XS-108H

8-Port IEEE 802.3bt / X-PoE® Lighting Controller

Installation Guide



INTRODUCTION

About This Guide

This guide offers detailed instructions for the installation and configuration of your XS-100 series lighting controller. In addition to the step-by-step installation process, it provides essential mounting techniques, safety requirements, and concise troubleshooting procedures — whether you are integrating the controller into a rack system or using it as a standalone device.

Cautions and Warnings

When installing hardware, it is important to follow safety precautions to avoid potential injuries or damage to the equipment. Failure to follow safety guidelines can result in electric shock, fire, or other hazards.

Definitions

NOTE

A note provides additional information or clarification that is relevant to the installation process. It may include recommendations, tips, or other useful information that can help ensure a successful installation.

CAUTION

A caution statement indicates a potential hazard that could result in minor or moderate injury, or cause damage to the product if appropriate precautions are not taken. It alerts the reader to a potential risk and provides instructions on how to avoid it.

DANGER

A danger statement indicates a potential hazard that could result in serious injury or death if appropriate precautions are not taken. It alerts the reader to a critical risk that requires immediate attention to prevent harm.

Safety Precautions

DANGER

- Do not connect the device to an external power supply before installing. Failure to observe this warning may result in electrical shock or death.
- Turn the external power supply off and ensure the unit is disconnected from the external power supply before performing any maintenance. Failure to observe this warning may result in electrical shock or death.
- When connecting a device to power, it is important to properly secure wires in screw terminals to prevent the risk of electrical shock or fire. Failure to do so could result in damage to the equipment, injury, or death.
- Always use the proper gauge wire for the external power supply being used. Using an incorrect gauge wire can result in overheating, electrical fires, or other dangerous situations.
- When installing the device, read the mounting instructions carefully and always use the correct mounting hardware. Using incorrect hardware or improperly installing the hardware can result in the equipment falling or shifting.

CAUTION

- Ensure that the unit does not overload the power supply. Add the maximum power consumption of all the devices connected to the unit, and compare that total with the rated wattage of the power supply.
- Equipment is for indoor use only.
- Make sure airflow around the unit is not restricted.
- Disassembling any part of the unit voids the warranty and regulatory certifications. There are no user-serviceable parts inside the unit.
- Do not install the unit in an environment where the operating ambient temperature might exceed 40°C (104°F).
- This equipment is not suitable for use in locations where children are likely to be present.

NOTE

- The unit is an indoor device. If it will be connected to outdoor devices or lighting loads, an arrester must be installed on the cable between outdoor devices/loads and the unit.

PRODUCT OVERVIEW

The XS-108H lighting controller is a high-performance solution offering multiple channels for remote constant current/voltage LED driving. It provides 8 ports that can deliver controlled power in either IEEE PoE++ (90W per port) or X-PoE® Max (up to 134W per port at 57V input) configurations. Powered by a 48V–57V low-voltage DC input, the controller ensures efficient and reliable power delivery to connected LED fixtures.

- 8 auto-sensing lighting control ports for use with IEEE devices or X-PoE® loads.
  - All ports backwards-compatible with IEEE 802.3af/at/bt Type 4 (up to 90W per port).
  - 2 individually controllable channels up to 67W on each port.
  - Tunable white support for human-centric lighting up to 2×67W.
  - Constant-current dimming up to 2,400mA per port (1,200mA per channel), down to 1%.
  - Constant-voltage dimming from 24V up to input voltage (48–57V depending on supply).
  - Individual power monitoring for every channel.
  - Limited autonomous load detection and failure detection.
  - Power metering on all ports with >95% accuracy.
- REST API and MQTT lighting-controls interface.
- Embedded web app for load configuration.
- DHCP and Static IP support for light management.
- 48V–57VDC input with locking connector.
- Override dry-contact closure for emergency operation.
- Native 1U half-rack-width form factor, able to wall/ceiling mount standalone.
  - Two units joinable to form a full 1U lighting controller.
- Indicator LEDs and buttons for operation/troubleshooting:
  - (1) green/red LED to indicate valid system power (on back).
  - (1) multi-color LED to indicate system status.
  - (8) multi-color LEDs to indicate port status.
  - (1) reset button for troubleshooting/factory reset.
  - (1) programming-override button for operation during a loss of communication.

> **NOTE**
> Maximum output power depends on the input voltage and the forward voltage of the connected light engine.

ORDERING INFORMATION

Controllers

Part number	Description

Part number	Description
XS-108H	8-port (16-channel) lighting controller
XS-108H-N	8-port (16-channel) lighting controller with 100 Mbps networking

Accessories

Part number	Description
XS-KIT-LB	Full-width rack mounting kit for an individual unit
XPD-P2H-G	Generic 2-channel cable adapter with pass-through for connecting LEDs / fixtures
XPD-T2P-G	Generic panel-mount 2-channel cable adapter for connecting LEDs / fixtures

INSTALLATION

Parts List

Before getting started with the installation process, make sure all the necessary components are included. Here's what should be found inside the box:

- (1) X-PoE® lighting controller / network switch
- (1) Screw-terminal power connector
- (1) Screw-terminal input connector
- (2) Rack / wall mounting bracket
  - (8) M3 bracket screws
- (2) Device coupling bracket
  - (8) M3 bracket screws
- (4) 10/32 rack screws
- (10) RJ45 dust plugs

Each kit includes all the hardware needed to securely mount two devices side-by-side in 1U of an equipment rack. If you intend to mount a single device in 1U of an equipment rack, you will need an additional bracket. The XS-KIT-LB is available separately and contains:

- (1) Long rack mounting bracket
  - (4) M3 bracket screws
- (2) 10/32 rack screws

Please ensure all items are accounted for. If any item is missing or damaged, contact the place of purchase for a replacement.

Stand-Alone Installation

> **NOTE**
> The hardware devices shown in these instructions are meant for guidance purposes and may not accurately represent the specific device or environment you're installing into.

