Crestron Zūm™
Technical Brochure

Featuring ASHRAE 90.1-2013, IECC 2015, and Title 24 - 2015- compliant solutions

Crestron Electronics, Inc. | Commercial Lighting Solutions
Crestron creates world-class commercial lighting control solutions that utilize leading-edge technology for scalable, reliable lighting control. Featuring simplified specification, installation, and setup, Crestron commercial lighting solutions offer the right products and systems that are designed to work for the individual needs of each space in a building.

These scalable lighting controls can then be easily networked and integrated for centralized monitoring, management, and control throughout the enterprise. With Crestron, you can expect to dramatically reduce the time required to complete each phase of a lighting control project, improve energy efficiency, and eliminate the over-specification and unnecessary programming inherent in most lighting control systems. Each space is configured with the optimal lighting controls, accessories, and nothing more.

The Zūm Lighting Control

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Crestron Zūm Lighting Control

Lighting control made easy
Crestron Zūm is an innovative commercial lighting solution that features simple design, installation, and control. With unparalleled scalability, Zūm allows for lighting control in as many — or as few — spaces as required. A complete Zūm lighting system is specified in three steps:

1. Start with a space
Crestron Zūm makes lighting control exceptionally simple to specify and set up. Zūm Zone Control devices intelligently "pair and play" with Zūm keypads, occupancy sensors, vacancy sensors, and daylight sensors. A few simple taps on each device sets up the lighting controls — no programming required! All the devices you need for energy-efficient lighting control are available in the Zūm Mesh lineup:

Zūm Mesh Controllers. A single-room Zone Controller is available in either a wallbox or in-ceiling form factor.

Zūm Universal Phase Dimming Module
J-Box Zone Controllers
Wall Box-Mounted Zone Controllers

Zūm Mesh Components. Connect any of the following Zūm devices to the Zūm Mesh Controllers:

AC-Powered Keypads
Battery-Powered Keypads
PIR Occupancy Sensor
PIR Vacancy Sensor
Open-Loop Daylight Sensor
AV Bridge
Contact Closure Output
Power Supply
Sensor Integration Module
Partition Sensor

But how do all the Zūm Mesh devices connect?

Mesh
P2P
Battery
AC powered Zūm Mesh devices
Battery powered Zūm Mesh devices

First, in-room Zūm devices are connected to one another over Zūm Mesh, a reliable, peer-to-peer wireless communications topology. A single-room Zūm system exists entirely within the controlled space; low-profile in-room devices are installed and then paired together for self-sufficient, energy-efficient lighting control.

Each Zūm space can then be networked with the addition of a Zūm Network Bridge, which allows Zūm wireless spaces to talk back to the Zum Hub via a gateway.

Finally, Zūm Multi-Room Networking Devices expand the system from a single room or a series of single rooms to an enterprise-wide lighting control system via Zūm Net communications.

Easy to Manage — Building-wide lighting control is just as easy as in-room lighting control. Simply snap the Zūm Network Bridge into the Zūm Load Controller that’s already installed in the room. Get centralized management and control, and Zūm Cloud Services for every Zūm space.
2) Networking is a snap!

Add the network bridge and the space can be networked. Snap a Zūm Network Bridge onto a J-Box Zone Controller — one per space — to gain intelligent lighting control. The Network Bridge comes with a Setup App for configuring and controlling all the Zūm devices in the room from your mobile device. The Network Bridge is also the component that enables several spaces to be integrated over the Zūm Net wireless network.

Every space can benefit from the Network Bridge — even those controlled by a Zūm Wall-Box Zone Controller! The Zūm Network Bridge Power Supply is available to provide power and junction-box mounting for the Network Bridge when J-Box zone controllers are not used.

Zūm Bridge Devices. Add the network bridge and the space can be networked.

3) Manage multiple Zūm spaces

Building-wide lighting control is just as easy as in-room lighting control. With a Zūm Network Bridge installed in every room, all you need is a Zūm Hub and a Zūm Net Gateway to tie all of your rooms together. The Zūm Hub provides the control and the Zūm Net Gateway provides wireless communications for centrally managing, monitoring, and controlling every Zūm space.

Zūm Net Devices. Add Gateways to each floor and a single Hub for the building:
Zūm Mesh 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 802.15.4 peer-to-peer mesh network topology, all AC Powered 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 protected through AES 128-bit encryption. The wireless range between any two Zūm Mesh devices is typically up to 50 ft (15 m) indoors. Zūm provides affordable standalone solutions for extensive code compliant applications.

Up to 32 Zūm Mesh devices per space can connect without the use of hubs, gateways, or bridges.

Zūm™ J-Box Zone Controllers (ZUMMESH-JBOX)

Marked by intelligent “pair and play” room lighting control with essential features for energy efficiency, each ZUMMESH-JBOX model wirelessly connects to Zūm daylight sensors, occupancy sensors, vacancy sensors, and keypads over the Zūm Mesh network. A complete Zūm system with sensors and Zone Controllers provides intelligent lighting control based on the amount of natural light and the presence of people in a space.

