



700 Series Bullet
500 Series Bullet
IP-Enabled HD Surveillance Camera

Installation Manual

Important!

Ensure your NVR
has the latest
firmware!

Read this page *before* you go to the job 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.

Required Equipment

- A network connection (and an NVR, if desired)
- Admin rights to a computer that can access the network
- Mobile phone with the Luma Surveillance mobile app (recommended) or CCTV tester
- Power source: either PoE or 12V DC
- Phillips screwdriver

Additional Resources

If desired, you can add an SD card (up to 128 GB) to the camera. 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.

Safety Tips

- Handle this device with care.
- Do not strike or shake this device.
- Do not operate this device beyond its specified power source ratings.
- Protect the power cord from being stepped on or pinched, particularly where it connects to the device and to the power outlet.
- Do not use this device near any heat sources such as radiators, heat registers, stoves, or other such heat-generating equipment.
- The performance and lifespan of the SD card (if used) is affected by temperature. For best results, use this device in temperatures ranging from -20–140 °F for the 500 series, or from -40–140 °F for the 700 series.
- Clean this device with a dry cloth. Do not use strong or abrasive detergents when cleaning the device, 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.

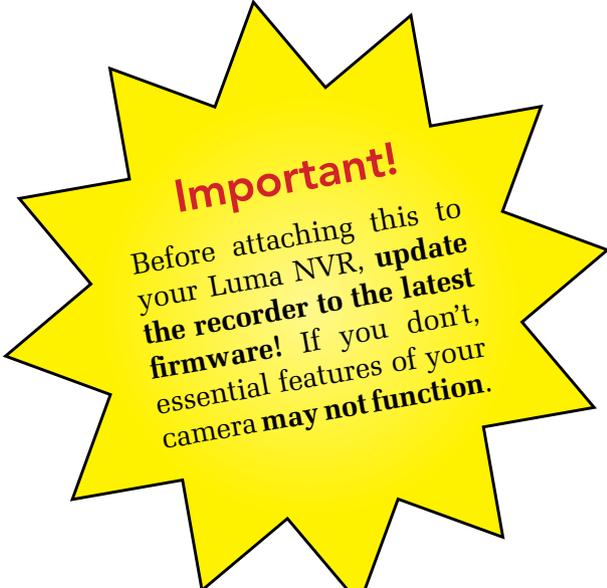
Installation

Before you start, ensure that the device is in good condition and all the assembly parts are included. **Also ensure that your recorder has the very latest firmware.** Use OvrC to update the firmware, or consult your NVR manual.

- Ensure the mounting surface is strong enough to hold three times the weight of the camera plus the mount.
- If the mounting surface is cement, use the included expansion screws to install the camera. If mounting to a wood surface, use self-tapping wood screws (not included) to secure the camera.
- If the product does not function properly, please contact technical support. Do not disassemble the camera for repair or maintenance.

Box Contents

- Camera
- Self-adhesive mounting template
- 4 x wall anchors (with screws)
- 3mm hex wrench
- CC tester cable
- Weatherproofing kit for PoE cable



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.**

Your Camera

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



Installation with an NVR

If you are installing with an NVR, follow these instructions. Otherwise, follow the instructions starting on the next page.

1. Ensure your NVR has the latest firmware. If it does not, your NVR may be unable to locate and activate your camera.
2. Perform the physical installation of your camera by following the instructions given on pages 10–14.
3. Plug your camera into your recorder. The NVR autodetects your camera, activates it (giving it the same admin password that it has), and assigns it an IP address.
4. Complete the installation using the instructions given in your NVR manual. You do not need to continue using this guide. [Where possible, we recommend changing settings using your NVR.](#)

Optional Extra Setup

This camera has a few features that are not available on your NVR.

- It has advanced detection features: line crossing and area intrusion. After completing installation, see the camera's web interface manual to set these up.
- The 700 (only) has a motorized varifocal lens. See page 14 for details. You can adjust the lens from your camera's live view screen or from the NVR's live view screen.

Installation Without an NVR

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 PC, 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 PC and run the Luma Utility. It searches for attached Luma Surveillance devices. If your camera does not appear, check the connection, ensure the camera is powered up, then click the **Refresh** button.

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.

- 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 *parisinthspring* is more secure and easier to remember than a password like *D3x-7b*.

