Flexible control every step of the way

A simple wireless lighting control solution for new and existing commercial buildings.

LUTRON
How can you make every office, school, or university campus an efficient, comfortable and productive place to work or learn?

**Vive is the answer.**

Vive by Lutron is a simple, scalable, wireless control that can be installed in a single space or throughout an entire campus. It’s designed to meet today’s energy codes, be used in new construction or retrofit situations, and meet your budgetary needs.

And with a wide family of products – including sensors, remotes, load controls, and an available software management suite – Vive provides the flexibility to select the products you want and handle any on-site challenges with ease.

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Scalable solutions — start small and grow

Vive wireless solutions offer a multi-strategy approach that accommodates your budget and performance needs now, and for the future of your building.

1. **Single office space**
   - Start by adding control in a single space and expand as budgets and occupant schedules allow.

2. **Single floor**
   - Expand to new areas or an entire floor at any time without reprogramming or replacing existing equipment.

3. **Multiple floors**
   - Duplicate the success of one floor across other floors as your business expands or tenants change. Control can be independent on each floor, or linked via Vive wireless hubs.

4. **Entire building**
   - Vive offers seamless integration to other building management systems to control every light in your building.

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**Energy-saving control strategies**

Combine lighting control strategies to maximize efficiency

What is the savings opportunity?
Lutron solutions can save 60% or more lighting energy.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Potential savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupancy/vacancy sensing</td>
<td>20–60% Lighting⁴</td>
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<td>Daylight harvesting</td>
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<td>Scheduling</td>
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<td>30–50% Peak Period⁷</td>
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<tr>
<td>Plug load control</td>
<td>15–50% Controlled Load⁸</td>
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<tr>
<td>High-end trim</td>
<td>10–30% Lighting⁹</td>
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<tr>
<td>Personal dimming control</td>
<td>10–20% Lighting¹⁰</td>
</tr>
<tr>
<td>HVAC integration</td>
<td>5–15% HVAC¹¹</td>
</tr>
</tbody>
</table>

For a list of sources please visit lutron.com/references.
Flexible, wireless controls and sensors for simple, code-compliant design

Add wireless hubs for centralized control and integration (optional)

Vive wireless hub

Communication protocols

- Communicate via RF to control components
- Communicate via WiFi to smart devices
- Communicate via wired Ethernet to Vive hub

Simple-to-use software

Occupancy and daylight sensors

Lighting controllers

Plug load controllers

Integrated fixture control and sensing

Transform existing buildings with wireless lighting controls

Vive wireless hub

Demand response

BACnet integration

API integration
Adding sensors to your job

- Occupancy/vacancy sensors turn lights on and/or off for convenience and energy savings
- Wireless devices can be mounted to any surface with no wiring needed
- Controls communicate wirelessly to the controls in the ceiling
- 10-year battery life

Control your loads

- Select the controller appropriate for the loads on your job
- Options available for:
  - switching, 0-10 V, phase dimming, Ecosystem, contact closure
- Simply wire one load controller for each group of lights you want to control together

Control your lights where you need to

- Wireless devices can be mounted to any surface with no wiring needed
- Controls communicate wirelessly to the controls in the ceiling
- 10-year battery life

Selecting and installing wireless controls is easy
Selecting and installing wireless controls is easy

**Area Control**

**Step 4**

Add daylight harvesting to meet code and save energy

- Save energy by dimming the lights when natural light is available
- Wireless devices can be mounted to any surface with no wiring needed
- 10-year battery life

**Step 5**

System software and control (optional)

- Timeclock
- Demand response
- BACnet & API integration
- Energy and Occupancy information
- Proactive maintenance alerts

See easy programming setup pages 16 – 17
Selecting and installing wireless controls is easy

**Individual Fixture Control**

**Step 1**

Simply count the fixtures—the technology is built in

- Visit lutron.com/hpfl for a list of fixtures that come with Vive wireless technology built in
- Fixtures are shipped with occupancy, vacancy and daylight sensing already installed

**Step 2**

Control your lights where you need to

- Wireless devices can be mounted to any surface with no wiring needed
- Controls communicate wirelessly to the controls in the ceiling
- 10-year battery life

**Step 3**

System software and control

- Timeclock
- Demand response
- BACnet & API integration
- Energy and Occupancy information
- Proactive maintenance alerts

See easy system programming on pages 16 & 17
Access to tools and resources is at your fingertips.
Get access and quick answers keep your project moving.

Free online estimating tool
Lutron QuEst-D is an easy-to-use software tool that gives you an estimate for your project based on a few simple questions. The result is an instant bill of materials that highlights details and ensures a code-compliant solution. Discover QuEst-D online at lutron.com/DiscoverQuEstD.

Easy-to-use design software
Lutron Designer+ for Vive is an intuitive, easy-to-use software tool that allows you to design a Lutron Vive lighting control system with visual “drag and drop” layout and connections. It also allows you to generate comprehensive system design documentation, including bills of materials, one-line diagrams, and sequence of operations. For access please contact myLutronsupport@lutron.com.

Quick help videos
Get access to Lutron Vive videos 24/7. Step-by-step setup, installation, and programming help whenever you need it. lutron.com/viveresources.

Online training
Visit lutron.com/LCIONline — Sign up for free, online training modules with practice exercises that walk you through the Vive system.

Summary of code requirements for lighting control
Vive wireless solutions ensure you can meet new construction and retrofit (lighting alterations) code requirements for three major energy codes: ASHRAE, IECC, and Title 24.

For specific commercial building code lighting requirements in your state, please visit lutron.com/energycodes.

App guides to help you meet codes
Codes can often be complicated and difficult to navigate. We have commercial application guides that include examples of different spaces and corresponding Lutron products for those spaces. Guides show you how you can use Lutron solutions to meet or exceed major energy code requirements.

Available online at lutron.com/appguides

Vive wireless specification typicals
Specifying wireless lighting control reduces design time and allows flexibility for changes during the project without the need to redesign. Vive Wireless Specification Typicals allow for quick and easy design of many applications. Simply copy and paste the typicals into drawing packages for complete design, layout, and BOM information.

Available online at lutron.com/viveresources

Energy code quick reference guides
Get the lighting and receptacle control requirements along with suggested functionality to meet the latest versions of ASHRAE 90.1, IECC, and Title 24 all on one page.

Available online at lutron.com/viveresources
Easy system programming

Simple setup and programming options with the Vive wireless hub

**Mobile phone setup**
Using Vive software on any smart device you can wirelessly connect system controls and program system settings—no ladder required. Lutron’s patent-pending RF signal strength detection automatically finds nearby devices, making job setup faster.

1. **Press and hold on wireless device**

2. **Automatic fixture identification**
Lutron patent-pending technology automatically finds and sorts the wireless devices closest to the control.

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For systems without a Vive wireless hub

**Push-button set up**
Use simple button-press programming to select and associate wireless devices—it’s as easy as setting a station on your car radio.

**Wireless dimmer**
Press and hold for 6 seconds

**Occupancy sensor**
Press and hold for 6 seconds

It works! Sensor now talks to the wireless dimmer
Save energy and improve building performance

Energy reporting
Quickly view and display energy-usage information to drive decision making and demonstrate savings.

Load shed Open ADR Compatible
Easily set lighting reduction levels that automatically respond during peak electricity usage times.

Schedules
Use a 365-day calendar to automatically adjust lights based on time of day, including single day and holiday events.

Light Control
Directly adjust the light levels.

Alerts
View proactive alerts that show issues such as low batteries or inactive devices to help improve building maintenance efficiency.

Seamlessly integrate with your building system
The BACnet/IP protocol is the primary means of integration. BACnet is embedded or native in the Vive wireless hub, which means no external interfaces or gateways are required in order to communicate with other systems.

API integration, native on the Vive hub, enables integration with third party devices, systems, and software. RESTful APIs are available over the ethernet.

Building/Energy Management Systems (BMS/EMS)
Energy Dashboards and Analytics Packages
HVAC
Audio & Video
API
IT
**Vive Vue software**

Vive Vue software now provides the ability to tie multiple Vive hubs together in one software interface. Built with the simple, scalable, wireless building blocks of the Vive Wireless system, Vive Vue software now delivers the advanced intelligence necessary for today’s smart buildings and the IoT. A smart building is now easier than ever to achieve.

