DM-TX-4K-100-C-1G

Wall Plate 4K DigitalMedia 8G+® Transmitter 100

> Cost-effective DigitalMedia 8G+® transmitter

> Connects to a DM® switcher or receiver over a single CAT type twisted pair cable [2]

> HDBaseT® Certified — Enables direct connection to other HDBaseT certified equipment

> Provides one HDMI® input [4]

> Also supports DVI and Dual-Mode DisplayPort sources [4]

> Handles video resolutions up to 4K and Ultra HD

> Handles 3D video and Deep Color

> Handles Dolby® TrueHD, Dolby Atmos®, DTS-HD®, and uncompressed 7.1 linear PCM audio

> HDCP 2.2 compliant

> Supports cable lengths up to 330 ft (100 m) for all resolutions up to UHD and 4K using DM Ultra cable [2]

> Supports cable lengths up to 330 ft (100 m) for 1080p, WUXGA, and 2K using DM 8G® cable or CAT5e [2]

> Supports cable lengths up to 230 ft (70 m) for UHD and 4K using DM 8G cable, or 165 ft (50 m) using CAT5e [2]

> Enables device control via CEC, IR, and RS-232 [1,7]

> Powered via the DM connection or local power pack (included) [5,6]

> 1-gang wall box mount design (3-1/2" deep)

> Surface mount bracket included

> Available in white or black finish

Shown in black; faceplate not included

The DM-TX-4K-100-C-1G provides a simple, cost-effective interface solution for a single HDMI, DVI, or Dual-Mode DisplayPort source as part of a complete Crestron® DigitalMedia™ system. It functions as a DM 8G+® transmitter and control interface, providing a single HDMI® input along with RS-232 and IR control ports. [1] In addition to DM 8G+, it is also compatible with HDBaseT®, allowing it to be connected directly to an HDBaseT certified receiver or display device.

Its 1-gang mountable design allows the DM-TX-4K-100-C-1G to be flush mounted in a wall or presentation lectern. It can also be mounted beneath a table or attached to a suitable flat surface using the mounting bracket provided. It connects to the head end or display location using a single CAT type twisted pair cable. [2] Standard gang-box mounting (3-1/2" deep) allows for installation adjacent to an Ethernet jack (Crestron MP-WP183 or equivalent) for a total connectivity solution. [3]

4K Ultra HD

Crestron DigitalMedia continues to advance the standard for digital AV signal distribution, delivering the world's first end-to-end 4K system solution. The DM-TX-4K-100-C-1G features the latest DM 8G+ technology, providing support for the transport of 4K and Ultra HD video signals. Support for 4K video also ensures support for the latest generation of computers and monitors with native resolutions beyond 1080p and WUXGA.

DigitalMedia 8G+®

As the leader in HDMI and control system technologies, Crestron developed DigitalMedia (DM®) to deliver the first complete HD AV distribution system to take HDMI to a higher level. DigitalMedia allows virtually any mix of HDMI and other AV sources to be distributed throughout a home, office, school, or virtually any other facility. The latest generation of DM is called DigitalMedia 8G™ (DM 8G®). Engineered for ultra high-bandwidth and ultimate scalability, DM 8G provides a true one-wire lossless transport for moving high-definition video, audio, and control signals over a choice of twisted-pair or fiber optic cable.

DM 8G over twisted-pair copper wire is called DigitalMedia 8G+ (DM 8G+). DM 8G+ handles uncompressed Full HD 1080p, Ultra HD, 2K, and 4K video signals with support for 3D, Deep Color, and HDCP 2.2. Audio capabilities include support for high-bitrate 7.1 audio formats like Dolby® TrueHD, Dolby Atmos®, and DTS-HD®, as well as uncompressed linear PCM. All signals are transported over a single CAT type wire, supporting 1080p, WUXGA, and 2K signals at distances up to 330 feet (100 m) using Crestron DM Ultra Cable, Crestron DM 8G Cable, or third-party CAT5e. Higher resolutions up to UHD and 4K are supported at distances up to 330 feet (100 m) using DM Ultra Cable, 230 feet (70 m) using DM 8G Cable, or 165 feet (50 m) using CAT5e. [2]

