Athena Technical Document

LUTRON

Athena

An uncompromising solution. The Athena lighting control system empowers architects, lighting designers, and electrical engineers with a native network of lighting, lighting controls, shades, and cloud-connected software that deliver exceptional experiences and building management.

An Uncompromising Solution

Scalable

High-rise offices. College campuses. Five-star resorts.

Lutron's wireless technology and modular data system form a foundation for nimble, next-gen scalability.

Adaptable

Meet property needs over time.

Design freedom during specification, customized conference halls for events, and lighting shifts to meet plan changes—all without rewire.

Streamlined

Maximize efficiency. Minimize disruptions.

Wireless technology and cloud-powered workflows simplify specification, accelerate construction, and lay the groundwork for future system updates and expansion.

Applications

Athena is designed to take on the most demanding projects on the globe, from architectural offices and hotels to universities and hospitals. Cloud connection takes Athena's powerful system to greater heights, providing radically simplified building management in a single platform.
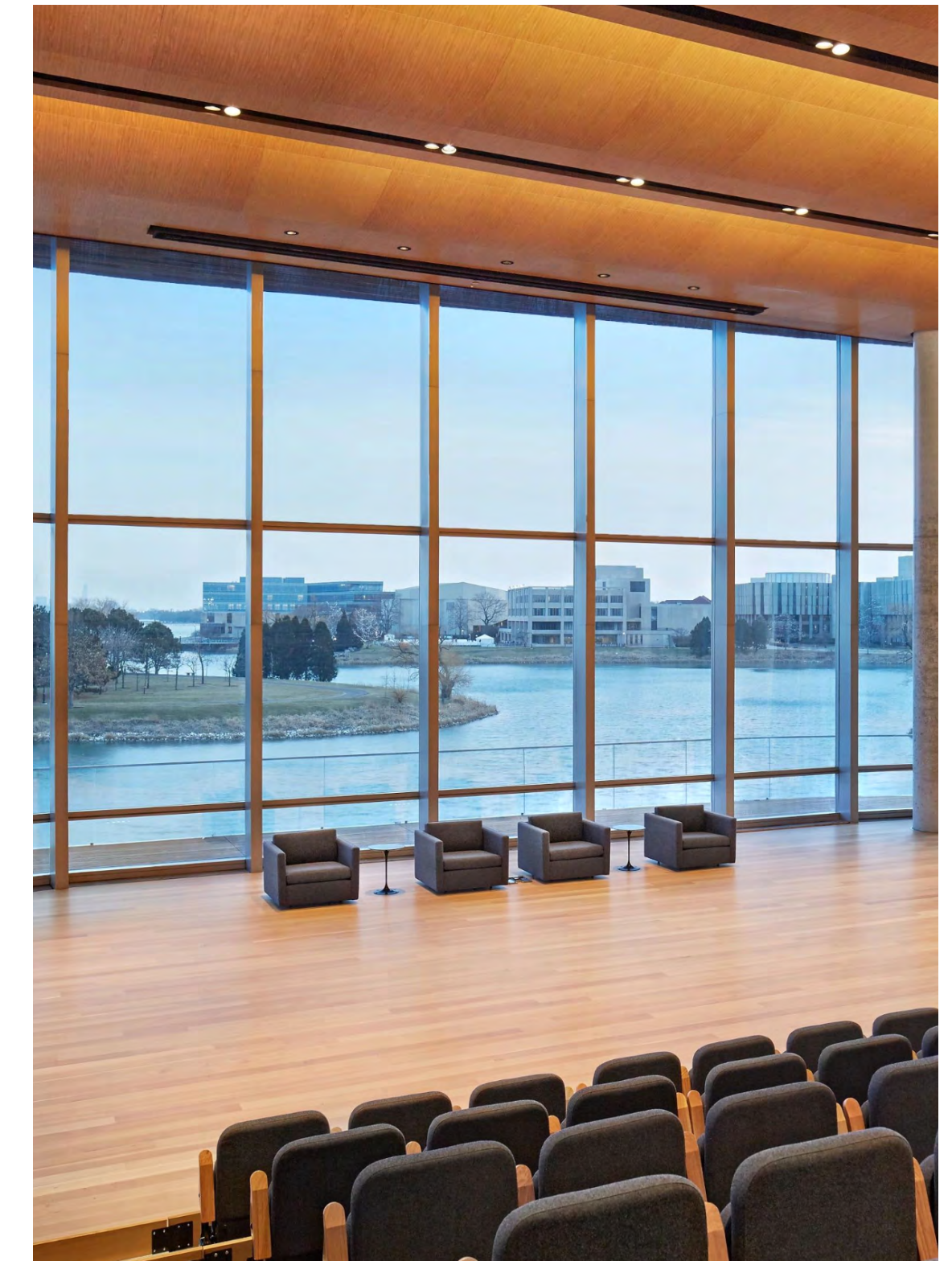
Offices

Give everyone a window seat. Set shades to perfectly balance natural and artificial light throughout your office. Promote well-being with light that shifts in color and intensity throughout the day.

Hospitality

Design restaurants, fitness centers, and social spaces that inspire engagement and support well-being with the Athena Lighting System.

Healthcare

Patients are under stress, so their rooms need to feel safe. With Lutron's intuitively controlled presets, you can easily transform light from soothing dim to brilliant—bright enough for medical tests.

Higher Education

Dial in the perfect light for any lecture hall, classroom with wireless controls that are simple, scalable, integrate seamlessly with lighting retrofits—meeting code every step of the way.

Technology Overview

Athena's built-from-the-ground-up modular data system creates the building blocks for scalability. A cloud-connected back end provides continuous software updates, so Athena gains breakthrough features and functionality over time, while rigorous encryption protocols ensure the system is always bank-grade secure.

