

## Zūm™ J-Box Load Controller

- > Zūm™ wireless junction box-mounted lighting load controllers
- > Pair and play wireless integration with Zūm keypads, occupancy sensors, vacancy sensors, and daylight sensors<sup>[1]</sup>
- > Zūm Mesh peer-to-peer RF communications for easy integration into a complete standalone or networked Zūm wireless lighting control solution
- > Dimming control of 0-10 Volt dimmable LED or fluorescent loads
- > Dimmers rated 5 or 16 Amps at 100-277 Volts AC
- > Zero cross switch control of 16 Amp, 100-277 Volt high inrush lighting loads
- > Zero cross switch control of 20 Amp, 100-240 Volt plug loads
- > Accommodation for a Zūm Network Bridge or Zūm Contact Closure Output device<sup>[1]</sup>
- > Flying lead wiring connections
- > Knockout mount to a standard 4-inch square junction box
- > UL 2043 listed for installation in an environmental air handling space
- > Meets UL 916 standard for energy management equipment
- > Meets CEC Title 24 energy efficiency standards<sup>[3]</sup>
- > Meets ASHRAE 90.1 energy efficiency standards<sup>[4]</sup>
- > ICC International Energy Conservation Code compliant<sup>[5]</sup>

Zūm™ junction box-mounted load controllers deliver intelligent “pair and play” room lighting control with essential features for energy efficiency. Available for 16 Amp switching, 5 Amp or 16 Amp 0-10V dimming, and 20 Amp plug load control, each ZUMMESH-JBOX model wirelessly connects to a Zūm [daylight sensor](#), [occupancy](#) or [vacancy sensors](#), and [keypads](#) over the Zūm Mesh network, providing intelligent lighting control based on the amount of natural light and the presence of people in the room.<sup>[1]</sup>

### Energy Efficiency

Occupancy sensor, vacancy sensor, and daylight sensor connectivity drive the potential for significant energy savings. Lights will turn off automatically when the room is vacant and dim gradually according to the amount of natural daylight in the room, reducing energy usage while maintaining a consistent light level for a comfortable workspace.

### Zūm Mesh Wireless Technology

Ultra-reliable Zūm Mesh wireless technology provides steadfast peer-to-peer RF communications within a commercial space without the need for physical control wiring, hubs, or gateways. Employing a Wi-Fi® friendly 2.4 GHz peer-to-peer mesh network topology, nearly every Zūm Mesh device acts as an “expander,” relaying wireless commands directly between Zūm Mesh devices to ensure that every command reaches its intended destination without disruption.

Zūm Mesh is smart! Every Zūm Mesh device knows its purpose and just the right messages to communicate to other Zūm Mesh devices within the space. Each Zūm Mesh device that is added to the space effectively increases the range and stability of the peer-to-peer mesh network by providing multiple redundant signal paths. Each Zūm Mesh device auto-negotiates its RF channel to provide robust communication and is



**Zūm J-Box Load Controller (Right)  
Shown with Optional Zūm Network Bridge (Left)**

protected through AES 128-bit encryption. The wireless range between any two Zūm Mesh devices is typically up to 50 ft (15 m) indoors.<sup>[2]</sup>

### Standalone System Capabilities

One or more Zūm J-Box Load Controllers can function as a standalone, single-room lighting system paired with Zūm occupancy or vacancy sensors, a daylight sensor, and one or more keypads.<sup>[1]</sup> The “pair and play” capabilities are enabled with a series of taps on a Zūm keypad – no programming required! Simply install the load controller and other devices in the room, set up the room with a few quick button taps, and then enjoy your energy-efficient lighting control.

### Zūm Across the Enterprise

Zūm delivers cutting-edge wireless lighting control and heightened energy efficiency for the intelligent enterprise. An installer simply snaps a [Zūm Network Bridge](#)<sup>[1]</sup> onto a Zūm J-Box Load Controller to enable centralized monitoring and management of the entire room via a [Zūm Floor Hub](#) and [Zūm Wireless Gateway](#).<sup>[1]</sup> The Zūm Network Bridge also enables enhanced room setup using the Zūm app.

