



LUM-510-PTZ  
IP Surveillance Camera

# Installation and Quick Start Guide

## Read this *before* you go on site!

For maximum control and convenience, **install your camera with a connection to the Internet** via your NVR or through a local network router. **This allows you to use OvrC**, a powerful remote maintenance tool. See OvrC.com for details.

In addition, your client can use the Luma Surveillance mobile app to check on the camera from anywhere.

**For installation using this guide, you must be able to access this camera through a personal computer.** If your surveillance system is not on a network, you'll have to use the NVR's local interface for installation. See the NVR user's manual for details.

### Safety Tips

- Handle this device with care. Do not strike or shake this device.
- Protect the power cord from being stepped on or pinched, particularly where it connects to the device and the power outlet.
- Do not operate this device beyond its specified power ratings.
- Do not use this device near any heat sources such as radiators, heat registers, stoves, or other such heat-generating equipment.
- Temperature affects the performance and lifespan of the camera and SD card. For best results, use this device in temperatures ranging from -20°F–140°F.
- Clean this device with a dry cloth. Do not use abrasive detergents when cleaning, especially the lens. If dirt is hard to remove, use a mild detergent and wipe gently.
- Make a note of the configuration settings and save them. This helps when changing the configuration, when upgrading the device, or with recovery if unexpected failure or trouble occurs.
- Avoid the possibility of a laser striking the camera's light sensor.



**WARNING:** This product can expose you to chemicals including cadmium, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Inspection

Ensure that the device is in good condition and all the assembly parts are included. If the product does not function properly, please contact technical support. Do not disassemble the camera for repair or maintenance.

### Box Contents

- Camera
- Extension mount
- Self-adhesive mounting template for camera and extension mount
- 4 × wall anchors with screws (2 sets)
- 2.5mm hex wrench
- Safety lanyard with carabiner
- Weatherproofing kit for PoE cable
- 4 × mount fastening screws

### Required Equipment

Aside from the contents of this box, you must provide

- Small slot-head screwdriver (if not using PoE)
- Standard slot-head screwdriver
- A network connection (and an NVR, if desired)
- Admin rights to a computer that can access the network
- Mobile device with Luma Surveillance app (recommended) or CCTV tester
- Power source: PoE or 12V DC
- Phillips screwdriver

### Optional Equipment

- SD Card (up to 128 GB)

## Preparation

- **Ensure that your recorder has the very latest firmware.** Use OvrC to update the firmware, or consult your NVR manual.
- Keep all equipment powered off during physical installation.
- Ensure the mounting surface is strong enough to withstand three times the weight of the camera and the mount.

### Additional Resources

If desired, you can add an SD card (up to 128 GB) to the camera. If you are not using an NVR, then an SD card or a network drive is required if you want to keep a log of the camera's activities.

You can acquire a PDF of the web interface manual and other materials from the product page at [SnapAV.com](http://SnapAV.com).

**Important!**

Before attaching this to your Luma NVR, **update the recorder to the latest firmware!** If you don't, essential features of your camera **may not function.**

## Overview

Before installing, familiarize yourself with the parts of your camera.

### Tails

The PTZ camera has five different tails.

#### Power

The power cable ends in a red screw terminal. Insert the two wires of the power supply into the red and black inputs. Do not use the center input.

#### Audio

- Purple: In
- Black: Ground
- Pink: Out

#### Ground

- Yellow/Green

#### Alarm

- White/Black: Alarm Com 1
- Yellow/Blue: Alarm In 1
- White/Red: Alarm Out 1
- Yellow/Orange: Alarm In 2
- White Yellow: Alarm Com 2
- Yellow/Black: Alarm Ground
- White/Purple: Alarm Out 2

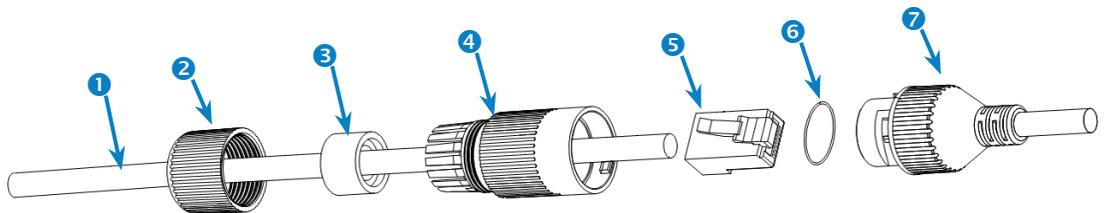
#### Network

Be sure to use the waterproofing kit on your network cable, as shown on the next page.