Software

Streamlined building management—at scale
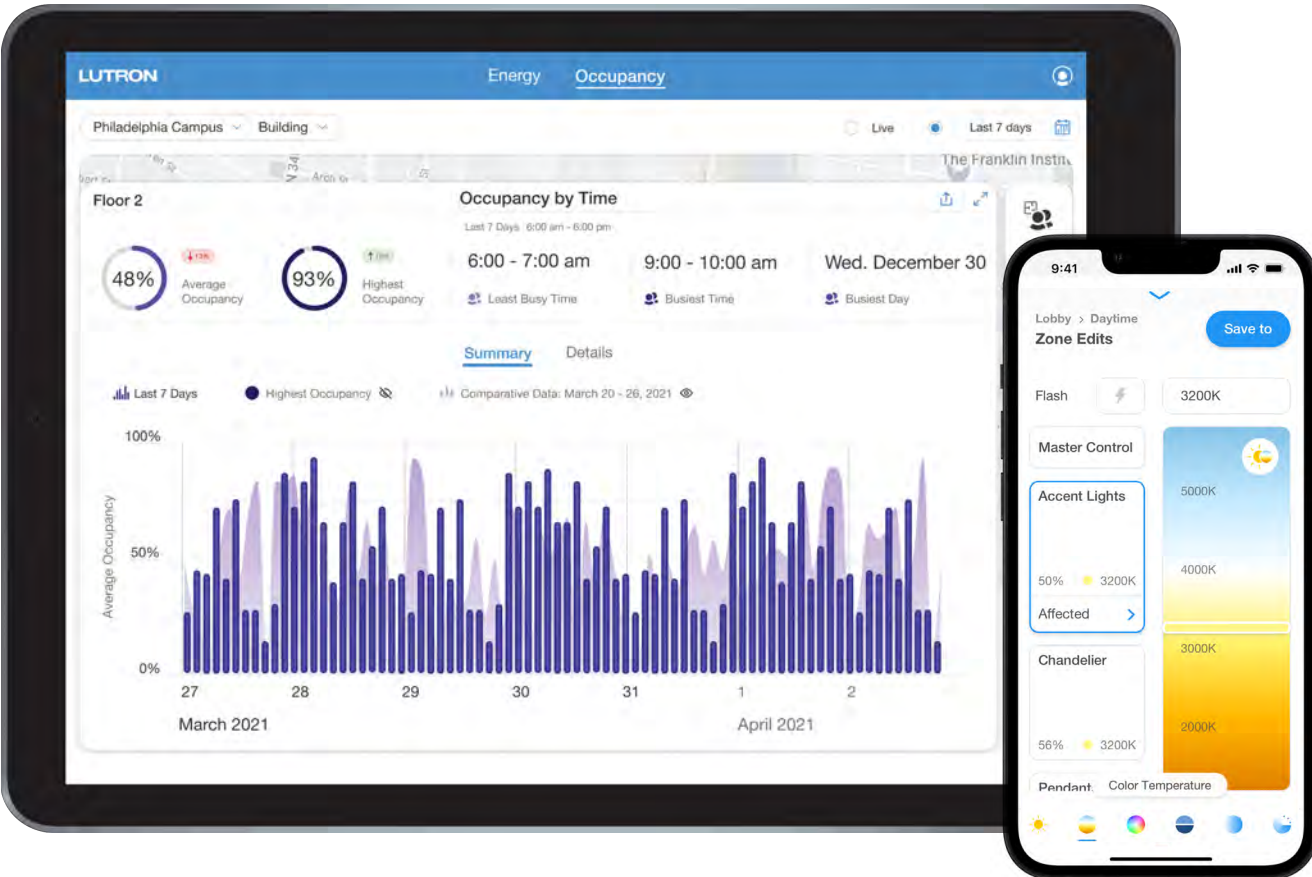
A suite of apps and interfaces deliver palm-of-your-hand control and data-driven insights at a glance.

Integrations

Smart connectivity for all-in-one system control

Responsive, reliable, and secure third-party integrations, including BACnet/IP and Lutron's secure API.

Security

Built for mission-critical environments

All updates are encrypted and authenticated by Lutron using bank-grade protocols, with industry-leading third-party verification.

Lutron Dashboard

Turn cloud-collected data into actionable insights to manage your entire property at scale. Track energy consumption, identify space utilization patterns, and swiftly address system issues to keep your property running smoothly.
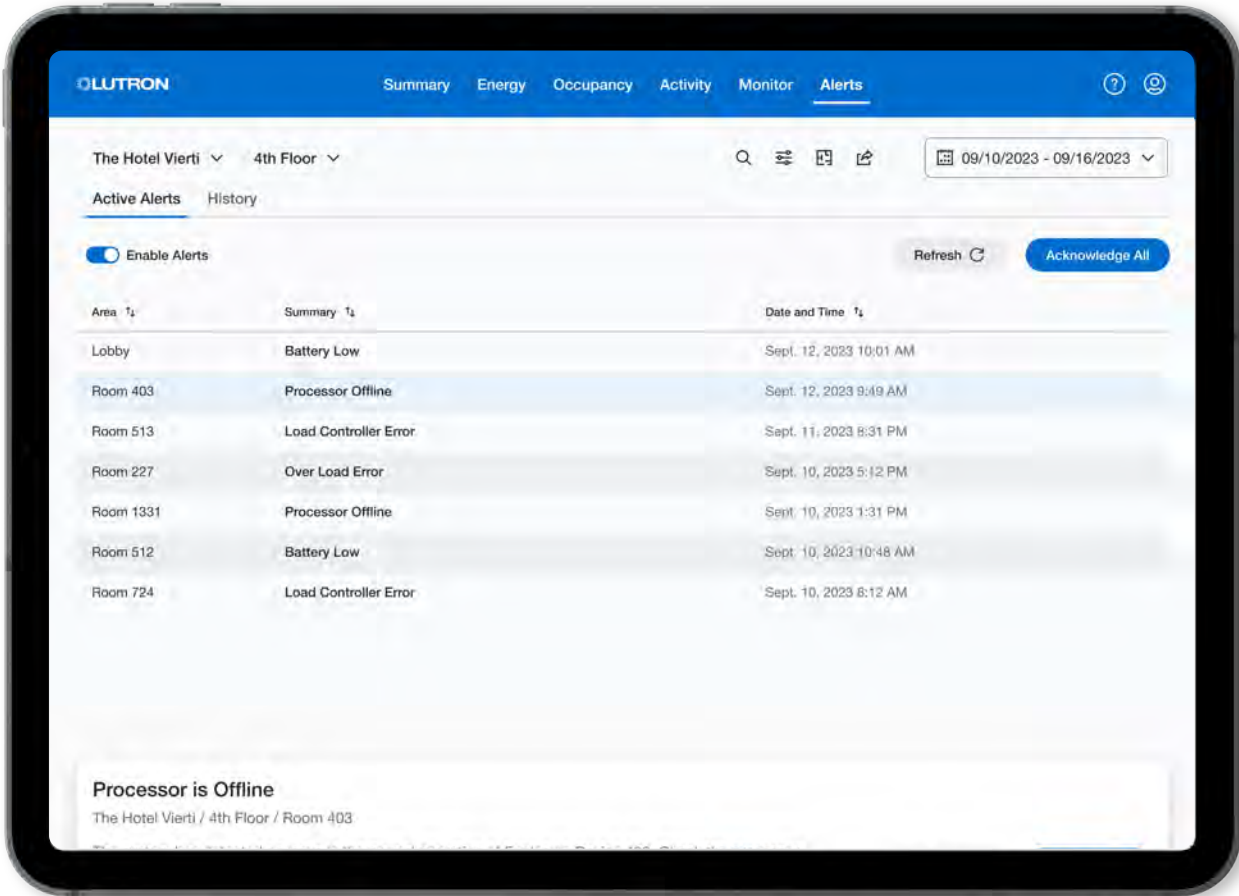
Save Energy
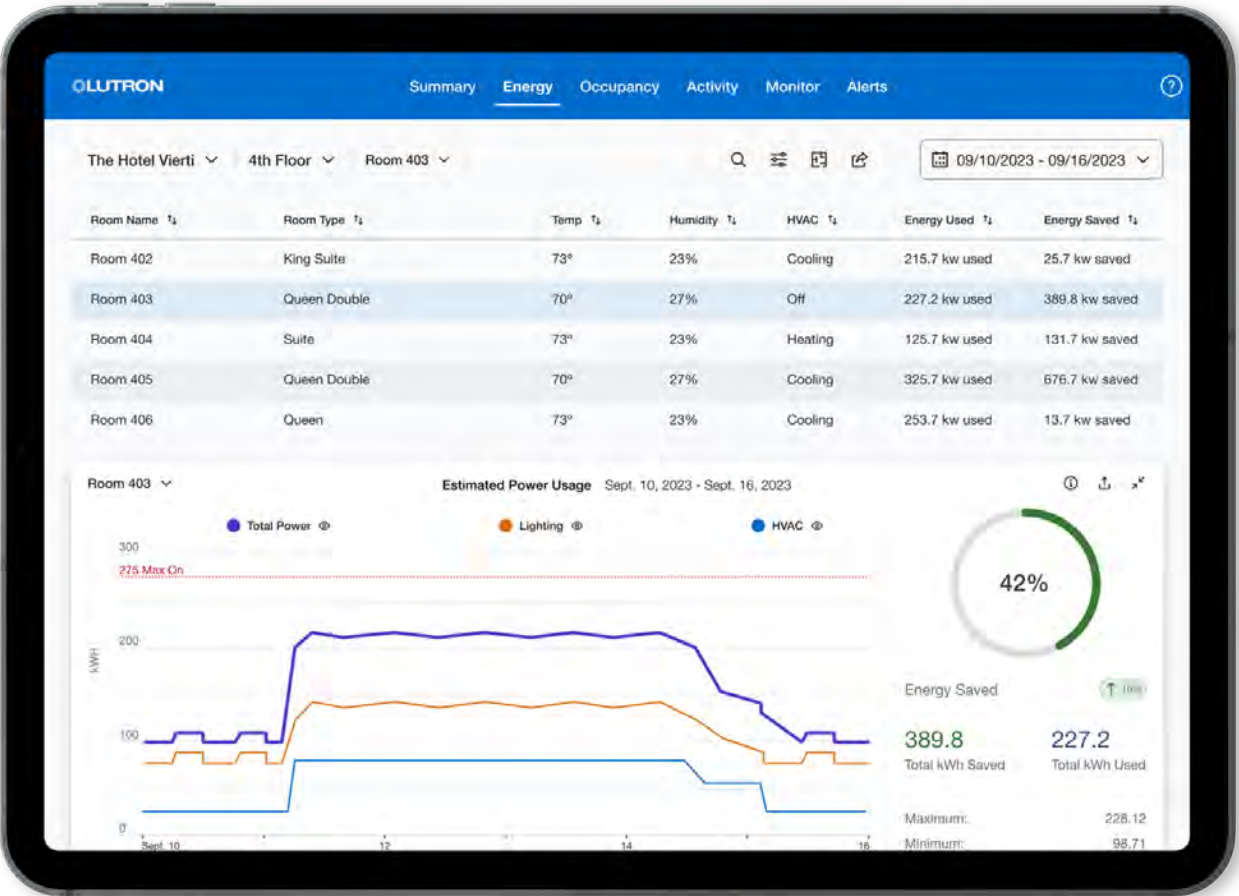
Access actionable data by building, floor, and room to enhance energy efficiency.

