



Instruction Manual

DNR100 SERIES





Instruction Manual DNR100 SERIES

Thank you for purchasing this product. FLIR is committed to providing our customers with a high quality, reliable security solution.

This manual refers to the following models:

DNR100 Series

For the latest online manual, downloads and product updates, and to learn about our complete line of accessory products, please visit our website at:

www.flirsecurity.com/pro



WARNING

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



WARNING: TO REDUCE THE RICK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

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Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacturing process of your product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to ensure your enjoyment and proper use of the product and accessory equipment. Please read them carefully before operating and using your product.

1.1 General Precautions

1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. It is highly recommended to connect the product to a surge protector to protect from damage caused by electrical surges. It is also recommended to connect the product to an uninterruptible power supply (UPS), which has an internal battery that will keep the product running in the event of a power outage.

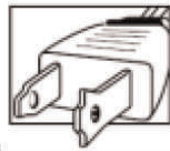


CAUTION

Maintain electrical safety. Power line operated equipment or accessories connected to this product should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

1.2 Installation

1. **Read and Follow Instructions** - All the safety and operating instructions should be read before the product is operated. Follow all operating instructions.
2. **Retain Instructions** - The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** - Comply with all warnings on the product and in the operating instructions.
4. **Polarization** - Do not defeat the safety purpose of the polarized or grounding-type plug.
A polarized plug has two blades with one wider than the other.



A grounding type plug has two blades and a third grounding prong.



The wide blade or the third prong are provided for your safety.

If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

5. **Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your location, consult your video dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading** - Do not overload wall outlets or extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power-Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
8. **Surge Protectors** - It is highly recommended that the product be connected to a surge protector. Doing so will protect the product from damage caused by power surges. Surge protectors should bear the UL listing mark or CSA certification mark.
9. **Uninterruptible Power Supplies (UPS)** - Because this product is designed for continuous, 24/7 operation, it is recommended that you connect the product to an uninterruptible power supply. An uninterruptible power supply has an internal battery that will keep the product running in the event of a power outage. Uninterruptible power supplies should bear the UL listing mark or CSA certification mark.
10. **Ventilation** - Slots and openings in the case are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the product manufacturer's instructions have been followed.
11. **Attachments** - Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.
12. **Water and Moisture** - Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.
13. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
14. **Accessories** - Do not place this product on an unstable cart, stand, tripod, or table. The product may fall, causing serious damage to the product. Use this product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.



15. **Camera Extension Cables** – Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.
16. **Mounting** - The cameras provided with this system should be mounted only as instructed in this guide or the instructions that came with your cameras, using the provided mounting brackets.

17. **Camera Installation** - Cameras are not intended for submersion in water. Not all cameras can be installed outdoors. Check your camera environmental rating to confirm if they can be installed outdoors. When installing cameras outdoors, installation in a sheltered area is required.

1.3 Service

1. **Servicing** - Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
2. **Conditions Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged.
 - If liquid has been spilled or objects have fallen into the product.
 - If the product has been exposed to rain or water.
 - If the product has been dropped or the cabinet has been damaged
 - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - When the product exhibits a distinct change in performance. This indicates a need for service.
3. **Replacement Parts** - When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the product manufacturer can prevent fire, electric shock, or other hazards.
4. **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the product is in safe operating condition.

1.4 Use

1. **Cleaning** - Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. **Product and Cart Combination** - When product is installed on a cart, product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
3. **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
4. **Lightning** - For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power line surges.

DNR100 Series Features



- Easy Connection and setup with 4 integrated Power over Ethernet (PoE) ports and auto-discovery of IP Cameras.
- Full HD 1080P recording provides the most detailed picture and reliable identification with selectable area digital zoom.
- Miniature form factor NVR (10.5" x 8" x 1.8").
- Record 4 cameras in Real-Time (30 fps per channel) at 1080p Full HD quality.
- Dual streaming (H.264) and dual core processing.
- ONVIF 2.1 conformance.
- 64 Channel CMS by FLIR included.
- Fully PC/Mac compatible.
- Mobile apps: iPhone, iPad, Android.
- Advanced mobile app features: remote playback, push notifications for motion/alarm, E-map, manual record/snapshot to device.
- HDMI & VGA simultaneous video output.
- Free DDNS service by FLIR with secure and redundant servers.
- Supports 1x SATA HDD up to 3TB.
- 2 x USB 2.0 ports.

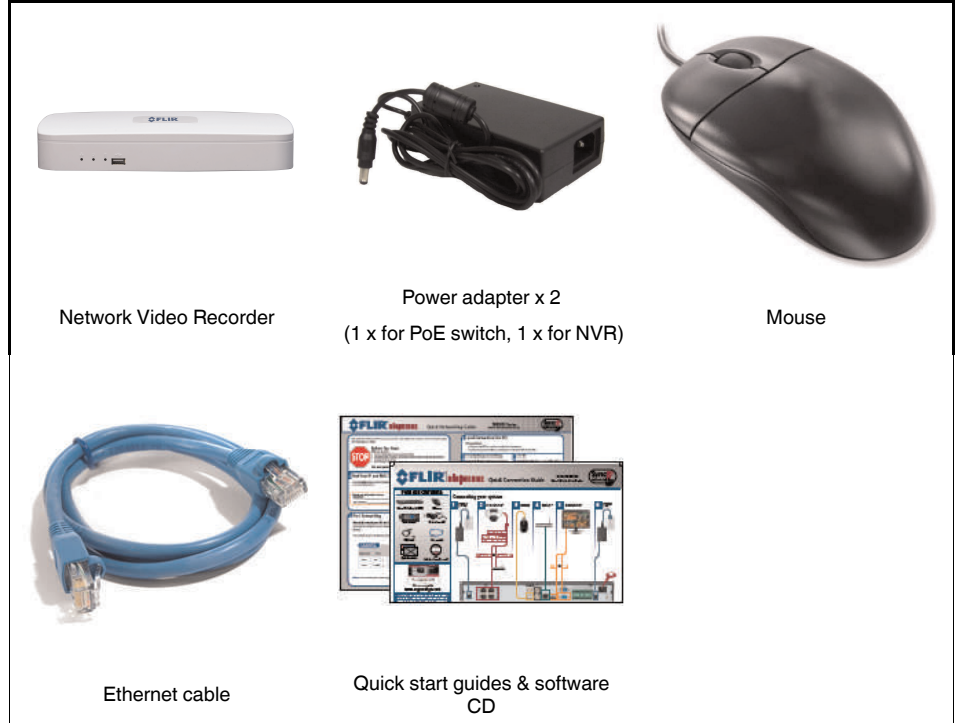


NOTE

Please visit www.flirsecurity.com/pro for information, firmware, and compatibility updates for mobile viewing.

DNR100 Series Getting Started

The system comes with the following components:



Hard drive size, number of channels, and camera configuration may vary by model. Please refer to your package for specific content details. Check your package to confirm that you have received the complete system, including all components shown above.

1. Connect the Cameras

- Connect IP cameras to PoE (Power over Ethernet) Ports.
OR
- Connect IP cameras to the same LAN as the NVR. For details on connecting IP cameras over the LAN, see 13.3 *Device Search*, page 43.



2. Connect a Monitor

- Connect an HDMI cable (not included) from the HDMI port on the rear panel to an HDTV or HDMI monitor.



OR

- Connect a VGA cable (not included) from the VGA port to the VGA port on your monitor.



3. Connect the Mouse

- Connect the mouse (included) to the USB mouse port on the front or rear panel.



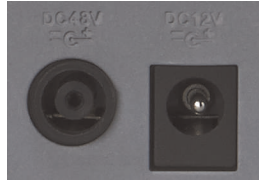
4. Connect the Ethernet Cable

- Connect an Ethernet cable (not included) to the LAN port on the rear panel of system; connect the other end of the Ethernet cable to an empty LAN port on your router or switch (not included).



5. Connect the Power Adapters

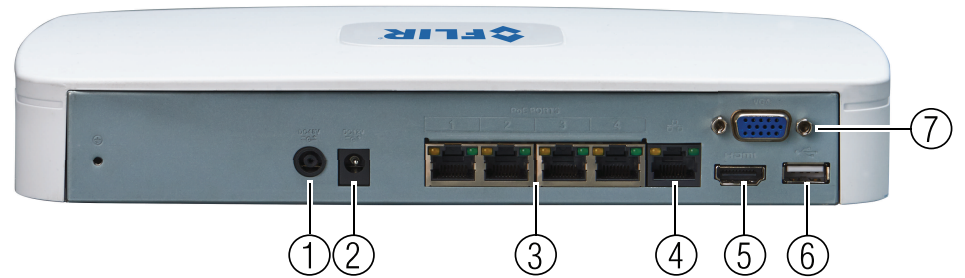
- 5.1. Connect the DC 48V power adapter to the DC 48V port on the rear panel of the system. Connect the power cable to an outlet, power strip, or surge protector. This power adapter is used to power the IP cameras via the integrated PoE ports.
- 5.2. Connect the DC 12V power adapter to the DC 12V port on the rear panel of the system. Connect the power cable to an outlet, power strip, or surge protector. This power adapter is used to power the main unit.



DNR100 Series Front Panel



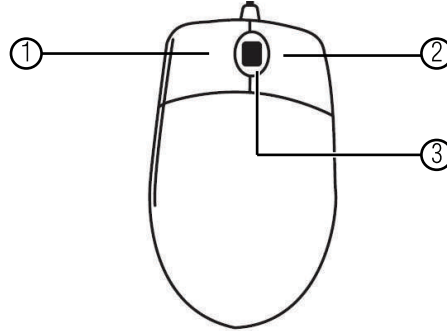
1. **NET:** Glows when network is in normal state. Turns off for network error.
2. **Power Indicator:** Glows to indicate the system is on.
3. **HDD:** Glows to indicate hard drive is in normal state. Turns off when there is a hard drive error.
4. **USB Port:** Connect a USB mouse (included) or connect a USB flash drive (not included) for data backup or firmware upgrades.



1. **DC 48V:** Port for 48V DC power adapter (included) that supplies power to the cameras connected to the integrated PoE ports.
2. **DC 12V:** Port for 12V DC power adapter (included) that supplies power to the NVR.
3. **PoE Ports:** Camera input ports for IP cameras.
4. **LAN:** Connect an Ethernet cable to connect the system to a router or switch (not included).
5. **HDMI:** HDMI port to connect the system to a HDMI TV/monitor.
6. **USB port:** Connect a USB mouse or connect a USB flash drive (not included) for data backup or firmware upgrades.
7. **VGA:** VGA port to connect the system to a VGA monitor.

The mouse is the primary control device for the system. To connect a USB mouse:

- Connect a USB mouse to the USB port on the front or rear panel.



1. Left-button:

- In live view, click to open the Navigation Bar. Right-click to close the navigation bar.
- In live view, while in a split-screen display mode, double-click an individual channel to view it in full-screen. Double-click again to return to the split-screen display mode.
- While navigating menus, click to open a menu option.

2. Right-button:

- During live view, right-click anywhere on the screen to open the Quick Menu.
- Within system menus, right-click to exit menus.

3. Scroll wheel: In live view, use the scroll wheel to zoom in/out.

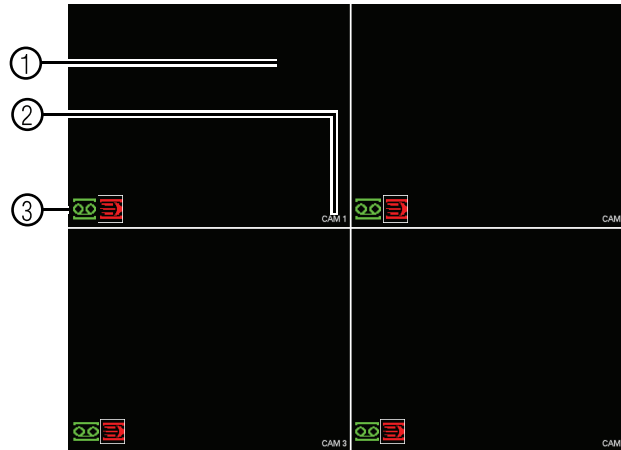


NOTE

The default system user name is **admin** and password is **000000**.

8.1 On-Screen Display

The system shows the following for all display views:






1. Display Area:

- Double-click on a channel to view in full-screen; double-click again to return to split screen.
- Right-click to open the Quick Menu.
- Left-click to open the Navigation Bar.
- Move the mouse to the top of a channel to view the Camera Toolbar.
- Click-and-drag cameras to rearrange the channel display. This does not affect the channels each camera is connected or recording to.

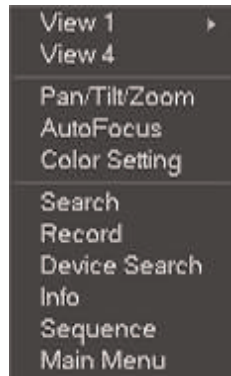
2. Channel Name

3. Channel Status Icons:

- : Channel is recording.
- : Motion has been detected.
- : Camera is locked (covert mode is activated).

8.2 Using the Quick Menu

The Quick menu gives you access to the system's key functions. To access the Quick Menu, right-click the screen during live view.

**The Quick Menu has the following options:**

- **View:** Select a camera in full-screen or select a multi-channel display.
- **Pan/Tilt/Zoom:** Access controls for PTZ cameras (not included).
- **AutoFocus:** If your camera has a mechanical focus lens, click to configure the zoom/focus levels or activate auto focus. See 8.7 *Adjusting Camera Zoom & Focus*, page 16.
- **Color Setting:** Configure color settings for IP cameras. See 8.3 *Adjusting Camera Image Settings*, page 12.
- **Search:** Search/playback recorded video. See 11 *Search (Playback)*, page 20.
- **Record:** Open the Record menu to select manual recording options. See 13.4.6 *Record*, page 48.
- **Device Search:** Open the Device Search menu to manage IP cameras.
- **Info:** Open the system information window.
- **Sequence:** Click to start/stop sequence mode. See 13.2.15 *Display*.
- **Main Menu:** Open the Main Menu. See .

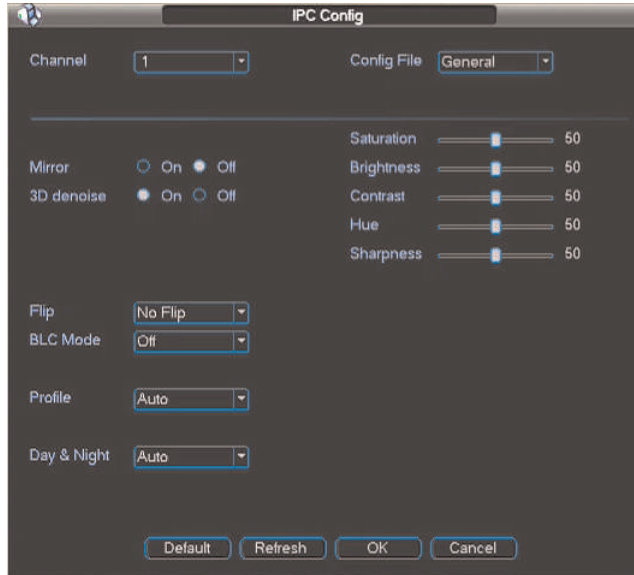
8.3 Adjusting Camera Image Settings

Use the Color Settings menu to adjust image settings for your IP cameras.

To adjust image settings:

1. Right-click on the channel you would like to configure and select **Color Setting**. Enter the system password if prompted.

2. Configure the following settings as needed:



NOTE

The settings listed below are only shown if they are supported on the selected camera. Some camera models do not support all settings.

- **Mirror:** Select **On** to flip the image horizontally.
- **3D Denoise:** Select **On** to turn on the camera's noise reduction feature. Noise reduction will ensure a cleaner image, especially at night, and may reduce the amount of disk space required to store video.
- **Flip:** Select **Flip 180°** to flip the image vertically. Select **No Flip** for the default orientation. Select **Clockwise 90°** to rotate the image clockwise by 90°. Select **Anti-clockwise 90°** to rotate the image counter-clockwise by 90°.
- **BLC Mode:**
 - Select **On** to enable back light compensation or **Off** to disable. Back light compensation adjusts the lighting levels in the picture so you can see objects in the foreground if there is a strong light source in the background.
 - Select **WDR** to enable wide dynamic range. Wide dynamic range helps balance a large contrast between foreground and background brightness.
 - Select **HLC** to enable high light compensation. High light compensation reduces the brightness of strong light sources in the foreground.
- **Scene Mode:** The Scene Mode allows you to adjust white balance levels for the camera. Select **Auto** for the camera to automatically adjust the white balance. Select **Sunny** or **Night** to use preset white balance levels. Select **User Defined** to manually set blue and red levels.
- **Day & Night:** This setting sets the camera's day/night mode. Select **Color** for the camera to use color mode at all times. Select **Auto** for the camera to automatically determine whether to use color or black and white mode. Select **Day&Night** for the camera to use black and white mode at all times.

**NOTE**

It is recommended to select Auto mode, as using Color mode may impact the camera's performance at night.

- **Saturation:** Adjust the vibrancy of colors in the image.
 - **Brightness:** Adjust the image brightness.
 - **Contrast:** Adjust the image contrast.
 - **Hue:** Adjust the color hue of the image.
 - **Sharpness:** Adjust the sharpness of the image.
3. Click **OK** to save changes.

**NOTE**

You must save changes to apply settings changes. It is recommended to adjust one setting at a time so you can see the results of each change. Click **Default** to reset the camera to default image settings.

8.4 Using the Navigation Bar

The Navigation Bar gives quick access to certain functions and menus.

To open the Navigation bar:

- Left click on the screen to open the Navigation Bar. The Navigation Bar has the following options:



1. **Main Menu.**
2. **Collapse.**
3. **Select display layout.**
4. **PTZ.**
5. **Search.**
6. **Alarm Status.**
7. **Network.**
8. **HDD Manager.**
9. **View System Info.**

8.5 Using the Camera Toolbar

The Camera Toolbar is used to perform actions on a specific channel.

To access the Camera Toolbar:

- Move the mouse to the top of the channel display. The Camera Toolbar has the following options:




1. **Quick Playback.**
2. **Digital Zoom.**
3. **Real-time backup.**
4. **Device Search.**
5. **Close.**

8.5.1 Using Quick Playback

Quick Playback is used to playback the last 5–60 minutes of video from the selected channel. You can also access Quick Playback in split-screen mode, while still viewing live video from the other channels.

To use Quick Playback:

1. Move your mouse to the top of the channel display and click .





NOTE

By default, the NVR will begin playback from 5 minutes ago. You can increase this to up to 60 minutes using the **Realtime Play** setting in **Main Menu>Setting>General**.

2. Right-click to exit Quick Playback.


8.5.2 Using Digital Zoom in Live Display

1. Move your mouse to the top of the channel display and click  to activate digital zoom. The icon will change to , indicating digital zoom is activated.



NOTE

You may activate digital zoom in multiple channels at the same time.




2. Click and drag inside the channel to zoom in.
 - Click and drag to pan the zoom area.
 - Right-click to zoom out and select a new zoom area.
 - Click  to disable digital zoom. Note that the channel will remain at the same zoom level until you right-click inside it.



8.5.3 Using Real-time Backup

Real-time backup allows you to save footage from the live display to a USB flash drive (not included) or external hard drive (not included).

To use Real-time Backup:

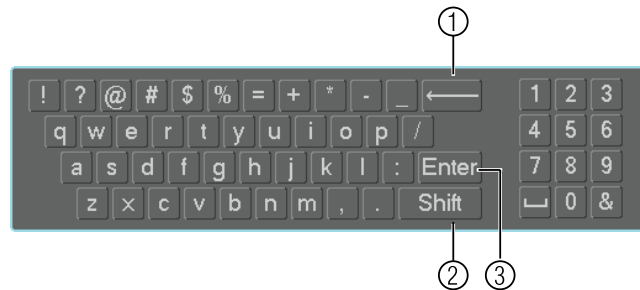
1. Insert the USB flash drive or external hard drive into one of the USB ports on the system.

2. Move your mouse to the top of the channel display and click  to start Real-time Backup. The icon changes to .
3. Click  again to end Real-time Backup. The file is saved to your USB device.

 NOTE
If the system prompts you to log in, you will need to click  again to start Real-time Backup after logging in.

8.6 Using the Virtual Keyboard

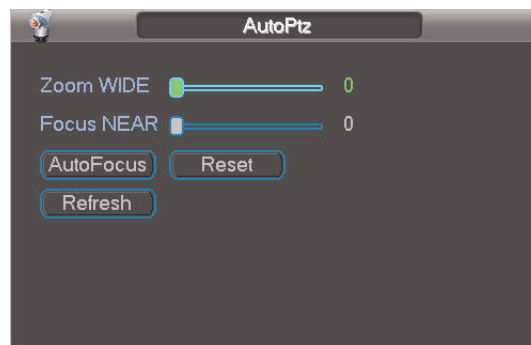
The Virtual Keyboard is used to input text or numeric values in certain menus.



1. **Backspace.**
2. **Enter capital letters.**
3. **Confirm entry.**

8.7 Adjusting Camera Zoom & Focus

If your camera has a motorized lens, you can control the zoom/focus level or activate auto focus from the NVR.



To adjust the camera's zoom focus:

1. Double-click on the channel where the motorized lens camera is connected.
2. Right-click and then click **AutoFocus**. Log into the system using the admin account (default user name is **admin** and password is **000000**).
3. Adjust the zoom and focus using the following options:
 - Use the sliders to adjust the **Zoom WIDE** or **Focus NEAR** settings for the camera.

**NOTE**

Hover the mouse over the sliders and use the mouse wheel to adjust by 1% at a time.

- Click the **AutoFocus** button to automatically focus the camera at the current zoom level.
 - Click **Reset** to return the camera to the default zoom and focus levels.
 - Click **Refresh** to refresh the settings shown on the NVR if someone has used the manual lens controls on the camera.
4. Right-click to exit and save changes.

Setting The Time

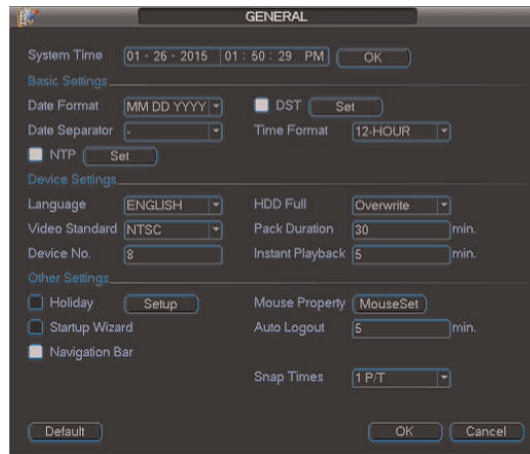


CAUTION

It is highly recommended to set the time on the system prior to doing any recording.

To set the date and time:

1. In the main viewing mode, right-click and click Main Menu. Log into the system using the admin account (default user name is **admin** and password is **000000**).
2. Click **Setting>General**.
3. Enter the current date (MM DD YYYY) and time (HH MM SS) under **System Time**.



4. Check **DST** to enable auto Daylight Savings Time updates.



NOTE

- You can adjust the Start Time and End Time for Daylights Savings Time if the default settings do not match your region.
- Under **DST**, click **Set**. Configure the **Start** and **End** times for daylight savings as needed. Click **OK** to save changes.

5. (Optional) Check **NTP** to sync your system with an Internet time server.





NOTE

- Your system must have a constant connection to the Internet to use NTP.
- (Advanced) Under **NTP**, click **Set** to configure a custom NTP time server. Enter a custom NTP server under **Server IP** and **Port**. Select how often the system will sync the time using **Interval**. Click **OK** to save changes.

6. Click **OK** to save changes.

By default, the system is set to immediately record at startup from connected cameras. This is called Continuous Recording. It is highly recommended to keep Continuous Recording on at all times.

The system supports the following recording types:

- **Continuous Recording:** By default, all camera channels are enabled with Continuous Recording. During Continuous Recording, the Record icon () appears in the channel.
- **Motion Recording:** Cameras can be configured to record and mark events when motion is detected. When motion is detected, the Motion icon () appears in the channel.



NOTE

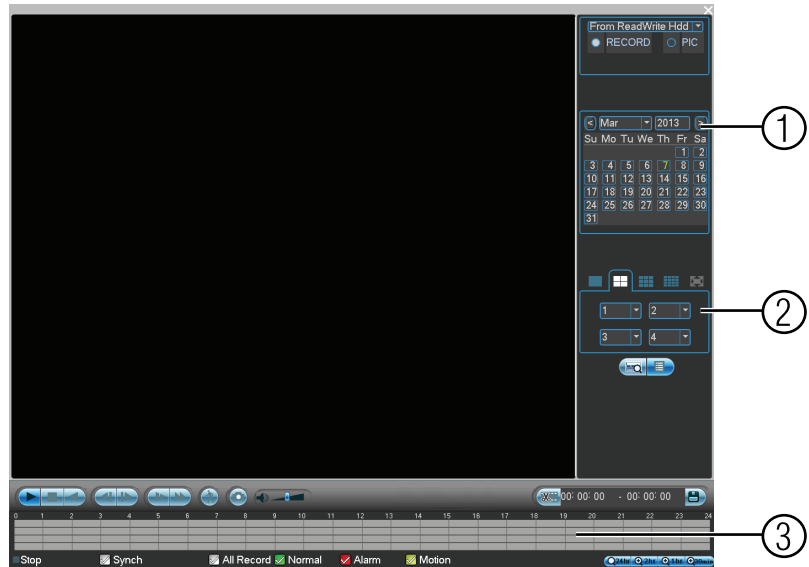
You must enable motion recording in the Schedule before the system will record motion events. For details, see 13.2.3 *Schedule*, page 34.

- **Alarm Recording:** Cameras can be configured to record when external alarm devices are triggered.

Search mode is used to navigate and playback recorded video files on the NVR.

11.1 Playing Back Video from the Hard Drive

1. From live view, right-click and then click **Search**. If needed, log in using the admin account (default user name is **admin** and default password is **000000**).
2. Configure the following:



- 2.1. Use the calendar on the right to select the day to playback.
- 2.2. Use the drop-down menus to select the channels you would like to playback.

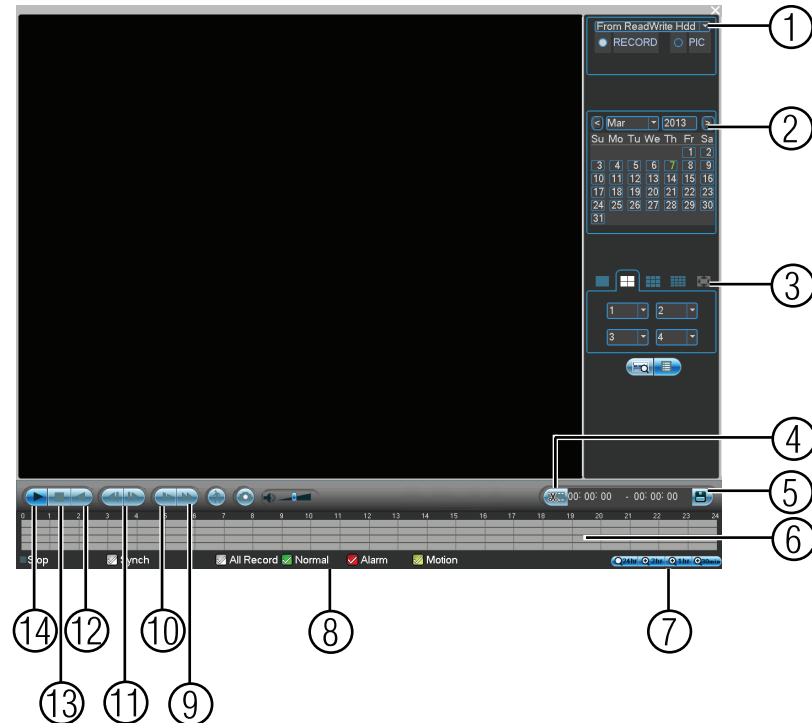


NOTE

Click the display options () to playback multiple channels simultaneously.

- 2.3. Click inside the video bar to select the playback time. The system will begin playing back at the selected time.

11.2 Playback Controls



1. **Select playback device.**
2. **Calendar:** Select the day to playback.
3. **Channel select:** Select channels to playback.
4. **Video clip backup:** Select video clip start and end times.
5. **Backup video clip:** Click to save selected clip.
6. **Playback Bar:** Click inside the bar to select a playback time.
7. **Zoom Playback Bar:** Select scope of time bar.
8. **Recording types:** Click to show/hide recording types.
9. **Speed up.**
10. **Slow.**
11. **Previous/next frame.**
12. **Play backward.**
13. **Stop.**
14. **Play.**

Backup video files to external USB flash drive (not included) or self-powered USB external hard drive (not included).

12.1 Formatting the USB Device

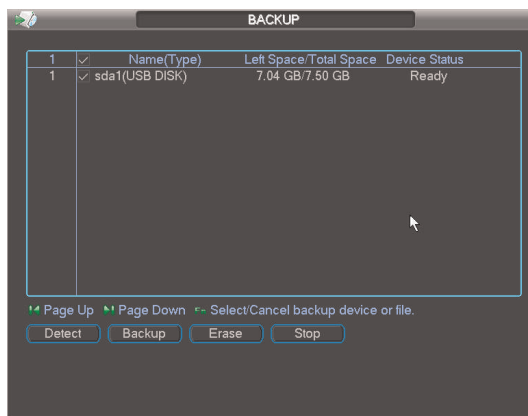
It is recommended to format your USB device before using it with the system.

CAUTION

Formatting the USB device will permanently erase all data.

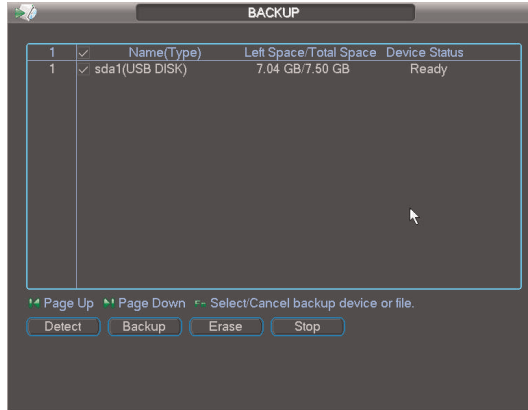
To format a USB device:

1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. From live view, right-click and then select **Main Menu**. Login if prompted.
3. Click **Backup**.
4. Check the USB device you would like to format and click **Erase**. Click **OK** to confirm.

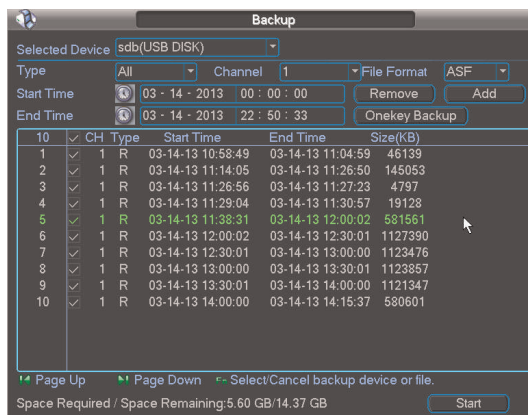


12.2 Backing up Video

1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. From live view, right-click and then select **Main Menu**. Login if prompted.
3. Click **Backup**.
4. Check the USB device where you would like to save video.