Perform the following steps to install the device on a shelf or table:

1. Review all cautions and warnings to ensure safe installation practices are followed.

2. Attach (4) adhesive rubber feet (not included) to the underside of the device.

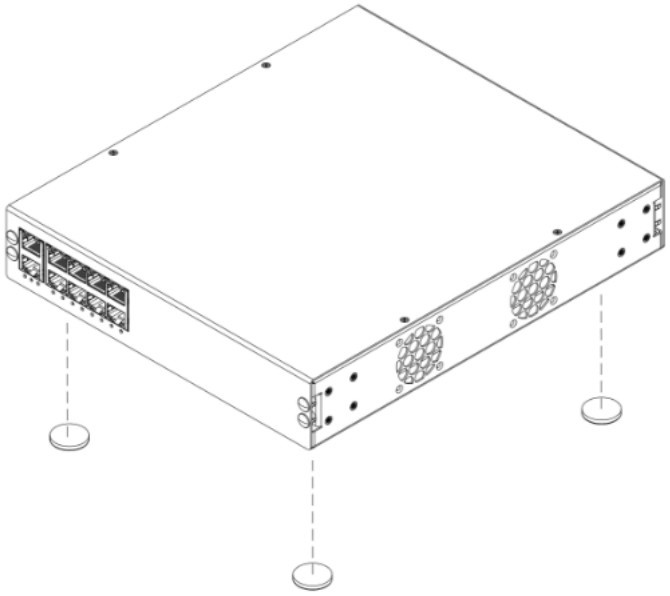


Fig. 1 — Attaching the Rubber Feet

3. Ensure the unit is placed on a sturdy, flat surface and that the ventilation holes are not obstructed.

Wall / Ceiling Mount Installation (single Unit)

> **NOTE**
> The hardware devices shown in these instructions are meant for guidance purposes and may not accurately represent the specific device or environment you're installing into.

Perform the following steps to install the device on a wall or ceiling:

1. Review all cautions and warnings to ensure safe installation practices are followed.

2. Attach the rack/wall mounting brackets to both sides of the device using the provided M3 screws. Ensure the rack mounting holes are facing the bottom of the device.

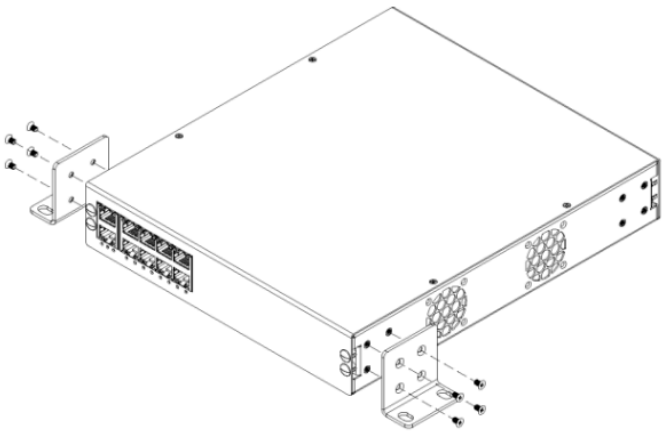


Fig. 2 — Attaching the Rack/Wall Mounting Brackets for Wall/Ceiling Mounting

3. Choose a suitable location for the device where it will be accessible and won't obstruct any other equipment. Ensure the ventilation holes are not obstructed.

4. Choose appropriate screws that are compatible with the device and the surface you're mounting to. If mounting to drywall, use the appropriate drywall anchors. Screws and anchors are not provided.

5. Mount the device using all four holes on the mounting bracket.

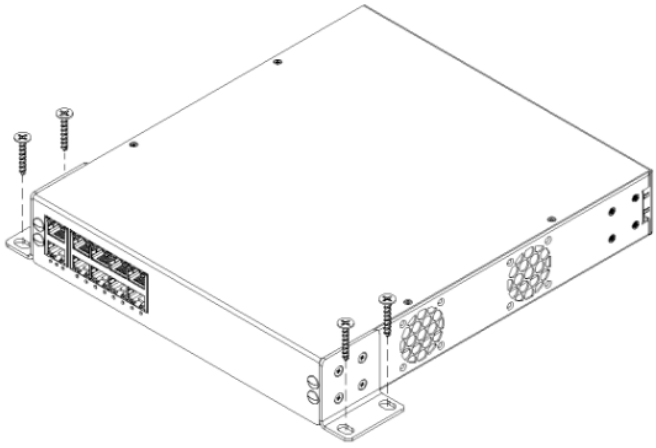


Fig. 3 — Mounting the Device to the Wall/Ceiling

Half-Width Rack Mount Installation (single Unit)

CAUTION

- It is recommended to have two people install the device in an equipment rack — one person holds the device while the other installs the rack screws.
- When mounting multiple units vertically in a rack, provide adequate airflow by leaving a space between the lighting controllers.

NOTE

The hardware devices shown in these instructions are meant for guidance purposes and may not accurately represent the specific device or environment you're installing into.

Perform the following steps to install the device in a half-width equipment rack:

1. Review all cautions and warnings to ensure safe installation practices are followed.

2. Attach the rack/wall mounting brackets to both sides of the device using the provided M3 screws. Ensure the rack mounting holes are facing the front of the device.

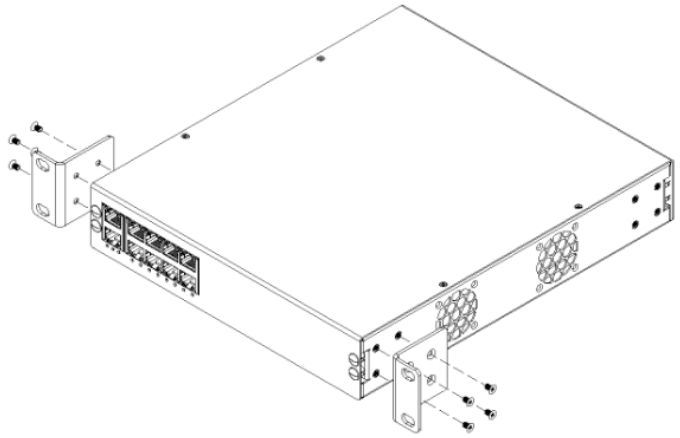


Fig. 4 — Attaching the Rack/Wall Mounting Brackets

3. Position the device at the proper rack unit in the half-width equipment rack and install the rack screws. Ensure they are sufficiently tight.

