

User Manual

LNZ45P25

4MP IP PoE Wired PTZ Security Camera with AI Detection and 25X Optical Zoom



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

This manual refers to the following model:

LNZ45P25

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

lorex.com



WARNING

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICEABLE 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.

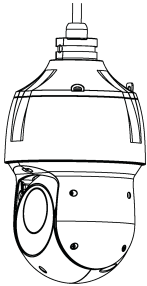
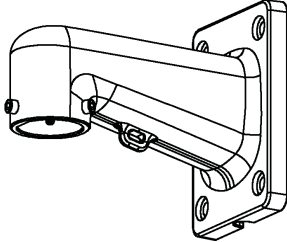
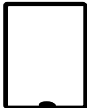
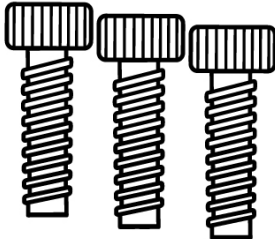
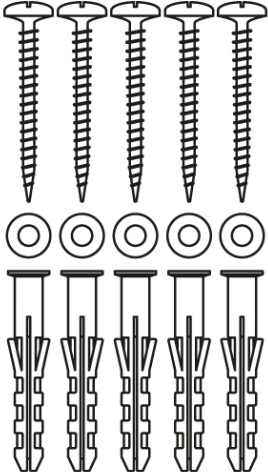
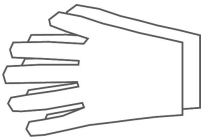
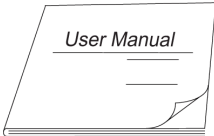
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

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- Read this guide carefully and keep it for future reference.
- Follow all instructions for safe use of the product and handle with care.
- Use the camera within given temperature, humidity, and voltage levels noted in the Technical Specifications.
- Camera is rated for outdoor use and is weatherproof when properly installed. Camera is not intended for submersion in water. Installation under a sheltered environment is recommended.
- Do not disassemble the camera.
- Do not point the camera directly towards the sun or a source of intense light.
- Use only the supplied regulated power supply. Use of a non-regulated, non-conforming power supply can damage this product and voids the warranty.
- Make sure to install the camera in a location that can support the camera weight.
- Make sure there are no live electrical cables in the area where you plan to mount the camera.
- Periodic cleaning may be required. Use a damp cloth only. Do not use anything other than water to clean the dome cover, as chemicals such as acetone can permanently damage the plastic.

The camera comes with the following components:

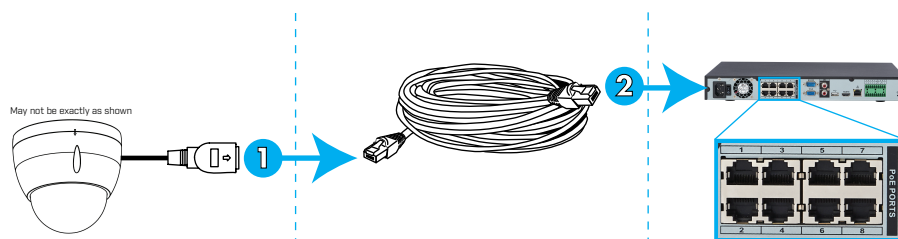
		
PTZ Camera	Wall Mount	Rubber Ring
		
Allen Key	M6 × 14 Screws (3×)	Mounting Anchors, Flat Washers & Screws (5×)
		
Safety Chain	ESD Gloves	Weather-Resistant Cap
		
Instruction Manual (Online)		
 NOTE Your accessories might appear different from the ones depicted in this guide.		



NOTE

It is recommended to connect the camera to your NVR and test the PTZ controls before permanent installation. For instructions on how to set up PTZ controls, see 5 *Controlling the PTZ Camera through the NVR*, page 10.

3.1 Option 1: Connecting the Camera to an NVR



1. Connect the PoE+ connector on the camera cable to an Ethernet extension cable.
2. Connect the Ethernet extension cable to one of the PoE+ ports on the back panel of your NVR.



NOTE

- You can use up to a 300ft (91m) CAT5e Ethernet cable (not included) to connect the camera to your NVR.
- The camera is compatible with the **N883 / N884** Series NVRs. For the most up-to-date list of compatible recorders, please visit lorex.com/compatibility.

3. **Alarm:** Connect the camera to an alarm system using alarm output (blue), alarm communication (green), alarm ground (yellow and green), alarm input (red and/or brown).
4. **Audio:** Connect the camera to external audio device using audio output (red), audio input (white), and audio ground (black).

3.2 Step 1 — Connecting Cameras to the Local Area Network (LAN)

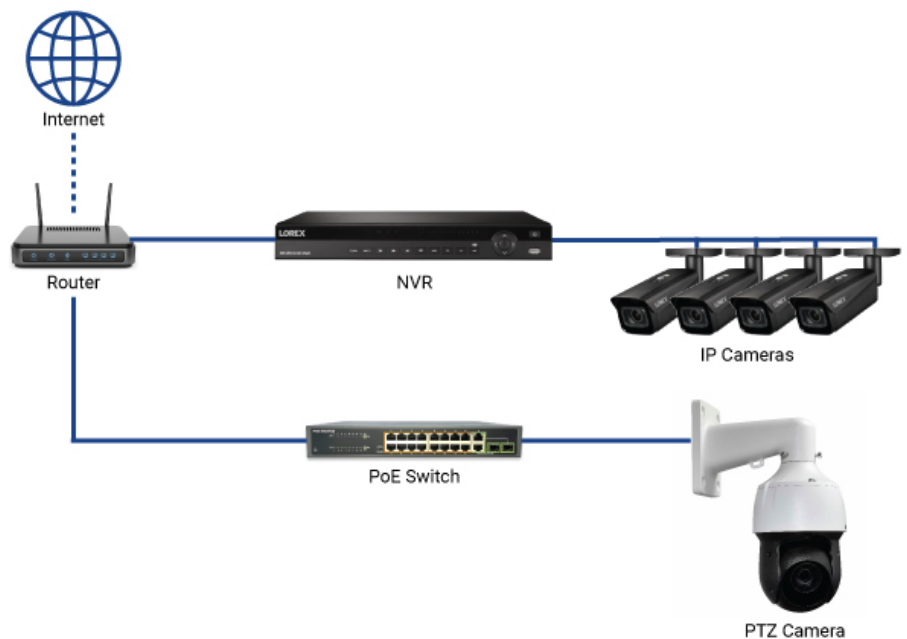
For flexibility, you may also connect the camera to the same Local Area Network (LAN) as the NVR. This is accomplished by connecting the camera to the same router as the NVR. For these installations, an external PoE+ switch or power adapter (sold separately) must be used to provide power to the camera. You also must add the camera on the NVR before it will show a picture on the monitor or be recorded by the NVR.

What is PoE+?

PoE (Power over Ethernet) is a technology that allows Ethernet cables to carry electrical power to connected devices. High-powered devices such as PTZ cameras use PoE+ (also known as PoE class 4 or IEEE 802.3at), which provides more power to connected devices than standard PoE. Compatible NVRs use integrated PoE+ ports to provide power and PTZ commands to the camera, as well as video connection to the NVR. PoE+ ports will provide up to 30W to each connected device, whereas standard PoE (class 3) ports only provide up to 15W. In order to use this PoE+ rated camera without a power adapter, you must connect it directly to a compatible NVR (N883 / N884 Series) or a PoE+ switch on the same network as the NVR. PoE+ switches are available for purchase on lorex.com.

