



300 Series Cube
Wireless HD Surveillance Camera
with Microphone

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 standard wall outlet
- 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 -14–140 °F.
- Clean this device with a dry lens 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 (if you are using one) 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 and 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
- Stand
- Self-adhesive mounting template
- Power supply
- 3 x camera mount screws with anchors (1 set is a spare)

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.**

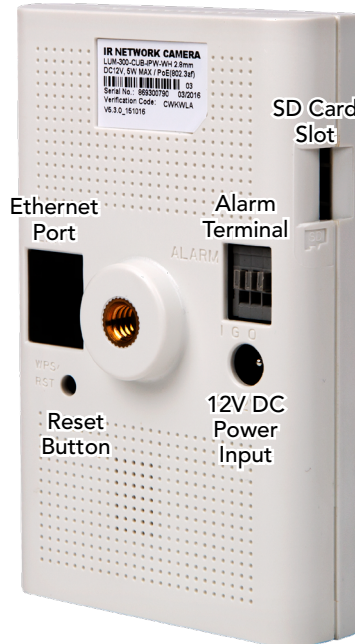
Your Camera

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

Front



Rear



Stand



Wired 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 14–17.
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 advanced detection features that are not available on your NVR: line crossing and area intrusion. After completing installation, see the camera's web interface manual to set these up.

Installation Without Direct Connection to an NVR

Use these steps if you have no NVR, or if you are connecting your camera to a network switch.

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 20170209 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 installation to be easiest if you connect the camera to your PC prior to physical installation, making most adjustments to the camera from the convenience of your table, rather than from atop a ladder.

Use a network cable to connect your camera to a PoE port on your switch (the network should consist of a router, a switch, your laptop and of course the IP camera). Run the Luma Utility on your PC. The Luma Utility 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.

Alternatively, double-click on the IP address in your camera's entry (or copy the address in your browser) to launch the web interface. Since the camera is still inactive, the window prompts you for 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 *parinthespring* is more secure and easier to remember than a password like *D3x-7b*.

<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...	

You can modify the network parameters after the device activation.

Activate Now

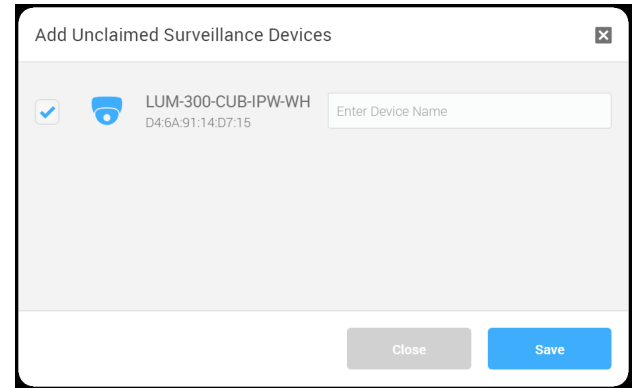
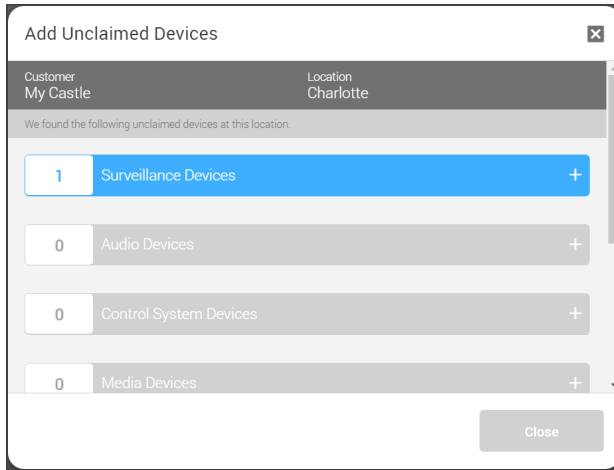
New Password:

Confirm Password:

Activate

Adding the Camera to OvrC

On your OvrC home page, go to the account in question, then click the Add Devices button. It searches for any unclaimed devices on the network, so you should see a + at the right side of the highlighted entry for surveillance. Click that, and OvrC displays your Wi-Fi Cube as an unclaimed device available to add. Click the checkbox to select it, add a name, and press **Save**.



