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 delivers 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.

Enjoy design freedom during specification, customize conference halls for events, and shift lighting 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 across 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.
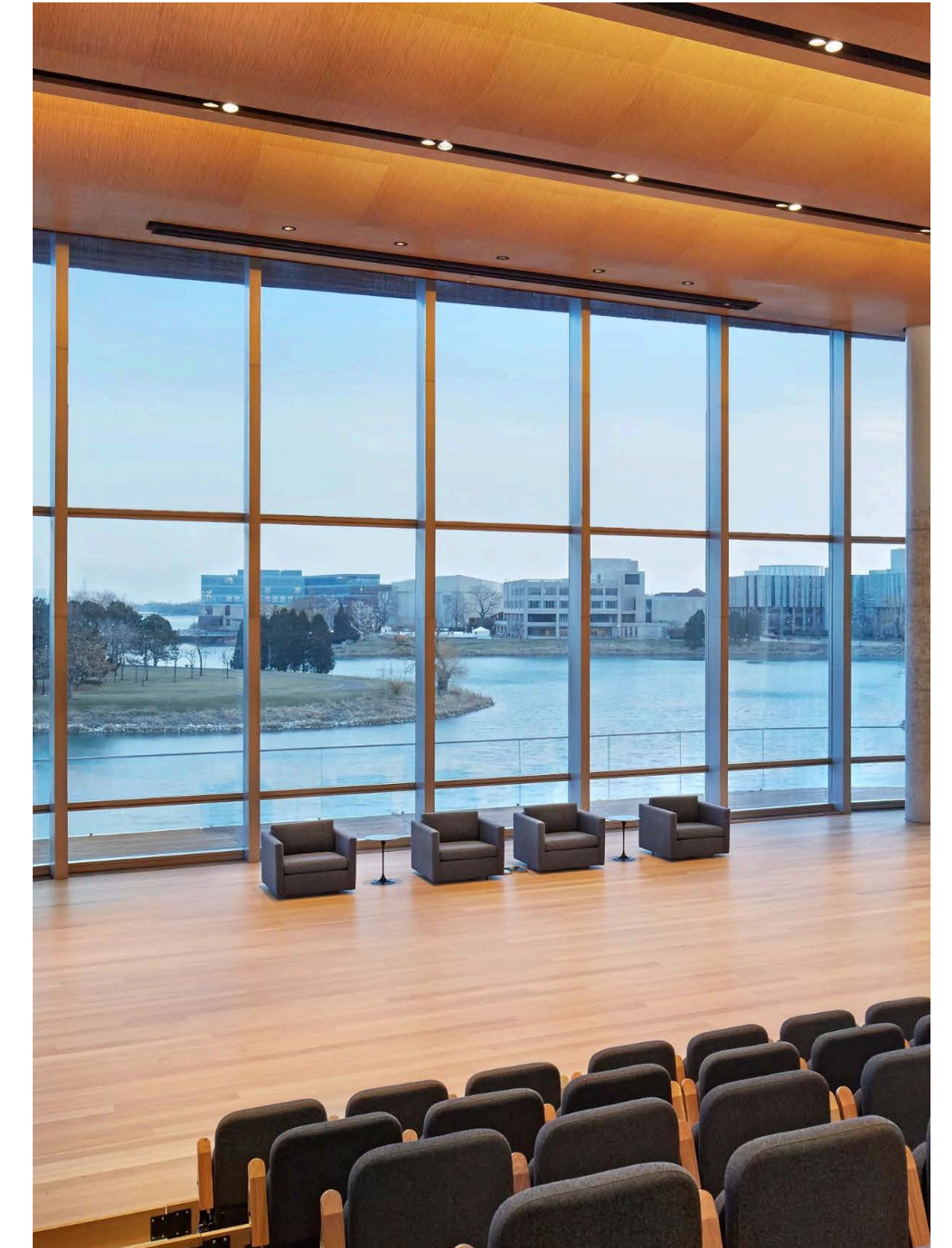
Offices

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 over the course of the day.

Hospitality

Design restaurants, fitness centers, and social spaces that inspire engagement and create comfort with the Athena lighting system.

Healthcare

Medical care can be stressful, so patient 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 attention.