Complete the following steps to connect the camera to the NVR over the LAN.

Option A: Connecting the camera to your local network using an optional PoE+ switch:



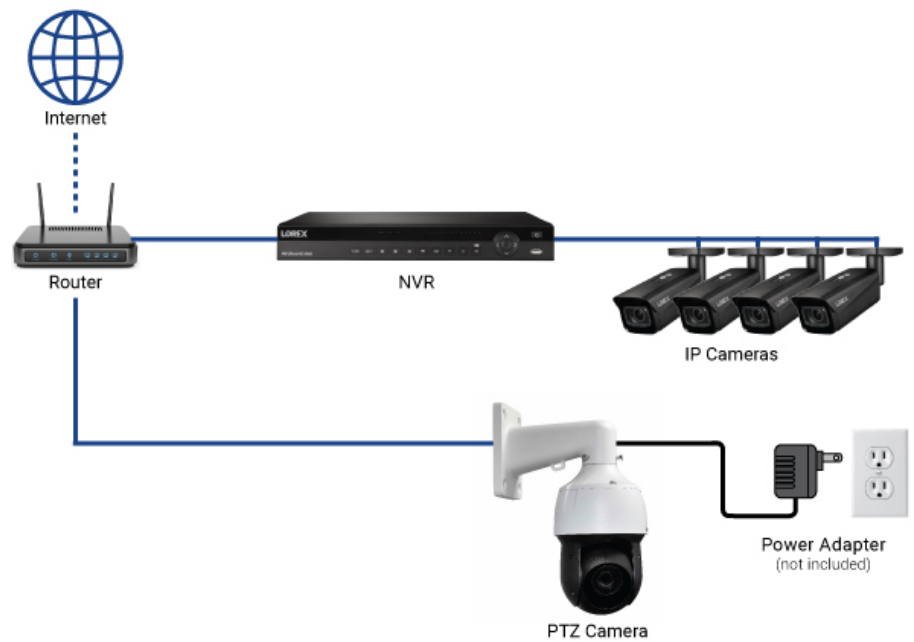
1. Connect an Ethernet cable of up to 300ft (91m) rated CAT5e or higher (not included) from the LAN port on an external PoE+ switch (sold separately on lorex.com) to your router. Connect the power cable to the PoE+ switch and to a power outlet or surge protector.



NOTE

Terminology may vary depending on the model of PoE+ switch you have.

2. Connect the camera to the PoE+ switch using an Ethernet cable or a CAT5e Ethernet cable of up to 300ft (91m) (not included). The PoE+ switch will provide power and video transmission the same way as your NVR.

Option B: Connecting the camera to your local network using a power adapter:

1. Connect the camera to a power adapter (not included).
2. Connect the camera to a router in the same network as your NVR using an Ethernet cable or an Ethernet cable of up to 300ft (91m) rated CAT5e or higher (not included).

3.3 Step 2 — Adding the PTZ Camera to your NVR

The following instructions are based on the N883 & N884 Series NVRs. See your NVR’s instruction manual for instructions on controlling the PTZ camera with your system.

NOTE

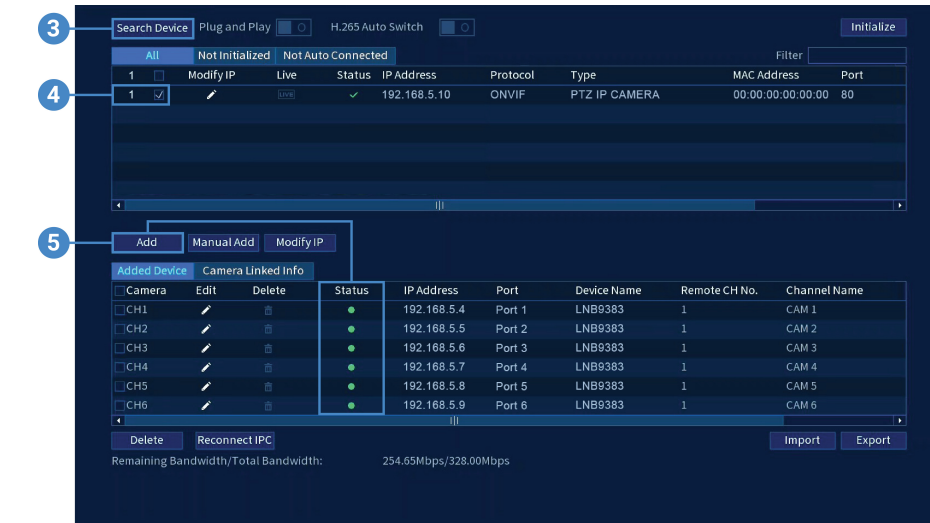
You must have at least one empty channel before attempting to add the camera to the NVR.

1.

Right-click during live view and select **Add Camera**.
2.

Log in using the admin account (default User Name: **admin**; default Password: **000000**).
3.

Click **Search Device**. The system searches the network for compatible cameras.



4.

Check the camera(s) you would like to add.
5.

Click **Add**. The Status indicator turns green to show the camera is successfully connected.

NOTE

You can also add a camera to a specific channel by hovering the mouse over an empty channel in split-screen view and clicking . Click **Device Search** and double-click the camera you would like to add. Right click to exit.

4.1 Installation Tips & Warnings



WARNING

Make sure to install the camera in a location that can support the camera weight.

- Camera is rated for outdoor use. It is recommended to install the camera in a sheltered area, such as under the eaves on a roof.
- It is recommended to install the camera as high up as possible to get the best possible image.
- Mount the camera where the lens is away from direct and intense sunlight.
- Plan your cable wiring so that it does not interfere with power lines or telephone lines.
- Ensure you adhere to local building codes.
- Ensure that the camera wiring is not exposed or easily cut.
- Mount the camera in an area that is visible but out of reach.



NOTE

This camera includes all components required for wall mounting.

For the most up-to-date software and complete instruction manuals:

1. Visit help.lorex.com.
2. Search for the model number of your product.
3. Click on your product in the search results.
4. Click on the **App / Software** tab.

4.2 Installation (Indoor / Outdoor)

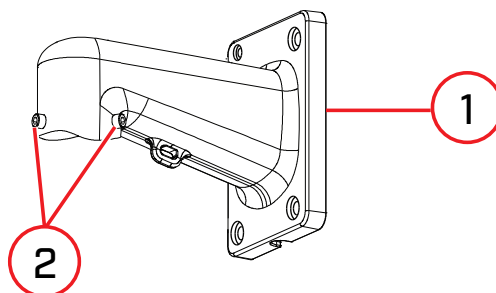


CAUTION

- Make sure to disconnect the power cable before installing the camera. Camera will begin moving immediately when power cable is connected.
- Make sure to install the camera in a location that can support the camera weight.

To install the camera on a wall:

1. Attach the included rubber ring to the back of the wall mount to ensure the weatherproof rating of the camera.
2. Use the included Allen key to attach the M6x14 screws (3x) to the wall mount. Do not tighten all the way.