Optimize Space Use
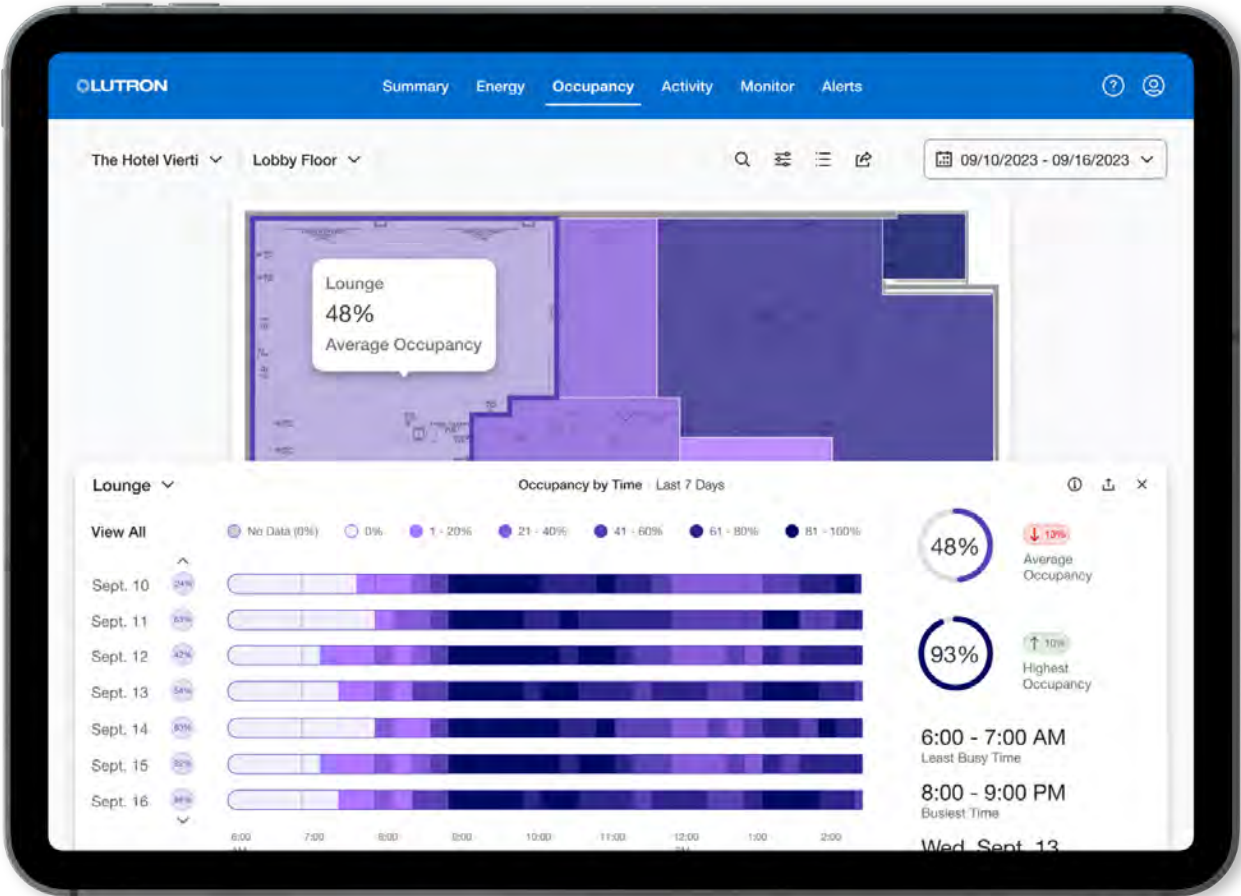
Compare room-performance trends to make strategic real-estate and space-use decisions.

Track Alerts

Maximize uptime – system alerts and notifications help you to anticipate and quickly troubleshoot issues.

Lutron App

Create sophisticated lighting experiences with powerful palm-of-your-hand control. Program lighting in real time, from a desk or on the go.