**Intuitive control**

View status, control lights, and optimize your building quickly and efficiently with a graphical floorplan.

**Optimize your space**

Improve building layout based on actual occupancy and usage information. With space utilization reports, you can quickly identify over-used and under-used spaces to improve building efficiency without expanding the building footprint.

**Save energy purposefully**

Energy reports allow you to view and monitor your energy savings. With trending energy information over time, and easily customizable reports, Vive Vue software helps you demonstrate the energy-saving advantages of wireless lighting control.
Manage data and operations for multiple Lutron lighting and shade control solutions

- A single data and management platform for your connected buildings
- The system interface delivers a simple, consistent user experience from any PC or tablet
- Open, easy integration with BACnet and web APIs leverages the IoT to enhance smart-building performance
Lutron system security

SECURE LIFECYCLE

We build security into the product and the process from conception to installation, and through the lifetime of the system.

Everything we do is backed by Lutron’s first, and guiding, principle — Take Care of the Customer with Superior Goods and Services. Every product, every system, and every solution is designed, manufactured and tested to work as expected.

Security by design

When building any new system, Lutron utilizes a dedicated security team to ensure best practices are implemented. Security is built in, it is not an afterthought or add-on.

Examples of security features designed into Vive include:

1. Isolated wired and wireless architecture which strictly limits the possibility of the Vive Wi-Fi or Clear Connect being used to access the corporate network to gain confidential information
2. A distributed security architecture — each hub has its own unique keys
3. NIST-recommended best practices for securing passwords, including salting and use of SCrypt
4. AES 128-bit encryption for network communications
5. HTTPS (TLS 1.2) protocol for securing connections to the hub over the wired network
6. WPA2 technology for securing connections to the hub over the Wi-Fi network

Third-party validation

Security is complicated. Lutron has a dedicated team of internal experts, but we also leverage external experts to double- and triple-check our work.

1. Multiple external experts engaged during design process
2. Third-party penetration testing to identify and fix potential vulnerabilities before they reach the field

Continuous monitoring and improvements

Security is a constantly moving target. Lutron uses a dedicated security team to continuously monitor the market 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.

1. IT deployment guides
2. Guidance from our world class 24/7 technical support organization with IT expertise throughout the product lifecycle

Clear Connect wireless technology

All Lutron wireless products utilize Lutron patented Clear Connect wireless technology, which operates in an uncongested radio frequency band. The result is ultra-reliable communication and smooth dimming performance with no flicker or delay. Other devices will not interfere with the Lutron lighting control system.

Clear Connect

434 MHz: Lutron Clear Connect wireless technology

Lutron devices operate in an uncongested frequency band, providing ultra-reliable operation.

Other frequency bands

2.4 GHz: Cordless phones | Bluetooth devices | Wireless security cameras

Other devices operate in congested frequency bands, creating a high potential for wireless interference.
Vive product catalog

Wireless hub page 28

Wireless load controls page 30

In-wall controls page 44

Wireless remotes page 48

Wireless Sensors page 52

Vive Installation
Suncrest Bank — Visalia, California
Features and benefits

- Communicates with controls on a floor using Lutron wireless Clear Connect technology (range radius of 71 ft [22 m])
- Distributed system architecture
- Pico remote controls and sensors communicate directly with the load devices they control and must be located within 30 ft (9 m) of the device with which they are associated
- Supports timeclock events based on both sunrise and sunset or fixed time-of-day
- Two contact closure inputs to enable load shed from other devices for Title 24 compliance and utility integration
- Open ADR 2.0b compatible for integration with utilities for demand response/loadshed and code compliance
- Each hub provides an individual dashboard for its coverage area and allows you to link to other hub dashboards from the mobile application
- API integration, native on the Vive hub, to enable integration with third party devices, systems, and software. RESTful APIs are available over the ethernet.
- Proactive alerts to inform batteries are low or devices may not be working to ensure system operates as expected.

Product options

**Vive wireless hub models**

**Starter (up to 75 devices)**

- HJS-0-FM  Flush mount
- HJS-1-FM  Flush mount
- HJS-1-SM  Surface mount
- H-MOUNT-SM  Surface-mount installation adapter

**Premium (with BACnet)**

- HJS-2-FM  Flush mount
- HJS-2-SM  Surface mount
- HJS-UPDATE  Software upgrade license to add BACnet
- HJS-DEVICES  Software upgrade license expands device limit to 700 devices

How it works

All wireless devices to be associated to the Vive wireless hub must be within 71 ft (22 m) of the Vive wireless hub and must be on the same floor as the Vive wireless hub.

Note: A corporate Wi-Fi network can interfere with the Wi-Fi on the Vive wireless hub. Where a corporate Wi-Fi network exists, it is recommended to do the following: Connect the Vive wireless hub to the corporate network using the Ethernet connection on the hub, and disable the hub’s Wi-Fi.
**How to design and specify**

- **One relay module**  
  For each controlled lighting zone in the space

- **Control**  
  Select appropriate model based on the size of the connected load
  - 16 A: 1920 W or 1/2 HP @ 120 V or 4432 W or 1 1/2 HP @ 277 V
  - 5 A: 600 W or 1/6 HP @ 120 V or 1385 W or 1/3 HP @ 277 V

- **Contact closure output**  
  For sending occupancy information to third-party equipment such as HVAC systems

- **Input**  
  120/277 V

**Product options**

**16 A models**
- RMJS-16R-DV-B
- RMJS-16RCCO1-DV-B  One contact closure output

**5 A models**
- RMJS-5R-DV-B
- RMJS-5RCCO1-DV-B  One contact closure output

---

**How to design and specify**

- **One single zone controller**  
  For each EcoSystem/DALI lighting zone in the space

- **Control**  
  EcoSystem/DALI: up to 32 drivers per controller
  - Multiple drivers/balasts connected to control module will always work together as single zone

- **Input**  
  120/277 V

**Product options**

- EcoSystem single zone
  - RMJS-EC032-SZ
How to design and specify

- One dimming module with 0-10V control
  For each controlled 0-10V lighting zone in the space
- Control
  5 A: 0-10 V controlled fixtures and switches compatible with third-party 0-10 V fluorescent ballasts, LED drivers, and fixtures
- Input
  347 V
- 0-10 V Link: Communicates with up to 60 mA of fixtures

Product options

- 5 A model with 0-10 V control
  RMJS-5T-347

Divider for Class 1 & Class 2 Separation

5T-347-DIVIDER

How to design and specify

- One dimming module with 0-10V control
  For each controlled 0-10V lighting zone in the space
- Control
  8 A: 0-10 V controlled fixtures and switches compatible with third-party 0-10 V fluorescent ballasts, LED drivers, and fixtures
- Input
  120/277 V
- 0-10 V Link: Communicates with up to 60 mA of fixtures

Product options

- 8 A models with 0-10 V control
  RMJS-8T-DV-B
  RMJS-8TN-DV-B

How it works

Two versions of the PowPak 0-10 V are available that optimize for different wiring practices. The -8T model has a connector on the back of the box which is optimized for Class 2 wiring outside of the standard conduit. The -8TN model has the 0-10 V wires coming out of the threaded end, optimized for wiring inside a junction box and used for when the 0-10 V wires are run in the cable or conduit with the Class 1 wiring. Both versions can have the 0-10 V control wires be installed using NEC® Class 1 or Class 2 wiring methods.

Wiring Schematic

*NOTE: The control module mounts to the exterior of a U.S.-style junction box.
Load controllers: J-box mounted switches and dimmers

How to design and specify

- **One contact closure output module**
  For each additional contact closure output you require

**Product options**

**Standard**

| RMJS-CCO1-24-B  | Contact closure output |

**Note:** If using a relay module with the contact closure output, you do not need to add a contact closure output module unless a second contact closure output is needed.

**How it works**

In response to information received from a Radio Powr Savr occupancy/vacancy sensor, the PowPak contact closure output module communicates room occupancy to the VAV terminal unit. By not heating or cooling an unoccupied room, the electricity consumed by the HVAC system can be reduced.