Note: If you opt to add the camera's MAC address manually, you must retrieve the MAC address for your camera while it is hardwired to your network. If the camera is connected only to the wireless, the system page in the web interface shows the MAC address of the wireless interface card, not the camera.

Connecting the Wi-Fi

With access to the camera's web interface, you can set up the Wi-Fi connection.

1. Go to **Basic Network Settings > TCP/IP** and ensure that you set the IPv4 address to *DHCP* under the LAN section as well as the WLAN tabs. Under WLAN, make sure you set entries for Subnet mask (typically 255.255.255.0) and default gateway (typically your router IP).
2. Go to **Advanced Network Settings > Wi-Fi**. Ensure it is enabled, and that the Network Mode option is set to *Manage*.
3. Select your SSID from the Wireless List. **Ensure the signal strength is 80% or better to prevent packet loss.**
4. Select your router or access point's Security Mode and encryption type from the dropdown menu.
5. Enter your router or access point's password in the Key1 text field.
6. Save your settings.

Confirm and Lock the Settings

7. In the Wireless List, check the connection status to ensure that you are connected to the SSID you chose. Run the Luma utility and confirm that you can navigate to both of the cube camera's valid IP addresses.
8. With the Wi-Fi connection established, remove the Ethernet cable. Reboot the cube camera by unplugging the power supply and plugging it back in.
9. After the camera boots up, navigate to the camera using the IP address indicated by the Luma utility. Go to **Configure This Computer > Basic Network Settings** and set the IPv4 addresses to *Static* under the LAN section as well as the WLAN section.

Be sure to save its address as a favorite on your web browser.

Alternate Connection Methods

If you do not want to enter the router or access point password, you can use Wi-Fi Protected Setup (WPS). The Luma Cube supports two modes for WPS connection: PCB and PIN.

PBC Mode

In Push-Button Configuration, you must simply push a button (either actual or virtual) on both the router / access point and the Wi-Fi camera.

1. Go to **Configure This Computer > Advanced Network Settings > Wi-Fi**
2. Check the **Enabled** box.
3. Select your system's SSID from the Wireless List.
4. Do not make any changes to Network Mode ('Manage'), Security Mode, Encryption Type or Key 1.
5. Check the checkbox to enable WPS.
6. Choose the connection mode as PBC.
7. Press the WPS button on the router / access point once. For details, please see its user guide.
8. On the Cube camera's web interface, click the virtual button to enable the PBC function.
9. Click the **Connect** button on the web interface of the Wi-Fi camera. Do **not** press the physical WPS button on the back of the Wi-Fi camera; that button is reserved for defaulting/resetting the camera.
10. The router or access point now searches for the Wi-Fi camera. Since the PBC mode is enabled both in the router and the camera, the camera and the wireless network connect automatically.

Finish the installation by following the steps under **Confirm and Lock the Settings** on the previous page.

PIN Mode

PIN mode requires you to enter a personal identification number (PIN) to connect the network.

1. Go to **Configure This Computer > Advanced Network Settings > Wi-Fi**
2. Check the **Enabled** box.
3. Select your system's SSID from the Wireless List.
4. Do not make any changes to Network Mode ('Manage'), Security Mode, Encryption Type or Key 1.
5. Check the checkbox to enable WPS.
6. Choose **Use route PIN code**. Use one of the two methods below to connect.

Generate a PIN with the Camera

To generate a PIN with your camera, click the **Generate** button. A generated PIN code expires in 120 seconds. Thus you have 2 minutes to enter this PIN in your router in order to connect the Wi-Fi camera. If the process fails or you exceed the 2-minute time limit, try again.

Use the PIN from the Router

Enter the PIN code from the router (found on the router's label or in your router's interface) and click the **Connect** button. You will get a 'connection succeeded' alert from the IP camera's interface.