HDBaseT® Certified

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. Via its DM 8G+ output, the DM-TX-4K-100-C-1G can be connected directly to an HDBaseT compliant device without requiring a DM receiver.
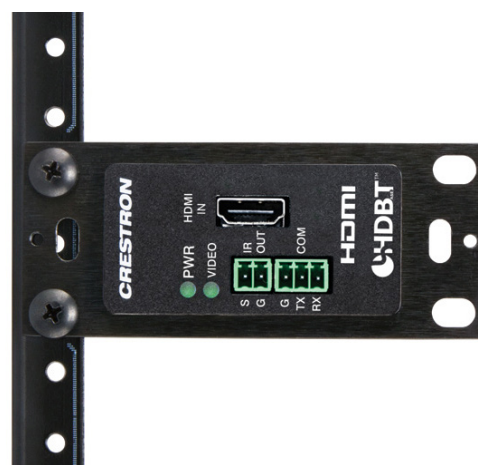
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DM-TX-4K-100-C-1G-B-T
Front & Rear Views

DM-TX-4K-100-C-1G-B-T
With Mounting Bracket

DM-TX-4K-100-C-1G-B-T
Attached to Rack Rail

Multimedia Computer/AV Interface

A single HDMI digital AV input port is provided on the DM-TX-4K-100-C-1G for connection of a laptop computer, mobile device, or other AV source. The HDMI input can also handle DVI and Dual-Mode DisplayPort signals using an appropriate adapter or interface cable.[4]

A single CAT type cable connects the DM-TX-4K-100-C-1G to a DM switcher or receiver, or to an HDBaseT device, transporting video, audio, control, and power signals all through one simple RJ45 connection.[2,5,6] Used with a single DM 8G+ Receiver/Room Controller, the DM-TX-4K-100-C-1G affords a simple solution for extending a computer or AV signal to a single display. As part of a larger system using a DM-MD series switcher, multiple DM-TX-4K-100-C-1Gs may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

Embedded Device Control

The DM-TX-4K-100-C-1G includes built-in RS-232 and IR control ports to allow for programmable control of the connected source device (via a control system).[1] Additional control capability is afforded by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-TX-4K-100-C-1G provides a gateway for controlling the source right through its HDMI connection, potentially eliminating the need for a dedicated serial cable or IR emitter.[7]

Versatile Mounting Options

The DM-TX-4K-100-C-1G is designed to be installed using a 3-1/2" deep 1-gang electrical box or plaster ring (not included). It can also be mounted beneath a table or attached to a suitable flat surface using the mounting bracket provided, or it can be fastened to a single rack rail in an equipment cabinet. The DM cable connects to the rear of the transmitter via a shielded RJ45 DM port. The unit can be powered using the wall mount power pack (included), or PoDM (Power over DigitalMedia) for a true one-wire solution.[5,6] An array of indicators is provided for easy setup and troubleshooting.

Please refer to the DigitalMedia Resources Webpage at http://www.crestron.com/dmresources/ *for additional design tools and reference documents.*

SPECIFICATIONS

Maximum Cable Lengths

Cable Type: Resolution:	DM-CBL-ULTRA DM® Ultra Cable	DM-CBL-8G DM 8G® Cable	CAT5e (or better) [2]
1080p60 Full HD		330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA			
1600x1200 UXGA			
2048x1080 DCI 2K	330 ft (100 m)		
2560x1440 WQHD		230 ft (70 m)	165 ft (50 m)
2560x1600 WQXGA			
3840x2160 4K UHD			
4096x2160 DCI 4K			

Video

Input Signal Types: HDMI w/Deep Color, 3D, & 4K (DVI & Dual-Mode DisplayPort compatible [4])

Output Signal Types: DM 8G+ & HDBaseT w/Deep Color, 3D, & 4K

Maximum Resolutions:

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 DCI 4K & 3840x2160 4K UHD	24 Hz	4:4:4	30 bit
		30 Hz	4:4:4	24 bit
		30 Hz	4:2:2	36 bit
		60 Hz	4:2:0	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
	1920x1080 HD1080p	60 Hz	4:4:4	36 bit
Interlaced	1920x1080 HD1080i	30 Hz	4:4:4	36 bit

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz

Audio

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible [4])
Output Signal Types: DM 8G+, HDBaseT
Formats: Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, Dolby Atmos®, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, LPCM up to 8 channels