Choose from five options:
16A Switching | 5A 0-10V Dimming | 16A 0-10V Dimming | 20A Plug Load | DALI

Product Details

Zūm junction box-mounted lighting control
Wireless integration with Zūm keypads and occupancy, vacancy, and daylight sensors
4" x 4" junction box mounting via ½" conduit knockout
Universal 120 or 277 VAC input
Plenum-rated
Switched outputs utilize arc-less switching, ensuring 1 million cycle relay lifetime
Provides a plug-in port for connecting a Zūm Network Bridge
Crestron Zūm Expander DIMU Solution
(ZUMMESH-EXP-16A-DIMU)

The ZUMMESH-EXP-16A-DIMU is required to control large forward or reverse phase loads, such as chandeliers or track lighting in ballrooms or museums, or decorative lamps in large hotel foyers.

Brings high power, universal phase control dimming to the Crestron Zūm product line
Standalone surface mounting
Same high-performance technology as CLX-2DIMU and GL-EXP-DIMU
Wireless integration with Zūm keypads and occupancy, vacancy, and daylight sensors
Universal 120 or 277 VAC input
Full 16A load rating
Plenum-rated

Zūm Wall-Box Zone Controllers
(ZUMMESH-SA-LV & ZUMMESH-SA-SW)

Zūm wireless wall-box zone controllers include a 5 Amp, 0-10V, ELV, and Forward Phase dimmer, and a 5 Amp switch. Available in five colors and configured with a "pair and play" rocker, the Wall-Box Zone Controllers are versatile and easy-to-use additions to the Zūm commercial lighting system. Powered via line voltage AC, their streamlined design and out-of-the-box functionality is advantageous in new or retrofit installations.

Choose from four options:
SA 0-10V Dimming | SA Switching | SA ELV Dimming | SA FWD Phase Dimming

*Sold separately
Zūm Wireless Keypad
(ZUMMESH-KP-X)

The AC-powered Zūm wireless wall-box keypad is available in five designer colors. Configured with either a rocker or a “pair and play” four-button layout, the keypad’s streamlined design and out-of-the-box functionality is advantageous in new or retrofit installations.

Choose from two options:
Option A: Rocker — Simple on/off, dim up/down control
Option B: Four-Button Keypad — Two buttons for on and off control and two scene recall button control

Product Details

Zūm AC-powered wireless keypad
Pair-and-play functionality with a Zūm Zone Controller
Configurable with a rocker switch or a pre-programmed 4-button layout
Available in red, grey, black, white, and almond colors
Flying lead connectors for easy installation
Standard wall-box installation, trimmed with gangable decorator-style faceplates*
Universal 120 or 277 VAC inputs

*Sold separately

Zūm Battery-Powered Wireless Keypad
(ZUMMESH-KP-X-BATT)

The extremely slim battery-powered Zūm wireless keypad features flexible installation. Available in five designer colors and configured with either a rocker or in one of three “pair and play” button layouts, this keypad is powered by a battery and slim enough to mount to a wall or glass surface.

Choose from four options:
Option A: Rocker – Simple on/off, dim up/down control
Option B: Four-Button Keypad – Two buttons for on and off control and two scene recall button control
Option C: Six Button Keypad – On and off control, dimming up and dimming down, and two scene recall buttons
Option D: Six Button Keypad (Sensor Control) On and off buttons, dimming up/down, scene recall, and one button for disabling motion sensors for one hour

Product Details

Zūm battery-powered wireless keypad
Pair-and-play functionality with a Zūm Zone Controller
Available in red, grey, black, white, and almond colors
Ultra-thin profile, — no thicker than a decorator-style faceplate*
Standard wall-box installation, trimmed with gangable decorator-style faceplates*
Powered via one CR2032 coin cell battery (included), 5 years of life

*Faceplates sold separately
Zūm Wireless Battery-Powered Occupancy Sensor, 500 sq ft

(ZUMMESH-PIR-_OCCUPANCY-BATT)

This low-profile, battery-powered occupancy sensor is designed to detect when areas up to 500 sq ft are occupied and when they are vacant. The occupancy sensor utilizes a passive infrared (PIR) sensor to deliver a powerful and cost-effective solution for reducing energy consumption and enhancing the functionality of standalone and networked Zūm lighting systems.

Product Details

- Zūm ceiling-mount occupancy sensor
- Passive infrared motion detection
- 360 degrees, 500 sq ft of coverage
- Lithium-ion 9-Volt battery powered, 10 years of life
- Automatic ON, Automatic OFF

Zūm Wireless Battery-Powered Vacancy Sensor, 500 sq ft

(ZUMMESH-PIR-VACANCY-BATT)

This low-profile, battery-powered vacancy sensor is designed to work with a Zūm lighting system to turn lights off when an area up to 500 sq ft is vacant. The vacancy sensor utilizes a passive infrared (PIR) sensor to deliver a powerful and cost-effective solution for reducing energy consumption and enhancing the functionality of standalone and networked Zūm lighting systems.

Product Details

- Zūm ceiling-mount vacancy sensor
- Passive infrared motion detection
- 360 degrees, 500 sq ft of coverage
- Lithium-ion 9-Volt battery powered, 10 years of life
- Grace occupancy feature
- Manual ON, Automatic OFF
Zūm Wireless Battery-Powered Daylight Sensor, Open-Loop (ZUMMESH-OL-PHOTOCELL-BATT)

This battery-powered, wireless, open-loop (dual loop calibration) daylight sensor provides superior natural light sensing and indoor lighting control in daylight harvesting applications. An internal photocell for open-loop daylight sensing effectively cuts costs while providing exceptional daylight sensing in new construction or retrofit applications.

