

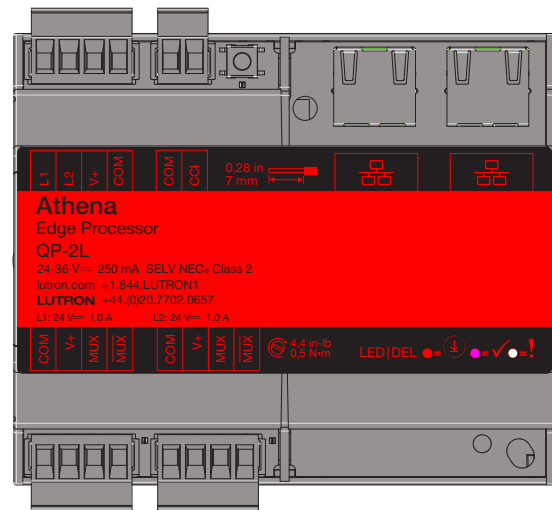
Athena Edge Processor Conversion Kit

The Athena Edge Processor Conversion Kit allows existing Quantum Light Management Hubs to be converted to the new Athena Edge processor. This kit also allows a new QP5 Light Management Hub to be converted from 2 configurable links to 4 configurable links.

Features

- Designed to control, manage, and monitor Lutron Energi Savr Node units, QS and Pico wallstations, contract roller QS shades, and QS drapery systems.
- Athena Edge Processor Conversion Kits can be installed in the following existing Quantum Light Management Hubs.
 - QP2-xPOCSE-120 (Contact Lutron for additional QP2 models). **Note:** Athena Processor is not compatible with Quantum bus supplies in QP2 panels (Q-2C)
 - QP3-1PL-100-240
 - QP4-1P-PS120
- The Athena system brings switching, dimming, motorized window shades, digital ballasts, digital LED drivers, and smart sensors together under one software tool.
- Can be connected to the same network as the other QP5 or QP6 Athena Management Hubs (requires switch by others). After upgrading, Athena Hub will no longer be compatible with other QP2, QP3, or QP4 Quantum Hubs.
- Enables an Athena system to cost-effectively scale from a single floor, to multiple floors, to the whole building.
- Compatible with Athena Clear Connect Gateway – Type X and requires a Q-POE-PNL or separate IEEE 802.3af-2003 or 802.3at-2009 compliant Power over Ethernet (PoE) supply (not by Lutron) powered with a normal feed.
- Ships with mounting bracket for ease of installation into existing Athena Light Management Hubs.
- Supports both astronomic and time-of-day events to automatically control the lights and shades/draperies in the system.

* Pico wireless controls, QS keypads, IR



Configurable Link/Switchleg Capabilities

Model	Limitations per Processor					
	Number of QS Links	Number of Ethernet Ports	QS Device Count			
QP-2L-UPGRADE	2	2	99			
	Limitations per QS Link					
	Wall Controls *	Occupancy Sensor Count	Daylight Sensor Count	Switchleg Count	DMX Interface Limit	
	100	100	100	512	16	

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Specifications

Regulatory Approvals

- cULus
- CE
- NOM

Power

- Processor: 24–36 V $\overline{=}$ 250 mA
- Links: 24–36 V $\overline{=}$ 1 A per link
- Low-voltage power is provided by the power supplies in an existing Quantum Light Management Hub (QP2, QP3, QP4) fed by normal power

Environment

- Operating temperatures 32 °F to 104 °F (0 °C to 40 °C)
- Relative humidity: 0% to 90% non-condensing
- For indoor use only

Typical Power Consumption

- 4.2 W; 8 Power Draw Units (PDUs)
Test conditions: Two Ethernet links connected, both device links in use

ESD Protection

- Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2

Surge Protection

- Tested to withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991 Recommended Practice for Surge Voltages in Low-Voltage AC Power Circuits

Power Failure

- **10-year power failure memory:** Should the power be interrupted, the processor will return to its previous state prior to the interruption when power is restored

