user name (1). The name can have up to 16 alphanumeric characters.
4. Select the type of user (2) from the drop-down list. The options are Viewer and Operator.
5. Assign the user a password (3). Passwords can have up to 16 alphanumeric characters.
6. Assign permissions to users (4).
### Basic permissions

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<thead>
<tr>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote parameter settings</td>
</tr>
<tr>
<td>Remote log search/Interrogate working status</td>
</tr>
<tr>
<td>Remote upgrade/format</td>
</tr>
<tr>
<td>Remote shutdown/reboot</td>
</tr>
<tr>
<td>Remote notify alarm host/Trigger alarm output</td>
</tr>
<tr>
<td>Remote video output control</td>
</tr>
<tr>
<td>Remote serial port control</td>
</tr>
</tbody>
</table>

### Camera permissions

<table>
<thead>
<tr>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote live view</td>
</tr>
<tr>
<td>Remote PTZ control</td>
</tr>
<tr>
<td>Remote manual recording</td>
</tr>
<tr>
<td>Remote playback</td>
</tr>
</tbody>
</table>

7. Click OK to save changes.

**To delete a user:**

1. Select one user in the User tab.
2. Click Delete button. A message box appears.
   - **Note:** Only the administrator can delete a user.
3. Click Save to save the changes.

### Modifying user information

You can easily change the information about a user such as their name, password and permissions.

**To modify user information:**

1. Select a user in the User tab.
2. Click the Modify button. The user management window appears
3. Change the information required.
   - **Note:** The user “Admin” can only be changed by entering the admin password.
4. Click Save to save changes.

### RTSP authentication

You can secure the stream data of live view.
To define RTSP authentication:
1. In the Storage folder, click the Record Schedule tab to open its window.

2. Select the Authentication type Enable or Disable in the drop-down list to enable or disable the RTSP authentication.

3. Click Save to save the changes.

Note: If "RTSP Authentication" is disabled, although the user has no permission for “Remote Live View”, he can still see live view images.

IP address filter

This function makes it possible for access control.
To define an IP address filter:
1. In the Security folder, click the IP Address Filter tab to open its window.
2. Check the Enable IP Address Filter checkbox.
3. Select the type of IP address filter in the drop-down list, Forbidden or Allowed.
4. Click Add to add an IP address.
5. Click Modify or Delete to modify or delete the selected IP address.
6. Click Clear to delete all the IP addresses.
7. Click Save to save changes.

Telnet

To define Telnet:
1. In the Configuration folder, select the Security folder.
2. Select the Telnet tab.
3. Check the checkbox of Enable Telnet.
4. Click Save to save changes.

Restore default settings

Use the Default menu to restore default settings to the camera. There are two options available:

- **Restore**: Restore all the parameters, except the IP parameters, to the default settings.
- **Default**: Restore all the parameters to the default settings.
Note: Video standard cannot be restored to default settings no matter Restore or Default.

To restore default settings:
1. In the Configuration folder, select the System tab.
2. Select the Maintenance tab.
3. Click either Restore or Default. A window showing user authentication appears.
4. Enter the admin password and click OK.
5. Click OK in the pop-up message box to confirm restoring operation.

Import/export a configuration file

To import/export configuration file:
1. In the Configuration folder, select the System tab.
2. Select the Maintenance tab.
3. Click Browse to select the local configuration file and then click Import to start importing configuration file.
4. Click Export and set the saving path to save the configuration file.

Upgrade firmware

The camera firmware is stored in the flash memory. Use the upgrade function to write the firmware file into the flash memory.

You need to upgrade firmware when it has become outdated. When you upgrade the firmware, all existing settings are unchanged. Only the new features are added with their default settings.

To upgrade the firmware through the web browser:
1. Download on to your computer the latest firmware from our web site at:
   - Or -
   www.utcfssecurityproductspages.eu/videoupgrades/
2. In the Configuration folder, select the System tab.
3. Select the Maintenance tab.
4. Click the Browse button to locate the latest file on your computer.
5. Click Update. You will receive a prompt asking you to reboot the camera.