The dual-loop auto-calibration process discovers the optimal light settings in just a few minutes — one press of a button is all it takes to achieve reliable and energy-efficient daylight harvesting in any Zūm space!

Product Details

- Zūm open-loop, battery-powered daylight sensor
- Ceiling or surface mounting for both sidelight and toplight applications
- Local button lets users commission and auto-calibrate the daylight harvesting system
- Light sensitivity: 0-65, 535 lux
- 10-year battery life via two Lithium-ion AAA batteries
- Sleek, compact design
- Powered via 24Vdc or USB

Zūm Wireless Partition Sensor (ZUMMESH-PART)

The Zūm Wireless Partition Sensor passes messages between two rooms that have Zūm RF devices when a partition is open. This allows for the two rooms to be treated as one for the purpose of occupancy sensors and keypads.

Product Details

- Powered by 24V
- Combines up to four Zūm rooms
- Mounts to single gang wallbox
**Zūm AV Bridge**  
*(ZUMMESH-AVBRIDGE)*

The Zūm AV Bridge is a wireless control integration module designed for use with Wireless Keypads, and occupancy and vacancy Sensors. 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. The AV Bridge pairs wirelessly with up to eight keypads and eight sensors in a room without requiring a separate wireless gateway.

**Product Details**

- Wireless pair-and-play in-space with Zūm Mesh lighting controls
- Bi-directional RS-232 or USB communication AV system
- Mounts inconspicuously at the AV equipment location
- Powered via 24Vdc or USB

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**Zūm Contact Closure Output**  
*(ZUMMESH-CCO)*

The Zūm Contact Closure Output (CCO) is a small module that snaps onto a ZUMMESH-JBOX (Zūm J-Box Load Controller) or ZUMMESH-JBOX-PSU (Zūm J-Box Accessory Power Supply). This enables integration with HVAC equipment by via its low-voltage SPDT form-C contact closure to a Zūm commercial room system.

The CCO is controlled by the occupancy or vacancy sensors in the room. When the room is occupied, the relay engages. When the room is vacant, the relay disengages.

**Product Details**

- Adds a contact closure output
- Low-voltage SPDT form-C relay activates and deactivates on signal from room occupancy sensor
- Rated 1 Amp @ 30 volts AC
- Enables integration with HVAC equipment to save energy
- Attaches to a Zūm J-Box Load Controller or Zūm J-Box Accessory Power Supply
**Zūm Power Supply**
*(ZUMMESH-JBOX-PSU)*

The Zūm J-Box-Mounted Power Supply delivers power to the Zūm Network Bridge for use in Zūm spaces controlled via a ZUMMESH-5A-LV (Wireless 0-10V Wall-Box Dimmers) or a ZUMMESH-5A-SW (Wireless Wall-Box Switches). Each Power Supply wirelessly connects to Zūm daylight sensors, occupancy sensors, vacancy sensors, keypads, and dimmers or switches over the Zūm Mesh network.

Zūm Zone Controllers furnish intelligent lighting control based on the amount of natural light and the presence of people in a space while the Zūm Network Bridge adds a Setup app and provides the capabilities to integrate several standalone Zūm spaces with the Zūm Hub for a centrally-managed lighting system.

**Product Details**

- Zūm junction box-mounted power supply for the Zūm accessories, like the Zūm Network Bridge and the Zūm Contact Closure Output
- Zūm Network Bridge integration for Zūm spaces controlled via Zūm dimmers or switches
- Zūm Mesh peer-to-peer RF communications for easy integration into a complete standalone or networked Zūm wireless lighting control solution
- Wireless integration with Zūm keypads, occupancy sensors, vacancy sensors, and daylight sensors

**Zūm Wireless Sensor Integration Module**
*(ZUMMESH-JBOX-SIM)*

Zūm J-Box Sensor Integration Module enables the use of hard-wired occupancy and daylight sensors with a Zūm commercial lighting system. It is ideal for applications that may not be conducive to using battery-powered wireless sensors. It also enables the use of ultrasonic and dual-technology type sensors, as well as specialized sensors for hallway, high-bay, wet location, outdoor, and other applications.

**Product Details**

- Junction box mounted using ½” knockout
- Motion sensors require DC high-logic signal >8 VDC
- Supports a single 24 VDC powered open-loop photocell
- Supplies 250mA @ 24 VDC
- Pairs with our Steinel sensors
- Powered from 120-277V
Zūm Net Technology

Ultra-reliable Zūm Net wireless technology provides steadfast 2-way RF communications throughout a commercial structure without the need for physical control wiring. Employing a Wi-Fi® friendly 2.4 GHz mesh network topology, every Zūm Netbridge device acts as an "expander," relaying wireless commands between the Zūm Gateway and all the other Zūm Netbridges to ensure that every command reaches its intended destination without disruption. Each Zūm Netbridge that is added to the network effectively increases the range and stability of the entire network by providing multiple redundant signal paths. The wireless range between any two Zūm Netbridges is typically up to 150 ft. indoors.