Mounting

- Mounts into existing Quantum Light Management Hubs (QP2, QP3, QP4) with supplied mounting bracket using 2 supplied screws

Low-Voltage Link Wire Type

- Two pairs — one pair 18 AWG (1.0 mm²), one pair 22 AWG to 18 AWG (0.5 mm² to 1.0 mm²) twisted shielded — IEC PELV/NEC® Class 2 cable

Internet Connection

- Providing the Athena hub with an internet connection is highly recommended. This connection is outbound from the Athena processor to the cloud (see the Athena IT Guide at www.lutron.com/AthenaITGuide for details). Having this connection provides for automated firmware updates as well as remote access, diagnostics, and service (some features may only be available after system startup).

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Athena Security Statement

Lutron takes cybersecurity very seriously. We actively monitor the threat landscape and take a proactive approach to security and privacy, continuously working to update and enhance our systems and processes.

At Lutron, we call our approach to cybersecurity “**Secure Lifecycle**”, and we would like to present the following steps we take to protect your security and privacy:

- **Security by Design.** When building a new system, Lutron utilizes a dedicated security team to ensure best practices are implemented. Security is built in. It is not an afterthought or an add-on.
- **Third-Party Validation.** Security is complicated. Lutron has a dedicated team of internal experts, but we also leverage external experts to double-check our work, and to make security recommendations.
- **Continuous Monitoring and Improvements.** Security is a constantly moving target. Lutron uses a dedicated security team to continuously monitor for potential threats and, when needed, send out security patches to update installed systems.
- **Ongoing Support.** Lutron has the resources you need to answer questions about security when they arise

We incorporate a variety of security features into our product designs. These features include recommendations from the National Institute of Standards and Technology (NIST) among others, and they are aimed at meeting our secure lifecycle protections. While we do not publish a comprehensive list of our security features, the following list is a small example of some of the techniques employed in our system designs for Athena Processors, Light Management Hubs, Clear Connect – Type X Gateway devices and associated services (such as mobile applications and cloud resources):

1. Secure and authenticated remote access with unique keys for every Athena system
2. A secure hardware element (“chip”) on all Athena processors and Clear Connect – Type X Gateway to guard the keys used for secure communication and authentication
3. Enforcing industry-standard encrypted communication and techniques for our integration protocols to the highest extent possible. Any integrated third-party components or systems should be evaluated independently.
4. Secure commissioning – all communication between the system programming software tool/app and the processors is encrypted and authenticated. Programming a system requires permission to access that system.
5. Security updates are pushed out automatically to the lighting system for urgent security patches. Lutron is committed to one year of security support from system start-up date.
6. Use of industry-standard techniques for cloud-based integrations, such as OAuth2.0
7. Signed processor firmware to ensure a firmware update is authentically from Lutron.

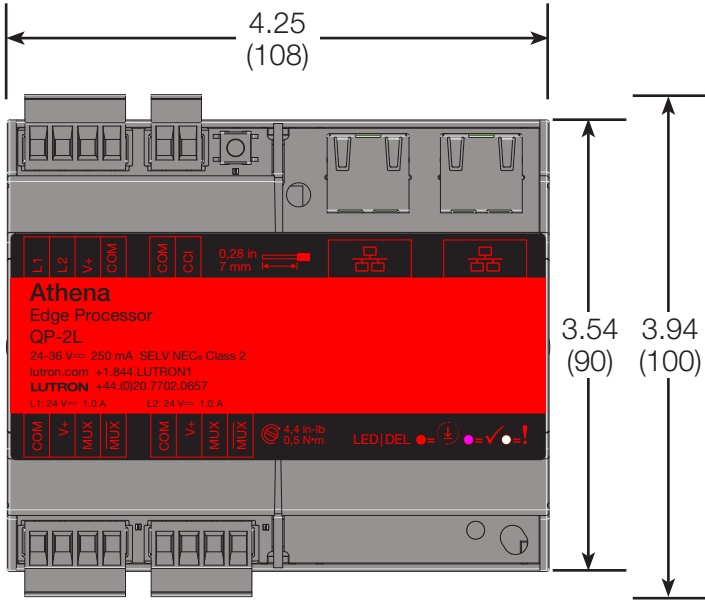
If you have additional questions or would like to make a vulnerability disclosure to Lutron, please contact Lutron’s 24/7 Technical support Line at 1.844.LUTRON1 or email us at support@lutron.com

