DM-EXT-2011 KIT

4K60 4:4:4 DM® Essentials Transmitter Receiver Pair for USB-C® DisplayPort™, USB 2.0, and Ethernet Signal Extension over CATx Cable

- *4K60 video with 4:4:4 color sampling*
- *Transmitter and receiver for extension of a USB-C® DisplayPort™ AV signal, USB 2.0 data signals, and Ethernet signal over a CAT5e or higher cable*
- *2x1 auto-switching transmitter and 2x1 auto-switching receiver for extension of a USB-C® DisplayPort™ AV signal or HDMI® signal and USB 2.0 data over a CAT5e or higher cable*
- *HDR10, HDR10+, and Dolby Vision® video formats*
- *Signal extension distance up to 130 ft (40 m) for UHD and 4K signals or up to 230 ft (70 m) for 1080p, WUXGA, and 2K signals*
- *EDID and HDCP 2.3 management*
- *Consumer Electronics Control (CEC) capability*
- *Ethernet, EDID, and CEC pass-through capability*
- *Low-profile installation*
- *100-240VAC power pack included*

The DM-EXT-2011 KIT consists of a transmitter (HD-TXU-4KZ-111-E) and receiver (HD-RXU-4KZ-101-E), and enables the extension of HDMI® and USB 2.0 signals. This is useful in applications where an AV source is located remotely from its destination, such as a display, projector, or codec solution. A CAT5e or higher twisted pair cable must be used to connect the transmitter and receiver.[1]

> **NOTE:** Power is transmitted over the CATx cable that connects the transmitter to the receiver.

4K60 4:4:4 and HDR Support

The DM-EXT-2011 KIT supports video resolutions up to 4K60 with 4:4:4 color sampling. HDR10, HDR10+, and Dolby Vision® video formats are also supported.[2]

USB 2.0 Data Extension

Two USB 2.0 host ports are provided on both the HD-TXU-4KZ-111-E and HD-RXU-4KZ-101-E, enabling connection to a wide variety of supported USB 2.0 peripheral devices.[4]

Ethernet Pass-Through Capability

The transmitter and receiver are each equipped with a 100/1000 Mbps LAN port that passes an Ethernet signal over the DM connection. The LAN port of one endpoint in the pair can be connected to an Ethernet network while the LAN port of the other endpoint can be connected directly to an Ethernet-enabled device such as a PC.

Low Profile Installation

The transmitter and receiver can be placed on or attached to a flat surface. The transmitter can fit discreetly inside a presentation lectern or be attached to the underside of a table. The receiver can be mounted onto a wall behind a display or onto a ceiling above a projector. The devices are also rack rail mountable.

Specifications

Video

Input Signal Types	DisplayPort™ over USB-C® (DisplayPort Alt Mode) with HDR10, HDR10+, Dolby Vision®, Deep Color, and 4K60 4:4:4 support[2]
Output Signal Types	HDMI® with HDR10, HDR10+, Dolby Vision, Deep Color, and 4K60 4:4:4 support[2]
Copy Protection	HDCP 2.3
Maximum Resolutions	Common resolutions are listed in the following table.

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 DCI 4K & 3840x2160 4K UHD	24 Hz	4:4:4	12 bit
		30 Hz	4:4:4	12 bit
		60 Hz	4:2:2	12 bit
		60 Hz	4:4:4	8 bit
	2560x1600 WQXGA	60 Hz	4:4:4	8 bit
	1920x1080 HD 1080p	60 Hz	4:4:4	12 bit

> **NOTES:**
> - The maximum supported resolution is 4K60 with 4:4:4 color sampling. Custom resolutions are supported at pixel clock rates up to 600 MHz.
> - Interlaced video sources are not supported.

