

Chroma-Q[®]

2inspire 24 port PSE

User Manual



Chroma-Q[®]
BRILLIANT SOLUTIONS

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MODEL: 1504-1024

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MANUAL: 1527-0701 V1.0



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WARNING!

Read the safety precautions in this section before installing, powering, operating or servicing this product.



Warning!

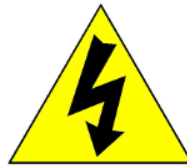
Safety Hazard.

Risk of severe injury or death.



Warning!

Fire Hazard.



Warning!

Hazardous Voltage.

Risk of severe lethal electric shock.



Warning!

Refer to User manual.

Warning!

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- SHUT DOWN POWER TO THE INSTALLATION DURING SERVICE AND WHEN IT IS NOT IN USE.
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- ISOLATE THE INSTALLATION FROM POWER IMMEDIATELY IF ANY PRODUCT, POWER CABLE OR POWER PLUG IS IN ANY WAY DAMAGED, DEFECTIVE OR WET, OR IF IT SHOWS SIGNS OF OVERHEATING.
- KEEP THE 2INSPIRE PSE AWAY FROM WATER AND HIGH HUMIDITY,

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- THE 2INSPIRE PSE IS COOLED ACTIVELY WITH FANS. PROVIDE ADEQUATE CLEARANCE FOR AIRFLOW AROUND THE DEVICE.
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1. Product Overview

24-Port PoE BT (up to 90W) Rackmount Power Supply & Ethernet Data Distributor

The Chroma-Q® 2inspire™ PSE 24-Port PoE BT Rackmount Power Supply & Ethernet Data Distributor is a high-performance, 1U 19" rackmount Power Sourcing Equipment (PSE) unit engineered to deliver both power and control the Chroma-Q 2inspire 100™, 200™, and 300™ fixtures, this device provides up to 90W per port across 24 PoE BT outputs, while also distributing Art-Net or sACN data.

Each of the 24 front-facing PoE ports is paired with intuitive LED indicators for power status, while dual data input ports (A and B) and a reset pinhole offer ease of integration and troubleshooting. The rear panel includes a third data port (C), a reliable Neutrik® powerCON TRUE1 input, and a contact closure terminal for alarm integration (UL924), making it suitable for a variety of professional lighting control environments.

A robust built-in web interface allows users to configure IP settings, monitor power consumption, and apply network security protocols. With a wide 100–250V, 1440W/2100W AC input range, the unit can deliver 1300W at 120V and up to 1900W 200 to 250V, supporting high-demand installations with efficiency and reliability.

Designed for professional-grade performance, the 2inspire™ 24-Port PSE combines intelligent power distribution with streamlined network control in a road-ready, compact form factor.

Key Features

- **24 PoE BT outputs** (each capable of delivering up to 90W)
 - **Total Power Budget:** up to 1300W@100-120V or 1900W @200-250V.
 - **Front Panel:** 2 data inputs (A, B), 24 PoE ports, LED indicators, reset pinhole
 - **Rear Panel:** 1 data port (C), powerCON TRUE1 connector, dry contact input for Alarm (UL924), duplicate LED indicators
 - **Built-in Web Interface** for configuring IP, monitoring PoE usage, and setting security options
-

2. Technical Specifications

I. Power Requirements

- **Input Voltage Range:** 100–250V AC 50-60hz
- **Power Capacity at 100-120V input:** 1440W max
- **Power Capacity at 200–250V input:** 2100W max
- **Connector:** powerCON TRUE1 power inlet (check local cable type/plug)

II. PoE Outputs

- **Ports:** 24 x RJ45 (PoE BT)
- **Max Power per Port:** 90W
- **Total Power Budget:** up to 1300W@100-120V or 1900W @200-250V.

Model	Input AC Voltage	Maximum Ports	Power per Port	Total Watts
2inspire 100	120V or 208-240V	24	25W	600W
2inspire 200	120V or 208-240V	24	40W	960W
2inspire 300	120V	19*	65W	1,230W
2inspire 300	208-240V	24	65W	1,560W

**The length of cables used between the PSE and the fixtures can influence the consumption*

III. Data Connectivity

- **Front Panel Ports A and B:** RJ45, can accept Art-Net or sACN data
- **Rear Panel Port C:** RJ45 Ethercon, can be used for configuration, data pass-through, or redundancy
- **Supported Protocols:** Art-Net, sACN

IV. Environmental Requirements

- **Placeholder: Operating Temperature Range:** 0–40 °C (32–104 °F)
- **Operating Humidity Range:** 10–90% RH (non-condensing)
- **Storage Conditions:** Keep in a clean, dry environment; avoid temperature extremes

V. Mechanical

- **Form Factor:** 19" rackmount, 1U
- **Included Rack Ears:** Yes
- **Dimensions (W x D x H):** 483 mm x 419 mm x 43.5 mm / 19" x 16.5" x 1.71"
- **Weight:** 6.7 kg / 15.3 lb

3. Installation & Mounting

I. Rackmount Preparation

- Confirm your rack has sufficient depth to accommodate the device plus connectors.
- If needed, install additional supports (rails or shelves) for heavier equipment or if the rack is subject to vibrations.

II. Clearance & Ventilation

- Ensure a minimum clearance of **3 inches (7 cm)** on the front and rear for proper airflow.
- **Never block** the front air intakes or the power supply's intake on the front and back panel.
- Maintain a suitable ambient temperature to prevent overheating.

III. Connecting Power

- Verify that the mains voltage is within the specified range (100–250V AC).
- Use a compatible **powerCON TRUE1 power connector** and ensure it is properly seated.
- Consider using a dedicated circuit or appropriately rated breaker if the PSE is near its 1440W@100-120V or 2100W @200-250V power capacity.

IV. Connecting Power Detection unit

- The 2inspire™ PSE includes an external power-detection module designed to trigger the Alarm input during a mains power failure. The module is wired to the facility's normal (non-backup) power source, while the PSE itself is powered from a UPS or other automatic backup supply. If the normal power source fails, the module's internal relay changes state (contact closure) and activates the PSE Alarm input, allowing the system to automatically switch connected fixtures to the programmed emergency state.



4. Connections & Cabling

I. Data Ports

- **Front Panel (A, B):** Connect inbound Art-Net or sACN data from your console or upstream network.
- **Rear Panel (C):** Use for configuration, secondary data route, or monitoring.

II. Ethernet Cable Guidance

- **Recommended Cables:** Use Cat5e or Cat6 UTP (unshielded) Ethernet cable (solid copper conductors recommended).
Shielded cable (STP) is not recommended for this system: it provides no practical benefit for PoE lighting in this application and can introduce grounding/shielding issues if installed incorrectly. Standardizing on unshielded cable also helps simplify commissioning and troubleshooting.
- **Ground Loops:** If using shielded cables, minimize risk by **not** tying cable shield grounds at both ends if unnecessary.