Communications

RS-232: 2-way device control and monitoring up to 115.2k baud with software handshaking (via control system) [1]
IR/Serial: 1-way device control via infrared up to 1.1 MHz or serial TTL/RS-232 (0-5 Volts) up to 19.2k baud (via control system) [1]
DigitalMedia: DM 8G+, HDCP 2.2, EDID, CEC [7], PoDM
HDBaseT: HDCP 2.2, EDID, CEC [7], PoE
HDMI: HDCP 2.2, EDID, CEC [7]

Connectors – Front

HDMI IN: (1) 19-pin Type A HDMI female;
HDMI digital video/audio input;
(DVI and Dual-Mode DisplayPort compatible [4])

IR OUT: (1) 2-pin 3.5 mm detachable terminal block;
IR/Serial port [1];
IR output up to 1.1 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

COM: (1) 3-pin 3.5 mm detachable terminal block;
Bidirectional RS-232 port [1];
Up to 115.2k baud, software handshaking support

Connectors – Rear

G: (1) 6-32 screw;
Chassis ground lug

DM OUT: (1) 8-pin RJ45 female, shielded;
DM 8G+ output, HDBaseT compliant;
PoDM PD port (HDBaseT PoE compatible) [5,6];
Connects to the DM 8G+ input of a DM switcher, receiver, or other DM device, or to an HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [2]

24VDC 0.75A: (1) 2-pin 3.5 mm detachable terminal block;
24 Volt DC power input;
PW-2407WUL power pack included

Indicators

PWR: (1) Green LED, indicates operating power supplied via PoDM, HDBaseT PoE, or local power pack
VIDEO: (1) Green LED, indicates video signal presence at the HDMI input
DM OUT (rear): (2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence

Power

Power Pack (included): Input: 100-240 Volts AC, 50/60 Hz
Output: 0.75 Amps @ 24 Volts DC
Model: PW-2407WUL

Power over DM (PoDM): IEEE 802.3at Type 1 Class 3 (12.95 W) compliant PoDM PD (Powered Device), capable of being powered by a PoDM PSE (Power Sourcing Equipment) [5]

Power over HDBaseT: IEEE 802.3at Type 1 Class 3 (12.95 W) compliant HDBaseT PoE PD (Powered Device), capable of being powered by an HDBaseT PoE PSE (Power Sourcing Equipment) [6]

Power Consumption: 4 Watts typical;
2.3 Watts idle

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 13.7 BTU/hr

Enclosure

Construction: Metal, black finish with white or black polycarbonate label overlay
Flush Wall Mount: Mounts in a 1-gang 3-1/2" deep electrical box or plaster ring, requires decorator style faceplate (not included)
Surface Mount: Surface mount bracket included
Rack Mount: Attachable to a single 19-inch EIA rack rail

Dimensions

Height: 4.12 in (105 mm)
Width: 1.72 in (44 mm)
Depth: 2.35 in (60 mm)

Weight

6.3 oz (179 g)

MODELS & ACCESSORIES

Available Models

DM-TX-4K-100-C-1G-B-T: Wall Plate 4K DigitalMedia 8G+® Transmitter 100, Black Textured

DM-TX-4K-100-C-1G-W-T: Wall Plate 4K DigitalMedia 8G+® Transmitter 100, White Textured

Included Accessories

PW-2407WUL: Wall Mount Power Pack, 24VDC, 0.75A, Flying Leads, Universal (Qty. 1 included)

Available Accessories

DM-PSU-ULTRA-MIDSPAN: DigitalMedia™ Ultra Midspan PoDM++ Injector

DM-CBL-ULTRA-PC: DigitalMedia™ Ultra Patch Cables

DM-CONN-ULTRA-RECP: DigitalMedia™ Ultra Keystone RJ45 Jack

DM-CBL-ULTRA-NP: DigitalMedia™ Ultra Cable, Non-Plenum Type CMR

DM-CBL-ULTRA-P: DigitalMedia™ Ultra Cable, Plenum Type CMP

DM-CBL-ULTRA-LSZH: DigitalMedia™ Ultra Cable, Low Smoke Zero Halogen (Available only in Europe)