Audio

Input Signal Type	DisplayPort over USB-C (DisplayPort Alt Mode)
Output Signal Type	HDMI

DM-EXT-2011 KIT

4K60 4:4:4 DM® Essentials Transmitter Receiver Pair for USB-C® DisplayPort™, USB 2.0, and Ethernet Signal Extension over CATx Cable

Digital 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, DTS:X®, LPCM up to 8 channels

Communications

Ethernet	100/1000 Mbps pass-through
HDMI	HDCP 2.3, EDID, CEC pass-through
DM	HDCP 2.3, EDID; USB 2.0 up to 300 Mbps
USB	USB signal extension via USB 2.0 host ports

Connectors - Transmitter (HD-TXU-4KZ-111-E)

24 VDC 1.4A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included **NOTE:** Either included power pack will power both the transmitter and the connected receiver. Do not connect both power packs at once.
DM	(1) 8-pin RJ-45 connector, female, shielded; DM output port for connection to the receiver[1]
USB INPUT	(1) USB Type-C® connector, female; Digital video/audio input using DisplayPort Alt Mode; USB 2.0 data support
LAN	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port; Passes Ethernet signal over the DM connection to the receiver
HOST	(2) USB Type-A connectors, female; USB 2.0 host ports; USB signal extender ports for connection to USB mice, keyboards, or other USB 2.0 peripheral devices;[4] **Available Power:** 500mA @ 5VDC per port
SERVICE	(1) USB 2.0 Type-A connector, female; Used for firmware loading, configuration management, or as a USB host port for one TT-100 series cable caddy (sold separately); Can also provide up to 5V, 500mA power to a USB powered device
Ground	(1) Chassis ground lug

Connectors - Receiver (HD-RXU-4KZ-101-E)

DM IN	(1) 8-pin RJ-45 yellow connector, female, shielded; DM input port for connection to the transmitter[1]
HDMI OUTPUT	(1) HDMI Type A connector, female; HDMI digital video/audio output (DVI compatible[4])
LAN	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port; Receives Ethernet signal from the transmitter over the DM connection
24 VDC 1.4A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included **NOTE:** Either included power pack will power both the receiver and the connected transmitter. Do not connect both power packs at once.
SERVICE	(1) USB 2.0 Type-A connector, female; Used for firmware loading, configuration management, or as a USB host port for one TT-100 series cable caddy (sold separately); Can also provide up to 5V 500 mA power to a USB powered device
HOST	(2) USB Type-A connectors, female; USB 2.0 host ports; USB signal extender ports for connection to USB mice, keyboards, or other USB 2.0 peripheral devices;[4] Available Power: 500mA @ 5VDC per port
Ground	(1) Chassis ground lug

Controls and Indicators - Transmitter (HD-TXU-4KZ-111-E)

PWR	(1) Green/amber bi-color LED; Amber indicates that the device is booting; Green indicates that the device is operational
INPUT	(1) Green LED, indicates that the device is receiving a DisplayPort over USB-C (DisplayPort Alt Mode) input signal
DM OUT	(2) LEDs on RJ-45 connector, one green and one amber; Green indicates that DM link is established; Flashing amber indicates non-HDCP video; Solid amber indicates HDCP video

DM-EXT-2011 KIT

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4K60 4:4:4 DM® Essentials Transmitter Receiver Pair for USB-C® DisplayPort™, USB 2.0, and Ethernet Signal Extension over CATx Cable

LAN	(2) LEDs on RJ-45 connector, one green and one amber; Green indicates that a 100 Mbps link is established; Solid amber indicates that a 1000 Mbps link is established; Flashing amber indicates 1000 Mbps Ethernet activity

Controls and Indicators - Receiver (HD-RXU-4KZ-101-E)

PWR	(1) Green/amber bi-color LED; Amber indicates that the device is booting; Green indicates that the device is operational
DM IN	(2) LEDs on RJ-45 connector, one green and one amber; Green indicates that DM link is established; Flashing amber indicates non-HDCP video; Solid amber indicates HDCP video
LAN	(2) LEDs on RJ-45 connector, one green and one amber; Green indicates that a 100 Mbps link is established; Solid amber indicates that a 1000 Mbps link is established; Flashing amber indicates 1000 Mbps Ethernet activity

Power

Power Pack (included with Transmitter and Receiver)	Input: 100-240VAC; Output: 24VDC 2.5A; Models: PW-2420RU

> **NOTE:** Either included power pack will power both the transmitter and receiver. Do not connect both power packs at once.