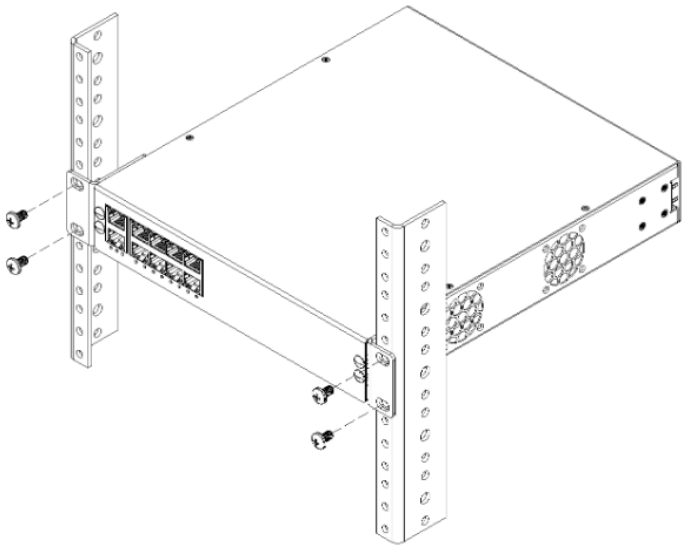


Fig. 5 — Mounting to the Equipment Rack

Rack Mount Installation (single Unit)

CAUTION

- It is recommended to have two people install the device in an equipment rack — one person holds the device while the other installs the rack screws.
- When mounting multiple units vertically in a rack, provide adequate airflow by leaving a space between the lighting controllers.

NOTE

- This installation requires additional hardware found in the XS-KIT-LB package (sold separately).
- The hardware devices shown in these instructions are meant for guidance purposes and may not accurately represent the specific device or environment you're installing into.

Perform the following steps to install the device in an equipment rack:

1. Review all cautions and warnings to ensure safe installation practices are followed.

2. Attach the rack/wall mounting (short) bracket to one side of the device, and the rack mounting (long) bracket to the other side, using the provided M3 screws. Ensure the rack mounting holes are facing the front of the device.

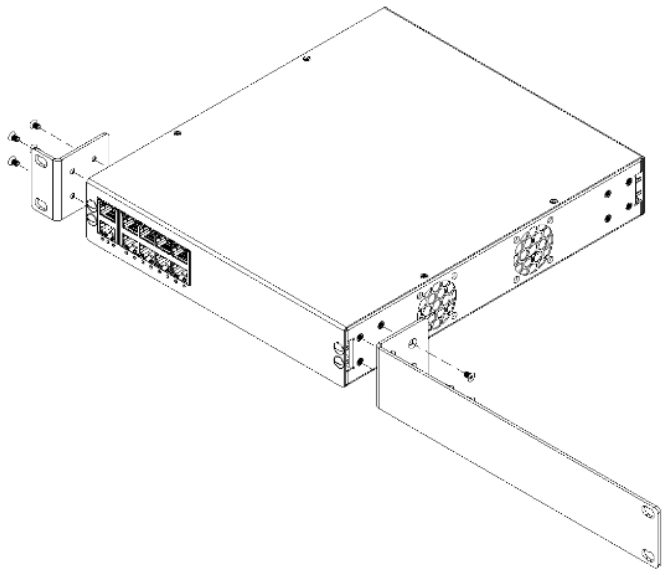


Fig. 6 — Attaching the Rack Mounting Brackets

3. Position the device at the proper rack unit in the equipment rack and install the rack screws. Ensure they are sufficiently tight.

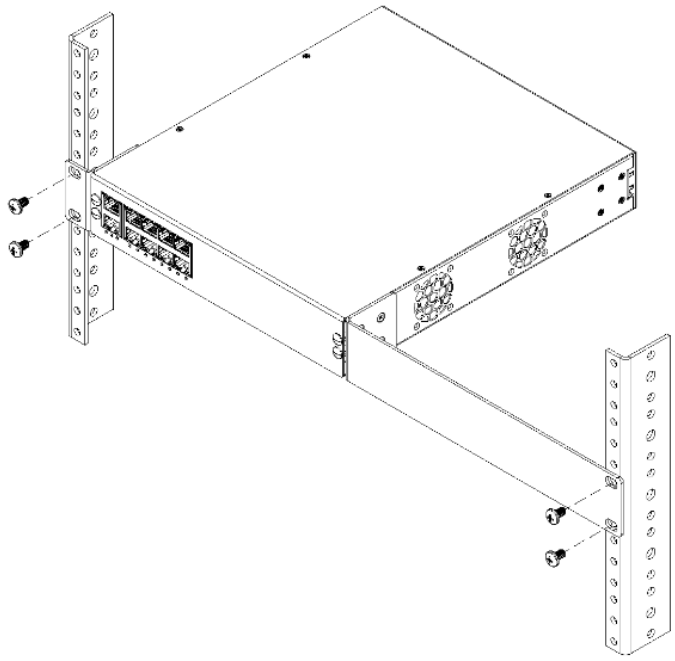


Fig. 7 — Mounting to the Equipment Rack

Rack Mount Installation (two Units)

CAUTION

- It is recommended to have two people install the device in an equipment rack — one person holds the device while the other installs the rack screws.
- When mounting multiple units vertically in a rack, provide adequate airflow by leaving a space between the lighting controllers.

NOTE

- The hardware devices shown in these instructions are meant for guidance purposes and may not accurately represent the specific device or environment you're installing into.

Perform the following steps to install two devices in an equipment rack:

1. Review all cautions and warnings to ensure safe installation practices are followed.

2. Unpack the mounting hardware from both devices. You should have 2 rack mounting brackets and 2 coupling brackets total.

3. Attach the rack/wall mounting bracket to the left side of the left device (rack holes facing the front). Attach the coupling brackets to the right side of the right device, front and rear, using the provided M3 screws. Install the coupling brackets *behind* the front and rear plates, not in front of them.

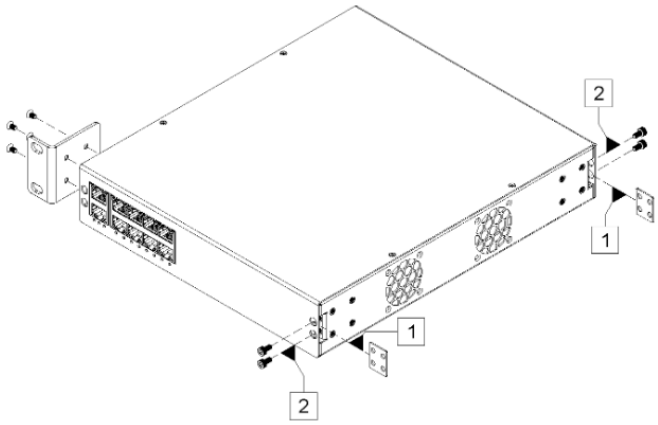


Fig. 8 — Left Switch Preparation

4. Attach the rack/wall mounting bracket to the right side of the right device (rack holes facing the front). Attach the right device to the left device using the coupling brackets.