**Device Specifications:**
- Maximum number of Zūm Mesh Devices per space = 32
- Maximum number of battery devices per space = 6 per high-voltage device
- Maximum number of battery-powered keypads per space = 8
- Maximum number of battery-powered occupancy/vacancy sensors per space = 8
- Maximum number of DL sensors per space = 1
- Maximum number of Zūm Network Bridges per space = 1
- Maximum number of Zūm Network Bridges per Zūm Gateway = 50
- Maximum number of Zūm Gateways per Zūm Hub = 30
- Maximum number of Zūm Network Bridges per Zūm Hub = 1000
- Maximum distance between Zūm Network Bridges and Zūm Net devices = 150 ft
- Recommended coverage area for a single Zūm Gateway = 250 ft radius (196,000 sq ft)

**Zūm Network Bridge**

(ZUMMESH-NETBRIDGE)

The Zūm Network Bridge enables Zūm device setup from a mobile app and integrates a standalone Zūm lighting control system with the Zūm Hub for a centrally managed, enterprise-wide lighting control system. Turning Zūm single-room lighting controls into a smart system is a snap with the Zūm Network Bridge!

Snap the Network Bridge on to the Zūm J-Box Zone Controller to use the mobile app to set up the Zūm devices in the room. Adding the Zūm Hub to the system enables all of the Network Bridges to communicate, providing centralized monitoring, management, and control of the lighting systems throughout an entire building. With easy installation and simple setup, the Zūm Network Bridge affords scalable lighting control and flexible device configuration within spaces to ensure that every space has exactly what it needs and nothing more.

**Product Details**
- Converts standalone Zūm lighting control system for a single room into a centrally managed, networked system
- Provides access to Zūm Setup App for room configuration, built-in Bluetooth beacon
- Zūm Net mesh communications technology for a complete networked Zūm wireless lighting control solution
- Mounts to Zūm J-Box Zone Controller, Zūm Network Bridge Power Supply, or Zūm J-Box SIM

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Zūm Net Wireless Mesh Networking

Peer-to-Peer Wireless Mesh Communications within the space
**Zūm Net Gateway**  
(ZUMNET-GATEWAY)

This 2-way RF wireless gateway is designed for use with Crestron Zūm wireless devices. A single gateway auto-acquires all Zūm Network Bridges within range, enabling an entire multi-room Zūm Net wireless communications network for commercial lighting control. The Zūm Gateway connects to the Zūm Hub to provide central monitoring, management, reporting, and control of lighting systems throughout the enterprise.

**Product Details**

- 2-way RF wireless gateway for Zūm Mesh devices
- Simple networked communications – auto-acquires Zūm wireless devices
- Ultra-dependable Zūm Net mesh network technology
- Automatic discovery for fast, easy setup
- “Wi-Fi friendly” channel selection for trouble-free operation
- Built-in RF network diagnostics
- Range of up to 250 feet (76.2 meters) to nearest Zūm Network Bridge
- Compact, stackable “IFE small” form factor
- Surface or DIN rail mountable using bracket provided
- Available rack mount and pole mount options
- Powered via IEEE 802.3at Type 1 (802.3af compatible) Class 1 (3.84 W) PoE
- Plenum-rated case
- Up to 30 gateways can be connected to each Zūm HUB

**Zūm Hub**  
(ZUM-HUB)

This Hub auto-discovers up to 1000 Zūm rooms and legacy Crestron wired product, providing a single point of control for the commercial lighting system. The Hub features an astronomical time clock for scheduling lighting events, centralized management and control for each space or across all the spaces at once, and real-time room status updates. The Zūm Hub forms the core of any modern networked commercial lighting installation, monitoring and managing the entire lighting system throughout your facility to make life easier, greener, more productive, and more enjoyable. The Zūm Hub also provides simple one-button selection to integrate to the building automation system via BACnet® over IP and demand response.

**Product Details**

- Astronomical time clock and programmable event scheduling capabilities for Zūm commercial lighting systems, centralized management and control
- Real-time room status updates, modular architecture
- 1-space rack-mountable
- Industry-standard Ethernet wired communications, web-based control and setup, native BACnet/IP support, full Unicode (multi-language) support
- Control Subnet — provides a dedicated local network for Zūm devices
- TLS, SSL, SSH, and SFTP network security protocols
- FIPS 140-2 compliant encryption, IPv6 ready
- BACnet over IP built-in
- Demand response input trigger
- Supports up to 30 Zūm gateways
Zūm Hub Monitoring & Management

Main View
View and Configure Room:
• Status
• Settings
• Schedule
• Users
• BACnet

Room Category Tree
Lists all Room Names grouped by Room Category.
• Add/Rename Room Categories and Rooms
• Unassociate Room from Room Category
• Delete Room
• Turn Rooms On and Off
• Set Bluetooth PIN
• Set Demand Response Level
• Search for Room Name

Help
System Alerts
Demand Response Status
Indicates that Demand Response is Enabled or Disabled

Overview
• See entire system in tree hierarchy
• Manage room status, battery life, and more
• Manage room types and groupings

Schedule
• Simple calendar view allows to create schedules
• Apply or modify daily schedules as needed
• User can change as needed in real time