III. PoE Outputs

- **24 Ports** delivering PoE BT up to 90W each.
- Total system power should not exceed the PSU's overall capacity.

IV. Alarm (UL924) Contact Closure

- Accessible on the rear panel. Input for dry contact, can be set to work N.O. (Normally open) or N.C. (Normally close)
- [See Schematic](#)

5. Web Interface & Configuration

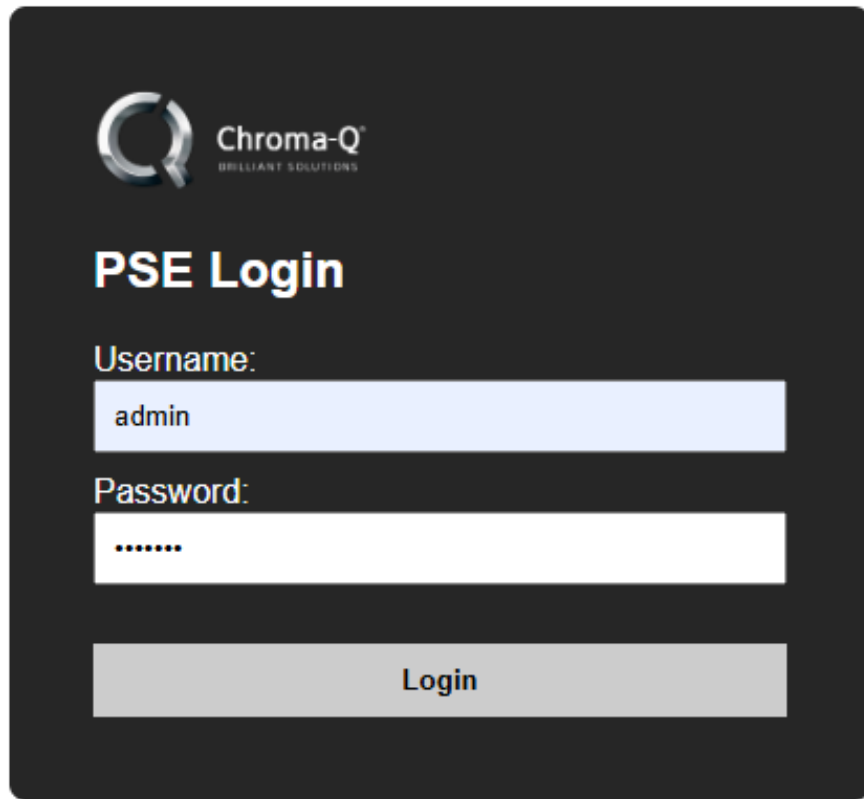
(This section to be expanded with step-by-step instructions, screen captures, and additional features at a later time.)

I. Default Network Settings

- IP Address: **2.0.0.10**
- Subnet Mask: **255.0.0.0**

II. Login Credentials

- **Username:** admin
- **Password:** chromaq

A screenshot of the Chroma-Q PSE Login web interface. The interface has a dark gray background. At the top left is the Chroma-Q logo, which consists of a stylized 'Q' icon and the text 'Chroma-Q' with 'BRILLIANT SOLUTIONS' in smaller text below it. Below the logo, the title 'PSE Login' is displayed in a large, bold, white font. Underneath the title, there are two input fields. The first is labeled 'Username:' in a light blue font, and the text 'admin' is entered into the field. The second is labeled 'Password:' in a light blue font, and the field contains seven dots, indicating a masked password. Below these fields is a large, light gray rectangular button with the word 'Login' centered on it in a dark gray font.

III. Navigation & Pages

See section [Web Interface](#)

IV. Reset to Factory Defaults

- **Pinhole Switch** on the front panel.
- Press and hold with a paperclip for 10 seconds to revert settings to defaults.

Web Interface

V. Main Status

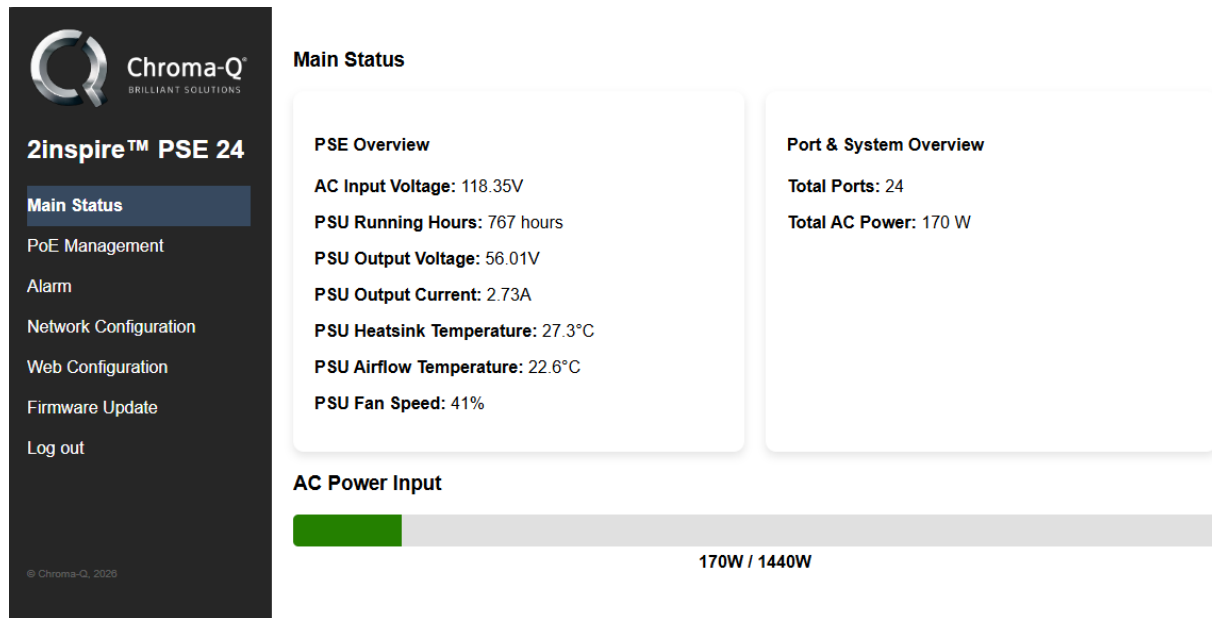


Figure 1. Main Status - Shows AC input, PSU telemetry and total port/power overview.

The **Main Status** page provides a real-time snapshot of the 2Inspire™ PSE's power system health and overall operating status. It is intended as the first step for confirming that the unit is powered correctly, running within normal limits, and delivering expected system capacity.