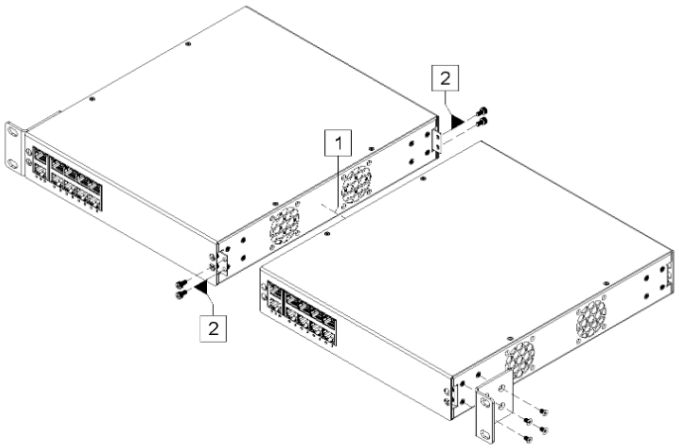


Fig. 9 — Right Device Coupling

5. Position the joined devices at the proper rack unit and install the rack screws. Ensure they are sufficiently tight.

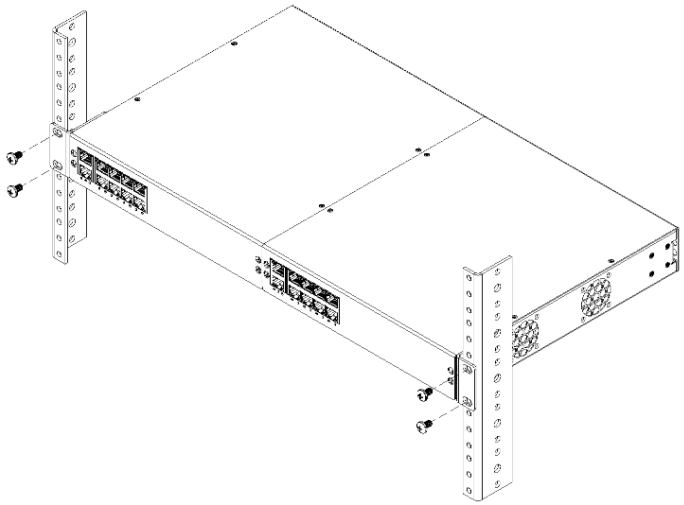


Fig. 10 — Mounting to the Equipment Rack

INITIAL SETUP

Please review the following warnings before attempting to provide power to the device:

DANGER

- Do not connect the device to an external power supply before installing. Failure to observe this warning may result in electrical shock or death.
- When connecting a device to power, it is important to properly secure wires in screw terminals to prevent the risk of electrical shock or fire. Failure to do so could result in damage to the equipment, injury, or death.
- Always use the proper gauge wire for the external power supply being used. Using an incorrect gauge wire can result in overheating, electrical fires, or other dangerous situations.
- Do not connect a power supply that exceeds the voltage specifications of the device. Always check the voltage rating of the power supply before connecting and ensure that its output matches the specified requirements. Failure to follow these guidelines may result in damage to the device, injury to the user, or both.

CAUTION

- Ensure that the unit does not overload the power supply. Add the maximum power consumption of all the devices connected to the unit, and compare that total with the rated wattage of the power supply.

NOTE

- An external 48VDC to 57VDC power supply is needed to power the device.

Necessary Parts

Review the following list to ensure all necessary parts are available:

1. XS-108H lighting controller
2. 48V–57VDC power supply
3. One or more X-PoE® powered devices (PDs)
4. One or more LED lighting loads
5. Access to an IP-based network with a DHCP server

NOTE

- Supported lighting loads must have a current rating between 100mA–1,200mA with a forward voltage between 24V–57V.
- For small installations, the IP-based network can be supplied with a standard home router.

Network Configuration

Perform the following steps to ensure the network is set up and has a working DHCP server:

> **NOTE**
> Having access to the DHCP allocation table is not necessary but makes setup easier.

1. Make sure the DHCP network is NAT'ed and has an isolated subnet (for example 192.168.1.x / 255.255.255.0). This step may not be necessary when using a home router.
2. Make sure the network has access to the internet. If using a home router, connect the WAN port to the internet modem.

Powering the Device

Perform the following steps to properly provide power to the device:

1. Ensure the power supply is turned off and that there are no connections on the front panel before beginning the installation process.
2. Remove the input connector on the device. Connect the supply wires to the input connector, ensuring that the positive and negative wires are correctly aligned.
3. Secure the connection by tightening the screws on the input connector.
4. Verify that the power supply is switched off, then connect the input connector to the device.
5. Double-check that the connection is secure and that the wires are not exposed.
6. Switch on the power supply and verify that the power and system LEDs are both green. This may require several minutes.

For more information on how to interpret the power and system LEDs, refer to the front and rear panel descriptions.

> **CAUTION**
> When disconnecting the device, ensure the power supply is turned off before removing the power connector.

Device Configuration

Perform the following steps to configure the device:

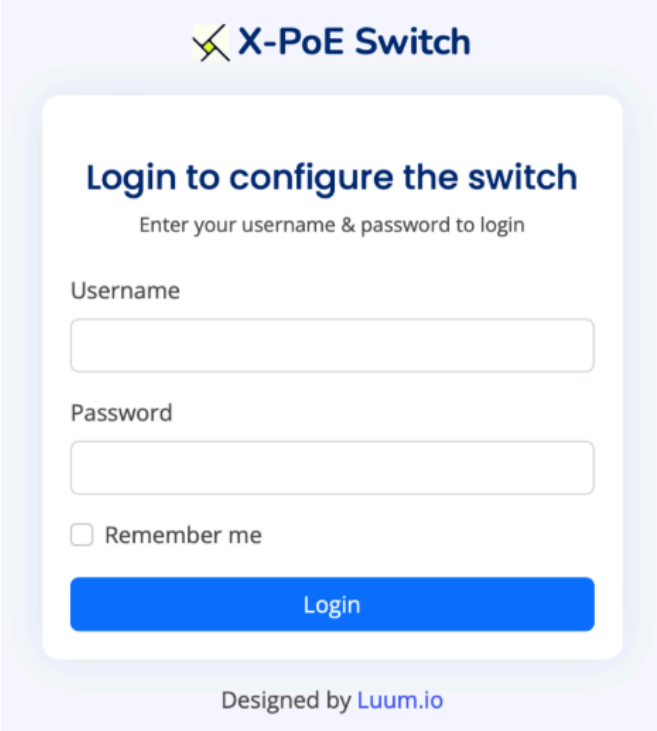
1. Ensure the device has power and plug the network feed into the Ethernet uplink port on the device. Once powered on and connected, the controller will automatically obtain an IP address from the DHCP server.