DM-CONN: Connectors for DM-CBL-ULTRA DigitalMedia Ultra Cable

DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum

DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum

DM-8G-CONN: Connectors for DM-CBL-8G DigitalMedia 8G™ Cable

DM-8G-CRIMP: Crimping Tool for DM-8G-CONN

DM-8G-CONN-WG: Connectors with Wire Guide for DM-CBL-8G DigitalMedia 8G™ Cable

DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG

CBL Series: Crestron® Certified Interface Cables

CNSP-XX: Custom Serial Interface Cable

IRP2: IR Emitter Probe w/Terminal Block Connector

MP-WP183: Media Presentation Wall Plate - Ethernet

Notes:

1. The IR and RS-232 (COM) ports are only enabled when the DM-TX-4K-100-C-1G is connected to an Ethernet-enabled DM transmitter or switcher that is addressable from a Crestron control system.

2. The maximum cable length for DigitalMedia 8G+ (DM 8G+) or HDBaseT is dependent upon the type of cable and resolution of the video signal. Refer to the "Maximum Cable Lengths" table for a detailed overview. Crestron legacy cable models DM-CBL DigitalMedia Cable and DM-CBL-D DigitalMedia D Cable support the same resolutions and cable lengths as CAT5e. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are sold separately.

3. The DM-TX-4K-100-C-1G does not include an Ethernet port. Local Ethernet connectivity for external devices requires a MP-WP183 or equivalent Ethernet jack with a dedicated LAN connection.

4. The HDMI input requires an appropriate adapter or interface cable to accommodate a DVI or Dual-Mode DisplayPort signal. CBL-HD-DVI interface cables are available separately.

5. To power the DM-TX-4K-100-C-1G using PoDM (Power over DigitalMedia) requires connection to a DM switcher or other equipment that has a PoDM PSE port. Any wiring that is connected to a PoDM PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.

6. To power the DM-TX-4K-100-C-1G using HDBaseT PoE requires connection to a switcher or other equipment that has an HDBaseT PoE PSE port. Any wiring that is connected to an HDBaseT PoE PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.