## Weatherproofing the Network Cable

We recommend weatherproofing your cable for all outdoor installations, no matter how shielded your camera may be from the elements. Use the weatherproofing kit provided with the camera, and an unterminated network cable.

1. Before terminating the RJ45 cable ❶, slide it through the lock nut ❷, the thick rubber gasket ❸, and the weatherproof endcap as shown. Be sure the notched side of the rubber gasket ❸ faces toward the endcap, as shown in the diagram below.
2. Terminate the RJ45 cable ❶ with a network plug ❺.
3. Place the O-ring ❻ onto the end of the camera's network interface socket ❼ with the flat side toward the camera. Push it past the locking teeth as far as it easily goes.
4. Connect the RJ45 plug ❺ to the camera's network socket ❼.
5. Align the teeth on the weatherproof endcap ❹ with the gaps on the camera's network interface socket ❼, then insert the socket into the endcap. Twist until they click into position (the O-ring ❻ gives you a little flexibility while still weatherproofing the connection).
6. Slide the thick rubber gasket ❸ into the weatherproof endcap ❹, and secure it by screwing the lock nut ❷ tightly onto the endcap ❹.



## Inserting an SD Card

If desired, you can add an SD card (up to 128 GB) to the camera. If you are not using an NVR, then an SD card or a network drive is required if you want to keep a log of the camera's activities.

It is best to insert the SD card before installing the camera.

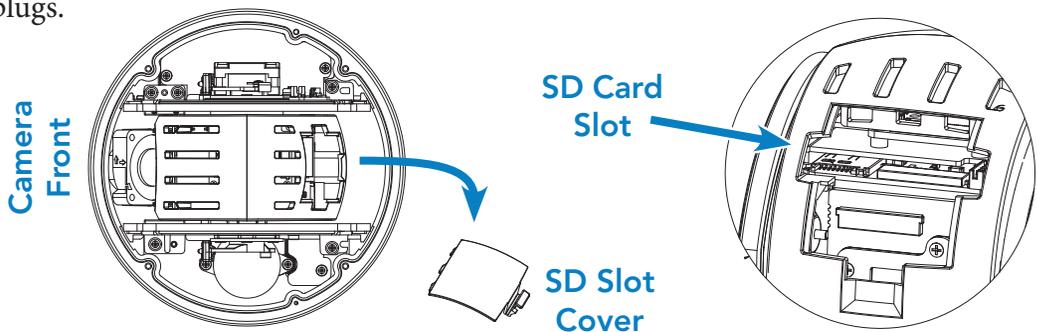
### Compatible Cards

A complete list of compatible cards can be found on our website.

### Insertion

Do not remove the protective covering from the camera dome while doing this! Also, ensure the camera is powered off.

- Remove the silicone plugs from the skirt around the camera dome.
- Use the hex wrench to loosen the bolts until you can remove the camera dome. Do not remove the bolts entirely.
- Set the camera dome aside. Be careful not to scratch it. Do not cut or remove the connecting strap.
- Remove the card cover (shown below left), locate the SD slot (below right) and insert the card.
- Replace the cover, reattach the dome, secure the bolts, and replace the rubber plugs.



## Installation: On-Ceiling

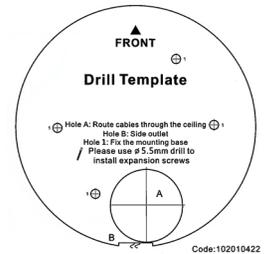
The cables of PTZ camera can be routed either from the top of the extension mount and into the ceiling, or out the side of the extension mount to run across the ceiling.

### Requirements

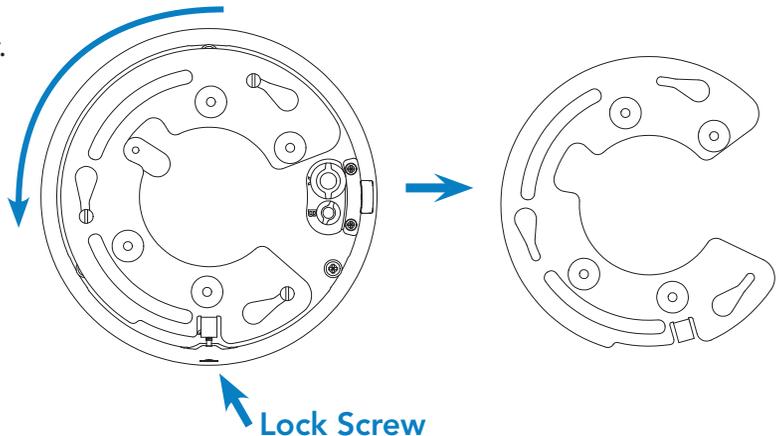
- The ceiling must be strong enough to withstand more than three times the weight of the PTZ camera (and its mount, if any).