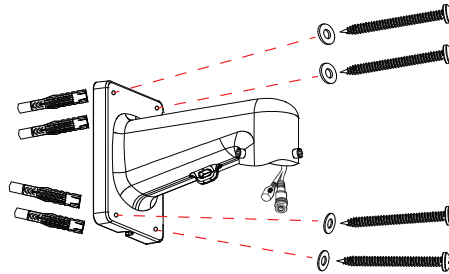


1. Wall Mount

2. M6x14 Screws (3x)

3. Use the included wall mount to mark holes for the mounting screws (4x) and cables. Drill holes (drill bit size – 3/8") to a depth of 2.8"/70mm in the mounting surface where marked.
4. Insert the included anchors (4x) into the holes and tap them into the wall with a hammer.
5. Pull the connection cable(s) through the mounting surface and wall mount.
6. Attach the included flat washers (4x) to the included mounting screws (4x).

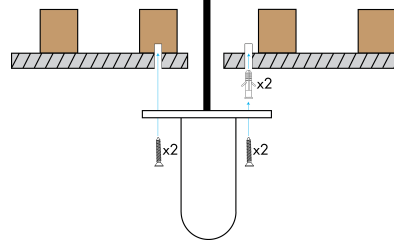
7. Firmly attach the wall mount to the mounting surface using the included mounting screws (4x) and flat washers (4x).

**NOTE**

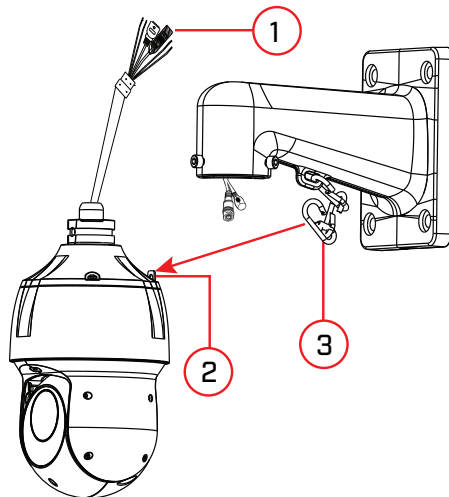
Imagery for illustration purposes only.

**WARNING**

Make sure to install the wall mount bracket in a location that can support the camera's weight. If mounting the camera on a drywall surface, you must drill at least 2 of the mounting screws through a wooden stud to ensure a stable mount. See the diagram below for details.



8. Connect the safety chain between the camera and the wall mount. This allows the camera to hang from the wall mount while connecting the cables.

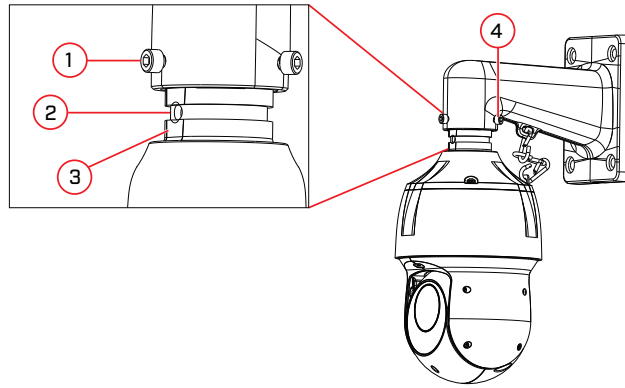


1. Camera Cables
2. Safety Chain Hook
3. Safety Chain

**CAUTION**

You must connect the safety chain between the camera and the wall mount to protect the camera from falling while connecting the cables.

-
9. Connect the connection cable(s) and then push the cable(s) into the wall mount. See 3 *Connecting the PTZ Camera*, page 3 for full details.
 10. Push the camera into the wall mount with the flat surfaces aligned on the inside. This will allow the M6x14 screw (1) on the wall mount to align with the hole on the camera.



1. M6x14 screw (1) on the flat surface (inside) of the wall mount.
 2. Hole on the camera.
 3. Flat surface on the camera.
 4. M6x14 screw (2x).
11. Use the included Allen key to tighten the M6x14 screw (3x) to secure the camera.
 12. Remove protective vinyl sheet covering the camera lens once installation is completed.

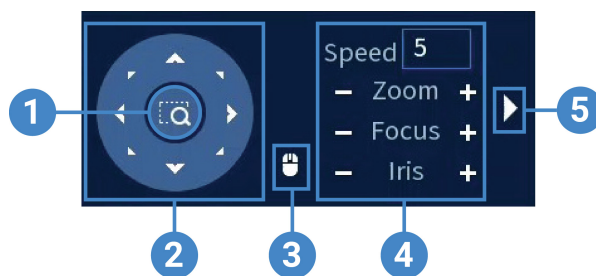
Controlling the PTZ Camera through the NVR

The following instructions are based on the N883 and N884 Series NVRs. See your NVR's instruction manual for instructions on controlling the PTZ camera with your system. For the latest list of compatible NVRs, please visit www.lorex.com/compatibility.

5.1 Controlling the PTZ Camera

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. The PTZ menu opens.
3. Use the on-screen controls to control the camera.

PTZ Controls



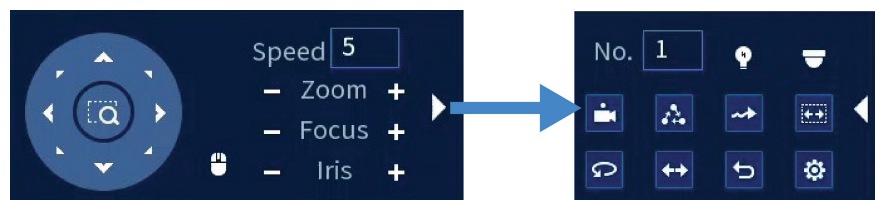
1. **Zoom-to-Area:** Click, then click-and-drag to draw a box on the camera image. The PTZ camera will zoom in to the selected area.
2. **Navigation Controls:** Click the directional arrows to move the PTZ camera manually.
3. **Mouse Tracking:** Click to enable/disable mouse tracking. When enabled, click-and-drag in the direction you would like the PTZ camera to move. The camera will follow the path of the mouse cursor.
4. **PTZ Settings:**
 - **Speed:** Enter a PTZ speed between **1** (slowest) and **8** (fastest).
 - **Zoom:** Optical zoom level. Click + to zoom in, and – to zoom out.
 - **Focus:** Manually control focus level. Click + to focus on objects further from the camera, or – to focus on objects closer to the camera.
 - **Iris:** Controls the amount of light coming through the lens. Click + to allow more light, or – for less.
5. **Advanced:** Expand to show advanced options. For a full overview, see 5.2 *Advanced PTZ Controls*, page 10.

5.2 Advanced PTZ Controls

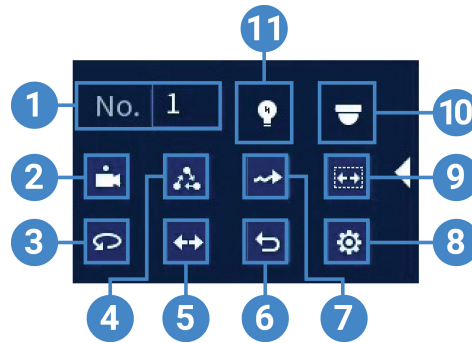
Advanced PTZ controls can be used to save camera positions and cycle through various positions, and automate camera actions.

To open advanced PTZ controls:

- Click the arrow in the PTZ control window to open advanced controls.