2. Find the device's MAC address or IP address. The MAC address can be found on the device's packaging or on the device itself. Alternatively, use a network-scanning tool to locate the `.local` or IP address.



Device MAC-Address Label

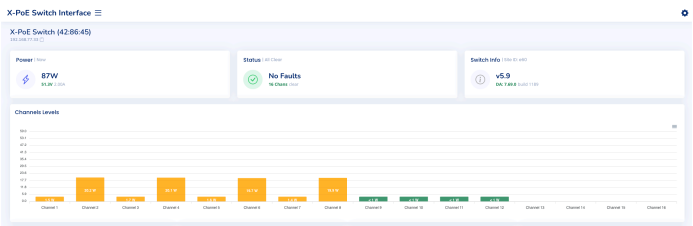
3. Open a web browser on a device connected to the same network. In the address bar, type `XPoE-` followed by the full MAC address of the controller, followed by `.local` (for example, for MAC `AB:CD:EF:12:34:56`, type `http://XPoE-abcdef123456.local`). The login screen appears.



Login Screen

4. Enter the login credentials. On a device that has not been configured, the credentials are:
Default username: `xpoeclient`
Default password: `xpoepass`

5. On the home screen, high-level power data, controller status, and controller information are displayed, along with a graph indicating channel levels.

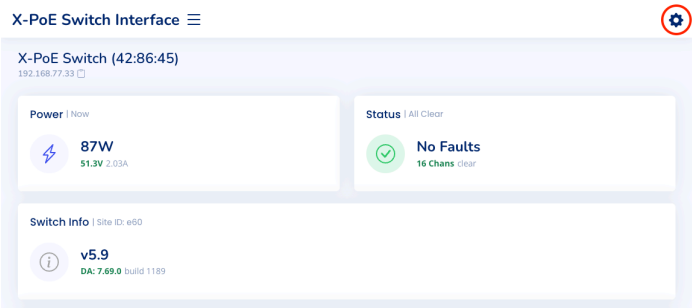


Home Screen

Firmware Update

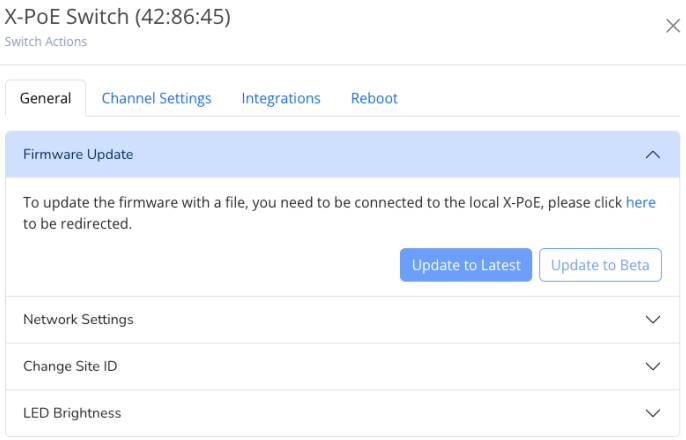
Perform the following steps to ensure the device is on the latest firmware version:

1. Navigate to the configuration settings.



Configuration Settings

2. Select **General** and expand **Firmware Update**.



Firmware Update Panel

3. Select **Update to Latest**.

> **NOTE**
>
> The automatic *Update to Latest* and *Update to Beta* options are only available on firmware version 4.8 or later. On earlier firmware, an update file must be provided manually.

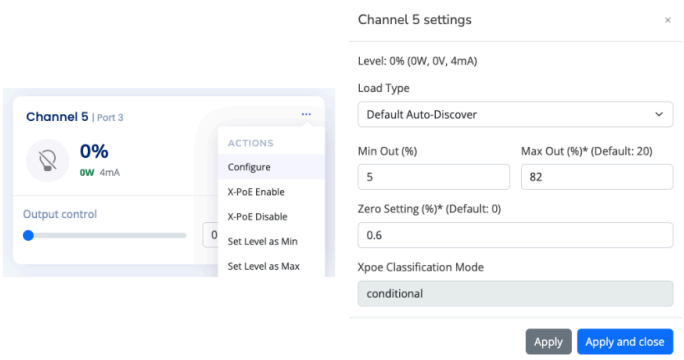
Channel Configuration

> **NOTE**
>
> - IEEE PoE loads should be automatically detected and negotiate the correct power.
> - Unconfigured X-PoE® loads will have a maximum channel power output of 20%.

Perform the following steps to configure the channels:

1. Connect the LED light to the PD, then connect the PD to any of the ports on the X-PoE® switch. The light should turn on within 10 seconds and appear in the UI.
    - If the load is a standard IEEE PD, the device automatically detects it and provides the correct power.
    - If the load is a standard X-PoE® load, the device automatically detects it and the load is operational.
    - If the load is a custom X-PoE® load, the device detects it as custom and sets the maximum port output to 20%.

2. Log in to the switch's web interface and navigate to the configuration settings for the port. If a manual/custom load type is detected, the minimum and maximum levels must be set.



Port Configuration Panel

3. Ensure the light is controllable through the Web UI by moving the slider representing the light.

It is best practice to assign load types to all X-PoE® channels. The following default load types can be applied:

Default X-PoE® Load Types

Load type	Behavior
300mA Constant Current	Provides 300mA of current at 100%
400mA Constant Current	Provides 400mA of current at 100%
500mA Constant Current	Provides 500mA of current at 100%
600mA Constant Current	Provides 600mA of current at 100%
800mA Constant Current	Provides 800mA of current at 100%
900mA Constant Current	Provides 900mA of current at 100%
1,000mA Constant Current	Provides 1,000mA of current at 100%
1,200mA Constant Current	Provides 1,200mA of current at 100%
24V Constant Voltage	Channel automatically increases current until 24V is reached

Load type	Behavior
36V Constant Voltage	Channel automatically increases current until 36V is reached
48V Constant Voltage	Channel automatically increases current until 48V is reached
Switched — Full Power	Provides maximum current at 100%, no dimming
Aggregate — Full Power ⚠️	Controls both channels of a port for when more power is needed
Aggregate-Switched — Full Power ⚠️	Controls both channels of a port for when more power is needed, no dimming

Default IEEE Load Types

Load type	Behavior
IEEE Switched	Allows switching of an IEEE load

> **AGGREGATE LOADS ⚠️**
> Aggregate load types must be used with an aggregate XPD.