Environmental

Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (non-condensing)

Construction

Chassis	Metal, black finish, vented sides, 2 mounting flanges
Mounting	Surface or rack rail mount

Dimensions - Transmitter (HD-TXU-4KZ-111-E)

Height	1.20 in. (30 mm)
Width	4.19 in. (106 mm)
Depth	7.94 in. (202 mm)

Dimensions - Receiver (HD-RXU-4KZ-101-E)

Height	5.11 in. (130 mm)
Width	4.19 in. (106 mm) with mounting flanges attached
Depth	7.94 in. (202 mm)

Weight

Transmitter	1.2 lb (0.55 kg)
Receiver	1.19 lb (0.54 kg)

Compliance

Regulatory Model: M202047005
Intertek® Listed for US and Canada, CE, IC, FCC Part 15 Class B digital device

Click here to search product certificates.

Models

DM-EXT-2011 KIT
4K60 4:4:4 DM® Essentials Transmitter Receiver Pair for USB-C® DisplayPort™, USB 2.0, and Ethernet Signal Extension over CATx Cable

Included Accessories

PW-2420RU
Desktop Power Pack, 24VDC, 2.5A, 2.1 mm

Available Accessories

For a list of available accessories, visit the DM-EXT-2011 KIT product page.

Notes:

1. For the DM CATx cable connection, use Crestron DM-CBL-8G, Crestron DM-CBL-ULTRA, or third-party CAT5e or higher cable. To safeguard against unpredictable environmental electrical noise that may impact performance at resolutions above 1080p, shielded cable and connectors are recommended for all applications and are required when bundling multiple cables in a wire run. Wire and cables are sold separately.

DM-EXT-2011 KIT

4K60 4:4:4 DM® Essentials Transmitter Receiver Pair for USB-C® DisplayPort™, USB 2.0, and Ethernet Signal Extension over CATx Cable

2. 4K60 4:4:4 performance and HDR support require the use of USB-3.2 Gen 1 (5 Gbps) cables with support for DisplayPort Alt Mode (DisplayPort 1.4 video, 4K60 4:4:4, 2 lanes). Cables are sold separately.

3. 4K60 4:4:4 performance and HDR support require the use of HDMI cables and couplers with a minimum TMDS bandwidth of 18 Gbps. If 4K60 4:2:0 or 4K30 4:4:4 performance is acceptable, cables and couplers with a minimum bandwidth of 10.2 Gbps may be used. Bandwidth loss is cumulative; therefore, performance may be reduced when inserting multiple cables and couplers inline.

4. The HD-TXU-4KZ-111-E and HD-RXU-4KZ-101-E are engineered to deliver maximum compatibility with the widest possible range of USB devices. Crestron does not guarantee that all USB devices are compatible with the HD-TXU-4KZ-111-E and HD-RXU-4KZ-101-E.

5. The HDMI output requires an appropriate adapter or interface cable to accommodate a DVI signal. CBL-HD-DVI interface cables are sold separately.

This product may be purchased from select authorized Crestron dealers and distributors. 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/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

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.

HDMI

Specifications are subject to change without notice.

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Rev 06/04/24

4.03 in.
(102 mm)

24V 1.4A LAN DM LITE OUT INPUT USB

CRESTRON

HD-TXU-4KZ-111-E

DM LITE 4K
TRANSMITTER

7.94 in.
(202 mm)

7.75 in.
(197 mm)

PWR INPUT — HOST — SERVICE

4.19 in.
(106 mm)