Advanced PTZ controls overview:



1. **No.:** Enter the ID number for a preset, tour, or pattern you want to activate.
2. **Preset:** Move the camera to the preset number specified in the **No.** field. For instructions on setting up preset locations, see 5.2.1 *Presets*, page 11.
3. **AutoPan:** Click to start autopan. During autopan, the camera will continuously pan 360°.
4. **Tour:** Perform the tour number specified in the **No.** field. For instructions on creating a tour, see 5.2.2 *Tours*, page 11.
5. **Flip:** Rotate the camera 180° from its current position.
6. **Reset:** Move the camera to the home position.
7. **Pattern:** Perform the pattern number specified in the **No.** field. For instructions on creating a pattern, see 5.2.3 *Patterns*, page 12.
8. **Configuration:** Click to open the configuration menu, where you can configure presets, tours, patterns and autoscans.
9. **AutoScan:** Move the camera between a predetermined left and right point. For instructions on creating an autoscan, see 5.2.4 *AutoScan*, page 12.
10. **OSD Menu:** Click to open the camera's OSD menu. This may not be supported on all camera models.
11. **Auxiliary Settings:** Click to configure auxiliary functions, allowing you to turn the camera Light or Wiper on or off.

5.2.1 Presets

Presets will save a camera position for quick retrieval.

To add preset locations:

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click .
3. Click the **Preset** tab.
4. Enter the number of the preset you want to create under **Preset**.
5. Move the camera to the desired position and click **Set**.

To go to a preset location:

- Under **No.**, select the number of the preset you want to go to, then click .

5.2.2 Tours

Tours will cycle through a set of presets.

To add tours:

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click .
3. Click the **Tour** tab.
4. Under **Patrol No.**, enter the number of the tour you want to create.
5. Under **Preset**, select a preset you want to add to the tour.

6. Click **Add Preset**.
7. Repeat steps 5 & 6 to add additional presets to the tour.

To run a tour:

- Under **No.**, select the number of the tour you want to go to, then click .

5.2.3 Patterns

Patterns automatically move the camera according to manually-entered movements.

To add patterns:

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click .
3. Click the **Pattern** tab.
4. Under **Pattern**, enter the number of the pattern you want to create.
5. Move the camera to the desired starting position, then click **Start**.
6. Using the on-screen controls, move the camera in any pattern you wish. When finished, click **End**.

To run a pattern:

- Under **No.**, select the number of the pattern you want to go to, then click .

5.2.4 AutoScan

An autoscan automatically cycles between a left and right point.

To configure autoscan:

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click .
3. Click the **Border** tab.
4. Move the camera into the desired left position and click **Left**.
5. Move the camera into the desired right position and click **Right**.

To run autoscan:

- Click .

Smart Motion Plus is available for this PTZ camera when connected to N883 and N884 NVR systems. By distinguishing between different types of movements, this feature reduces false alarms when remotely viewing from the app.

To use Smart Motion Plus, enable it in your NVR events settings. Then, draw specific areas of interest and adjust the schedule to tailor the monitoring to your security needs.

6.1 Configuring Smart Motion Plus

This section will guide you through the steps to configure Smart Motion Plus for optimal motion detection and monitoring.



NOTE

For the Smart Motion Plus feature to function correctly on your PTZ camera, ensure the Smart Plan is properly enabled. Please enable the **Smart Motion Plus** feature before continuing. Refer to 7.1 *Enable Smart Motion Plus (for Auto Tracking)* in *Smart Plan*, page 18 for full instructions.

To configure smart motion plus:

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **EVENTS**. Click the **Event Settings** tab from the side panel, then the **Smart Motion Plus** tab from the drop-down.



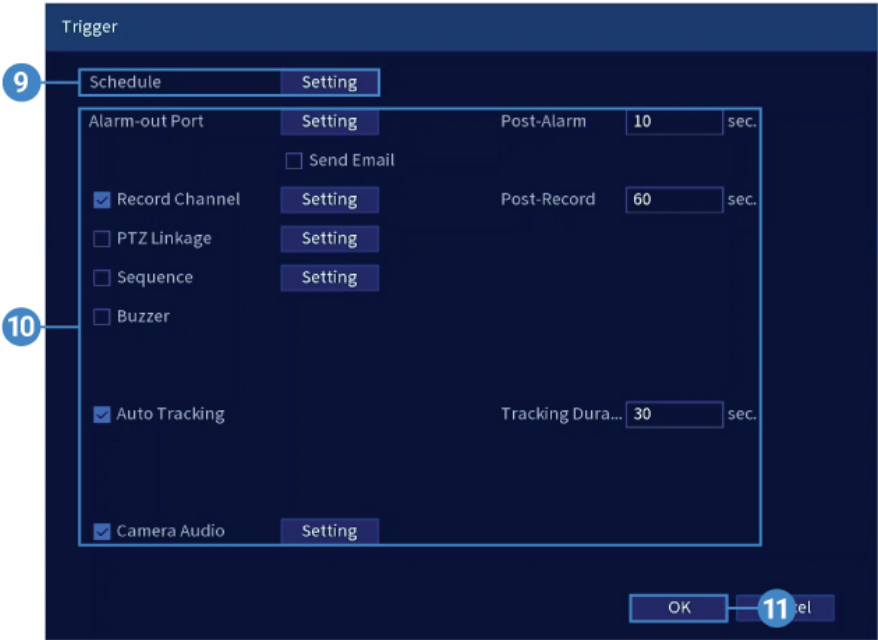
3. Select the channel number to which the PTZ camera is connected.
4. Check to enable the smart motion plus setting.
5. Set a name for the setting by double-clicking the mouse over the **Name**.
6. Choose between the different types of Smart Motion Plus:
 - **Tripwire:** This feature sets off an alarm when a specified line is crossed by a target in a particular direction.
 - **Smart Motion:** Detects and alerts when a person or vehicle enter or move within a specified area.
 - **Parking Detection:** Monitors and identifies available parking spaces in outdoor environments.
 - **Crowd Gathering Destination:** Triggers an alarm if people congregate in a specified zone for a longer period than allowed, helping manage crowd control.
 - **Loitering Detection:** Alerts security when a person or object stays in a designated area for an extended period.

7. Click the **Draw** icon  to customize the active area for Smart Motion Plus.

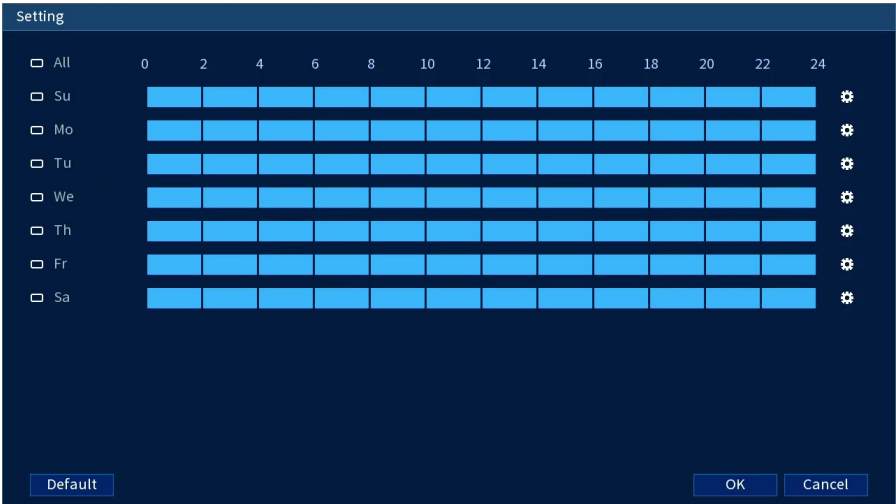


- **Preset:** Link to a preset. Refer to the instructions 5.2.1 *Presets*, page 11 for setting a preset.
- **Name:** Assign a name to this setting.
- **Draw Rule:** To draw, click and drag the corners of the box to resize the area. For the most accurate results: Click the delete icon  to remove the current box. Click to draw the new monitoring area, making sure it covers where objects of interest will move within and in/out of the bounding box. Right-click to close the bounding box.
- **Action:** Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction:** Determine which direction triggers an alarm: Select **Enter** for movement entering the defined area. Select **Leave** for movement exiting the defined area. Select **Both** for both types of movements.
- **Target:** (Only available for Tripwire and Smart Motion) Enable the **Target Filter**. Check the detection targets you wish to use, or check both.
- Click **OK** when finished.