### Steps

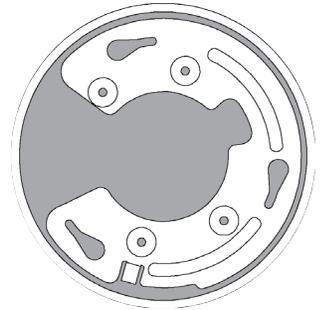
- Attach the self-adhesive drill template to the desired location. Ensure the front of the template aims toward the primary viewing area; the camera's cabling routes out the back.
- Drill four holes according to the template for mounting screws. To run your cabling through the ceiling, also drill out area A in the template.
- Attach the extension mount to the ceiling using the enclosed screws. Ensure that the cable conduit faces away from the front of the camera.



- Turn the camera over. Loosen the lock screw on the side of the camera (do not remove it). Rotate the base plate counterclockwise to separate it from the camera.

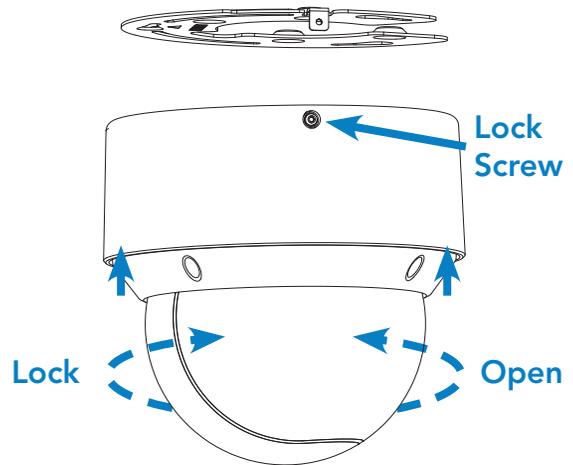


5. Flip the base plate over and attach it to the extension mount, as shown. Be sure that the gap in the base plate is over the cable conduit of the extension mount.



6. Route the cables through the cable hole or conduit and connect them to the camera tails.

7. Align the PTZ camera with the base plate. Insert the PTZ camera and rotate it clockwise into the base plate until the camera can turn no further (this is the opposite of step 1). Note the icons on the side of the PTZ to ensure you rotate it properly.



8. Tighten the lock screw on the PTZ camera to fully secure the camera.

## Install and Run the Luma Utility

Use the Luma Utility to locate your camera and set it up.



Visit your product page at SnapAV.com and download the Luma Utility installer from the Support tab. **You must use v3.0.0.53 build 20170426 or later! Earlier versions of the utility will not work!**

Run the installer. You can click through and accept the defaults.

### Pre-Installation Camera Configuration

**You'll find it easiest to connect the camera directly to your PoE switch, making most adjustments to the camera from the convenience of your table (prior to physical installation), rather than from atop a ladder.**



Connect the camera to your networked PC. Run the Luma Utility. It searches for attached Luma Surveillance devices. If your camera does not appear, check the connection, ensure the camera has power, then click **Refresh**.

### Activate the Camera

Click on the entry for your camera to view its details. If the camera is inactive,

use the text boxes at the lower right of the Luma utility window to activate the camera by creating a new secure password.

<input type="checkbox"/>	006	LUM-500-DVR-16...	Luma 16C...	Inactive	192.168.8.113	80	8000	554	V3.0.4build 1...	snapavTest
<input type="checkbox"/>	007	LUM-700-BUL-IPH...	IP CAMERA	Active	192.168.8.144	80	8000	554	V5.4.1build 1...	
<input type="checkbox"/>	008	LUM-500-TUR-IP...	IP CAMERA	Active	192.168.8.145	8019	8000	554	V5.4.1build 1...	
<input type="checkbox"/>	009	LUM-500-TUR-IP...	Saadturet	Active	192.168.8.104	8025	8000	554	V5.3.6build 1...	snapavTest
<input type="checkbox"/>	010	LUM-500-BUL-IP...	IP CAMERA	Active	192.168.254.3	80	8000	554	V5.4.1build 1...	
<input type="checkbox"/>	011	LUM-500-BUL-IP-GR	IP CAMERA	Active	192.168.8.112	80	8000	554	V5.4.1build 1...	
<input type="checkbox"/>	012	LUM-700-DOM-IR...	IP CAMERA	Active	192.168.8.126	8016	8000	554	V5.4.1build 1...	
<input type="checkbox"/>	013	LUM-700-BUL-IPH...	IP CAMERA	Active	192.168.254.4	80	8000	554	V5.4.1build 1...	