Actions
• Configure Holidays
• Configure States
• Demand Response Mode
• Discover
• Reboot

Zūm Hub Schedule

Zūm BACnet

BACnet®
• Complete BACnet over IP interface built-in
• Send all or select points to BAS/BMS systems
• Single button to integrate BAS/BMS systems

System Alerts
Demand Response Status
Indicates that Demand Response is Enabled or Disabled
Zūm Space Design and Best Practices

Questions to ask when creating a Zūm space:

1. What loads types do I have in the space?
2. Should the load controller be wall box-mounted or junction box-mounted?
3. Do I need wall box-mounted keypads with line power or battery-powered keypads that can be mounted to any surface?
4. Do I need the lights to automatically turn on and off based on occupancy or to only turn off when someone leaves the space?
5. Do I need a sensor for daylight harvesting?
6. Will the spaces need to be networked for enterprise-wide control and management?

Step 1
Write down the energy code your project must comply with and include solutions below to match.

Step 2
- What is the type (switching, 0-10V, ELV, FWD Phase) and wattage of your lighting zones?
- Add 3x4 table with row headings: ‘Zone Name,’ ‘Type,’ and ‘Wattage.’
- Select the zone controllers to match the type and wattage of the lighting zones. (Create a list of the zone controllers.)

Step 3
Add motion sensors, (ZUMMESH-PIR- OCCUPANCY-BATT, ZUMMESH-PIR-VACANCY-BATT, ZUMMESH-JBOX-SIM). Choose occupancy (auto-on) or vacancy (manual-on) based on your energy code. Typically occupancy is good for common space like corridors and bathrooms. Use vacancy for everything else. (Don’t mix occupancy and vacancy sensors in the same room.)

Step 4
Add 1 photocell (ZUMMESH-OL-PHOTOCELL) for the space. Remember that multiple unique daylight zones only require 1 photocell per space.

Step 5
Add required accessories like the Contact Closure Output (ZUMMESH-CCO) or the AV Bridge (ZUM-AV-BRIDGE).

Step 6
Answer these questions:
- Do you want to configure with the Zūm App? (Recommended)
- Do you want to network multiple spaces together?
- Do you need time clock control?
- Do you need global control (i.e. load shedding) or maintenance?

If you answered yes to any of these questions, then add one ZUMMESH-NET-BRIDGE to the space.

Want an even quicker deploy? Learn more about our GLZUM SpaceBuilder system for an easy Zūm Wireless deployment.
Zūm Installation and Setup

A Zūm system can be setup and commissioned by a contractor with less than 1 day of training

Crestron Zūm solutions are designed for easy installation and fast startup. Each device on a Zūm network automatically communicates with other Zūm devices in the space for true out-of-the-box operation. Zūm Junction Box Zone Controllers mount above the ceiling using a standard ½” conduit knockout. Zūm Wall-Box Zone Controllers and Zūm keypads can be ganged together and mounted using standard back boxes and decorator-style faceplates. Battery operated daylight sensors and motion sensors mount quickly to the ceiling and can be easily relocated for sensor coverage adjustment.

Pairing
The Zūm Mesh pairing process can be started from any AC-Powered Zūm device. Once in Pairing mode, each device in the space is added to the Zūm Mesh network. After pairing, all bound devices remember their network, even in the event of a power outage or during battery replacement. Remember, Zūm Mesh auto-negotiates its RF channel for reliable operation even when the RF environment changes. Pairing can also be done by the factory when choosing the SpaceBuilder option.

Calibrating
The Zūm Daylight Sensor is auto-calibrating. During the daytime, simply press the calibrate button, leave the room, and let Zūm do the rest! Using dual-loop technology and through a series of zone control ON/OFF/DIM UP/DIM DOWN commands, within minutes Zūm determines the proper amount of daylight to harvest.

Tuning
Adjust the scenes to your liking and save them as preset recalls via the keypads.

Crestron Zūm solutions are designed for easy installation and fast startup. Each device on a Zūm Mesh network automatically communicates with other Zūm Mesh devices in the space for true out-of-the-box operation. Zūm Junction Box Zone Controllers mount above the ceiling using a standard ½” conduit knockout. Zūm Wall-Box Zone Controllers and Zūm keypads can be ganged together and mounted using standard back boxes and decorator-style faceplates. Battery operated daylight sensors and motion sensors mount quickly to the ceiling and can be easily relocated for sensor coverage adjustment.

After the Zūm solution has been installed, a simple series of button presses on the Zūm devices pair, calibrate, and tune the space – or, when using a Zūm Network Bridge, everything can be done via the Zūm App for Android™ or iOS®. Zūm Mesh networking can be configured without even opening your laptop!

Crestron SpaceBuilder systems are the fastest way to design, install, and start up commercial lighting controls for any size building or system. Space Based packaging allows for quick project material sorting, and optional Pre-Paired option from the factory – which saves time in the field.

As part of a SpaceBuilder solution, Crestron can produce factory paired devices for easily deployable rooms that are immediately ready for occupancy. All SpaceBuilder Zūm systems are packaged and shipped by space type.