---

**Load controllers**

**PowPak contact closure output module**

**Dimensions**

| W: 2.89” (48 mm) |
| H: 3.44” (87 mm) |
| D: 1.25” (32 mm) |
How to design and specify

- **One relay module**
  - For each 20A receptacle circuit you want to control
- **Input** 120/277V

Product options

20A models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-20R-DV-B</td>
<td>General purpose switch 120-277V receptacles</td>
</tr>
<tr>
<td>RMJS-20RCC01-DV-B</td>
<td>General purpose switch 20A, 120-277V receptacles with one contact closure output</td>
</tr>
</tbody>
</table>

How it works

Plug loads, such as task lighting, computer monitors, and printers, account for greater than 5% of commercial electricity usage. Many energy codes now require control of receptacles for compliance.

The occupancy/vacancy sensor wirelessly communicates room occupancy to the relay module. Based on the occupancy status received, the relay module switches the power to the receptacles on or off, reducing the amount of energy consumed.
How to design and specify

- **One wireless receptacle**
  For each receptacle circuit you want to control
  One wireless receptacle can also control standard receptacles wired downstream

- **Input**: 120V

### Product options

#### 15A models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR2S-15-STR - 15A</td>
<td>Split (half switching; single pole/downstream)</td>
</tr>
<tr>
<td>CAR2S-15-DTR - 15A</td>
<td>Duplex (dual switching; single pole/downstream)</td>
</tr>
</tbody>
</table>

#### 20A models

<table>
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<th>Description</th>
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<td>Split (half switching; single pole/downstream)</td>
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<tr>
<td>CAR2S-20-DTR - 20A</td>
<td>Duplex (dual switching; single pole/downstream)</td>
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</tbody>
</table>

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How it works

Plug loads, such as task lighting, computer monitors, and printers, account for greater than 5% of commercial electricity usage. Many energy codes now require control of receptacles for compliance.

The occupancy/vacancy sensor wirelessly communicates room occupancy to the wireless receptacle. Based on the occupancy status received, the wireless receptacle switches the power on or off, reducing the amount of energy consumed. The wireless receptacle will control normal receptacles downstream.

---

Load controllers: Plug load control

Load controllers: Plug load control

- **RF receptacle with top controlled**

  **Dimensions**
  - W: 2.94” (75 mm)
  - H: 4.69” (119 mm)
  - D: 1.4” (36 mm)

- **Load controllers**
  - **Plug load control**
  - **Pico control with wallplate**
  - **RF receptacle with top control**

For a list of sources please visit lutron.com/references.
How to design and specify

- **Vive integral fixture control**
  For each fixture in the space
- **Digitally controls** up to three drivers/ballasts per fixture
- **Select either** Clear Connect (RF) only or Clear Connect (RF) & XCT Sensing

**Product options**

**Wireless individual in-fixture control**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFCSJ-OEM-RF</td>
<td>Clear Connect (RF) only</td>
</tr>
<tr>
<td>DFCSJ-OEM-OCC</td>
<td>Clear Connect (RF) and Occupancy/Daylight Sensing</td>
</tr>
</tbody>
</table>

Contact your local fixture representative and ask for a Vive-enabled fixture or visit lutron.com/findafixture

**Dimensions**

- **Clear Connect (RF) + Sensing**
  - W: 2.927" (74.4 mm)
  - H: 2.477" (62.9 mm)

- **Clear Connect (RF) Only**
  - W: 2.892" (73.4 mm)
  - H: 2.453" (62.4 mm)

**Note:** Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m) through walls of each other.

How it works

Install the fixture control directly to a fixture or on a junction box nearest to the fixture. Install the sensor on the ceiling near the fixture to optimize coverage in the desired area.

**Note:** Avoid mounting the fixture sensor in direct sunlight or in the light which is cast from the fixture.

---

Load controllers: Wireless individual fixture control

How to design and specify

- **One PowPak wireless fixture control**
  For each fixture in the space
- **Controls** 1A of load or up to three drivers/ballasts per fixture
- **Select either** Area sensing or individual fixture sensing
- **PowPak fixture sensor** Combined occupancy/daylight sensor

**Product options**

**0-10 V control models**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCJS-010</td>
<td></td>
</tr>
<tr>
<td>FCJS-010-BULK8</td>
<td>8-pack</td>
</tr>
</tbody>
</table>

**EcoSystem control models**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCJS-ECO</td>
<td></td>
</tr>
<tr>
<td>FCJS-ECO-BULK8</td>
<td>8-pack</td>
</tr>
</tbody>
</table>

**Sensor models**

- FC-SENSOR: Occupancy/Daylight sensor
- FC-VSENSOR: Vacancy/Daylight sensor

**Dimensions**

- **W: 2.89" (73.4 mm)
- H: 3.44" (87 mm)
- D: 1.25" (32 mm)

**Note:**

Avoid mounting the fixture sensor in direct sunlight or in the light which is cast from the fixture.

---

XCT Occupancy/Vacancy sensing

**Range Diagrams**

- **Ceiling:**
  - 9 ft (2.7 m)
  - 12 ft (3.65 m)

- **Floor:**
  - 15 ft (4.6 m)
  - 9 ft (2.7 m)
  - 12 ft (3.65 m)

- **12 ft (3.65 m)**
How to design and specify

- One UL 924 PowPak module per lighting zone or fixture, depending on model

**Relay module control:**
- 16 A: 1920 W or 1/2 HP @ 120 V
- 4432 W or 1/2 HP @ 277

**0-10 V module control:**
- 8 A: 0-10 V controlled fixtures and switches compatible with third-party 0-10 V fluorescent ballasts, LED drivers, and fixtures
- 0-10 V link: Communicates with up to 60 mA of fixtures

**Fixture control:**
- 1 A of load or up to 3 drivers and ballasts
- Input (all models) 120/277 V

### Product options

<table>
<thead>
<tr>
<th>Relay</th>
<th>RMJS-16R-DV-B-EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10 V</td>
<td>RMJS-8T-DV-B-EM</td>
</tr>
<tr>
<td>Fixtures</td>
<td>FCJS-010-EM, FCJS-ECO-EM</td>
</tr>
</tbody>
</table>

**Dimensions**

| W:        | 2.89" (48 mm) |
| H:        | 3.44" (87 mm) |
| D:        | 1.25" (32 mm) |

UL 924 listed

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Load controllers: UL 924 rated emergency wireless controls

How to design and specify

**0-10 V module control:**
- 5A: 0-10 V controlled fixtures and switches compatible with third-party 0-10 V fluorescent ballasts, LED drivers, and fixtures
- 0-10 V Link: Communicates with up to 60 mA of fixtures
- Input 347 V

**Product options**

5 A model with 0-10 V control
- RMJS-5T-347-EM

**347 V emergency lighting module**

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>W: 4.53&quot; (114.90 mm)</td>
</tr>
<tr>
<td>H: 4.53&quot; (114.90 mm)</td>
</tr>
<tr>
<td>D: 1.80&quot; (45.60 mm)</td>
</tr>
</tbody>
</table>

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Load controllers
### How it works

During normal power conditions, the LS 924 rated PowPak modules can dim loads and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.

If utility power fails and the emergency PowPak loses power for greater than 250 msec, the emergency generator backup source activates and the automatic transfer switch senses loss of normal power and switches to emergency power.

The emergency PowPak regains power and automatically goes into emergency mode (full output, relay closed and 0-10V signal goes to 10.0 V) for 120 minutes. All local buttons, Pico wireless controls and occupancy/daylight sensors will not respond.

When normal power is restored to the Vive hub and emergency PowPak, the emergency PowPak will return to the previous light level within 2 minutes of normal power being restored. It will again accept local button control, input from Pico wireless controls, and occupancy/daylight sensors.

### System Wiring Diagram (Vive Hub with Emergency PowPak)

[Diagram showing wiring connections and components]

*NOTE: Solution is not applicable for an uninterrupted power supply (UPS) backup system. RSMS-5T-347-EM must see a complete change-over of power from normal to emergency for the unit to go into emergency mode.*

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### How it works

During normal power conditions, the rated modules can dim loads and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.