8. Click the **Trigger** icon  to adjust how the system will react to smart motion plus.



9. Click **Setting** next to **Schedule** to choose which days and times of the week to enable smart motion plus:



- Click or click-and-drag along each of the blue timelines to quickly add or remove time from each day's schedule in 30-minute segments.
- Click  beside 2 or more days to link schedules (). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.

10. Choose how the system will react to smart motion plus:

- **Send Email:** Check this box to enable email alerts. Ensure you configure email alerts first to receive them (refer to your recorder's manual for detailed instructions).
- **Record Channel:** Select the channels that will record when motion is detected on the selected channel. Set the length of recording following a video loss event in the **Post-Record** field.
- **PTZ Linkage:** Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence:** Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer:** Check to enable the system buzzer.
- **Auto Tracking:** Check this box to enable Auto Tracking. Enter the **Tracking Duration** to specify how long the PTZ camera will zoom, track, and follow an object after it moves within the defined area. Refer to *7 Auto Tracking*, page 18 to learn more.
- **Camera Audio:** Check this box to enable an alarm when motion is detected within the defined area. Click **Setting** to choose between different alarms and set the number of repetitions for the **Play Time**.

11. Click **OK**, click **OK** again.

12. Click **Apply** to save changes.

13. Click **Add** to create additional active areas for smart motion plus on the selected channel.

14. To delete a smart motion plus setting, click the **Delete** icon  for that setting.

6.2 Searching for Smart Motion Plus

Smart Search lets you filter recorded video to search for person detection events, vehicle detection events, animal detection events or all three.

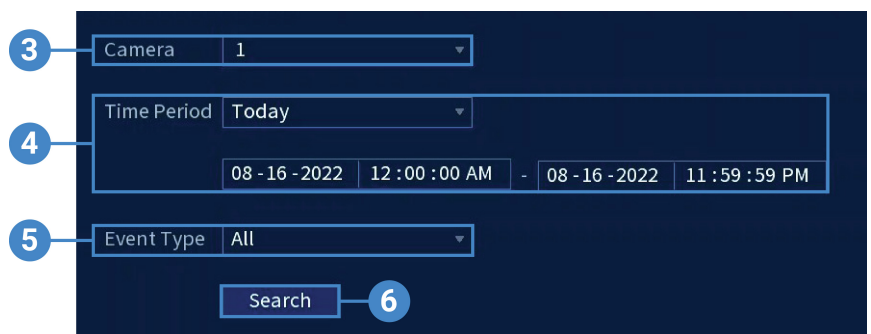


NOTE

In order to use Smart Search, you must configure at least one channel's smart detection settings. See the procedure above for full instructions.

To perform a Smart Search:

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.
2. Click the **Smart Motion Plus** tab from the side panel.



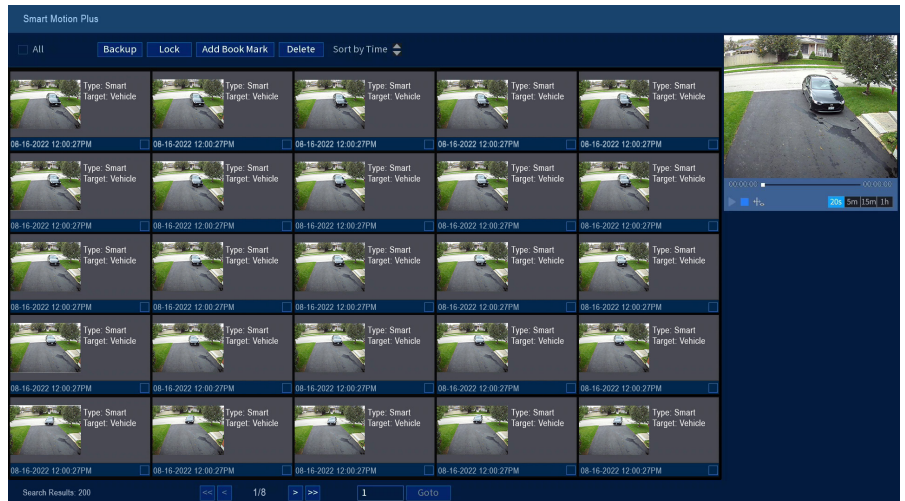
The screenshot shows the Smart Search interface with the following elements:

- 3:** Camera dropdown menu showing '1'.
- 4:** Time Period dropdown menu showing 'Today', with a date range selector below it showing '08-16-2022 12:00:00 AM' to '08-16-2022 11:59:59 PM'.
- 5:** Event Type dropdown menu showing 'All'.
- 6:** Search button.

3. Select a camera to search for detection events from, or select **All**.

4. Enter period for your search, then the start and end time.

5. Select the type of smart motion detection for your search, or select **All**.

6. Click **Search**.

7. Events that match your search criteria are displayed. You now have the following options:

- Click a thumbnail to preview the event. Double-click the preview window to view in full screen.
- Check thumbnails to perform other actions:
 - **Backup:** Back up events.
 - **Lock:** Lock events.
 - **Add Book Mark:** Bookmark events.
 - **Delete:** Delete events.

Auto Tracking is an advanced feature of the PTZ camera designed to monitor large areas by automatically detecting, following, and recording moving objects, such as people or vehicles. This technology leverages both AI detection and tracking. When an object activates the smart motion plus rule, the PTZ camera will utilize its pan/tilt rotation and zoom capabilities to keep the moving object centered on the screen, ensuring continuous tracking without missing any details.



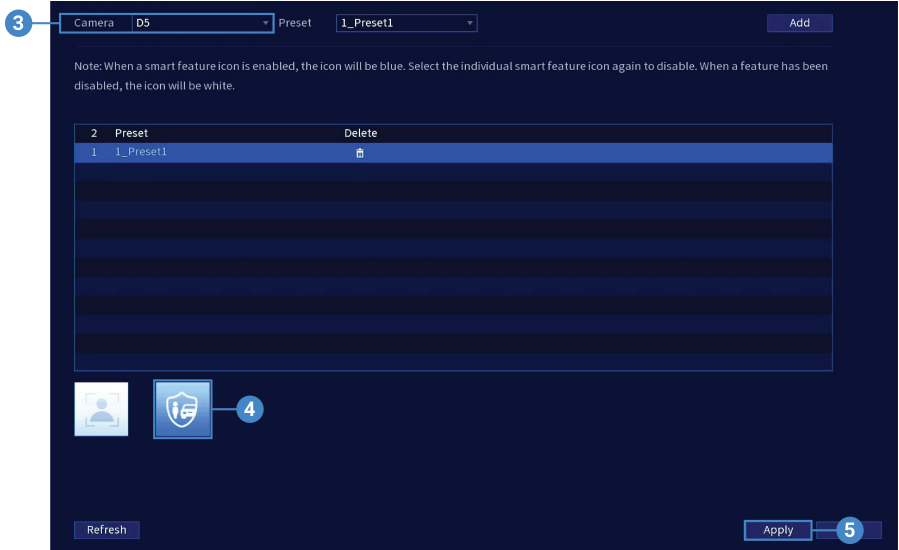
7.1 Enable Smart Motion Plus (for Auto Tracking) in Smart Plan

The smart motion plus feature cannot be used simultaneously with the face detection feature. If the smart motion plus feature is not enabled on your IP PTZ camera's smart plan, then the auto tracking feature will not work. Please make sure the smart motion plus feature is enabled in smart plan before continuing.