GLZUM SpaceBuilder System

Crestron SpaceBuilder systems are the fastest way to design, install, and start up commercial lighting controls for any size building or system. Space Based packaging allows for quick project material sorting, and optional Pre-Paired option from the factory – which saves time in the field.

As part of a SpaceBuilder solution, Crestron can produce factory paired devices for easily deployable rooms that are immediately ready for occupancy. All SpaceBuilder Zūm systems are packaged and shipped by space type.
Classroom Installation

Key

- Line Voltage Power
- 0-10V Dimming
- Züm Mesh Wireless
- Züm Net Wireless

Load Types
0-10V, PL

Code Compliance
IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

Operations
- Lights turn ON when entry keypad is pressed
- Daylight is harvested automatically using daylight sensor
- Occupant may select a scene or dim the lights up and down using the entry or teacher keypads
- Switched receptacles turn ON while the space is occupied
- Lights and switched receptacles turn OFF 15 minutes after space becomes vacant

Notes:

The Sensor Disable button disables motion sensors for one hour for situations in which the room is occupied but there is little motion to detect, such as during exam periods.

- 2 ZUMMESH-JBOX-5A-LV Junction Box Zone Controller, 0-10V Dimming, 5A
- 1 ZUMMESH-JBOX-20A-PLUG Junction Box Zone Controller, Plug-Load, 20A
- 2 ZUMMESH-KP10DBATT 6-Button Battery-Powered Keypad with 1 Hour Sensor Disable
- 2 ZUMMESH-PIR-VACANCY-BATT PIR Vacancy Sensor (Manual-ON, Auto-OFF)
- 1 ZUMMESH-OL-PHOTOCELL-BATT Open-Loop Daylight Sensor
- 1 ZUMMESH-NETBRIDGE Züm Network Bridge (Optional)
Conference Room Installation

2  ZUMMESH-JBOX-5A-LV  Junction Box Zone Controller, 0-10V Dimming, 5A
1  ZUMMESH-JBOX-20A-PLUG  Junction Box Zone Controller, Plug-Load, 20A
1  ZUMMESH-KP10CBATT  6-Button Battery-Powered Keypad
1  ZUMMESH-PIR-VACANCY-BATT  PIR Vacancy Sensor (Manual-ON, Auto-OFF)
1  ZUMMESH-OL-PHOTOCELL-BATT  Open-Loop Daylight Sensor
1  ZUMMESH-NETBRIDGE  Zūm Network Bridge (Optional)

Notes:
Occupant may select a scene or dim the lights up and down using the keypad.

Load Types
0-10V, PL

Code Compliance
IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

Operations
- Lights turn ON when entry keypad is pressed
- Daylight is harvested automatically using daylight sensor
- Switched receptacles turn ON while the space is occupied
- Lights and switched receptacles turn OFF 15 minutes after space becomes vacant
Open Office Installation

Key
- Line Voltage Power
- 0-10V Dimming
- Zūm Mesh Wireless
- Zūm Net Wireless

Notes:
Occupant may select a scene or dim the lights up and down using the keypad.

Load Types
0-10V, PL

Code Compliance
IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

Operations
- Lights turn ON automatically to 50% when occupants enter space
- Daylight is harvested automatically using daylight sensor
- Switched receptacles turn ON while the space is occupied
- Lights and switched receptacles turn OFF 15 minutes after space becomes vacant

Open Office Installation

3 ZUMMESH-JBOX-SA-LV Junction Box Zone Controller, 0-10V Dimming, 5A
1 ZUMMESH-JBOX-20A-PLUG Junction Box Zone Controller, Plug-Load, 20A
1 ZUMMESH-KP10CBATT 6-Button Battery-Powered Keypad
2 ZUMMESH-PIR-OCPPANCY-BATT PIR Occupancy Sensor (Auto-ON, Auto-OFF)
1 ZUMMESH-OL-PHOTOCELL-BATT Open-Loop Daylight Sensor
1 ZUMMESH-NETBRIDGE Zūm Network Bridge (Optional)
Private Office Installation

Key

- Line Voltage Power
- 0-10V Dimming
- Zūm Mesh Wireless
- Zūm Net Wireless

Load Types

0-10V, PL

Code Compliance

IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

Operations

• Lights turn ON when the entry dimmer is pressed
• Daylight is harvested automatically using daylight sensor
• Switched receptacles turn ON while the space is occupied
• Lights and switched receptacles turn OFF 15 minutes after space becomes vacant

Notes:
### Lounge Installation

#### Load Types

- **0-10V, PL**

#### Code Compliance

- IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

#### Operations

- Lights turn ON when the entry dimmer is pressed
- Switched receptacles turn ON while the space is occupied
- Lights and switched receptacles turn OFF 15 minutes after space becomes vacant

---

**Notes:**

- Occupant may turn the lights on and off, or dim the lights up and down using the Wall-Box Zone Controller.