PSE Overview (Power Supply Status)

This panel displays key readings from the internal power system:

- **AC Input Voltage**
The incoming mains voltage feeding the PSE power supply. Use this to confirm the PSE is receiving normal line voltage (and to spot brownouts or abnormal supply conditions).
- **PSU Running Hours**
Total accumulated operating hours of the power supply. Useful for maintenance tracking, service intervals, and long-term reliability monitoring.
- **PSU Output Voltage**
The DC output voltage produced by the power supply (typically around 54–56 VDC for PoE). This confirms the supply is regulating correctly.
- **PSU Output Current**
The total DC current being delivered by the PSU. This rises as PoE loads increase and provides a quick indication of total power demand.

- *PSU Heatsink Temperature*
Temperature of the PSU's heatsink (thermal reference for the internal power stage). Elevated values can indicate high load, restricted airflow, or high ambient temperature.
- *PSU Airflow Temperature*
Temperature of the air moving through the power section. Helps indicate overall internal ambient temperature and cooling effectiveness.
- *PSU Fan Speed*
Current fan speed (typically shown as a percentage). Fan speed increases automatically with temperature/load to maintain safe operating limits.

Port & System Overview (Capacity Summary)

This panel summarizes system-wide totals:

- *Total Ports*
Number of PoE output ports available on the PSE (24).
- *Total AC Power*
The PSE's current AC power draw from mains. This includes internal system consumption plus the power being delivered to PoE loads (scaled by PSU efficiency).

AC Power Input (Load Bar)

At the bottom, the **AC Power Input** bar graph shows how much of the available input power budget is currently being used.

- The bar fills proportionally as load increases.
- The numeric readout shows **current draw vs. maximum available**, for example:
14 W / 1440 W (light load compared to total available capacity).

This display is useful for quickly confirming headroom before enabling additional PoE ports, increasing fixture intensity, or adding more fixtures to the system.

VI. PoE Management

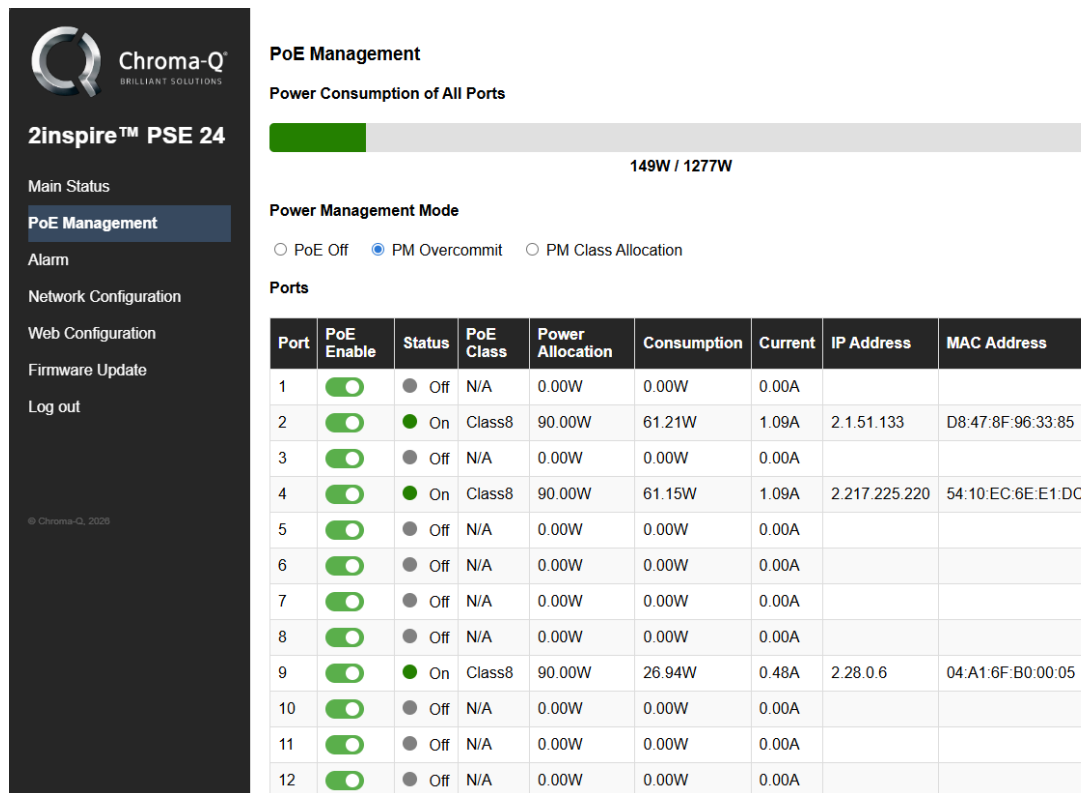


Figure 2. PoE Management - Per-port PoE enable/status, class, allocation, consumption and identifiers.

PoE Management Page (Port Power Control)

The **PoE Management** page is used to monitor and control PoE power delivery on each of the 24 output ports. It provides a system-wide power summary at the top, a selectable **Power Management Mode**, and a per-port table showing live port status, PoE negotiation class, and actual power draw.

Power Consumption of All Ports (Total Load Bar)

At the top of the page, the horizontal bar graph shows the **total PoE power currently being delivered** versus the **available PoE power budget**.

- The bar fills as connected loads increase.
- The numeric readout (example shown: **6W / 1289W**) indicates:
 - **Current PoE consumption** (all ports combined)
 - **Maximum PoE budget available** (based on PSU capacity and configured limits)

This is the quickest way to confirm available headroom before enabling more ports or increasing fixture intensity.

Power Management Mode

This setting determines how the PSE allocates and enforces its total PoE power budget across all ports:

- **PoE Off**
Disables PoE output globally. Ports will not provide power to connected devices.
 - **PM Overcommit**
Allows the PSE to oversubscribe the total PoE budget by allocating power based on real measured consumption instead of strictly reserving the full PoE class power for every port. This is useful because many fixtures negotiate a higher PoE class (e.g., Class 8 = 90W) even if their true maximum draw is lower (for example, a 65W fixture).
 - Use this mode when you want higher port utilization while still keeping protection and monitoring in place. The PSE will manage the available budget dynamically and may shed ports if the total available power is exceeded.
 - **PM Class Allocation**
Allocates power based on the PoE class negotiated by each connected device (for example, Class 8 for high-power fixtures). This is a more conservative mode that reserves power according to the device class rather than real-time measured draw.
Use when you want stricter budgeting and predictable reservation per port.
-

Ports Table (Per-Port Monitoring & Control)

Each row corresponds to one PoE output port and shows both configuration and live operating data:

- **Port**
Physical port number on the PSE (1–24).
- **PoE Enable**
Per-port on/off control (toggle).
 - **ON** enables PoE power negotiation and power delivery on that port.
 - **OFF** disables PoE output on that port (device will not be powered).
- **Status**
Live port state indicator (example shown: **On / Off**).
This reflects whether the port is currently delivering power to a valid PoE load.
- **PoE Class**
The negotiated PoE classification reported by the connected device (example shown: **Class8** for high-power PoE++ devices).
If no valid device is detected, this may show **N/A**.
- **Power Allocation**
The power budget reserved/assigned to that port (example shown: **90.00W** on Class 8 ports).
This value depends on the selected Power Management Mode and the device class.