5. Click **Backup**.

6. Configure your search options:



- **Type:** Select the recording type you would like to search for or select **All** to search all recording types.
- **Channel:** Select the channel you would like to search or select **All** to search all channels.
- **File Format:** Select **DAV** to save files to save files to .dav format. You can use the Player that is automatically saved on the USB device to playback .dav files on PC (Mac not supported). Or, select **ASF** for .asf format. You can playback .asf files in VLC Media Player (free download from www.videolan.org) on PC or Mac.


**NOTE**

VLC Media Player is a free software available from www.videolan.org. VLC Media Player is not supported by FLIR.

- **Start Time/End Time:** Select the start and end time for your search.

7. Click **Add**. A list of files that match your search criteria appears.




8. Check files you would like to backup and then click **Start**. Wait for the backup to complete.

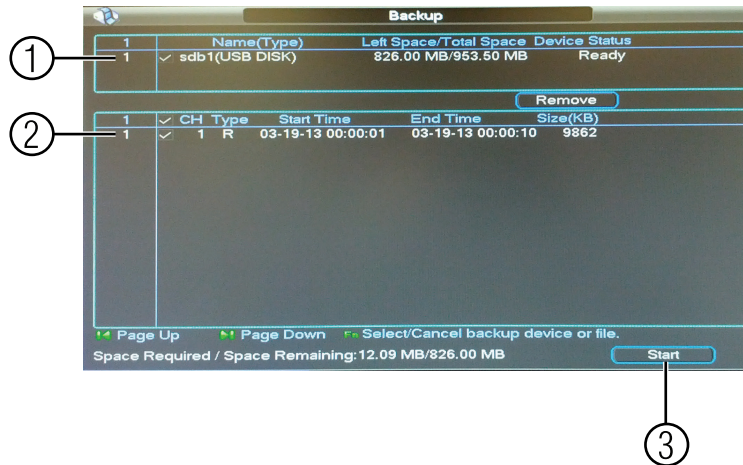
 NOTE
<p>HD video files saved on the system may take up a large amount of disk space. The size of video files selected and the amount of free space on your USB device is shown at the bottom of the screen.</p>

12.3 Using Video Clip Backup

Video clip backup allows you to select a duration of video during playback mode and save it to a USB device (not included).

To use Video Clip Backup:

1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. Start playing back video using the steps in 11.1 *Playing Back Video from the Hard Drive*, page 20.
3. Click  to mark the beginning of the video clip. Click  again to mark the end of the video clip.
4. Click  to open the Backup menu.
5. Configure the following:



- 5.1. Check the USB device where you would like to save the file.
- 5.2. Check the files you would like to backup.
- 5.3. Click **Start**. Wait for the backup to complete before removing the USB flash drive.

12.4 Viewing Backup Files

To playback .dav backup video files, use the Player that is automatically installed on the USB device when you save a backup file.

**NOTE**

The Player is PC compatible only. For Mac users, make sure to save backup files in .asf format (select ASF under File Format). You can playback .asf backup video files in VLC Media Player (free download from www.videolan.org) on PC or Mac.

VLC Media Player is not supported by FLIR.

To view backup video files using the Player (PC only):

1. Insert the USB device into your computer. Open the USB device in Windows Explorer.
2. Right-click the **Player.exe** file and select **Open as administrator**. The Player opens and begins playing all video files on the USB device in sequence.
3. Use the Player controls to control playback or select other files for playback.

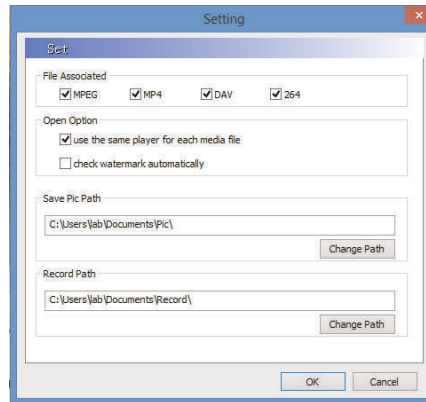
Video Player Controls



1. Select playback time.
2. Open files.
3. Play/pause.
4. Stop/Stop recording.
5. Start recording.
6. Previous file.
7. Slow.
8. Back one frame.
9. Forward one frame.
10. Fast.
11. Next file.
12. Snapshot.
13. Shuffle/repeat.
14. Full-screen.

**NOTE**

To view or change where manual recordings or snapshots are saved, right click in the video area and select **Parameter Setting**.



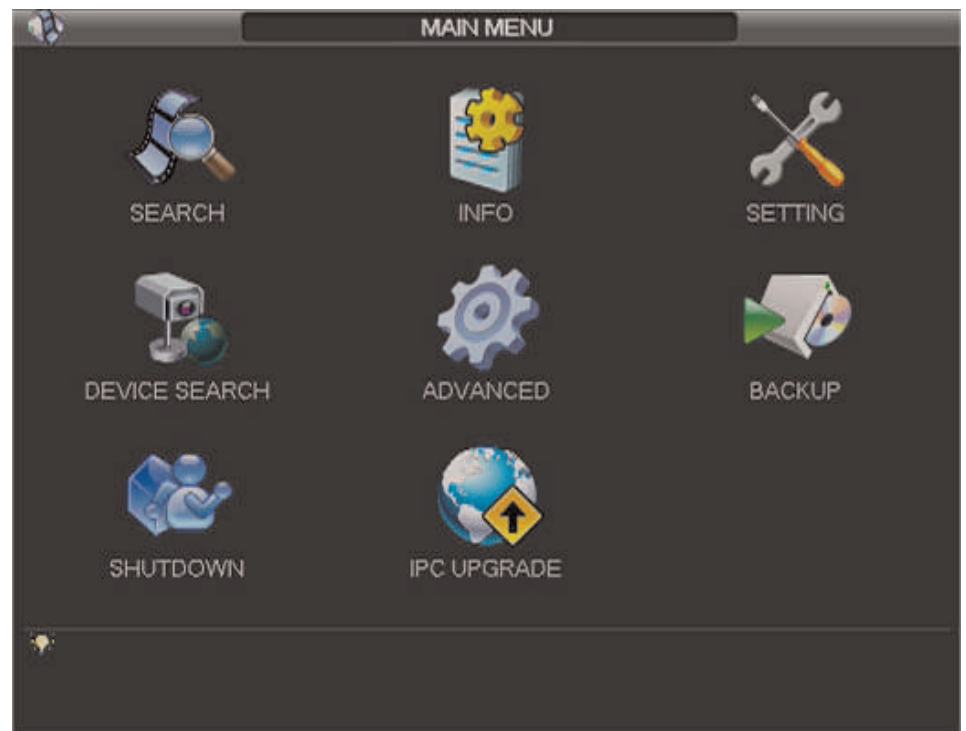
To open the Main Menu:

- **Using the Mouse:** Right-click and click **Main Menu**.



NOTE

The system password may be required to access the Main Menu. By default the user name is **admin** and the password is **000000**.



1. **SEARCH:** Open Search/Playback mode. For details, see 11 *Search (Playback)*, page 20.
2. **INFO:** View system information. Perform firmware upgrades.
3. **SETTING:** Configure general system, schedule, network, recording, display, and motion settings. Restore system to factory defaults.
4. **DEVICE SEARCH:** Connect IP cameras to the NVR.
5. **ADVANCED:** Configure HDD, user accounts, and error functions. Configure auto-restart. Save/restore system configuration. Access Manual Recording Menu.
6. **BACKUP:** Export files to USB device. For details, see 12 *Backup*, page 22.
7. **IPC UPGRADE:** Upgrade the firmware of IP cameras connected to the NVR.
8. **SHUTDOWN:** Logout, restart, or shutdown the system.



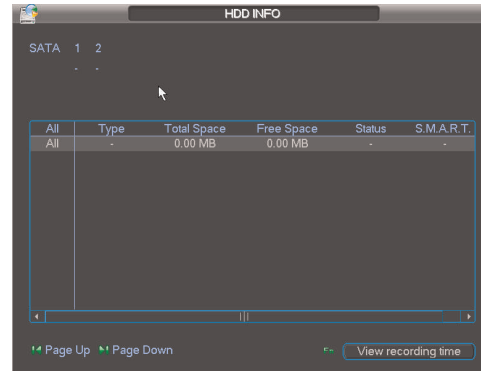
NOTE

Checkboxes on the system are filled in with a white color when settings are enabled or empty when disabled.

13.1 Info

The Info menu contains the following sub-menus showing system information.

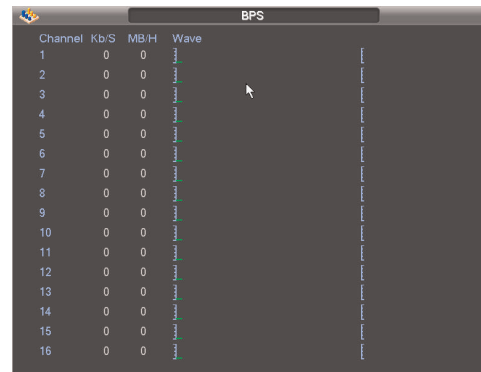
13.1.1 HDD Info



The HDD Info sub-menu shows information related to the hard drives installed in the system, including capacity, status, and type. Click **View recording time** to see the start and end times of recordings saved on the hard drives.

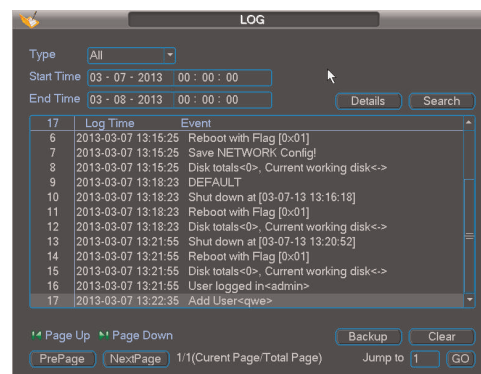
13.1.2 BPS

The BPS sub-menu shows the bitrates of connected IP cameras.



13.1.3 Log

The Log sub-menu allows you to search for system logs.



To search for system logs:


1. Under **Type**, select the log type to search for.
2. Under **Start Time** and **End Time**, select the start and end time for your search.
3. Click **Search**.
4. (Optional) Click **Backup** to export logs to a USB flash drive connected to the system.

13.1.4 Version (Updating Firmware)


The Version sub-menu allows you to view information about the current firmware. You may also update the firmware through the version menu.

To update the system firmware:

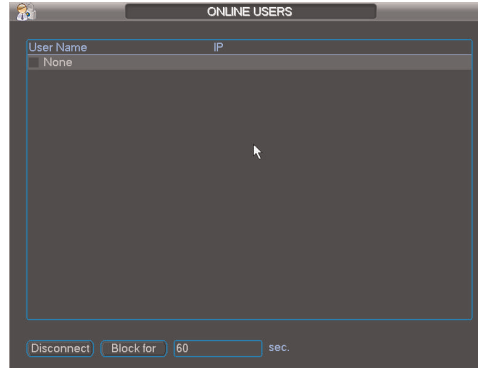
1. Download the latest firmware update from www.flirsecurity.com/pro.
2. Copy the firmware to a blank USB flash drive.

	NOTE
Do not have any folders on the USB flash drive—just the firmware file.	

3. Connect the USB flash drive to a USB port on the system.
4. Right-click and then select **Main Menu>Info>Version**.
5. Click **Start** to update firmware. Wait for the firmware upgrade to complete.

	WARNING
Do not remove the USB flash drive until the upgrade process is complete or power off the NVR during the upgrade process.	

13.1.5 Online Users

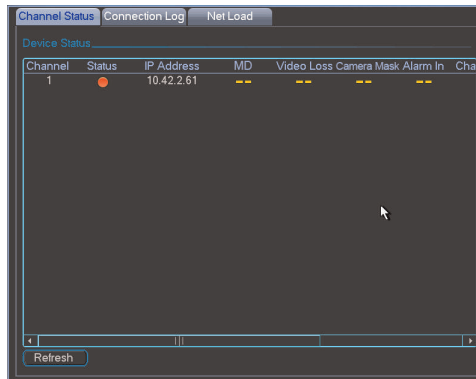


The Online Users sub-menu shows a list of users connected to the system using remote devices. You may click **Disconnect** to disconnect a user for up to 18 hours or click **Block** to block a user from the system.

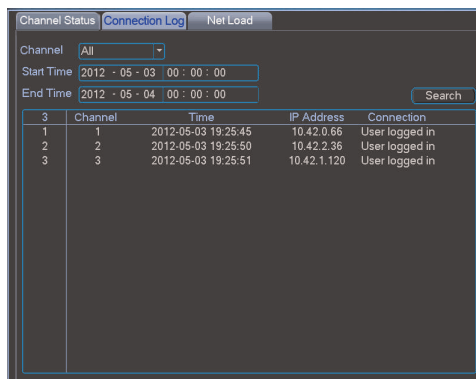
13.1.6 Remote Device Info

The Remote Device Info sub-menu shows information about IP cameras connected to the system, it contains the following tabs:

- **Channel Status:** Shows the IP address, model number, and camera status.



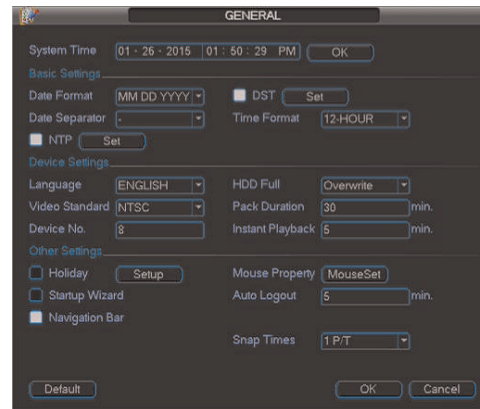
- **Connection Log:** Search for camera status logs, including user access to cameras.



13.2 Setting

The Setting menu allows you to configure general system, schedule, network, recording, display, and motion settings. It also allows you to restore the system to factory defaults.

13.2.1 General



The General sub-menu allows you to configure the time and general system settings.

The General sub-menu contains the following options:

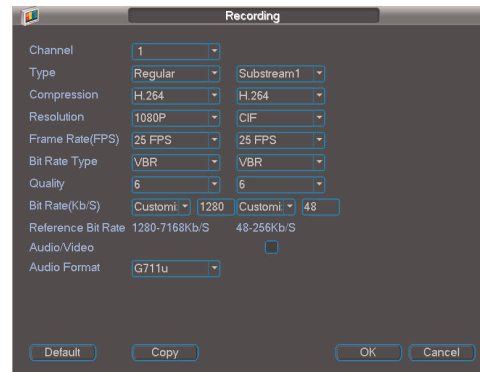
- **System Time:** Select the current date and time and click **OK** to save changes.
- **Date Format:** Select the date format (**YYYY MM DD**, **MM DD YYYY**, or **DD MM YYYY**).
- **Date Separator:** Select if you would like a dot (.), dash (-), or slash (/) to separate the date display.
- **DST:** Check to enable daylight savings time adjustments. To configure the start and end times for daylight savings, click **Set**. Then, configure the **Start** and **End** as needed, and click **OK**.
- **Time Format:** Select **24-HOUR** or **12-HOUR**.
- **NTP:** Check to enable NTP. Click **Set** to configure a custom NTP time server. Enter a custom NTP server under **Server IP** and **Port**. Select how often the system will sync the time using **Interval**. Click **OK**.
- **Language:** Select the system language.
- **Video Standard:** Select **NTSC** (North America) or **PAL** (Europe).
- **HDD Full:** Select **Overwrite** for the system to begin overwriting the oldest recordings when the hard drive is full or select **Stop Recording** for the system to stop recording when the hard drive is full.
- **Pack Duration:** Enter the desired pack duration. The pack duration determines the duration of video files saved to the system.
- **Instant Playback:** Select the duration of videos that will be played back in Quick Playback mode. For example, if Instant Playback is set to 5 minutes, Quick Playback will start playing back video recorded from 5 minutes ago on the selected channel.
- **Mouse Property:** Click **MouseSet**, adjust the double-click speed and click **OK**.
- **Holiday:** Click **Setup** to set certain days as holidays. Select days in the calendar to enable them as holidays. Selected holidays are highlighted in blue. Click **OK** to save. Holidays can have a special recording schedule. For details, see 13.2.3 *Schedule*, page 34.
- **Startup Wizard:** Check to enable the Startup Wizard when your system starts. It is recommended to disable Startup Wizard once you have configured the system.
- **Navigation Bar:** Check to enable the System Toolbar that appears when left clicking on the screen.
- **Auto Logout:** Enter the amount of time the system will wait before logging a user out when idle.

- **Snap Times:** The number of snapshots (up to 5) the system will take each you click the snapshot button.

**NOTE**

Click **OK** when finished making changes.

13.2.2 Recording

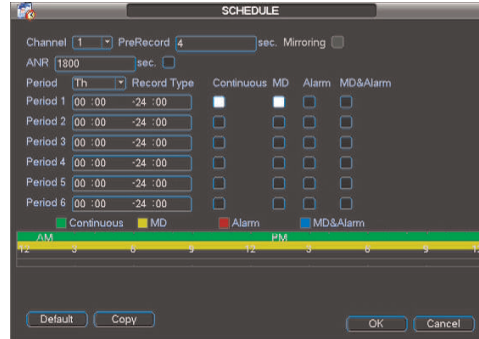


The Recording sub-menu allows you to configure image quality settings for the recording stream and sub-stream (used during remote connection). Settings for the recording stream are shown on the left, and sub-stream settings are shown on the right.

To configure recording quality settings:

1. Under **Channel**, select the channel you would like to configure.
2. Under **Resolution**, select the resolution for the selected recording type. Settings available depend on the model of IP camera connected.
3. Under **Frame Rate**, select the frame rate for the selected recording type on the left. Select the frame rate for the sub-stream on the right.
4. Under **Bit Rate Type**, select **CBR** (Constant Bit Rate) or **VBR** (Variable Bit Rate) for the selected recording type on the left and sub-stream on the right. If you select VBR, select the Quality from **1** (lowest) to **6** (highest).
5. Under **Bit Rate (Kb/S)**, select the bit rate for the selected recording type on the left and the sub-stream on the right.
6. Under **Audio/Video**, check the box on the left to enable audio recording (camera must have microphone attached). Check the box in the middle to enable audio streaming to remote users. Check the box on the far right to enable video streaming to remote users (un-check to hide the channel from remote users).
7. (Optional) To copy settings to other channels, click **Copy**, select channels to apply settings to, and click **OK**.
8. Click **OK** to save changes.

13.2.3 Schedule



The Schedule sub-menu allows you to configure the recording schedule for continuous and motion recording. It also allows you to configure holiday and pre-recording settings.



NOTE

To use motion recording, motion detection must be enabled for the channel. For details, see 13.2.13 Motion, page 39.

1. Under **Channel**, select the channel you would like to configure or select **All**.
2. Under **Period**, select the day of the week you would like to configure, or select **Holiday** or **All**.
3. Configure up to 6 separate schedule periods.
 - Configure the start and end time for the time period on the left.
 - Check the types of recording that will apply to the time period on the right: **Continuous**, **MD** (Motion Detection), **Alarm**, or **MD&Alarm**.
 - A visual representation of the current schedule is shown below.
4. (Optional) Click **Copy** to copy the selected schedule to other channels. Select the channels you would like to copy to and click **OK**.
5. Click **OK** to save changes.

13.2.4 Configuring Pre-Recording

Pre-recording determines the amount of time the system will record before events.

To configure pre-recording:

1. Under **Channel**, select the camera you would like to configure or select **All**.
2. Under **PreRecord**, select the duration for pre-recording.
3. Click **OK** to save settings.

13.2.5 Network



The Network sub-menu allows you to configure network settings.

13.2.6 Configuring DHCP or Fixed IP Address

1. From live view, right-click and select **Main Menu**. Login if prompted.
2. Click **Setting>Network**.
3. Check **DHCP** to use DHCP or un-check to use a static IP address. If you un-check DHCP, configure the following:
 - **IP Address.**
 - **Subnet Mask.**
 - **Gateway.**
 - **Preferred DNS.**
 - **Alternate DNS.**
4. Click **Save** to save your changes. Restart the system to update the IP address.

13.2.7 Configuring System Ports

The system uses the following ports:

- **TCP Port (Client Port):** Used for remote video streaming to computers and mobile devices. The default port number is **35000**.
- **HTTP Port:** Used to enable connection to the system's web browser interface. The default port number is **80**.
- **UDP Port:** Used for special applications. The default port number is **35001**.
- **HTTPS Port:** Used for special applications. The default port number is **443**.
- **RTSP Port:** Used for special applications. The default port number is **554**.

NOTE

You must port forward the TCP (Client) Port and HTTP Ports to enable remote access to the system.

To configure ports:

1. Configure the **TCP Port (Client)**, **HTTP Port**, **UDP Port**, and **RTSP Port** fields as needed.

NOTE

Please note that if the HTTP is port is anything other than 80, you must enter `http://` before the camera's IP address and colon (:) and the HTTP port after the IP address when connecting using an Internet browser (e.g. if the HTTP port is 85, enter `http://192.168.x.x:85`).

2. Click **Save**. The system will restart to update the ports used.

13.2.8 Configuring NTP

You can sync the system clock with an Internet NTP time server.

To sync the system with a time server:

1. From live view, right-click and select **Main Menu**. Login if prompted.
2. Click **Setting>General**.
3. Check **NTP**.
4. Click **Set** to open the configuration menu.
5. Configure the following:
 - Under **Server IP**, enter the IP or DNS address of the NTP server.
 - Under **Port**, enter the NTP server port number.
 - Under **Time Zone**, select your time zone.
 - Under **Interval**, enter the interval your system will sync the time with the selected server.
6. Click **Manual Update** to test the server settings entered and manually sync the system time.
7. Click **OK** to save your changes.

13.2.9 Configuring DDNS

The DDNS Setup window allows you to enter your FLIR DDNS settings in the NVR. This step is required for remote access.

Prerequisites:

- Create a DDNS account. For details, “Appendix D: Setting Up DDNS Service” on page 98.
- Port forward ports on your router to NVR’s IP address (by default, ports **35000** and **80**).
- Have your DDNS account name, password, and domain name ready.

To configure DDNS settings:

1. Click **Network Setting**.
2. Check **DDNS**.
3. Double-click **DDNS**.
4. Ensure **Enable** is checked. The box will be white when DDNS is enabled.
5. Under **Domain Name**, enter the **Domain Name** from the confirmation email you received after registering for DDNS.
6. Under **User ID**, enter the **User Name** from the confirmation email.
7. Under **Password**, enter the **Password** from the confirmation email.
8. Click **OK**.
9. Click **OK**.
10. Click **Save**.

13.2.10 Connecting to your system

After you have port forwarded the required port, created a DDNS account, and enabled DDNS on your system, you must enter the DDNS URL into Internet Explorer to access your NVR.

The DDNS URL must include **http://**, the name of your DDNS URL, followed by a **colon**, then the **HTTP port** of your NVR.

For example:

http://tomsmith.myddns-flir.com:80

**NOTE**

If you change your HTTP port number (port 80) to a different port, you must enter your port number after the DDNS address

13.2.11 Configuring Email Alerts

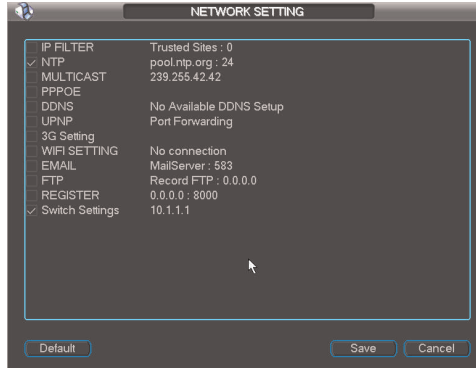
You can configure the system to send out email alerts for motion detection or other events.

**NOTE**

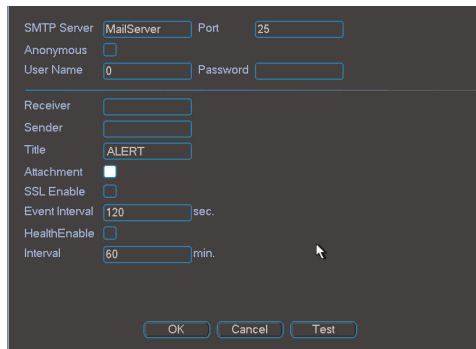
To send out motion detection alerts, you must enable the Send Email option for motion detection on each camera. For details, see 13.2.14 *Configuring Motion Detection Events*, page 39.

To configure Email Alerts:

1. From live view, right-click and select **Main Menu**. Log in if prompted.
2. Click **Setting>Network**.
3. Click **Network Setting**.

4. Check **Email**. Double-click **Email**.

5. Configure the following:



- **SMTP Server:** Enter the SMTP server address.
 - **Port:** Enter the port used by the SMTP server.
 - **Anonymous:** Check if your server supports anonymous log ins. Otherwise, leave this unchecked.
 - **User Name:** Enter the SMTP user name.
 - **Password:** Enter the SMTP password.
 - **Receiver:** Enter the email address that will receive alerts.
 - **Sender:** Enter the sender's email address.
 - **Attachment:** Check to include a jpg image attachment of the camera.
 - **Title:** Enter the subject line for email alerts.
 - **Encrypt Type:** Select **SSL** or **TLS** if your server uses encryption. Select **None** if your server does not use encryption.
 - **Event Interval:** Enter the interval between alert emails.
 - **Health Enable:** Check to enable health check emails. Health check emails will be sent periodically to ensure that the system is functioning normally.
 - **Interval:** Enter the interval in minutes for health check emails.
6. Click **Test** to send a test email.
 7. Click **OK**.
 8. Click **Save** to save settings.

13.2.12 Configuring Switch Settings

You can configure the networking settings for the internal PoE switch.

CAUTION

Changing this information from the default values may disrupt the connection to the cameras. Make sure your IP cameras are using DHCP or IP addresses that are compatible with your selected settings.

To configure switch settings:

1. Click **Network Setting**.
2. Double-click **Switch Settings**.
3. Configure the **IP Address**, **Subnet Mask**, and **Gateway** for the internal PoE switch.
4. Click **OK**. Click **Save** to save changes. The system will restart.

13.2.13 Motion

The Motion sub-menu allows you to configure settings for motion detection.

13.2.14 Configuring Motion Detection Events

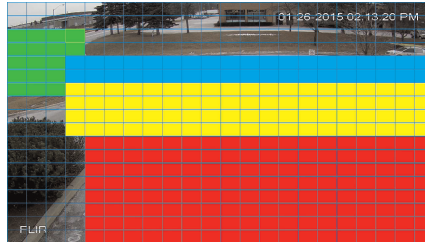
Motion Detection events allow the system to mark footage that has motion. This allows you to quickly locate relevant footage through Search. You can also configure system responses to motion detection events, such as activating the system buzzer or sending an email alert.

To configure Motion Detection events:

1. Under **Event Type**, select **Motion Detect**.
2. Under **Channel**, select the channel you would like to configure.
3. Check **Enable** to enable motion detection on the selected channel.

- Click **Setup** next to Region to configure which areas of the image will be enabled for motion detection. A grid will appear over the camera's live view.

Motion Grid



- Hover the mouse at the top of the screen to select which motion area you want. You can set up to 4 motion detection areas and customize the sensitivity and threshold for motion detection separately for each area between 0 (lowest) to 100 (highest).



- Areas enabled for motion detection are shown in red, yellow, blue, or green. Areas that are disabled are transparent. Click and drag to enable or disable areas for motion detection. Right-click when finished.
- The **Sensitivity** determines how sensitive the camera is to motion. For example, if the sensitivity is high, small amounts of motion are more likely to trigger an event. It is recommended to select a Sensitivity between 30~70.
- The **Threshold** determines how much motion is required to trigger an event. If the amount of motion exceeds the threshold, an event occurs. It is recommended to select a Threshold between 10~50.



NOTE

It is recommended to have a second person walk in front of the camera to test different Sensitivity and Threshold settings to determine the best setting for your camera's location.

- Under **Anti-dither**, enter the anti-dither time. After a motion event occurs and motion stops, if motion is detected within the anti-dither time, the system continues the motion event and includes the new motion within the first event, rather than creating a new motion event.
- Under **Post_REC**, enter the post-recording time.
- To configure a schedule when motion detection will be enabled on this channel, click **Set** next to Period. Configure times when motion detection will be enabled. For example, you may want to disable motion detection during business hours and enable it outside of business hours. Click **OK** when finished.



NOTE

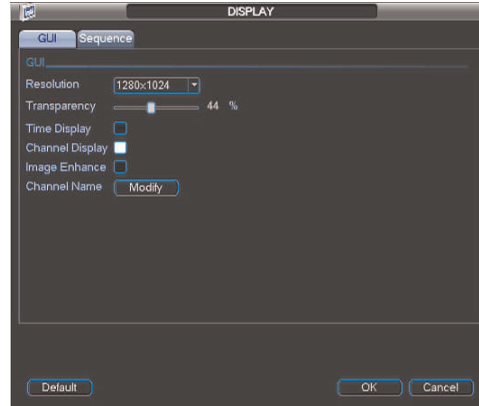
This setting can override scheduled motion recording. This means that motion recording will only take place at times that are enabled both in the Schedule menu and here.

8. Configure the following system actions when motion is detected:
 - **Show Message:** Check to enable an on-screen pop-up. On-screen pop-up shows the channels an event occurred on and the type of event.
 - **Alarm Upload:** Check to enable the system to upload alerts to FLIR Cloud™ Client.
 - **Send Email:** Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 13.2.11 *Configuring Email Alerts*, page 37).
 - **Record Channel:** Select the channels that will record when motion is detected on the selected channel.
 - **PTZ Activation:** Check to enable PTZ actions when motion is detected (PTZ camera required; not included). Click **Setup** to select which PTZ actions will be taken by each camera.
 - **Snapshot:** Check to attach a .jpg image of the camera when sending email alerts.
 - **Buzzer:** Check to enable the system buzzer.
9. Click **OK** to save changes.

13.2.15 Display

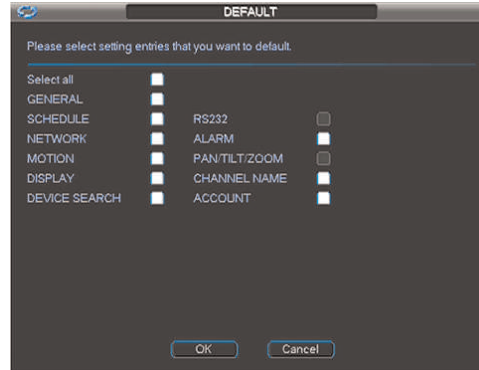
The Display sub-menu allows you to configure the system's display settings, such as the monitor resolution. The GUI tab allows you to configure what is displayed in the system's user interface. The Sequence tab allows you to configure the display when you activate sequence mode. In Sequence mode, the system automatically cycles through connected cameras.

To configure GUI Display settings:



1. Click the **GUI** tab
2. Configure the following settings, as needed:
 - **Resolution:** Select the correct resolution for your monitor. The system will reboot when you save changes.
 - **Transparency:** Select the menu transparency between **0** (lowest) and **100** (highest).
 - **Time Display:** Check to enable system time display.
 - **Channel Display:** Check to enable camera title display.
 - **Image Enhance:** Check for the system to digitally improve the video quality on the live display. This setting does not affect recordings.
 - **Channel Name:** Click **Modify** and enter names for your IP cameras. Click **OK** when finished.
3. Click **OK** to save changes.