---

**Key**

- Line Voltage Power
- 0-10V Dimming
- Zūm Mesh Wireless
- Zūm Net Wireless

---

**Labels:**

- 1 ZUMMESH-JBOX-20A-PLUG Junction Box Zone Controller, Plug-Load, 20A
- 1 ZUMMESH-SA-LV Wall-Box Zone Controller, 0-10V Dimming, 5A
- 1 ZUMMESH-PIR-VACANCY-BATT PIR Vacancy Sensor (Manual-ON, Auto-OFF)
- 1 ZUMMESH-NETBRIDGE Zūm Network Bridge (Optional)
## Restroom Installation

### Key
- **Line Voltage Power**
- **0-10V Dimming**
- **Zūm Mesh Wireless**
- **Zūm Net Wireless**

### Notes:
- Occupant may turn the lights on and off, or dim the lights up and down using the rocker keypad.

### Load Types
- **0-10V**

### Code Compliance
- IECC-2015, ASHRAE 90.1-2013, TITLE 24-2015

### Operations
- Lights turn ON automatically when the occupant enters
- Lights turn OFF 15 minutes after space becomes vacant

### Installation Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ZUMMESH-JBOX-5A-LV</td>
<td>Junction Box Zone Controller, 0-10V Dimming, 5A</td>
</tr>
<tr>
<td>1 ZUMMESH-KP10ABATT</td>
<td>Rocker-Style Battery-Powered Keypad</td>
</tr>
<tr>
<td>1 ZUMMESH-JBOX-SIM</td>
<td>Motion sensor</td>
</tr>
<tr>
<td>1 Steinel GLA-US-QUATTRO COM1-24</td>
<td>Motion Sensor</td>
</tr>
<tr>
<td>1 ZUMMESH-NETBRIDGE</td>
<td>Zūm Network Bridge (Optional)</td>
</tr>
</tbody>
</table>
With the Zūm platform you can select the lighting control solution that is best for your application and never have to worry about compatibility. Zūm is compatible with ALL Crestron commercial lighting solutions. Classic SpaceBuilder solutions, touch screens and conventional panels are auto-discoverable by the ZUM HUB.

**Learn More**

**Zūm Website**
http://www.crestron.com/zum

**Lighting Control Specification Tools**
https://support.crestron.com/app/answers/detail/a_id/5709/kw/5709

Or give us a call:

Lighting Support Hotline – 855-644-7643
Lighting Consultant Hotline – 888-330-1502

Apps for Zūm

**Zūm Setup App**

The Zūm Network Bridge takes single-room Zūm lighting control to the next level. It comes with a corresponding setup app that enables installers to customize the room’s lighting controls.

With the app, installers can set scenes and set up sensors. No programming is required when the controls are literally in hand!

**Download now!**

---

**Key**
- Ethernet
- Crestron
- Zūm Net Wireless
### Recommended Code Compliant Solutions

<table>
<thead>
<tr>
<th>ASHRAE 90.1-2013</th>
<th>ON/OFF Control</th>
<th>Light Level Control</th>
<th>Plug Load Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.4.1.1.a</strong></td>
<td>Local controls (i.e. keypad)</td>
<td>There shall be one or more readily accessible manual lighting controls in each space</td>
<td></td>
</tr>
<tr>
<td><strong>4.4.1.1.b</strong></td>
<td>Manual ON / partial auto ON “Vacancy Sensing Mode”</td>
<td>The general lighting shall either be manually turned ON or automatically turned on to no more than 50%</td>
<td></td>
</tr>
<tr>
<td><strong>9.4.1.1</strong></td>
<td>Automatic full ON “Occupancy Sensing Mode”</td>
<td>Lighting is permitted to automatically turn to full ON</td>
<td></td>
</tr>
<tr>
<td><strong>9.4.1.1.h</strong></td>
<td>Automatic Full OFF</td>
<td>All lighting must be shut off within 20 minutes of vacancy</td>
<td></td>
</tr>
<tr>
<td><strong>9.4.1.1.i</strong></td>
<td>Scheduled shutoff (i.e. programmable timeclock)</td>
<td>All lighting shall be automatically shut off during periods when space is scheduled to be unoccupied using a programmable timeclock or signal from another control device (i.e. security system)</td>
<td></td>
</tr>
<tr>
<td><strong>9.4.1.1.d</strong></td>
<td>Bi-level control (i.e. 0-10V dimming)</td>
<td>General lighting shall have at least one intermediate step between 30 - 70% power, or continuous dimming, in addition to full ON and full OFF</td>
<td></td>
</tr>
<tr>
<td><strong>9.4.1.1.e</strong></td>
<td>Automatic daylight controls (i.e. photocontrols)</td>
<td>In primary side daylight, general lighting zones with greater than 150W (or greater than 300V within the primary or secondary daylit zones), daylight must be harvested using photocontrols. In top, daylight general lighting zones with greater than 150W, daylight must be harvested using photocontrols</td>
<td></td>
</tr>
<tr>
<td><strong>8.4.2</strong></td>
<td>Automatic receptacle control</td>
<td>50% of all receptacles and 25% of modular furniture feeders must be turned OFF 20 minutes after vacancy</td>
<td></td>
</tr>
</tbody>
</table>

#### Primary Solutions
- Zūm Wireless
- GLPP
- GLPAC
- PYNG
- DALI® Control
- CENTRALIZED

### Recommended Code Compliant Solutions

<table>
<thead>
<tr>
<th>Classrooms</th>
<th>Conference</th>
<th>Private Offices</th>
<th>Open Office Plan (&gt;250 sq ft)</th>
<th>Public Spaces</th>
<th>Stairwells</th>
<th>Restrooms</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