<input type="checkbox"/>	004	LUM-501-DVR-8CH	Luma 8CH...	Active	192.168.8.133	80	8000	554	V3.0.4build 1...	snapavTest
<input type="checkbox"/>	005	LUM-500-DVR-16...	Luma 16C...	Active	192.168.8.110	80	8000	554	V3.0.4build 1...	snapavTest
<input checked="" 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-IP...	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...	

The device is not activated.

You can modify the network parameters after the device activation.

New Password:

Confirm Password:

Edit the Network Settings

Modify Network Parameters

Enable DHCP

Device Serial No.: 0420150626AAWR0932017

Device Name: Luma 4CH DVR

IP Address: 10.102.155.64

Server Port: 8000

Subnet Mask: 255.255.0.0

Gateway: 10.102.0.1

IPv6 Address: fe80::d66a:91ff:fe12:5aa

IPv6 Gateway: ::

IPv6 Prefix Length: 64

HTTP Port: 80

RTSP Port: 554

Admin Password:

Modify

[Forgot Password](#)

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 lets you to access your camera through the web. The server port defaults to 8000. The Luma mobile app uses it.

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 created and then click **Save**.

Complete Port Forwarding

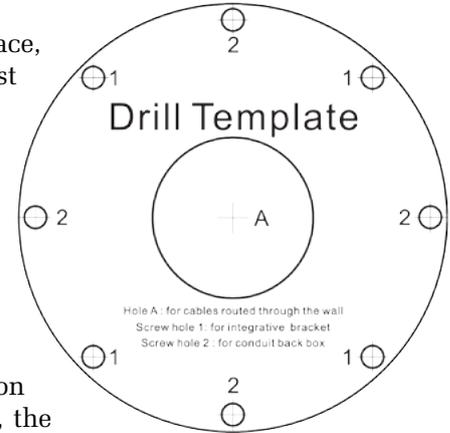
Port forwarding allows you to access the camera from the internet for remote operations. These settings are entered in your network router, typically in a menu called *Port Forwarding* or *Applications and Gaming*. Refer to your router manual for help. Find the settings you need, then log in to the router 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
<input type="text"/>
Admin Password
<input type="password"/>

Physical Installation

1. Drill a cable hole and pilot holes for your screws in the mounting surface, using the supplied template shown. The cable hole needs to be at least 1 inch wide.
2. **CAUTION! Before terminating your RJ45 for an outdoor install, you must weatherproof it! See the next page for details.**
3. Route the cables through the cable hole.
4. Secure the camera base to the mounting surface with screws.
5. Attach power to the camera.
 - If using **PoE**, attach the RJ45 cable to the connector.
 - If using **12V DC** for power, locate the red and black wire bundle (on the 700, there are two sets of wires: one has red and black only, the other is a bundle of eight). Attach the hot line to the red wire, and the ground to the black wire.
6. For the **700 only**: Connect the leads in the eight-wire bundle as shown for additional features. Secure all other wires so they don't cause a short circuit.

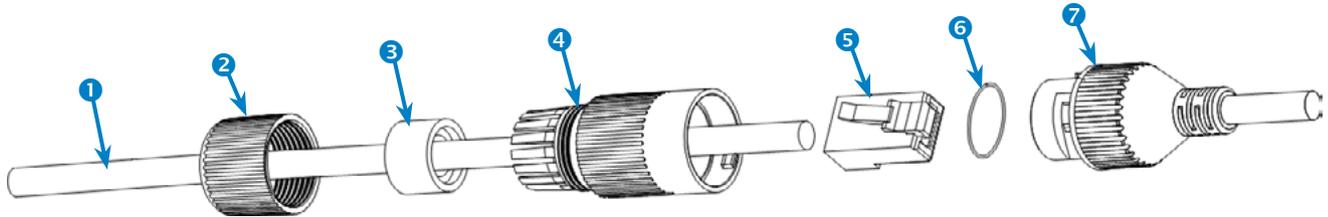


- Blue Alarm in hot
- Green Alarm in ground
- Black Alarm out hot
- White Alarm out ground



- Orange Audio in hot
- Gray Audio in ground
- Purple Audio out hot
- Red Audio out ground