13.2.16 Default



The Default sub-menu allows you to reset the system to factory default settings.

To reset the system to factory default settings:

1. Check the menus you would like to reset to default settings.
2. Click **OK**.



NOTE

If you check **Account**, the default system account (**admin**) will reset to the default password (**000000**). It will not reset the passwords of any user-created accounts.

13.3 Device Search

The Device Search menu allows you to manage connections to your IP cameras. SyncrolIP cameras connected to the PoE (Power over Ethernet) Ports will automatically be detected by your NVR. Device Search also allows you to search for IP cameras connected to the LAN. Some configuration may be required to connect IP cameras from other manufacturers.

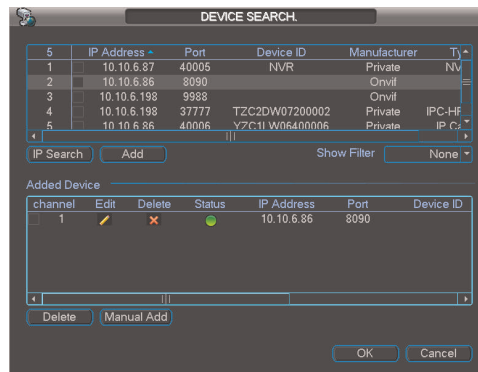


NOTE

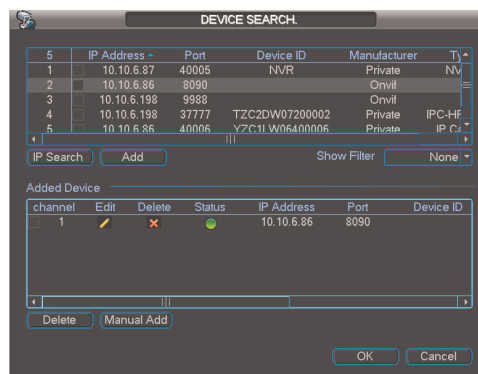
For a list of 3rd party IP cameras supported, visit www.flirsecurity.com/pro.

13.3.1 Adding Cameras from the LAN

1. Connect the camera to a router or switch on the same network as the NVR.
2. Right-click and select **Device Search**. Log in using the admin account (the default user name is **admin** and the default password is **000000**).
3. Click **IP Search**. The NVR scans your LAN for compatible IP cameras.

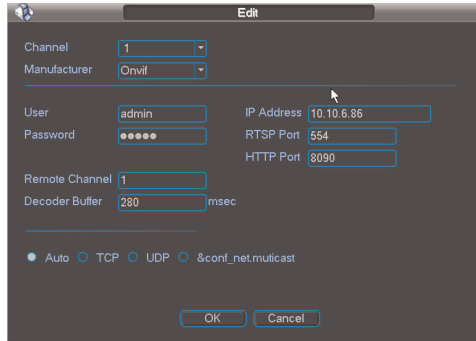


4. Check the camera(s) you would like to add and click **Add**.



5. If the Status indicator is green, the camera is connected and no further configuration is required. Click **OK** to save changes.

6. If the Status indicator is red, click . Update the following information, as needed.



- **Manufacturer:** Select the manufacturer of your IP camera.
- **User:** Enter the camera's user name.
- **Password:** Enter the camera's password.
- **RTSP Port:** Enter the camera's RTSP Port.
- **HTTP Port:** Enter the camera's HTTP Port.

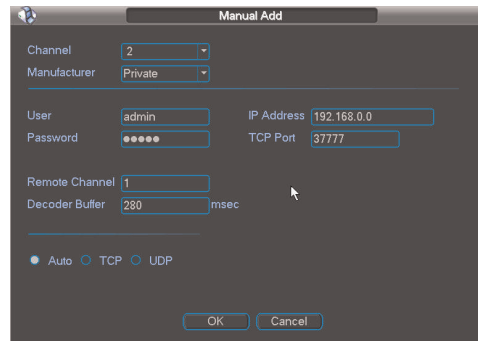


NOTE

See the manufacturer's user manual for your IP camera for the default user name, password, etc.

7. Click **OK**. Click **OK** again to save changes.

13.3.2 Manual Add



If the IP address of your IP camera does not appear when you run IP search, ensure that the camera is connected to the same LAN as the NVR or is connected to the PoE Ports. You may attempt to manually connect IP cameras using Manual Add.

To manually add a camera to the NVR:

1. Click **Manual Add**. Configure the following:
 - **IP Address:** Enter the IP address of your IP camera.
 - **Manufacturer:** Select the manufacturer of your IP camera.
 - **User:** Enter the camera's user name.
 - **Password:** Enter the camera's password.
 - **RTSP Port:** Enter the camera's RTSP Port.
 - **HTTP Port:** Enter the camera's HTTP Port.

**NOTE**


See the manufacturer's user manual for your IP camera for the default user name, password, etc.

2. Click **OK**. Click **OK** again to save changes.

13.3.3 Editing Cameras

If the Status indicator on cameras connected to the NVR via PoE or LAN is red or if you change the connection details for your IP cameras, you will need to update this information.

To edit cameras:

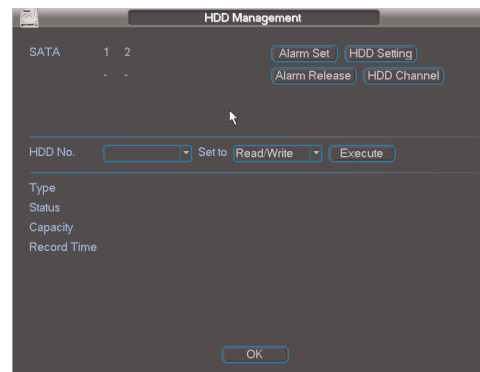
1. Click  next to the camera you would like to edit.
2. Configure the connection information as needed.
3. Click **OK**. Click **OK** again to save changes.

13.3.4 Deleting Cameras

- Click  next to the camera you would like to delete.

13.4 Advanced

Configure HDD, user accounts, and error functions. Configure auto-restart. Save/restore system configuration. Access Recording Menu.

13.4.1 HDD Management

HDD Management allows you to format hard drives and manage hard drive settings. The top right corner shows hard drive status.

- **O:** Normal hard drive operation.
- **X:** Hard drive error.

- -: Hard drive is not installed.

13.4.2 Formatting Hard Drives

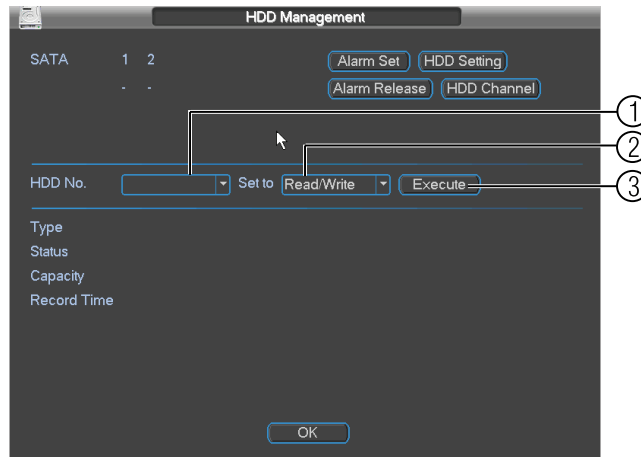
You must format hard drives before you may use them with the system.

CAUTION

Formatting the HDD erases all data on the hard disk. This step cannot be undone. System settings will not be erased.

To format a hard drive:

1. From Live View, right-click and select **Main Menu>Advanced>HDD Management**.
2. Configure the following:



- 2.1. Under **HDD No.**, select the hard drive you would like to format. Information about the hard drive appears in the lower section of the menu.
- 2.2. Under **Set to**, select **Format**.
- 2.3. Click **Apply**. Click **OK** to confirm. Wait for the hard drive to format. Hard drives become Read/Write hard drives by default when formatted.

13.4.3 Selecting Hard Drive Types

The system supports the following hard drive types:

- **Read/Write**: Normal recording hard drive.
- **Read only**: Do not record on the hard drive.

To select hard drive types:

1. Under **HDD No.**, select the hard drive you would like to format.
2. Under **Set to**, select the hard drive type.
3. Click **Apply**.
4. Right-click to exit the HDD Management menu. The system will restart.

13.4.4 Configuring Hard Drive Group Settings

Hard drive group settings allows you to balance recordings for your IP cameras across multiple hard drives.

To configure hard drive group settings:

1. Click **HDD Setting**.

- Under **HDD Group** select the group number you would like to assign to each hard drive.

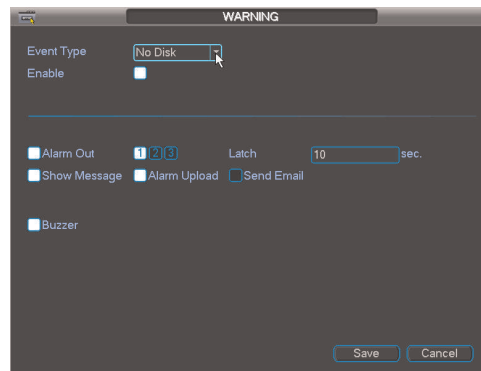


- Click **OK**. The system will restart.
- Return to the HDD Manage menu (right-click>**Main Menu**>**Advanced**>**HDD Manage**). Click **HDD Channel**.
- For each channel, select the hard drive group you would like it to record to.



- Click **OK**.

13.4.5 Warning



The Warning sub-menu allows you to configure actions taken when system errors occur.

To configure system error actions:

1. Under **Event Type**, select one of the following system errors to configure: **No Disk**, **Disk Error**, **Disk No Space**, **Net Disconnection**, **IP Conflicted**, or **MAC Conflicted**.
2. Check **Enable** to enable warnings for the selected Event Type.
3. Configure the following actions that will be taken when errors occur:
 - **Show Message**: Check to show pop-up window with information related to the error.
 - **Send Email**: Check to enable email message. You must configure email alerts before you will be able to receive them.
 - **Buzzer**: Check to enable system buzzer.
4. Click **Save** to save changes.

13.4.6 Record

The Record menu is used control manual recording for connected cameras.

The Record menu is divided into the following sections:

- The **Record Mode** section defines settings for the main (high quality) recording stream.
- The **Substream** section defines settings for an optional lower quality recording stream. This is useful because you can record the substream to the hard drive and stream it for playback to remote devices. This saves bandwidth during remote playback.

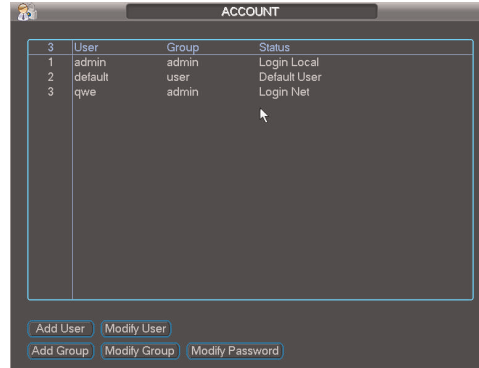
**NOTE**

Enabling Substream Recording is required to use playback mode on a smartphone or tablet. Substream Recording will increase the amount of disk space required for recording.

To configure manual recording:

1. Right-click in live view and select **Record**. Log in if prompted.
OR
Click **Main Menu>Advanced>Record**. Log in if prompted.
2. Under **Record Mode**, select the main stream recording option under each camera or under **All** to configure all cameras:
 - **Schedule**: Camera will record according to settings configured in the schedule.
 - **Manual**: When selected, the camera will use continuous recording.
 - **Stop**: When selected, the camera will not record.
3. Under **Substream**, configure recording options for the substream.
4. Click **OK** to save changes.

13.4.7 Account

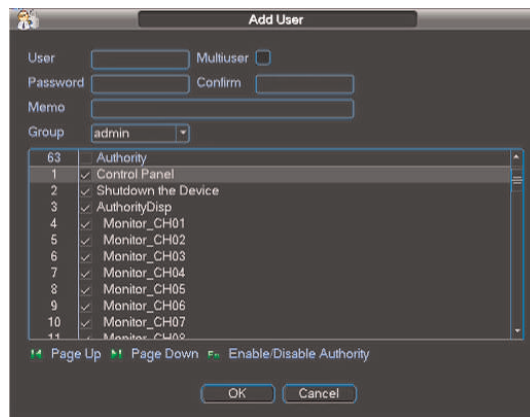


The Account sub-menu allows you to configure user accounts. Accounts are organized into groups, and receive permission to access system functions based on their group's settings. By default, the following user groups are configured on the system:

- **admin:** Accounts in the admin group are system administrators. They have full access to the system, may configure all system settings, and can manage user accounts.
- **user:** Accounts in the user group are normal users. They have limited access to system menus.

13.4.8 Adding Accounts

1. Click **Add User**.



2. Configure the following:

- **User:** Enter a user name for the account.
- **Memo (Optional):** Enter comments for the account.
- **Password:** Enter a password for the account. Repeat password under **Confirm**.



NOTE

User passwords must be 6 characters.

- **Multuser:** Check to enable multiple users to connect using this account.
- **Group:** Select the group that the account will be included in.

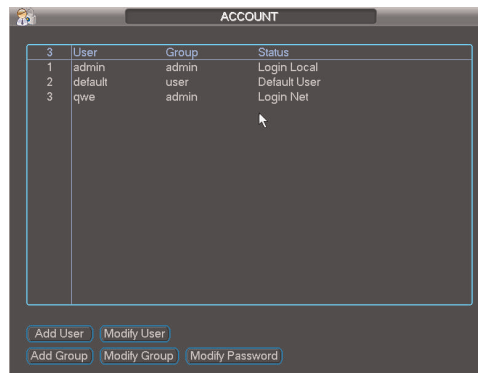
3. In the bottom portion of the screen, select the permissions that will apply to the user. By default the account will have all permissions that are enabled for its group. An account cannot have more permissions than its group.
4. Click **OK** to save changes.

13.4.9 Modifying Accounts

Admin accounts may modify the user name, password, and permissions of user accounts. User accounts may modify their own password.

To modify account settings:

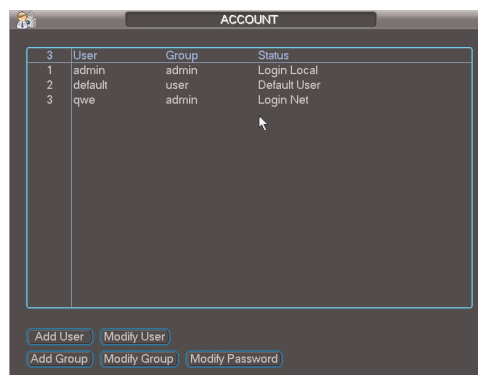
1. Click the account in the list.
2. Click **Modify User**.



3. Under **User**, select the account you would like to modify.
4. Configure the account settings and permissions as necessary and then click **Save**.

To modify an account password:

1. Click **Modify Password**.



2. Under **User**, select the account you would like to modify.
3. Under **Old Password**, enter the account's previous password.
4. Under **New Password**, enter the new password for the account. Repeat it under **Confirm**.
5. Click **Save**.

13.4.10 Deleting Accounts

1. Click the account in the list.

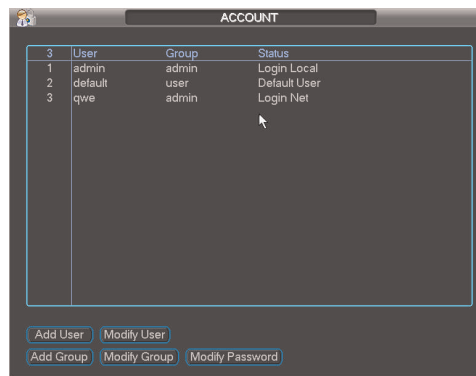
2. Click **Modify User**.
3. Under **User**, select the account you would like to delete.
4. Click **Delete** then click **OK** to confirm.

13.4.11 Adding Groups

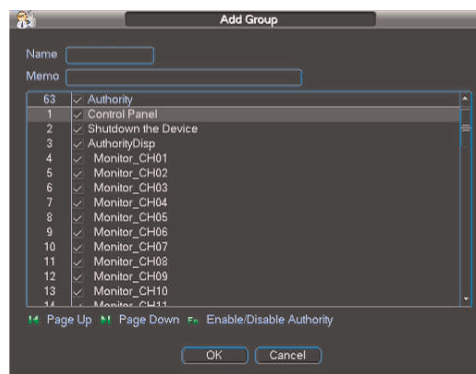
Groups allow you to easily manage permissions for multiple user accounts. A user account by default has all permissions available to the group it is in, and it cannot be given permissions the group does not have.

To add a group:

1. Click **Add Group**.



2. Under **Name**, enter a name for the group.
3. (Optional) under **Memo**, enter comments for the group.
4. Configure group permissions as needed. Note that any user accounts added to the group may not be given any permissions that are not selected.



5. Click **Save**.

13.4.12 Deleting Groups

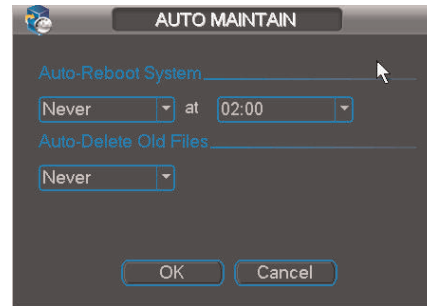
1. Click **Modify Group**.
2. Under **Group**, select the user group you would like to delete.
3. Click **Delete** and then click **OK** to confirm.

13.4.13 Modifying Groups

1. Click **Modify Group**.
2. Under **Group**, select the user group you would like to modify.

- Update group settings as needed and then click **Save**.

13.4.14 Auto Maintain



The Auto-Maintain sub-menu allows you to configure your system to automatically reboot once a day or once a week. For system stability, it is recommended to enable auto-rebooting.

The Auto-Maintain sub-menu also allows you to set the system to automatically delete files that are older than a specified number of days.

To configure Auto Maintain settings:

- Under **Auto-Reboot System**, select the day of the week you would like the system to reboot on, select **Everyday** to reboot the system everyday, or select **Never** to disable auto-rebooting. On the right, select the time of day you would like the system to reboot.
- Under **Auto-Delete Old Files**, select **Never** to disable auto-deleting of old recordings or select **Customized** to enable auto-deleting.
 - If you select Customized, enter the number of days the system will retain recordings.

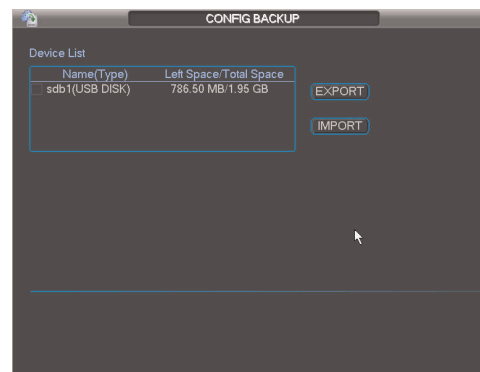


NOTE

The system must have sufficient storage space to keep recordings for the specified duration.

- Click **OK** to save changes.

13.4.15 Config Backup



The Config Backup sub-menu allows you to export your system configuration to a USB flash drive (not included) or to import a saved configuration. You can import a saved configuration from another NVR of the same model and channel configuration.

To export the system configuration to a USB flash drive:

1. Insert a USB flash drive into one of the USB ports on the system.
2. Right-click and select **Main Menu>Advanced>Config Backup**.
3. Check the USB flash drive you would like to export to in the list.
4. Click **Export**.

To import a saved system configuration:

1. Insert a USB flash drive with a saved system configuration into one of the USB ports on the system.
2. Right-click and select **Main Menu>Advanced>Config Backup**.
3. Check the USB flash drive with the saved system configuration file.
4. Click **Import**.
5. Click **OK**. The system will restart.

13.5 IPC Upgrade

Use the IPC Upgrade menu to upgrade the firmware on connected IP cameras. Firmware upgrades are available for free at .

**NOTE**

Not all IP cameras support firmware upgrading through the NVR.

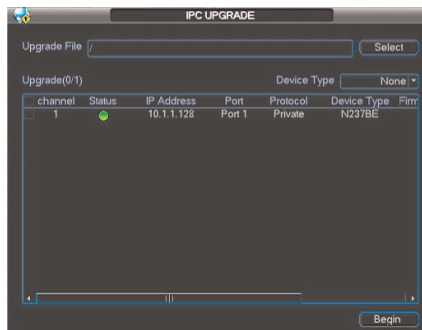
To upgrade the camera firmware:

1. Download the camera firmware from if one is available.

**NOTE**

Make sure that the firmware file you are using is compatible with your IP camera model.

2. Extract the firmware file and copy it to a USB thumb drive (thumb drive).
3. Insert the USB thumb drive (not included) into a USB port on the system.
4. From live view, right-click and select **Main Menu**. Login if prompted.
5. Click **IPC Upgrade**.



6. Click **Select**. Select the firmware file on the USB drive and click **OK**.
7. Check the camera you would like to apply the upgrade to in the list and then click **Begin**.

**CAUTION**

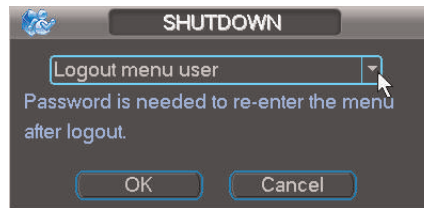
Wait for the firmware upgrade to complete before turning off or unplugging the cameras or NVR. The cameras will restart during the firmware update process.

13.6 Shutdown

Use the Shutdown menu to shutdown, restart, or log out of the system.

To access the Shutdown menu:

1. From live view, right-click and select **Main Menu**. Login if prompted.
2. Click **Shutdown**.
3. Select one of the following:



- **Logout menu user:** Log out the account that is currently active.
 - **Switch user:** Log out the account that is currently active, and sign in with a new account.
 - **Shutdown.**
 - **Restart system.**
4. Click **OK** to complete the selected action.

Connecting to Your System Over the Internet on PC or Mac

This system features connectivity using the exclusive . This cloud-enabled service allows you to view and manage multiple NVRs and IP cameras.

NOTE

- Except where noted, the PC and Mac instructions in this section are the same.
- For smartphone/tablet setup, see 16 *Connecting to your System Using Smartphone or Tablet Apps*, page 91.
- For the latest list of supported apps and devices, visit .



14.1 System Requirements

Your system must meet the system requirements below:

Description	Requirement
CPU	Core 2 Duo 3.0GHz
Operating System	Windows™ 8/7/Vista Mac OSX 10.7 and above
Memory	2GB
Video	512 MB of video memory and above
Network (LAN)	10/100 BaseT Network
Network (WAN)	1 Mbps upstream High-speed Internet service is required to remotely connect to your system.

14.2 Accessing your System within a Local Network (LAN)

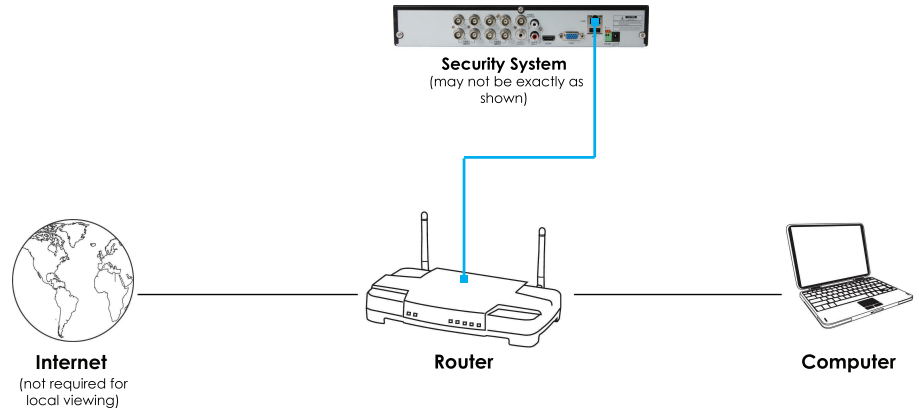
You can connect to your system through using the Client Software through the local area network (LAN). It is recommended to confirm connectivity over a local network before setting up your system for DDNS connectivity.

NOTE

To complete the steps below, your computer must be on the same network as your system.

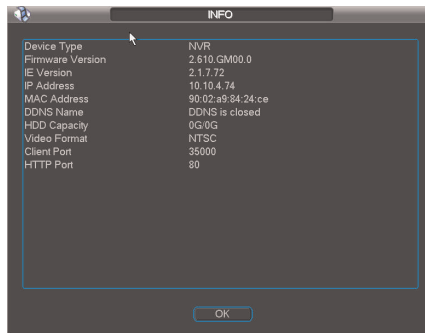
14.2.1 Step 1 of 3: Connect your System to Your Router

1. Power off your system by disconnecting the power adapter.
2. Connect an Ethernet cable (included) to the **LAN** port on the rear panel of the system. Connect the other end of the Ethernet cable to an empty LAN port (usually numbered 1~4) on your router.
3. Reconnect the power adapter to power the system back on.



14.2.2 Step 2 of 3: Obtain the System's Local IP Address

1. Right-click to open the Quick Menu and click **Info**. Enter the system user name (default: **admin**) and password (default: **000000**).




2. Write down the **IP Address** of the system.
 - A local IP looks something like this: 192.168.5.118.

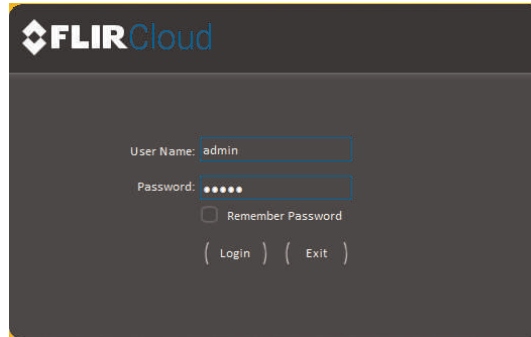
14.2.3 Step 3 of 3: Connect to the System's Local IP Address

Follow the steps below to confirm connectivity over a local network on a PC or Mac.

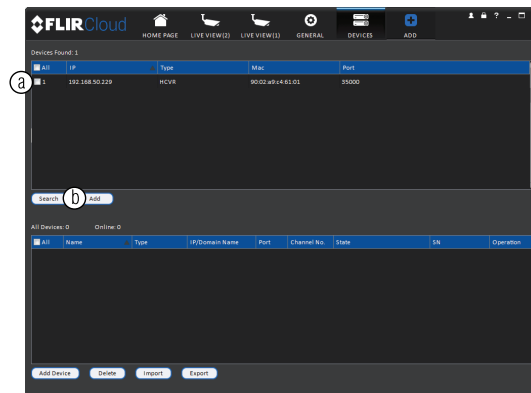
To connect using the system's local IP address:

1. Download and install the client software.
 - **PC Users:** Download and install the **Client Software for PC** from .
 - **Mac Users:** Download and install the **Client Software for Mac** from . Double click to extract the software. Drag the software to **Applications**.
2. Once installation is finished, double-click the FLIR Cloud™ Client icon () from the desktop or Applications list.

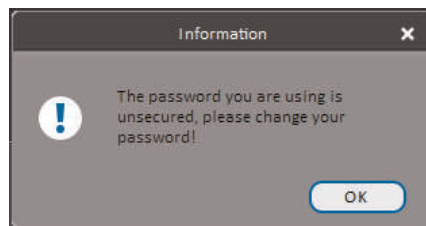
- Log into the Client Software using the Client Software user name (default: **admin**) and password (default: **admin**) and then click **Login**.



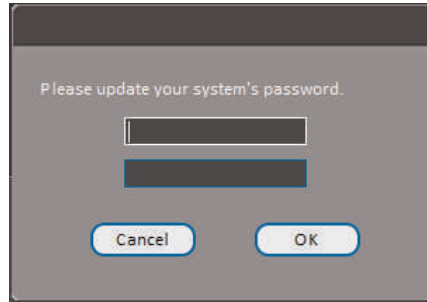
- The client scans your LAN for connected systems. Check your system (a) and click **Add** (b).



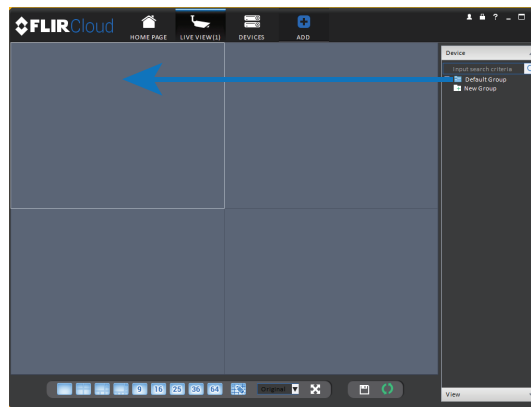
- Enter the password for your system (default: **000000**) and click **OK**.
- If this is the first time you are connecting, you will be prompted to change the system password.



7. Enter a new 6 character password and click **OK**. This password will be used to connect to your system from now on.



8. Click  then .
9. Click and drag **Default Group** to the display window to open your cameras in live view.



Result



14.3 DDNS Setup—Access your System Remotely over the Internet

Setting up DDNS connectivity allows you to view your system from any computer or compatible mobile device with Internet access.

To set up remote connectivity with your system, you must:

1. Port forward the HTTP port (default: **80**) and Client port (default: **35000**) on your router to your system's IP address.
2. Create a DDNS account.
3. Enable DDNS on the system.
4. Test the remote connection by entering your DDNS address in the client software.

14.3.1 Step 1 of 4: Port Forwarding

You **must** port forward the HTTP port (default: **80**) and Client port (default: **35000**) on your router to your system's IP address before you can remotely connect to your system. There are several methods to port forward your router:

- Use the **Auto Port Forwarding Wizard** (PC only) to port forward the required ports (see www.flirsecurity.com/pro for details). For instructions, see the Auto Port Forward Wizard manual on www.flirsecurity.com/pro.
- Manually port forward the required ports on your router to your system's IP address by following your router manufacturer's instructions. For more information on port forwarding, see the reference guides on www.flirsecurity.com/pro.



NOTE

If the above ports are not forwarded on your router, you will not be able to access your system remotely.

14.3.2 Step 2 of 4: Create a DDNS Account

To setup your free FLIR DDNS account:

1. In your browser, go to <http://ddns.myddns-flir.com> and click **Create Account**.

FLIR

- ▶ [Login](#)
- ▶ [Create Account](#)
- ▶ [Lost Password](#)

2. Complete the **Account Information** fields with your personal information. Complete the **Warranty Information** with your purchase details (optional).

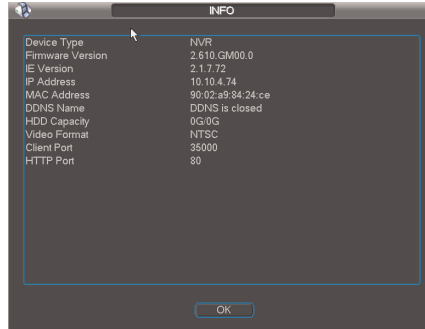
The screenshot shows a web form titled "Create New Account" with a sub-section "Account Information". The fields are as follows:

- E-mail:
- Password:
- Password confirm:
- First name:
- Last name:
- Region:
- Country:
- Timezone:

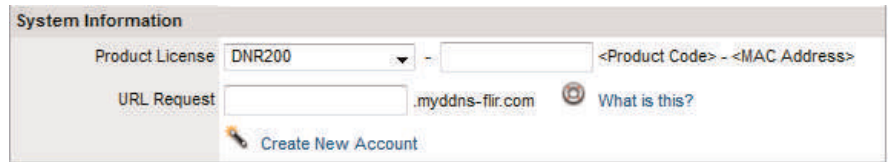
At the bottom of the form, it states: "By clicking on 'Create New Account' you accept the [Terms of Service](#)."

