

DM Lite® 4K60 4:4:4 Transmitter and 2x1 Auto-Switcher for HDMI® and USB-C® DisplayPort™ Signal Extension over CATx Cable



- *Interoperability with a DM Lite® receiver or DMPS Lite™ switcher*
- *Point-to-point extension of an HDMI® or USB-C® DisplayPort™ signal over a CAT5e or higher cable*
- *USB-C input with DisplayPort Alt Mode capability*
- *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*
- *Automatic switching of HDMI and USB-C DisplayPort inputs*
- *Charging capability provided by the USB-C DisplayPort input*
- *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-211-CHGR is a DM Lite® 4K60 4:4:4 transmitter designed to interoperate with a DM Lite® receiver or DMPS Lite™ switcher. The HDMI® input of the HD-TX-4KZ-211-CHGR enables the transmission of an HDMI signal. The USB-C® input with DisplayPort™ Alt Mode capability enables the transmission of a DisplayPort AV signal. A CAT5e or higher twisted pair cable is used to connect the HD-TX-4KZ-211-CHGR 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-211-CHGR 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-211-CHGR 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-211-CHGR. In addition, control system programming and .AV Framework™ software support of the HD-TX-4KZ-211-CHGR is hosted by the switcher.

4K60 4:4:4 and HDR Support

The HD-TX-4KZ-211-CHGR supports video resolutions up to 4K60 with 4:4:4 color sampling. HDR10, HDR10+, and Dolby Vision® video formats are also supported.²

Automatic Switching of Inputs

When the HD-TX-4KZ-211-CHGR is used with a DMPS Lite switcher, the web interface of the switcher or control system programming hosted by the switcher can be used to configure the switching behavior of the HD-TX-4KZ-211-CHGR. Switching between the HDMI and USB-C DisplayPort inputs can occur based on the last connected input or on the routing priority assigned to each input. In addition, input selection push buttons on the front panel of the HD-TX-4KZ-211-CHGR enable the desired input to be selected manually.

USB-C DisplayPort Input with Charging Capability

When the HD-TX-4KZ-211-CHGR is powered by the included power pack, the USB-C DisplayPort input can charge the connected AV source (for example, a laptop) with up to 60W of power. If the HD-TX-4KZ-211-CHGR is powered by a remote DM Lite receiver or DMPS Lite switcher, no charging capability is provided by the USB-C input.

Compact, Surface-Mountable Design

Compact in design, the HD-TX-4KZ-211-CHGR 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-211-CHGR 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 Types	HDMI® (DVI and Dual-Mode DisplayPort™ interface compatible ⁴) and 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
Interlaced (HDMI input only)	1920x1080 HD 1080i	60 Hz	4:4:4	12 bit
		30 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 USB-C DisplayPort input does not support interlaced video.

Audio

Input Signal Types	HDMI, 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

HDMI	HDCP 2.3, EDID, CEC pass-through
USB-C	HDCP 2.3, EDID, CEC pass-through
USB	USB host for one TT-100 series cable caddy (sold separately)
DM Lite	HDCP 2.3, EDID pass-through

Connectors

HDMI INPUT 1	(1) HDMI Type A connector, female; HDMI digital video/audio input; DVI and Dual-Mode DisplayPort interface compatible ⁴
60W USB INPUT 2	(1) USB Type C® connector, female; Digital video/audio input using DisplayPort Alt Mode; Can also charge connected AV source with up to 60W of power ⁵
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 ^{1,6}
24V 7.5A	(1) 2.5 x 5.5 mm DC power connector; 24VDC power input; PW-2475DU power pack included ³
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

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.
AUTO	(1) Push button for enabling or disabling automatic switching of inputs; (1) LED, green indicates that automatic switching of inputs is enabled
SETUP	(1) Push button for Ethernet setup (applicable only when used with a DMPS Lite switcher); (1) LED, red indicates that the SETUP push button is pressed

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INPUT 1-2 (2) Push buttons for manual input selection;
(2) LEDs, green indicates that the corresponding input is routed to an output, and amber indicates that a source is detected but is not routed to an output.

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 7.5A
Model: PW-2475DU³

Environmental

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

Enclosure

Chassis Metal, black finish, vented top, front, rear, 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 8.52 in. (216 mm)
Depth 5.23 in. (133 mm)

Weight

1.67 lb (0.76 kg)

Compliance

Regulatory Model: M202046003

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

To search for product certificates, refer to support.crestron.com/app/certificates.

Model

HD-TX-4KZ-211-CHGR

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Included Accessories

PW-2475DU

Desktop Power Pack, 24VDC, 7.5A

Available Accessories

For a list of available accessories, visit the HD-TX-4KZ-211-CHGR product page.

Notes:

- 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.
- For HDMI inputs, 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.
For USB-C DisplayPort inputs, 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.
- 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.
- The HDMI input requires an appropriate adapter or interface cable to accommodate a Dual-Mode DisplayPort or DVI signal. CBL-HDI-DVI interface cables are sold separately.
- In order for the USB-C DisplayPort input to charge the connected AV source, the HD-TX-4KZ-211-CHGR must be powered by the included power pack. If the HD-TX-4KZ-211-CHGR is powered by a remote DM Lite receiver or DMPS Lite switcher, no charging capability is provided by the USB-C input.
CBL-USB3G1-C-C-6 and CBL-USB3G2-C-C-3 cables are sold separately.

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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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HDMI

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