Customize Programming
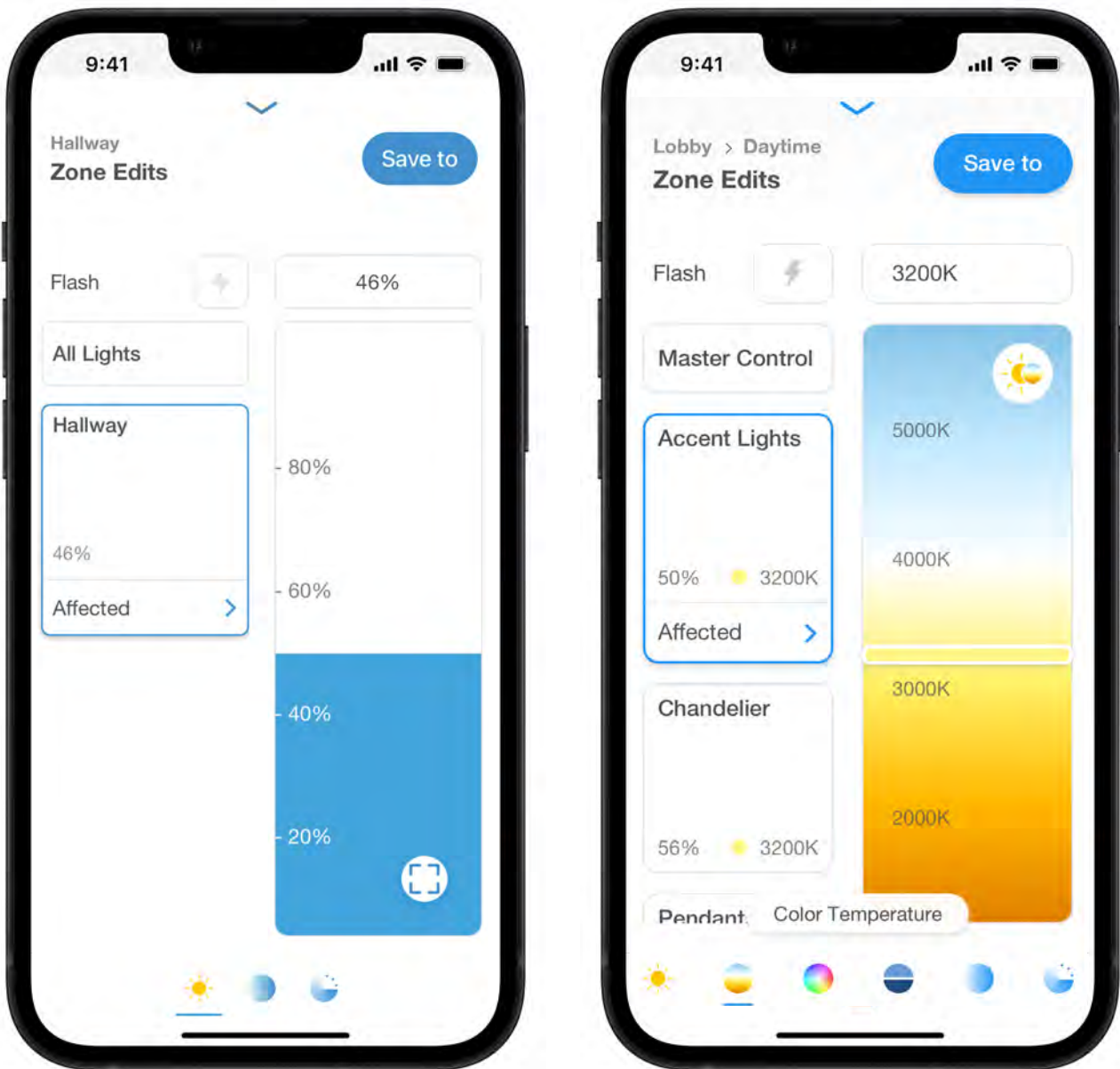
Customize lighting levels, color temperature, and saturated color for extraordinary, personalized events.

Create Schedules
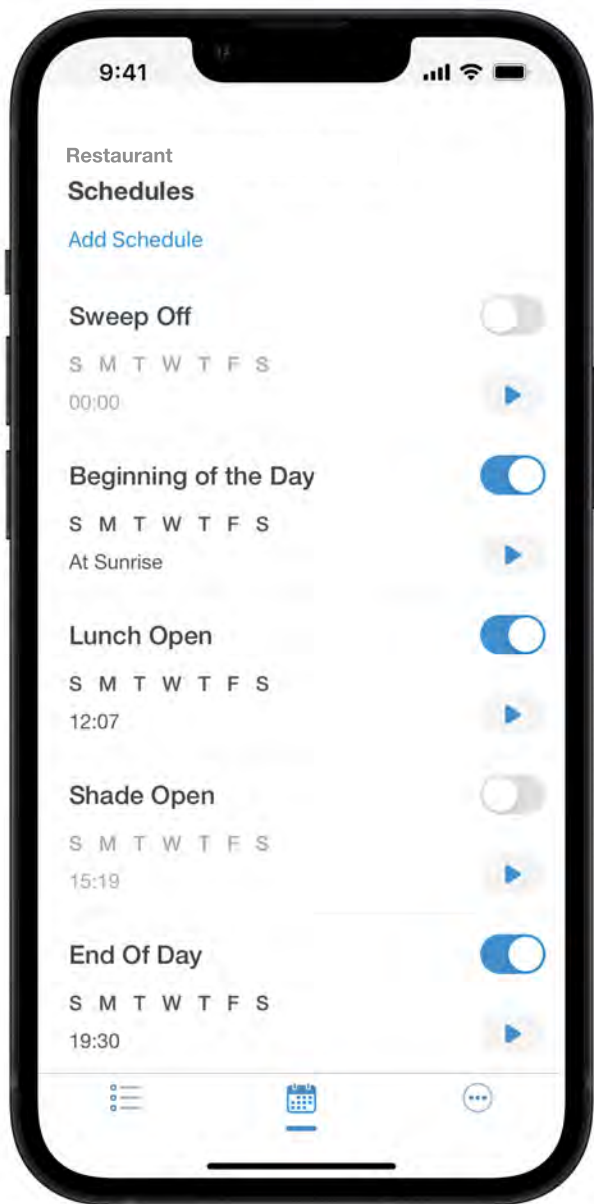
App-based control ensures property managers can focus on lighting scenes and schedules.

Simplify Setup
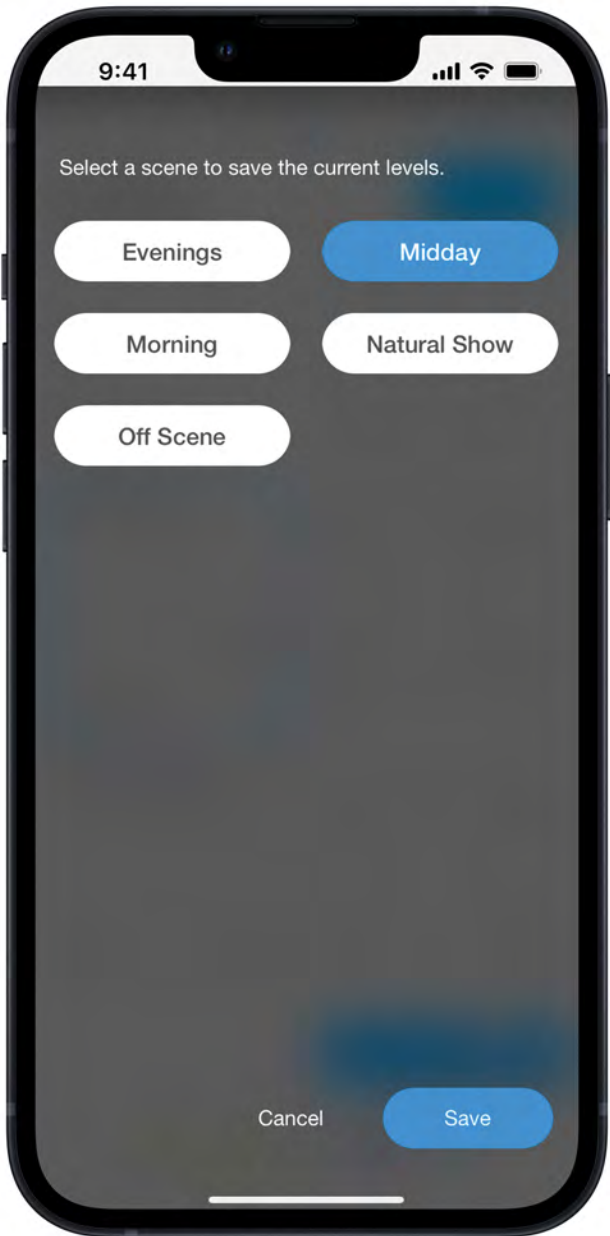
Programming is intuitive and limited only by your imagination. Easily fine-tune, edit, and save lighting scenes.