3. Complete the System Information fields:

- **Product License:** Select your product model from the Product License drop down menu (i.e. DNR300 Series).
- **<Product Code> - <MAC Address>:** Enter the MAC address of your system.
 - To find the MAC address, right-click to open the Quick Menu and click **Info**.



- **URL Request:** Choose a URL for your DDNS connection (i.e. your name, your company or business name, or anything of your choice).



4. Click **Create New Account**.
5. Your account information will be sent to you at the email Address you used in Step 2. You will need this information for remote access to your system. Record your information below:

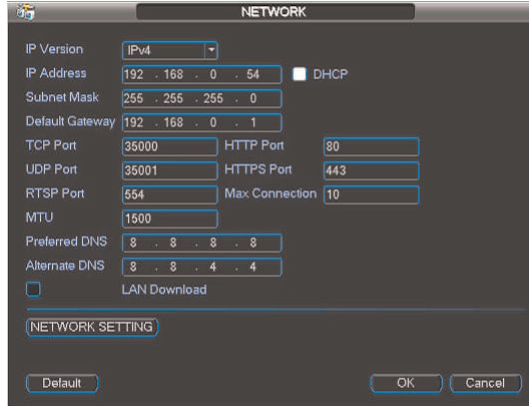
Domain name/URL Request:	
DDNS User Name:	
Device DDNS password:	

14.3.3 Step 3 of 4: Enable DDNS on the System

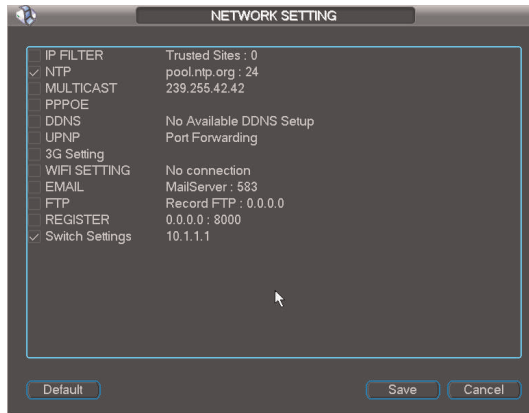
To enable DDNS on your system:

1. In live view, right-click and then click **Main Menu**. Login using the admin account if prompted (default user name is **admin** and default password is **000000**).
2. Click **Setting>Network**.

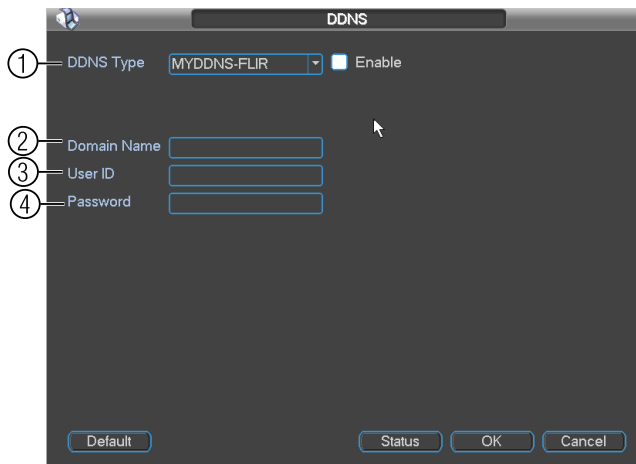
3. Click **Network Setting**.



- 4. Check **DDNS**.
- 5. Double-click **DDNS**.



6. Configure the following:



6.1. Ensure **Enable** is checked. The checkbox will be white when DDNS is enabled.

- 6.2. Under **Domain Name**, enter the Domain Name from the confirmation email you received after registering for DDNS.
- 6.3. Under **User ID**, enter the User Name from the confirmation email.
- 6.4. Under **Password**, enter the Password from the confirmation email.

**NOTE**

The DDNS user name and password is different from your DVR's user name and password.

7. Click **OK** to return to the Network Setting window.
8. Click **OK** to save changes.

**NOTE**


It may take between 10~15 minutes for the DDNS server to update with your new DDNS address.

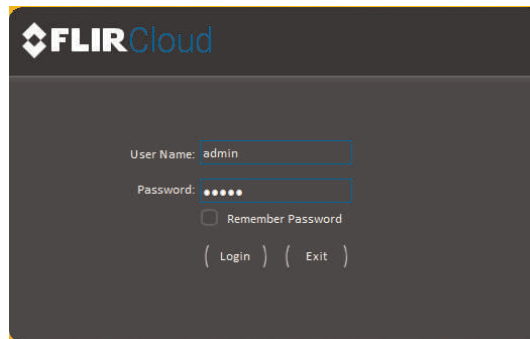
14.3.4 Step 4 of 4: Connect to the System's DDNS Address

**NOTE**

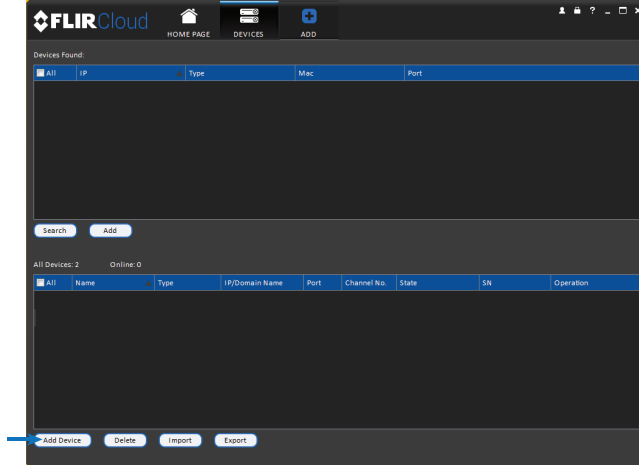
Please allow 10~15 minutes for the DDNS servers to update with your new DDNS address before attempting to connect.

To connect using the system's DDNS address:

1. Download and install the client software on a remote computer.
 - **PC Users:** Download and install the **Client Software for PC** from .
 - **Mac Users:** Download and install the **Client Software for Mac** from . Double click to extract the software. Drag the software to **Applications**.
2. Once installation is finished, double-click the FLIR Cloud™ Client icon  from the desktop.
3. Log into the Client Software using the Client Software user name (default: **admin**) and password (default: **admin**) and then click **Login**.




4. Click **Add Device**.

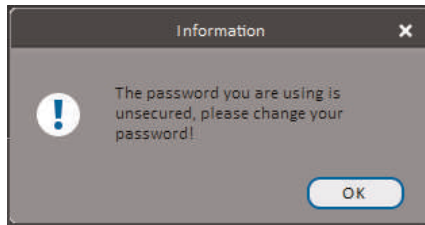


5. Enter the following:

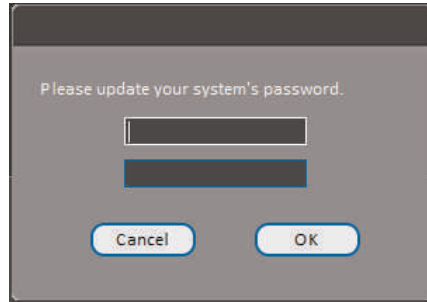
- 5.1. Check **By IP/Domain** to add a system using the DDNS address.
- 5.2. **Device Name**: Choose a name for your system of your choice.
- 5.3. **IP/DDNS Address**: Enter the Domain Name/URL Request you received in the email when you registered for DDNS followed by **.myddns-flir.com**.


 NOTE
For example, if your Domain Name/URL Request is tomsmith, enter <i>tomsmith.myddns-flir.com</i>

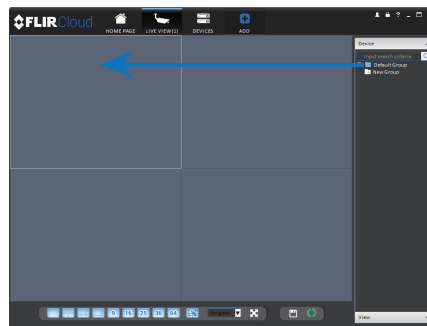
- 5.4. **Client Port**: Enter the Client Port (default: **35000**).
 - 5.5. **User Name**: Enter the system User Name (default: **admin**).
 - 5.6. **Password**: Enter the system Password (default: **000000**).
6. Click **Add**. If this is the first time you are connecting, you will be prompted to change the system password.



7. Enter a new 6 character password and click **OK**. This password will be used to connect to your system from now on.



8. Click  then .
9. Click and drag **Default Group** to the display window to open your cameras in live view.



Congratulations! You can now connect over the Internet to view and playback video on your computer.

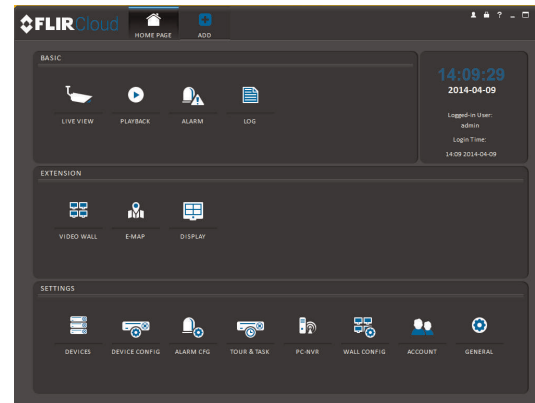


Using FLIR Cloud™ Client for PC or Mac


FLIR Cloud™ Client allows you to connect to multiple systems from a PC or Mac.

15.1 Home Page

The Home Page allows you to access all the tabs within the software. Each tab allows you to access different features.





To open tabs:

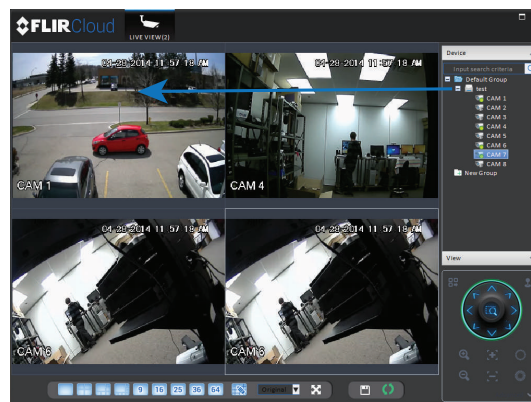
Click a tab from the Home Page to open it or click the  button at the top of the screen from within any tab to open a new tab.

15.2 Live View

The Live View tab is where you can view live video from connected systems.

To view live video from a system:

1. Click  and then click  to create a Live View tab.
2. Click and drag a DVR, NVR, group, or individual camera to open live video. To access individual cameras, you can click + to expand groups or systems.



15.2.1 Live View Controls



1. **Live display:** Double-click to expand the area. Right-click to access additional options. Hold the mouse over the display area to access the camera toolbar.

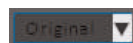
Camera toolbar:






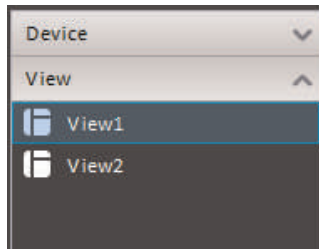
- 1.1. **Streaming quality:** Shows the bitrate and resolution for the stream, and shows if display is showing the Sub Stream or Main Stream.
 - 1.2. **Manual recording:** Click to start/stop manual recording.
 - 1.3. **Snapshot:** Click to save a snapshot.
 - 1.4. **Mute/unmute:** Click to mute/unmute audio (audio camera required).
 - 1.5. **Not supported.**
 - 1.6. **Instant playback:** Plays back the most recently recorded video from the camera. By default, it will play back the last 5 minutes of recorded video from the camera.
 - 1.7. **Digital zoom:** Click to enable digital zoom mode. Click and drag over the display area to zoom on the camera. Then click and drag to pan. Click the icon again to zoom out.
 - 1.8. **Disconnect.**
1. **Split-screen mode:** Click to select split-screen layout.



2. **Aspect ratio:** Use the drop down menu to select the aspect ratio for the selected camera. **Original** uses the actual aspect ratio of the image. **Full-win** stretches the image to fill up the entire display area.



-
3.  **Full-screen:** Click to open full-screen mode. Press **ESC** to exit full-screen mode.
 4.  **Save view:** Click to save the current display layout and open cameras as a view. Then enter a name for the view.
 5.  **Start/stop tour:** Click to start the tour. During the tour the client will cycle through all saved views every few seconds. Click again to stop the tour.
 6. **PTZ Controls:** Controls for PTZ cameras (not included). See 15.3 *Controlling PTZ Cameras*, page 68 for details.
 7. **View:** Click **View** to access view menu. Then double-click on a view to open it in the display area.



8. **Devices:** Shows a list of groups, cameras, and systems connected to the client. Drag items to the display area to open live video. Right-click to view additional options.

15.2.2 Opening Live View in Multiple Monitors

If your computer has multiple monitors, you can open more than one Live View tab and move them to secondary monitors. This allows you to monitor cameras on multiple monitors at the same time.



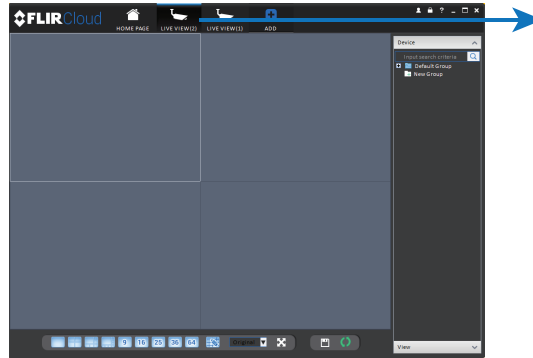
NOTE

Using multiple monitors significantly increases the amount of computing resources necessary to run the application and may affect performance.

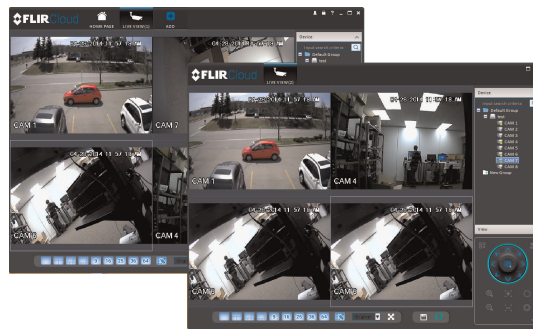
To open Live View in multiple monitors:

1. Click  and then click  to create a Live View tab.

- Click and drag the tab outside of the client window to create a new window. You can drag the window to one of the secondary monitors.



Result



15.3 Controlling PTZ Cameras

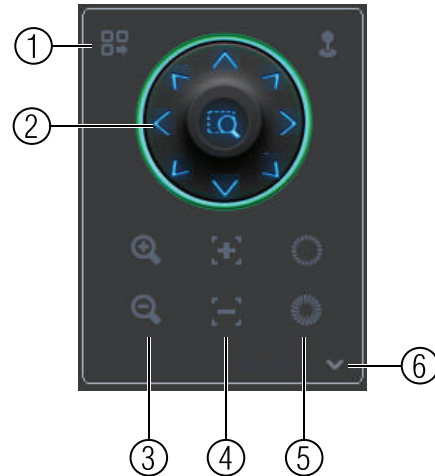
If you have PTZ cameras (not included), you can control them using the client.


NOTE

You must ensure the PTZ camera is properly connected to your system and your system is configured to detect it before you can control them using the client.

To control PTZ cameras:

- Click the display area with the PTZ cameras and use the on-screen PTZ controls.



PTZ controls:

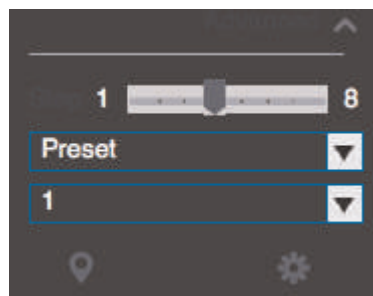
1. **Open menu:** Click to open camera OSD menu controls. This feature may not be supported for all camera models.
2. **Move camera:** Click the arrows to move the camera.
Click  to open dynamic zoom mode. Then click and drag in the video area to zoom in the camera on an area.
3. **Zoom +/-:** Click to zoom the camera in and out.
4. **Focus +/-:** Click to increase/decrease the focus.
5. **Iris +/-:** Click to increase/decrease the iris.
6. **Advanced:** Click to access advanced PTZ controls.

15.3.1 PTZ Presets

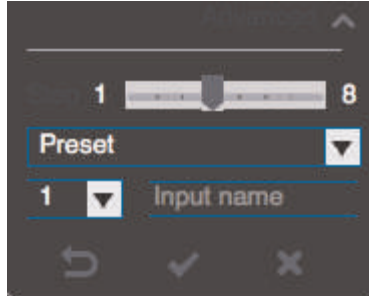
Presets will save a camera position for quick retrieval.


To add presets:

1. Click  to open the Advanced controls. Select **Preset**.
2. Click .




3. Select the number of the preset you would like to add.



4. Move the camera to the desired position.
5. Click  to save the current position as a preset.



To go to a saved preset:

1. Select the preset number from the list or click  to go to the currently selected preset.

15.3.2 PTZ Tours

Tours will cycle through a set of presets.

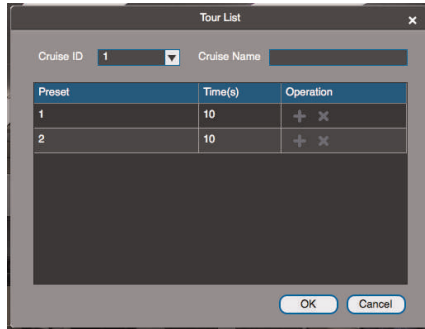
To configure a PTZ tour:

1. Click  to open the Advanced controls. Select **Tour**.
2. Click .



3. Under **Cruise ID**, select the number of the tour you would like to configure.
4. (Optional) Under **Cruise Name**, enter a name for the tour.

- Use the chart to select which presets you would like to include in the tour and the order of presets.



- Preset:** Select the preset number.
- Time(s):** Enter the time in seconds the camera will remain on the selected preset.
- Operation:** Click to add a preset to the tour. Click to delete a preset from the tour.

- Click **OK** to save changes.

To run a PTZ tour:

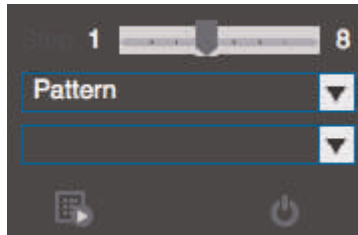
- Select the tour number and click .

15.3.3 PTZ Pattern

Patterns automatically cycle the camera between two positions.

To create a pattern:

- Click to open the Advanced controls. Select **Pattern**.
- Select the number of the pattern you would like to set up.



- Move the camera into the desired start position.
- Click to start recording the pattern.
- Move the camera to the desired end position. Then, click to stop recording the pattern.

To run a pattern:

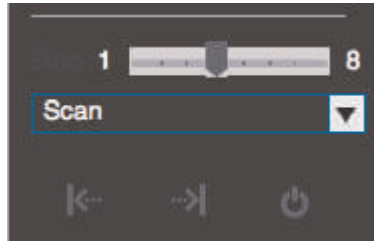
- Select the pattern number and click .



15.3.4 PTZ Scan

Scan automatically cycles between a left and right point.

To set up scan mode:

1. Click  to open the Advanced controls. Select **Scan**.



2. Move the camera to the desired left position and click .
3. Move the camera to the desired right position and click .



To run scan mode:

1. Click .

15.3.5 PTZ Pan

Pan makes the camera continuously pan 360°.

To run Pan mode:

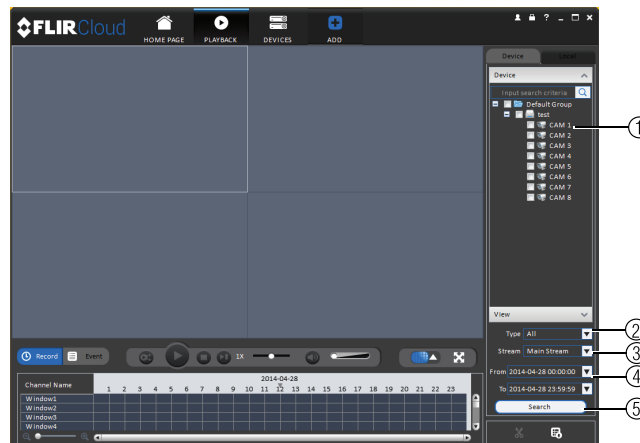
1. Click  to open the Advanced controls. Select **Pan**.
2. Click .

15.4 Playback

You can use Playback mode to playback video saved on systems connected to the client.

To access Playback mode:

- Click  and then click  to create a Playback tab.

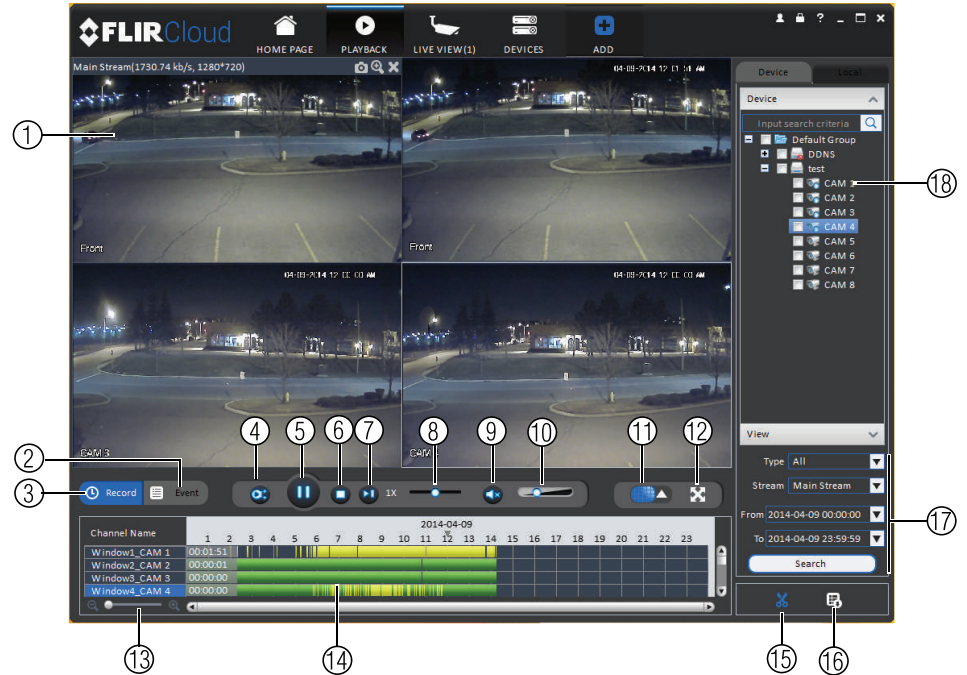


To playback video:

1. Check the channels you would like to play back from in the Device List.
2. Under **Type**, check the file types you would like to search for.
 - **All:** All recordings.
 - **General:** Continuous recordings.
 - **MD:** Motion recordings.
 - **Alarm:** Alarm recordings. Your system must support alarm devices (not included) to use this feature.
3. Under **Stream**, select **Main Stream** to search for Main Stream recordings (high quality) or **Sub Stream** to search for Sub Stream recordings (smaller file size).
4. Select the start time and end time for your search under **From** and **To**. You may not search more than 24 hours of video.
5. Click **Search**. Wait for the client to find video saved to the system.
6. Click inside the play back bar to start playback.



15.5 Playback Controls



1. **Display area:** Double-click to expand/return to split-screen mode. Hold the mouse over the display area to open the camera toolbar.

Main Stream(1730.74 kb/s, 1280*720)

- **Snapshot:** Click to save a snapshot.
- **Digital zoom:** Click to enable digital zoom mode. Then, click and drag to zoom in. Click and drag to pan the camera. Click again to zoom out.

2. **Event:** Click to view recordings based on a list of events and files.
3. **Record:** Click to view recordings on a timeline.
4. **Sync:** Click to sync playback between channels. This forces all channels to playback from the same time.
5. **Pause/play.**
6. **Stop.**
7. **Frame-by-frame:** Click to advance the video by a single frame.
8. **Playback speed:** Use the slider to adjust the playback speed.
9. **Mute.**
10. **Volume.**
11. **Split-screen:** Select split screen configuration.
12. **Full-screen:** Click to open playback in full-screen. Press **ESC** to exit full-screen.
13. **Timeline zoom:** Use the slider to zoom in/out on the timeline.
14. **Playback timeline:** Shows recordings from the selected channels on a timeline. Click inside the timeline to start playback or select a playback time. Each type of recordings is shown in a different color. Continuous recordings are green, motion recordings are yellow, and alarm recordings are red.
15. **Video clip:** Click to start a video clip. You can download video clips to your hard drive.

-
16. **Download list:** Click to see a list of files you have downloaded and the progress of files that are currently downloading.
 17. **Search:** Search for video on the selected channels based on the search parameters you set.
 18. **Device list:** Select the channels you would like to search or playback video from.

15.6 Downloading Video to your Computer Hard Drive



You can download video to your computer hard drive to save important events or share them. It is recommended to download video of important events as soon as possible to ensure they are not overwritten by new recordings.

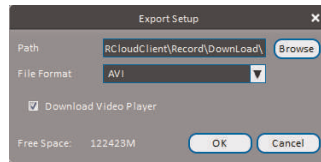


NOTE

PC Users: You may need to run FLIR Cloud™ Client as an administrator to download files to your hard drive.

To download video files:

1. Start playing back video using the steps in 15.4 *Playback*, page 72.
2. Click  to start a video clip at the current playback time. Click  to stop the video clip.
3. Configure the following save options:



- **Path:** Use the default save folder or click **Browse** to select a different folder.
- **File Format:** Select **Original Format** to save to .dav format (requires the video player). Select **AVI** to save files to .avi format (can be played in VLC Media Player).



NOTE

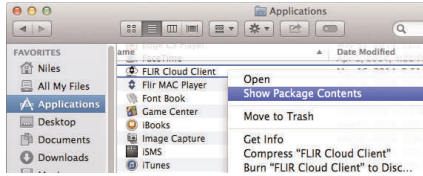
The Mac version only supports downloading video to .dav format.

- **Download Video Player:** Check to save a copy of the video player with the downloaded file.
4. Click **OK** to start the download. A status screen will pop up to show progress on downloaded files.

NOTE

To retrieve downloaded video files:

- **PC Users:** Browse to the folders listed in **General>File**.
- **Mac Users:** Browse to the folders listed in **General>File**. To get to the default location, open Applications in Finder, right click on **FLIR Cloud Client** and select **Show Package Contents**. Then, navigate to the desired folder.



15.7 Alarm

The Alarm menu allows you to view a list of alarms received by the client software.

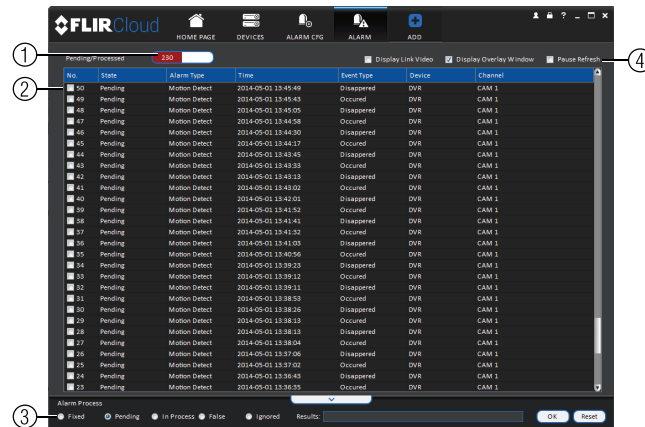
NOTE

You must set up alarms in the Alarm CFG menu before they will appear in this list. See 15.12 *Alarm CFG*, page 81 for more details.

To access Alarms:

- Click  and then click .

Alarm menu overview:



1. **Number of alarms:** Shows the number of open alarms.
2. **Alarm list:** Shows the list of alarms and information on when they occurred and which systems and channels triggered them.
3. **Alarm Process:** You can close alarms by selecting one of the options and clicking **OK**.

4. **Options:** Check to enable the following:

- **Display Link Video:** Open live video to monitor alarms on a continuous basis.
- **Display Overlay Window:** Show the overlay controls. They allow you to enable/disable sound alerts and quickly jump back to the Alarm menu from another tab.



- **Pause Refresh:** Stop refreshing the live video in the video popup.

15.8 Log

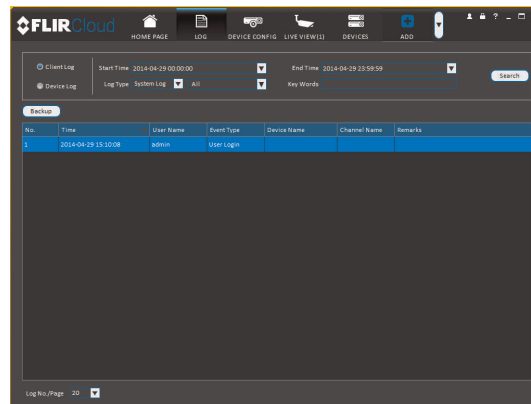
The Log menu allows you to view logs for the client software or to view logs for connected systems.

To access logs:

- Click  and then click .

To view client logs:

1. Click **Client Log** to view logs for the client software.



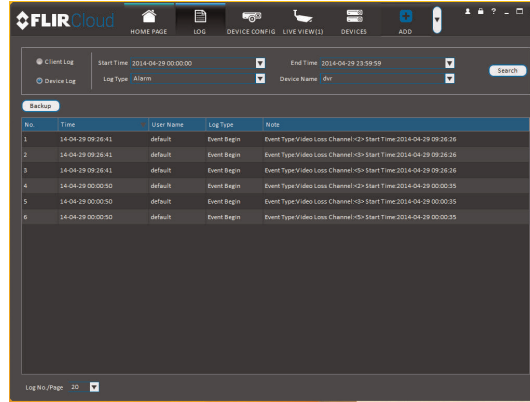
2. Configure the following:

- **Start Time/End Time:** Select the start and end times to search for logs.
- **Log Type:** Select the type of logs to search for.

3. Click **Search**.

To view logs from connected systems:

1. Click **Device Log** to view logs from connected systems.





2. Configure the following:
 - **Start Time/End Time:** Select the start and end times to search for logs.
 - **Log Type:** Select the type of logs to search for.
 - **Device Name:** Select the system you would like to view logs from.
3. Click **Search**.

15.9 E-map

E-Map allows you to place cameras over a still image. For example, you can use the E-Map to create a virtual map of your cameras over a floor plan of your home or business.