If utility power fails and the emergency module loses power for greater than 1 sec, the emergency generator backup source activates and the automatic transfer switch senses loss of normal power and switches to emergency power.

The emergency module regains power and automatically goes into emergency mode (full output, relay closed and 0-10V signal goes to 10.0 V) for 120 minutes. All local buttons, Pico wireless controls and occupancy/daylight sensors will not respond.

When normal power is restored to the Vive hub and emergency module, the emergency module will return to the previous light level within 3-10 minutes of normal power being restored. It will again accept local button control, input from Pico wireless controls, and occupancy/daylight sensors.

### System Wiring Diagram (Vive Hub with Emergency Dimming Module)

[Diagram showing wiring connections and components]

*NOTE: Solution is not applicable for an uninterrupted power supply (UPS) backup system. RSMS-5T-347-EM must see a complete change-over of power from normal to emergency for the unit to go into emergency mode.*

---

**Lutron | 45**
Load controllers: In-wall switches and dimmers

How to design and specify

• Select one switch per lighting zone
• Select appropriate model based on the size of the connected load
  - **6 A**: 600 W lighting @ 120 V
  - **8 A**: 960 W lighting @ 120 V or 2216 W @ 277 V
• If existing switch does not have a neutral, choose the model available for 120/277 V with no neutral required
• Select from up to 27 colors to complement the décor*
• Add an additional Pico remote for rooms with multiple switches for a single zone

Product options

**Dual Voltage No Neutral switches**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRF2S-8S-DV-XX</td>
<td>8 A lighting, 1/10 HP fan @ 120 V only, 120-277 V, no neutral</td>
</tr>
</tbody>
</table>

**120 V Neutral required switches**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRF2S-6ANS-XX</td>
<td>6 A lighting, 1/10 HP fan, 120 V only</td>
</tr>
<tr>
<td>MRF2S-8ANS-120-XX</td>
<td>8 A lighting, 1/4 HP fan, 120 V only</td>
</tr>
</tbody>
</table>

Maestro wireless switches

Dimensions

| W: 2.94” (75 mm) |
| H: 4.69” (119 mm) |
| D: 1.44” (38 mm) |

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.)

How to design and specify

• Select one wireless dimmer per lighting zone
• Select appropriate model based on the size and type of existing load
• Most models do not require a neutral
• Select from up to 27 colors to complement the décor*
• Add an accessory dimmer or a Pico wireless remote for rooms with multiple switches for a single zone
• Gray models (-GR) are plenum rated for mounting in ceiling applications

Product options

**Maestro Wireless dimmers**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRF2S-6CL-XX</td>
<td>150 W dimmable CFL/LED, 600 W incandescent/halogen</td>
</tr>
<tr>
<td>MRF2S-6ELV120-XX</td>
<td>600 W ELV, 120 V</td>
</tr>
<tr>
<td>MRF2S-6ND-120-XX</td>
<td>600 W/VA incandescent/halogen/MLV, 120 V</td>
</tr>
<tr>
<td>MA-R-XX</td>
<td>Accessory dimmer for multi-location lighting controls, 120 V</td>
</tr>
</tbody>
</table>

**MRF2S-6ANS-120-XX** | 8 A lighting, 1/4 HP fan, 120 V only

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.)
Features and benefits

• Easy to install; directly replaces an existing control in a wallbox
• Combines occupancy sensing, manual control, and system connectivity in one piece of hardware
• Easily add additional wall controls and sensors without running any new wires
• Connect to a Vive wireless hub for system features such as timeclock, energy reporting, and demand response/load shed
• Lutron XCT technology for superior sensitivity prevents false ons and false offs

How to design and specify

• Select one dimmer or switch per lighting zone
• Select appropriate model based on type of load:
  - 120 – 277 V – 8 A Electronic fluorescent ballast or LED drivers
  - Controls up to 50mA of 0-10 V fixtures, sink only
  - Neutral required
• Add additional Pico remotes for rooms with multiple switches for a single zone
• Add additional wireless occupancy and/or daylight sensors for additional coverage area and functionality

Product options

Standard

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRF2S-8SD010-XX</td>
<td>0-10 V Wallbox Occupancy/Vacancy Sensor Dimmer</td>
</tr>
<tr>
<td>MRF2S-8SS-XX</td>
<td>Wallbox Occupancy/Vacancy Sensor Switch</td>
</tr>
<tr>
<td>MRF2S-8SDV010-XX</td>
<td>0-10 V Wallbox Vacancy Sensor Dimmer</td>
</tr>
<tr>
<td>MRF2S-8SSV-XX</td>
<td>Wallbox Vacancy Sensor Switch</td>
</tr>
</tbody>
</table>

(XX in the model number represents color/finish code)
How to design and specify

- Select one 2-button Pico wireless remote to add a location with ON/OFF control
- Select one 3-button Pico wireless remote to add a location with ON/OFF control and one preset
- Select one 2-button with raise/lower Pico wireless remote to add a location with ON/OFF and BRIGHTEN/DIM control
- Select one 3-button with raise/lower Pico wireless remote to add a location with ON/OFF, BRIGHTEN/DIM control and one preset
- Select whether a nightlight is needed (2-button and 3-button with raise/lower only)

Note: Spaces with a PowPak relay or dimming module will not have a local control in the room unless a Pico is added

Product options

2-button remotes

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJ2-2BRL-XXX-L01</td>
<td>2-button with raise/lower wireless remote</td>
</tr>
<tr>
<td>PJ2-2B-XXX-L01</td>
<td>2-button wireless remote</td>
</tr>
<tr>
<td>PJN-2B-GXX-L01</td>
<td>Nightlight 2-button wireless remote</td>
</tr>
</tbody>
</table>

3-button remotes

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJ2-3BRL-XXX-L01</td>
<td>3-button with raise/lower wireless remote</td>
</tr>
<tr>
<td>PJ2-3B-XXX-L01</td>
<td>3-button wireless remote</td>
</tr>
<tr>
<td>PJN-3BRL-GXX-L01</td>
<td>Nightlight 3-button with raise/lower wireless remote</td>
</tr>
</tbody>
</table>

How it works

- No wires—put it where it’s most accessible
- Pedestal mount for tabletop use
- Surface mount anywhere with Claro wallplate
- 10-year battery life

Dimensions

<table>
<thead>
<tr>
<th>W</th>
<th>H</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.28”</td>
<td>2.60”</td>
<td>0.33”</td>
</tr>
</tbody>
</table>

 peru. 1.28” (33 mm) 2.60” (66 mm) 0.33” (8 mm)
How to design and specify

- The Pico wireless remote is a flexible and easy-to-use device that allows the user to control Lutron wireless load-control devices from anywhere in the space. This battery-operated control requires no external power or communication wiring.

Product options

4-button remotes

- PJ2-4B-GWH-L21P 2-group control
- PJ2-4B-GWH-L01 Zone control
- PJ2-4B-GWH-L31 Scene control

- Custom-engraved models for Zone control keypads (-L01, -S01) and Scene control keypads (-L31, -S31) are available but require a different set of button marking codes when ordering.

Note: 2-Group (-L21, -S21, -LS21) controls are not offered with the custom engraving option.

Button Marking Codes

<table>
<thead>
<tr>
<th>Zone Control</th>
<th>Standard Engraving</th>
<th>Custom Engraving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights</td>
<td>-L01</td>
<td>-EL1</td>
</tr>
<tr>
<td>Shades</td>
<td>-S01</td>
<td>-ES1</td>
</tr>
<tr>
<td>Scene Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights</td>
<td>-L31</td>
<td>-EL2</td>
</tr>
<tr>
<td>Shades</td>
<td>-S31</td>
<td>-ES2</td>
</tr>
</tbody>
</table>

Dimensions

- W: 1.28” (33 mm)
- H: 2.60” (66 mm)
- D: 0.33” (8 mm)

Tabletop accessories

- L-PED1-WH pedestal for one Pico remote
- L-PED2-WH pedestal for two Pico remotes
- L-PED3-WH pedestal for three Pico remotes
- L-PED4-WH pedestal for four Pico remotes

How to design and specify

- Select one Pico pedestal for each tabletop location based on the number of Pico remotes at each location.