Higher Education

Dial in the perfect light for any lecture hall or classroom with wireless controls that are simple, scalable, and 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
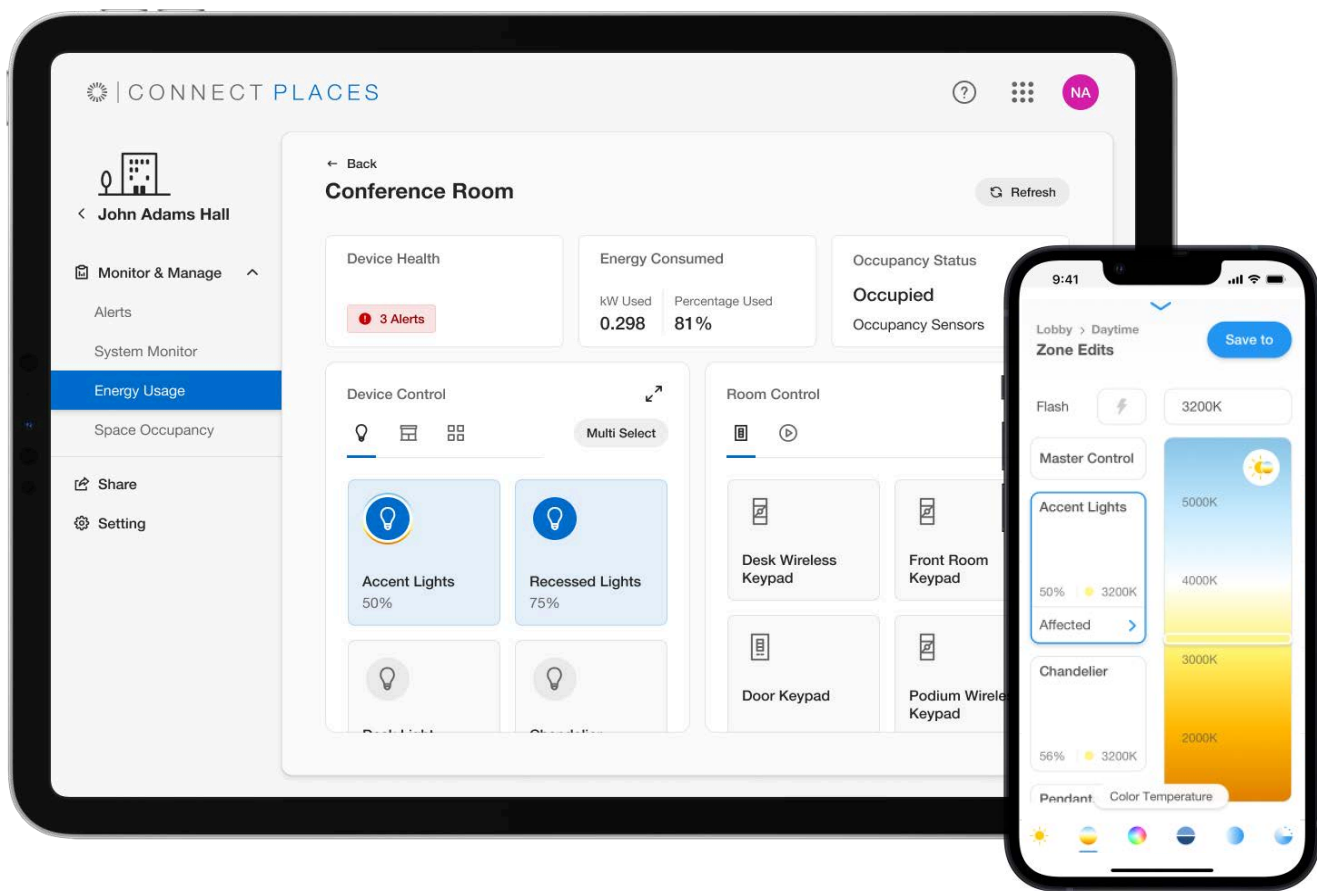
A suite of apps and interfaces delivers palm-of-your-hand control and data-driven insights at a glance.

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 with real-time control.