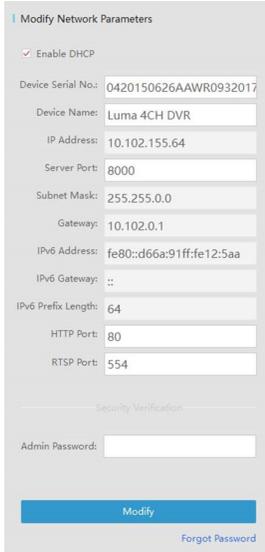
You can modify the network parameters after the device activation.

New Password:

Confirm Password:

- Passwords cannot be longer than 16 characters. To ensure compatibility with the local interface, only use numbers, letters, spaces, and the following special characters: . , : - /
- Use a password that is long and easy to remember. A password like *parisinthespring* is more secure and easier to remember than a password like *D3x-7b*.

## Edit the Network Settings



**Suggested Best Practices:** Ensure the **Enable DHCP** box is activated. In your router, reserve an IP address and assign it to the camera's MAC address (found on its box). See your router's documentation for details.

The HTTP port defaults to 80. It allows you to access your camera through a web browser.

The server port defaults to 8000. The Luma mobile application uses it to access the camera.

For security reasons, change your ports and record the new numbers. Consult your manual for reserved port numbers to avoid.

To confirm changes, enter the password that you just created and then click **Save**.

## Complete Port Forwarding

Port forwarding allows you to access the camera from the internet for remote operations. These settings are entered in your network router, typically in a menu called *Port Forwarding* or *Applications and Gaming*. Refer to your router manual for help. Find the settings you need, then log in to the router and enter the new ports.

Port	Default	New Value	Protocol
HTTP	80		TCP/UDP
Server	8000		TCP/UDP
RTSP	554		TCP/UDP

Camera IP Address
Admin Password

## Start the Web Interface

Open your browser and navigate to the camera's IP address.



Below the login area, you may see: "Please click here to download and install the plug-in. Close the browser when installing the plug-in." If so, download the plug-in and close all browser windows.

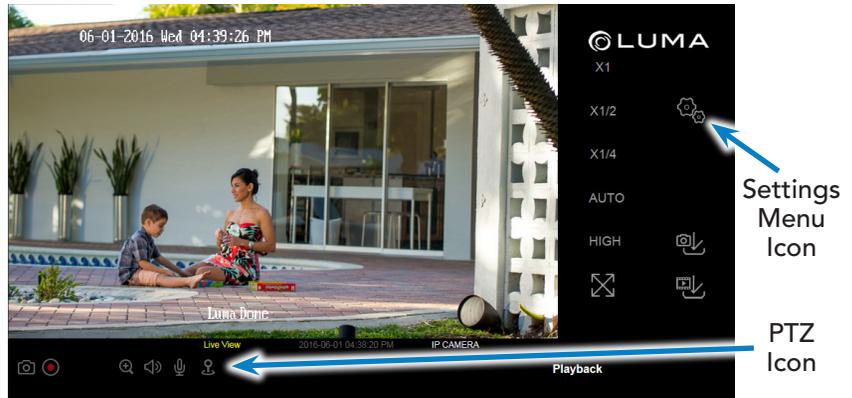
Install the *LumaWebComponents* plug-in, restart your browser and go to your camera's login window. Log in as *admin* using the password you created.

You might get a pop-up message that asks whether you want to run the Luma Web Components plug-in. You must allow the plug-in to access your system over the web.

Be sure to save your camera's web page as a favorite in your browser.

## Check the Camera

After logging in, your screen shows the live page, similar to the illustration below. If it does not appear, check the connection to your NVR or network, and ensure that the camera is powered up. Click the **Settings** icon to access the web interface and finish setup.