Product options

Wall-mount accessories

- PICO-WBX-ADAPT Pico wallbox adapter
- CW-1-WH Claro 1-gang wallplate
- CW-2-WH Claro 2-gang wallplate
- CW-3-WH Claro 3-gang wallplate
- CW-4-WH Claro 4-gang wallplate

How to design and specify

- Select one Pico wallbox adapter for each Pico that you would like wall mounted with a Claro-style wallplate.
- Select one Claro wallplate (up to 4-gang) for all Pico and Maestro Wireless wall-mounted control locations where Claro style is desired.

Dimensions

- W: 2.94” (75 mm)
- H: 4.69” (119 mm)
- D: 1.44” (38 mm)
How to design and specify

- A single occupancy sensor can communicate to all control devices in the room.
- Use in small rooms or areas with medium to high partitions.
- For 8 ft ceilings: 484 ft²
- For 12 ft ceilings: 676 ft²

Product options

### Ceiling-mount sensors

- **LRF2-OCR2B-P-WH**: Occupancy/vacancy
- **LRF2-VCR2B-P-WH**: Vacancy only

### Accessories

- **L-CMDPIRKIT**: Ceiling-mount sensor lens masking kit
- **L-CRMK-WH**: Ceiling-mount sensor recess-mounting bracket
- **L-WIRECAGE-C**: Wire guard for ceiling-mount sensor

Sensor coverage diagrams

**Ceiling mount, 360°**

**Floor view**

**Coverage varies by ceiling height**

Key:
- Minor motion
- Major motion

**Top view**

**Ceiling-mount sensor coverage chart (for sensor mounted in center of room)**

<table>
<thead>
<tr>
<th>Ceiling height</th>
<th>Maximum room dimensions for complete floor coverage</th>
<th>Radius of coverage at floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 ft (2.4 m)</td>
<td>18 x 18 ft (5.5 x 5.5 m)</td>
<td>324 ft² (30.2 m²)</td>
</tr>
<tr>
<td>9 ft (2.7 m)</td>
<td>20 x 20 ft (6.1 x 6.1 m)</td>
<td>400 ft² (37.2 m²)</td>
</tr>
<tr>
<td>10 ft (3.0 m)</td>
<td>22 x 22 ft (6.7 x 6.7 m)</td>
<td>484 ft² (44.9 m²)</td>
</tr>
<tr>
<td>12 ft (3.7 m)**</td>
<td>26 x 26 ft (7.9 x 7.9 m)</td>
<td>676 ft² (62.4 m²)</td>
</tr>
</tbody>
</table>

* Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).
** 12 ft (3.7 m) is the maximum mounting height allowed.
How to design and specify

- A single occupancy sensor can communicate to all control devices in the room.

Product options

**Wall-mount sensors**
- Use in large open rooms with few tall obstructions
- Coverage: 3,000 ft²
- LRF2-OWLB-P-WH Occupancy/vacancy
- LRF2-VWLB-P-WH Vacancy only

**Corner-mount sensors**
- Use in medium to large open rooms with few tall obstructions
- Coverage: 2,500 ft²
- LRF2-OKLB-P-WH Occupancy/vacancy
- LRF2-VKLB-P-WH Vacancy only

**Hallway sensors**
- For a 6 ft wide hallway: 50 ft coverage
- For a 10 ft wide hallway: 150 ft coverage
- LRF2-OHLB-P-WH Occupancy/vacancy
- LRF2-VHLB-P-WH Vacancy only

Accessories
- LRF-ARM-WH Flexible armature mounting kit for Radio Powr Savr wall, hall, corner sensors
- L-WIRECAGE-C Wire guard for ceiling-mount sensor
- L-WIRECAGE-W Wire guard for in-wall sensor

Sensor coverage diagrams

**Wall mount*, 180°**
- 1,500 ft² — minor motion
- 3,000 ft² — major motion

**Corner mount*, 90°**
- 1,225 ft² — minor motion
- 2,500 ft² — major motion

**Hallway*, long narrow field of view**
Coverage varies by hallway width and length

**Hallway sensor maximum recommended length chart**
(sensor centered within hallway)

<table>
<thead>
<tr>
<th>Width of hallway</th>
<th>Length of hallway</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 ft (1.6 m) or less</td>
<td>50 ft (15.2 m)</td>
</tr>
<tr>
<td>8 ft (2.4 m)</td>
<td>100 ft (30.5 m)</td>
</tr>
<tr>
<td>10 ft (3.0 m) or more</td>
<td>150 ft (45.7 m)</td>
</tr>
</tbody>
</table>

* Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).
** 12 ft (3.7 m) is the maximum mounting height allowed.
Wireless daylight sensors

Dimensions
W: 1.6” (41 mm)
H: 1.6” (41 mm)
D: 0.7” (17 mm)

How to design and specify
- A single daylight sensor is capable of controlling:
  - All Maestro switching and dimming zones
  - All PowPak switching zones
  - All PowPak dimming modules with 0-10V control

Product options
Daylight sensor
LRF2-DCRB-WH  Daylight sensor

* Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).
** 12 ft (3.7 m) is the maximum mounting height allowed.

Sensor coverage diagrams

Location for average size areas
Arrow points towards the area viewed by the sensor (towards windows).

H = Effective Window Height

Location for narrow areas (corridors, private offices)
Arrow points towards the area viewed by the sensor (away from window).
Available setup support services

**Blocks of setup support time**

- Lutron Services Representative — either onsite or remotely — supports the installation team in setting up the system
- Utilize the technician’s time in the way that best suits your needs: training, punch list items, or complete programming independently
- Mix and match remote and onsite blocks of time and use them when you need them during the construction timeline
- Choose the amount of time you need

**Product options**

<table>
<thead>
<tr>
<th>Blocks of setup support time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LSC-OS-PROG8-SP</td>
<td>8 hours of onsite setup support</td>
</tr>
<tr>
<td>LSC-OS-PROG4-SP</td>
<td>4 hours of onsite setup support</td>
</tr>
<tr>
<td>LSC-RMT-PROG4-SP</td>
<td>4 hours of remote setup support</td>
</tr>
</tbody>
</table>

**Additional setup support services**

| LSC-PREWIRE               | Prewire visit |
| LSC-TRAINING             | Customer-site solution training |
| LSC-AF-VISIT             | Onsite scene and level tuning |
| LSC-WALK                 | Onsite performance—verification walk-through |

Available startup services

**Onsite full-scope startup**

- Lutron Service Representative onsite to ensure proper system startup and configuration
- Train facilities staff to best utilize and maintain the lighting control assets
- Reduce risk and keep your Installation team small by having us do the setup for you.
- Includes a Commercial System Limited Warranty
- Onsite startup enhancements available

**Remote full-scope startup**

- Dedicated Lutron Remote Technician works with your installation team to ensure proper system startup and configuration
- Introduce end-user facilities staff to system components and resources available
- Less lead time to schedule than onsite startup
- Lower cost than onsite startup
- Commercial system limited warranty available

**Product options**

**Setup service models**

**Full scope startup**

| LSC-OS-SU-VIVE | Onsite full-scope startup |
| LSC-RMT-SU-VIVE | Remote full-scope startup |

**Startup enhancements** *(Available with onsite full-scope startup)*

| LSC-AH-SU | Startup performed at night or weekends *(weekend work available in certain locations)* |
| LSC-SENS-LT | Sensor layout & tuning |
| LSC-SPV-DOC | System performance—verification documentation |
| LSC-SPV-DOC-T24 | Title 24 acceptance test visit |
Available Operational Services

- Support the facilities team to maximize system potential
- Reprogram the system as space needs change over time
- Support retro-commissioning requirements
- Pre-purchase with the system to capture costs in capital budget

Product options

Operational service models

<table>
<thead>
<tr>
<th>Operational services</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSC-TRAINING</td>
<td>Customer-site solution training</td>
</tr>
<tr>
<td>LSC-SYSOPT</td>
<td>System optimization service</td>
</tr>
<tr>
<td>LSC-OS-PROG8-EN</td>
<td>8 hours of onsite reconfiguration support</td>
</tr>
<tr>
<td>LSC-OS-PROG4-EN</td>
<td>4 hours of onsite reconfiguration support</td>
</tr>
<tr>
<td>LSC-RMT-PROG4-EN</td>
<td>4 hours of remote reconfiguration support</td>
</tr>
</tbody>
</table>

Remote and onsite services are also available for purchase after the system is in operation at hourly, half-day and full-day rates; contact Lutron at lscwarranty@lutron.com for more information.