- *Consumption*
Real-time measured power draw on that port (Watts).
This is the actual load and is the best indicator of what the fixture is consuming at that moment.
- *Current*
Real-time measured output current on that port (Amps).
Useful for diagnosing abnormal loads, cable issues, or unexpected behavior.
- *IP Address*
IP address of the connected fixture/device (when available / discovered by the system).
- *MAC Address*
MAC address of the connected fixture/device (useful for identification, patching, and troubleshooting).

VII. Alarm

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2inspire™ PSE 24

Main Status
PoE Management
Alarm
Network Configuration
Web Configuration
Firmware Update
Log out

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Alarm

When the alarm functionality is enabled, an external dry contact trigger signal can be used to cause the light fixtures to go to a known state.

During external trigger events, all control signals from the console ports are prevented from reaching the PoE fixture ports. The PSE can also optionally transmit an override Art-Net or sACN signal.

☒ Enable alarm functionality

☐ Force trigger for test (disabled after reboot)

☐ Use normally-open input

☒ Enable buzzer during alarm activation

Universe Snapshot #1

☒ Enable this universe

☒ Use sACN instead of Art-Net

Transmit Universe:

#	DMX Channel Values															
1																

If fewer than 512 values are entered, the values entered will be used as a repeating pattern to fill the universe.

Universe Snapshot #2

☐ Enable this universe

☐ Use sACN instead of Art-Net

Figure 3. Alarm - Alarm enable options and emergency snapshot configuration.

Alarm section

- *Enable alarm functionality*
Arms/disarms the whole emergency/alarm feature.
When **ON**, the PSE will monitor the external dry-contact input and, if triggered, will force the ports/fixtures into the configured alarm behavior.
- *Force trigger for test (disabled after reboot)*
A software “test button” that simulates an alarm trigger without needing to wire/activate the external contact.
It automatically clears after a reboot so it can’t be left enabled by accident.
- *Use normally-open input*
Selects the input contact type:
 - **ON** = treat the external input as **Normally Open (NO)**
 - **OFF** = treat the external input as **Normally Closed (NC)**
(This ensures the PSE interprets the wiring correctly and can also help with “fail-safe” wiring schemes.)

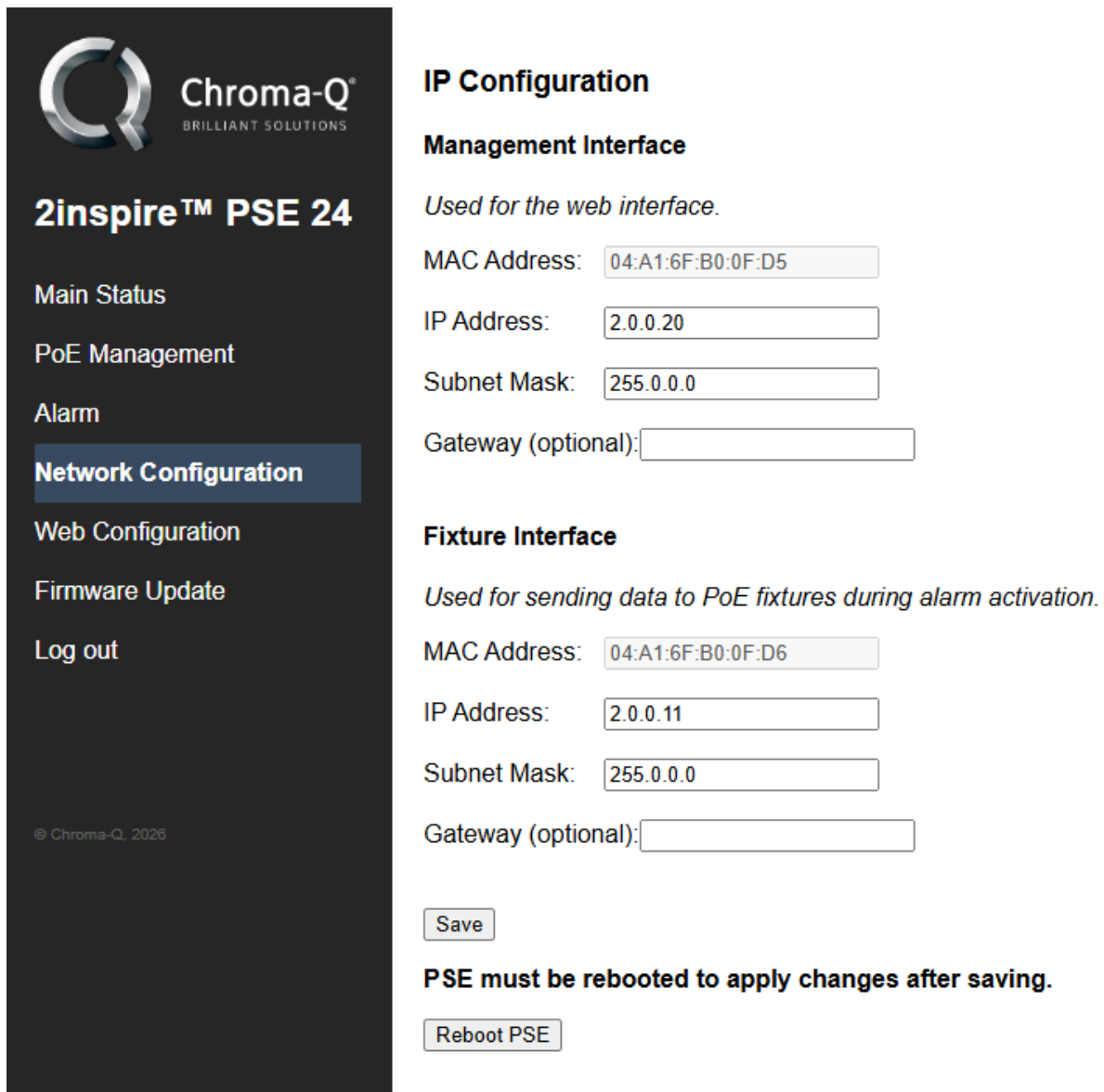
- *Enable buzzer during alarm activation*
Turns on an audible buzzer inside the PSE during an active alarm state (useful for local troubleshooting / confirming the unit is in alarm mode).

Universe Snapshot sections

Each **Universe Snapshot** block lets the PSE transmit a predefined DMX look when an alarm is active (so fixtures can go to a known state). Snapshot #1 and #2 let you send *two different universes* (or two different looks) if needed.