Control in Real-Time
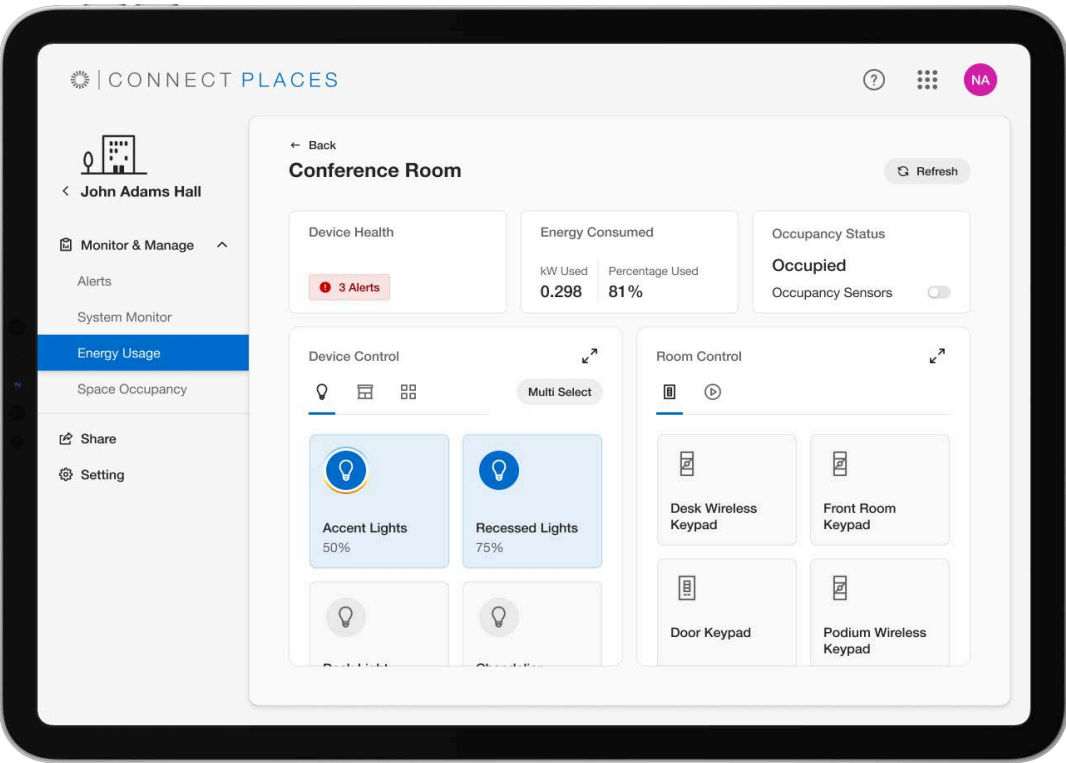
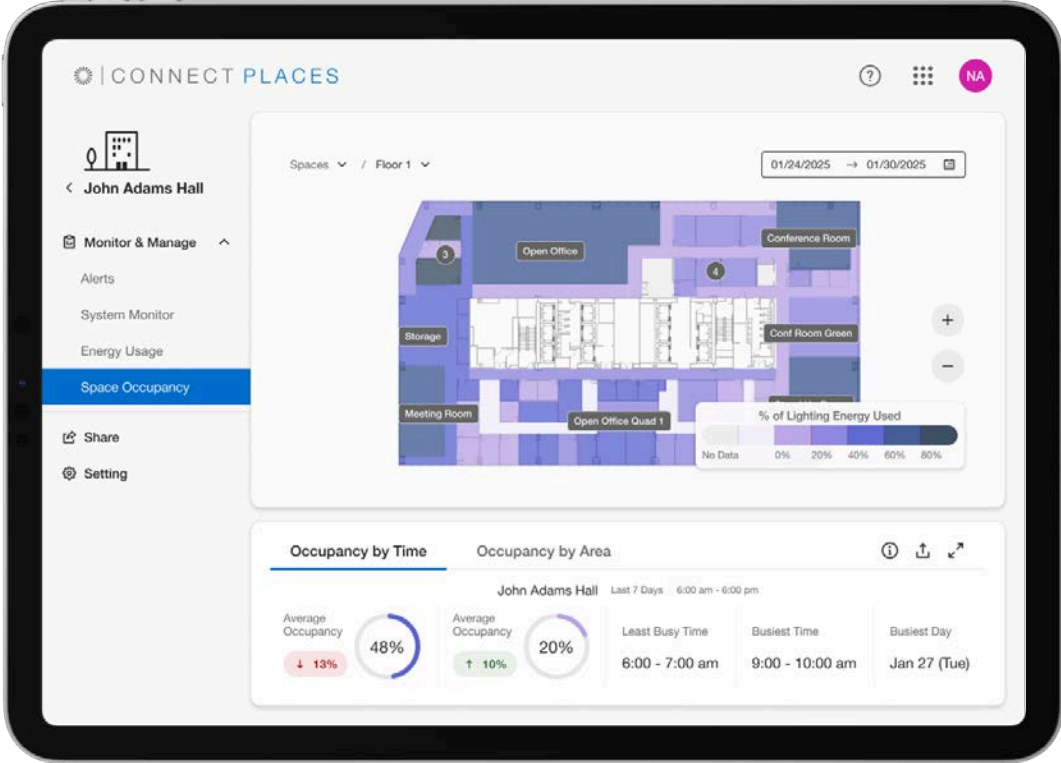Manage your system and make changes in the moment with the Lutron Dashboard.
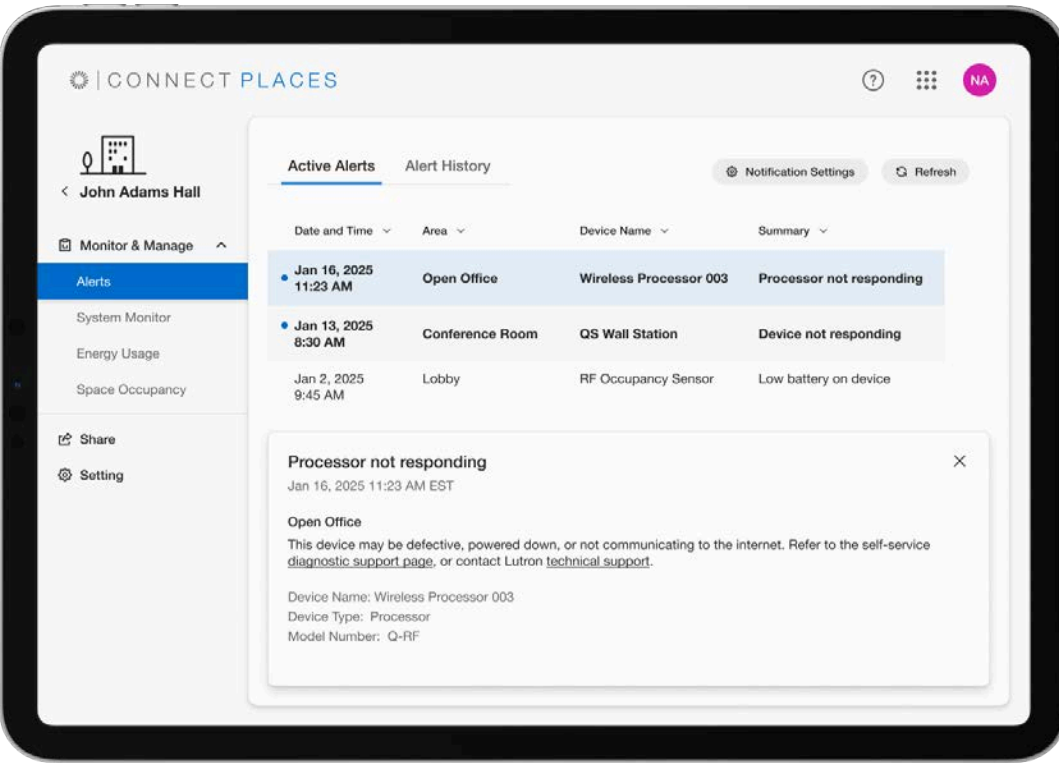
Save Energy
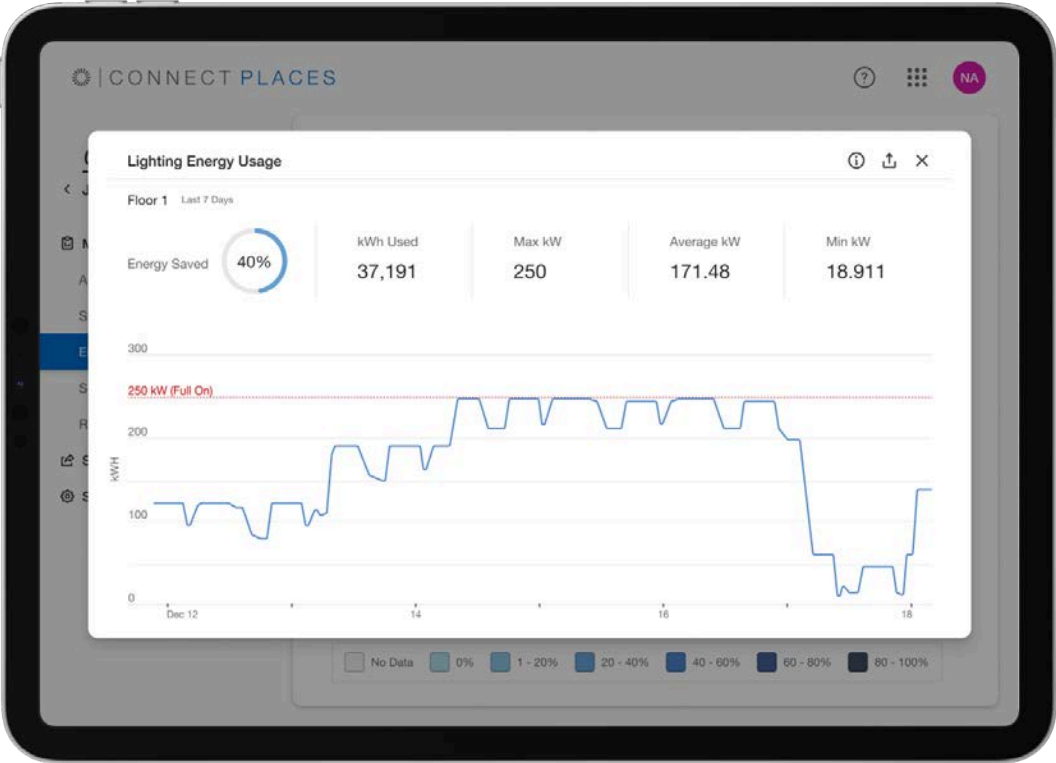
Access energy-use data by building, floor, and room to enhance energy efficiency.

