

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



- *DM® Essentials transmitter functionality designed to interoperate with a DM Essentials HD-RXU-4KZ Series receiver*
- *Point-to-point extension of a USB-C® DisplayPort™ AV signal, USB 2.0 data signals, and Ethernet signal over CAT5e or higher cable*
- *USB-C® input with DisplayPort™ Alt Mode capability and USB 2.0 support*
- *DM® Essentials transmission 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*
- *4K60 4:4:4 capability*
- *HDR10, HDR10+, and Dolby Vision® video formats*
- *Ethernet pass-through capability*
- *Compliance with HDCP 2.3*
- *CEC (Consumer Electronics Control) pass-through capability*
- *EDID pass-through capability*
- *Compact, surface-mountable design*
- *Power from 24VDC power pack (included) or from remote DM Essentials receiver*

The HD-TXU-4KZ-111-E is a DM® Essentials 4K60 4:4:4 transmitter designed to interoperate with a DM Essentials [HD-RXU-4KZ Series](#) receiver. A USB-C® input with DisplayPort™ Alt Mode capability enables signal extension of a DisplayPort AV signal along with USB 2.0 data. 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 (Crestron [DM-CBL-8G](#)

or [DM-CBL-ULTRA](#) sold separately) must be used to connect the HD-TXU-4KZ-111-E to the DM Essentials receiver¹.

Interoperability with HD-RXU-4KZ Series Receivers

For interoperability between the HD-TXU-4KZ-111-E and an HD-RXU-4KZ Series receiver, the DM Essentials output port of the HD-TXU-4KZ-111-E must be connected to the DM Essentials input port of the HD-RXU-4KZ Series receiver.

NOTE: USB 2.0 data extension is not supported if the HD-TXU-4KZ-111-E is paired with a DM Essentials receiver other than an HD-RXU-4KZ Series receiver or paired with a DMPS Essentials switcher.

4K60 4:4:4 and HDR Support

The HD-TXU-4KZ-111-E 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 the HD-TXU-4KZ-111-E, enabling connection to a wide variety of supported USB 2.0 peripheral devices.³

USB 2.0 data from peripheral devices connected to the host ports of the HD-TXU-4KZ-111-E is routed to a computer connected to the USB-C input of the HD-TXU-4KZ-111-E. In addition, USB 2.0 data from peripheral devices connected to the host ports of DM Essentials HD-RXU-4KZ Series receivers is also routed to the computer connected to the USB-C input of the HD-TXU-4KZ-111-E.

No switching of peripheral devices is required for the HD-TXU-4KZ-111-E transmitter and HD-RXU-4KZ Series receivers.

Ethernet Pass-Through Capability

The HD-TXU-4KZ-111-E is equipped with a 100/1000 Mbps LAN port that passes an Ethernet signal over the DM Essentials connection to the receiving endpoint. 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.

Compact, Surface-Mountable Design

Compact in design, the HD-TXU-4KZ-111-E can be mounted onto a flat surface such as the underside of a table, behind a credenza, or inside a podium. It can also be attached to a single rack rail in the back of an equipment cabinet. The HD-TXU-4KZ-111-E can receive power from the remote DM Essentials receiver or DMPS Essentials switcher.⁴

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Specifications

Video

Input Signal Type	DisplayPort™ over USB-C® (DisplayPort Alt Mode) with HDR10, HDR10+, Dolby Vision®, Deep Color, and 4K60 4:4:4 support ²
Output Signal Type	DM® Essentials with HDR10, HDR10+, Dolby Vision, Deep Color, and 4K60 4:4:4 support ²
Copy Protection	HDCP 2.3
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 FHD 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.
- The HD-TXU-4KZ-111-E does not support interlaced video.

Audio

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

USB-C	HDCP 2.3, EDID, CEC pass-through; USB 2.0 up to 300 Mbps
USB	USB signal extension via USB 2.0 HOST ports; USB host for one TT-100 series cable caddy (sold separately) via SERVICE port
DM Essentials	HDCP 2.3, EDID pass-through; USB 2.0 up to 300 Mbps
Ethernet	100/1000 Mbps pass-through

Connectors

USB INPUT	(1) USB Type-C® connector, female; Digital video/audio input using DisplayPort Alt Mode ⁵ ; USB 2.0 data support
DM OUT	(1) 8-pin RJ-45 yellow connector, female, shielded; DM Essentials output port for connection to a DM Essentials receiver or DMPS Essentials switcher ¹
LAN	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port
24V 1.4A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included ⁴
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; ³ Available Power: 500 mA @ 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 500 mA power to a USB powered device
Ground	(1) Chassis ground lug

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Controls and Indicators

PWR	(1) LED, indicates that power is being applied to the device; 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; Green indicates that a DM Essentials link is established; Flashing amber indicates non-HDCP video; Solid amber indicates HDCP video
LAN	(2) LEDs on RJ-45 connector; 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)	Input: 100-240VAC Output: 24VDC 2.5A Model: PW-2420RU ⁴
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Environmental

Temperature	32° to 104°F (0° to 40°C)
Humidity	20% to 90% RH (non-condensing)

Enclosure

Chassis	Metal, black finish, vented top and sides, 2 mounting brackets included
Mounting	Freestanding, surface mountable, or attachment to a single rack rail

Dimensions

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

Weight

1.2 lb (0.55 kg)

Compliance

Regulatory Model: M202047005

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

To search for product certificates, refer to [support.crestron.com/app/certificates](#).

Model

HD-TXU-4KZ-111-E

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Available Accessories

For a list of available accessories, visit the [HD-TXU-4KZ-111-E](#) product page.

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Notes:

1. For DM Essentials connections, use Crestron [DM-CBL-8G](#), Crestron [DM-CBL-ULTRA](#), or third-party CAT5e or higher cable. For information about the maximum transmission distance for each cable type, refer to [Online Help Answer ID 1001567](#).

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. Cables are sold separately.

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. The HD-TXU-4KZ-111-E is 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.
4. When a surface-mountable DM Essentials transmitter is paired with a surface-mountable DM Essentials receiver, either the power pack included with the transmitter or the receiver can be used to power both devices. A power pack must not be connected to both devices simultaneously.
When a surface-mountable DM Essentials transmitter is paired with a wall plate DM Essentials receiver, the power pack included with the transmitter is used to power both devices.
When a DM Essentials transmitter is paired with a DMPS Essentials switcher, the switcher provides power to the DM Essentials transmitter. The DM Essentials transmitter must not be connected to the included power pack.
5. For the USB-C input, CBL-USB3G1-C-C-6 and CBL-USB3G2-C-C-3 cables are sold separately.
6. The HD-TXU-4KZ-111-E does not provide power to DMPS Essentials switchers.

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 contact us for additional information by visiting [www.crestron.com/contact/our-locations](#) for your local contact.

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](#).

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