7. Supports simple pass-through of CEC when connected directly to a DM-RMC-4K-100-C-1G receiver. Supports full management of CEC between the locally connected HDMI device and a control system when connected to an Ethernet-enabled 4K DM receiver or switcher that supports CEC over HDBaseT. Refer to the spec sheet for each DM receiver, switcher, input card, or input blade to verify "CEC" is listed under "HDBaseT" in the "Communications" section of the product's specifications.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.
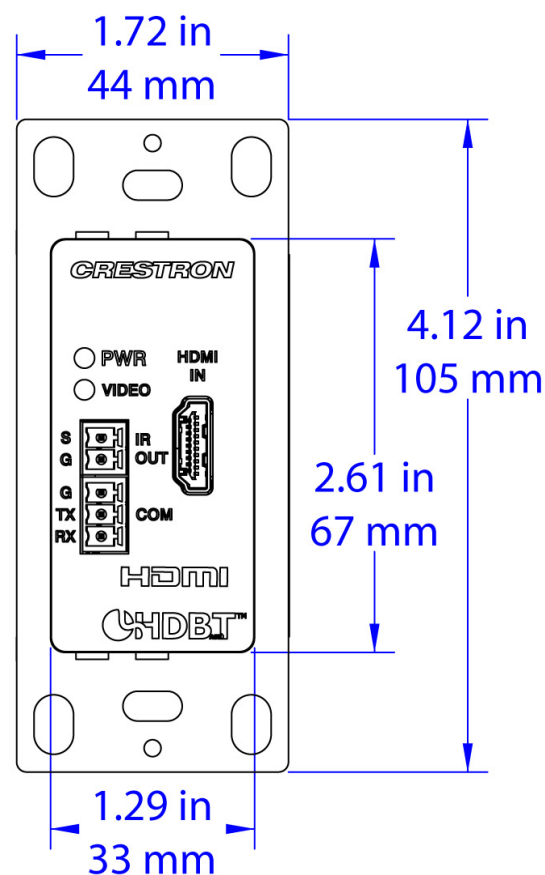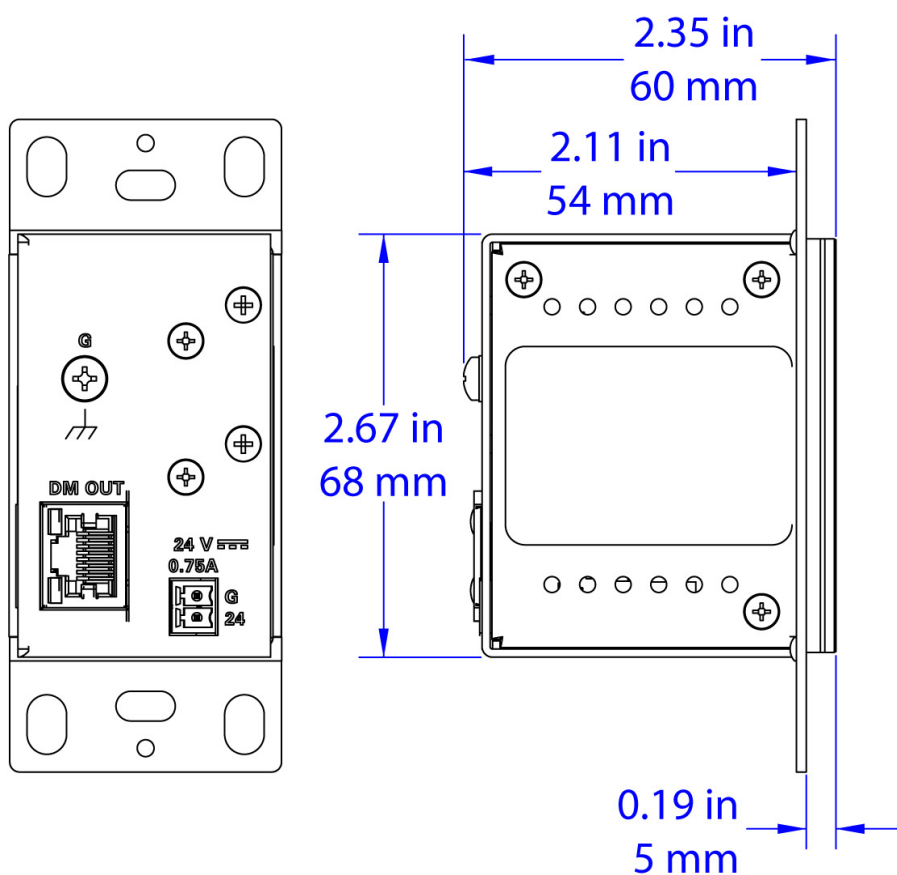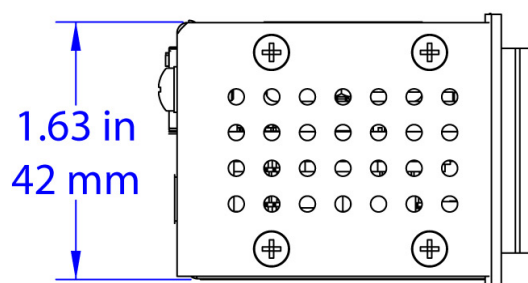
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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Specifications subject to change without notice. Revised 12/08/16

Zūm™ Wireless Battery-Powered Occupancy Sensor, 500 sq ft

> *Zūm™ ceiling-mount occupancy sensor*
> *Passive infrared motion detection*
> *360 degrees, 500 sq ft (46.5 m²) of coverage*
> *Half mask and perforated mask included*
> *10-year battery life using included 9 Volt lithium battery*
> *Zūm Mesh peer-to-peer RF communications for easy integration into a complete standalone or networked Zūm wireless lighting control solution*
> *Meets CEC Title 24 energy efficiency standards[2]*
> *Meets ASHRAE 90.1 energy efficiency standards[3]*
> *Meets UL 916 standard for energy management equipment*
> *ICC International Energy Conservation Code compliant[4]*

Zūm™ sensors deliver a powerful and cost-effective solution for reducing energy costs and enhancing the functionality of a Zūm lighting system. The ZUMMESH-PIR-OCCUPANCY-BATT is a low-profile, battery-powered, passive infrared occupancy sensor designed to detect when an area up to 500 square feet (46.5 square meters) is occupied and when it is vacant. Up to eight occupancy sensors may be employed for increased coverage.