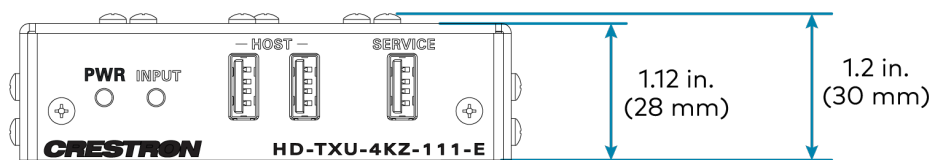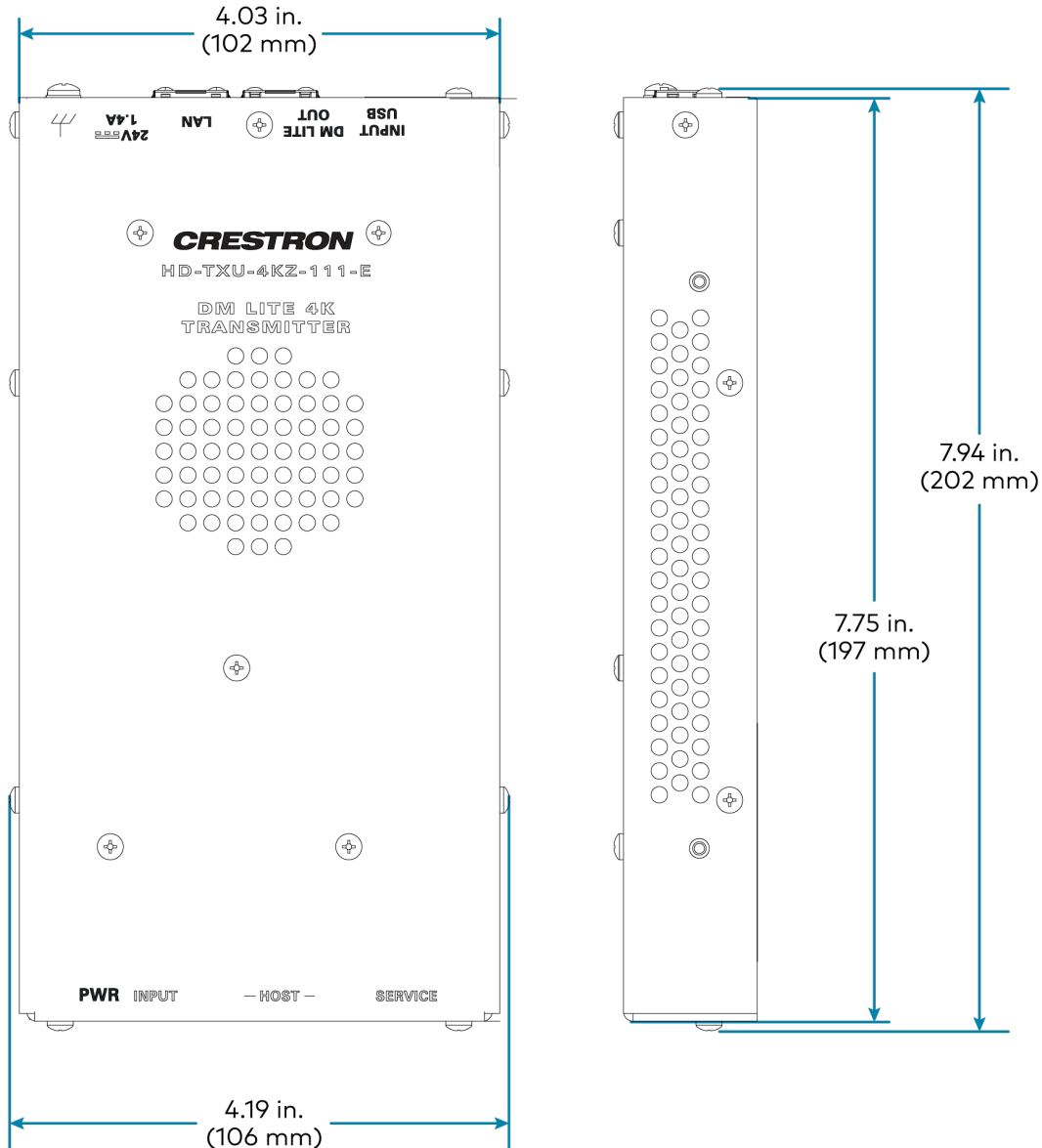— HOST — SERVICE

PWR INPUT

CRESTRON HD-TXU-4KZ-111-E

1.12 in.
(28 mm)

1.2 in.
(30 mm)

CRESTRON

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4.03 in.
(102 mm)

HD-RXU-4KZ-101-E

DM LITE 4K
RECEIVER

7.94 in.
(202 mm)

7.75 in.
(197 mm)

4.19 in.
(106 mm)

PWR OUTPUT — HOST — SERVICE

HD-RXU-4KZ-101-E

1.12 in.
(28 mm)

1.2 in.
(30 mm)