Commercial system limited warranty

The commercial system limited warranty offers 5 years of parts coverage, 2 years of first-available onsite/remote response time for system issues, and 24/7 technical support. Warranty included with onsite full-scope startup & available with remote full-scope startup.

Product options

Vive limited warranty

<table>
<thead>
<tr>
<th>Product options</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSC-B2</td>
</tr>
<tr>
<td>Commercial System</td>
</tr>
<tr>
<td>2-Year Limited</td>
</tr>
</tbody>
</table>

Technology Support Plans (TSPs)

All Lutron Technology Support Plans provide 100% parts and diagnostic labor coverage for up to 10 years. Optional response-time guarantees and preventive maintenance visits enable the coverage to be customized to meet the facility’s needs. TSPs are available for any Vive system; a warranty audit visit will be included with the purchase of a TSP when full-scope startup is not purchased.

Product options

Vive Technology Support Plans

<table>
<thead>
<tr>
<th>Product options</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSC-SILV-IW</td>
</tr>
<tr>
<td>Silver Level Technology Support Plan</td>
</tr>
<tr>
<td>LSC-GOLD-IW</td>
</tr>
<tr>
<td>Gold Level Technology Support Plan</td>
</tr>
<tr>
<td>LSC-PLAT-IW</td>
</tr>
<tr>
<td>Platinum Level Technology Support Plan</td>
</tr>
<tr>
<td>LSC-WARR-AUD</td>
</tr>
<tr>
<td>Warranty Audit Visit</td>
</tr>
</tbody>
</table>

Vive warranty information

Vive wireless solutions are all covered by a 5-year parts warranty with registration of the product. Additional technology support options are available to meet your project needs. See the options below.

<table>
<thead>
<tr>
<th>Support Options</th>
<th>Commercial System Limited Warranty</th>
<th>Silver (TSP)</th>
<th>Gold (TSP)</th>
<th>Platinum (TSP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration up to 10 years of coverage</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>100% Replacement Parts</td>
<td>(5 yrs)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Diagnostic Labor—First Available Response</td>
<td>(2 yrs)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Diagnostic Labor—72-Hour Response</td>
<td></td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Labor—24-Hour Response</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Annual Preventive Maintenance Visit</td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>
### Vive wireless hub

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-MOUNT-SM</td>
<td>Surface-mount installation adapter</td>
<td>80.00</td>
</tr>
<tr>
<td>HJS-0-FM</td>
<td>Starter Vive wireless hub, flush mount</td>
<td>1,700.00</td>
</tr>
<tr>
<td>HJS-1-FM</td>
<td>Standard Vive wireless hub, flush mount</td>
<td>80.00</td>
</tr>
<tr>
<td>HJS-1-SM</td>
<td>Standard Vive wireless hub, surface mount</td>
<td>80.00</td>
</tr>
<tr>
<td>HJS-2-FM</td>
<td>Premium Vive wireless hub, flush mount</td>
<td>146.00</td>
</tr>
<tr>
<td>HJS-2-SM</td>
<td>Premium Vive wireless hub, surface mount</td>
<td>146.00</td>
</tr>
</tbody>
</table>

### Vive Vue Dashboard Software

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIVE-VUE</td>
<td>Vive Vue Software Dashboard License</td>
<td>Contact Lutron sales for a quote</td>
</tr>
<tr>
<td>HJS-UPDATE</td>
<td>Software upgrade license to add BACnet</td>
<td>Contact Lutron sales for a quote</td>
</tr>
<tr>
<td>HJS-DEVICES</td>
<td>Software upgrade license expands device limit to 700 devices</td>
<td></td>
</tr>
</tbody>
</table>

### PowPak relay module

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-5R-DV-B</td>
<td>5 A relay</td>
<td>111.00</td>
</tr>
<tr>
<td>RMJS-5RCCO1-DV-B</td>
<td>5 A relay with one contact closure output</td>
<td>126.00</td>
</tr>
<tr>
<td>RMJS-16R-DV-B</td>
<td>16 A relay</td>
<td>131.00</td>
</tr>
<tr>
<td>RMJS-16RCCO1-DV-B</td>
<td>16 A relay with one contact closure output</td>
<td>146.00</td>
</tr>
</tbody>
</table>

### UL 924 rated emergency wireless controls

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-16R-DV-B-EM</td>
<td>Emergency rated 16A relay</td>
<td>182.00</td>
</tr>
<tr>
<td>RMJS-8T-DV-B-EM</td>
<td>Emergency rated 8A, 0-10V dimmer</td>
<td>203.00</td>
</tr>
<tr>
<td>FCJS-ECO-EM</td>
<td>Emergency rated EcoSystem control module</td>
<td>128.00</td>
</tr>
<tr>
<td>FCJS-010-EM</td>
<td>Emergency rated 0-10V control module</td>
<td>130.00</td>
</tr>
<tr>
<td>RMJS-5T-347-EM</td>
<td>Emergency rated 5A, 0-10V controller for 347V</td>
<td>235.00</td>
</tr>
</tbody>
</table>

### PowPak dimming module

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-8T-DV-B</td>
<td>8A 0-10V controller-connector</td>
<td>152.00</td>
</tr>
<tr>
<td>RMJS-8TN-DV-B</td>
<td>8A 0-10V controller-flying leads</td>
<td>152.00</td>
</tr>
<tr>
<td>RMJS-EC032-SZ</td>
<td>Single zone EcoSystem/DALI controller</td>
<td>152.00</td>
</tr>
<tr>
<td>RMJS-ST-347</td>
<td>5A 0-10V controller for 347V</td>
<td>180.00</td>
</tr>
<tr>
<td>5T-347-DIVIDER</td>
<td>Divider for class 1 &amp; class 2 separation</td>
<td>9.00</td>
</tr>
</tbody>
</table>

### PowPak contact closure output module

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-CCO1-24-B</td>
<td>one contact closure output</td>
<td>111.00</td>
</tr>
</tbody>
</table>

### Wireless Receptacle

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR2S-15-STR</td>
<td>15A Split (half switching; single pole/downstream, 120V)</td>
<td>173.00</td>
</tr>
<tr>
<td>CAR2S-15-DTR</td>
<td>15A Duplex (dual switching; single pole/downstream, 120V)</td>
<td>173.00</td>
</tr>
<tr>
<td>CAR2S-20-STR</td>
<td>20A Split (half switching; single pole/downstream, 120V)</td>
<td>193.00</td>
</tr>
<tr>
<td>CAR2S-20-DTR</td>
<td>20A Duplex (dual switching; single pole/downstream, 120V)</td>
<td>193.00</td>
</tr>
</tbody>
</table>

### PowPak relay module

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMJS-20R-DV-B</td>
<td>20 A Receptacle Control Relay Module</td>
<td>141.00</td>
</tr>
<tr>
<td>RMJS-20RCCO1-DV-B</td>
<td>20 A Receptacle Control Relay Module with contact closure output</td>
<td>156.00</td>
</tr>
</tbody>
</table>

### Individual fixture control

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCJS-010</td>
<td>0-10V Control Module</td>
<td>79.00</td>
</tr>
<tr>
<td>FCJS-ECO</td>
<td>EcoSystem Control Module</td>
<td>79.00</td>
</tr>
<tr>
<td>FCJS-010-BULK8</td>
<td>0-10V Control Module 8-pack</td>
<td>610.00</td>
</tr>
<tr>
<td>FCJS-ECO-BULK8</td>
<td>EcoSystem Control Module 8-pack</td>
<td>610.00</td>
</tr>
<tr>
<td>FC-SENSOR</td>
<td>Occupancy/Daylight Sensor</td>
<td>35.00</td>
</tr>
<tr>
<td>FC-VSENSOR</td>
<td>Vacancy/Daylight Sensor</td>
<td>35.00</td>
</tr>
<tr>
<td>DFCSJ-OEM-RF*</td>
<td>Vive Integral Fixture Control (RF Only)</td>
<td>60.00</td>
</tr>
<tr>
<td>DFCSJ-OEM-OCC*</td>
<td>Vive Integral Fixture Control (with Sensing)</td>
<td>70.00</td>
</tr>
</tbody>
</table>