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 anticipate and quickly troubleshoot issues..

Lutron App

Create sophisticated lighting experiences with powerful palm-of-your-hand control. Program lighting in real time, any time, from nearly anywhere.

Customize Programming
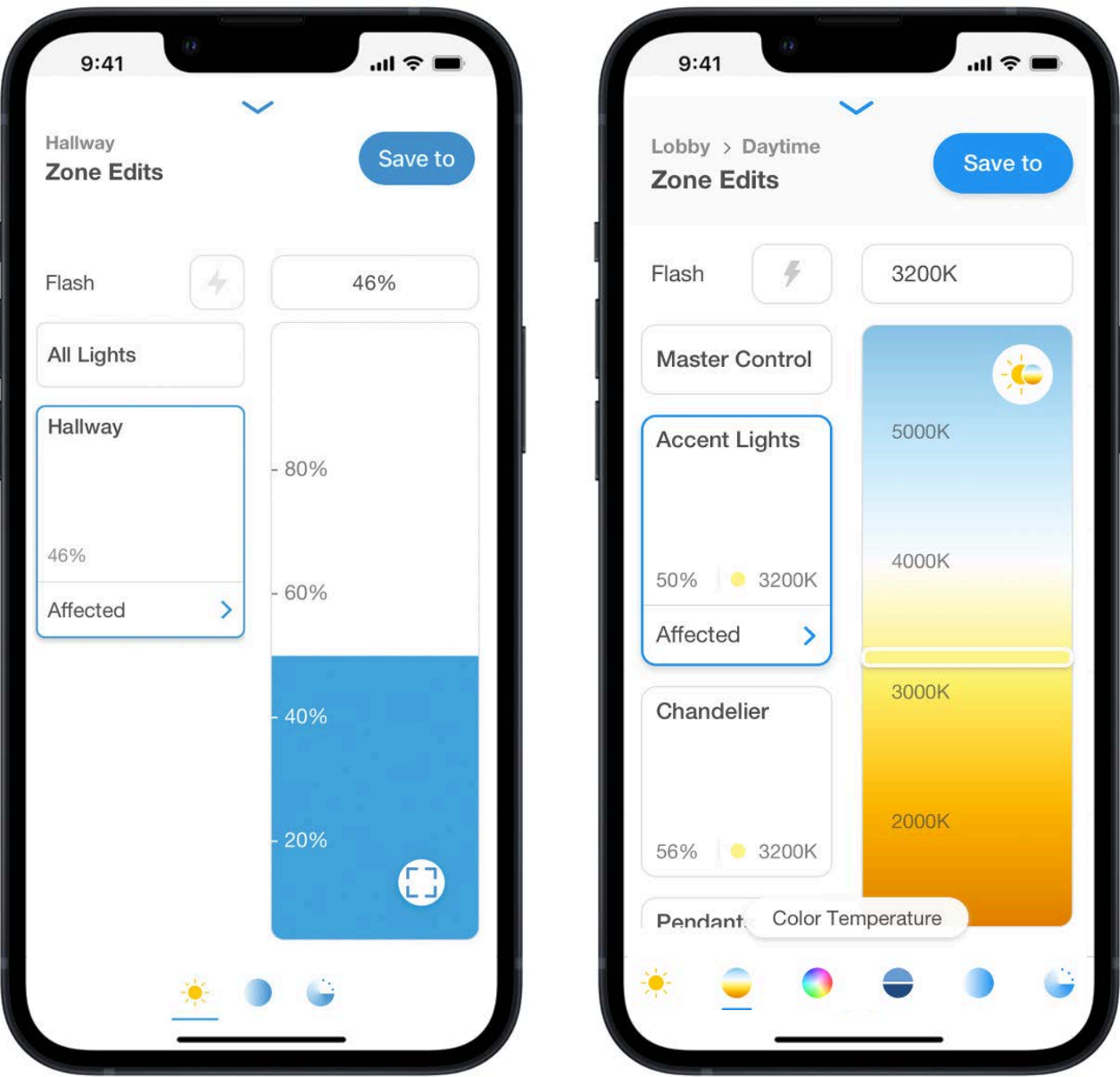
Adjust lighting levels, color temperature, and saturated color to create personalized scenes for events or regular use throughout the property.