Custom Loads

To maximize the dimming performance of individual lighting loads, custom load types can be created. Perform the following steps to configure custom loads:

> **NOTE**
> The custom-loads feature is only available on firmware version 4.8 or later.

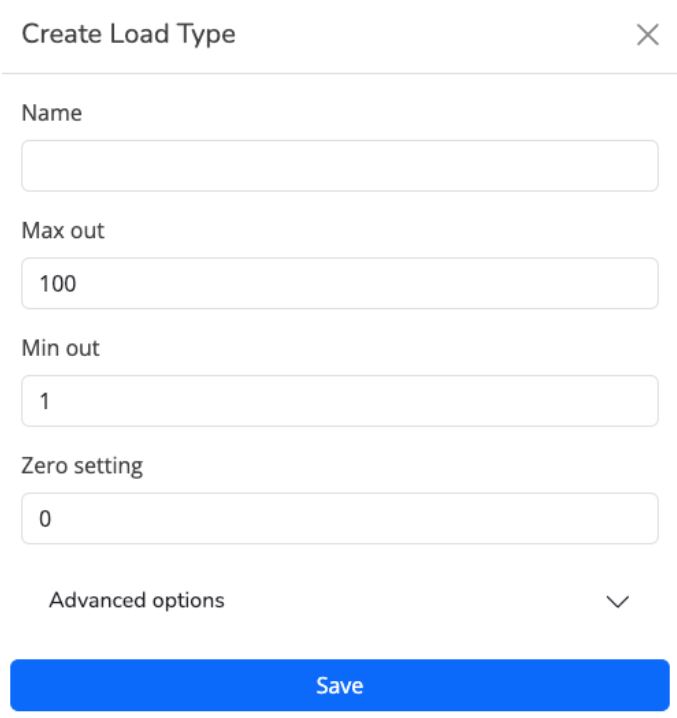
1. Scroll down on the X-PoE® home page until the custom load types table is displayed.



Custom Load Types Table

2. Select **Create Load Type** to open the new-load-type menu. Enter the properties for the new load type:

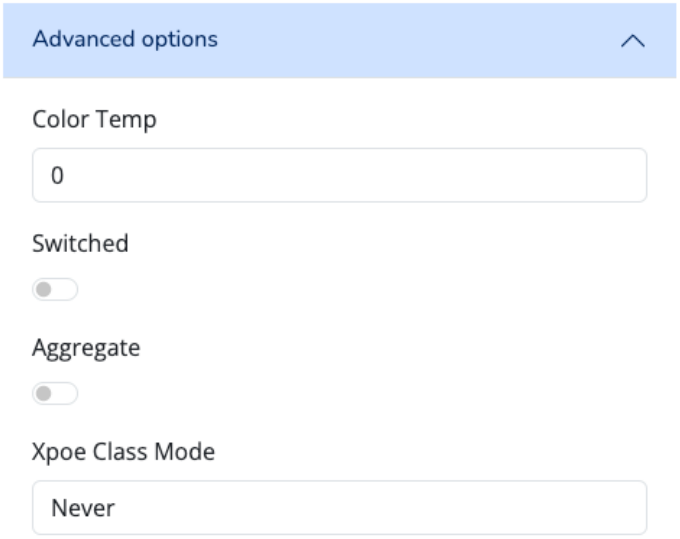
   - **Name** — a descriptive name for the load type.
   - **Max Out** — the maximum output level for the load (for example, 100).
   - **Min Out** — the minimum output level for the load (for example, 1).
   - **Zero Setting** — the level at which the load is considered off. Default to 0.9.



New Load Type Menu

3. Enter the advanced properties for the new load type if applicable:

   - **Color Temp** — The color temperature of the load.
   - **Switched Behavior** — The switched behavior of the load. Default to **Off**.
   - **Aggregate** — The aggregate mode of the load. Default to **Off**.
   - **X-PoE® Class Mode** — The X-PoE® class mode of the load. Default to **Never**.



Advanced Custom-Load Options

4. Click **Save** to create the custom load type. The new type appears in the custom load types table, where you can view and manage it.

Once a custom load type is created, you can assign it to specific channels within the channel-configuration settings to optimize performance based on the defined properties.

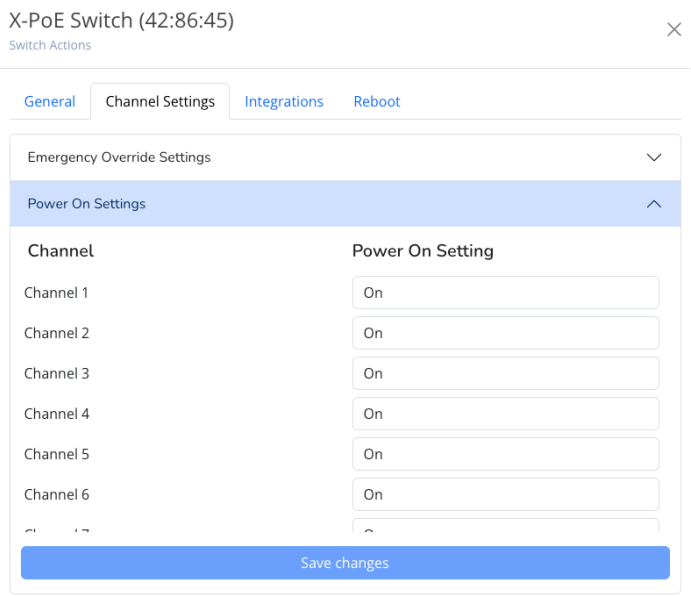
> **NOTE**
> Custom loads cannot be edited.

Power-On Settings

Perform the following steps to specify what happens to each X-PoE® channel when the device powers on:

> **NOTE**
> The power-on settings feature is only available on firmware version 5.1 or later.

