

## Zūm™ J-Box Load Controllers

- > 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<sup>[2]</sup>
- > 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™ J-Box Load Controllers (**ZUMMESH-JBOX**) afford sophisticated lighting control with simple installation. Multiple models are offered to support the choice of 16 Amp switching, 5 Amp or 16 Amp 0-10V dimming, and 20 Amp plug load control. Each model mounts directly to a 4-inch square junction box and pairs wirelessly with one or more Zūm wireless keypads to control a single lighting load with up to three scene presets.

Zūm Mesh wireless technology affords easy “pair and play” integration as part of a complete Zūm commercial room lighting system. Energy-saving options are available to enable daylighting, occupancy or vacancy sensing, HVAC system integration, and centralized monitoring and management.<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. This reduces energy usage while maintaining a consistent light level for a comfortable workspace.

### Pair and Play

Designed with flexibility and ease-of-use in mind, Zūm load controllers are pre-programmed with “pair and play” functionality. An installer can simply install the load controller in a room along with **Zūm keypads**, occupancy or vacancy sensors, and/or a daylight sensor, then set up the room with a few quick button taps and instantly control the lights in the room – no programming required! Room setup can also be accomplished using the Zūm app if the room is equipped with a Zūm Network Bridge.<sup>[1]</sup>

### Optional Zūm Network Bridge

Zūm delivers cutting-edge wireless lighting control and heightened energy



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

efficiency for the intelligent enterprise. Simply snap a Zūm Network Bridge (**ZUMMESH-NETBRIDGE**) onto any Zūm J-Box Load Controller in the room to enable centralized monitoring and management of the entire room via a **Zūm Floor Hub** and **Zūm Net Wireless Gateway**. The Zūm Network Bridge also enables enhanced room setup using the Zūm app. For more information, please refer to the ZUMMESH-NETBRIDGE spec sheet.<sup>[1]</sup>

### Optional Contact Closure Output

Easy integration with an HVAC system or other relay-controlled equipment is enabled by snapping a Zūm Contact Closure Output (**ZUMMESH-CCO**) onto the Zūm J-Box Load Controller. For more information, refer to the ZUMMESH-CCO spec sheet.<sup>[1]</sup>

### 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 a “routing node,” 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 protected through AES 128-bit encryption. The wireless range between any two Zūm Mesh devices is typically 50 feet (15 meters).<sup>[2]</sup>

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Please refer to the [Zūm Lighting Control System Setup Guide \(Doc # 7957\)](#) for additional information.

## SPECIFICATIONS

### Load Control

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

**Dimmable Load Types (-LV models only):** 0-10 Volt LED drivers or fluorescent ballasts (4-wire), 60 mA maximum current sink

#### Load Rating:

ZUMMESH-JBOX-5A-LV: 5 Amps

ZUMMESH-JBOX-16A-LV: 16 Amps

ZUMMESH-JBOX-20A-SW: 16 Amps, high inrush, zero cross switching

ZUMMESH-JBOX-20A-PLUG: 20 Amps (or 16 Amps derated by 80%), high inrush, zero cross switching for receptacles

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

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

**Idle Power Consumption:** 1 Watt

### Wireless Communications

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

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

**Zūm Net Range:** 50 ft (15 m) to a Zūm Net wireless gateway or nearest Zūm Net mesh network device(s), requires the Zūm Network Bridge (model [ZUMMESH-NETBRIDGE](#)<sup>[1]</sup>), range between floors or ceilings is limited to one level, 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)

### Compliance

UL Listed for US & Canada, IC, FCC Part 15 Class A digital device, UL 916, UL 2043, UL 94 5VA, CEC Title 24<sup>[3]</sup>, ASHRAE 90.1<sup>[4]</sup>, IECC<sup>[5]</sup>

## 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, 100-240V

### 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

**ZUMMESH-PIR-VACANCY-BATT:** Zūm Wireless Battery-Powered Vacancy Sensor

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

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**ZUMMESH-KP:** Züm Wireless Keypad

**ZUM-FLOOR-HUB:** Züm Floor Hub

**ZUMNET-GATEWAY:** Züm Net Wireless Gateway

**Notes:**

1. Item(s) sold separately. Refer to each product's spec sheet for more information.
2. "Züm Mesh" refers to the wireless mesh network within each room composed of dimmers, switches, load controllers, keypads, and sensors. "Züm Net" refers to the wireless mesh network that connects one or more rooms with a Züm Floor Hub, and consists of a Züm Net Wireless Gateway and one or more Züm Network Bridges. AC-powered Züm Mesh or Züm Net devices function as routing nodes, which effectively extend the range of a Züm Mesh or Züm Net wireless network. Battery-powered devices only function as leaf nodes and do not extend range. A Züm Mesh network composed predominantly of battery-powered devices may require additional AC-powered devices, such as the **ZUMMESH-JBOX-PSU**, to serve as supplemental routing nodes to fill any gaps in coverage. Refer to the "Installation and Setup of Crestron RF Products, Best Practices" guide (Doc #6689) for additional guidelines.
3. This product is part of a California Energy Commission Title 24 compliant solution. Refer to <http://www.energy.ca.gov/title24/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
4. This product is part of an ASHRAE 90.1 compliant solution. Refer to <https://www.ashrae.org/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
5. This product is part of an International Energy Conservation Code compliant solution. Refer to <https://www.iccsafe.org/iecc/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.

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.

Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>. For assistance with incorporating this product into a design or specification, please contact the Commercial Lighting Consultant Hotline via email 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).

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