Reboot camera
The camera can be easily rebooted remotely.

To reboot the camera through the web browser:
1. In the Configuration folder select the System tab.
2. Select the Maintenance tab.
3. Click the Reboot button to reboot the device.
4. Click OK in the pop-up message box to confirm reboot operation.
Chapter 4: Camera management
Chapter 5
Camera operation

This chapter describes how to use the camera once it is installed and configured.

Logging on and off
You can easily log out of the camera browser window by clicking the Logout button on the menu toolbar. You will be asked each time to enter your user name and password when logging in.

Figure 10: Login dialog box

Live view mode
Once logged in, click “Live View” on the menu toolbar to access live view mode. See Figure 1 on page 6 for the description of the interface.

- **Start/stop live view**: You can stop and start live view by clicking the Start/stop live view button on the bottom of the window.

- **Record**: You can record live video and stored it in the directory you have configured. In the live view window, click the Record button at the bottom of the window. To stop recording, click the button again.
**Take a snapshot:** You can take a snapshot of a scene when in live view. Simply click the **Capture** button located at the bottom of the window to save an image. The image is in JPEG format. Snapshots are saved on the hard drive.

**3D position:** Click to track and zoom out any suspected objects by simply dragging and clicking the mouse.

---

**Playing back recorded video**

You can easily search and play back recorded video in the playback interface.

**Note:** You must configure NAS or insert SD card in the dome camera to be able to use the playback functions.

To search recorded video stored on the camera’s storage device for playback, click **Playback** on the menu toolbar. The Playback window displays. See Figure 11 on page 55.
**Figure 11: Playback window**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Playback button</td>
<td>Click to open the Playback window.</td>
</tr>
<tr>
<td>2.</td>
<td>Search calendar</td>
<td>Click the day required to search.</td>
</tr>
<tr>
<td>3.</td>
<td>Search</td>
<td>Start search.</td>
</tr>
<tr>
<td>4.</td>
<td>Set playback time</td>
<td>Input the time and click to locate the playback point.</td>
</tr>
<tr>
<td>5.</td>
<td>Control playback</td>
<td>Click to control how the selected file is played back: play, stop, slow and fast forward playback.</td>
</tr>
<tr>
<td>6.</td>
<td>Timeline bar</td>
<td>The timeline bar displays the 24-hour period of the day being played back. It moves left (oldest) to right (newest). The bar is color-coded to display the type of recording. Click a location on the timeline to move the cursor to where you want playback to start. The timeline can also be scrolled to earlier or later periods for play back. Click to zoom out/in the timeline bar.</td>
</tr>
<tr>
<td>7.</td>
<td>Time moment</td>
<td>Vertical bar shows where you are in the playback recording. The current time and date are also displayed.</td>
</tr>
<tr>
<td>8.</td>
<td>Download functions</td>
<td><img src="download_video_icon" alt="Download video files" /> Download video files. <img src="download_image_icon" alt="Download captured images" /> Download captured images.</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9.</td>
<td>Recording type</td>
<td>The color code displays the recording type. Recording types are schedule recording, alarms recording and manual recording. The recording type name is also displayed in the current status window.</td>
</tr>
<tr>
<td>10.</td>
<td>Archive functions</td>
<td>Click these buttons for the following archive actions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><img src="image" alt="Capture a snapshot image of the playback video." /></td>
</tr>
<tr>
<td></td>
<td></td>
<td><img src="image" alt="Start/Stop clipping video files." /></td>
</tr>
</tbody>
</table>

**To play back recorded video**

1. Select the date and click the **Search** button. The searched video is displayed in the timeline.

2. Click **Play** to start playback. While playing back a video, the timeline bar displays the type and time of the recording. The timeline can be manually scrolled using the mouse.