1. Navigate to the configuration settings. Select **Channel Settings** and expand **Power On Settings**.



Power-On Settings Panel

2. Configure the *Power On Setting* for each channel:
   - **On** — the channel turns on to 100% when the switch powers on (default).
   - **Previous** — the channel turns on to the previously recorded level when the switch powers on.
   - **Off** — the channel remains off when the switch powers on.

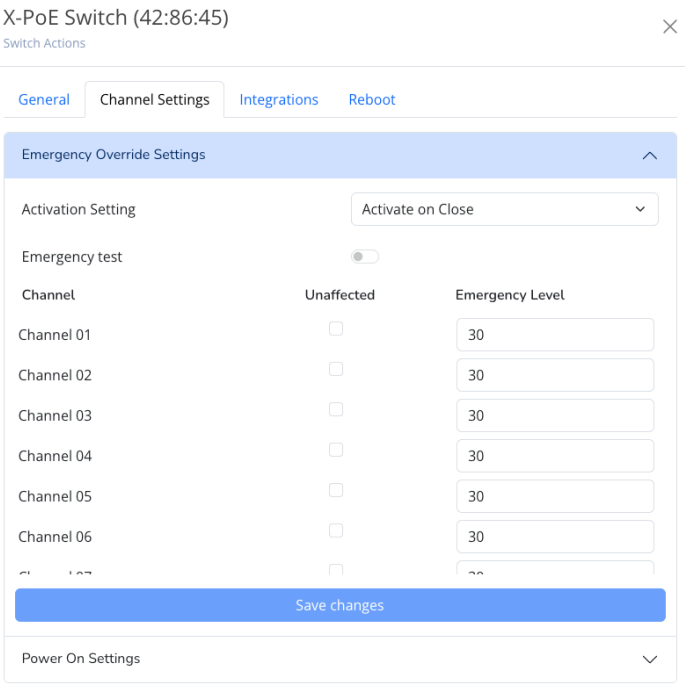
3. Click **Save Changes** to apply the settings. The power-on configuration takes effect immediately.

Programming Override

Perform the following steps to configure the programming-override input:

> **NOTE**
> The programming-override configuration feature is only available on firmware version 4.8 or later.

1. Navigate to the configuration settings. Select **Channel Settings** and expand **Emergency Override Settings**.



Emergency Override Settings

2. Configure the *Activation Setting*:
    - **Activate on Close** — the override engages when the input circuit is closed.
    - **Activate on Open** — the override engages when the input circuit is opened.
3. Use the *Emergency Level* fields to set the desired output percentage for each channel when the override is active (for example, setting a channel to 100% outputs full power during the override).
4. Click **Save Changes** to apply. The override configuration takes effect immediately.
5. Test the configuration using the *Emergency Test* toggle.

> **NOTE**
> When connecting multiple X-PoE® lighting controllers to the same programming-override bus, it is critical that the override-input polarity is consistent across all controllers.

Programming Override — Operation

- **Engaging the override:** the override can be engaged manually by manipulating the external circuit connected to the *Programming Override Input* on the rear panel. Based on the configuration (Activate on Close/Open), the override forces all connected lighting loads to operate according to the pre-set emergency levels.
- **Disengaging the override:** the override automatically disengages if the external circuit remains in the opposite state for more than 5 seconds. Once disengaged, the system reverts to its previous operation mode.

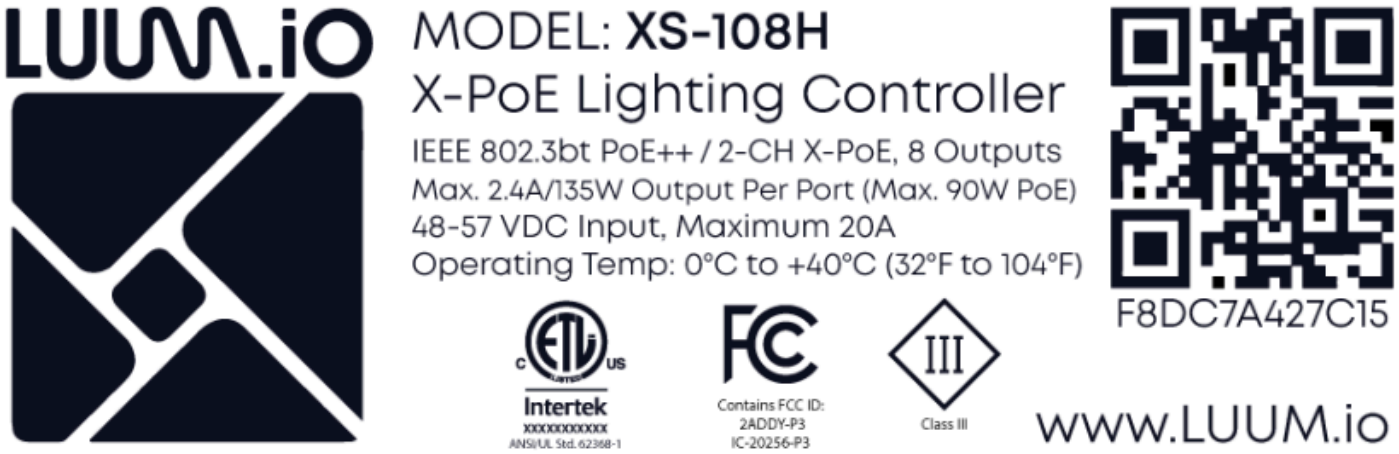
- **Indicator lights:** the front-panel System Status LED flashes red while the programming override is engaged, providing a visual indication that the system is in emergency mode.

System Configuration

At this point, the X-PoE® lighting controller can be controlled from the UI, and its API can be integrated into various control systems.

RELATED INFORMATION

Package and Device Labels



Package and Device Labels

> **NOTE**
> The package and device labels contain important information for configuring the device. This information may be required when contacting technical support.

LED Indicator Descriptions

The following tables describe the behavior of each indicator LED on the XS-108H.