System Integrations

A/V, climate control, and property management systems integrate seamlessly with the Athena system. BACnet/IP brings broad compatibility, while Lutron's secure API keeps your system safe.

Audio / Visual

Extron   **CRESTRON**   **Q-SYS**   **URC**

Building Integration (via API)

Johnson Controls   **NOMAD GROUP**   **rti**

Building Integration (via BACnet)

Schneider Electric   **TRANE**   **SIEMENS**

TRIDIUM   **Johnson Controls**   **Automated Logic**

Architected for Natural Light

Foster well-being throughout the interior, emphasize connection to the outdoors, and improve building efficiency with dynamic, day-synchronized light and shade control. The Athena system works with Lutron automated shades and Athena wireless nodes to make gradual, real-time changes to light color, intensity, and shade position in order to emulate the cycles of the sun.

Tunable White Automation

Use the Athena wireless node to synchronize the color temperature and intensity of electric light with the cycles of daylight.
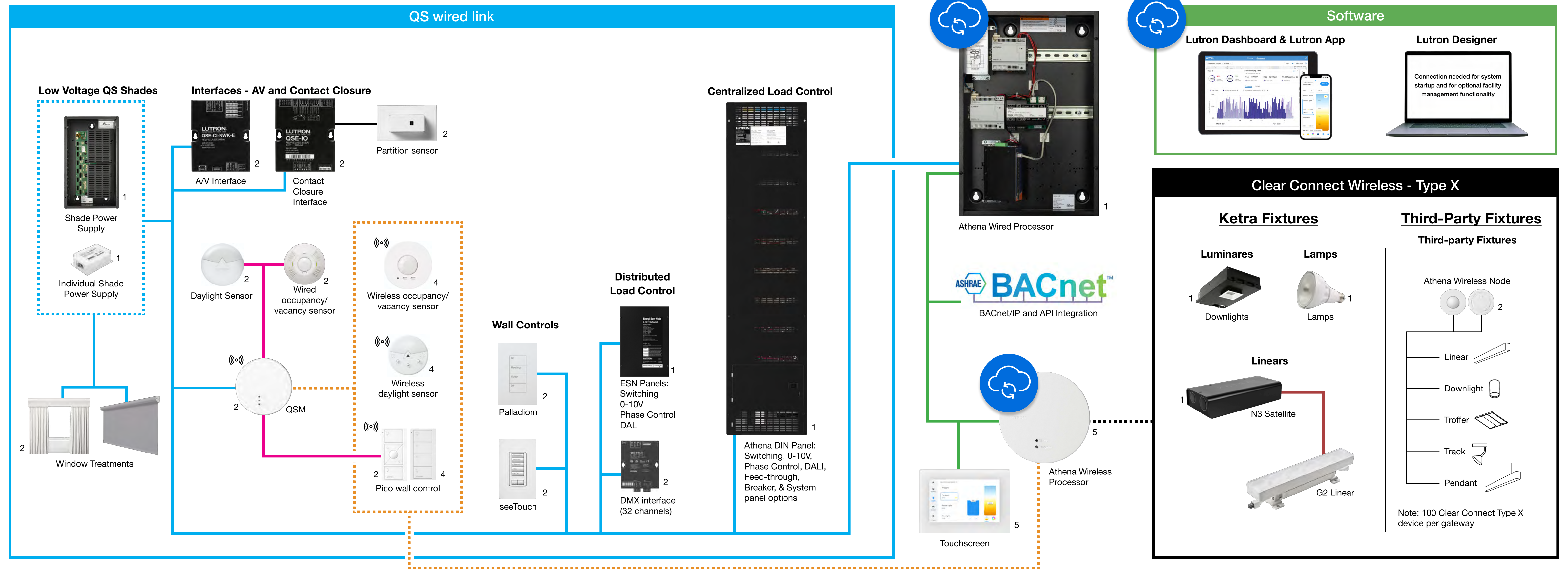
Solar Shade Automation

Automated shades fine-tune daylight by moving in response to the position of the sun, preserving views of the outdoors while mitigating glare and reducing thermal gain.

Compatible Products

The Athena wireless processor works in concert with Athena wireless nodes, Ketra luminaires, and Lutron's automated shades to form one seamless experience.

Athena Architecture Diagram

QS wired link

Software

Low Voltage QS Shades

Interfaces - AV and Contact Closure

Centralized Load Control

Lutron Dashboard & Lutron App

Lutron Designer

Connection needed for system startup and for optional facility management functionality

LUTRON QSE-CI-NWK-E

LUTRON QSE-IO

Partition sensor 2

A/V Interface 2

Contact Closure Interface 2

Shade Power Supply 1

Individual Shade Power Supply 1

Athena Wired Processor 1

Clear Connect Wireless - Type X

Ketra Fixtures

Third-Party Fixtures

Third-party Fixtures

Luminares

Lamps

Athena Wireless Node

Downlights 1

Lamps 1

2

Daylight Sensor 2

Wired occupancy/ vacancy sensor 2

Wireless occupancy/ vacancy sensor 4

Wireless daylight sensor 4

Linears

Distributed Load Control

Linear

Downlight

ASHRAE BACnet™

BACnet/IP and API Integration

2 QSM

Wall Controls

N3 Satellite 1

G2 Linear

Troffer

Track

Pendant

Palladiom 2

ESN Panels: Switching 0-10V Phase Control DALI 1

Pico wall control 2 4

seeTouch 2

DMX interface (32 channels) 2

Athena DIN Panel: Switching, 0-10V, Phase Control, DALI, Feed-through, Breaker, & System panel options 1

Athena Wireless Processor 5

Touchscreen 5

Window Treatments 2

Note: 100 Clear Connect Type X device per gateway

Athena system capacities

- 16 Athena processors (max per system)
- 1600 Athena processors (max per building)

QS wired link
4-wire RS-485 link, 24-35V

Wired Sensor link
3-wire link, 20V

Clear Connect Wireless

Ethernet link

QS Wired 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 conductor cable
- See Lutron document 369596 for specifications

Internet Connected Device
Internet connection allows for cloud-connectivity via the Lutron Dashboard and App from anywhere in the world, as well as security patches, bug fixes, feature updates, and faster flexible support.