- *Enable this universe*
Turns that snapshot output on/off. If it's off, that snapshot won't transmit anything during alarm.
- *Use sACN instead of Art-Net*
Selects which protocol the PSE will use to transmit the alarm look:
 - **OFF** = transmit using **Art-Net**
 - **ON** = transmit using **sACN**
- *Transmit Universe*
The universe number the PSE will transmit the snapshot on (for the selected protocol). This should match the universe your fixtures are listening to during alarm operation.
- *DMX Channel Values grid*
This is where you define the actual DMX levels (0–255 per channel) that the PSE will output on that universe during alarm.
- *Add Value*
Adds another DMX channel value entry to the snapshot sequence (building up channels 1...512).
- *Remove Last Value*
Deletes the most recently added value entry.
- *Save Values*
Saves the snapshot to the PSE so it persists and is used during alarm.
- *Repeating pattern note (important)*
If you enter **fewer than 512 values**, the PSE repeats what you entered to fill the rest of the universe.
Example: if you enter 3 values [255, 0, 0], channels 1–3 repeat across 4–6, 7–9, etc. This is handy for simple patterns across multiple fixtures

VIII. Network Configuration



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2inspire™ PSE 24

- Main Status
- PoE Management
- Alarm
- Network Configuration**
- Web Configuration
- Firmware Update
- Log out

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IP Configuration

Management Interface

Used for the web interface.

MAC Address:

IP Address:

Subnet Mask:

Gateway (optional):

Fixture Interface

Used for sending data to PoE fixtures during alarm activation.

MAC Address:

IP Address:

Subnet Mask:

Gateway (optional):

PSE must be rebooted to apply changes after saving.

Figure 4. Network Configuration - Management and Fixture interface IP configuration (reboot required).

Network Configuration Page (IP Settings)

The **Network Configuration** page is used to set the IP parameters for the two Ethernet interfaces inside the 2inspire™ PSE. These two interfaces serve different purposes: one is for accessing the PSE web interface, and the other is used for communication with PoE lighting fixtures (especially during Alarm override operation).

Management Interface (Web Interface Network)

Purpose:

This interface is used to connect to and access the PSE **web interface** from a PC or network.

Fields:

- *MAC Address*
The hardware (physical) address of the Management Ethernet interface. This value is fixed and is mainly used for network identification or IT documentation.
 - *IP Address*
The IP address used to connect to the PSE web interface in a browser.
 - *Subnet Mask*
Defines the network range for the Management interface. The IP address and subnet mask must match the network settings of the PC or network you are using to access the web UI.
 - *Gateway (optional)*
Only required if you need to access the PSE from a different subnet (routing). In most simple lighting networks (single subnet), this can be left blank.
-

Fixture Interface (PoE / Fixture Network)

Purpose:

This interface is used for network communication to PoE lighting fixtures. In particular, it is used to **send data to fixtures during Alarm activation** (for example, to transmit a snapshot look over Art-Net or sACN).

Fields:

- *MAC Address*
The hardware address of the Fixture Ethernet interface.
 - *IP Address*
The IP address the PSE uses on the fixture network.
 - *Subnet Mask*
Defines the network range for fixture communication. This must match the IP range used by the connected PoE fixtures.
 - *Gateway (optional)*
Typically not required unless the fixture network is routed (uncommon in most lighting deployments).
-

Save / Apply Behavior

- *Save*
Stores the new network settings in the PSE configuration.

- *Important: Reboot required*

The message “**PSE must be rebooted to apply changes after saving.**” indicates that IP changes do not take effect until the PSE restarts.

- *Reboot PSE*

Reboots the unit so the new network settings become active.

Practical notes

- If you change the **Management Interface IP**, you may need to update your PC's IP settings (or reconnect to the correct subnet) to regain access to the web page.
- The **Fixture Interface** IP/subnet should be set to the same range as your PoE fixtures (for example, many 2inspire devices use the 2.x.x.x range by default).
- Gateways are rarely needed for isolated lighting networks; use them only when the PSE must be reachable across routed networks.

IX. Web Configuration

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2inspire™ PSE 24

Main Status

PoE Management

Alarm

Network Configuration

Web Configuration

Firmware Update

Log out

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Web Interface Configuration

Change Username

New username:

Change Password

New password:

(repeat password):

Figure 5. Web Configuration - Change web interface username and password.

Web Configuration Page (Login Credentials)

The **Web Configuration** page is used to change the login credentials for accessing the PSE web interface. This allows you to secure the unit by replacing the default username/password with site-specific credentials.

Change Username

- *New username*
Enter the desired new web interface username (example shown: *admin*).
 - *Save*
Applies the username change. After saving, the next login will require the new username.
-

Change Password

- *New password*
Enter the new password you want to use for the web interface.
 - *(repeat password)*
Re-enter the same password to confirm it was typed correctly.
 - *Save*
Applies the password change. After saving, the next login will require the new password.
-

Notes / Best Practice

- Record the new credentials and store them in the project documentation.
- If credentials are lost, access may require a service reset procedure

X. Firmware Update

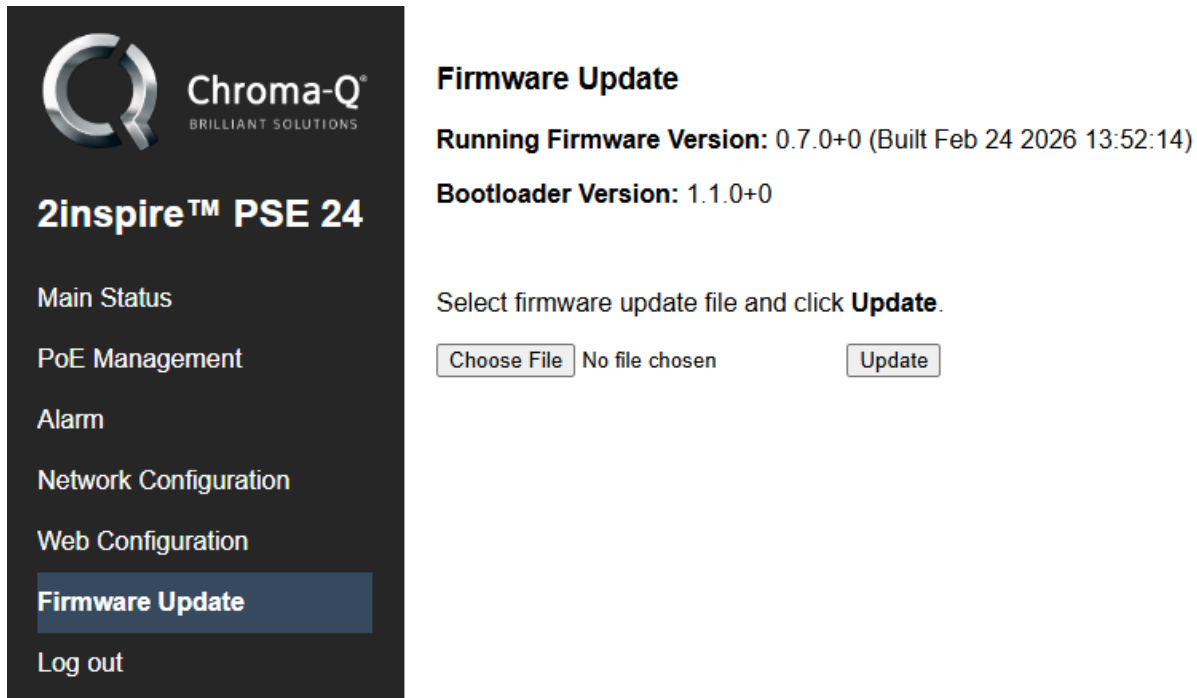


Figure 6. Firmware Update - Upload and apply a firmware update; shows running and bootloader versions.