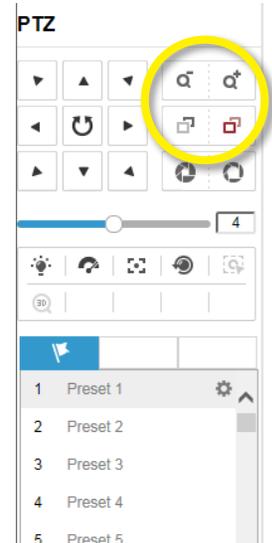
## Zoom and Focus

This camera has a motorized varifocal lens.

To adjust the focus, return to the live screen (see previous page) and click the PTZ icon . This opens up the PTZ menu on your screen.

In the PTZ menu, the buttons circled control the lens.

- The Zoom- button on the top left widens the angle of vision, providing a more panoramic view.
- The Zoom+ button on the top right lowers the angle of vision, providing a tighter view.
- The Focus- button on the bottom left focuses on near objects.
- The Focus+ button on the bottom right focuses on distant ones.



## Set Up Presets and Patrols

To set up presets and patrols, go to the live page and click the PTZ icon . This opens up the PTZ menu on your screen.

### Set Up Presets

You can set up to 300 different presets. To set a preset, click the flag button on the PTZ menu to open the preset tab. Use the arrow, zoom, and focus buttons to move your camera to a desired alignment. When you are satisfied, click the preset number you want it to be, then press the gear button to save the position.

To call a preset, press the arrow on the preset's button. Clicking X deletes the associated preset.



Presets 33–45 and 92–105 are reserved for system use. They cannot be overwritten.

### Set Up a Patrol

A patrol is a linked series of presets. The camera moves from one preset to another in a chain, and lingers at each preset for a certain amount of time.

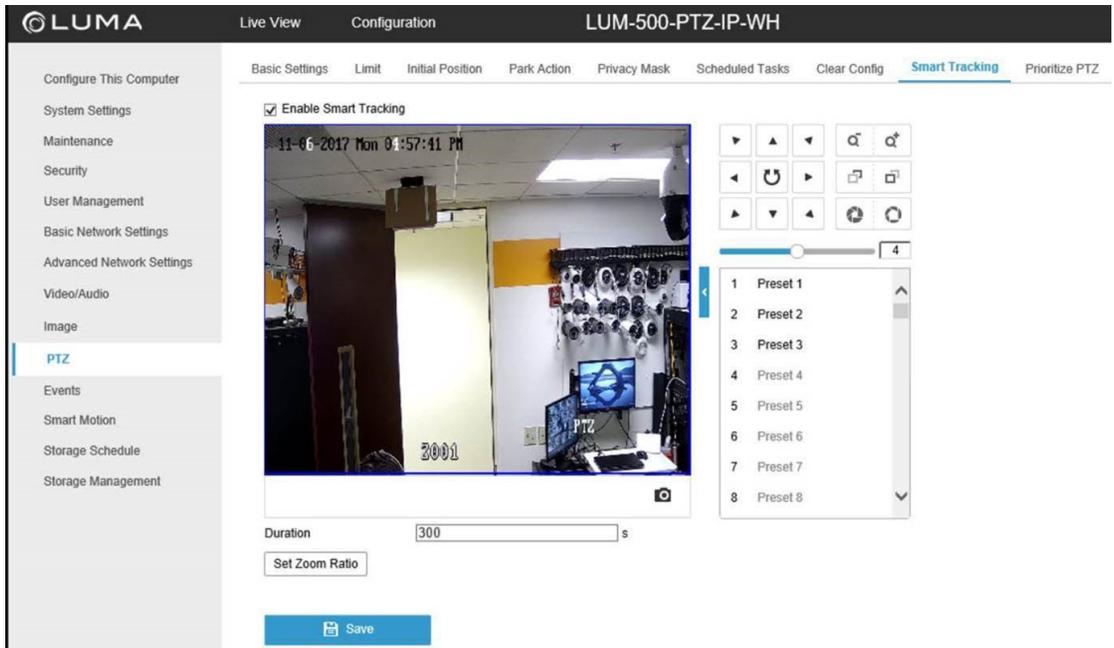
You can set up to 8 different patrols. To do so, click the movement button (to the right of the preset flag) on the PTZ menu to open the patrol tab. Press the gear button to set or edit the patrol.



## Set Up Smart Tracking

Smart tracking enables the camera to follow a moving object across its field of view. The camera can follow the object for up to 5 minutes.