Power

1. Line voltage VAC
2. Low voltage VDC
3. Plug-in transformer
4. Battery powered
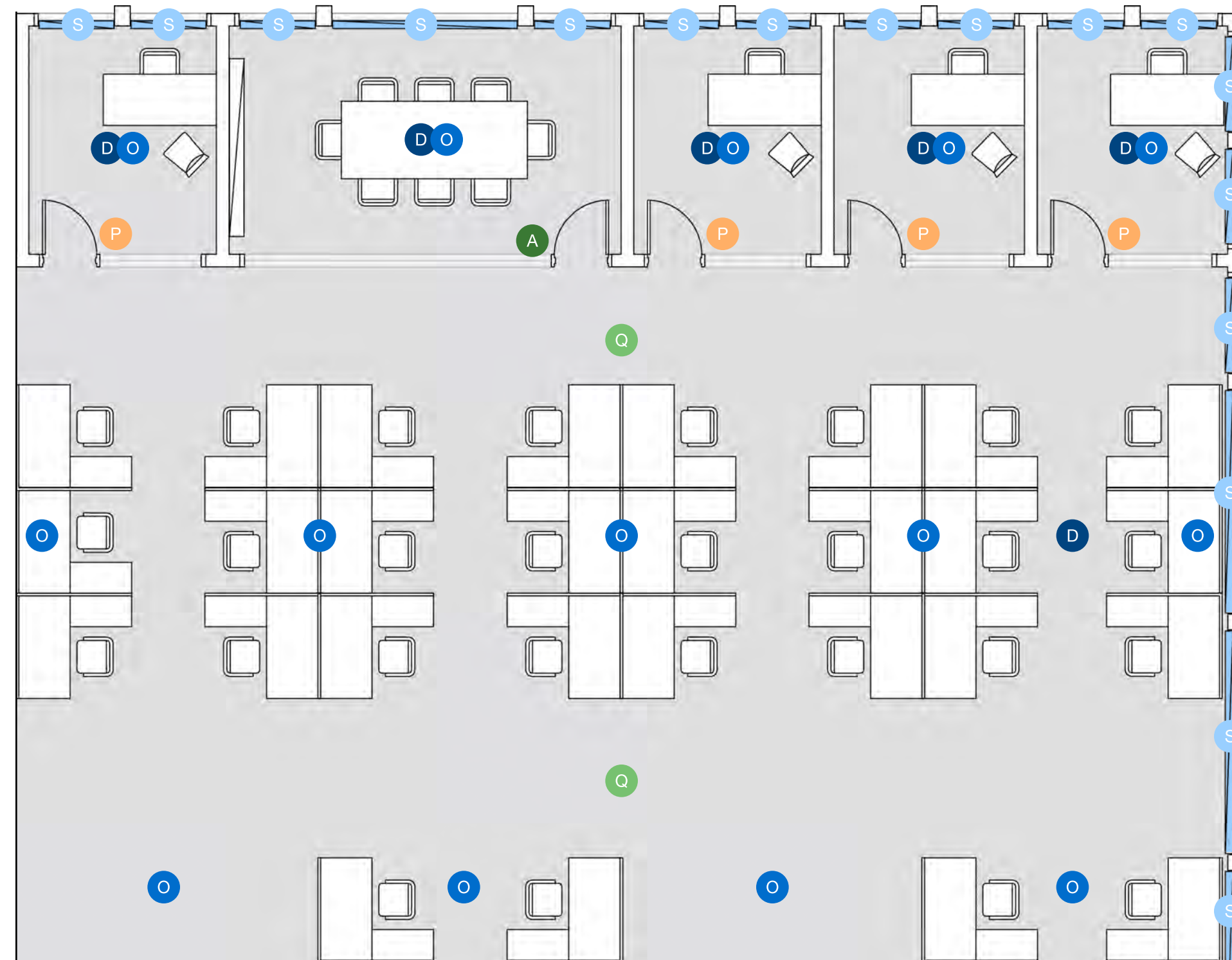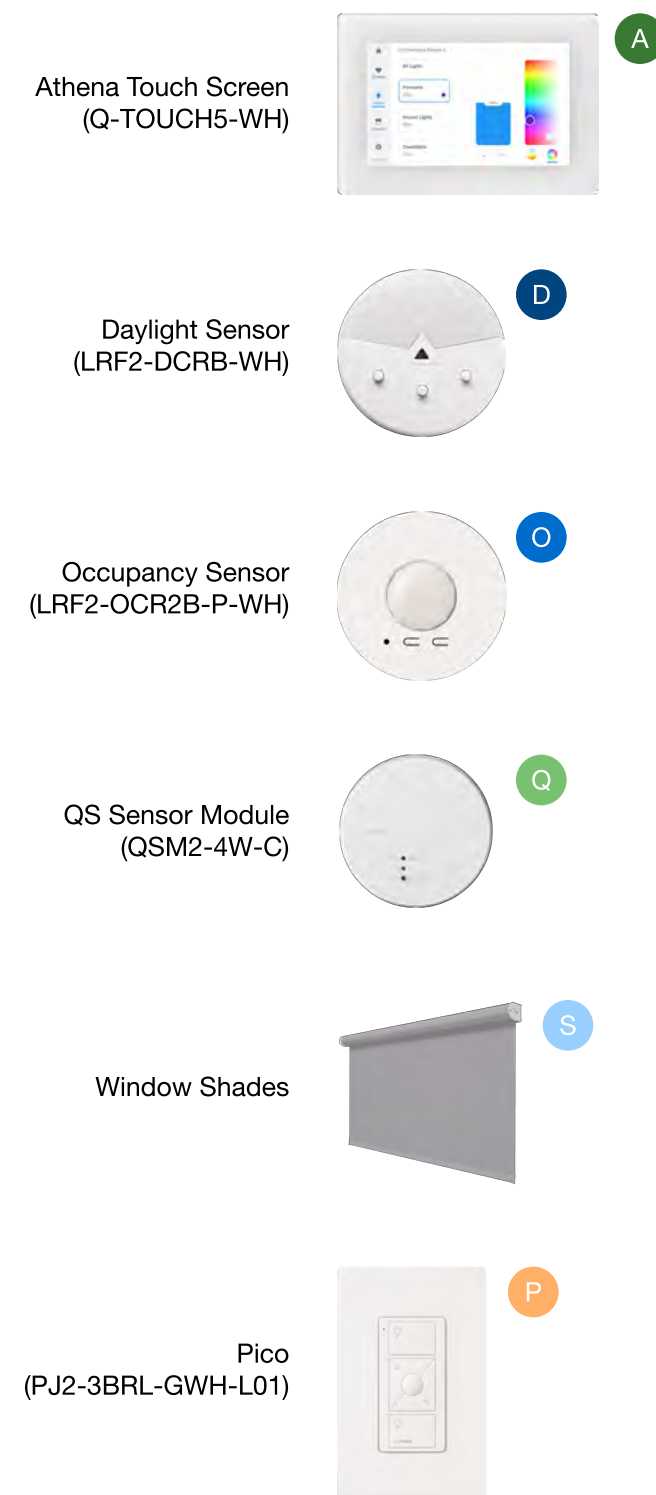5. Power over Ethernet (PoE)