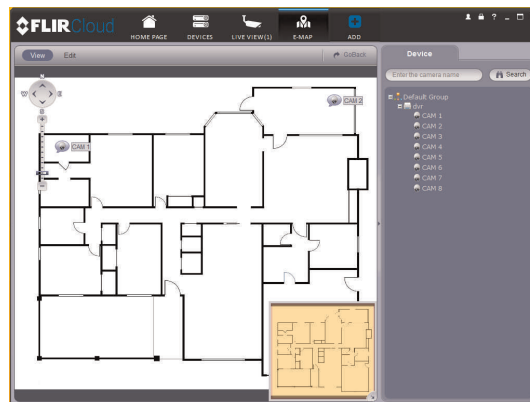
To create an E-map:

1. Click  and then click .
2. Click **Add Map**.

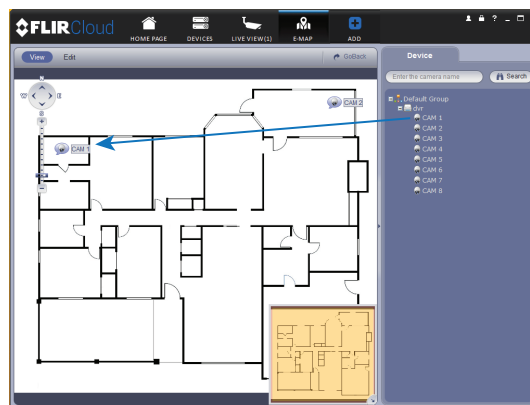


3. Configure the following:

- **Name:** Enter a name for your e-map of your choice.
 - **Picture:** Click **File** and then select a .png, .bmp, or .jpg image on your computer to use as the e-map.
 - **Describe (optional):** Enter a text description of the e-map.
4. Click **Save**.
 5. Click **Edit** to edit the e-map.

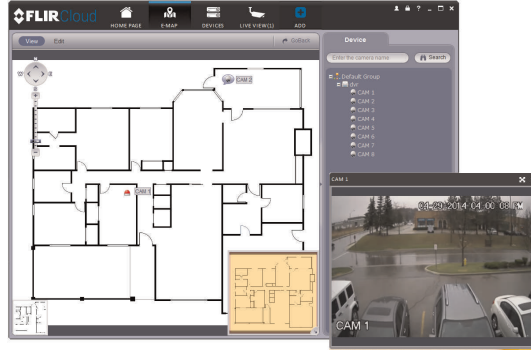


6. Click and drag cameras from the device list to place them on the map.

**To open cameras from the e-map:**

1. Click **View**.

2. Double-click cameras on the map to open live video.



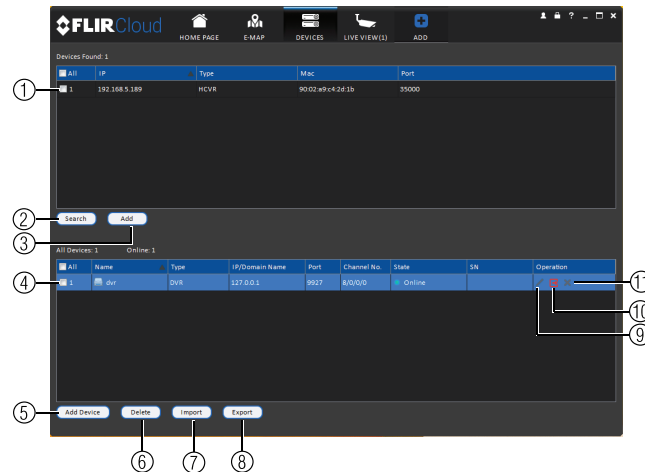
15.10 Devices

The Devices menu is where you can manage systems connected to the client software.

To access the Devices menu:

- Click  and then click .

Devices overview:





1. **Devices Found:** Shows systems that are connected to the same network as the computer where the client is installed. Once you connect to the system, it moves to the bottom of the screen.
2. **Search:** Refresh the list of systems connected to the network.
3. **Add:** Add checked systems to the client software.
4. **Device list:** Shows a list of systems connected to the client software, and shows which systems are online.
5. **Add Device:** Add a remote system using a Device ID or IP/DDNS address.
6. **Delete:** Delete the selected system.
7. **Import:** Import a list of systems from a saved .xml file.
8. **Export:** Export a list of currently connected systems to an .xml file. This is useful if you need to re-install the software or if you want to open the same list of systems on a different computer.
9. **Delete:** Delete system.
10. **Manual connect/disconnect:** Manually connect/disconnect the system.

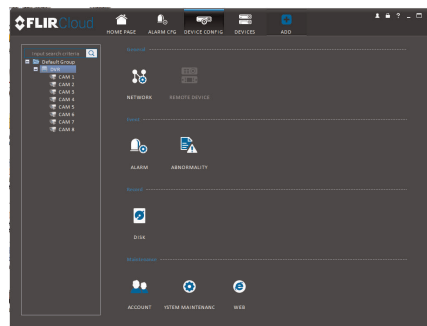
11. **Edit:** Edit the connection details for the system.

15.11 Device Config

The Device Config menu allows you to remotely configure settings for connected systems.

To access the Device Config menu:

- Click  and then click .
- Click on a system in the device list to see the settings available for that system and then configure settings as needed.



NOTE

The settings available depend on the model of system you have.

15.12 Alarm CFG



The Alarm CFG menu allows you to configure alarms for the client software. The client software will alert you by popping up live video and playing sound alerts.

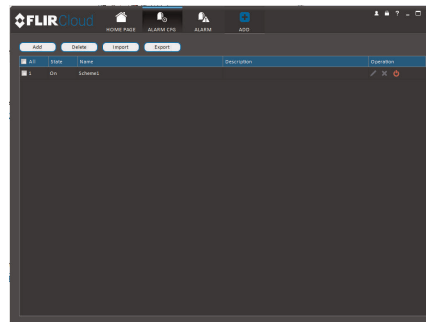


NOTE

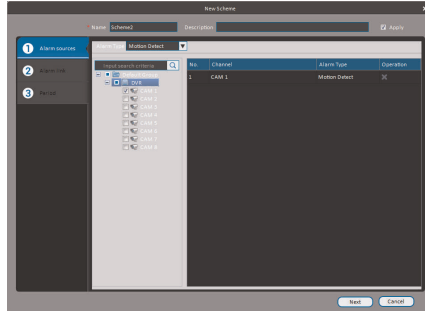
Alarm upload must be enabled on the system in order for it to send the alarm to the client software.

To create alarms:

1. Click  and then click .
2. Click **Add** to create a new alarm.

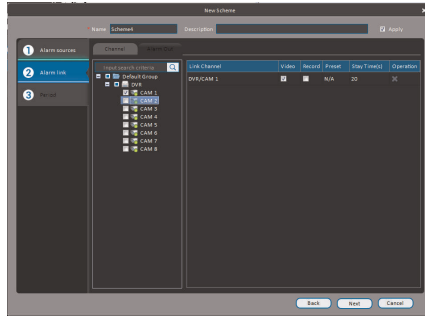


-
3. In the **Alarm sources** menu, you set up the parameters that trigger the alarm.

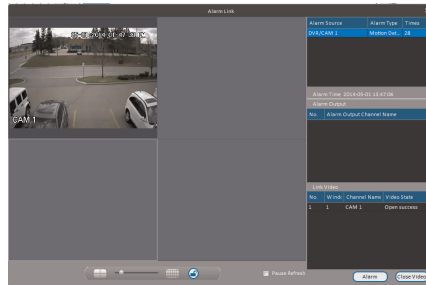


- Under **Alarm Type**, select the alarm type that will trigger an alarm. For example, you can select Motion Detect for the alarm to be triggered by motion.
- Select the systems or channels you would like to trigger an alarm. Continuing the example, if CAM 1 is selected, the alarm will be triggered if there is motion on CAM 1.
- Click **Next**.


- In the **Alarm link** menu, you set up the responses to alarms. Select the channels that will pop up or alarm out devices (not included; not all systems support alarm out devices) that will be triggered by an alarm.
For each channel selected, configure the following:



- Video:** Pop up a window with live video from the selected channel, like the one below.

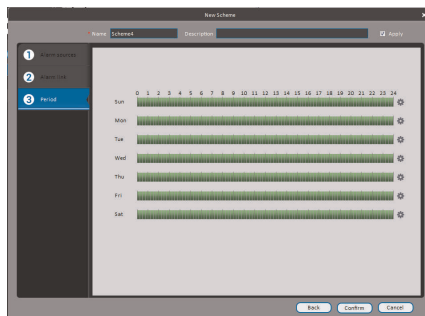


- Record:** Record video from the selected channel.

 NOTE
PC Users: You may need to run the client software as admin to record.

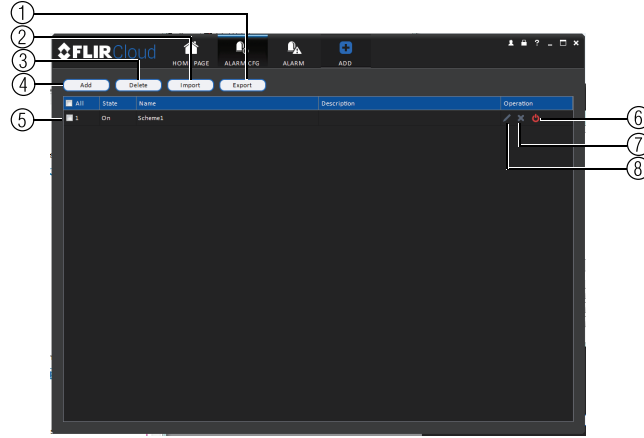
- Preset:** If you select a PTZ camera, you can select the preset that will be activated when an alarm occurs.
- Stay Time:** Enter how many seconds the video window will stay open or record when an alarm occurs.

- Click **Next**.
- In the **Period** window, configure times the alarm will be activated.



- Click **Confirm** to save the alarm.

To manage alarms:




1. **Export:** Export current list of alarms as an xml file.
2. **Import:** Import list of alarms.
3. **Delete:** Delete selected alarm.
4. **Add:** Add new alarm.
5. **Alarms.**
6. **On/off:** Click to enable/disable alarm.
7. **Delete:** Click to delete alarm.
8. **Edit:** Click to edit alarm settings.



15.13 Tour & Task

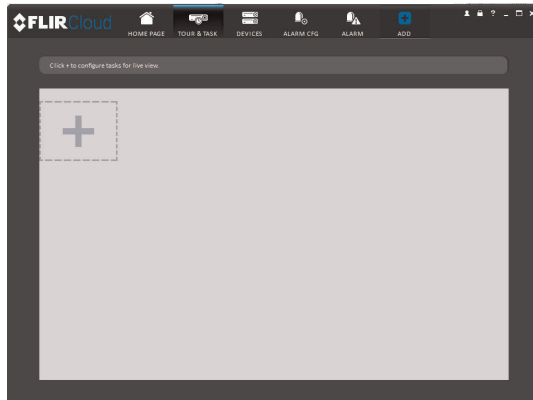
The Tour & Task menu is where you can set up custom views for the system. You can also set up tours, which sets the client to automatically cycle through views.

To start a tour:

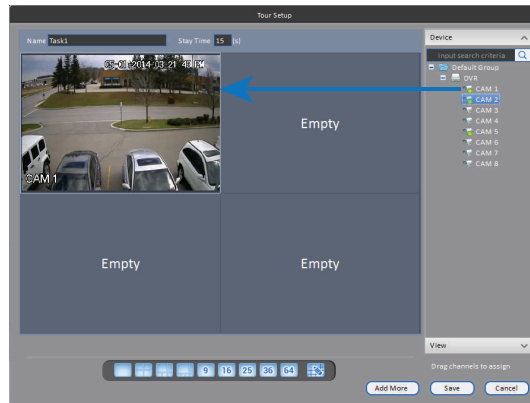
- Click  in Live View to start a tour. The live view will automatically cycle through all views you have set up in the Tour & Task menu. Click again to stop the tour.

To add views:

1. Click  and then click .
2. Click **+** to create a new view.



3. Under **Name**, enter a name for your view.
4. Under **Stay Time**, enter the number of seconds the view will be shown before the client switches to the next view.
5. Select the split-screen mode you would like to use for the view and then click and drag channels to the empty grid areas to select channels to be shown in the view.



6. Click **Save** to save the view. Or click **Add More** to save the view and create another view.

15.14 Account

The Account menu is where you can set up user accounts and passwords for the client software. To simplify management, you can group user accounts according to role. A role determines the permissions an individual user account can have.

To access the account menu:

- Click  and then click .

15.14.1 Managing User Accounts

By default, the client software includes an admin account that has full access to all features of the software and all connected systems. You can add user accounts with customized levels of access.

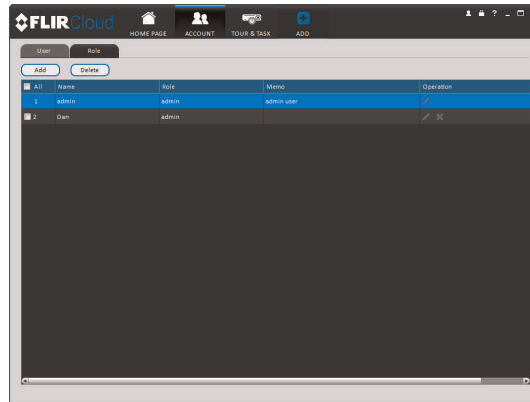


NOTE

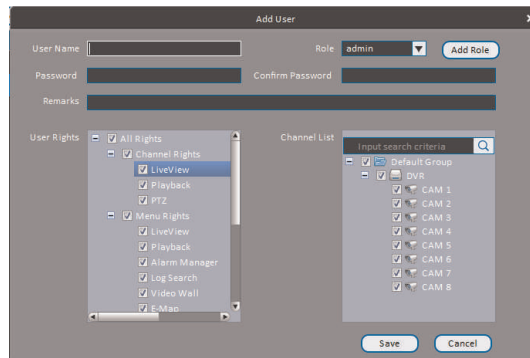
The admin account cannot be deleted. The default user name for the admin account is **admin** and the default password is **admin**.

To create a user account:

1. Click **Add**.



2. Configure the following settings for the user account:



- **User Name:** Enter a user name for the account.
- **Role:** Select the role for the user account. By default, the user account gains all the permissions of the role selected, but you can deactivate permissions as needed.
- **Password/Confirm Password:** Enter the password for the user account.
- **Remarks (Optional):** Enter a text description of the user account.
- **User Rights:** Check the permissions that will apply to the user account. If you click on LiveView, Playback, and PTZ, you can select which channels the user account can access in the Channel List section.


3. Click **Save** to create the account.

To switch between user accounts:


- Click .

To modify a user account:
 **NOTE**

Admin accounts with Account Setup permissions can change account passwords. A user cannot change his own password.

- Click  next to the user account you would like to modify. Edit the user account details and click **Save**.

To delete a user account:

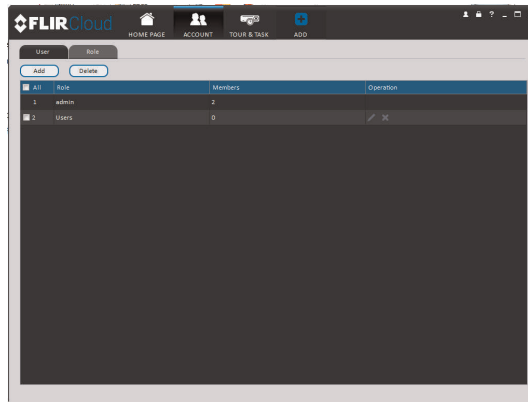
1. Click  next to the user account you would like to delete. Click **OK** to confirm.

15.14.2 Managing Roles

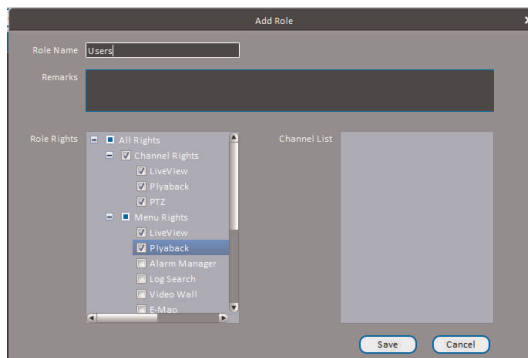
Roles make it easier to manage user accounts by determining the permissions an individual user account can have. By default, a new user account is given all the permissions of the role they are assigned to.

To create a role:

1. Click the **Role** tab.
2. Click **Add**.




3. Configure the following settings for the role:




- **Role Name:** Enter a name for the role.
- **Remarks (Optional):** Enter a text description of the role.
- **Role Rights:** Check the permissions that will apply to user accounts assigned this role. If you click on LiveView, Playback, and PTZ, you can select which channels may be accessed in the Channel List section.

4. Click **Save**.

To modify a role:

- Click  next to the role you would like to modify. Edit the role details and click **Save**.

To delete a user account:

1. Click  next to the role you would like to delete. Click **OK** to confirm.

15.15 General

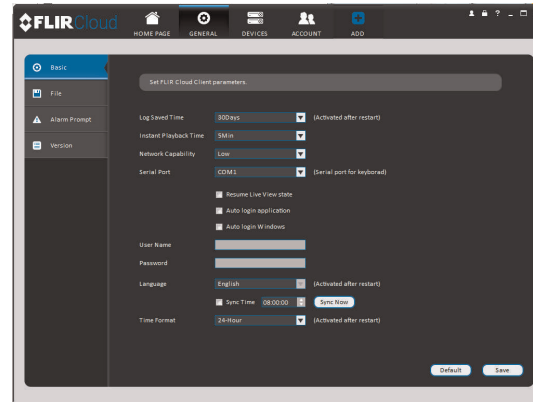
The General menu is where you can configure application settings for the client software.

To access the General menu:

- Click  and then click .

15.15.1 Basic

The Basic menu contains general settings for the client software.



The Basic menu contains the following settings:

- **Log Saved Time:** Select the number of days you would like the client to save log entries.
- **Instant Playback Time:** Select the number of minutes the system will go back when you start an instant playback.
- **Network Capability:** Select the speed of your computer's network connection.
- **Resume Live View State:** Check for the client to resume live view when it starts up. The live view will open to the last view that you had open.
- **Auto login application:** Check for the client to automatically login when it starts up without entering a user name or password.
- **Auto Login Windows:** Not supported.
- **Language:** Select the language for the client software.
- **Sync Time:** Check to have the client software sync time with your computer's system time. Select the time the software will sync the time. Click **Sync Now** to manually sync the time.
- **Time Format:** Select **12-Hour** or **24-Hour** time format. You must close the client and restart it to apply this setting.

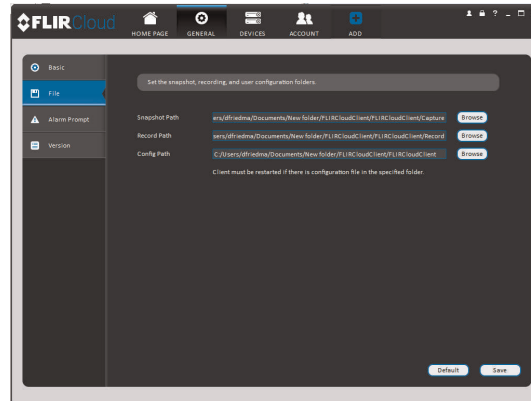


NOTE

Click **Save** to save setting changes.

15.15.2 File

The File menu allows you to select the folders where the client software will save downloaded video files and snapshots.



The File menu contains the following options:

- **Snapshot Path:** Click **Browse** to select the default folder to save snapshots.
- **Record Path:** Click **Browse** to select the default folder to save video recordings.
- **Config Path:** Click **Browse** to select the folder where the client will save software config files.



NOTE

Click **Save** to save setting changes.

PC Users: You may need to run the client software as admin to save files to enable snapshot or video recording.

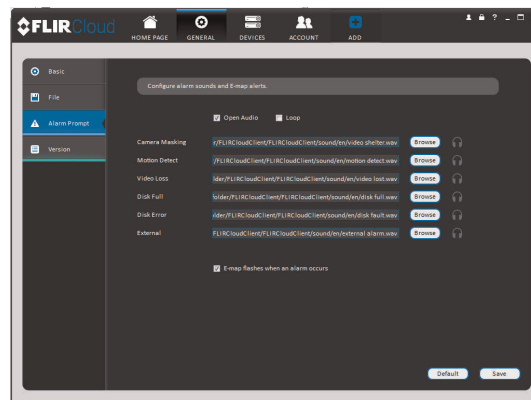
15.15.3 Alarm Prompt

The Alarm Prompt menu allows you to configure audio alerts. The client will play audio alerts when events occur. You can replace the default sounds with any .wav file.




NOTE

You must configure alarms in the Alarm CFG menu before the client will play alarm sounds.



The Alarm Prompt menu has the following options:

- **Open Audio:** Check to enable audio alerts.
- **Loop:** Check to repeat audio alerts until acknowledged.
- **Camera Masking:** Select or preview the sound that will play for camera masking alarms.

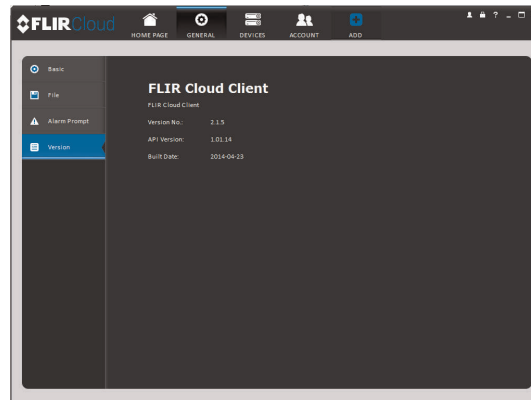
-
- **Motion Detect:** Select or preview the sound that will play for motion detection.
 - **Video Loss:** Select or preview the sound that will play for video loss alarms.
 - **Disk Full:** Select or preview the sound that will play for disk full alarms.
 - **Disk Error:** Select or preview the sound that will play for disk errors.
 - **External:** Select or preview the sound that will play for external alarms (triggered by sensor devices, which may not be supported on all systems).
 - **E-map flashes when alarm occurs:** If the camera has alarms enabled and is added to an e-map, a  appears on the e-map when an event occurs.

**NOTE**

Click **Save** to save changes.

15.15.4 Version

The Version menu shows you which version of the client software you are using. It is recommended to always run the latest version of the software from .



Connecting to your System Using Smartphone or Tablet Apps

The system is compatible with iPhone, iPad and Android devices.

Platform	App Name	Get App From
iPhone/iPad	FLIR Cloud™	Apple App Store
Android	FLIR Cloud™	Google Play Store

See www.flirsecurity.com/pro for the latest compatibility list.

16.1 iPhone

FLIR Cloud™ is an iPhone app that allows you to remotely view your system.

16.1.1 Prerequisites

- The device you are connecting to must be connected to the Internet.
- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera. For more information on DDNS, see 14.3 *DDNS Setup—Access your System Remotely over the Internet*, page 58.



NOTE




For the latest list of supported apps and devices, visit .



NOTE

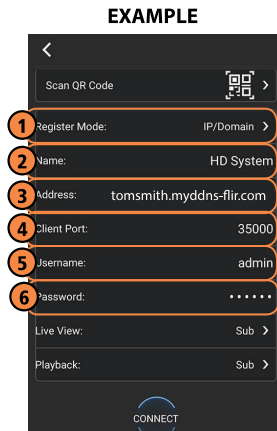
The app will ask for permission to send push notifications and to access Photos. It will only send notifications if you enable motion-activated push notifications in the Push Config menu. It needs access to Photos to save snapshots and video clips to the local storage on your mobile device.

16.1.2 Connecting to your System on iPhone

1. Download **FLIR Cloud™** for free from the App Store.
2. Tap on the FLIR Cloud™ icon  to start the app.
3. Tap **Sign up** and enter your email address and password to create a new account.
4. Tap  then .



5. Configure the following:

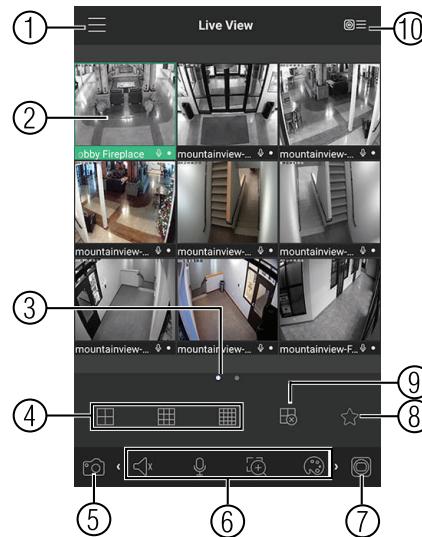


- 5.1. Tap **Register Mode** and select **IP/Domain**.
- 5.2. **Name**: Choose a name for your system of your choice.
- 5.3. **Address**: Enter the IP address or DDNS address of your system.
- 5.4. **Client Port**: Enter the **Client Port** (default: **35000**).
- 5.5. **User Name**: Enter the **system's User Name** (default: **admin**).
- 5.6. **Password**: Enter the **system's Password** (default: **000000**).

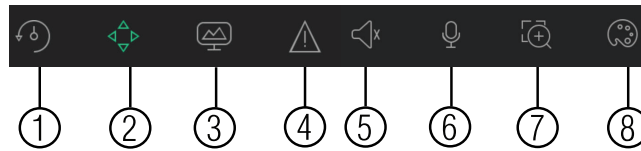
16.1.3 Live View Interface

You can use FLIR Cloud™ in portrait and landscape mode.

Live View Overview



1. **Menu**: Tap to bring up the Menu.
2. **Display Area**: Double-tap to open a channel in full screen. Swipe left or right to select a different page of channels.
3. **Pages**: Shows the number of pages available and highlights the currently selected page.
4. **Split**: Select the split-screen layout.
5. **Snapshot**: Tap to take a snapshot from the currently selected channel.
6. **Control Bar**: Contains the following options. Swipe left or right to access more options.




- 6.1. **Quick Playback:** Tap to start/stop quick playback.
 - 6.2. **PTZ Controls:** Open/close PTZ controls. PTZ camera required (not included).
 - 6.3. **Streaming Quality:** Open/close streaming quality panel.
 - 6.4. **Not supported.**
 - 6.5. **Not supported.**
 - 6.6. **Not supported.**
 - 6.7. **Digital Zoom:** Tap to activate digital zoom mode. Pinch to zoom in/out.
 - 6.8. **Color Settings:** Tap to access color controls for the currently selected camera.
- 7. **Manual record:** Tap to start/stop manual recording.
 - 8. **Access Favorites.**
 - 9. **Connect/disconnect all:** Connect to/disconnect from all previously added cameras.
 - 10. **Device List:** Tap to open a list of devices. You can use the Device List to open multiple systems or cameras at once.

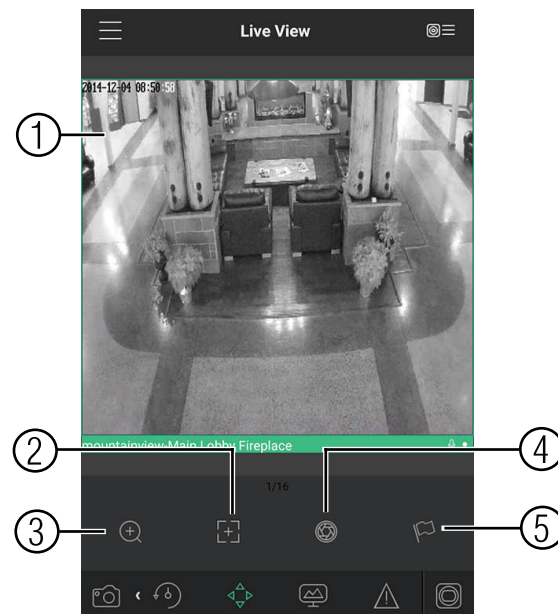
16.1.4 Controlling PTZ Cameras

If you have PTZ cameras (not included), you can control them from the app.

To control PTZ cameras:

1. Tap the display area the PTZ camera is connected to.
2. Tap  to open PTZ controls.

PTZ Controls



1. **Live Display:** Swipe to move the camera. Pinch to zoom in/out.
2. **Focus:** Tap to show focus controls.
3. **Zoom:** Tap to show zoom controls.

4. **Iris:** Tap to show iris controls.
5. **Goto preset:** Tap to access preset controls. Then use the sliders to select a preset and then tap the checkmark to goto the preset.

**NOTE**

You must set presets for the camera using the system's local menus before you can use this feature.

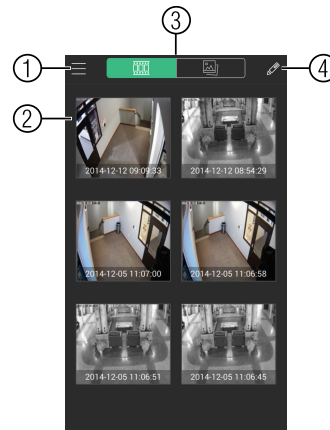
16.1.5 Viewing Snapshots and Videos with Local Files

If you have saved snapshots or videos using the app, you may open them with Local Files.

To access Local Files:

- Tap  to access the Menu, and then tap **Local Files**.

Local Files Overview



1. **Menu:** Return to Menu.
2. **Files:** Tap to open files.
3. **File Type:** Tap the options to select video files or snapshots.
4. **Options:** Tap to delete or export files to your device's local storage.

**NOTE**

Exported snapshots and video files are saved to the Photos app. Video files are saved to MP4 format.

16.1.6 Using Playback Mode on iPhone

You can access recorded video on your system using your iPhone.

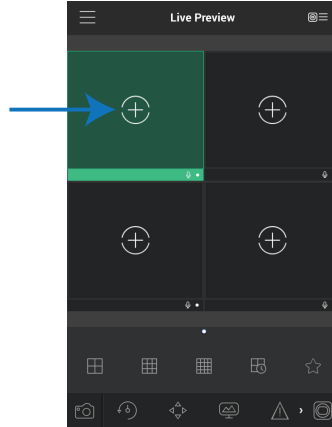
**NOTE**

You must enable Sub Stream Recording to use playback mode on mobile devices.

To use Playback Mode:

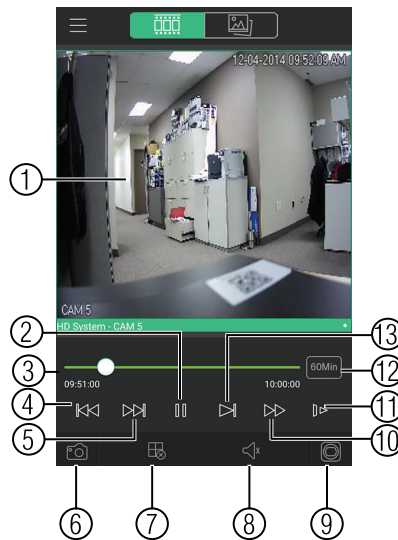
1. Tap  to access the Menu, and then tap **Playback**.