With a simple installation and setup process for every device and little to no programming required, Zūm is a revolutionary, easy-to-use commercial lighting control system for the intelligent enterprise that values centralized lighting management, scalability, and flexibility in either new or retrofit applications. With cloud software support, building managers have total energy monitoring, management, and control capabilities over the entire enterprise, including 3D visualization for each connected room.

*Please refer to the Zūm Lighting Control System Setup Guide (Doc # 7957A) for additional information.*

# ZUMMESH-JBOX Zūm J-Box Load Controller

## SPECIFICATIONS

### Load Ratings

**ZUMMESH-JBOX-5A-LV:** 5 Amps at 100-277 Volts AC, 50/60 Hz, 60 mA maximum current sink

**ZUMMESH-JBOX-16A-LV:** 16 Amps at 100-277 Volts AC, 50/60 Hz, 60 mA maximum current sink

**ZUMMESH-JBOX-20A-SW:** 16 Amps high inrush at 100-277 Volts AC, 50/60 Hz, zero cross switching

**ZUMMESH-JBOX-20A-PLUG:** 20 Amps high inrush (or 16 Amps derated by 80%) at 100-240 Volts AC, 50/60 Hz, zero cross switching for receptacles

**Switch Load Types:** LED, fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, high-intensity discharge

**Dim Load Types (-LV models only):** 0-10 Volt LED driver or fluorescent ballast (4-wire)

**Dim Control Output (-LV models only):** 0-10 Volts DC, 60 mA sink or source

### Power Requirements

**Line Power:** 100-277 Volts AC, 50/60 Hz  
(100-240 Volts AC for ZUMMESH-JBOX-20A-PLUG)

**Idle Power Consumption:** 1 Watt

### Wireless Communications

**RF Transceiver:** 2-way RF, 2.4 GHz ISM Channels 15, 20, 25, or 26 (channel auto-selected), IEEE 802.15.4 compliant

**Zūm Mesh Range (Typical):** 50 ft (15 m) indoor to nearest peer-to-peer mesh network device(s); Subject to site-specific conditions and individual device capabilities<sup>[2]</sup>

**Zūm Net Range (Typical):** 150 ft (46 m) indoor to a Zūm wireless gateway or nearest mesh network device(s), requires the Zūm Network Bridge (model [ZUMMESH-NETBRIDGE](#)<sup>[1]</sup>); Subject to site-specific conditions and individual device capabilities<sup>[2]</sup>

*Note: A maximum of 32 Zūm Mesh wireless devices is permitted per room. Only one Network Bridge is permitted per room.*

### Controls & Indicators

**SETUP:** (1) Pushbutton and (1) red LED, used for room setup and factory reset

**TEST:** (1) Pushbutton and (1) green LED, press the button to toggle the switched load output on and off, press and hold the button to cycle the dimming level up and down, LED indicates the lighting load (or plug load) is turned on, also used for room setup and factory reset

### Connections

**Hot:** (1) 14 AWG Class 1 flying lead, black, line power input

**Neutral:** (1) 14 AWG Class 1 flying lead, white, neutral

**Switched Load:** (1) 14 AWG Class 1 flying lead, red, switched load output

**0-10V Dim + (-LV models only):** (1) 18 AWG Class 1 flying lead, purple, 0-10 Volt DC dimming control output, positive

**0-10V Dim - (-LV models only):** (1) 18 AWG Class 1 flying lead, gray,

0-10 Volt DC dimming control output, negative

**Expansion Port:** Accessory port for optional Zūm Network Bridge or Zūm Contact Closure Output (model [ZUMMESH-NETBRIDGE](#) or [ZUMMESH-CCO](#)<sup>[1]</sup>)

### Construction

**Housing:** Plastic, white, UL 94 5VA flame rated

**Mounting:** Mounts to the side of a 4-inch square junction box via a 1/2 inch conduit knockout, meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

### Environmental

**Temperature:** 32° to 104° F (0° to 40° C)

**Humidity:** 10% to 90% RH (non-condensing)

### Dimensions

**Height:** 3.25 in (83 mm)

**Width:** 4.17 in (106 mm)

**Depth:** 1.32 in (34 mm)

*Note: Projects 3.66 inches (93 mm) from the junction box when installed.*

### Weight

7 oz (199 g)