Complete the Installation

Finish the installation by following the steps under **Confirm and Lock the Settings** on the page 10.

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

Security Verification

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

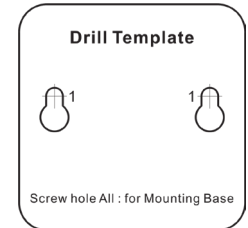
Port forwarding allows you to access the camera from the internet for remote operations. These settings are entered in your network router, typically in a menu called *Port Forwarding* or *Applications and Gaming*. Refer to your router manual for help. Find the settings you need, then log in to the router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

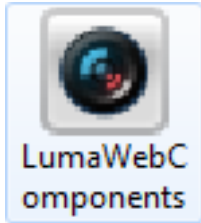
Physical Installation

1. If you intend to secure the camera's base to a wall, drill pilot holes for your screws using the supplied template shown. Ensure that the template is upright when drilling. For mounting on a flat surface, no drilling is necessary. **We do not recommend mounting this unit on a ceiling, as it is difficult to mount securely.**
2. Mount the camera base.
3. Loosen the locking wingnut on the stand. Orient the mounting arm in the desired direction, then tighten the locking wingnut.
4. Loosen the camera lock nut as far as it can go. Screw the camera onto the mounting arm. Ensure that it is upright. When the camera is oriented properly, tighten the camera lock nut.
5. Attach power to the camera.
 - **If using PoE**, attach the RJ45 cable to the connector.
 - **If using 12V DC** for power, attach the power supply to the input.
6. If you will be using the alarm in or alarm out capabilities, insert those wires into the terminals as marked (input, output, and ground).



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.

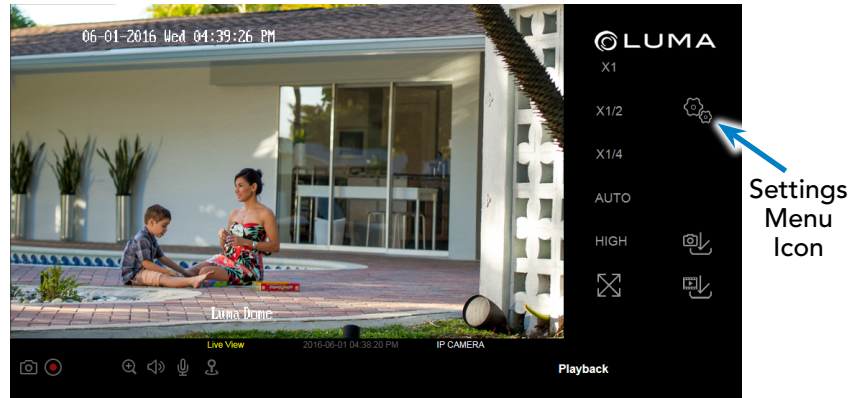
You might get a pop-up message that asks whether you want to run the Luma Web Components plug-in. You must allow the plug-in to access your system over the web.

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.



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 15) 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 13), add a colon and the port number to the URL (for example, 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		<input type="text" value="WirepathDDNS"/>	
	Server Address		<input type="text" value="ns2.wirepathdns.com"/>	
	Domain		<input type="text" value="myhome"/>	
	User Name		<input type="text"/>	
	Port		<input type="text" value="1"/>	
	Password		<input type="text"/>	
	Confirm		<input type="text"/>	
	Device URL		<input type="text" value="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**.

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).

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.

Maintenance Notes

Indicator Lights

The camera has three indicator lights that are useful for troubleshooting purposes. From top to bottom, these are:

- **Alarm:** This shows solid red when the camera is armed, and solid blue when the camera is unarmed.
- **Status:** This is not used, but is included for forward compatibility.
- **Link:** This flashes amber while the camera is connected to the network. It is unlit when no network is found.

Hard Reset

If you are physically present at the camera, unplug the camera. Press and hold the Reset button (on the back of the camera), then plug it back in. Release the Reset button after restoring power to the camera.

If you are at a remote location, use the web interface's maintenance feature.

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.

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