Weatherproofing the PoE Cable



1. Before terminating the RJ45 cable ①, slide it through the lock nut ②, the thick rubber gasket ③, and the weatherproof endcap ④ as shown. Ensure the notched side of the rubber gasket ③ faces the endcap ④.
2. Terminate the RJ45 cable ① with a network plug ⑤.
3. Place the O-ring ⑥ onto the end of the camera's network interface socket ⑦ with the flat side toward the camera. Push it past the locking teeth as far as it easily goes.
4. Connect the RJ45 plug ⑤ to the camera's network socket ⑦.
5. Align the teeth on the weatherproof endcap ④ with the gaps on the camera's network interface socket ⑦, then insert the socket into the endcap. Twist until they click into position (the O-ring ⑥ gives you a little flexibility while still weatherproofing the connection).
6. Slide the thick rubber gasket ③ into the weatherproof endcap ④, and secure it by screwing the lock nut ② tightly onto the endcap ④.

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.

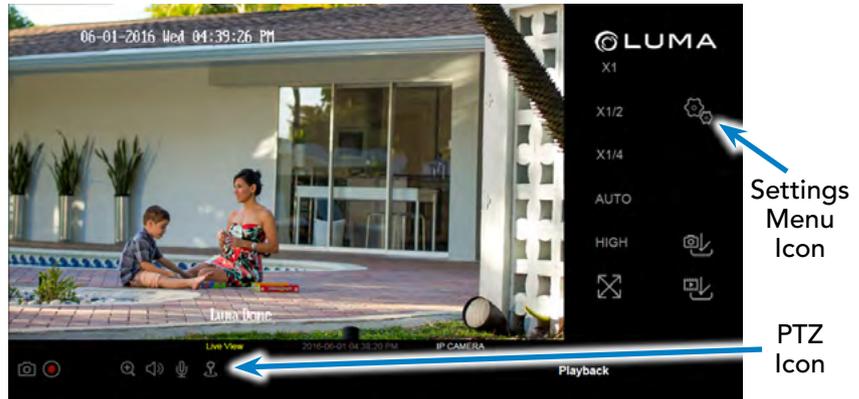
You might get a pop-up message that asks whether you want to run the Luma Web Components plug-in. You must allow the plug-in to access your system over the web.

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, which should look similar to the illustration below. If it does not appear, check the connection to your network, and ensure that the camera is powered up.

Click the **Settings Menu** icon to access the web interface tools and finish setup.



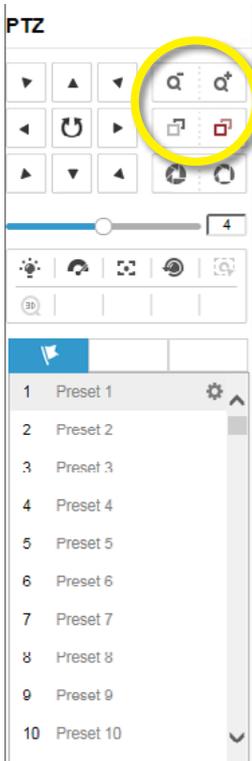
Adjust the Camera

1. This camera has an elbow joint flanked by two rotational joints for perfect pan and tilt control. Loosen the three hex screws in the camera. Check the camera's aim using either the camera's web-based UI, the Luma Surveillance app, or a CC tester.
2. Adjust the angle of the elbow as desired, and tighten the elbow hex screw, A. Rotate the camera so that it faces the proper direction, and tighten the base screw, B. Finally, spin the camera casing so that the picture is level, and tighten the level hex screw, C.



3. Adjust the sunshade. Use a quarter to loosen the sunshade screw (do not remove it). Slide the shade to the desired position, and tighten the screw when finished. [We recommend that you do not remove the shade, even for indoor installations.](#)

Adjust the Zoom and Focus (700 only)



The 700 series has a motorized varifocal lens.

To adjust the focus, return to the live screen (see page 12) and click the PTZ icon . This opens up the PTZ menu on your screen.

In the PTZ menu, click on the buttons circled.

- 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 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.

Configure This Computer

System Settings

Maintenance

Security

User Management

Basic Network Settings

Advanced Network Settings

Video/Audio

Image

Basic Events

Smart Events

Storage Schedule

Storage Management

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 9), 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			
	Server Address			
	Domain			
	User Name			
	Port			
	Password			
	Confirm			
	Device URL			

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. 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.

Copyright ©2016–2017 by SnapAV. All rights reserved. SnapAV, Luma Surveillance, and all related marks and images are trademarks or registered trademarks of SnapAV.

Version 170720-1027