To enable smart motion plus in smart plan settings:

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

- 2. Click **EVENTS**. Click the **Event Settings** tab from the side panel, then the **Smart Plan** tab from the drop-down.



- 3. Under **Camera**, select your connected IP PTZ camera.
- 4. Select the **Smart Motion Plus** feature.



NOTE

When a smart feature icon is enabled, the icon appears blue. Click the blue smart feature icon again to disable it. When a feature is disabled, the icon appears white.

- 5. Click **Apply** to save changes.

7.2 Create a Preset for Auto Tracking

To use the auto tracking function on your PTZ camera, you must create one or more presets. Presets will save a camera position for quick retrieval. See 5.2.1 *Presets*, page 11 for full instructions.

7.3 Configuring Auto Tracking

The system allows you to create defined detection areas for auto tracking on moving objects. Adjust preferences for auto tracking on your IP PTZ camera.

To configure auto tracking:

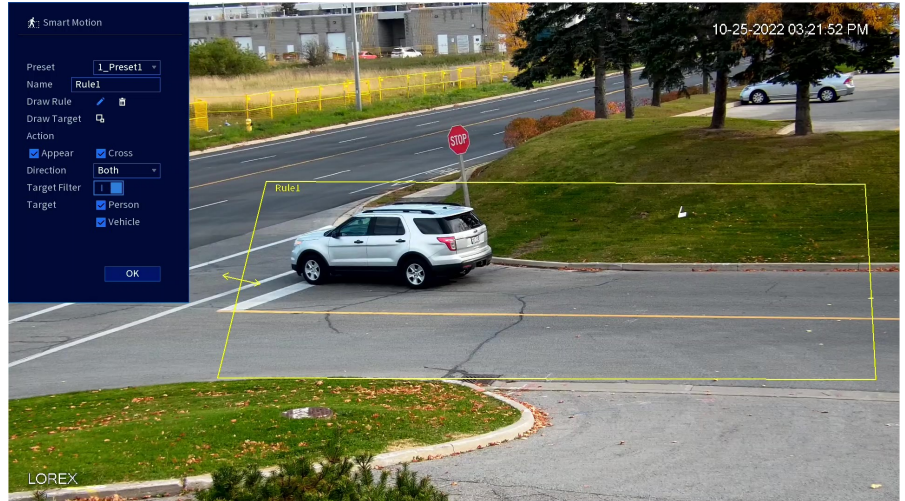
- 1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **EVENTS**. Click the **Event Settings** tab from the side panel, then the **Smart Motion** tab from the drop-down.



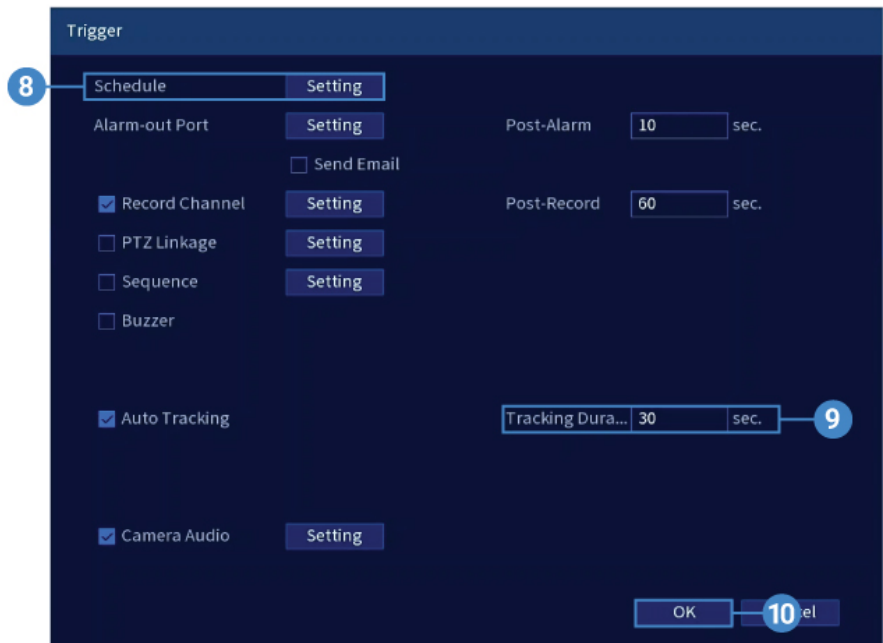
3. Under **Camera**, select your connected PTZ camera.
4. Click **Add** to create a detection rule. Auto Tracking is enabled by default.
5. Under **Type**, select **Smart Motion**.

6. Click the **Draw** icon  and customize the active area for auto tracking:

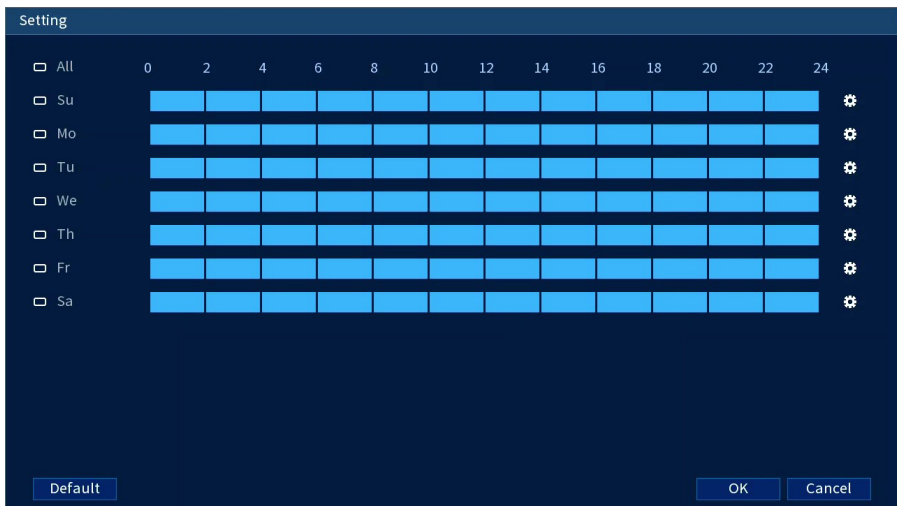


- **Preset:** Select the preset that you have created for your PTZ camera. If you have not yet created one, see 5.2.1 *Presets*, page 11 for full instructions, otherwise auto tracking will not work.
- **Name:** Set a custom name for the rule.
- **Draw Rule:** To draw, click around the area, then right-click to close the defined area. For most accurate results, set an area where objects of interest will move within the defined area as well as into/out of.
- **Action:** Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction:** Determine which direction an object needs to travel in order to trigger auto tracking. You can select **Enter** for movement entering the defined area, or **Leave** for movement exiting the defined area, or **Both** for both types of directions.
- **Target:** Enable the **Target Filter**. Then check the detection targets **Person** and/or **Vehicle**.
- Click **OK** when finished.