* Contact your local fixture representative and ask for a Vive-enabled fixture or visit lutron.com/findafixture. Fixture adders may vary.
### Maestro Wireless switches*
- **MRF2S-6ANS-XX**: 6 A lighting, 3 A fan (1/10 HP motor), 120V
  - List Price: $110.00
- **MRF2S-8S-DV-XX**: 8 A lighting, 3 A fan (1/10 HP motor, 120 V only), spec grade
  - List Price: $173.00
- **MRF2S-8ANS-120-XX**: 8 A lighting, 5.8 A fan (1/4 HP motor), spec grade, 120V
  - List Price: $142.00

### Maestro Wireless dimmers*
- **MRF2S-6CL-XX**: 150W dimmable CFL/LED, 600W incandescent, halogen
  - List Price: $110.00
- **MRF2S-6ELV120-XX**: 600W ELV, 120V
  - List Price: $212.00
- **MRF2S-8END-120-XX**: 600 WVA incandescent/halogen/MLV, 120 V
  - List Price: $152.00
- **MRF2S-8SD010-XX**: 0-10 V Wallbox Dimmer Sensor
  - List Price: $180.00
- **MRF2S-8SS-XX**: Wallbox Sensor Switch
  - List Price: $160.00

### Maestro Wireless/Maestro occupancy sensing control companion devices*
- **MA-AS-XX**: Multi-location companion switch, 120V
  - List Price: $38.50
- **MA-R-XX**: Multi-location companion dimmer, 120V
  - List Price: $30.50

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) Price indicated for gloss finish products.

### Pico wireless remotes*
- **PJ2-2BRL-XXX-L01**: 2-button with raise/lower
  - List Price: $25.00
- **PJ2-2B-XXX-L01**: 2-button
  - List Price: $25.00
- **PJN-2B-GXX-L01**: Nightlight 2-button
  - List Price: $58.00
- **PJ2-3BRL-XXX-L01**: 3-button with raise/lower
  - List Price: $21.00
- **PJ2-3B-XXX-L01**: 3-button
  - List Price: $25.00
- **PJN-3BRL-GXX-L01**: Nightlight 3-button with raise/lower
  - List Price: $58.00
- **PJ2-4B-XXX-L21P**: 4-button with 2 group control
  - List Price: $39.00
- **PJ2-4B-XXX-L01**: 4-button with zone control
  - List Price: $25.00
- **PJ2-4B-XXX-L31**: 4-button with scene control
  - List Price: $39.00

* (XX in the model number represents color/finish code; price shown is for white (WH) models only.) Price for other colors varies.

### Pico accessories*
- **PICO-WBX-ADAPT**: Pico wireless remote wallbox adapter
  - List Price: $8.60
- **PICO-347WBX-ADAP**: Pico wireless remote wallbox adapter for 347V
  - List Price: $9.00
- **CW-1-XX**: Claro 1-gang wallplate
  - List Price: $5.00
- **CW-2-XX**: Claro 2-gang wallplate
  - List Price: $10.00
- **CW-3-XX**: Claro 3-gang wallplate
  - List Price: $15.20
- **CW-4-XX**: Claro 4-gang wallplate
  - List Price: $21.00
- **L-PED1-XX****: Pico wireless remote single pedestal
  - List Price: $15.00
- **L-PED2-XX**: Pico wireless remote double pedestal
  - List Price: $30.00
- **L-PED3-XX****: Pico wireless remote triple pedestal
  - List Price: $100.00

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) Price indicated for gloss finish products.

** (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) Price indicated for White finish products.

### Maestro Colors
- **Gloss Colors**
  - White (WH)
  - Ivory (IV)
  - Almond (AL)
  - Light Almond (LA)
  - Gray (GR)
  - Brown (BR)
  - Black (BL)

- **Satin Colors (Prices vary from Gloss Colors)**
  - Hot (HT)
  - Merlot (MR)
  - Plum (PL)
  - Turquoise (TQ)
  - Sea Glass (SG)
  - Midnight (MN)
  - Sienna (SI)
  - Temacotta (TC)
  - Greenbriar (GB)
  - Bluestone (BG)
  - Tappe (TP)
  - Eggshell (ES)
  - Biscuit (BI)
  - Snow (SW)
  - Palladium (PD)
  - Mocha Stone (MS)
  - Goldstone (GS)
  - Desert Stone (DS)
  - Stone (ST)
  - Limestone (LS)

### Pico Colors
- **Gloss Colors**
  - White (WH)
  - Ivory (IV)
  - Light Almond (LA)
  - Black (BL)
  - White/Gray (WG)
- **Satin Colors**
  - Snow (SW)
  - Biscuit (BI)
  - Midnight (MN)

* $56 not in white
### Ordering Information

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Radio Powr Savr occupancy/vacancy sensors</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRF2-OCR2B-P-WH</td>
<td>Ceiling-mount, 360° field-of-view, occupancy/vacancy sensor</td>
<td>89.00</td>
</tr>
<tr>
<td>LRF2-OWLB-P-WH</td>
<td>Wall-mount, 180° field-of-view, occupancy/vacancy sensor</td>
<td>89.00</td>
</tr>
<tr>
<td>LRF2-OXLB-P-WH</td>
<td>Corner-mount, 90° field-of-view, occupancy/vacancy sensor</td>
<td>89.00</td>
</tr>
<tr>
<td>LRF2-OHLB-P-WH</td>
<td>Hallway, occupancy/vacancy sensor</td>
<td>89.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupancy/vacancy sensor accessories</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L-CMDPPIRKIT</td>
<td>Sensor lens masking kit for Radio Powr Savr ceiling sensor</td>
<td>12.50</td>
</tr>
<tr>
<td>L-CRMK-WH</td>
<td>Recess-mounting bracket for Radio Powr Savr ceiling sensor</td>
<td>18.00</td>
</tr>
<tr>
<td>L-RF-ARM-WH</td>
<td>Flexible armature mounting kit for Radio Powr Savr wall, hall, corner sensors</td>
<td>62.00</td>
</tr>
<tr>
<td>L-WIRECAGE-WBX</td>
<td>Wire guard for in-wall sensor, White</td>
<td>68.00</td>
</tr>
<tr>
<td>L-WIRECAGE-C</td>
<td>Wire guard for ceiling-mount sensor, White</td>
<td>68.00</td>
</tr>
<tr>
<td>L-WIRECAGE-W</td>
<td>Wire guard for wall-mount and hallway sensors, White</td>
<td>68.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Radio Powr Savr daylight sensor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRF2-DCHR-PWH</td>
<td>Ceiling-mount daylight sensor</td>
<td>125.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>List Price (US)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wallplates</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW-1-XX</td>
<td>Claro 1-gang wallplate</td>
<td>5.00</td>
</tr>
<tr>
<td>CW-2-XX</td>
<td>Claro 2-gang wallplate</td>
<td>10.00</td>
</tr>
<tr>
<td>CW-3-XX</td>
<td>Claro 3-gang wallplate</td>
<td>15.20</td>
</tr>
<tr>
<td>CW-4-XX</td>
<td>Claro 4-gang wallplate</td>
<td>21.00</td>
</tr>
</tbody>
</table>

---

* XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices. Price indicated for gloss finish products.