Note: Not all available products shown

Athena Open Office Configuration – Centralized Load Control
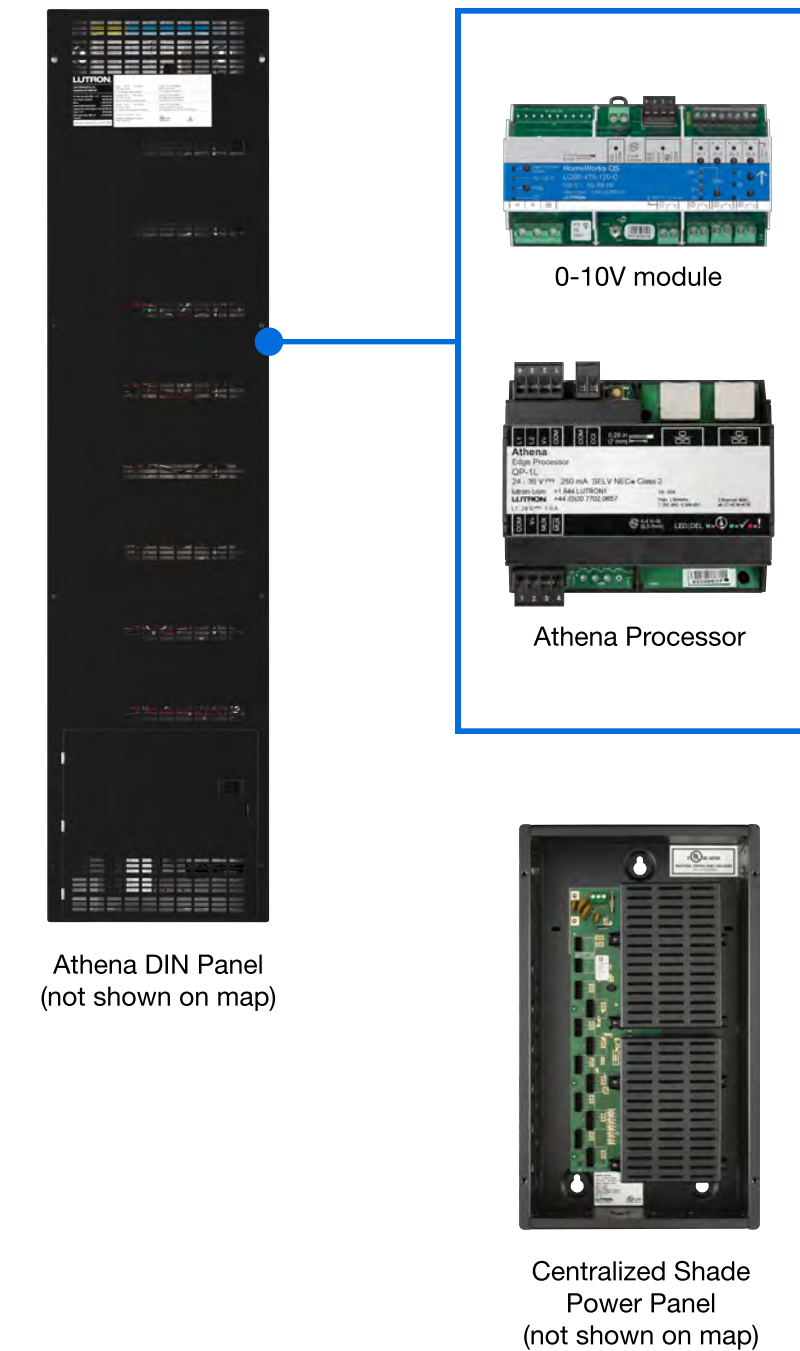
Package Includes

- Central control, management and monitoring of Athena devices
- Supports astronomic and time-of-day events
- Integration available to conference room A/V and Building Management System
- Seamless integration to Lutron motorized window treatments
- Connection to the Lutron Dashboard and Lutron App

- System project management and programming by Lutron

Shades Details:

- Lutron roller shades connected to lighting system with no interfaces
- Athena shade automation dynamically adjusts shade position based on real-time sun position to maximize useful daylight and mitigate glare without sensors

Sequence of Operations (SOO):

	Occupant Enters	When Occupied	Occupant Exits	System Events
Lights	All lights automatically turn on to maximum light level. Maximum light level is set to 80%.	Automatic: Overhead lights dim/brighten based on daylight availability. There are two perimeter daylight zones. Manual: Occupant uses wall dimmers to set desired light levels for all lights.	All lights automatically turn off 15 minutes after all occupants exit the controlled zone.	Demand Response: All lights automatically dim 20% during demand events.
Shades	N/A	Manual: User has control over shade position based on local wall control	N/A	Shades dynamically adjust based on real-time sun position to maximize useful daylight and mitigate glare

Athena Touch Screen
(Q-TOUCH5-WH) — A

Daylight Sensor
(LRF2-DCRB-WH) — D

Occupancy Sensor
(LRF2-OCR2B-P-WH) — O

QS Sensor Module
(QSM2-4W-C) — Q

Window Shades — S

Pico
(PJ2-3BRL-GWH-L01) — P

Inside Panel

0-10V module

Athena Processor

Athena DIN Panel
(not shown on map)

