ATHENA System Architecture

LUTRON

QS Wired Link

- **QP5-2L and QP5-4L:**
  99 QS devices per link
  512 switchlegs per link*
- **QP6-1L and QP5-1L:**
  25 QS devices per link
  256 switchlegs per link*
- 2,000 feet maximum wire length (consult technical specs for other applicable rules)
- Free-wire topology (star, daisy chain, home run, etc.)
- Standard Lutron 4 conductor cable**

Shades


1
QSPS 10-output power panel


1
Plug-in power supply


1
J-box power supply


2
Contract Roller or Sivoia QS shades

Interfaces - AV and Contact Closure


2
NWK


2
CCO/CCI


3
Partition sensor


2
Wallbox CCI

Sensors and Remotes


Occupancy/ Vacancy sensor

2
QSM


Daylight sensor


Pico Wired Control


4
Radio Powr Savr occupancy sensor


4
Radio Powr Savr daylight sensor


4
Pico wireless control

Distributed Load Control


0
PRO LED+ Phase adaptive


0
0-10V


0
EcoSystem


0
Switching


0
T-Series


0
DALI UNV


2
DMX (32 channels)

Centralized Load Control


0
Athena DIN Panel Phase Adaptive, 0-10V, Switching

Wall Controls


2
Palladiom


2
seeTouch

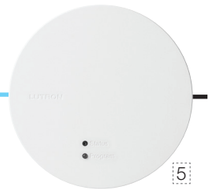
Internet

No local server or PC required


Athena processor hub 0

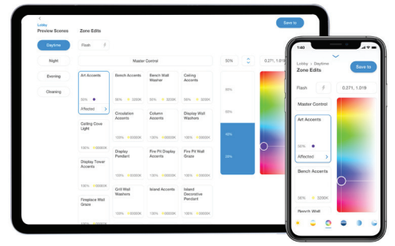

Lutron Field Service, connection needed for system startup


5
Touchscreen


5
Clear Connect Gateway - Type X

Mobile app

Lutron App



The Lutron App communicates with connected Athena processor hubs via the cloud

Clear Connect Wireless - Type X

Luminaries


0
D3 Downlight


1
D4R Downlight


1
S38 Lamp

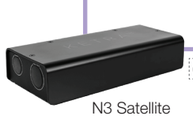

1
A20 Lamp


G2 Linear


L4R Linear


L3I Linear


LS0 Lightbar Slim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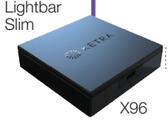
N3 Satellite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X96

Lamps

1
S30 Lamp

- 100 Clear Connect Type X devices per gateway
- Refer to N3 and X96 spec sheets for system design rules

Athena System Capacities

- 16 total Athena Edge Processors and Clear Connect Type X Gateways (max, any combination)
- 16,384 switchlegs (max, excluding Ketra)*
- 1500 Ketra devices (max)***

* A switchleg is the smallest controllable point on any product - a single CCO, a zone of 0-10V, or a single digital address for a fixture.

*** An N3 and an X96 counts as 1 device regardless of the amount of fixtures connected to it.

Key - Wiring

- **QS Wired Link****
- **QSM Wired Sensor Link**
- **Clear Connect Wireless- Type A Link**
- **Ketranet PLC**
- **X-96 Wired Link**
- **Clear Connect Wireless - Type X Link**
- **System Ethernet Link** — Ethernet connection between processors and Clear Connect Type X Gateways to the internet required for system startup and app function.

**Pin-out: pin 1 - common, pin 2 - VDC, pin 3 - MUX, pin 4 - $\overline{\text{MUX}}$

GRX-CBL-346S-500 (runs up to 500ft): one pair 18AWG, one pair #18-22AWG twisted/screened

GRX-CBL-46L (runs up to 2000ft): one pair 12AWG, one pair #18-22AWG twisted/screened

RS-485, 24 - 35 VDC powered

The wire gauge required for shade power conductors is dependent on shade size and number, wire run length, and power supply type being used. Consult technical specifications of shade equipment for details.

This document is a system architecture overview. Please refer to system and product spec sheets for complete details.

Key - Power

0 120 or 277VAC
1 Line voltage 120 VAC
2 Low voltage 24-35 VDC
3 Plug-in transformer
4 Battery powered
5 Power over Ethernet (PoE)