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### Vive Startup Services

- **LSC-OS-SU-VIVE**: Onsite full-scope startup
- **LSC-RMT-SU-VIVE**: Remote full-scope startup
- **LSC-AH-SU**: After hours startup
- **LSC-SENS-LT**: Sensor layout & tuning
- **LSC-SPV-DOC**: System performance-verification documentation
- **LSC-SPV-DOC-T24**: Title 24 acceptance test visit

### Vive Setup Support Services

- **LSC-OS-PROG8-SP**: Onsite programming — 8-hour block
- **LSC-OS-PROG4-SP**: Onsite programming — 4-hour block
- **LSC-RMT-PROG8-SP**: Remote programming — 8-hour block
- **LSC-PREWIRE**: Prewire visit
- **LSC-TRAINING**: Customer-site solution training
- **LSC-AF-VISIT**: Onsite scene and level tuning
- **LSC-WALK**: Onsite performance-verification walkthrough

### Vive Operational Services

- **LSC-TRAINING**: Customer-site solution training
- **LSC-SYSSOPT**: System optimization service
- **LSC-OS-PROG8-EN**: 8 hours of onsite reconfiguration support
- **LSC-OS-PROG4-EN**: 4 hours of onsite reconfiguration support
- **LSC-RMT-PROG4-EN**: 4 hours of remote reconfiguration support

### Vive Limited Warranty and Technology Support Plans

- **LSC-B2**: Commercial system limited warranty
- **LSC-SLVL-IW**: Silver level technology support plan
- **LSC-GOLD-IW**: Gold level technology support plan
- **LSC-PLAT-IW**: Platinum level technology support plan
- **LSC-WARR-AUD**: Warranty audit visit

Contact Lutron sales for a quote.
In-wall: Occupancy/vacancy switches

Other energy saving devices by Lutron

These devices do not integrate with the Vive system

Maestro sensor

Dimensions
W: 2.94" (75 mm)
H: 4.69" (119 mm)
D: 1.44" (38 mm)

Maestro dual-circuit sensor switch

Dimensions
W: 2.94" (75 mm)
H: 4.69" (119 mm)
D: 1.44" (38 mm)

Features and benefits

- Standalone solutions are not compatible with the Vive hub
- Lutron XCT technology for superior sensitivity prevents false ons and false offs
- Automatically turns lights off when space is unoccupied
- Easy to install; directly replaces an existing control
- Lutron’s Smart Ambient Light Detection learns your preferences over time and adapts accordingly
- Lutron’s Adaptive Zero-Cross Switching extends relay lifetime
- 180° sensor field-of-view; must have unobstructed view
- Up to 900 ft² major motion coverage and 400 ft² minor motion coverage
- Adjustable timeout—1, 5, 15, 30 minutes
- Vacancy/partial-on models available to meet CA Title 24 requirements
- Dual-circuit sensors provide bi-level control of two circuits, as required by specific energy codes
- Select from up to 27 colors to complement the décor*

Product options

Maestro sensor switch†
MS-OPS2-XX 2 A lighting, 120 V PIR occupancy/vacancy; single pole, no neutral
MS-OPS5M-XX 5 A lighting, 120 V PIR occupancy/vacancy; 3 A fan, multi-location/3-way/single pole, no neutral
MS-OPS6M2-DV-XX 6 A lighting, 120-277 V PIR occupancy/vacancy, 3 A fan (120 V only); no neutral required
MS-OPS6M2N-DV-XX 6 A lighting, 120-277 V PIR occupancy/vacancy, 3 A fan (120 V only); neutral required

Maestro dual-circuit sensor switch
MS-OPS6-DDV-XX 6 A lighting per circuit, 120-277 V PIR dual-circuit occupancy/vacancy; 4.4 A fan (120 V only) per circuit; single pole

Standalone Solutions

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) See Maestro colors on page 51.

† Vacancy-only models available. Replace the “O” in the model number with a “V.”

†† Vacancy-only models available. Replace the “O” in the model number with a “V.”
In-wall: Occupancy/vacancy switches

Maestro dual-technology sensor switch

Dimensions:
W: 2.94” (75 mm)
H: 4.69” (119 mm)
D: 1.44” (38 mm)

Maestro dual-technology, dual-circuit sensor switch

Dimensions:
W: 2.94” (75 mm)
H: 4.69” (119 mm)
D: 1.44” (38 mm)

Features and benefits

- Standalone solutions are not compatible with the Vive hub
- Lutron XCT technology greatly enhances the performance of dual-technology sensors, enabling them to detect very fine motion like typing
- Automatically turns lights off when space is unoccupied
- Easy to install; directly replaces an existing control
- Lutron’s Smart Ambient Light Detection learns your preferences over time and adapts accordingly
- Lutron’s Adaptive Zero-Cross Switching extends relay lifetime
- 180° sensor field-of-view; must have unobstructed view
- Up to 900 ft² major motion coverage and 400 ft² minor motion coverage
- Adjustable timeout—1, 5, 15, 30 minutes
- Vacancy models available to meet CA Title 24 requirements
- Dual-circuit sensors provide bi-level control of two circuits, as required by specific energy codes
- Select from up to 27 colors to complement the décor*

Product options

Maestro sensor switch†

MS-A102-XX 6 A lighting, 120-277V dual-tech occupancy/vacancy sensor, 4.4 A fan (120V only); single pole, no neutral

MS-B102-XX 6 A lighting, 120-277V dual-tech occupancy/vacancy sensor, 4.4 A fan (120V only); multi-location/3-way, neutral required

Maestro dual-circuit sensor switch

MS-A202-XX 6 A lighting per circuit, 120-277V dual-tech occupancy/vacancy sensor, 4.4 A fan (120V only) per circuit; single pole, no neutral

MS-B202-XX 6 A lighting per circuit, 120-277V dual-tech occupancy/vacancy sensor, 4.4 A fan (120V only) per circuit; 3-way, neutral required

In-wall PIR occupancy/vacancy sensor switches

Dimensions:
W: 2.94” (75 mm)
H: 4.69” (119 mm)
D: 1.44” (38 mm)

Features and benefits

- Standalone solutions are not compatible with the Vive hub
- Lutron XCT technology for superior sensitivity prevents false ons and false offs
- Automatically turns lights off when space is unoccupied
- Easy to install; directly replaces an existing control
- Lutron’s Smart Ambient Light Detection learns your preferences over time and adapts accordingly
- 180° sensor field-of-view; must have unobstructed view
- Up to 900 ft² major motion coverage and 400 ft² minor motion coverage
- Adjustable timeout—1, 5, 15, 30 minutes
- Vacancy models available to meet CA Title 24 requirements
- Select from up to 27 colors to complement the décor*

Product options

0-10 V dimmer sensor‡

MS-Z101-XX 8 A lighting 120-277V; occupancy/vacancy; multi-location/3-way/single pole

Controls electronic LED drivers and fluorescent ballasts
- Miswire and load incompatibility alert — lens will flash red if control is miswired or connected to an incompatible fixture
- Selectable dimming curve optimizes performance of 0-10V LED drivers
- Lutron’s Adaptive Zero-Cross Switching extends relay lifetime

* (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) See Maestro colors on page 51.
† Vacancy only models available. Add “-V-” before the color code (XX).
‡ (XX in the model number represents color/finish code; use WH for White; please visit lutron.com for other color choices.) See Maestro colors on page 51.
† Vacancy only models available. Replace the “O” in the model number with a “V.”
Features and benefits

- Standalone solutions are not compatible with the Vive hub
- C•L dimmer for control of screw-based CFLs and LEDs

Product options

C•L dimmer sensor†

MSCL-OP153M-XX  
C•L dimmer with PIR sensor; occupancy/vacancy; multi-location/3-way/single pole; 150 W CFL/LED, 600 W incandescent/halogen

Dimensions

W: 2.94" (75 mm)  
H: 4.69" (119 mm)  
D: 1.44" (38 mm)

* Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).
† Vacancy-only models available. Replace the “O” in the model number with a “V”.
‡ For dual-tech or 0-10 V vacancy models, add “-V-” before the color code (XX).

Vacancy models available to meet California Title 24 section 119(j) requirements.

** Dual-tech or 0-10 V vacancy models, add “-V-” before the color code (XX).
For a list of all Vive wireless solutions product model numbers and pricing see lutron.com/vive

Questions?
call us 24-7
1.844.588.7661

lutron.com
Lutron Electronics Co., Inc., 7200 Suter Road, Coopersburg, PA 18036-1299

Customer Assistance
Online: lutron.com/help
Email: support@lutron.com
Phone: 1.844.LUTRON1 (588.7661) — includes 24/7 technical support

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