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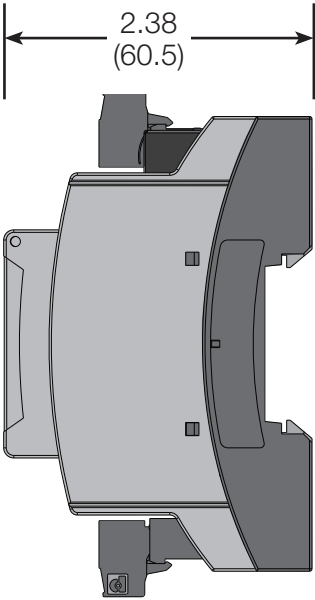
Dimensions

All dimensions are shown as: in (mm)

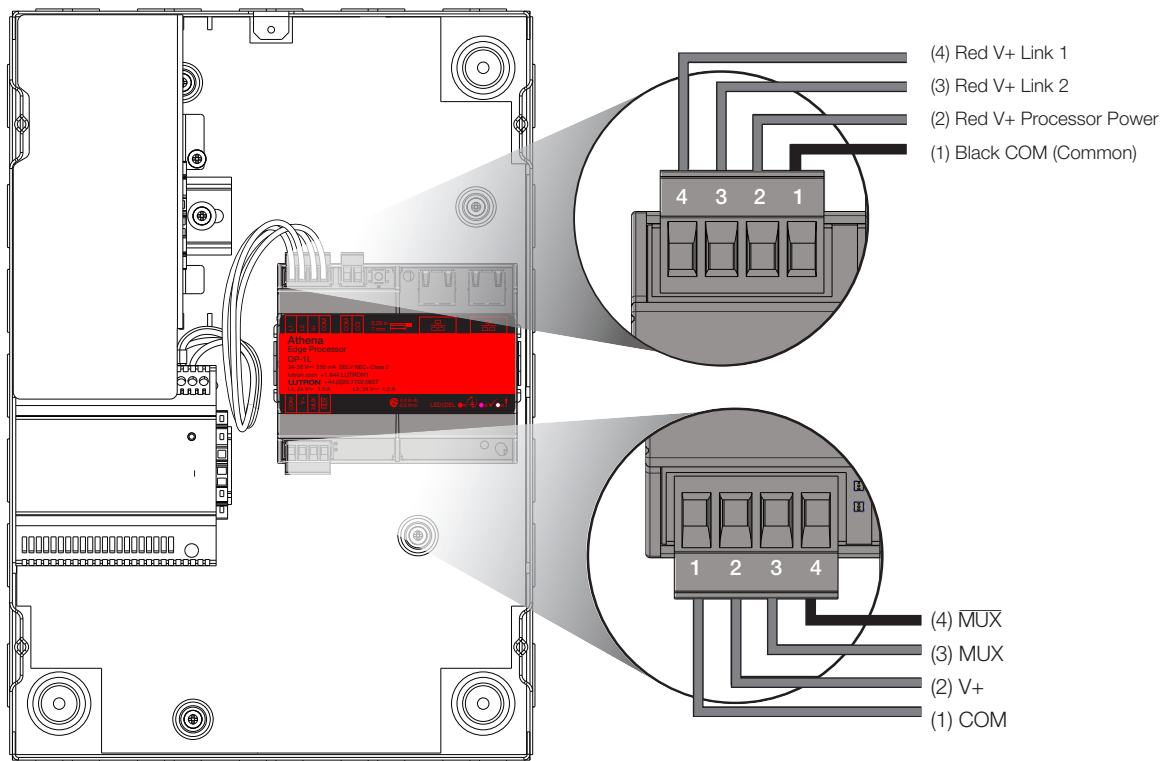