   **Note:** You must have playback permission to playback recorded images. See “Modifying user information” on page 47 to archive recorded video files.

3. Select the date and click the **Search** button to search for the required recorded file.

4. Click ![search](image) to search the video file.

5. In the pop-up window, check the box of the video file and click **Download** to download the video files.

**To archive a recorded video segment during playback:**

1. While playing back a recorded file, click ![clip](image) to start clipping. Click it again to stop clipping. A video segment is created.

2. Repeat step 1 to create additional segments. The video segments are saved on your computer.
To archive recorded snapshots:
1. In playback, click to open the snapshots search window.
2. Select the snapshot type (1) as well as the start and end time (2).
3. Click Search (3) to search for the snapshots.
4. Select the desired snapshots, and click Download (3) to download them.

Searching event logs
You must configure NAS or insert a SD card in the dome camera to be able to use the log functions.

The number of event logs that can be stored on NAS or SD card depends on the capacity of the storage devices. When this capacity is reached, the system starts deleting older logs. To view logs stored on storage devices, click Log on the menu toolbar. The Log window appears. See Figure 12 on page 58.

Note: You must have view log access rights to search and view logs. See “Modifying user information” on page 47 for more information.
Figure 12: Log window

1. Major Type
2. Minor Type
3. Start and end search time
4. Start search
5. Save searched logs

You can search for recorded logs by the following criteria:

**Major type:** There are three types of logs: Alarm, Exception, and Operation. You can also search All. See Table 7 below for their descriptions.

**Minor type:** Each major type has some minor types. See Table 7 below for their descriptions.

**Date and Time:** Logs can be searched by start and end recording time.

### Table 7: Types of logs

<table>
<thead>
<tr>
<th>Log type</th>
<th>Description of events included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm</td>
<td>Alarm Input, Alarm output, Start Motion Detection, Stop Motion Detection, Start Tamper-proof, Stop Tamper-proof</td>
</tr>
<tr>
<td>Exception</td>
<td>Video Signal Loss, Illegal Login, HDD Full, HDD Error, Network Disconnected and IP Address Conflicted</td>
</tr>
</tbody>
</table>
To search logs:
1. Click Log in the menu toolbar to display the Log window.
2. In the Major Type and Minor Type drop-down list, select the desired option.
3. Select start and end time of the log.
4. Click Search to start your search. The results appear in the left window.

Operating PTZ control

In live view you can use the PTZ control buttons to control pan/tilt/zoom and carry out other functions of the camera.

PTZ control panel

In live view, click \[ \text{PTZ control panel} \] to display/hide the PTZ control panel.

Figure 13: PTZ control panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Directional buttons: Controls the movements and directions of the PTZ. Center button is used to start auto-pan by the PTZ dome camera.</td>
</tr>
<tr>
<td>2.</td>
<td>Zoom, focus and iris: Adjusts zoom, focus and iris.</td>
</tr>
<tr>
<td>3.</td>
<td>PTZ movement: Adjusts the speed of PTZ movement.</td>
</tr>
<tr>
<td>4.</td>
<td>Turns on/off the light, it is supported by those have RS-485 port cameras.</td>
</tr>
<tr>
<td>5.</td>
<td>Turns on/off camera wiper.</td>
</tr>
<tr>
<td>6.</td>
<td>Auto focus</td>
</tr>
<tr>
<td>7.</td>
<td>Initializes the lens</td>
</tr>
</tbody>
</table>
Chapter 5: Camera operation

**Note:** This feature can vary on different cameras.

### Using presets

Presets are predefined locations of a PTZ dome camera that allow you to quickly move the PTZ dome camera to a desired position.

You can only call up the predefined presets. For instance, preset 99 is the “Start auto scan”. If you call the preset 99, the camera starts auto scan function.

These predefined presets cannot be modified. You cannot set up new presets.

