

# ZUMMESH-AVBRIDGE

## AV Bridge – Wireless Control Integration Module

- > Enables Crestron® Battery-Powered Wireless AV Keypads for all applications
- > Enables use of Züm™ occupancy and vacancy sensors for non-Züm applications
- > Connects the keypads and sensors to a control system or computer
- > Interfaces a complete Züm commercial lighting system to a local AV control system
- > Choice of RS-232 or USB interface<sup>[1]</sup>
- > Simple, brand-agnostic command set
- > Züm Mesh peer-to-peer wireless technology — no gateway required!<sup>[2]</sup>
- > Ultra-compact, surface mount design
- > 12-24 Volt DC or USB powered<sup>[3]</sup>

The AV Bridge (ZUMMESH-AVBRIDGE) is a wireless control integration module designed for use with Crestron® Battery-Powered Wireless AV Keypads (ZUMMESH-KPAVBATT) and Züm™ Wireless Battery-Powered Occupancy and Vacancy Sensors (ZUMMESH-PIR-OCCUPANCY-BATT & ZUMMESH-PIR-VACANCY-BATT). It enables simple control of AV and other functions by connecting the keypads and sensors to a control system or computer. A simple, brand-agnostic command set allows for integration with both Crestron and third-party systems via RS-232 or USB.<sup>[1]</sup> The AV Bridge pairs wirelessly with up to eight keypads and eight sensors in a room without requiring a separate wireless gateway.<sup>[2]</sup>

The AV Bridge also enables integration between a complete Züm commercial lighting system and an AV control system within the same room, communicating wirelessly with each Züm device in the room via the Züm Mesh wireless network.<sup>[2]</sup> Integrating the lighting and AV systems enables control of the lights from any touch screen, keypad, handheld remote, or mobile device app tied to the control system. It also enables automation of the lights using any occupancy sensor, daylight sensor, or other device tied to the control system. Conversely, the current state of the Züm lighting devices (active lighting scene, dimming levels, occupancy status, daylight levels) can report to the control system to integrate and automate the AV and other equipment tied to the control system.

The Züm AV Bridge is designed to be mounted to a wall or other flat surface. Care should be taken when positioning the device to avoid interference from nearby RF devices, obstructions, and metal surfaces. The unit can be powered by a regulated 12-24 Volt DC power source or USB power.<sup>[3]</sup>



### SPECIFICATIONS

#### Wireless Communications

**RF Transceiver:** Züm Mesh 2-way RF, 2.4 GHz ISM Channels 15, 20, 25, or 26 (channel auto-selected), IEEE 802.15.4 compliant, AES-128 encryption  
**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>

*Note: A maximum of 32 Züm Mesh wireless devices is permitted per room inclusive of a maximum of 8 battery-powered keypads and 8 occupancy or vacancy sensors.*

#### Wired Communications

**RS-232:** 2-way serial up to 115.2k baud (TD/RD only)

**USB:** USB 1.1, appears as a virtual COM port on the host computer

#### Connectors

**COM:** (1) 3-pin 3.5 mm detachable terminal block;  
Bidirectional RS-232 port

**COMPUTER:** (1) USB Type Micro-B connector, female;  
USB 1.1 device port<sup>[3]</sup>;  
3 ft (0.91 m) USB micro-B male to A male cable included

**PWR 12-24 VDC:** (1) 2-pin 3.5 mm detachable terminal block;  
12-24 Volt DC power input

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## Controls & Indicators

**PWR:** (1) Bi-color LED, amber indicates device is booting, green indicates device is operating

**NET:** (1) Amber LED, indicates Züm Mesh wireless network activity

**TX:** (1) Green LED, indicates serial data transmission

**RX:** (1) Green LED, indicates serial data reception

**ERR:** (1) Red LED, indicates an error condition

**SETUP:** (1) Red LED and (1) recessed pushbutton for room setup and factory reset

## Power

**Power Options:** 12-24 Volts DC or USB<sup>[3]</sup>

**Power Consumption:** 1 Watt

## Environmental

**Temperature:** 32° to 113° F (0° to 45° C)

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

**Heat Dissipation:** 3 BTU/hr

## Construction

Plastic, black, (2) integral surface mounting flanges, vented sides

## Dimensions

**Height:** 0.69 in (18 mm)

**Width:** 2.58 in (66 mm)

**Depth:** 2.49 in (64 mm)

## Weight

1.6 oz (45 g)

## Compliance

IC, FCC Part 15 Class B digital device

## MODELS & ACCESSORIES

### Available Models

**ZUMMESH-AVBRIDGE:** AV Bridge – Wireless Control Integration Module

### Available Accessories

**PW-2407RU:** 18 Watt Cresnet® Power Supply, Desktop, 24VDC, 0.7A (18 Watts), Regulated, US/International

**CNSP-XX:** Custom Serial Interface Cable

**ZUMMESH-KPAVBATT Series:** Battery-Powered Wireless AV Keypad

**ZUMMESH-PIR-OCCUPANCY-BATT:** Züm™ Wireless Battery-Powered Occupancy Sensor

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



Top, Front, & Rear Views

### Notes:

1. Use RS-232 for connection to a Crestron control system. When connected to a computer via USB, the interface appears as a virtual COM port. Connecting the USB port to any USB host disables the RS-232 port. Custom commissioning is required when integrating with a control system. Custom software is required when integrating with a computer.
2. The ZUMMESH-AVBRIDGE uses "Züm Mesh" wireless technology to connect and communicate with the keypads, sensors, and lighting devices. Züm Mesh is a peer-to-peer wireless mesh network designed to operate within a single room. The ZUMMESH-AVBRIDGE and all AC-powered Züm Mesh devices function as routing nodes, which effectively extend the range of the wireless network within the room. Battery-powered devices only function as leaf nodes and do not extend range. Networks 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. Power supply not included. Connecting the USB port to a USB host disables the RS-232 port.

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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 <http://www.crestron.com/salesreps> or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: <http://patents.crestron.com>.

Certain Crestron products contain open source software. For specific information, visit <http://www.crestron.com/opensource>.

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