Front View



Side View



Configurable Link Wiring: QS Link



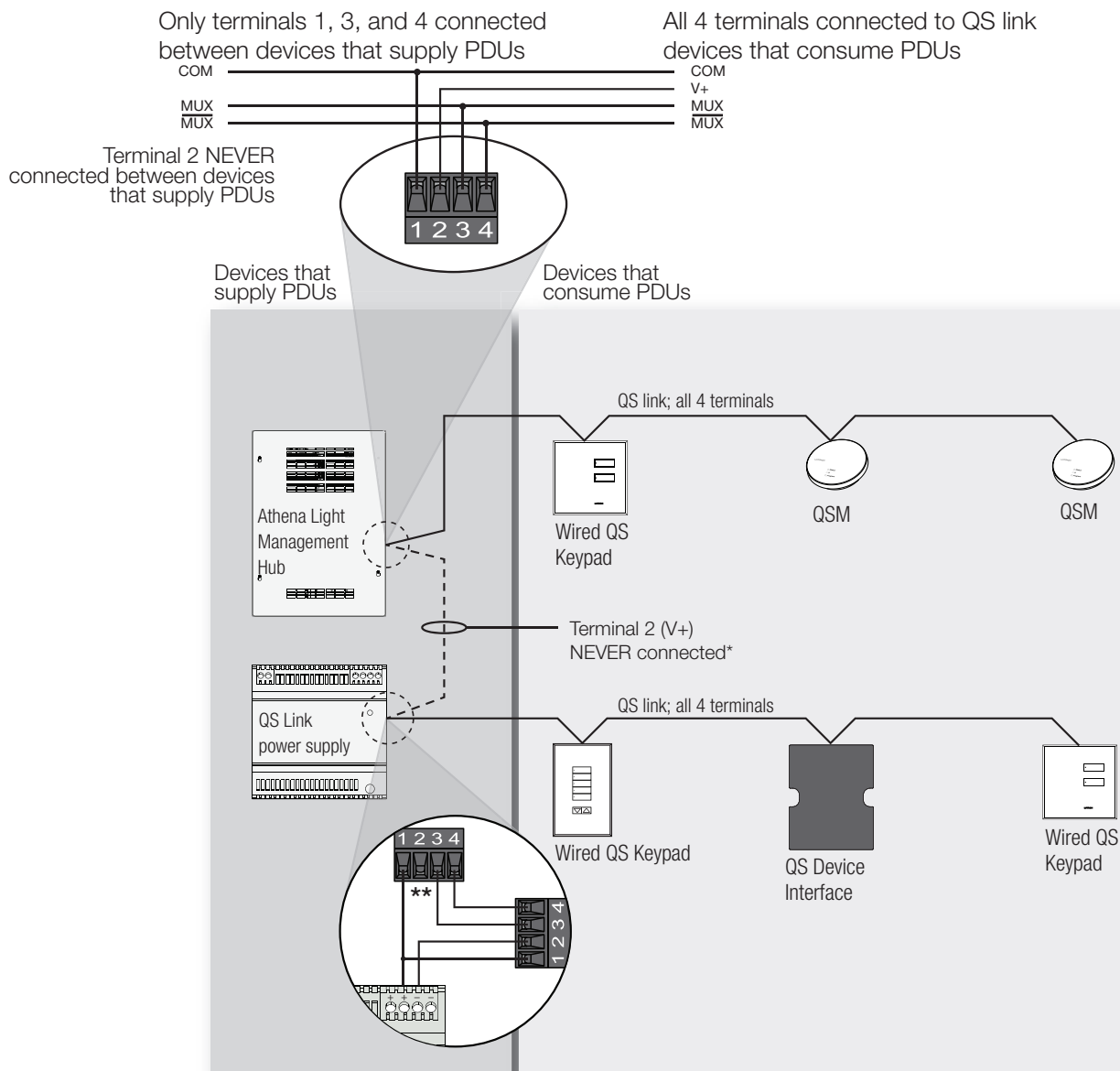
QP3-1PL-100-240 converted to QP6-1L shown