2. Tap + and select a channel to playback.



3. Select the date then the start and end times to playback.
4. Use the on-screen controls to control playback.

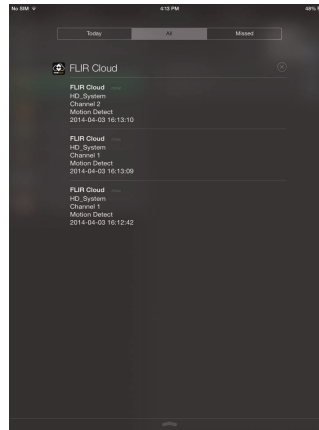
Playback Controls




- 4.1. **Display Area:** Double-tap to open in full-screen.
- 4.2. **Play/pause.**
- 4.3. **Time Bar:** Tap inside the bar to fast forward or rewind.
- 4.4. **Previous:** Select previous video file.
- 4.5. **Next:** Select next video file.
- 4.6. **Snapshot:** Tap to take a snapshot from the selected camera.
- 4.7. **Stop All:** Stop playback on all channels.
- 4.8. **Not supported.**
- 4.9. **Manual Record:** Tap to start/stop recording to your mobile device's local storage.
- 4.10. **Fast.**
- 4.11. **Slow.**
- 4.12. **Time Range:** Tap to change the range of time shown in the time bar.
- 4.13. **Next frame.**


16.1.7 Enabling Push Notifications

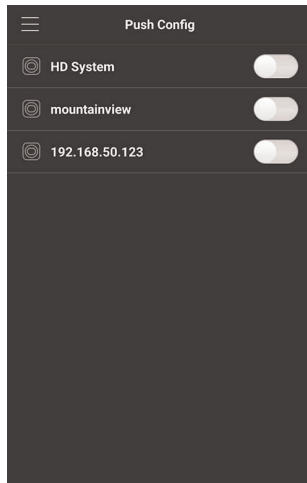
You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video or a snapshot attachment from the camera that detected motion.



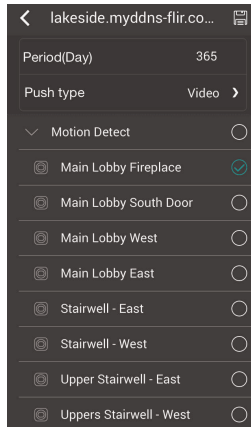
 NOTE
Your cameras must have motion detection activated to receive push notifications.


To enable Push Notifications:

1. Tap  to access the Menu, and then tap **Push Config**.
2. Tap the system you would like to configure.



3. Tap **Motion Detect** and then check each channel you would like to receive push notifications from.



4. Tap  to save changes. You will now receive a notification when one of the selected cameras detect motion.

16.1.8 Using the Event List

The Event List menu shows a list of events that were sent to your device via push notifications.

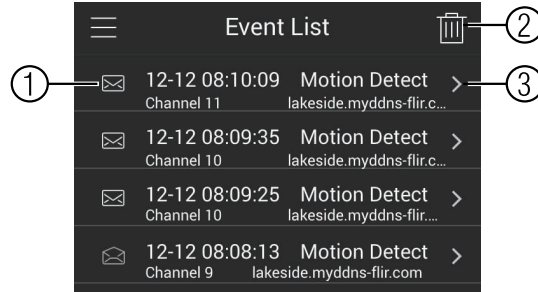
NOTE

You must configure push notifications before you can use the Event List.

To access the Event List:

- Tap  to access the Menu, and then tap **Event List**.

Event List Overview



1. **Events:** Shows the details of each motion detection event. Tap the event to view the video or snapshot.
2. **Delete All:** Tap to delete all events in the Event List.

NOTE

To delete a single event, swipe it to the left and then tap **Delete**.

3. **View:** Tap to view the video or snapshot for the selected event.

16.1.9 Using Favorites

Favorites allows you to select a group of cameras as a favorite. You can then quickly bring up the group of cameras in Live View without having to individually select each camera.


To use Favorites:

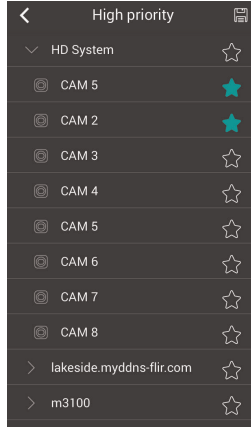
1. Tap to access the Menu, and then tap **Favorites**.
2. Tap a group to configure an existing group.


NOTE

Tap to create a new group and then enter a name for the new group.

3. To add cameras to the group, tap .




4. Select the cameras you would like to add to the group. Tap  to save changes.

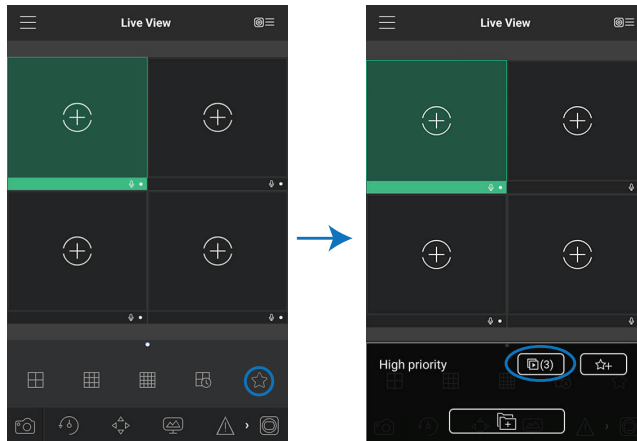


 **NOTE**

To delete cameras that have been added to the group, select the group in the group list. Then, swipe left and tap **Delete**.

To open Favorites in Live View:

1. Tap  to access the Menu, and then tap **Live View**.
2. Tap , and then tap  to open the group.



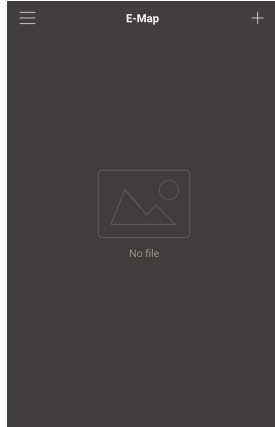
16.1.10 Using the E-Map


E-Map allows you to place cameras over a still image. For example, you can use the E-Map to create a virtual map of your cameras over a floor plan of your home or business.

To add an E-Map:


1. Tap  to access the Menu, and then tap **E-Map**.

2. Tap .



3. Select a .jpg image on your mobile device.
4. Press  and select a camera. Drag the camera on the screen to place it on the map. Repeat to add additional cameras.

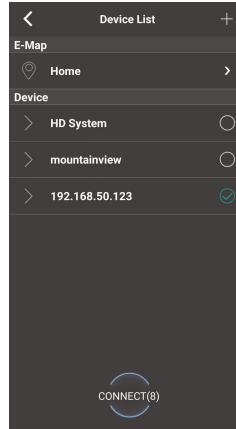


5. Click . Choose a name for your E-Map and then tap **OK**.

To open cameras from an E-Map:

1. Tap  in Live View.

2. Select the E-Map in the Device List.




3. Tap the camera or cameras to select and then tap **Connect** to open the cameras.



16.1.11 Device Manager

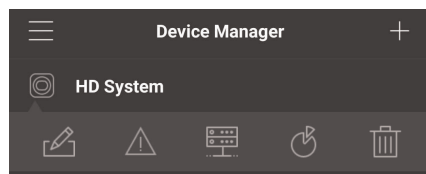
You can use Device List to add, delete, or edit your systems.

To access Device Manager:

- Tap  to access the Menu, and then tap **Device Manager**.


To edit a system:

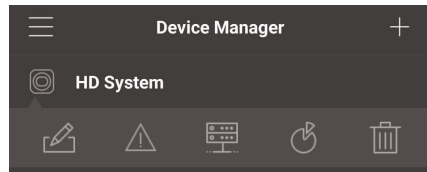
1. Tap the system in Device Manager. Tap .



2. Edit the connection details as needed.
3. Tap **Connect** to save changes and connect to the system.

To delete a system:

1. Tap the system you would like to delete.
2. Tap . Tap **OK** to confirm.

**16.2 iPad**

FLIR Cloud™ is an iPad app that allows you to remotely view your system.

16.2.1 Prerequisites

- The device you are connecting to must be connected to the Internet.
- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera. For more information on DDNS, see 14.3 *DDNS Setup—Access your System Remotely over the Internet*, page 58.




**NOTE**

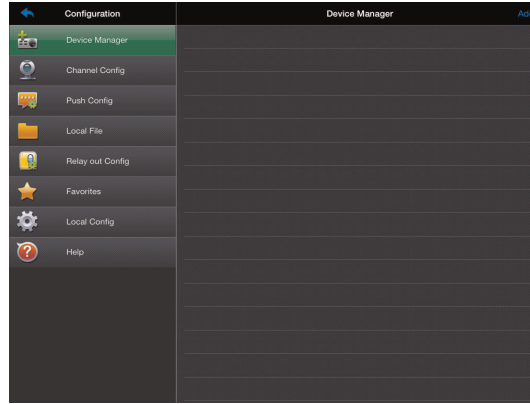
For the latest list of supported apps and devices, visit .

**NOTE**

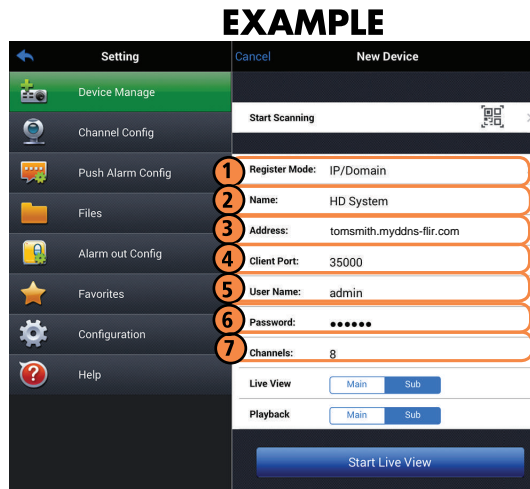
The app will ask for permission to send push notifications and to access Photos. It will only send notifications if you enable motion-activated push notifications in the Push Config menu. It needs access to Photos to save snapshots and video clips to the local storage on your mobile device.

16.2.2 Connecting to your system on an iPad

1. Install FLIR Cloud™ for free from the App Store.
2. Tap on the FLIR Cloud™ icon () to start the app.
3. Tap  then .
4. Tap **Device Manager**.

5. Tap **Add**.

6. Configure the following:

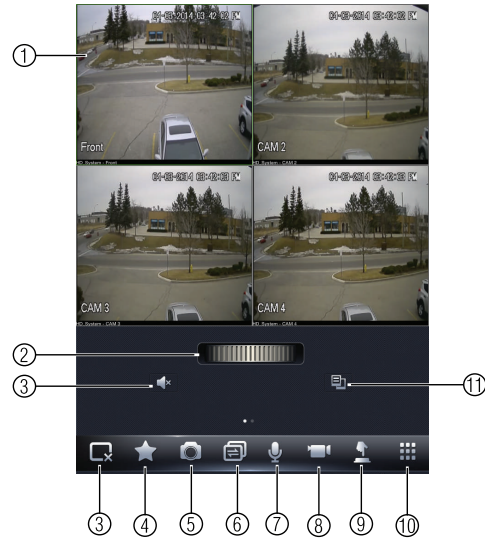


- 6.1. Tap **Register Mode** and select **IP/Domain**. Then tap **New Device** to return to the New Device screen.
 - 6.2. **Name**: Choose a name for your system of your choice.
 - 6.3. **Address**: Enter the DDNS or IP address of your device.
 - 6.4. **Client Port**: Enter the Client Port (default: **35000**).
 - 6.5. **User Name**: Enter the system's User Name (default: **admin**).
 - 6.6. **Password**: Enter the system's Password (default: **000000**)
 - 6.7. **Channel Amount**: Enter the number of channels your system has.
7. Tap **Start Live View**. You will be prompted to change the system password.
 8. Enter a new 6 character password and tap **OK**. This password will be used to log on to your system from now on.
 9. The app opens in Live View and streams video from all connected cameras.

16.2.3 Live View Interface

You can use FLIR Cloud™ in landscape or portrait mode.

Live View Overview



1. **Display area:** Double-tap to open camera in full screen.
2. **Favorites:** Slide to select favorites.
3. **Disconnect:** Disconnect from all open cameras.
4. **Add to favorites:** Add the current view to favorites.
5. **Snapshot:** Tap to take a snapshot from the currently selected channel.



NOTE

You can view or share snapshots using the Photos app.

6. **Change display view.**
7. **Not supported.**
8. **Manual record:** Tap to start/stop manual recording from this channel.
9. **Not supported.**
10. **Open menus.**
11. **Select different camera.**

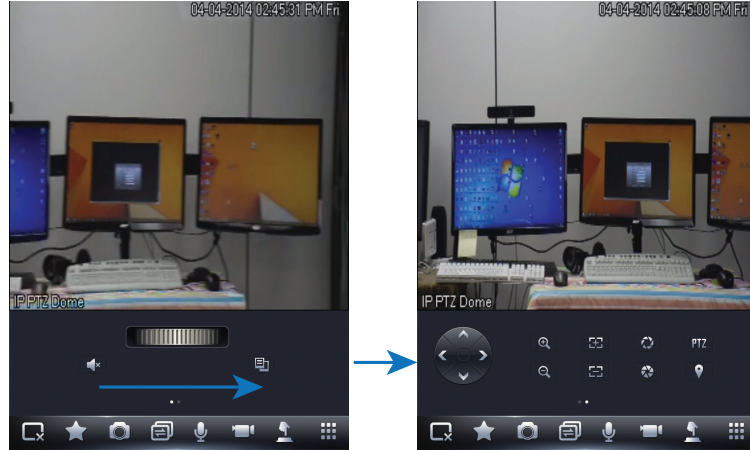
16.2.4 Controlling PTZ Cameras

If you have PTZ cameras (not included), you can control them using the app.

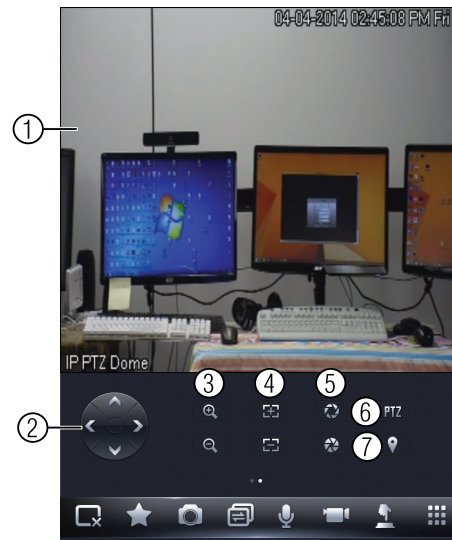
To control PTZ cameras:

1. In Live View, tap the window the PTZ camera is connected to.

- Slide the middle controls to the right to access PTZ controls.



PTZ Controls



- Live display:** Swipe to move the camera. Pinch to zoom in/out.
- Direction buttons:** Tap to move the camera.
- Zoom:** Tap +/- to zoom the camera in/out.
- Focus:** Tap +/- to adjust the focus.
- Iris:** Tap +/- to adjust the iris.
- PTZ/EPTZ:** Tap to switch between PTZ and EPTZ mode. Use PTZ mode to control PTZ cameras. Use EPTZ mode to activate digital zoom mode on non-PTZ cameras.
- Goto preset:** Tap to goto a camera preset.



NOTE

You must set presets for the camera using the system's local menus before you can use this feature.



16.2.5 Using Playback Mode on iPad

You can access recorded video on your system using your iPad.

**NOTE**

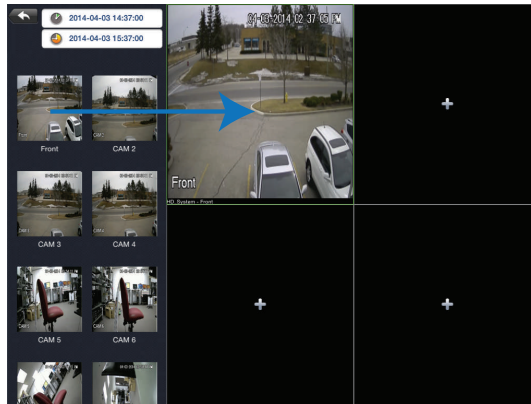
You must enable Substream Recording to use playback mode on mobile devices.

To use Playback Mode:

1. From Live View tap  then .
2. In Portrait Mode: Tap +, select the start time and end time for your search, and select the camera you would like to playback.

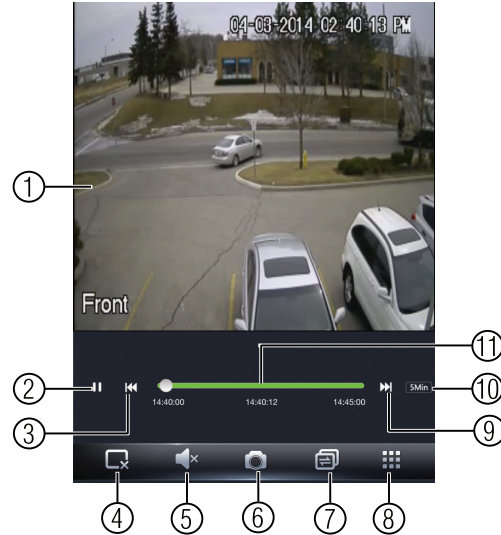
OR

In Landscape Mode: Select the start time and end time for your search, and drag the camera you would like to playback to the display area.



3. Use the playback controls.

Playback Controls



1. **Display area:** Double-tap to open camera in full screen.
2. **Play/pause.**
3. **Previous file.**
4. **Disconnect:** Disconnect from the currently selected camera.
5. **Not supported.**
6. **Snapshot:** Tap to take a snapshot from the currently selected camera.
7. **Change display view.**
8. **Menu.**
9. **Next file.**
10. **Time range:** Tap to change the range of time shown in the time bar.
11. **Time Bar:** Tap inside the bar to fast forward or rewind.





NOTE

Playback controls are only shown in portrait mode.

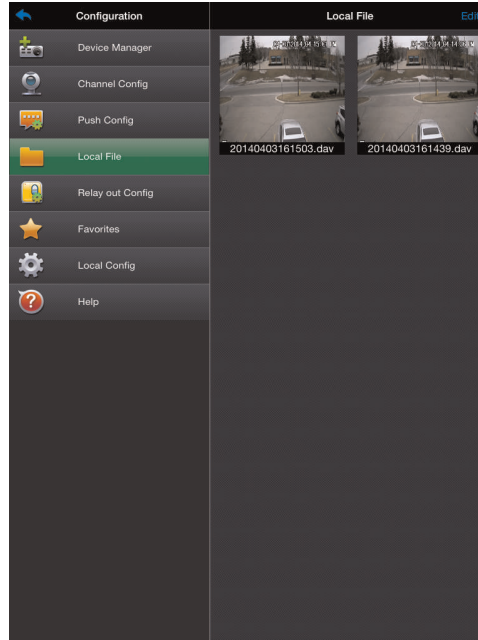
16.2.6 Using Local File to View Manual Recordings

You can view manual recordings saved to your mobile device using the Local File menu.


To view manual recordings:

1. From live view, tap  then .
2. Tap **Local Files**.

3. Tap a video file to open it.



To delete videos:

1. Tap **Edit**.
2. Select the videos you would like to delete and tap .



16.2.7 Enabling Push Notifications

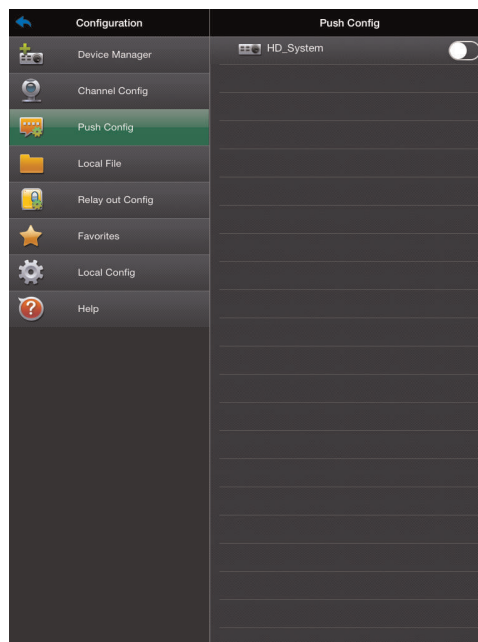
You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open video or an image from the camera that detected motion.

**NOTE**

Your cameras must have motion detection activated to receive push notifications.

To enable Push Notifications:

1. From live view, tap  then .
2. Tap **Push Config**.
3. Tap the slider for the system you would like to configure.




4. Tap **Motion Detect** then check each channel you would like to receive push notifications from.





5. Under **Type**, select Playback to attach a video file with each push notification. Or, select **Picture** to attach a still image of the camera that detected motion.
6. Tap **OK** to save change. Whenever the selected cameras detect motion, you will receive a notification.

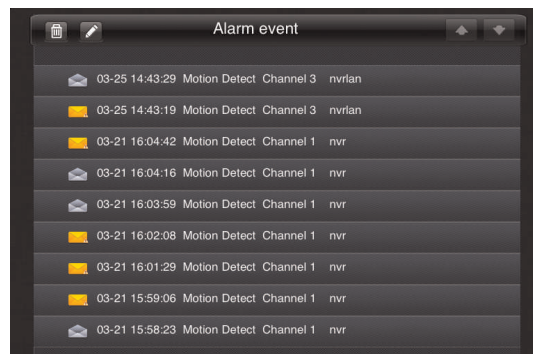
16.2.8 Using the Event List

The Event List menu shows a list of events that were sent to your device via push notifications.

 NOTE
You must configure push notifications before you can use the Event List.

To access the Event List:


1. From live view, tap  then .



16.2.9 Using Favorites

Favorites allows you to select a group of cameras as a favorite. You can then quickly bring up the group of cameras in Live View without having to individually select each camera.

To create favorites:



1. In Live View, tap  to save the cameras that are currently open as a favorite.
2. Enter a name for the favorite and tap **OK**.

To open favorites in Live View:

- In Live View, slide the dial to cycle through favorites.



To edit favorites:

1. From live view, tap  then .
2. Tap **Favorites**.
3. Tap the favorite you would like to edit.





4. Tap **Edit**.
5. Select the cameras you would like to include in the favorite and then tap **Save**.

16.2.10 Using the E-Map

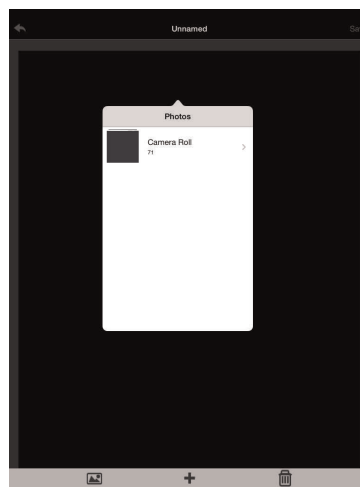
E-Map allows you to place cameras over a still image. For example, you can use the E-Map to create a virtual map of your cameras over a floor plan of your home or business.

To add an E-Map:

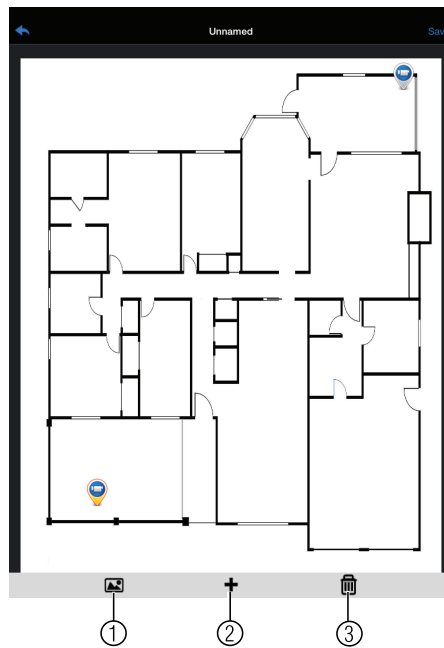
1. From live view, tap  then .
2. Tap **Add**.



3. Select a .jpg image file on your mobile device.



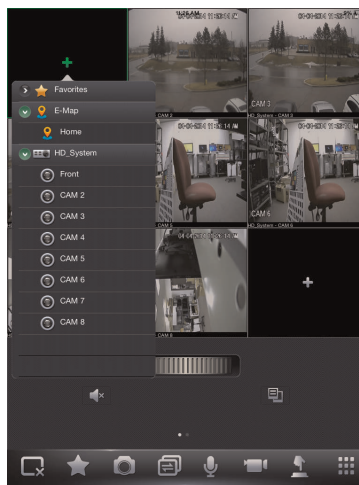
4. To edit the E-map:



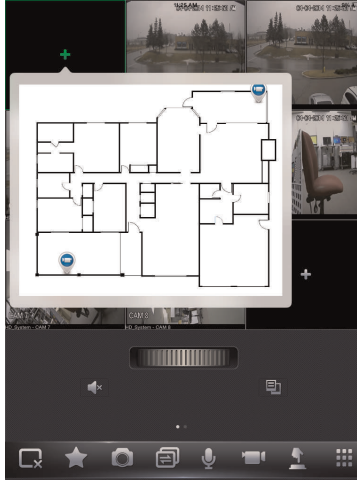
- 4.1. **Select Image:** Select different image file to use for your E-Map.
- 4.2. **Add Camera:** Tap + to select cameras to add to your E-Map. Then drag the camera to place it on the E-Map.
- 4.3. **Delete E-Map.**
5. When you are finished editing the E-Map, tap **Save** and enter a name for the E-Map to save changes.

To open cameras using the E-Map:

1. In live view, tap + on an empty display window and select the E-Map.





2. Tap a camera from the E-map to open.




16.2.11 Using the Device Manager

Device Manager allows you to manage your systems.

To access Device Manager:

1. From live view, tap  then .
2. Tap **Device Manager**.

To delete a system:

1. Tap the system to select it.
2. Tap . Tap **Yes** to confirm.



To modify a system:

1. Tap a system to select.
2. Tap the system again to open the edit screen.
3. Update the connection details as needed and then tap **Start Live View**.

16.3 Android

FLIR Cloud™ allows you to remotely view your system on Android devices.

16.3.1 Prerequisites




- The device you are connecting to must be connected to the Internet.
- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera. For more information on DDNS, see 14.3 *DDNS Setup—Access your System Remotely over the Internet*, page 58.



NOTE

For the latest list of supported apps and devices, visit .

16.3.2 Connecting to your System on Android

1. Download **FLIR Cloud™** for free from the Google Play Store.
2. Tap on the FLIR Cloud™ icon () to start the app.
3. Tap **Sign up** and enter your email address and password to create a new account.
4. Tap  then .



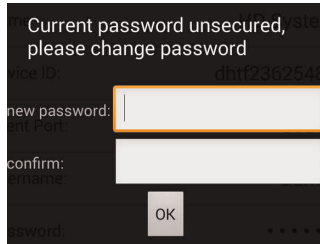
5. Configure the following:

EXAMPLE



- 5.1. Tap **Register Mode** and select **IP/Domain**.
- 5.2. **Name:** Choose a name for your system of your choice.
- 5.3. **Address:** Enter the IP address or DDNS address of your device.
- 5.4. **Client Port:** Enter the **Client Port** (default: **35000**).
- 5.5. **Username:** Enter the **system's User Name** (default: **admin**).
- 5.6. **Password:** Enter the **system's Password** (default: **000000**).
6. Tap **Connect**. You will be prompted to change the system password.

7. Enter a new 6 character password and tap **OK**. This password will be used to log on to your system from now on.

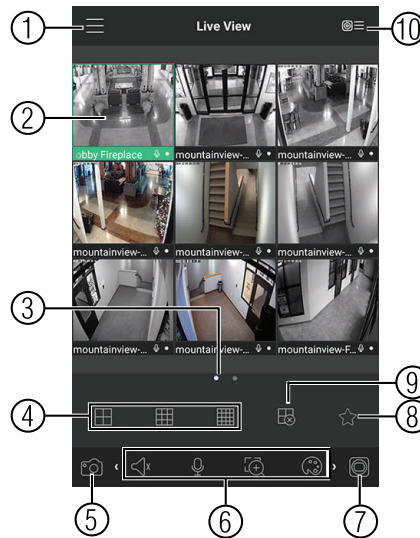


8. The app opens in Live View and streams video from your cameras.

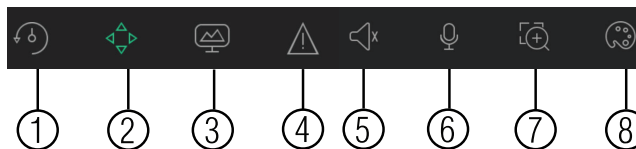
16.3.3 Live View Interface

You can use FLIR Cloud™ in portrait and landscape mode.

Live View Overview



1. **Menu:** Tap to bring up the Menu.
2. **Display Area:** Double-tap to open a channel in full screen. Swipe left or right to select a different page of channels.
3. **Pages:** Shows the number of pages available and highlights the currently selected page.
4. **Split:** Select the split-screen layout.
5. **Snapshot:** Tap to take a snapshot from the currently selected channel.
6. **Control Bar:** Contains the following options. Swipe left or right to access more options.




- 6.1. **Quick Playback:** Tap to start/stop quick playback.
- 6.2. **PTZ Controls:** Open/close PTZ controls. PTZ camera required (not included).
- 6.3. **Streaming Quality:** Open/close streaming quality panel.

- 6.4. **Not supported.**
 - 6.5. **Not supported.**
 - 6.6. **Not supported.**
 - 6.7. **Digital Zoom:** Tap to activate digital zoom mode. Pinch to zoom in/out.
 - 6.8. **Color Settings:** Tap to access color controls for the currently selected camera.
7. **Manual record:** Tap to start/stop manual recording.
 8. **Access Favorites.**
 9. **Connect/disconnect all:** Connect to/disconnect from all previously added cameras.
 10. **Device List:** Tap to open a list of devices. You can use the Device List to open multiple systems or cameras at once.

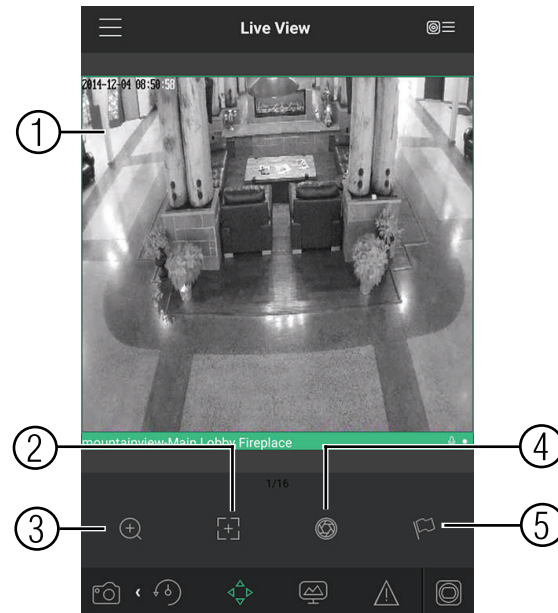
16.3.4 Controlling PTZ Cameras

If you have PTZ cameras (not included), you can control them from the app.

To control PTZ cameras:

1. Tap the display area the PTZ camera is connected to.
2. Tap  to open PTZ controls.

PTZ Controls



1. **Live Display:** Swipe to move the camera. Pinch to zoom in/out.
2. **Focus:** Tap to show focus controls.
3. **Zoom:** Tap to show zoom controls.
4. **Iris:** Tap to show iris controls.
5. **Goto preset:** Tap to access preset controls. Then use the sliders to select a preset and then tap the checkmark to goto the preset.

NOTE

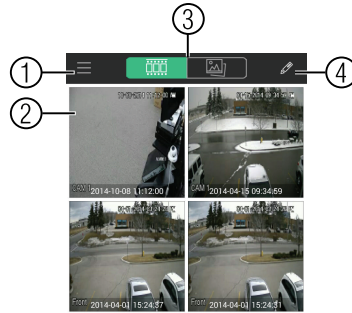
You must set presets for the camera using the system's local menus before you can use this feature.

16.3.5 Viewing Snapshots and Videos with Local Files

If you have saved snapshots or videos using the app, you may open them with Local Files.