Manage Lighting Operations
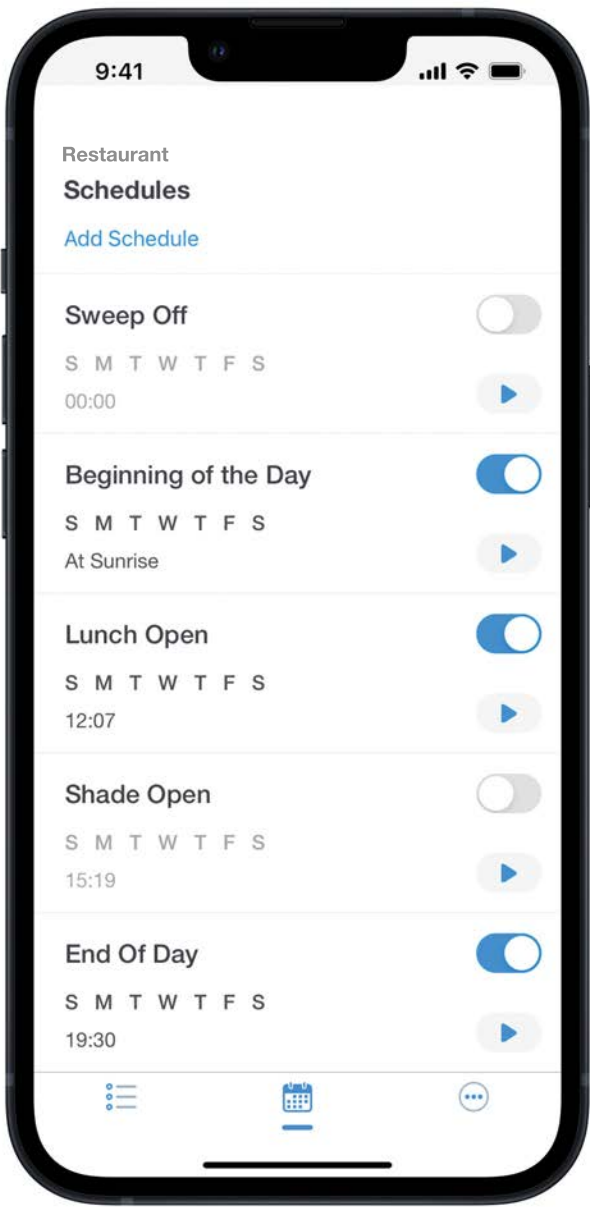
Scenes and schedules automate the right light for every moment. And the Lutron app puts control at your fingertips.

Simplify Setup

An intuitive interface fast-tracks setup. Easily fine-tune, edit, and save lighting scenes.

System Integrations

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

Audio/Visual

Extron   CRESTRON   Q-SYS

URC   RTI
It's Under Control®

API Integrations

Johnson Controls   NOMAD GROUP   synapse   pharos

BACnet Integrations

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 to emulate the cycles of the sun.

Natural Show

Use the Athena wireless node to synchronize the color temperature and intensity of electric light with the cycles of daylight.
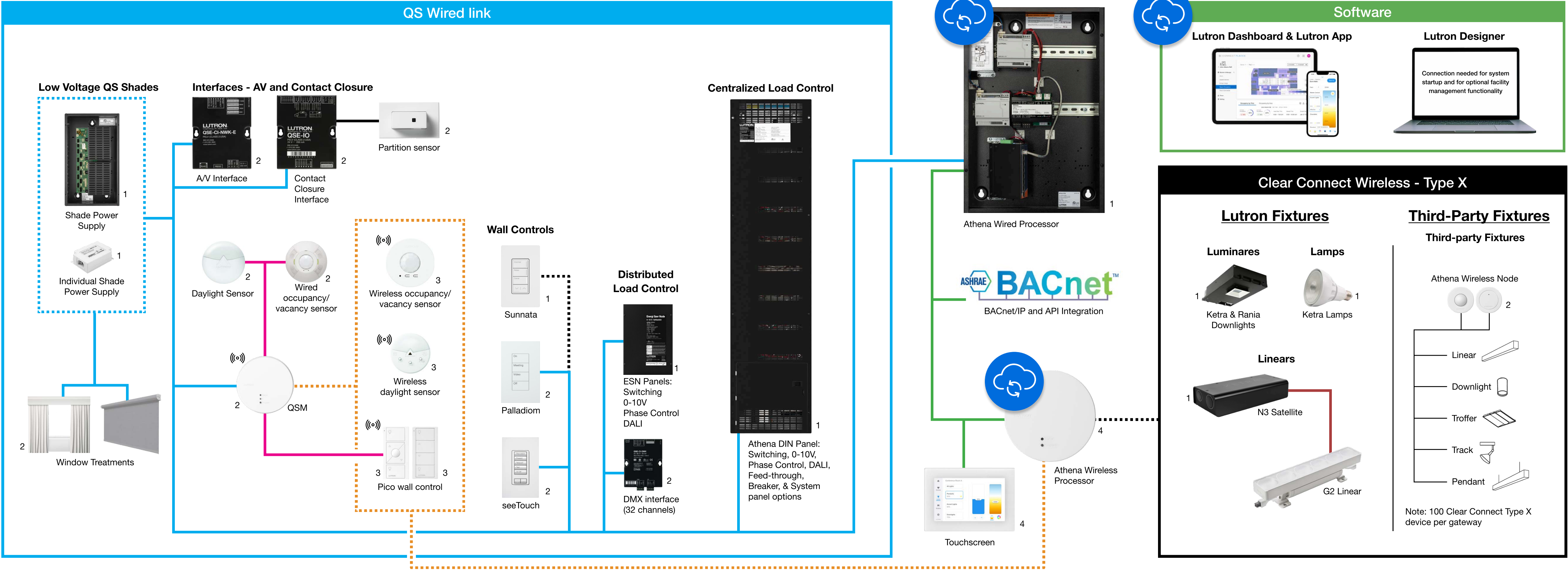
Natural Light Optimization

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 and Rania luminaires, and Lutron's automated shades to form one seamless experience.