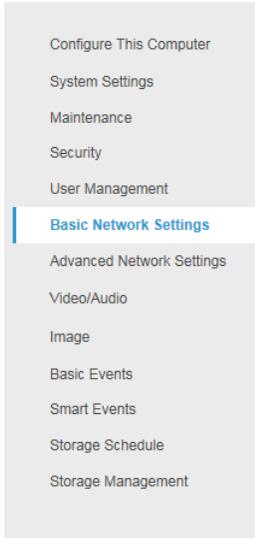
From the home page, click the settings icon (see page 12). When the configuration page opens, go to the **PTZ** page using the menu at left.



The screenshot shows the LUMA web interface for configuring a PTZ camera. The top navigation bar includes 'Live View', 'Configuration', and the camera model 'LUM-500-PTZ-IP-WH'. The left sidebar lists various settings categories, with 'PTZ' selected. The main configuration area is titled 'Smart Tracking' and features a checkbox labeled 'Enable Smart Tracking' which is checked. Below this is a live video feed showing an office interior with a timestamp '11-06-2017 Mon 04:57:41 PM'. To the right of the video is a control panel with directional arrows, a zoom icon, and a list of 8 presets. Below the video, there is a 'Duration' field set to '300' seconds and a 'Set Zoom Ratio' button. A blue 'Save' button is at the bottom.

Just above the video screen, click the checkbox to enable smart tracking. Just below the screen, enter the maximum duration of smart tracking (up to 300 seconds). Click **Save**.

## Set Up Dynamic DNS



DDNS allows you to connect to your surveillance system from anywhere, via the Internet, using a web address that's easy to remember.

Click on the **Settings Menu** icon (page 12) and navigate to **Basic Network Settings > DDNS**.

Click **Enable DDNS**, then choose a type from the DDNS Type drop-down menu. [We recommend WirepathDDNS](#). Next, choose a server address. [We recommend ns2.wirepathdns.com](#).

Enter your desired domain in the Domain box. This creates a personalized server address, which is shown under Device URL. If someone has already registered your desired domain, the system adds two to four digits to your domain.

*Example: If you choose the domain myhome, your system's custom URL would become myhome.wirepathdns.com. If someone already had claimed the myhome URL, then your system's URL would look like myhome13.wirepathdns.com.*

If you changed your HTTP port (see page 11), add a colon and the port number to the URL (e.g., myhome.wirepathdns.com:8402).

**NOTE: All your network devices now use this same DNS (with appropriate port numbers)!**

Click **Save** to finalize the settings.

TCP/IP	DDNS	PPPoE	Ports	NAT
<input checked="" type="checkbox"/> Enable DDNS				
DDNS Type		WirepathDDNS		
Server Address		ns2.wirepathdns.com		
Domain		myhome		
User Name				
Port		1		
Password				
Confirm				
Device URL		myhome.wirepathdns.com		

## ..... Add Additional Users .....

Click on **User Management**.

Click the **Add** button. Enter the new account's user name and password. Account names can be up to 32 characters long. If you are using an NVR, to ensure compatibility with the NVR's local interface, user names should contain numbers and letters only.

[We recommend that you add accounts by individual users' names, so that you always know which user is involved with any activity.](#)

Passwords cannot be longer than 16 characters. To ensure compatibility with the NVR's local interface, passwords can only contain numbers, letters, spaces, and the following special characters: . , : - /

Choose the account's level. There are two levels for users: operator and user. The only difference is the default permissions they are given. You can customize permissions for each account individually. See the camera web interface manual (available online on your camera's product page) for more details.

## Calibrate the Camera's Clock

Click on **System Settings** > **Time Settings**.

### Synchronize the Time

At the top, choose your time zone.

By default, the system uses network time protocol (NTP) to synchronize your system to Coordinated Universal Time. [We strongly recommend using NTP to keep your system well calibrated.](#)

If you want to use manual time sync, or if your system is isolated from the Internet, see the camera web interface manual (available online).

### Disable DST if Necessary

If you are in a location that does not observe daylight saving time, click the **Enable DST** checkbox to deselect it.

Click **Save** to confirm changes.

## Support

### Need Help? Contact Tech Support!

If you need further clarification, please email [support@SnapAV.com](mailto:support@SnapAV.com). For more information, instructional videos, support documentation, or ideas, visit our website and view your item's product page.

### 3-Year Limited Warranty

This Luma Surveillance™ product has a 3-Year Limited Warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products that have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to a designated service center with an assigned return authorization (RA) number. Contact technical support for an RA number.

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