To access Local Files:

- Tap  to access the Menu, and then tap **Local Files**.



1. **Menu:** Return to Menu.
2. **Files:** Tap to open files.
3. **File Type:** Tap the options to select video files or snapshots.
4. **Options:** Tap to share, delete, or export files to your device's local storage.



NOTE

Exported video files are saved to MP4 format in the folder `/snapshot/mp4/`, which you can access by connecting your Android device to a computer using a USB cable.

16.3.6 Using Playback Mode on Android

You can access recorded video on your system using your Android.



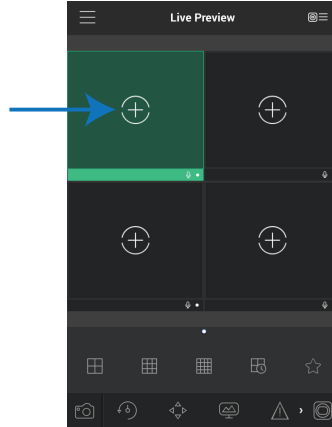
NOTE

You must enable Sub Stream Recording to use playback mode on mobile devices. For details on enabling Sub Stream Recording, see .

To use Playback Mode:

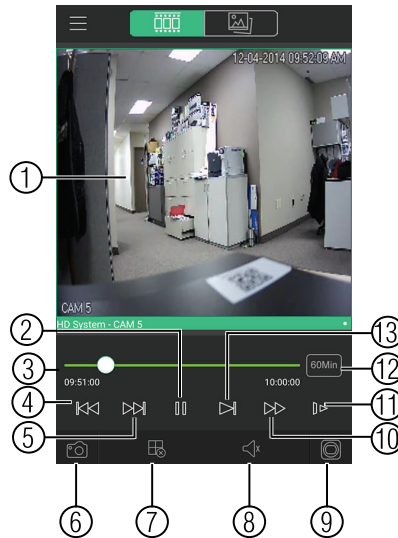
1. Tap  to access the Menu, and then tap **Playback**.

2. Tap + and select a channel to playback.



3. Select the date then the start and end times to playback.
4. Use the on-screen controls to control playback.

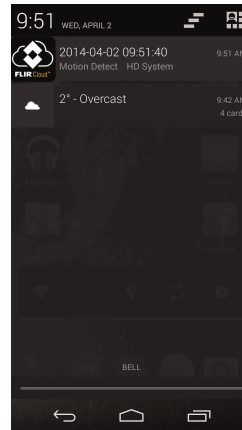
Playback Controls



- 4.1. **Display Area:** Double-tap to open in full-screen.
- 4.2. **Play/pause.**
- 4.3. **Time Bar:** Tap inside the bar to fast forward or rewind.
- 4.4. **Previous:** Select previous video file.
- 4.5. **Next:** Select next video file.
- 4.6. **Snapshot:** Tap to take a snapshot from the selected camera.
- 4.7. **Stop All:** Stop playback on all channels.
- 4.8. **Not supported.**
- 4.9. **Manual Record:** Tap to start/stop recording to your mobile device's local storage.
- 4.10. **Fast.**
- 4.11. **Slow.**
- 4.12. **Time Range:** Tap to change the range of time shown in the time bar.
- 4.13. **Next frame.**

16.3.7 Enabling Push Notifications


You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video or a snapshot attachment from the camera that detected motion.

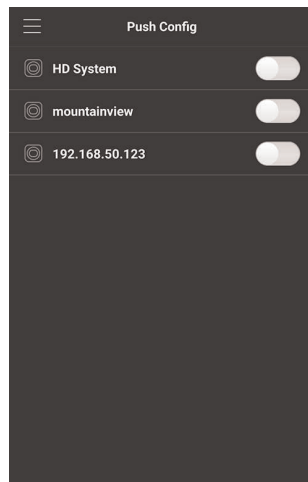


NOTE

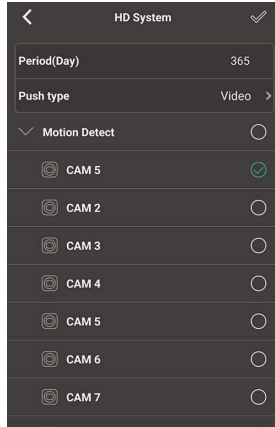
Your cameras must have motion detection activated to receive push notifications.


To enable Push Notifications:

1. Tap  to access the Menu, and then tap **Push Config**.
2. Tap the system you would like to configure.




3. Tap **Motion Detect** and then check each channel you would like to receive push notifications from.



4. Under **Push type**, select **Video** to attach a video clip to each push notification. Or, select **Image** to attach an image to each push notification.
5. Tap  to save changes. You will now receive a notification when one of the selected cameras detect motion.

16.3.8 Using the Event List

The Event List menu shows a list of events that were sent to your device via push notifications.

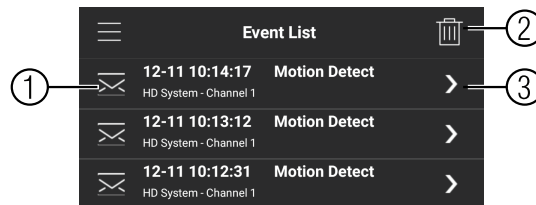
 **NOTE**

You must configure push notifications before you can use the Event List.

To access the Event List:

- Tap  to access the Menu, and then tap **Event List**.

Event List Overview





1. **Events:** Shows the details of each motion detection event. Long press an event to delete just that event.
2. **Delete All:** Tap to delete all events in the Event List.
3. **View:** Tap to view the video or snapshot for the selected event.


16.3.9 Using Favorites



Favorites allows you to select a group of cameras as a favorite. You can then quickly bring up the group of cameras in Live View without having to individually select each camera.

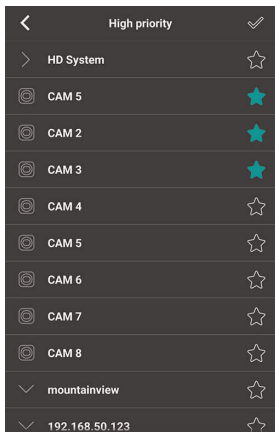
To use Favorites:


1. Tap  to access the Menu, and then tap **Favorites**.
2. Tap a group to configure an existing group.

 **NOTE**

Tap  to create a new group and then enter a name for the new group.




3. To add cameras to the group, tap .
4. Select the cameras you would like to add to the group. Tap  to save changes.

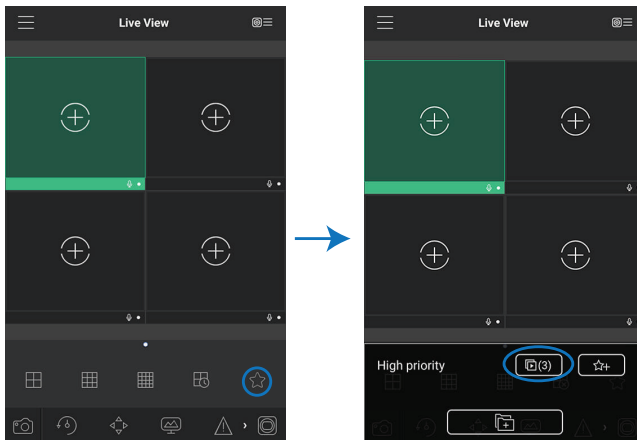


 **NOTE**

To delete cameras that have been added to the group, select the group in the group list. Then, press and hold to delete cameras from the group.

To open Favorites in Live View:



1. Tap  to access the Menu, and then tap **Live View**.
2. Tap , and then tap  to open the group.

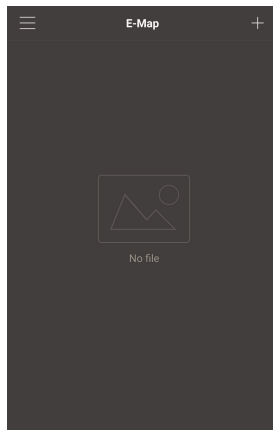



16.3.10 Using the E-Map

E-Map allows you to place cameras over a still image. For example, you can use the E-Map to create a virtual map of your cameras over a floor plan of your home or business.


To add an E-Map:

1. Tap  to access the Menu, and then tap **E-Map**.
2. Tap .



3. Select a .jpg image on your mobile device.
4. Press  and select a camera. Drag the camera on the screen to place it on the map. Repeat to add additional cameras.

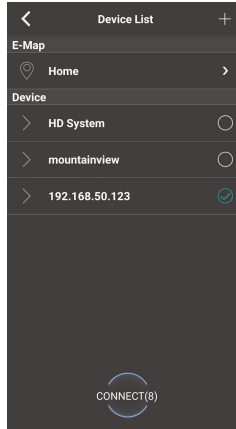


5. Click . Choose a name for your E-Map and then tap **OK**.

To open cameras from an E-Map:

1. Tap  in Live View.

2. Select the E-Map in the Device List.




3. Tap the camera or cameras to select and then tap **Connect** to open the cameras.



16.3.11 Device Manager

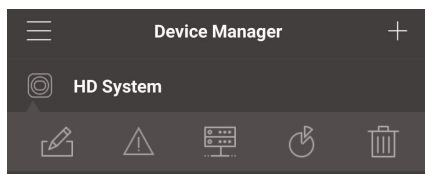
You can use Device List to add, delete, or edit your systems.

To access Device Manager:

- Tap  to access the Menu, and then tap **Device Manager**.


To edit a system:

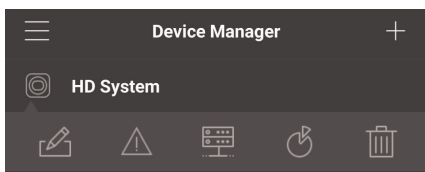
1. Tap the system in Device Manager. Tap .



2. Edit the connection details as needed.
3. Tap **Connect** to save changes and connect to the system.

To delete a system:

1. Tap the system you would like to delete.
2. Tap . Tap **OK** to confirm.



Remote Viewing On Internet Explorer

You can also view your system remotely using Internet Explorer (version 8 or later required).



NOTE

Remote viewing is only compatible with Internet Explorer. Mozilla Firefox, Opera, Safari, and other browsers are not supported.

17.1 Prerequisites

- The HTTP Port (default: **80**) and Client Port (default: **35000**) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera. For more information on DDNS, see 14.3 *DDNS Setup—Access your System Remotely over the Internet*, page 58.
- The NVR must have internet access.

To view your system using Internet Explorer:

1. Open Internet Explorer. It is recommended to select **Run as Administrator** when opening Internet Explorer to ensure full functionality.
2. In the address bar, enter your system's IP address or DDNS address followed by the HTTP Port (default: 80). For example, `http://192.168.1.1:80` or `http://tomsmith.myddns-flir.com:80`.



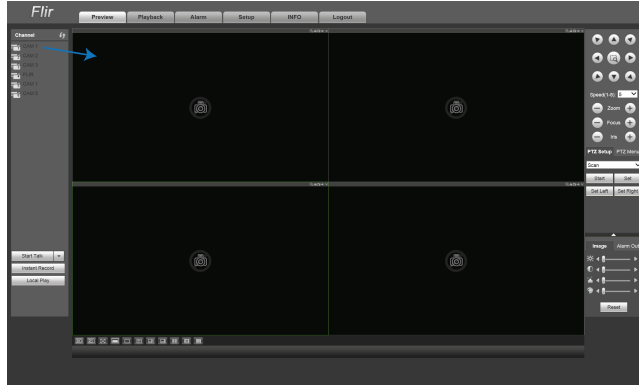
NOTE

You **MUST** include `http://` in order to access your system.

3. An attention bar appears at the top or bottom of the screen to prompt you to install ActiveX plugins, click **Install** or **Allow** and follow the prompts to install the plugins.
4. Enter the system user name and password (by default **admin / 000000**).
5. Select **LAN** to connect using the main (high quality) stream. Select **WAN** to use the substream to conserve bandwidth and for improved performance when connecting over the Internet.
6. Click **Login** to log in.



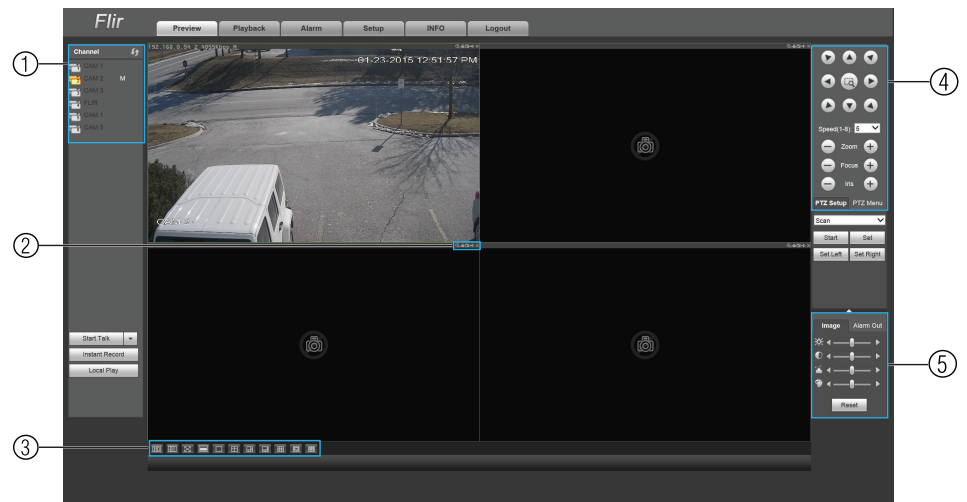
- Click and drag cameras to the display window to view them live.



17.1.1 IE Live Display Overview

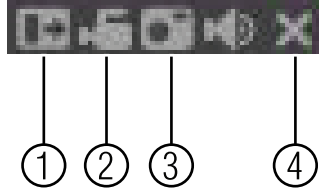
NOTE

Some options are not available in WAN mode.




- Cameras:** Click and drag to the display area to view.

2. Camera Controls:



- 2.1. **Digital zoom:** Click and drag to select the zoom area.
- 2.2. **Manual record.**
- 2.3. **Snapshot.**
- 2.4. **Close.**

 NOTE
Manual Recordings are saved to <i>C:\RecordDownload</i> . Snapshots are saved to <i>C:\PictureDownload</i> . You must select Run as Administrator when you open Internet Explorer to use these functions.

1. Live View Toolbar:



- 1.1. **Select image quality.**
 - 1.2. **Fluency/latency.**
 - 1.3. **Full-screen.**
 - 1.4. **Select display view.**
- 1. **PTZ Controls.**
 - 2. **Color Settings:** Use the sliders to adjust the brightness, contrast, saturation, and hue for the selected camera.

Setting up the Remote Viewing Feature requires several steps. Networking skills are required to correctly configure the remote viewing functions.

18.1 What Do I Need?

- NVR System.
- A PC with the installed CMS software.



NOTE

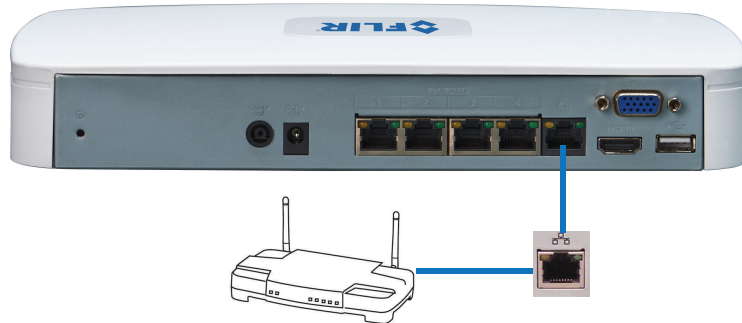
For Mac users, please visit www.flirsecurity.com/pro for instructions.


- A router (not provided with the system) and High Speed Cable or DSL Internet Connectivity (for remote viewing outside your network).

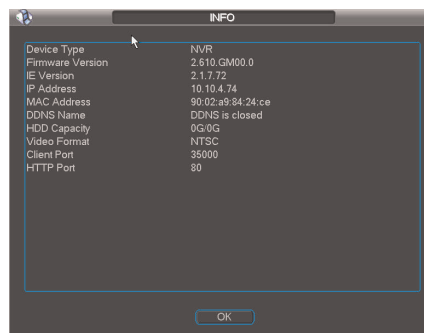
18.2 Network Setup / Remote Access Overview

To setup remote viewing:

1. With the system powered off, connect the system to the router using an Ethernet cable.



2. Power the system on.
3. Find the IP address for your NVR. To do this, left-click to open the Navigation Bar. Log-in if prompted. Click  to open the System Info screen.




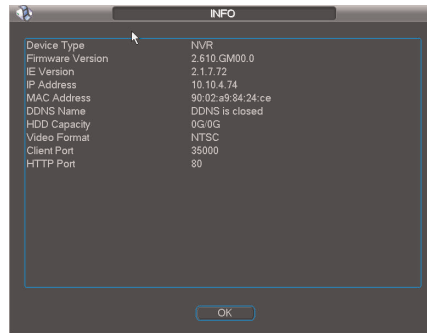
4. On your router, port forward the Client port (default: **35000**) and HTTP port (default: **80**) to your NVR's IP address. To set up port forwarding, use the included Auto Port Forwarding Wizard software (19 *Auto Port Forwarding Wizard*, page 132) or refer to your router manufacturer's instruction
5. Setup an account at <http://ddns.myddns-flir.com>. For details, 20 *Setting Up DDNS Service*, page 139.

18.3 Finding your IP Address and MAC Address

The IP and MAC address of your system are necessary for DDNS setup. DDNS allows you to view and control your system from a remote location.

To find your IP and MAC address:

- Left-click to open the Navigation Bar. Login if prompted. Click  to open the System Info screen.



18.3.1 Finding Your External IP Address

If you wish to find your external IP address, you can type **what is my ip address** into Google or use a third-party website such as <http://whatismyip.org>.

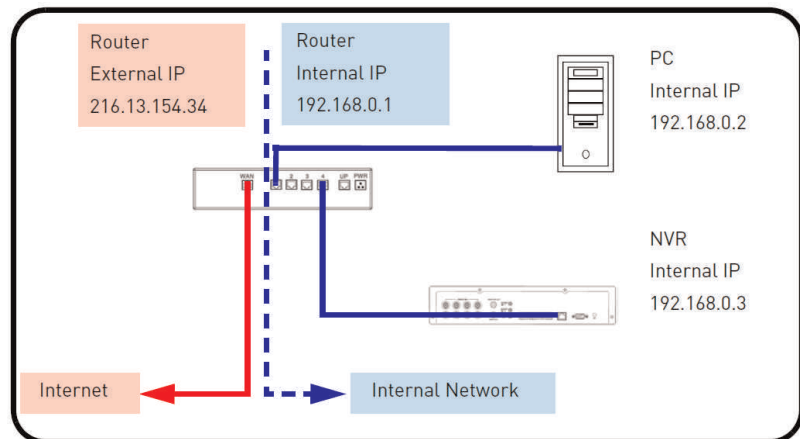
Your external IP address can also be found within your router settings. Refer to your router's user guide for further details.

18.3.2 Enabling Port Forwarding

You need to enable port forwarding on your router to allow for external communications with your system for the following ports:

- **80** (HTTP Port).
- **35000** (Client Port).

Network Example



When a computer on the Internet needs to send data to your internal network, it sends this data to the external IP address of the Router. The Router then needs to decide where this data is to be sent to. This is where setting up Port Forwarding becomes important.

Port Forwarding tells the router which device on the internal network to send the data to. When you set up port forwarding on your Router, it takes the data from the external IP address:port number and sends that data to an internal IP address:port number (i.e. Router External IP 216.13.154.34:80 to NVR Internal IP 192.168.0.3:80).

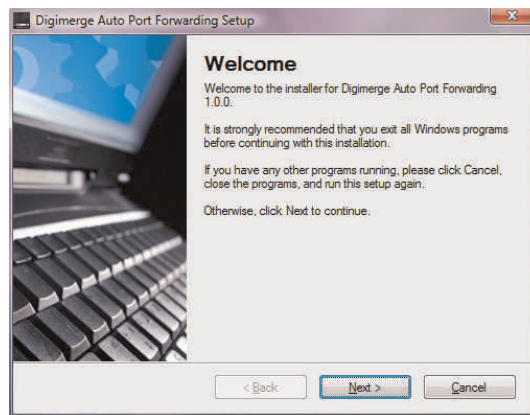
Please see resources available at www.flirsecurity.com/pro for more assistance with port forwarding.

The Auto Port Forwarding Wizard is an exclusive software that easily automates router port forwarding. Before setting up a DDNS account, it is recommended to run the Auto Port Forwarding Wizard to port forward the required ports.

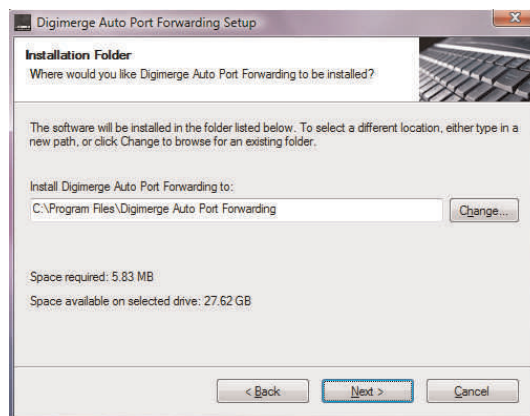
19.1 Installation

To install the Auto Port Forwarding Wizard:

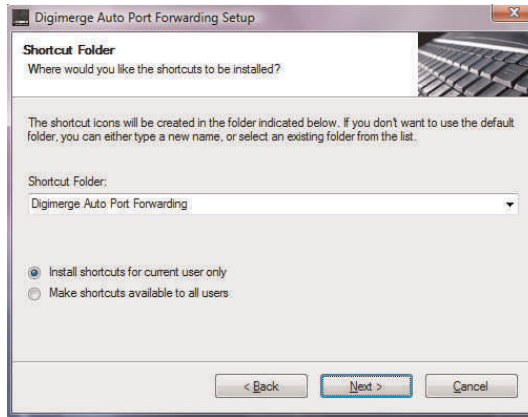
1. Download the Auto Port Forwarding Wizard from www.flirsecurity.com/pro and run the installer file.
 - The installation window opens.
2. Click **Next** to continue.



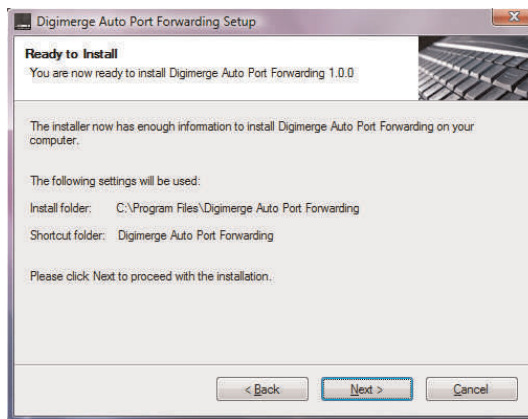
3. Click the **Change** button to change the default installation directory (optional). Click the **Next** button to continue.




4. Select the users who can see the Auto Port Forwarding shortcut (Optional). Click the **Next** button to continue.



5. Click the **Next** button and then click **Finish** to complete the software installation.



6. Double-click the Auto Port Forwarding shortcut () from your desktop to start the program.

19.2 Configuration

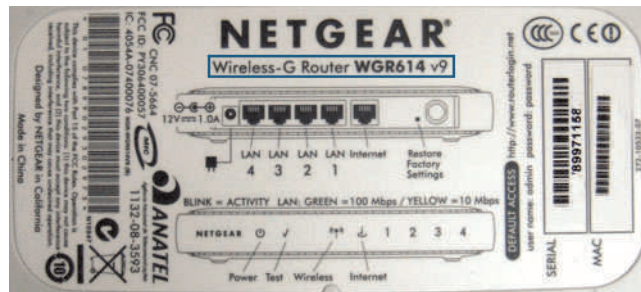


You must have the following before you configure the software:

1. Your router's model number and version number
2. Your router's user name and password.
3. Your device's IP address.
4. Your device's port numbers that require port forwarding.

19.2.1 Obtaining Your Router Model Number and Version

On most routers, the model and version number can be found underneath the router, printed on a sticker.



- **WGR614** refers to the model number.
- **v9** refers to the version number.



NOTE

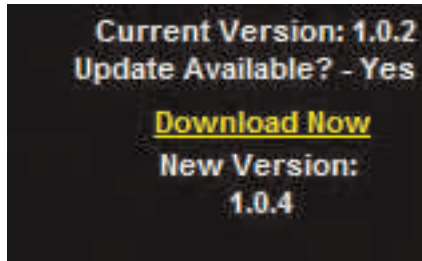
It is recommended to upgrade your router to the latest firmware available from your router manufacturer before running the Auto Port Forward Wizard software. Check the website for your router's manufacturer for details.

19.2.2 Initial Startup: Select Language

1. Click the **Language** drop-down menu and select a language (English, French, Spanish). Click the **Start** button to continue.



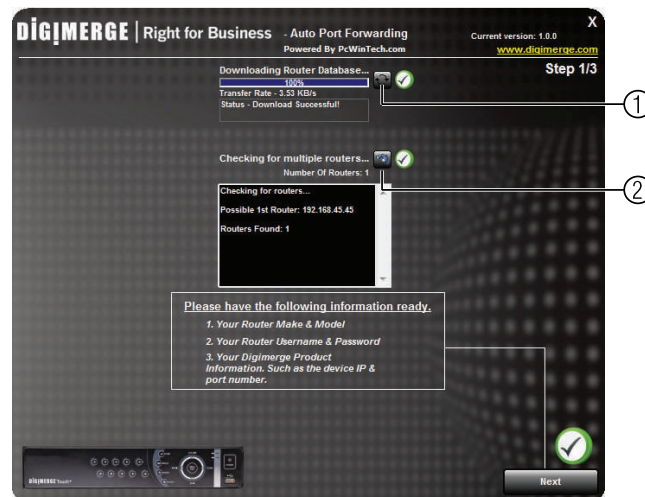
- If software updates are available, click the **Download Now** button in the top-right corner. A software update includes an updated list of routers compatible with the Auto Port forwarding Wizard.





- Run the update file and install the latest version of the software.

19.2.3 Step 1: Populate the Router Database

The Auto Port Forwarding Wizard automatically populates a list of current routers, and detects the number of connected routers.



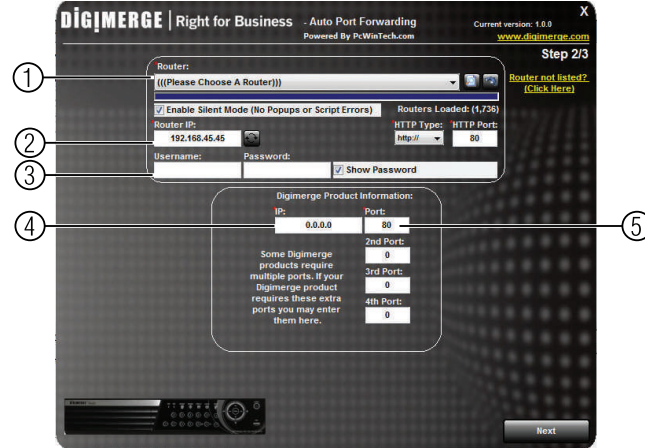
- (Optional) Click  to refresh the router database.
- (Optional) Click  to check for multiple routers.
- Click the **Next** button after the software detects your router configuration.




NOTE


If more than one router is detected, you may need to contact your ISP (Internet Service Provider) to port forward. For details on configuring multiple routers, see 19.2.7 *Configuring Multiple Routers*, page 137.


19.2.4 Step 2: Enter your Router Settings



- Under the **Router** drop-down list, select the model of your router.
 - Click the **Search** button () to enter the name of your router model.

NOTE

You can click the **Auto Detect** button () if you have a Linksys or Netgear router (works with most Linksys or Netgear models).

- Under Router IP, click the **Detect Router IP** button ().
 - The router's IP populates in the blank field. Click **OK** to exit the prompt.
- Under **Username** and **Password**, enter *the router's* username and password.

NOTE

The HTTP Type (default http://) and HTTP Port fields refer to the port and protocol used to access your router's configuration web page. You may need to change the values depending on your router model. Consult your router manual for details.

- Under **IP**, enter the IP address of your device.

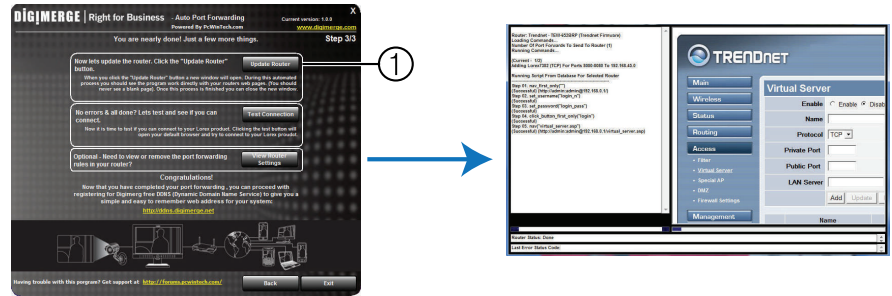
NOTE

The IP is usually found in the information window of your system.

- Under **Port**, enter the system's HTTP Port (by default, port **80**).
Under **2nd Port**, enter the system's Client Port (by default, port **35000**).
- Click **Next** to continue.

19.2.5 Step 3: Update the Router Settings

1. Click the **Update Router** button.
 - You will see your router window open. The Auto Port Forwarding Wizard automatically populates your router with the relevant information. This will take a few moments.



2. Close the update window when the update finishes.

19.2.6 Step 4: Test your Connection

1. Click the **Test Your Connection** button.
 - Your system's default browser opens and connects to your device.

NOTE
<ul style="list-style-type: none"> • Ensure that Internet Explorer is your system's default Internet browser. • A window opens that prompts you to enter in your system's user name and password (do not enter your DDNS log in information). • ActiveX warnings may appear. Accept all ActiveX installation warnings to connect to your system.

19.2.7 Configuring Multiple Routers

Your network may have two or more connected routers. During the initial launch of the auto port forwarding wizard, the program scans the network to detect the number of connected routers.

To check for multiple routers:

Click the Detect Multiple Routers button (). A list of connected routers populates in the window.

- The "Possible 1st Router" refers to the router directly connected to your system. This is the router that requires the port forward information.
- The "Possible 2nd Router" refers to the router immediate to the internet connection. This is the router that requires you to configure a DMZ host connection.

Scenario A: Router/Modem Combination + Router

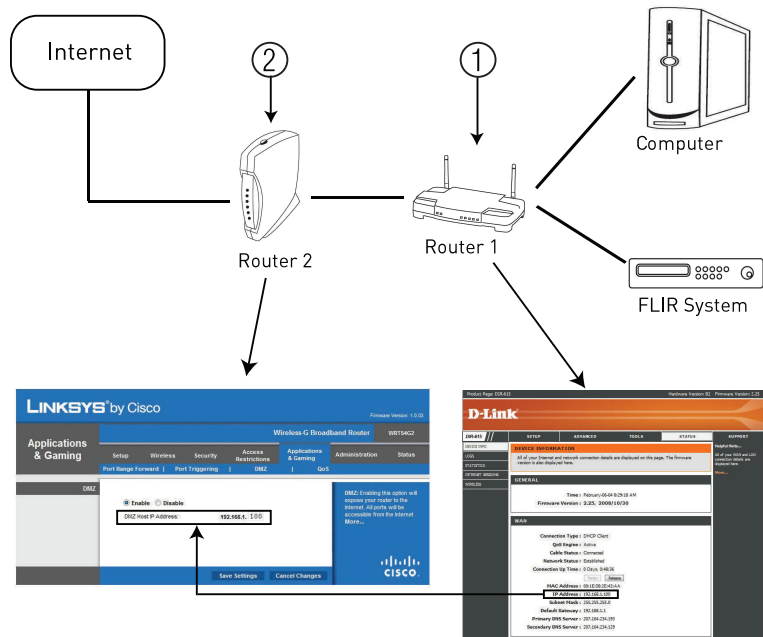
- You may have a router/modem combination, with a second router in your network.