Passive Infrared Occupancy Sensing

PIR sensors utilize a highly sensitive specialized lens to divide the field-of-view into sensor zones. When a person passes into or out of a zone, the sensor detects the motion and switches the lights on. The lights will remain on for as long as motion is detected in the sensor zones. When the sensor no longer detects motion, it registers the room as vacant and the Zūm system automatically turns off the lights. PIR sensing achieves dependable motion detection and provides superior immunity to false triggering from vibrations, inanimate objects, or movement in an adjacent corridor. Sensitivity is adjustable for optimal performance.

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 protected through AES 128-bit encryption. The wireless range between any two Zūm Mesh devices is typically up to 50 ft (15 m) indoors.[1]

Versatile Installation

The ZUMMESH-PIR-OCCUPANCY-BATT offers a discreet, nearly hidden appearance when installed on a typical drywall or drop-tile ceiling. Hardware is included for fast and simple mounting to a flat ceiling surface.

SPECIFICATIONS

Performance

Sensor Technology: Passive infrared
Coverage Area: 500 square feet (46.5 square meters)
Coverage Pattern: 360 degrees (half mask and perforated mask included)
Major Motion Area: 150 to 500 square feet
Minor Motion Area: 0 to 150 square feet

Note: A maximum of eight occupancy sensors are permitted per room; do not combine occupancy sensors with vacancy sensors in the same room.

Power Requirements

Battery: (1) Ultralife® U9VL-J-P 9 Volt 1200 mAh lithium disposable battery (included)
Battery Life: 10 years under normal operating conditions

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 [1]

Note: A maximum of 32 Zūm Mesh wireless devices is permitted per room.

Controls & Indicators

Sensitivity: (1) Knob (behind cover), adjusts PIR sensitivity from low to high (scales linearly)
Timeout: (1) Knob (behind cover), adjusts timeout from 30 seconds to 30 minutes
Test: (1) Pushbutton (behind cover) for test mode, room setup, and factory reset
Status: (1) Red and (1) green LEDs for test mode, room setup, factory reset, and low battery indication

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 0% to 95% RH (non-condensing)

Construction

Housing: Plastic, removable cover, white finish
Mounting: Ceiling surface mount

Dimensions

Height: 1.19 in (31 mm)
Diameter: 4.38 in (112 mm)

Weight

Without Battery: 3.5 oz (98 g)
With Included Battery: 4.8 oz (135 g)

Standards & Certifications

CEC Title 24 2013 [2], ASHRAE 90.1-2016 [3], IECC-2015 [4], UL 916, FCC, UL Listed, CE, IC

MODELS & ACCESSORIES

Available Models

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

Available Accessories

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

ZUMMESH-5A-LV: Zūm Wireless 0-10V Wall-Box Dimmer, 5A, 100-277V

ZUMMESH-5A-SW: Zūm Wireless Wall-Box Switch, 5A, 100-277V

Notes:

1. "Zūm Mesh" refers to the peer-to-peer wireless mesh network within a room composed of dimmers, switches, load controllers, keypads, and sensors. AC-powered Zūm Mesh devices function as wireless "expanders," which effectively extend the range of the wireless network within the room. Battery-powered devices, including the ZUMMESH-PIR-OCCUPANCY-BATT, 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.
2. This product is part of Crestron T24-2013 compliant solutions. Reference the T24-2013 design guide for additional devices required for fully compliant solutions.
3. 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.
4. 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 or by calling 800-237-2041.
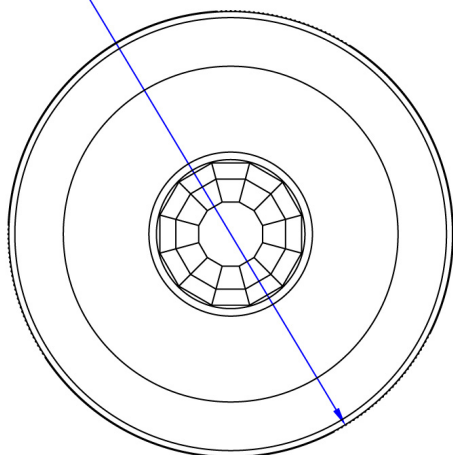
For assistance with incorporating this product into a design or specification, please contact the Commercial Lighting Consultant Hotline at clcdesign@crestron.com or by calling 888-330-1502.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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

ø4.38 in
ø112 mm

1.19 in
31 mm