System Power LED

Color	State	Description
n/a	OFF	The unit **is not** receiving adequate power
GREEN	ON	The unit is powered on and operating normally
RED	ON	A system malfunction has been detected

System Status LED

Color	State	Description
n/a	OFF	The system processor **is not** receiving adequate power

Color	State	Description
GREEN	ON	The unit is powered on and operating normally
GREEN	FLASHING	The unit is powered on and operating normally without an internet connection
ORANGE	ON	The unit is undergoing a system update
ORANGE	FLASHING	The unit is booting or rebooting
RED	ON	A system malfunction has been detected
RED	FLASHING	The programming override has been engaged

Port Status Leds

Color	State	Description
WHITE	FLASHING	The port **is not** configured and **is not** providing power
WHITE	ON	The port **is** configured and **is not** providing power
GREEN	FLASHING	The port **is not** configured and **is** providing power
GREEN	ON	The port **is** configured and **is** providing power
ORANGE	ON	The port **is** providing power to an IEEE load
PURPLE	FLASHING	The port is in constant voltage discovery mode
RED	ON	An error has been detected on the port

RJ45 Connector Leds

Color	State	Description
ORANGE (Left)	OFF	**No** network activity on the port
ORANGE (Left)	FLASHING	Network activity on the port
GREEN (Right)	OFF	**No** network connection is established on the port
GREEN (Right)	ON	A stable network connection is established on the port

> **RJ45 LEDS**
> The LEDs on the RJ45 ports will only function for the uplink port.

Button Operation

The reset button can be pressed a specific number of times in quick succession to invoke different device actions.

Reset Button

Action	Count	Description
PRESS	2 TIMES	Restart the system processes
PRESS	5 TIMES	Restart the unit
PRESS	7 TIMES	Reset network settings
PRESS	10 TIMES	Factory default all settings

Basic Troubleshooting

Perform the following steps for basic troubleshooting of the device:

1. Verify the initial install process.
2. Verify the initial setup process.
3. Verify that the power and status LEDs are both solid green.
4. Verify the network connection and ensure the Ethernet cable is securely plugged into both the device and the network uplink port.
5. Restart the device.
6. Factory reset the device.

If both the power and status LEDs are still not solid green, continue to troubleshoot based on the color of the front status indicator and the rear power indicator.

Port Troubleshooting

Use the following table to troubleshoot specific issues with the device based on the port-status indicators:

Troubleshooting

Condition	Likely cause	Steps to resolve
Power LED is **OFF**	The device is not receiving power	1. With the power supply off, unplug the power connector. Confirm all conductors are secure and tight in the power connector. 2. Confirm the power connector is attached firmly to the switch. Use the locking screws to secure. Turn the power supply back on. 3. If the power LED is still off, confirm the power supply is outputting the correct voltage with a digital multimeter.

Condition	Likely cause	Steps to resolve
Power LED is **RED**	The polarity is reversed from the power supply	1. With the power supply off, unplug the power connector. Reverse the + and − wires in the power connector. Confirm all conductors are secure and tight. 2. Confirm the power connector is attached firmly to the switch. Use the locking screws to secure. Turn the power supply back on.
Power LED is **GREEN**, Status LED is **RED** or **OFF**	A malfunction has been detected in the system	1. Restart the device. If that fails to turn the status LED green, factory reset the device. 2. If both restart and reset fail, contact customer support.
Port Status LED is **RED** or **OFF**, port is set to **>0%**	An error has been detected on the port	1. Confirm the cable is properly connected to the device port and PD. Validate the terminations using a cable tester. 2. Try connecting the PD to a different port, or try a different PD, to isolate whether the problem is with the port or the PD. 3. Confirm the port configuration settings and check the *Advanced Debug Info* section of the web UI for any errors.

Fault List

Use the following table to troubleshoot specific issues based on events in the PSE Events Timeline, located toward the bottom of the X-PoE® UI:

PSE Fault Reference

Fault type	Fault name	Description
DC disconnect	`DISCONNECT_PCUT_FAULT`	Occurs when an IEEE load disconnects. For X-PoE® loads, disconnection is monitored in software and won't trigger a PSE fault. X-PoE® cable disconnect may not be detected at low load levels.
Short circuit	`PORT1_ILIM_FAULT`	Triggered when a channel experiences a short circuit. For IEEE loads this shows as a short-circuit fault; for X-PoE® the system monitors current directly to detect faults without a PSE trigger.
Overdraw (I-Limit)	`ILIM_START_FAULT_COR`, `PORT1_ILIM_FAULT`	If current is overdrawn without a hard short, an I-Limit fault occurs. This can happen for IEEE loads if the load exceeds startup inrush-current requirements.
PCUT fault	`PORT34_PCUT_FAULT_4P`, `PORT12_PCUT_FAULT_4P`	An IEEE-only fault that occurs when a load exceeds its power class. Typically hard to trigger without a load that surpasses its class rating.

Fault type	Fault name	Description
Input voltage low — warning	`VDD_UVLO_WARN`	A warning that the input voltage to the switch is dipping. Expected once at boot; otherwise indicates voltage instability.
Input voltage low — failure	`VDD_UVLO_FAIL`	Indicates the input voltage has dipped so low that the PSE cannot operate. This fault is critical and requires immediate attention.
Over temperature	`OVER_TEMP`	A high-temperature fault occurs if the controller exceeds safe operating temperatures. Should not occur under normal conditions if fans are operating correctly.

> **NOTE**
>
> `PORT#` refers to the channel number, not the physical port number.

Technical Support

If you experience any issues during installation or operation of this product, contact our technical-support team via email at support@luum.io. Please provide a detailed description of the issue, including any error messages or other relevant information.

Warranty Information

All Luum.io lighting products and controls come with a 5-year parts warranty. We warrant that our products will be free from defects in material and workmanship for a 5-year period from the date of purchase. Defective products under warranty will be replaced with an equal or higher-quality product.

If you experience any issues during the warranty period, we will repair or replace the product at no charge. To initiate a warranty claim, contact our customer-service team at support@luum.io. For additional support options, visit luum.io.

Contacts

Luum.io Headquarters
625 Kenmoor Ave STE 350
PMB 51933
Grand Rapids, MI 49546
Phone: +1 (313) 314-3617

Document Feedback

While we have taken great care to ensure the accuracy and completeness of this document, we welcome your feedback and suggestions. If you notice any errors or omissions, or feel a topic could benefit from further explanation, please email your feedback to support@luum.io.

Revision History

Date	Revision	Notes
3/22/2023	A	Initial XS-100 series install guide release
6/27/2023	B	Port to docs.luum.io
4/20/2026	C	Port to PDF

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Compliance Information

This device is ETL-certified and compliant with the ANSI/UL standard 62368-1 for safety of audio, video, and information-technology equipment. The device also contains a module with FCC ID 2ADDY-P3 / IC 20256-P3, demonstrating compliance with applicable FCC regulations for electromagnetic interference.