Firmware Update Page (Updating the PSE Software)

The **Firmware Update** page is used to update the internal firmware of the 2inspire™ PSE. Firmware updates may add new features, improve performance, or fix issues.

Current Versions

- *Running Firmware Version*
Shows the firmware version currently installed on the PSE, including the build date/time.
- *Bootloader Version*
Shows the version of the bootloader. The bootloader is a protected recovery component that manages the firmware update process and allows the unit to load new firmware safely.

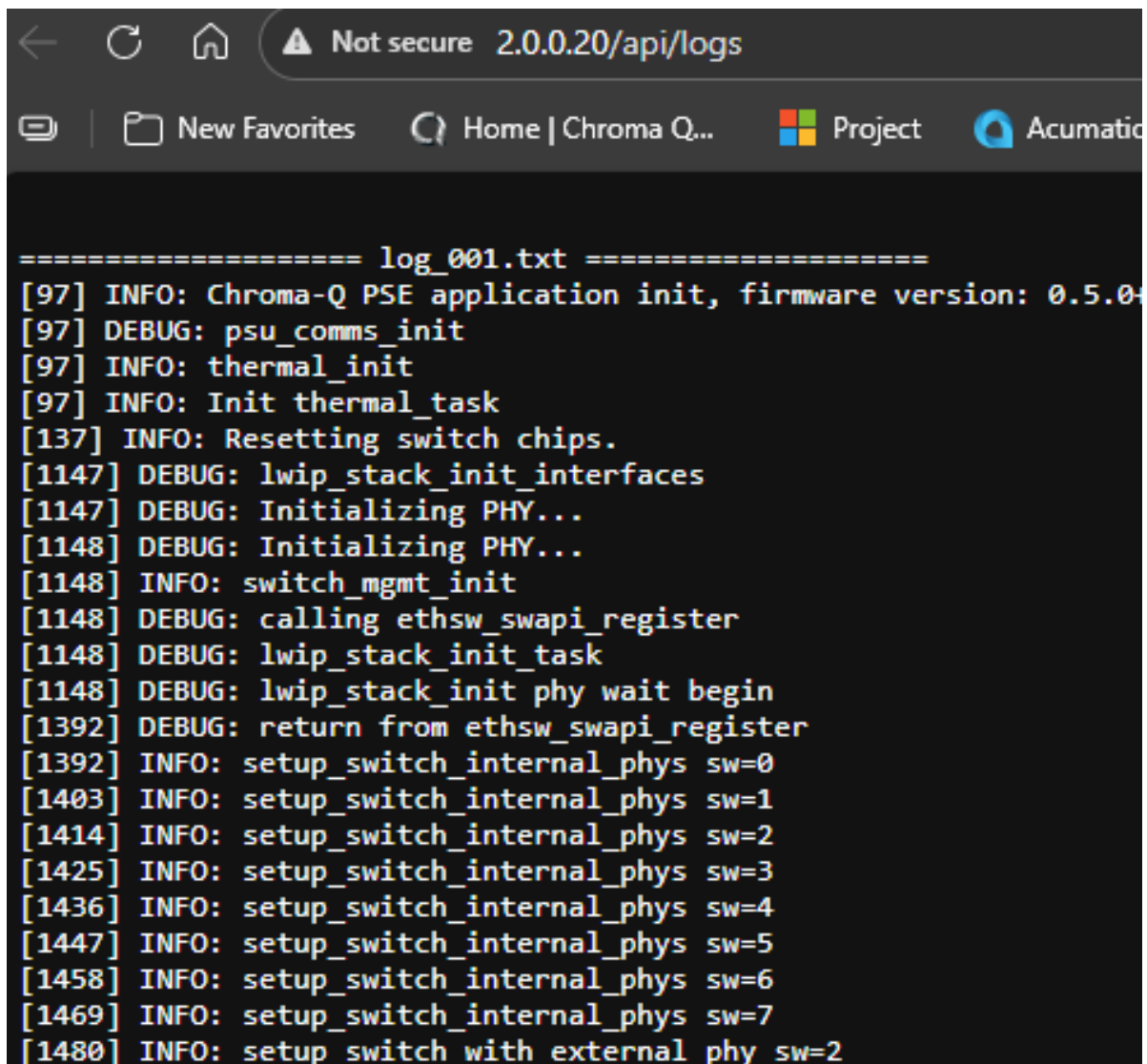
Performing an Update

1. *Choose File*
Click **Choose File** and select the provided PSE firmware update file on your computer.
 2. *Update*
Click **Update** to start the firmware upload and installation process.
-

Important Notes / Best Practice

- **Do not power off** the PSE during a firmware update. Interrupting power during an update can leave the unit in an unusable state until recovery procedures are performed.
- Perform updates using a **stable power source** (preferably on a UPS).
- Allow time for the PSE to complete the update and reboot before attempting to reload the web page or make additional changes.
- After the update, return to this page (or Main Status) to confirm the **Running Firmware Version** changed to the expected release.

Logs



The screenshot shows a web browser window with the address bar displaying '2.0.0.20/api/logs'. The browser's address bar also shows 'Not secure'. The browser's tabs include 'New Favorites', 'Home | Chroma Q...', 'Project', and 'Acumatica'. The main content area displays a log file named 'log_001.txt'. The log contains various messages, including INFO and DEBUG, related to the Chroma-Q PSE application initialization and switch setup.

```
===== log_001.txt =====
[97] INFO: Chroma-Q PSE application init, firmware version: 0.5.0
[97] DEBUG: psu_comms_init
[97] INFO: thermal_init
[97] INFO: Init thermal_task
[137] INFO: Resetting switch chips.
[1147] DEBUG: lwip_stack_init_interfaces
[1147] DEBUG: Initializing PHY...
[1148] DEBUG: Initializing PHY...
[1148] INFO: switch_mgmt_init
[1148] DEBUG: calling ethsw_swapi_register
[1148] DEBUG: lwip_stack_init_task
[1148] DEBUG: lwip_stack_init phy wait begin
[1392] DEBUG: return from ethsw_swapi_register
[1392] INFO: setup_switch_internal_phys sw=0
[1403] INFO: setup_switch_internal_phys sw=1
[1414] INFO: setup_switch_internal_phys sw=2
[1425] INFO: setup_switch_internal_phys sw=3
[1436] INFO: setup_switch_internal_phys sw=4
[1447] INFO: setup_switch_internal_phys sw=5
[1458] INFO: setup_switch_internal_phys sw=6
[1469] INFO: setup_switch_internal_phys sw=7
[1480] INFO: setup_switch_with_external_phy sw=2
```

Figure 8. Logs - System log viewer for troubleshooting.