Centralized Shade
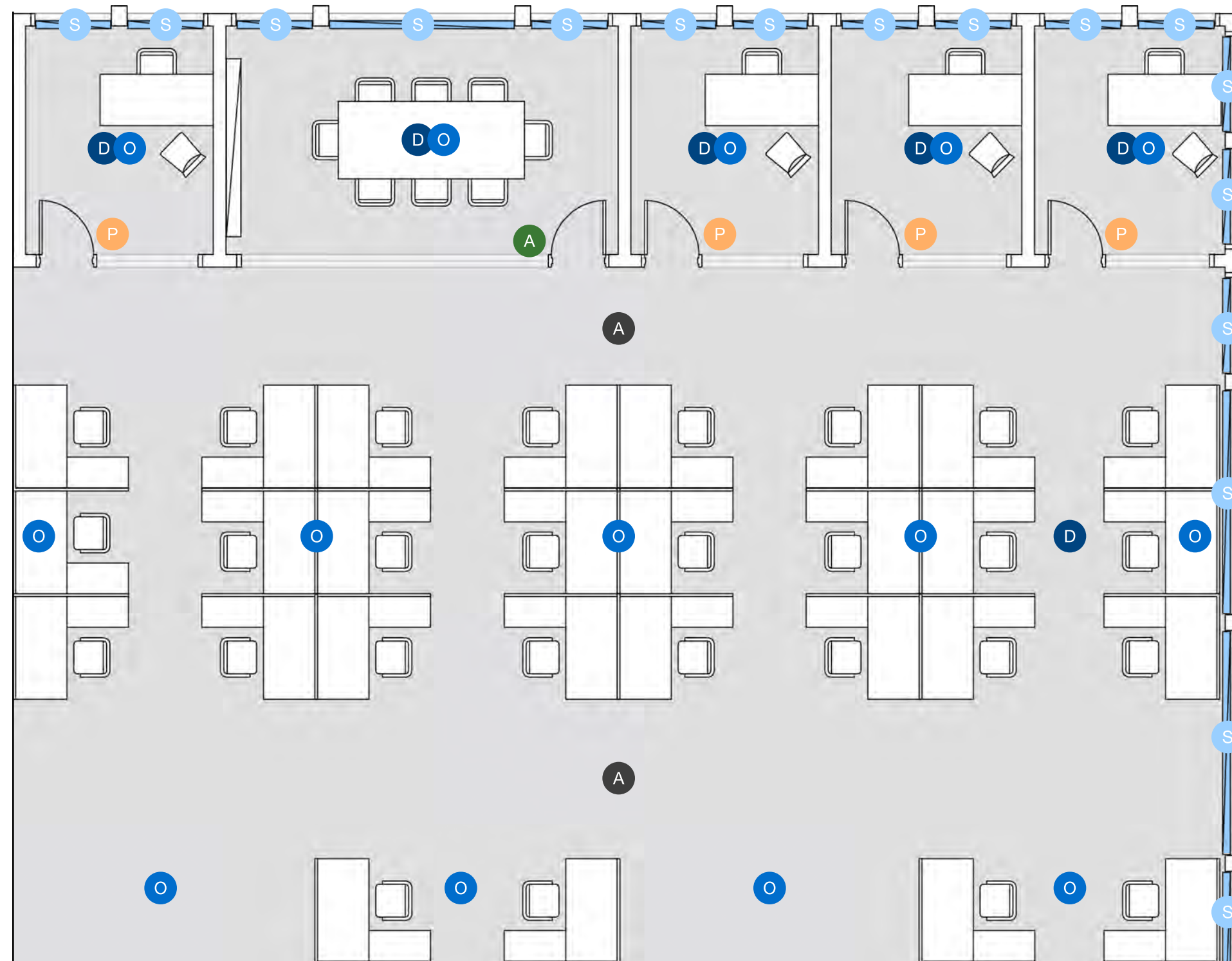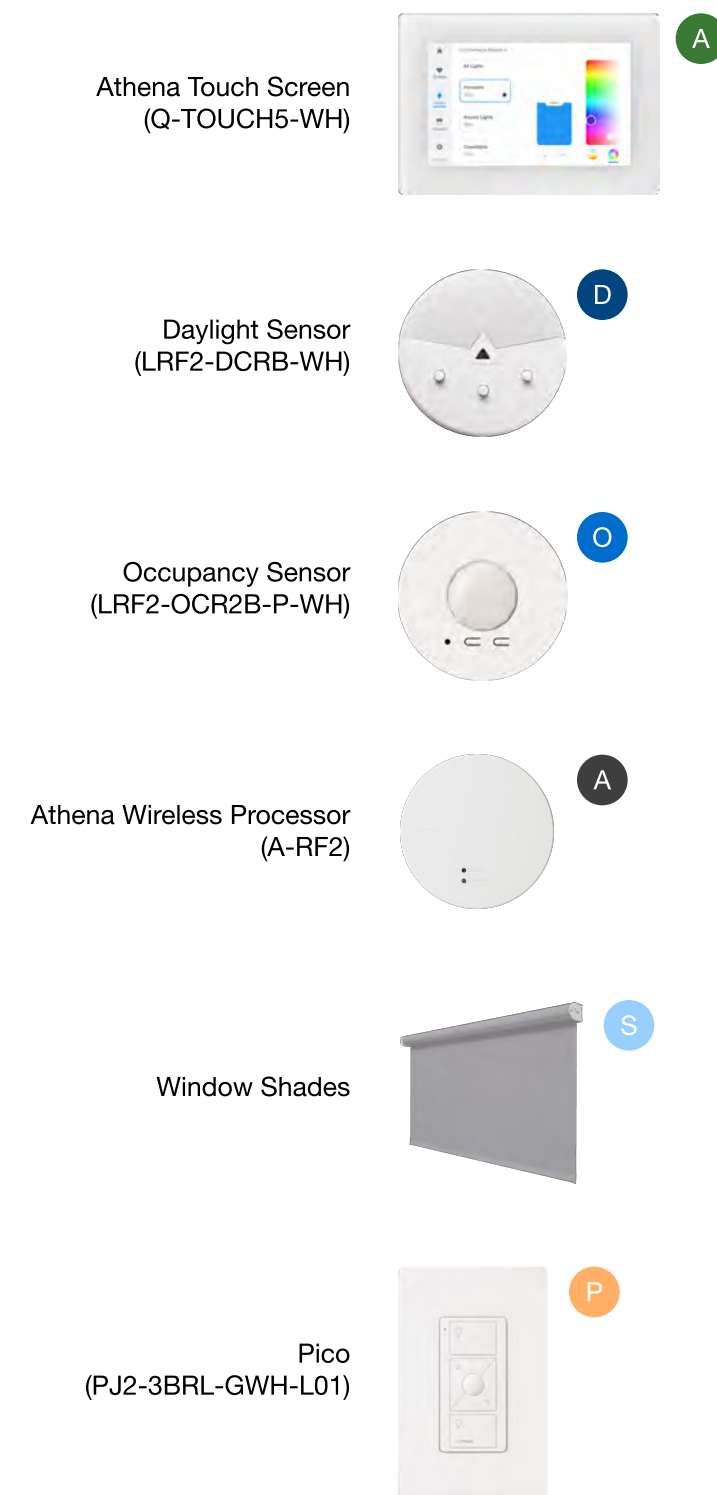Power Panel
(not shown on map)

Athena Open Office Configuration – Wireless Load Control

Package Includes

- Central control, management and monitoring of Athena devices
- Supports astronomic and time-of-day events
- Integration available to conference room A/V and Building Management System
- Seamless integration to Lutron motorized window treatments
- Connection to the Lutron Dashboard and Lutron App

- System project management and programming by Lutron

Shades Details:

- Lutron roller shades connected to lighting system with no interfaces
- Athena shade automation dynamically adjusts shade position based on real-time sun position to maximize useful daylight and mitigate glare without sensors

Sequence of Operations (SOO):

	Occupant Enters	When Occupied	Occupant Exits	System Events
Lights	All lights turn on to maximum light level at the CCT specified by the tunable white show automatically. Maximum light level is set to 80%.	Automatic: Overhead lights dim/brighten based on daylight availability. Color temperature can be overridden by occupant based on manual wall control. There are two perimeter daylight zones. Manual: Occupant uses local wall control to set desired light levels for all lights.	All lights automatically turn off 15 minutes after all occupants exit the controlled zone.	Tunable white automation: Color temperature automatically set throughout the day based on project location, independent of light level. Automation gives the user the ability to override and subsequently sync back to preset color temperature seamlessly. Demand Response: All lights automatically dim 20% during demand events.
Shades	N/A	Manual: User has control over shade position based on local wall control	N/A	Shades dynamically adjust based on real-time sun position to maximize useful daylight and mitigate glare

Athena Touch Screen
(Q-TOUCH5-WH) — A

Daylight Sensor
(LRF2-DCRB-WH) — D

Occupancy Sensor
(LRF2-OCR2B-P-WH) — O

Athena Wireless Processor
(A-RF2) — A

Window Shades — S

Pico
(PJ2-3BRL-GWH-L01) — P

Installed in each fixture for control

Athena Processor Panel*
(not shown on map)

Centralized Shade
Power Panel*
(not shown on map)

*Panels are required for Lutron Shades

The Service Difference

A lifetime of support—Lutron stays with you every step of the way. From design and installation to operation and upgrades, our project managers and factory-trained, regional technicians provide peace of mind and service for the full life-cycle of your Lutron solution.

Pre-Construction

Lutron's service experts provide technical support and project management during the design phase, ensuring the project is tuned to your needs and budget, providing documentation requirements, and coordinating with contractors.

During Build

Simplify and streamline the installation and startup process. Lutron's field service team provides technical, onsite support during construction to mitigate risk, minimize delays, and guide your team through startup.

Post-Occupancy

Once your system is set up, schedule a team training and regular maintenance visits. Our technicians offer upgrade planning throughout the system's life cycle, so Athena gains new capabilities over time.

Want more Information? Have a question?

Visit Athena page

Visit Athena Spec page

LUTRON