Athena Architecture Diagram

QS Wired link

Low Voltage QS Shades

Shade Power Supply — 1

Individual Shade Power Supply — 1

Window Treatments — 2

Interfaces - AV and Contact Closure

LUTRON QSE-CI-NWK-E — A/V Interface — 2

LUTRON QSE-IO — Contact Closure Interface — 2

Partition sensor — 2

Daylight Sensor — 2

Wired occupancy/vacancy sensor — 2

Wireless occupancy/vacancy sensor — 3

Wireless daylight sensor — 3

QSM — 2

Pico wall control — 3, 3

Wall Controls

Sunnata — 1

Palladiom — 2

seeTouch — 2

Distributed Load Control

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

DMX interface (32 channels) — 2

Centralized Load Control

LUTRON — 1

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

Athena Wired Processor — 1

ASHRAE BACnet™ — BACnet/IP and API Integration

Athena Wireless Processor — 4

Touchscreen — 4

Software

Lutron Dashboard & Lutron App

Lutron Designer
Connection needed for system startup and for optional facility management functionality

Clear Connect Wireless - Type X

Lutron Fixtures

Luminares
Ketra & Rania Downlights — 1

Lamps
Ketra Lamps — 1

Linears
N3 Satellite — 1

G2 Linear

Third-Party Fixtures

Third-party Fixtures

Athena Wireless Node — 2

Linear
Downlight
Troffer
Track
Pendant

Note: 100 Clear Connect Type X device per gateway

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

Note: Not all available products shown

Legend
- — 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
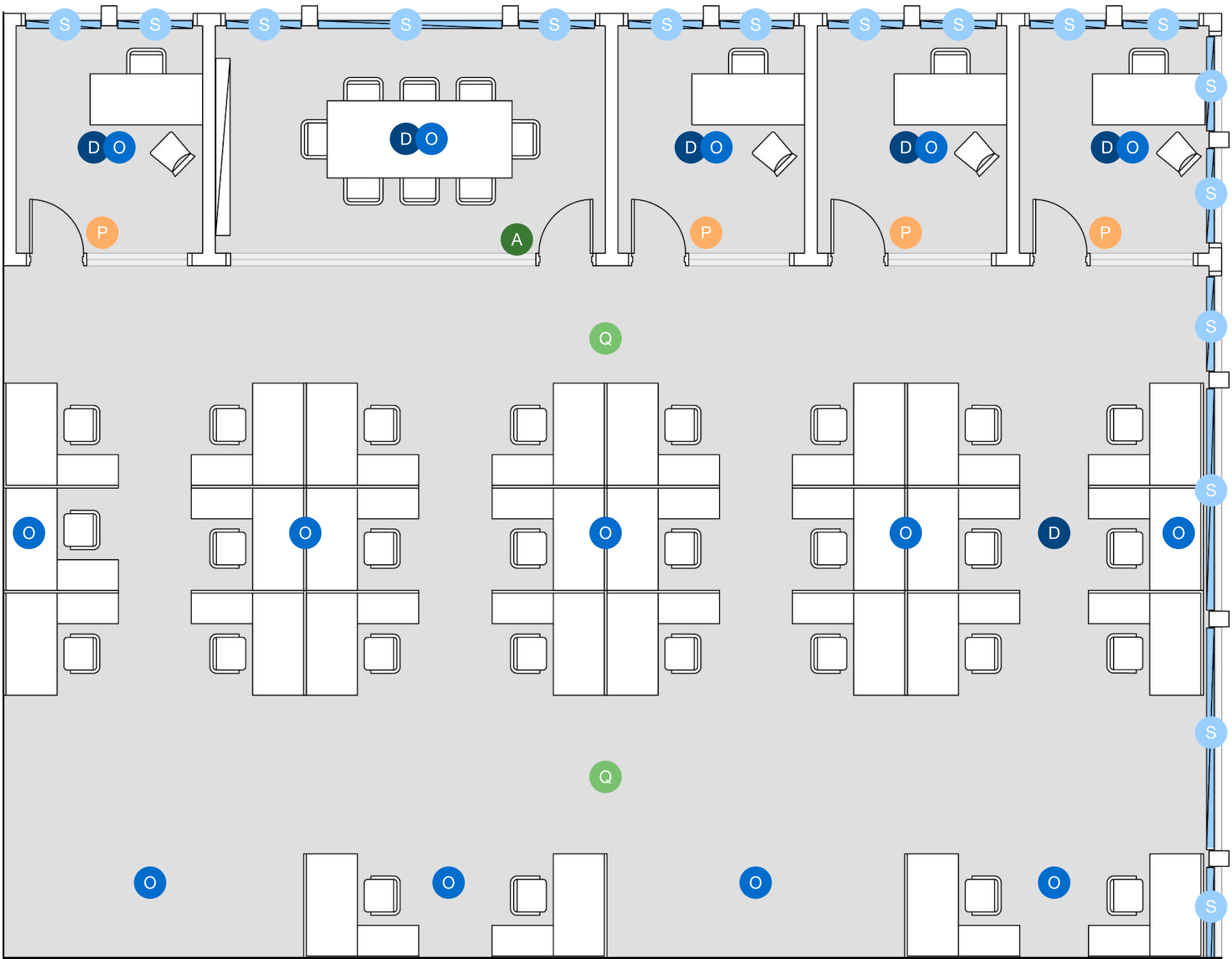2. Low voltage VDC
3. Battery powered
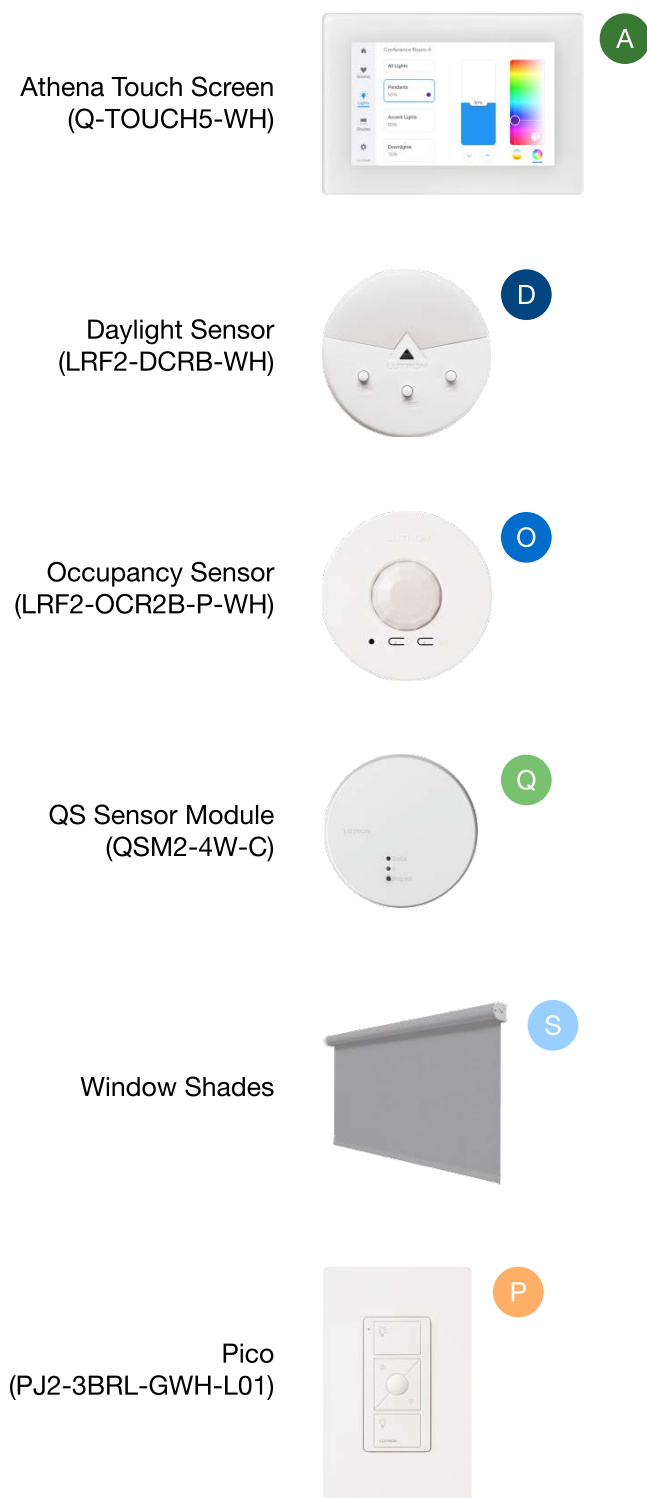4. Power over Ethernet (PoE)