### Standards & Certifications

UL 2043, UL 916, UL 94 5VA, CEC Title 24 2013<sup>[3]</sup>, ASHRAE 90.1-2016<sup>[4]</sup>, IECC-2015<sup>[5]</sup>, FCC

## MODELS & ACCESSORIES

### Available Models

**ZUMMESH-JBOX-5A-LV:** Zūm J-Box Load Controller, 0-10V Dimmer, 5A, 100-277V

**ZUMMESH-JBOX-16A-LV:** Zūm J-Box Load Controller, 0-10V Dimmer, 16A, 100-277V

**ZUMMESH-JBOX-20A-SW:** Zūm J-Box Load Controller, High Inrush Switch, 16A, 100-277V

**ZUMMESH-JBOX-20A-PLUG:** Zūm J-Box Load Controller, Plug Load Switch, 20A, 100-277V

### Available Accessories

**ZUMMESH-NETBRIDGE:** Zūm Network Bridge

**ZUMMESH-CCO:** Zūm Contact Closure Output

**ZUMMESH-OL-PHOTOCELL-BATT:** Zūm Wireless Battery-Powered Daylight Sensor, Open-Loop

**ZUMMESH-PIR-OCCUPANCY-BATT:** Zūm Wireless Battery-Powered Occupancy Sensor, 500 sq ft

**ZUMMESH-PIR-VACANCY-BATT:** Zūm Wireless Battery-Powered Vacancy Sensor, 500 sq ft

**ZUMMESH-KPBATT:** Zūm Battery-Powered Wireless Keypad

**ZUMMESH-KP:** Zūm Wireless Keypad

# ZUMMESH-JBOX Zūm J-Box Load Controller

**ZUM-FLOOR-HUB:** Zūm Floor Hub

**ZUMNET-GATEWAY:** Zūm Wireless Gateway

**Notes:**

1. Item(s) sold separately. Refer to each product's spec sheet for more information.
2. "Zūm Mesh" refers to the wireless mesh network within each room composed of dimmers, switches, load controllers, keypads, and sensors. "Zūm Net" refers to the wireless mesh network that connects one or more rooms with a Zūm Floor Hub, and consists of a Zūm Wireless Gateway and one or more Zūm Network Bridges. AC-powered Zūm Mesh or Zūm Net devices function as wireless "expanders," which effectively extend the range of a Zūm Mesh or Zūm Net wireless network. Battery-powered devices do not provide expander functionality. Networks composed predominantly of battery-powered devices may require additional AC-powered devices, such as the **ZUMMESH-JBOX-PSU**, to function as expanders to fill any gaps in coverage.
3. This product is part of Crestron T24-2013 compliant solutions. Reference the T24-2013 design guide for additional devices required for fully compliant solutions.
4. This product is part of Crestron ASHRAE 90.1-2013 compliant solutions. Reference the ASHRAE 90.1-2013 design guide for additional devices required for fully compliant solutions.
5. This product is part of Crestron IECC-2015 compliant solutions. Reference the IECC-2015 design guide for additional devices required for fully compliant solutions.

All design guides can be accessed via the Consultant Partner Portal at <http://www.crestron.com/about/partner-info/consultants-uplink>.

This product may be purchased from an authorized Crestron dealer or distributor. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/salesreps](http://www.crestron.com/salesreps) or by calling 800-237-2041.

For assistance with incorporating this product into a design or specification, please contact the Commercial Lighting Consultant Hotline at [clcdesign@crestron.com](mailto:clcdesign@crestron.com) or by calling 888-330-1502.

The specific patents that cover Crestron products are listed online at: [patents.crestron.com](http://patents.crestron.com).

Certain Crestron products contain open source software. For specific information, visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

Crestron, the Crestron logo, and Zūm are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. Wi-Fi is either a trademark or a registered trademark of Wi-Fi Alliance in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography. Specifications are subject to change without notice.  
©2017 Crestron Electronics, Inc.