Logs Page (System Diagnostics)

The **Logs** page provides access to the PSE's internal diagnostic log files. These logs are primarily used for troubleshooting, commissioning verification, and factory/support diagnostics.

What you'll see

- A text log (example: **log_001.txt**) displayed in the browser.
- Each line typically includes:
 - A **timestamp or tick count** (e.g., [97], [1148]) indicating when the message occurred since boot.
 - A **severity level** such as:
 - **INFO** – normal operating messages (startup, state changes)
 - **DEBUG** – detailed low-level messages (network stack, switch/PHY init, internal tasks)
 - *(Other builds may also include WARNING / ERROR if faults occur)*
 - A short description of the event (for example: PSU communications init, thermal init, Ethernet PHY initialization, internal/external switch setup).

When to use it

- **After a reboot** to confirm the PSE started correctly and all internal subsystems initialized.
- **When something isn't working** (ports not powering, fixtures not responding, alarm behavior, network issues).
- **For support cases**, where Chroma-Q may ask for the log output to diagnose a problem.

Common examples of what the log indicates

- **Power supply / PSU messages:** confirms PSU communications and regulation status.
- **Thermal messages:** confirms temperature monitoring tasks are running.
- **Network stack / PHY messages:** confirms the Ethernet interfaces and switch ports initialized correctly.

Notes / Best Practice

- Logs are intended for diagnostic use and may include advanced technical details.
- When contacting support, capture the full log text (or download/copy it) immediately after reproducing an issue so the relevant messages are included.

6. Operation & Maintenance

I. Normal Operation

- Confirm the **Red (Power) LED** is illuminated to indicate the unit is powered.
- Ensure the **Green (Status) LED** is active to confirm normal device status.

II. Cleaning & Airflow

- Keep vents and fans clear: Regularly inspect and clean the air intakes, exhaust vents, and fan openings to prevent dust buildup. Use a soft brush or dry compressed air to remove dust.
- Power down before cleaning: Always disconnect AC mains power before cleaning the unit.
- Do not introduce moisture: Do not use liquids or spray cleaners, and do not allow moisture to enter the enclosure.
- Check for obstructions routinely: Verify that nothing is blocking airflow around the PSE (rack doors, cables, insulation, etc.). As a guideline, inspect at least monthly, or more frequently in dusty environments..

III. Servicing & PSU Access

- The internal PSU is a removable assembly. Access requires removing the top cover and front cover of the PSE.
- Servicing and PSU removal must only be performed by an authorized, qualified technician.
- Disconnect AC mains power (and any backup/UPS supply feeding the unit) before opening the enclosure.
- There are no user-serviceable parts inside the PSE other than the specified replaceable fuses. Unauthorized servicing may create a safety hazard, damage the unit, and/or void the warranty..

IV. User-Serviceable Components

- The 2inspire™ PSE contains two user-replaceable fuses:
 - AC Input Fuse, Protects the mains input to the power supply.
 - DC Blade Fuse, Protects the internal DC/PoE power distribution.
- Replacement guidelines:
 - Disconnect AC mains power before inspecting or replacing any fuse.

- Replace fuses only with the same type and rating as specified on the unit label (or in the specifications section). Using an incorrect fuse may create a safety hazard or damage the PSE.
 - If a replacement fuse blows again, do not continue replacing fuses—there is likely an underlying fault (overload, wiring issue, internal failure). Contact an authorized service center or Chroma-Q support.
-

7. Troubleshooting

I. LED Indicators

Red (Power indicator):

Solid Red: PSE powered / system running normally.

Flashing Red (reserved): Fault condition detected (*future use / not active in current firmware*).

Yellow (Alarm indicator):

Symptom: Yellow LED blinking on the front panel (buzzer beeping in the same rhythm).

Meaning / Cause:

The **external Alarm input is active**. (*At this time, no other condition will illuminate the Yellow LED.*)

System Behavior During Alarm:

- The Yellow LED will continue to blink for as long as the alarm input remains active.
- The buzzer will beep in time with the blinking Yellow LED.

Silencing the Buzzer (Alarm still active):

- A **brief press** of the front panel button will **mute the buzzer**.
- The **alarm condition remains active**, and the **Yellow LED will continue blinking** until the external alarm input is cleared.

Recommended Actions:

1. Verify the external alarm trigger wiring and state (NO/NC selection, if applicable).
2. Confirm whether the building mains/power-detection module is intentionally indicating a power-fail condition.
3. Clear the external alarm condition to return the system to normal operation.

Green (Status):

Indicate Factory Reset state when the **Pinhole Switch** has been pressed successfully.

II. Common Issues & Solutions

No Power to PoE Port

- **Port disabled:** Confirm the port is enabled on the **PoE Management** page.
- **Power budget exceeded:** The PSE total power budget may be exceeded. When this occurs, the PSE will automatically disable power to some ports to protect the system, starting with the **highest-numbered ports**.
- **Fixture power requirement too high:** Verify the connected device does not exceed the port capability (up to **90 W** per port, depending on device/class and configuration).
- **Cabling issue:** Check/replace the Ethernet cable and ensure it is solid copper Cat5e/Cat6 and properly terminated.
- **Note:** The available **system power budget is determined dynamically based on the measured AC input voltage**, so the maximum available PoE power may vary depending on the incoming mains voltage.

No Network Data (Fixtures not responding)

- IP / Subnet mismatch: Confirm the PSE Fixture Interface IP address and subnet mask match the fixture network, and that your control source (console/PC) is on the same IP range.
- Cabling / termination: Check Ethernet cables for damage, loose connectors, or incorrect termination (use known-good Cat5e/Cat6 cables).
- Wrong protocol or universe: Verify the control source is outputting the correct protocol (Art-Net or sACN) and the correct universe(s) expected by the fixtures.
- Network filtering (managed switches): If using sACN on a managed network, ensure IGMP snooping / multicast handling is configured correctly so multicast data is not blocked.
- Multiple transmitters: Ensure only one source is transmitting the same universe(s) to avoid conflicts.
- Tip: If the fixtures have link/activity indicators, confirm the Ethernet link is up and data activity is present before changing software settings.
- Possible causes / checks:
- IP / Subnet mismatch: Confirm the PSE Fixture Interface IP address and subnet mask match the fixture network, and that your control source (console/PC) is on the same IP range.
- Cabling / termination: Check Ethernet cables for damage, loose connectors, or incorrect termination (use known-good Cat5e/Cat6 cables).