Maximum Link Length	Wire Gauge	Available from Lutron in one cable	Alternate Wiring
500 ft (152 m)	Power (terminals 1 and 2) 1 pair 18 AWG (1.0 mm²) Data (terminals 3 and 4) 1 pair 22 AWG (0.5 mm²) twisted and shielded	GRX-CBL-346S GRX-PCBL-346S	Power Connections: use two 18 AWG (1.0 mm²) stranded conductors Data connections: use Belden Cable #9461 (two 22 AWG (0.5 mm²) twisted shielded pair)
2000 ft (609 m)	Power (terminals 1 and 2) 1 pair 12 AWG (4.0 mm²) Data (terminals 3 and 4) 1 pair 22 AWG (0.5 mm²) twisted and shielded	GRX-CBL-46L GRX-PCBL-46L	Power Connections: use two 12 AWG (4.0 mm²) stranded conductors Data connections: use Belden Cable #9461 (two 22 AWG (0.5 mm²) twisted shielded pair)

Notes

- Link communication uses IEC PELV/NEC® Class 2 low-voltage wiring.
 - Follow all local and national electrical codes when installing IEC PELV/NEC® Class 2 wiring with line voltage/mains wiring.
 - Terminals accept:
 - One 22 AWG to 12 AWG (0.5 mm² to 4.0 mm²) wire
 - Up to two 18 AWG (1.0 mm²) wires
- The total wire length of a link must not exceed 2000 ft (609 m)
 - The Athena Edge Processor provides 33 power draw units (PDUs) on each QS Link. For more information, see “Power Draw Units on the QS Link” (Lutron P/N 369405) at www.lutron.com
 - QS Link Wiring can be T-tapped or daisy-chained.
 - Shield wire will not land on the processor, it should be isolated from ground and all other connections.