Athena Open Office Configuration – Centralized Load Control
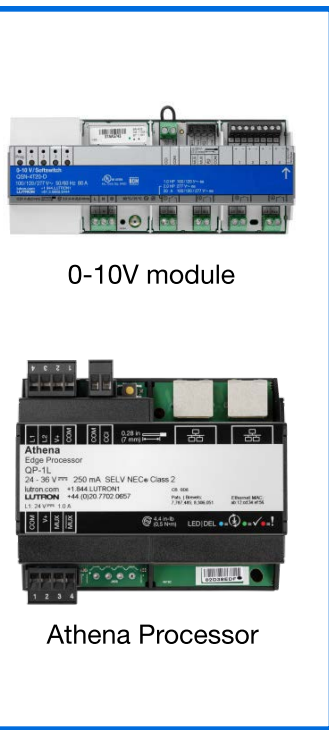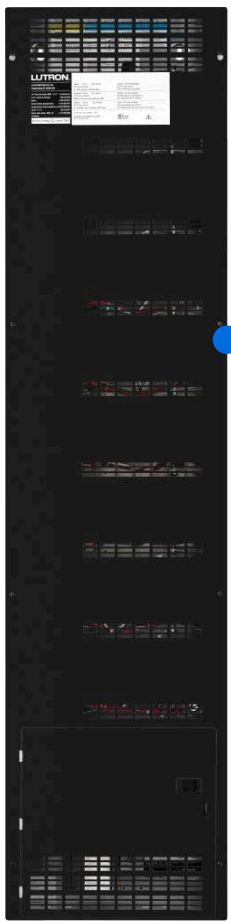
Package Includes

- 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)

Daylight Sensor
(LRF2-DCRB-WH)

Occupancy Sensor
(LRF2-OCR2B-P-WH)

QS Sensor Module
(QSM2-4W-C)

Window Shades

Pico
(PJ2-3BRL-GWH-L01)

Inside Panel

0-10V module

Athena Processor

Athena DIN Panel
(not shown on map)