<table>
<thead>
<tr>
<th>Special Preset</th>
<th>Function</th>
<th>Special Preset</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Auto flip</td>
<td>93</td>
<td>Set limit stops manually</td>
</tr>
<tr>
<td>34</td>
<td>Back to initial position</td>
<td>94</td>
<td>Remote reboot</td>
</tr>
<tr>
<td>35</td>
<td>Call preset tour 1</td>
<td>96</td>
<td>Stop a scan</td>
</tr>
<tr>
<td>36</td>
<td>Call preset tour 2</td>
<td>97</td>
<td>Start random scan</td>
</tr>
<tr>
<td>37</td>
<td>Call preset tour 3</td>
<td>98</td>
<td>Start frame scan</td>
</tr>
<tr>
<td>38</td>
<td>Call preset tour 4</td>
<td>99</td>
<td>Start auto scan</td>
</tr>
<tr>
<td>39</td>
<td>IR cut filter in</td>
<td>100</td>
<td>Start tilt scan</td>
</tr>
<tr>
<td>40</td>
<td>IR cut filter out</td>
<td>101</td>
<td>Start panorama scan</td>
</tr>
<tr>
<td>41</td>
<td>Call shadow tour 1</td>
<td>102</td>
<td>Call preset tour 5</td>
</tr>
<tr>
<td>42</td>
<td>Call shadow tour 2</td>
<td>103</td>
<td>Call preset tour 6</td>
</tr>
<tr>
<td>43</td>
<td>Call shadow tour 3</td>
<td>104</td>
<td>Call preset tour 7</td>
</tr>
<tr>
<td>44</td>
<td>Call shadow tour 4</td>
<td>105</td>
<td>Call preset tour 8</td>
</tr>
<tr>
<td>92</td>
<td>Start to set limit stops</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**To set a preset:**

1. Select a preset number from the preset list.
2. Use the PTZ directional buttons to move the camera to the desired position.
3. Click ‣ to finish the setting of the current preset.
4. You can click ‣ to delete the preset.

**To call a preset:**
1. Select a defined preset from the list.
2. Click ‣ to call the preset.

**Using preset tours**

A preset tour is a memorized series of preset function. The camera stays at a step for a set dwell time before moving on to the next step. The steps are defined by presets. A preset tour can be configured with up to 32 presets.

You can configure up to eight preset tours.

**To set a preset tour:**
1. In the PTZ control panel, click ‣ to enter the tour settings interface.
2. Select a preset tour number from the drop-down list.
3. Click ‣ to enter the adding interface of preset.

4. Configure the preset number, preset tour time, and preset tour speed.

<table>
<thead>
<tr>
<th>Preset Tour Time</th>
<th>The dwell time. The length of time for which a camera stays at a preset before moving to the next preset.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preset Tour Speed</td>
<td>The speed the camera moves from one preset to another.</td>
</tr>
</tbody>
</table>

5. Click OK to save a preset into the preset tour.
6. Repeat the steps from 3 to 5 to add more presets.
7. Click ‣ to save all the patrol settings.

**To call a preset tour:**

In the PTZ control panel, select a defined preset tour from the drop-down list and click ‣ to call the preset tour.
Using shadow tours

A shadow tour is a memorized series of pan, tilt, zoom, and preset functions. You can configure up to four shadow tours.

To set a shadow tour:
1. In the PTZ control panel, click \( \text{\textbullet} \) to enter the pattern settings interface.
2. Select a shadow tour number from the list.
3. Click \( \text{\textbullet} \) to enable recording the panning, tilting, and zooming actions.
4. Use the PTZ control buttons to move the lens to the desired position after the information:
   - Pan the PTZ dome to the right or left.
   - Tilt the PTZ dome up or down.
   - Zoom in or out.
   - Refocus the lens.
5. Click \( \text{\textbullet} \) to save the settings.

To call a shadow tour:
Select one shadow and click \( \text{\textbullet} \) to call the shadow tour.
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