Configurable Link Wiring: QS Link *(continued)*

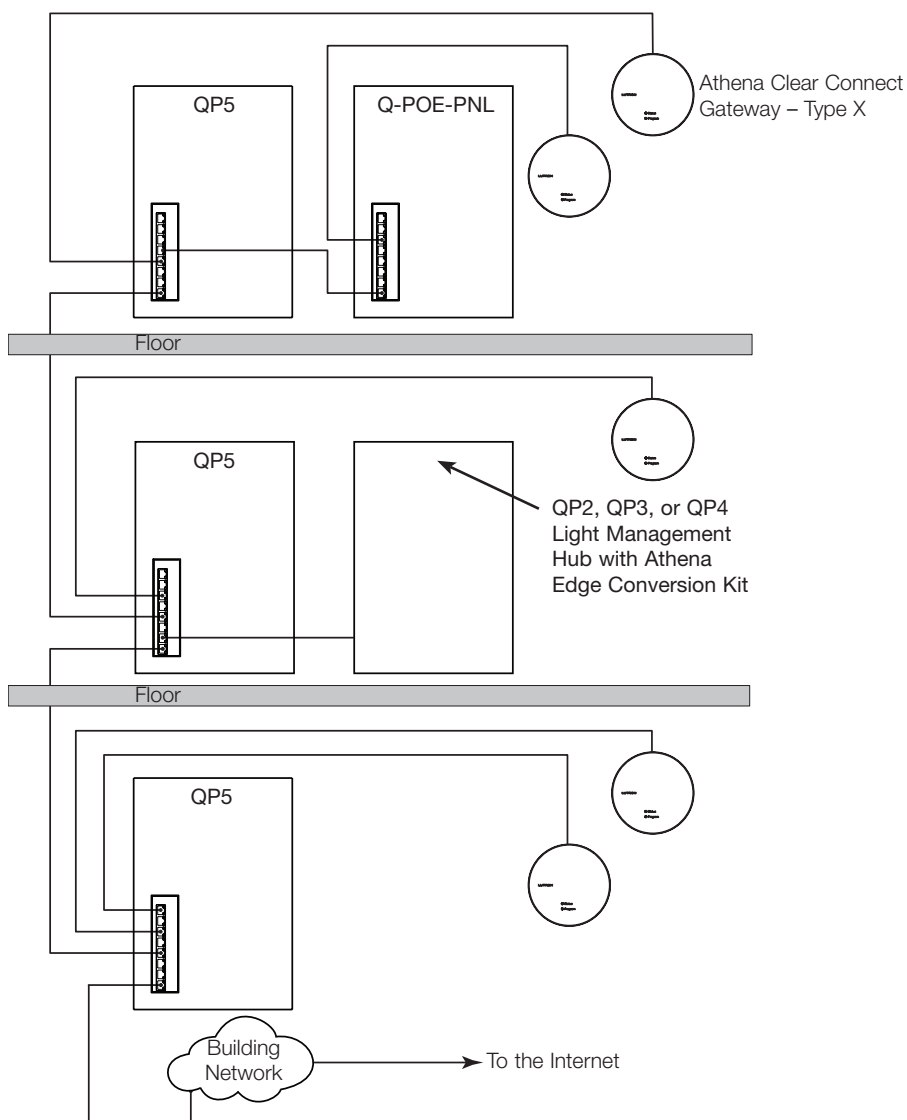


QS Link Wiring Rules

- * Terminal 2 (V+) should NEVER be connected between devices that supply PDUs.
- ** For QS Link power supply wiring connection details, refer to the installation instructions for the specific power supply model being used.

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System Riser Diagram



Note: Refer to the IT Guide at www.lutron.com/AthenaITguide for more information and networking requirements.

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Software

OpenADR Compliant

- OpenADR 2.0b compliant when used with LUT-Q-OPNADR-CPN8064

iOS Control Application

- The Athena system can have up to 10 simultaneously connected mobile app clients
- Compatible with Lutron App
- Requires iOS 13 or newer

Scheduling

- Events can be scheduled to occur at fixed times or relative to sunrise/sunset and can be programmed to occur once or to be reoccurring

User Access

- Username and password required for user access

Load Shed/Demand Response

- Participate in load shed/demand response programs offered by local utility companies
- Apply a load shed reduction to the system, thereby reducing the building's lighting power usage

Lighting Control

- Monitor current status of areas, scenes, and zones
- Activate lighting scenes
- Adjust lighting zone levels
- Modify lighting zone levels in area scenes
- Control the intensity and color of Ketra fixtures
- Adjust saturated color and vibrancy of Ketra fixtures

QS Shade Control

- Monitor current status of shade groups and drives
- Activate shade presets
- Adjust shade levels

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Compatible Models

Load controls

- QSN-*
- QSE-CI-DMX

Wall controls

- PJ2-*
- PJN-*
- PX-*
- QSWA-*
- QSWAS-*
- QSWE-*
- QSWS2-*
- QSWS2-KS-*
- QWP-*

Shades

- Contract Roller Shades
- Sivoia QS Shades

Sensors

- GRX-IRPS
- EC-DIR*
- GRX-CES*
- LOS-*
- LRF2-OCR2B*
- LRF2-DCRB*
- LUT-WS*
- QSM2-*

Accessories

- LUT-19AV-1U
- LUT-5x10-ENC
- LFG*
- LTR-*
- LPFP-*
- L-PED*
- PICO-*

Power Interfaces

- TVI-LMF-2A
- C5-*
- PHPM-*
- GRX-TVI

Integration Interfaces

- LUT-Q-OPNADR-CPN8064
- QSE-CI-NWK-E
- QSE-IO
- QSE-CI-WCI

Emergency

- LUT-ELI-3PH (for QSN-* load control panels)
- LUT-SHUNT-A-TD (for Ketra loads)

Power Supplies

- QSPS-*

Cable

- QS-CBL-*
- GRX-CBL-*
- GRX-PCBL-*

* Designates additional model number characters that may vary depending on the specific model chosen.

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