Scenario B: Multiple Routers

- You may have two routers in your network. In both scenarios, the router that is immediate to the internet connection (Router 2 in illustration below) must act as a "bridge" to another router (Router 1 in illustration). The Auto Port Forwarding Wizard must connect to Router 1.

A proper DMZ configuration in Router 2 allows all incoming traffic going to it to automatically pass to Router 1. Router 2 acts as a "dummy" router and passes all the incoming data onto Router 1. Router 1 is the router that needs the port forwarding information.

Configuring a DMZ Host Connection



1. Find the public IP address of Router 1: Connect to "Router 1" on your network (referred to as "Possible 1st Router" in the Auto Port Forwarding Wizard). Obtain the IP address of Router 1. Usually this can be found in the "Status" section of your router menu. The IP should begin with "192.168....".



NOTE

The "Status Page" of a router normally includes the router's vital information such as the IP address. The IP information is normally under a header called "WAN" or "Internet Port". Each router has different terminology.

2. Set up Router 2 as DMZ Host: Enter the IP address obtained in the previous step into the DMZ section of Router 2.
3. Once you have configured Router 2 with a DMZ connection, run the Auto Port Forwarding Wizard to set up port forwarding on Router 1.



NOTE

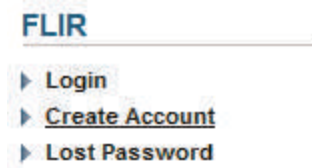
Consult your router's owner's manual for details on configuring DMZ settings.

FLIR offers a free DDNS service for use with your system. A DDNS account allows you to set up a web site address that points back to your local network. The following outlines how to set up your free DDNS account.

20.1 Registering for FLIR DDNS Service

To setup your free FLIR DDNS account:

1. In your browser, go to <http://ddns.myddns-flir.com> and click **Create Account**.



2. Complete the **Account Information** fields with your personal information. Complete the **Warranty Information** with your purchase details (optional).

3. Complete the System Information fields:

- **Product License:** Select your product model from the Product License drop down menu (i.e. DNR100 Series).
- **<Product Code> - <MAC Address>:** Enter the MAC address of your NVR. To find the MAC address, see 18.3 *Finding your IP Address and MAC Address*, page 130.
- **URL Request:** Choose a URL for your DDNS connection (i.e. your name, your company or business name, or anything of your choice).

4. Click **Create New Account**.
5. Your account information will be sent to you at the email Address you used in Step 2. You will need this information for remote access to your system. Record your information below:

User name:
Domain name*:
Password:

20.2 How Do I Enable DDNS On My System?

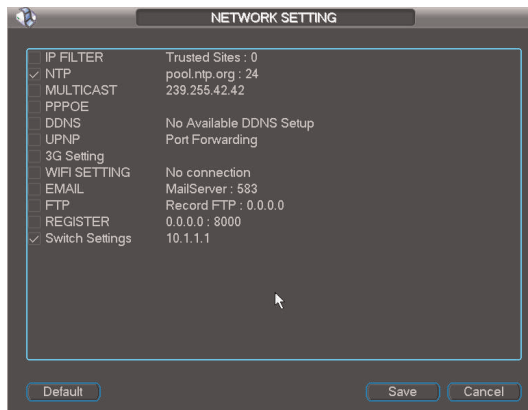
Once you have registered for free DDNS service, use the information in the confirmation email to configure DDNS settings on your system.

To enable DDNS on your system:

1. In live view, right-click and then click Main Menu. Login using the admin account if prompted (default user name is **admin** and default password is **000000**).
2. Click **Setting>Network**.
3. Click **Network Setting**.



4. Check **DDNS**.
5. Double-click **DDNS**.



6. Configure the following:

- 6.1. Ensure **Enable** is checked. The checkbox will be white when DDNS is enabled.
- 6.2. Under **Domain Name**, enter the Domain Name from the confirmation email you received after registering for DDNS.
- 6.3. Under **User ID**, enter the User Name from the confirmation email.
- 6.4. Under **Password**, enter the Password from the confirmation email.

**NOTE**

The DDNS user name and password is different from your DVR's user name and password. See for your DDNS user name and password if you previously recorded it in this manual.

7. Click **OK**.
8. Click **Save**.

**NOTE**

It may take between 10~15 minutes for the DDNS server to update with your new DDNS address.

20.3 Connecting to your system using DDNS

**NOTE**

You must port forward ports on your router to NVR's IP address (by default, ports **35000** and **80**) to connect to your system over the Internet.

Now that you have set up your system for DDNS, use the following address formats to connect:

20.3.1 CMS Software or Mobile Apps

Example DDNS address to connect using CMS or app

tomsmith.myddns-flir.com

- For details on the CMS Software, .
- For details on mobile apps, .

20.3.2 Internet Explorer

Example DDNS address to connect using IE
--

http://tomsmith.myddns-flir.com:80

- For details, 17 *Remote Viewing On Internet Explorer*, page 126.

To perform a firmware upgrade over the LAN or Internet, a Config Tool is provided on the CD or www.flirsecurity.com/pro. In an effort to continuously improve the functionality of our products, firmware upgrades are available as a free download on our website, as they are released.



NOTE

The Config Tool is supported on PC only. You may also upgrade the firmware using the system's local menu (see 13.1.4 *Version (Updating Firmware)*, page 30).

21.1 Installing a Firmware Upgrade Over the LAN

Prerequisites:

- Connect your NVR or IP camera to a router or switch on your network.
- Download a firmware upgrade from www.flirsecurity.com/pro, if one is available. Extract the contents.

To perform a firmware upgrade over the LAN:

1. Download the Config Tool from www.flirsecurity.com/pro.
2. Extract the contents into a folder.
3. Open the folder and right-click **ConfigTool.exe** and select **Run as administrator**.



NOTE

If a Windows Firewall warning appears, click Allow Access.

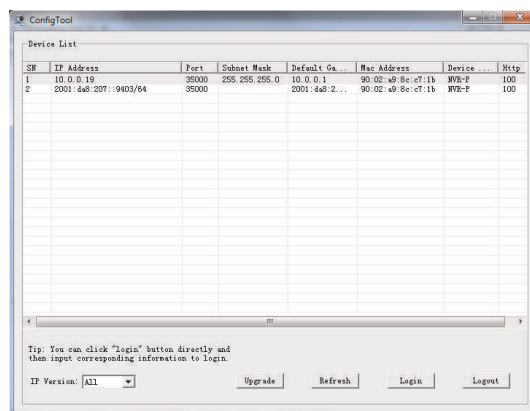
The Config Tool scans your LAN for NVRs and IP cameras.



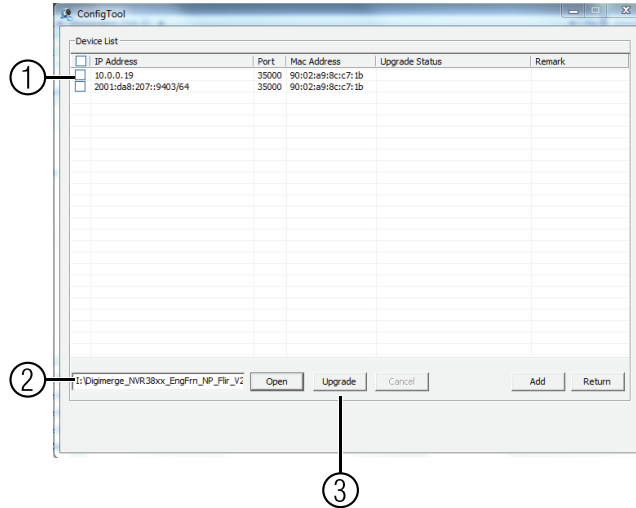
NOTE

Firmware versions are different between NVRs and IP cameras.

4. Click **Upgrade**.



5. Configure the following:



- 5.1. Check any NVRs or IP cameras you would like to upgrade.
- 5.2. Click **Open**. Select the upgrade firmware file (.bin).
- 5.3. Click **Upgrade**. Wait for the upgrade to complete. Do not power off the system or disconnect the power cable during upgrade. The system will restart when the upgrade is complete.

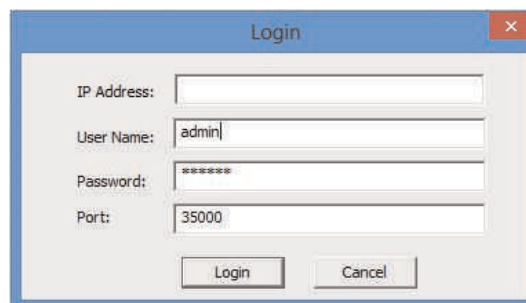
21.2 Installing a Firmware Upgrade Over the Internet

Prerequisites:

- Port forward the Client Port (default: **35000**) on the system's local router.
- Obtain the public IP address of the system.
- Download a firmware upgrade from www.flirsecurity.com/pro, if one is available. Extract the contents.

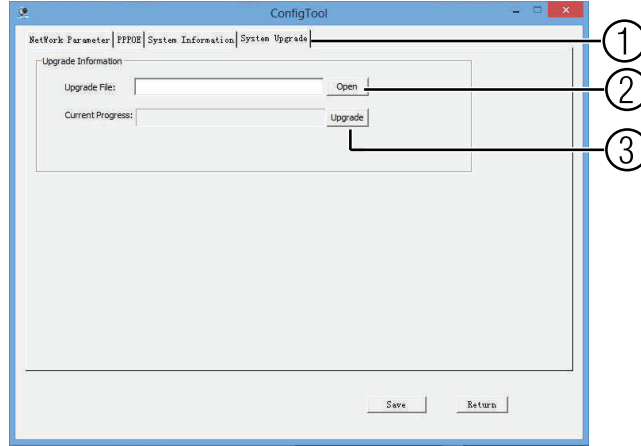
To perform a firmware upgrade over the Internet:

1. Download the Config Tool from www.flirsecurity.com/pro.
2. Extract the contents into a folder.
3. Open the folder and right-click **ConfigTool.exe** and **Run as administrator**.
4. Click **Login**.
5. Under **IP Address**, enter the public IP address of the system. Edit the User Name, Password, or Port if these have been changed from the default values.



6. Click **Login**. The Config Tool logs in to the system.

7. Configure the following:



- 7.1. Click **System Upgrade**.
- 7.2. Click **Open**. Select the firmware file (.bin).
- 7.3. Click **Upgrade**. Wait for the upgrade to complete. Do not power off the system or disconnect the power cable during upgrade. The system will restart when the upgrade is complete.

DNR100 Series Hard Drive Installation

The system comes with a pre-installed 3.5" SATA hard drive. You can replace the hard drive with one up to a maximum size of 4TB.

22.1 Installing a Hard Drive

 CAUTION
--

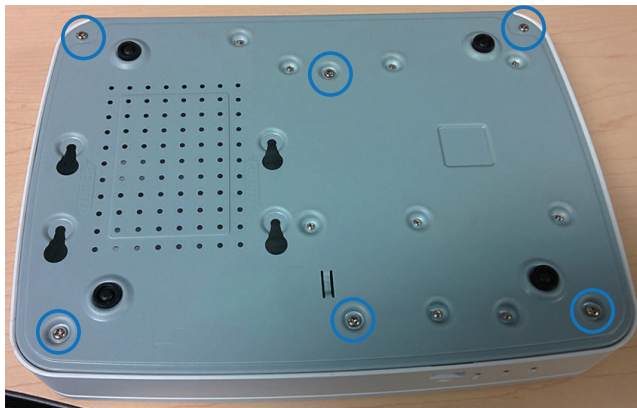
Make sure that the system is OFF and ALL power adapters have been disconnected before removing/installing the hard drive.

To install the hard drive:

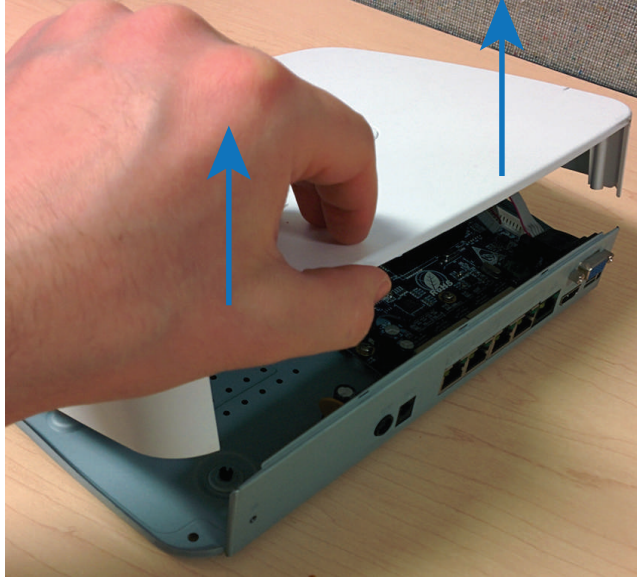
1. Insert hard drive screws (4x) on the hard drive and tighten them half way.



2. Power off the system, and unplug all cabling from the system.
3. Turn the NVR over and remove the cover screws (6x).



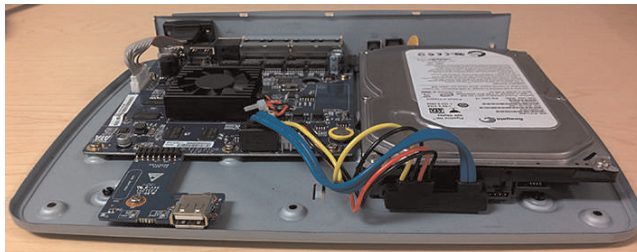
4. Turn the NVR back over and remove the cover. The easiest way to do this is to pull up on the edge that hangs over the rear panel of the unit.



5. Place the hard drive over the screw slots on the bottom of the NVR and then slide the hard drive into place. The SATA connectors on the hard drive should face the front of the unit.



6. Connect the SATA power and data cable to the hard drive.



- Turn the NVR over carefully. Tighten the hard drive screws (4x) to secure the hard drive.

**CAUTION**

Hold the hard drive in place when turning the NVR over to prevent damage to the NVR.

- Replace the cover and cover screws (6x).

**NOTE**

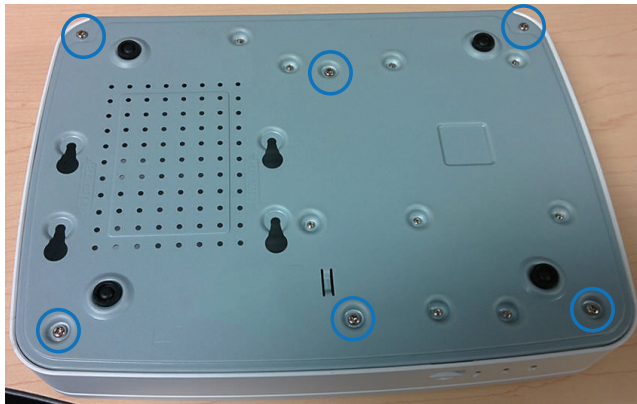
After installation, you must format the hard drive in order to use it with the system. See 22.3 *Formatting Hard Drives*, page 150.

22.2 Removing the Hard Drive

**CAUTION**

Make sure that the system is OFF and ALL power adapters have been disconnected before removing/installing the hard drive.

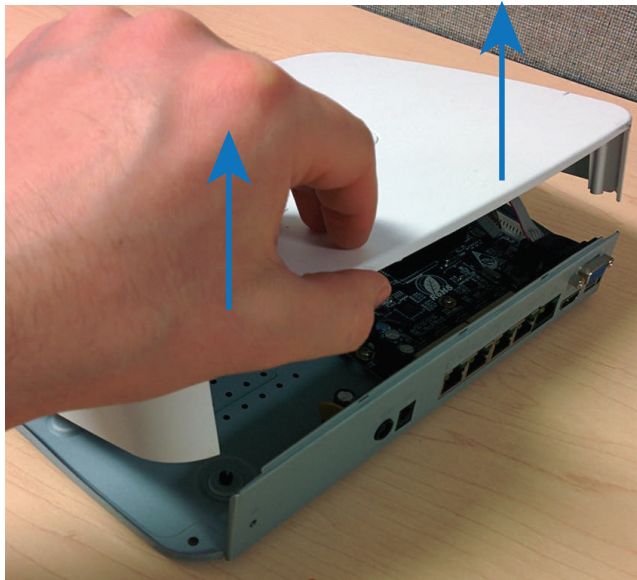
- Power off the system, and unplug all cabling from the system.
- Turn the NVR over and remove the cover screws (6x).



3. Loosen the hard drive screws (4x), but do not remove them.



4. Carefully turn the NVR over and remove the cover. The easiest way to do this is to pull up on the edge that hangs over the rear panel of the unit.



5. Disconnect the SATA power and data cable from the hard drive.



6. Slide the hard drive towards the front of the NVR and remove it from the unit.

- Replace the cover and cover screws (6x).

**NOTE**

After installation, you must format the hard drive in order to use it with the system. See 22.3 *Formatting Hard Drives*, page 150.

22.3 Formatting Hard Drives

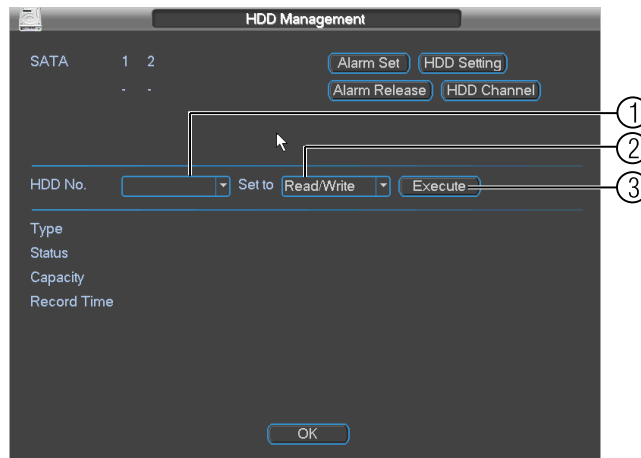
You must format hard drives before you may use them with the system.

**CAUTION**

Formatting the HDD erases all data on the hard disk. This step cannot be undone. System settings will not be erased.

To format a hard drive:

- From Live View, right-click and select **Main Menu>Advanced>HDD Management**.
- Configure the following:

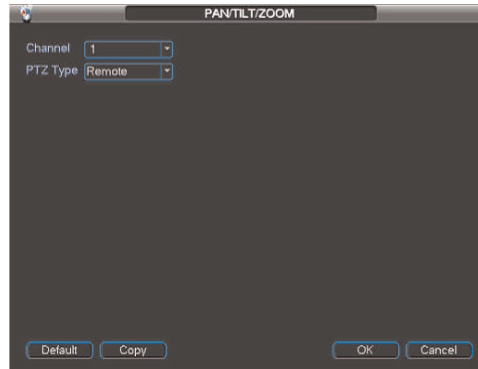


- Under **HDD No.**, select the hard drive you would like to format. Information about the hard drive appears in the lower section of the menu.
- Under **Set to**, select **Format**.
- Click **Apply**. Click **OK** to confirm. Wait for the hard drive to format. Hard drives become Read/Write hard drives by default when formatted.

You can connect PTZ cameras (not included) to the system.

To connect a PTZ camera to the system:

1. Connect the camera video cable to one of the **Video IN** ports on the system.
2. Right-click and click **Main Menu**. Enter the system user name (default: **admin**) and password (default: **000000**) if prompted.
3. Click **Setting>Pan/Tilt/Zoom**.



4. Under **Channel**, select the channel your PTZ camera is connected to.
5. Under **PTZ Type**, select **Remote**.
6. Click **OK**. You can now control your PTZ camera using the system.

23.1 Controlling a PTZ Camera (Local NVR)

1. In live view, double-click the channel that has the PTZ camera connected to open in full-screen.
2. Right-click and click **Pan/Tilt/Zoom**. Enter the system user name and password if prompted.
3. Use the on-screen PTZ controls to control the camera.

PTZ Controls



1. **Direction keys:** Click to pan and tilt the camera.
2. **Speed:** Enter the PTZ speed.
3. **Zoom/Focus/Iris:** Click +/- to adjust the zoom, focus, and iris.
4. **Set:** Click to open the aux menu, where you can set up Presets, Tours, Patterns, and AutoScans.
5. **Page Switch:** Click to open advanced PTZ controls.

23.2 Advanced PTZ Controls

Advanced PTZ controls can be used to save camera positions and cycle through various positions, and automate camera actions.

To open advanced PTZ controls:

- Click **Page Switch** in the PTZ control window to open advanced controls.



Advanced PTZ controls overview:

- **No.:** Select the number of the action you want to perform.
- **Preset:** Click to call the selected preset.
- **Pattern:** Click to run the selected pattern.
- **Tour:** Click to run the selected tour.
- **AutoScan:** Click to run the selected autoscan.
- **AutoPan:** Click to start autopan. During autopan, the camera will continuously pan 360°.
- **Flip:** Click to flip the camera 180°.
- **Reset:** Click to move the camera to the home position.

23.2.1 Presets

Presets will save a camera position for quick retrieval.

To add presets:

1. From the PTZ control window, click **Set** to open the aux menu.
2. Click **Preset**.



3. Enter the number of the preset you want to create under **Preset**.
4. Move the camera to the desired position and click **Set**.

To go to a preset:

1. Right-click to return to the PTZ control window.

2. Click **Page Switch** to open advanced PTZ controls.



3. Under **No.**, select the number of the preset you would like to go to and click **Preset**.

23.2.2 Tours

Tours will cycle through a set of presets.

To create a tour:

1. From the PTZ control window, click **Set** to open the aux menu.
2. Click **Tour**.



3. Under **Patrol No.**, select the tour you would like to configure.
4. Under **Preset**, select a preset you would like to add to the tour.
5. Click **Add Preset**.
6. Repeat steps 4 and 5 add additional presets to the tour.



NOTE

Click **Del Tour** to clear all presets from a tour.

To run a tour:

1. Right-click to return to the PTZ control window.
2. Click **Page Switch** to open advanced PTZ controls.



-
- Under **No.**, select the number of the tour you would like to run and click **Tour**.

23.2.3 Pattern

Patterns automatically cycle the camera between two positions.

To create a pattern:

- From the PTZ control window, click **Set** to open the aux menu.
- Click the **Pattern** tab.



- Under **Pattern**, enter the pattern you would like to configure.
- Move the camera into the desired start position and click **Begin**.
- Move the camera into the desired end position and click **End**.

To run a pattern:

- Right-click to return to the PTZ control window.
- Click **Page Switch** to open advanced PTZ controls.



- Under **No.**, select the number of the pattern you would like to run and click **Pattern**.

23.2.4 Auto Scan

An auto scan automatically cycles between a left and right point.

To create a new auto scan:

- From the PTZ control window, click **Set** to open the aux menu.

2. Click **Border**.



3. Move the camera into the desired left position and click **Left**.
4. Move the camera into the desired right position and click **Right**.

To run an auto scan:

1. Right-click to return to the PTZ control window.
2. Click **Page Switch** to open advanced PTZ controls.



3. Under **No.**, select the number of the pattern you would like to run and click **AutoScan**.

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling FLIR Technical Support:

Error	Possible Causes	Solutions
<ul style="list-style-type: none"> NVR is not receiving power, or is not powering up. 	<ul style="list-style-type: none"> Cable from power adapter is loose or is unplugged. 	<ul style="list-style-type: none"> Confirm that all cables are connected correctly. Confirm that the power adapter is securely connected to the back of the unit.
	<ul style="list-style-type: none"> Cables are connected, but NVR is not receiving sufficient power. 	<ul style="list-style-type: none"> Confirm that the unit is powered on (LED indicators on the front should be ON). If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet. Confirm that there is power at the outlet: <ul style="list-style-type: none"> Connect the power cable to another outlet. Test the outlet with another plugged device (such as an electric calculator or phone charger).
<ul style="list-style-type: none"> There is no picture on selected channels / camera picture is not being displayed. 	<ul style="list-style-type: none"> PoE power adapter is not connected. 	<ul style="list-style-type: none"> Make sure the 48V DC power adapter is connected to the NVR or the cameras will not receive power from the PoE Ports.
	<ul style="list-style-type: none"> Camera cables are loose or have become disconnected. 	<ul style="list-style-type: none"> Disconnect and reconnect the cable at the NVR and at the camera. Try moving the camera to another channel or use another cable. If your cameras are not using PoE, make sure they are using the correct power source according to the specifications provided by the manufacturer.
	<ul style="list-style-type: none"> Camera/NVR connection to LAN has become interrupted. 	<ul style="list-style-type: none"> Make sure your cameras are connected to the same LAN as the NVR. Make sure any routers or switches in between the NVR and IP cameras are powered on.
<ul style="list-style-type: none"> Hard drive is not detected by the system. 	<ul style="list-style-type: none"> Hard drive cables are loose or not properly connected. 	<ul style="list-style-type: none"> Remove the housing and check that hard drive cables are firmly connected.
	<ul style="list-style-type: none"> Hard drive has not been initialized (formatted) by the system. 	<ul style="list-style-type: none"> For details, see <i>22.3 Formatting Hard Drives</i>, page 150.
	<ul style="list-style-type: none"> There is no hard drive in the system. 	<ul style="list-style-type: none"> Open the housing and install a 3.5" SATA hard drive.
<ul style="list-style-type: none"> Hard drive is full and the unit is no longer recording. 	<ul style="list-style-type: none"> Overwrite is not enabled. 	<ul style="list-style-type: none"> From the Main Menu, select General. Beside HDD Full, select Overwrite. Click OK to save settings. This enables the system to continuously record by overwriting data once the hard drive is full.

Error	Possible Causes	Solutions
<ul style="list-style-type: none"> Mouse not detected by system. 	<ul style="list-style-type: none"> Mouse cable is not firmly connected to the system. 	<ul style="list-style-type: none"> Firmly connect the mouse cable to the system.
	<ul style="list-style-type: none"> Mouse is not connected to the system. 	
	<ul style="list-style-type: none"> System needs to be reset. 	<ul style="list-style-type: none"> Re-connect the power cord to restart the system.
<ul style="list-style-type: none"> My system does not seem to be recording. 	<ul style="list-style-type: none"> Recording may be disabled. 	<ul style="list-style-type: none"> Right-click in live view, and click Record. Ensure that each channel is set to Schedule or Manual. If schedule is selected, make sure schedule settings are correct under Setting>Schedule. ATTENTION: For security, it is highly recommended to keep Continuous Recording ON at all times.

24.1 Remote Connectivity Troubleshooting

Error	Possible Causes	Solutions
<ul style="list-style-type: none"> Cannot connect to the NVR over the Internet. 	<ul style="list-style-type: none"> Ports not forwarded. 	<ul style="list-style-type: none"> Port forward the HTTP port (default: 80) and Client port (default: 35000).
	<ul style="list-style-type: none"> DDNS Setup not completed. 	<ul style="list-style-type: none"> Register for a DDNS account. For details, see 20 <i>Setting Up DDNS Service</i>, page 139.
	<ul style="list-style-type: none"> Ports are blocked by Internet Service Provider (ISP). 	<ul style="list-style-type: none"> Some ISP's block port 80. Reassign the HTTP port to anything above 1026. Re-complete port forwarding using the newly assigned port.
	<ul style="list-style-type: none"> Multiple routers installed in local network. 	<ul style="list-style-type: none"> If you have multiple routers, additional setup may be required. For details, see 19.2.7 <i>Configuring Multiple Routers</i>, page 137.
<ul style="list-style-type: none"> Could connect to system previously, but no longer can. 	<ul style="list-style-type: none"> NVR internal IP address has changed. 	<ul style="list-style-type: none"> This can occur if your router resets due to power failure. Set up a fixed IP address for your NVR. For details, see 13.2.6 <i>Configuring DHCP or Fixed IP Address</i>, page 35.
<ul style="list-style-type: none"> Cannot connect to the NVR using a smartphone or tablet. 	<ul style="list-style-type: none"> IP address used from outside local network. 	<ul style="list-style-type: none"> Use the DDNS address to connect to the NVR using a mobile application (e.g. tomsmith.myddns-flir.com).
	<ul style="list-style-type: none"> Router is blocking DDNS connection from internal network. 	<ul style="list-style-type: none"> Turn off WiFi connection and attempt to connect using 3G or mobile network.

DNR100 Series System Specifications

25.1 System

Main Processor	Dual-core embedded processor
Operating System	Embedded LINUX
Pentaplex Operation	Simultaneous View, Record, Playback, Backup, and Remote Monitoring

25.2 Inputs/Outputs

IP Camera Input	4 channel / 8 channel
Power over Ethernet (PoE)	4 integrated PoE ports
USB	2 ports

25.3 Display

Interface	1 HDMI, 1 VGA
Resolution	1920×1080, 1280×1024, 1280×720, 1024×768
Display Split	1/4, 1/4/8/9
OSD	Camera Title, Time, Camera Lock, Motion Detection, Recording Status

25.4 Recording

Compression	H.264
Resolution	1080P (1920×1080) / 720P (1280×720)
Record Rate	120FPS @ 1080P / 240FPS @ 720P
Bit Rate	32Mbs
Record Mode	High Quality Stream/Sub-Stream Recording: Manual, Schedule, Motion Detection, Alarm
Record Interval	1~120 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec

25.5 Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Screen tips
Video Detection	Motion Detection, Video Loss

25.6 Playback and Backup

Sync Playback	1/4, 1/4/8
Playback Function	4 Channel / 8 Channel
Backup Mode	USB Device / Network
Configuration Backup	To USB Device

25.7 Network

Ethernet	RJ-45 port (10M/100M/1000M)
Network Function	HTTP, TCP/IP, IPv4/IPv6, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPOE, DDNS, FTP, Alarm Server, IP Search

Max. User Access	20 simultaneous users
Smart Phone	iPhone, iPad, Android
IP Cameras Supported	FLIR, Digimerge, Panasonic, Sony, Dynacolor, Samsung, AXIS, Arecont, Bosch, Canon, Honeywell, Pelco, Panasonic, Vivotek

25.8 Storage

SATA Ports	1 internal SATA port
Maximum Storage Capacity	1 x 4TB internal

25.9 Dimensions

Weight	0.7kg / 1.5lbs
Dimensions (W x H x D)	267mm x 203mm x 46mm / 10.5" x 8.0" x 1.8"

25.10 Power

Power Supply	1x 12V DC 2A (for NVR); 1x 48V DC 1.04A (for PoE)
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As our products are subject to continuous improvement, FLIR Systems, Inc. and its subsidiaries reserve the right to modify product design, specifications, and prices without notice and without incurring any obligation. E&OE

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows the guidelines in this manual to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury.

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

26.1 FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.



Website

www.flirsecurity.com/pro

Technical Support

1-866-816-5919

Customer Service

1-866-344-4674

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