7. Click the **Trigger** icon  to set the auto-tracking schedule and to adjust the tracking duration.



8. Click **Setting** next to **Schedule** to choose which days and times of the week to enable auto tracking.



9. To adjust how long the camera will automatically track a moving object, enter the **Tracking Duration** number (next to **Auto Tracking**).
10. Click **OK** when finished.
11. Click **Apply** to save changes.

7.4 Disable Auto Tracking

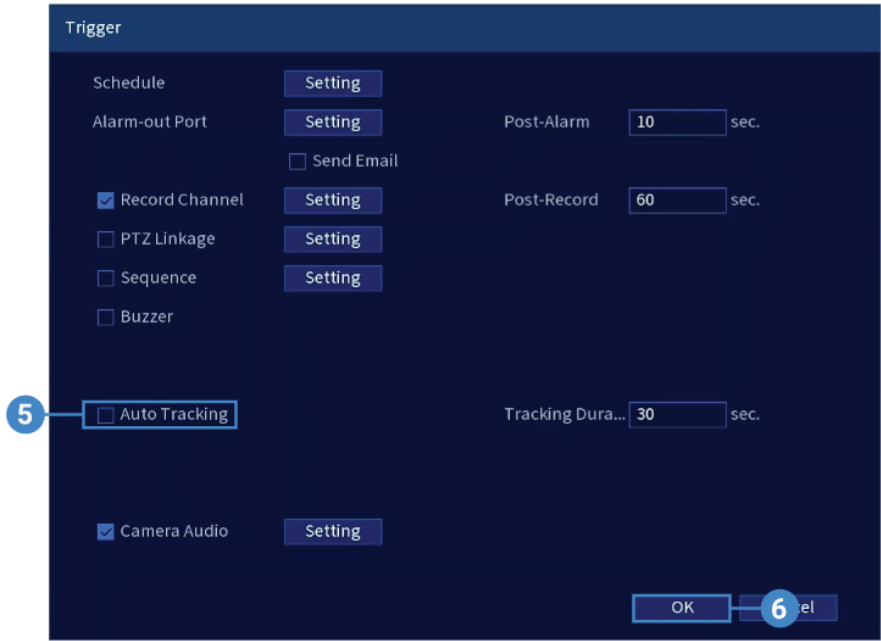
Stop auto tracking on your PTZ camera by simply disabling the function.

To disable auto tracking:

- 1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
- 2. Click **EVENTS**. Click the **Event Settings** tab from the side panel, then the Smart Motion tab from the drop-down.



- 3. Under **Camera**, select your connected PTZ camera.
- 4. Click the **Trigger** icon .



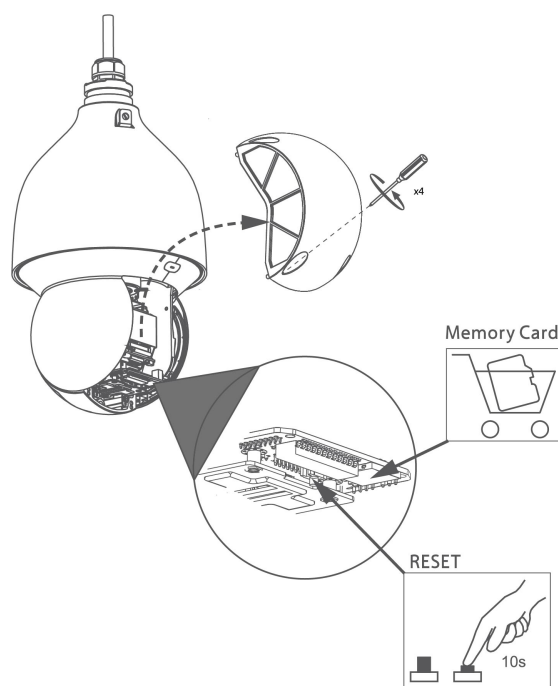
- 5. Uncheck **Auto Tracking**.
- 6. Click **OK**, then **Apply** to save changes.

Inserting the microSD Card (Optional) and Resetting the Camera

The camera features a hard reset button that is used to reset all camera settings back to the default values. This is useful in case you want to revert camera image settings back to the default values.

To reset the camera:

1. Connect the camera as detailed in 3 *Connecting the PTZ Camera*, page 3. Make sure the camera is powered on.
2. Loosen the service panel screws (x4), but do not remove them. Remove the service panel cover.



3. The service panel allows you to perform the following:
 - Insert a microSD card into the microSD card slot. For local recording, you can install a microSD card up to 128GB. SanDisk™ or Kingston™ brand microSD cards are recommended. microSD card Class 10 or higher required.
 - Press and hold the reset button for 10 seconds to reset the camera to default settings



NOTE

It may take few minutes for the camera image to reappear on the screen.

There is no picture at night.

- Camera is capable of seeing in extremely low light conditions, but it cannot see in total darkness. It is recommended to install the camera where there is some ambient light (e.g. street lighting, starlight, moonlight, etc.) or leave a light on in the area where the camera is installed.

No image at startup.

- The camera may take up to 1 minute to power up after being connected to the NVR. Wait 2 minutes before following steps below.
- Check to ensure your camera is properly connected (see 3 *Connecting the PTZ Camera*, page 3).
- If you are using a PoE switch, it must be PoE+ rated (PoE class 4). Standard PoE switches are not adequate to power the camera. PoE+ switches are available for purchase on lorex.com (model #:).
- Ensure the camera is connected to a router on the same network as the NVR.
- If the camera is connected to the LAN, you must search your network for cameras using the NVR. See your NVR's instruction manual for details.
- Make sure that the cable run is within the limitations specified in 3 *Connecting the PTZ Camera*, page 3. All Ethernet cables must be rated CAT5e or higher.
- If using a power adapter, connect it to a different outlet.
- Ethernet cable may be damaged or not connected properly. Check your cable run or try a different cable.
- Reset the camera to factory default settings. See 8 *Inserting the microSD Card (Optional) and Resetting the Camera*, page 24 for details.

No image or camera image is unclear.

- Dome cover is dirty. Clean the dome cover with a soft, slightly damp cloth. Do not use anything other than water to clean the dome cover, as chemicals such as acetone can permanently damage the plastic.

Image is distorted.

- Digital zoom is activated. Activating digital zoom may reduce the resolution of the camera image. Zoom out completely to return to the camera's optimal resolution. See 5 *Controlling the PTZ Camera through the NVR*, page 10 to be directed to instructions on using the zoom controls.
- Image may become unclear when camera is tilted too close to the camera base (e.g. pointed parallel to the ceiling). Tilt the camera using NVR PTZ controls.

Image is too bright.

- Ensure your camera isn't pointed directly at a source of light (e.g. sun or spot light).
- Check your NVR's brightness and contrast settings.
- Move your camera to a different location.
- Enable HDR (High Dynamic Range) in your NVR. HDR is optimized for outdoor environments to help with over- or under-exposed images of scenes with both bright and dark areas in the same picture.

Image is too dark.

- Check your NVR's brightness and contrast settings.
- Move your camera to a different location.
- Enable HDR (High Dynamic Range) in your NVR. HDR is optimized for outdoor environments to help with over- or under-exposed images of scenes with both bright and dark areas in the same picture.

NVR motion detection is constantly triggering.

- Turn off motion detection on the channel the PTZ camera is connected to. NVRs use video motion detection, which means they detect motion by looking for changes between frames (images) in the video. If the camera is moving, the NVR will detect this as motion.