Centralized Shade
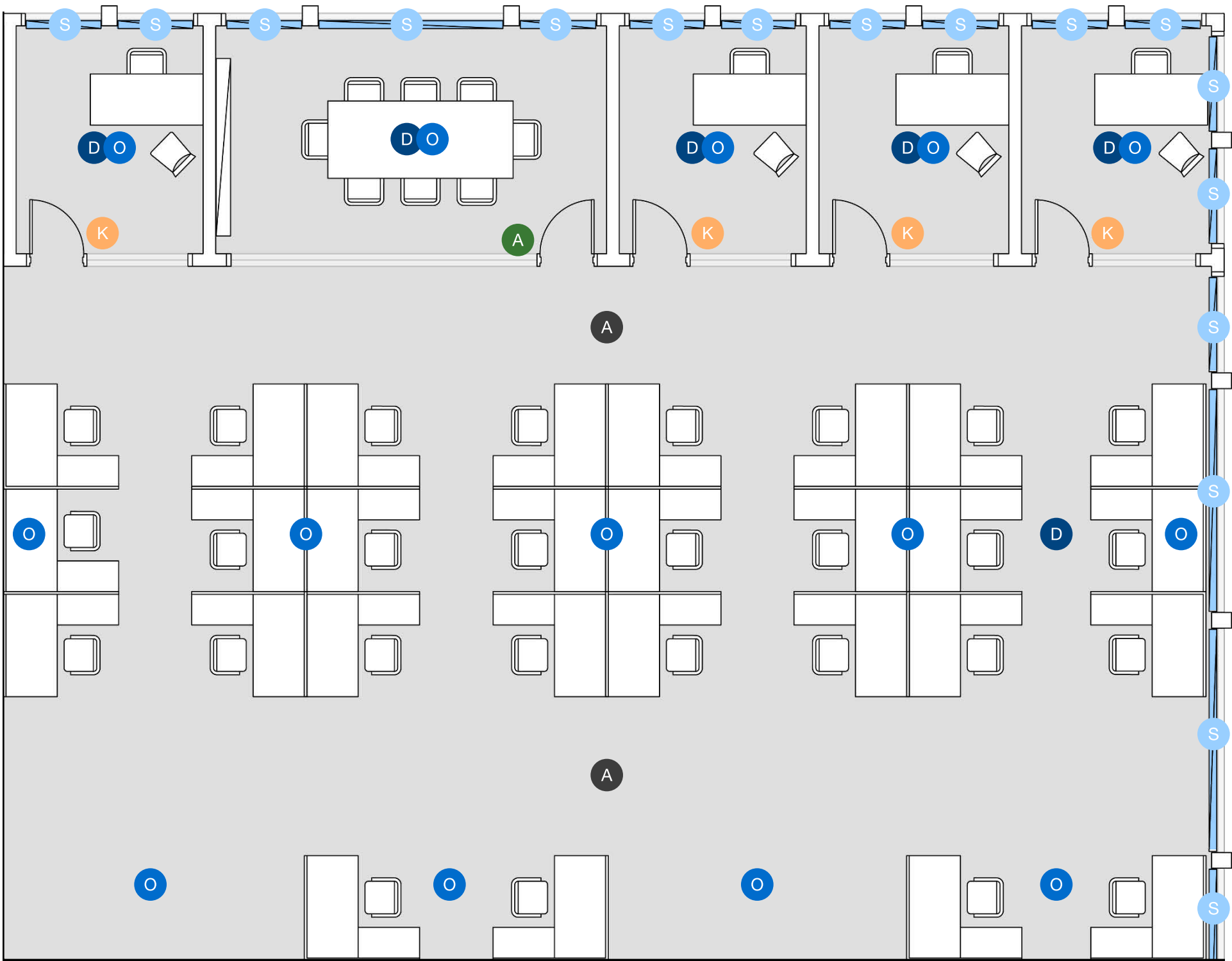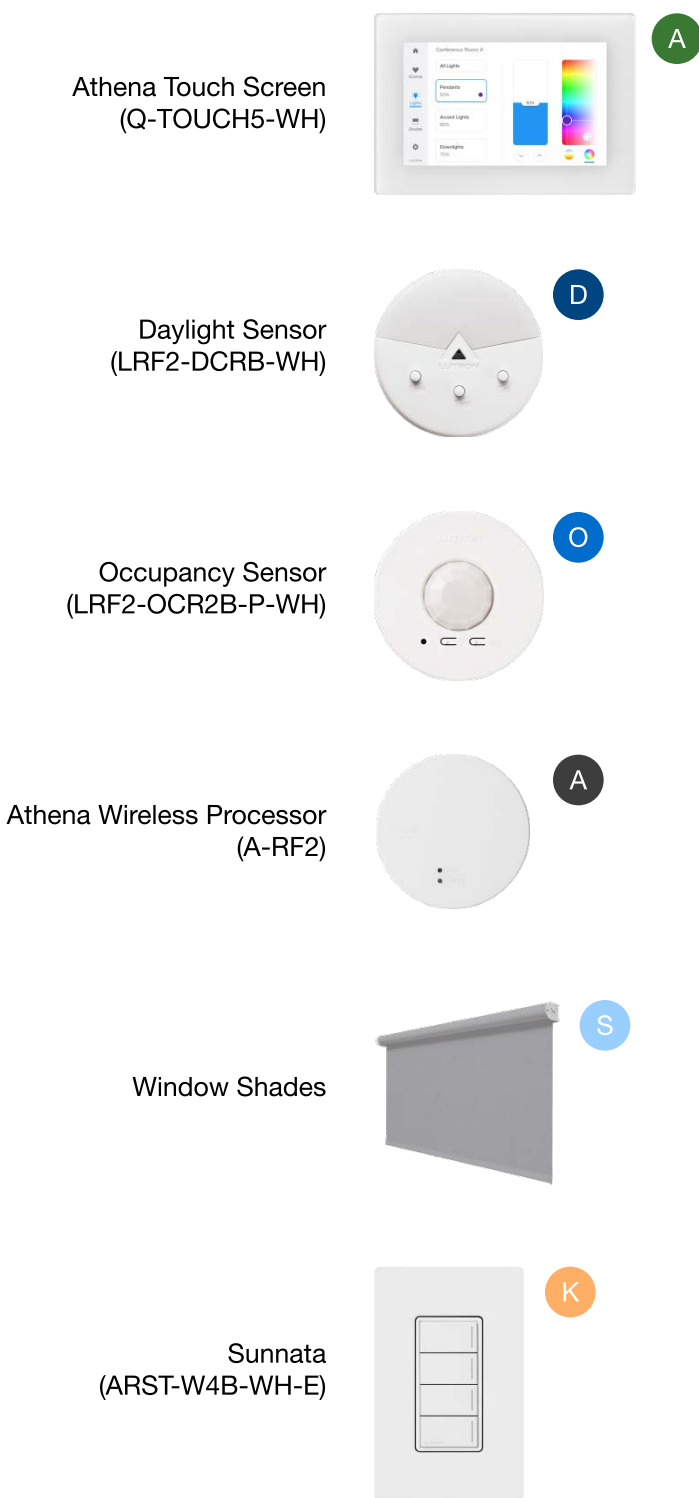Power Panel
(not shown on map)

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.	Natural Show: 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

Sunnata
(ARST-W4B-WH-E)   K

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 offer 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. We ensure the project meets your needs and budget, assist with documentation, and coordinate 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 the details.

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