- Wrong protocol or universe: Verify the control source is outputting the correct protocol (Art-Net or sACN) and the correct universe(s) expected by the fixtures.
- Network filtering (managed switches): If using sACN on a managed network, ensure IGMP snooping / multicast handling is configured correctly so multicast data is not blocked.
- Multiple transmitters: Ensure only one source is transmitting the same universe(s) to avoid conflicts.
- Tip: If the fixtures have link/activity indicators, confirm the Ethernet link is up and data activity is present before changing software settings.

Overheating

- **Blocked airflow:** Confirm all vents, grills, and air intakes/exhausts are unobstructed. Maintain adequate clearance around the unit and avoid mounting in sealed/insulated cavities.
- **High ambient temperature:** Verify the installation environment is within the specified operating range. If installed in a rack, confirm rack ventilation is adequate and hot air is not being recirculated.
- **Fan restriction / contamination:** Inspect fans and filters (if fitted) for dust buildup and clean as needed. Check that fans are spinning freely and not making abnormal noise.
- **Excessive load:** High PoE load increases internal heat. Reduce total PoE draw temporarily (disable non-essential ports or lower fixture output) to confirm whether heat rise is load-related.
- **Check status readings:** Use the **Main Status** page to review PSU heatsink temperature, airflow temperature, and fan speed to confirm cooling behavior.

Alarm Contacts Triggered

- Verify alarm input wiring: Check the rear-panel wiring to the UL924 / Alarm input (dry contact). Confirm the correct terminals are used and the connections are secure.
- Confirm NO/NC configuration: Ensure the Normally Open / Normally Closed selection matches the type of external contact device (fire alarm interface, power-detection module, relay, etc.).
- Check the external trigger source: Confirm whether the building fire alarm system, emergency interface, or external power-detection module is actively asserting the contact closure (for example, a normal mains power loss condition).
- Review Alarm page settings: Confirm Alarm is enabled and that any Force trigger for test function is not active (if applicable).

- Acknowledge buzzer: If the buzzer is sounding, a brief press of the front panel button can silence it, but the alarm state remains active until the external contact returns to normal.
 - Confirm system state: Check Main Status and Logs pages to verify the unit is not reporting a related fault condition and to identify the exact time/state change that caused the alarm to activate.
-

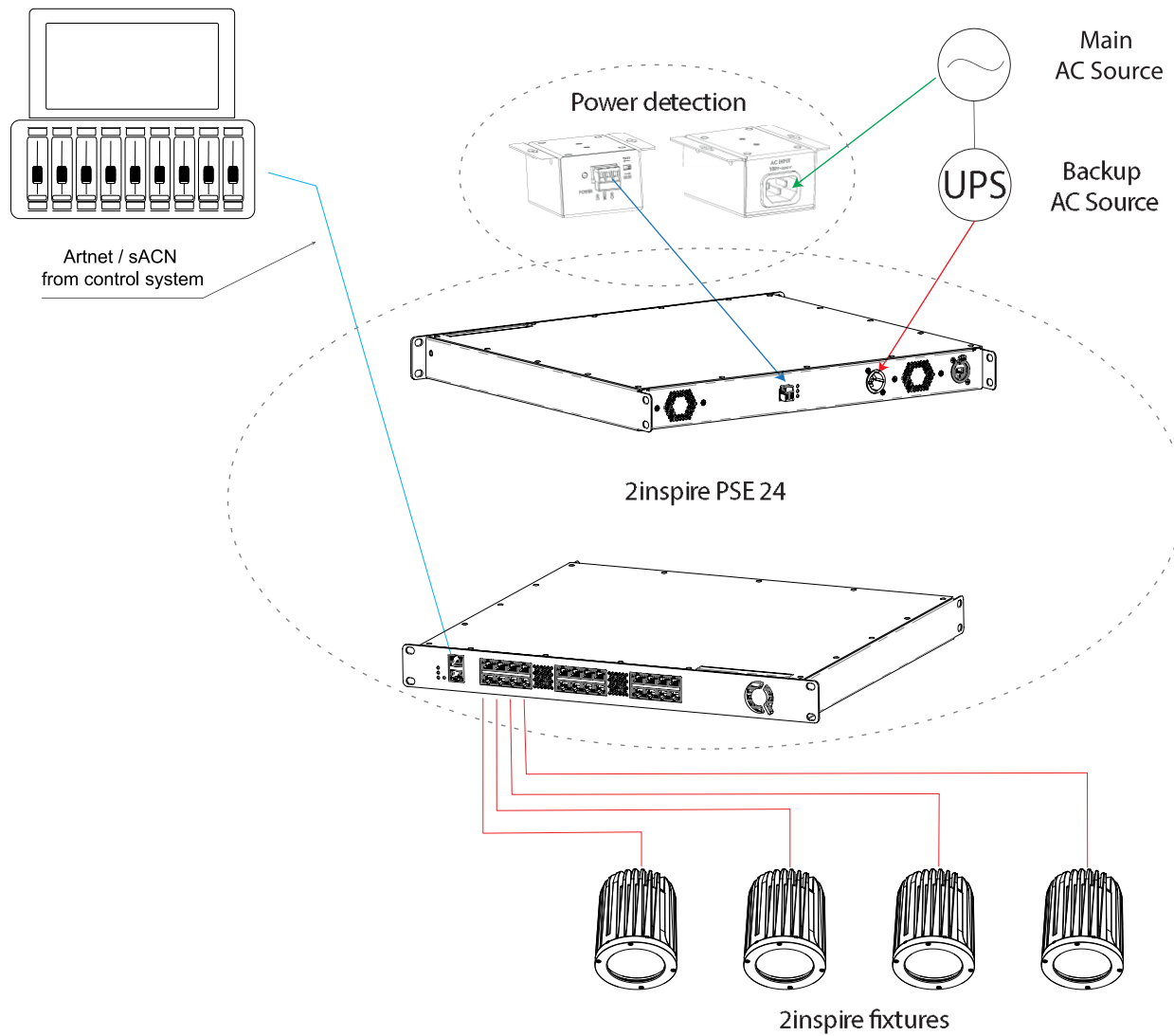
Quick Reference

Item	Details
Model Name	2inspire 24 port PSE
Form Factor	19" Rackmount, 1U
Power	100–250V AC, 1440W @120V, 2100W @200–250V
Max PoE per Port	90W
Total PoE Budget	1300W@100-120V or 1900W @200-250V
Data Input Protocol	Art-Net or sACN
Default IP	2.0.0.10 Web management
	2.0.0.11 fixture data
Default Subnet	255.0.0.0
Username/Password	admin / chromaq
Reset Method	Pinhole switch (front panel)
LED Indicators	Red (Power), Yellow (Alarm), Green (Status) – Front & Rear
Alarm Contact	Rear panel (UL924)

Final Notes

- Always use proper safety procedures when handling and installing high-voltage equipment.
 - Keep all firmware and software updated to benefit from the latest features and security patches.
 - For further information, consult the manufacturer's official support channels or authorized distributors.
-

Typical setup Wire diagram



Line Drawing