*9.4.1.1.g permits automatic partial OFF such that lighting can be automatically reduced by at least 50% (*“night light” mode*). Full off is also acceptable.
## Ordering Guide

### Zūm Mesh In-Room Devices

#### Zūm Keypads (Battery Powered)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Available Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-KP10ABATT-X-S</td>
<td>1-Button Battery-Powered Keypad</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>ZUMMESH-KP10BBATT-X-S</td>
<td>4-Button Battery-Powered Keypad</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>ZUMMESH-KP10CBATT-X-S</td>
<td>6-Button Battery-Powered Keypad</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>ZUMMESH-KP10DBATT-X-S</td>
<td>6-Button Battery-Powered Keypad with 1HR Sensor Override</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
</tbody>
</table>

#### Zūm Keypads (AC Powered)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Available Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-KP10A-X-S</td>
<td>1-Button AC-Powered Keypad</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>ZUMMESH-KP10B-X-S</td>
<td>4-Button AC-Powered Keypad, White</td>
<td>White, Black, Almond, Red, Grey</td>
</tr>
</tbody>
</table>

#### Zūm Sensors

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-OL-PHOTOCELL-BATT</td>
<td>Battery-powered Open Loop Daylight Sensor</td>
</tr>
<tr>
<td>ZUMMESH-PIR-OCCLUPANCY-BATT</td>
<td>Battery-powered PIR Occupancy Sensor (AUTO-ON, AUTO-OFF)</td>
</tr>
<tr>
<td>ZUMMESH-PIR-VACANCY-BATT</td>
<td>Battery-powered PIR Vacancy Sensor (MANUAL-ON, AUTO-OFF)</td>
</tr>
<tr>
<td>ZUMMESH-PART</td>
<td>Zūm Partition Sensor</td>
</tr>
<tr>
<td>ZUMMESH-JBOX-SIM</td>
<td>Zūm J-Box Motion Sensor Integration Module</td>
</tr>
</tbody>
</table>

#### Zūm Junction Box Zone Controllers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-JBOX-SA-LV</td>
<td>Junction Box Zone Controller, 0-10V Dimming, 5A</td>
</tr>
<tr>
<td>ZUMMESH-JBOX-16A-LV</td>
<td>Junction Box Zone Controller, 0-10V Dimming, 16A</td>
</tr>
<tr>
<td>ZUMMESH-JBOX-20A-SW</td>
<td>Junction Box Zone Controller, Switching, 16A</td>
</tr>
<tr>
<td>ZUMMESH-JBOX-20A-PLUG</td>
<td>Junction Box Zone Controller, Plug Load, 20A</td>
</tr>
<tr>
<td>ZUMMESH-EXP-16A-DIMU</td>
<td>Crestron Zūm Expander DIMU Solution</td>
</tr>
</tbody>
</table>

### Zūm Wall-Box Zone Controllers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-SA-SW-X-S</td>
<td>Wall-Box Switch, 5A or Wall-Box 0-10V Dimmer, 5A</td>
</tr>
<tr>
<td>ZUMMESH-SA-LV-X-S</td>
<td>5A 0-10V Dimmer</td>
</tr>
<tr>
<td>ZUMMESH-DIM-X-S</td>
<td>500W Forward Phase Dimmer (Incandescent / Magnetic Low Voltage)</td>
</tr>
<tr>
<td>ZUMMESH-DELV-X-S</td>
<td>500W Reverse Phase Dimmer (Electronic Low Voltage / LED)</td>
</tr>
</tbody>
</table>

### Zūm Net Multi-Room Networking Devices

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-NETBRIDGE</td>
<td>Zūm Network Bridge</td>
</tr>
<tr>
<td>GLNET-ZUM</td>
<td>Zūm Floor Hub in a DIN-EN-3X18</td>
</tr>
<tr>
<td>ZUMNET-GATEWAY</td>
<td>Zūm Net Gateway</td>
</tr>
<tr>
<td>ZUMMESH-HUB and ZUMNET-GATEWAY</td>
<td>Packaged Solution</td>
</tr>
<tr>
<td>ZUMMESH-AVBRIDGE</td>
<td>Zūm AV Bridge</td>
</tr>
</tbody>
</table>

### Zūm Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUMMESH-CCO</td>
<td>Zūm Contact Closure Output</td>
</tr>
<tr>
<td>ZUMMESH-JBOX-PSU</td>
<td>Junction Box Network Bridge Power Supply</td>
</tr>
</tbody>
</table>

### Faceplates

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP-G1-X-S</td>
<td>1-Gang Decorator-Style Faceplate Available in White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>FP-G2-X-S</td>
<td>2-Gang Decorator-Style Faceplate Available in White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>FP-G3-X-S</td>
<td>3-Gang Decorator-Style Faceplate Available in White, Black, Almond, Red, Grey</td>
</tr>
<tr>
<td>FP-G4-X-S</td>
<td>4-Gang Decorator-Style Faceplate Available in White, Black, Almond, Red, Grey</td>
</tr>
</tbody>
</table>

*X = W for White, B for Black, A for Almond, G for Grey, or R for Red
Crestron is lighting control

See what Crestron can do for you.

Contact us anytime at 888-330-1502 • clcdesign@crestron.com