Auto Tracking is not working.

- Auto Tracking works with Smart Motion Plus. When Smart Motion Plus is enabled, you can turn Auto Tracking on or off. Refer to 7 *Auto Tracking*, page 18 for detailed instructions.

10.1 Video Transmission

Technology	IP
Resolution/Frame Rate	4MP (2560 × 1440) @ 1-25/30fps
Effective Pixels	H: 2560 × V: 1440
Ultra WDR (Wide Dynamic Range)	Yes
Video Format	NTSC/PAL
Video Compression	H.264H, H.264B, Smart H.265+, H.264, H.265, MJPEG (Sub Stream), Smart H.264+
Termination	RJ45 10/100Mbps Ethernet

10.2 Optical

Image Sensor Type	4MP, 1/2.8" CMOS
Horizontal Field of View	51.9° to 3.0°
Lens/Lens Type	5 mm to 125 mm, F1.6 to F3.6 / Zoom Module
Optical Zoom	25×
Digital Zoom	Yes 1

10.3 Pan/Tilt Capabilities

Range	Pan: 0° to 360° endless, Tilt: -15° to 90°
Auto Flip	Yes, 180°
Continuous Rotation	Yes
Maximum Manual Speed	Pan: 0.1°–200°/s, Tilt: 0.1°–120°/s
Maximum Preset Speed	Pan: 240°/s, Tilt: 200°/s
Presets	300
Patterns	5
Tours	8, with a maximum of 32 presets per tour
Other PTZ Functions	Auto Scans, Auto Pan

10.4 Special Features

AI Detection	Yes (Person, Vehicle)
Privacy Masking	Supports up to 24 areas, with a maximum of 8 areas in a single

10.5 Night Vision

IR Night Vision Range	330 ft / 100 m, 850nm 3
Color Night Vision	Yes

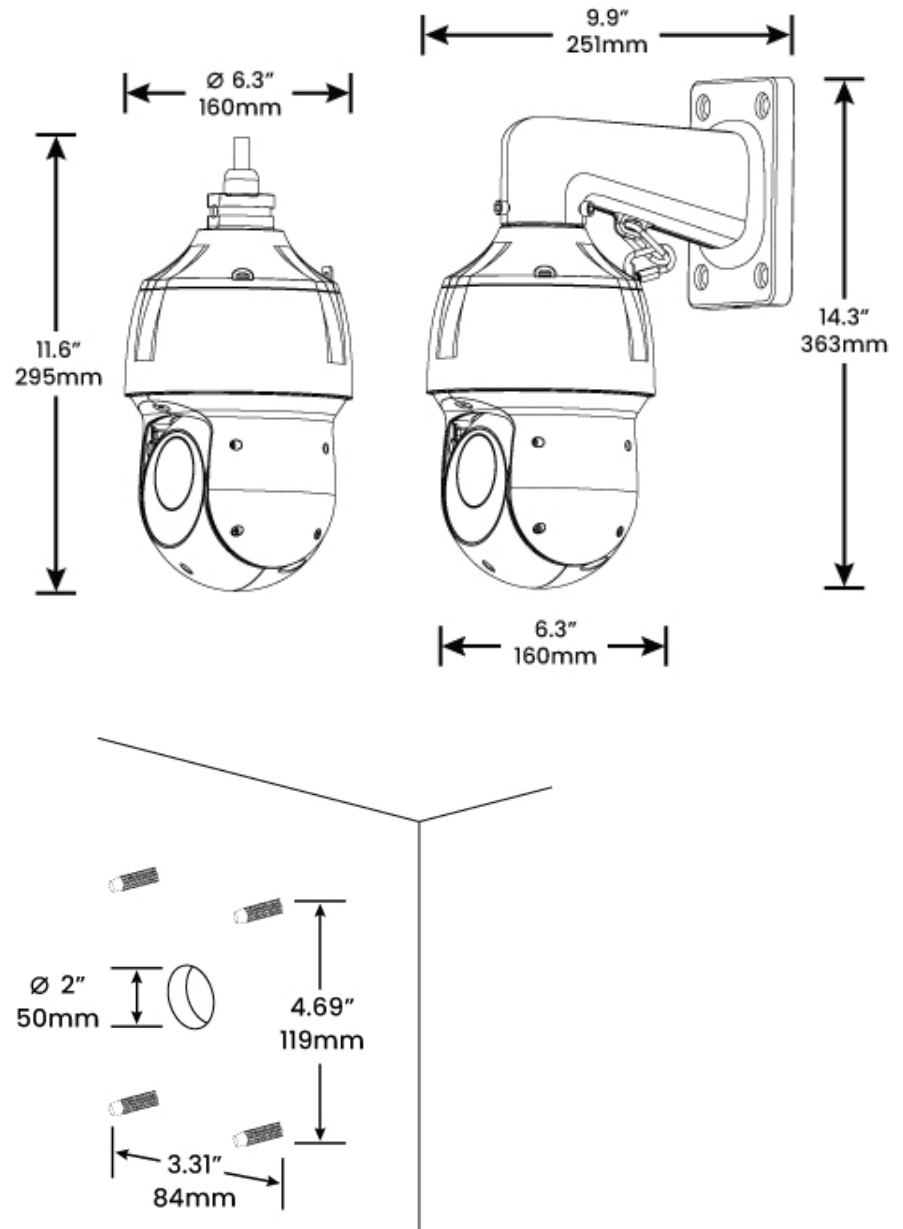
10.6 General

Body Material	Aluminum Alloy
Power Requirements	PoE+ (802.3at), 12V DC / 3A
Maximum Power Consumption	20W
Storage	MicroSD card (up to 512GB), FTP/SFTP, NAS
Operating Temperature	-40°F to 158°F / -40°C to 70°C
Operating Humidity	<95% RH
Environmental Rating	IP66 (Indoor/Outdoor) 4

Weight	Camera Only: 5.29 lbs / 2.4 kg With Wall Mount: 7.21 lbs / 3.27 kg
Audio Input/Output	Input: 1 channel (LINE IN, bare wire) Output: 1 channel (LINE OUT, bare wire)
Alarm Inputs/Output	Inputs: 2 Output: 1

10.7 Dimensions

Camera (Dia. × H)	6.3" × 11.6" / 160 mm × 295 mm
Camera with Wall Mount (W × D × H)	6.3" × 9.9" × 14.3" / 160 mm × 251 mm × 363 mm
Wall Mount Screw Hole Spacing (W × H)	3.31" × 4.69" / 84 mm × 119 mm
Camera Cable Entry Hole (Dia.)	□ 2" / 50 mm



10.8 Disclaimers

1. Digital zoom is a function controlled by the connected NVR. For a list of compatible NVRs, visit www.lorex.com/compatibility.
2. Full-color nighttime video will switch to black & white IR night vision below 1 lux to maintain optimal low-light image quality.
3. The stated IR night vision range is based on ideal conditions with typical outdoor nighttime ambient lighting and total darkness. Actual range and image clarity depend on installation location, viewing area, and the light reflection or absorption levels of objects. In low light, the camera will switch to black and white.
4. Not intended for submersion in water. Installation in a sheltered location is recommended.
5. For the online instruction manual on how to install and use this camera, visit www.help.lorex.com/LNZ45P25-series.
6. Compatible with select Lorex NVRs. For the most up-to-date list of compatible recorders, visit www.lorex.com/compatibility.
7. A Cat5e cable is required to connect to a compatible NVR (not included).



Website

www.lorextechnology.com

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