DM Lite® 4K60 4:4:4 Transmitter for USB-C® DisplayPort™ Signal Extension over CATx Cable

- *Interoperability with a DM Lite® receiver or DMPS Lite™ switcher*
- *USB-C® input with DisplayPort™ Alt Mode capability for the point-to-point extension of a DisplayPort AV signal over a CAT5e or higher cable*
- *DM Lite 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*
- *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 Lite receiver or DMPS Lite switcher*

The HD-TX-4KZ-111 is a DM Lite® 4K60 4:4:4 transmitter designed to interoperate with a DM Lite® receiver or DMPS Lite™ switcher. The HD-TX-4KZ-111 includes a USB-C® input with DisplayPort™ Alt Mode capability, enabling the transmission of a DisplayPort AV signal. A CAT5e or higher twisted pair cable is used to connect the HD-TX-4KZ-111 to the DM Lite receiver or DMPS Lite switcher. For 1080p, WUXGA, and 2K signals, a cable length of up to 230 ft (70 m) is supported. For UHD and 4K signals, a cable length of up to 130 ft (40 m) is supported.[1]

Interoperability with a DM Lite Receiver or DMPS Lite Switcher

The DM Lite output port of the HD-TX-4KZ-111 must be connected to a DM Lite input port of a DM Lite receiver or DMPS Lite switcher. Examples of supported DM Lite 4K60 4:4:4 receivers are the HD-RX-4KZ-101, HD-RXA-4KZ-101, HD-RXC-4KZ-101, and HD-RXCA-4KZ-101. Supported DM Lite 4K60 4:2:0 receivers are the HD-RX-101-C-E, HD-RXC-101-C-E, HD-RX-201-C-E, HD-RX-101-C-1G-E, and HD-RXC-101-C-1G-E. Supported DMPS Lite switchers are the HD-PS622, HD-PS621, HD-PS402, HD-PS401, and HD-RX-4K-210-C-E(-POE).

The HD-TX-4KZ-111 can be configured and controlled only when it is used with a DMPS Lite switcher. The web interface of the switcher can be used to configure the HD-TX-4KZ-111. In addition, control system programming and .AV Framework™ software support of the HD-TX-4KZ-111 is hosted by the switcher.

4K60 4:4:4 and HDR Support

The HD-TX-4KZ-111 supports video resolutions up to 4K60 with 4:4:4 color sampling. HDR10, HDR10+, and Dolby Vision® video formats are also supported.[2]

Compact, Surface-Mountable Design

Compact in design, the HD-TX-4KZ-111 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-TX-4KZ-111 can receive power from the included power pack or from the remote DM Lite receiver or DMPS Lite switcher.[3]

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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 Lite® 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

NOTE: *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-TX-4KZ-111 does not support interlaced video.

Audio

Input Signal Type	DisplayPort over USB-C (DisplayPort Alt Mode)
Output Signal Type	DM Lite
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
DM Lite	HDCP 2.3, EDID pass-through

Connectors

USB IN	(1) USB Type-C® connector, female; Digital video/audio input using DisplayPort Alt Mode[4]
DM LITE OUT	(1) 8-pin RJ-45 yellow connector, female, shielded; DM Lite output port for connection to a DM Lite receiver or DMPS Lite™ switcher[1, 5]
24V 1.25A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included[3]
Ground	(1) Chassis ground lug

Controls and Indicators

LINK	(1) Green LED, indicates that a DM Lite link is established.
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.
USB IN	(1) Green LED, indicates that the device is receiving a DisplayPort over USB-C (DisplayPort Alt Mode) input signal
DM LITE OUT	(2) LEDs on RJ-45 connector. Green indicates that a DM Lite link is established. Flashing amber indicates non-HDCP video, and solid amber indicates HDCP video.

Power

Power Pack (Included)	Input: 100-240VAC Output: 24VDC 2.5A Model: PW-2420RU[3]

Environmental

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

Enclosure

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

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Dimensions

Height	4.13 in. (105 mm)
Width	4.18 in. (106 mm)
Depth	1.08 in. (27 mm)

Weight

11.96 oz (339 g)

Compliance

Regulatory Model: M202047002

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-TX-4KZ-111
DM Lite® 4K60 4:4:4 Transmitter for USB-C® DisplayPort™ 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 HD-TX-4KZ-111 product page.

Notes:

1. For DM Lite 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. When a surface-mountable DM Lite transmitter is paired with a surface-mountable DM Lite 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 Lite transmitter is paired with a wall plate DM Lite receiver, the power pack included with the transmitter is used to power both devices.

   When a DM Lite transmitter is paired with a DMPS Lite switcher, the switcher provides power to the DM Lite transmitter. The DM Lite transmitter must not be connected to the included power pack.

4. For the USB-C input, CBL-USB3G1-C-C-6 and CBL-USB3G2-C-C-3 cables are sold separately.

5. Examples of supported DM Lite 4K60 4:4:4 receivers are the HD-RX-4KZ-101, HD-RXA-4KZ-101, HD-RXC-4KZ-101, and HD-RXCA-4KZ-101. Supported DM Lite 4K60 4:2:0 receivers are the HD-RX-101-C-E, HD-RXC-101-C-E, HD-RX-201-C-E, HD-RX-101-C-1G-E, and HD-RXC-101-C-1G-E. Supported DMPS Lite switchers are the HD-PS622, HD-PS621, HD-PS402, HD-PS401, and HD-RX-4K-210-C-E (-POE).

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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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4.03 in.
(102 mm)

1 in.
(25 mm)

4.13 in.
(105 mm)

4 in.
(102 mm)

4.18 in.
(106 mm)

1.08 in.
(27 mm)