

## DM® Essentials 4K60 4:4:4 Transmitter for HDMI®, RS-232, and IR Signal Extension over CATx Cable



- *Point-to-point extension of HDMI®, RS-232, and IR signals over CAT5e or higher cable*
- *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*
- *Compliance with HDCP 2.3*
- *CEC (Consumer Electronics Control) pass-through capability*
- *Bidirectional RS-232 and IR pass-through capability*
- *EDID pass-through capability*
- *Compact, surface-mountable design*
- *Power from 24VDC power pack (included) or from remote DM Essentials receiver or DMPS Essentials switcher*

The HD-TXC-4KZ-101 is a DM® Essentials 4K60 4:4:4 transmitter designed to interoperate with a DM® Essentials receiver or DMPS Essentials switcher for the transmission of HDMI®, RS-232, and IR signals. A CAT5e or higher twisted pair cable (Crestron [DM-CBL-8G](#) or [DM-CBL-ULTRA](#) sold separately) is needed to connect the HD-TXC-4KZ-101 to the DM Essentials receiver or DMPS Essentials 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.<sup>1</sup>

### Interoperability with a DM Essentials Receiver or DMPS Essentials Switcher

The DM Essentials output port of the HD-TXC-4KZ-101 must be connected to a DM Essentials input port of a DM Essentials receiver or DMPS Essentials switcher. Examples of supported DM Essentials 4K60 4:4:4 receivers are the [HD-RXC-4KZ-101](#) and [HD-RXCA-4KZ-101](#). Supported DMPS Essentials switchers are the [HD-PS622](#), [HD-PS621](#), [HD-PS402](#), [HD-PS401](#), and [HD-RX-4K-210-C-E](#).

The HD-TXC-4KZ-101 can be configured and controlled only when it is used with a DMPS Essentials switcher. The web interface of the switcher can be used to configure the HD-TXC-4KZ-101. In addition, control system programming and .AV Framework™ software support of the HD-TXC-4KZ-101 is hosted by the switcher.

### 4K60 4:4:4 and HDR Support

The HD-TXC-4KZ-101 supports video resolutions up to 4K60 with 4:4:4 color sampling. HDR10, HDR10+, and Dolby Vision® video formats are also supported.<sup>2</sup>

### Compact, Surface-Mountable Design

Compact in design, the HD-TXC-4KZ-101 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-TXC-4KZ-101 can receive power from the included power pack or from the remote DM Essentials receiver or DMPS Essentials switcher.<sup>3</sup>

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### Specifications

#### Video

<b>Input Signal Type</b>	HDMI® with HDR10, HDR10+, Dolby Vision®, Deep Color, and 4K60 4:4:4 support <sup>2</sup> (DVI and Dual-Mode DisplayPort™ interface compatible <sup>4</sup> )
<b>Output Signal Type</b>	DM® Essentials with HDR10, HDR10+, Dolby Vision, Deep Color, and 4K60 4:4:4 support <sup>2</sup>
<b>Copy Protection</b>	HDCP 2.3
<b>Resolutions</b>	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	1920x1080 FHD 1080p	60 Hz	4:4:4	12 bit
	1920x1080 HD 1080i	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.

#### Audio

<b>Input Signal Type</b>	HDMI
<b>Output Signal Type</b>	DM Essentials
<b>Digital Formats</b>	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

<b>HDMI</b>	HDCP 2.3, EDID, CEC pass-through
<b>DM Essentials</b>	HDCP 2.3, EDID pass-through
<b>RS-232</b>	2-way serial pass-through up to 115.2k baud (TD/RD only)

#### IR

Bidirectional IR signal pass-through up to 60 kHz

#### Connectors

<b>IR IN/OUT</b>	(1) 4-pin 3.5 mm detachable terminal block; Comprised of (1) IR input port and (1) IR output port; <b>IR IN</b> is for connection from a Crestron IR control port or other IR signal source and passes the IR input signal to the <b>IR OUT</b> port on the DM Essentials receiver; <b>IR OUT</b> is for connection to an IR emitter ( <a href="#">IRP2</a> , sold separately) and transmits the IR signal from the <b>IR IN</b> port on the DM Essentials receiver; Supports IR up to 60 kHz
<b>COM</b>	(1) 3-pin 3.5 mm detachable terminal block; Bidirectional RS-232 port; Passes RS-232 TD/RD data to/from the <b>COM</b> port on a DM Essentials receiver; Supports up to 115.2k baud
<b>HDMI IN</b>	(1) HDMI Type A connector, female; HDMI digital video/audio input; DVI and Dual-Mode DisplayPort™ interface compatible <sup>4</sup>
<b>DM OUT</b>	(1) 8-pin RJ-45 yellow connector, female, shielded; DM Essentials output port for connection to a DM Essentials receiver or DMPS Essentials switcher <sup>1</sup>
<b>24V 1.25A</b>	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; <a href="#">PW-2420RU</a> power pack included <sup>3</sup>
<b>Ground</b>	(1) Chassis ground lug

#### Controls and Indicators

<b>LINK</b>	(1) Green LED, indicates that a DM Essentials link is established.
<b>PWR</b>	(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.
<b>HDMI IN</b>	(1) Green LED, indicates that the device is receiving an HDMI signal

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**DM OUT** (2) LEDs on RJ-45 connector. Green indicates that a DM Essentials 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](#)<sup>3</sup>

### 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

### Dimensions

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

### Weight

11.92 oz (338 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](http://support.crestron.com/app/certificates).

### Model

**HD-TXC-4KZ-101**  
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### Included Accessories

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

### Available Accessories

For a list of available accessories, visit the [HD-TXC-4KZ-101](#) product page.

Notes:

- 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.
- 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.
- 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.
- The HDMI input requires an appropriate adapter or interface cable to accommodate a Dual-Mode DisplayPort or 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](http://www.crestron.com/How-To-Buy/Find-a-Representative) or contact us for additional information by visiting [www.crestron.com/contact/our-locations](http://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](http://www.crestron.com/warranty) for full details.

The specific patents that cover Crestron products are listed online at [patents.crestron.com](http://patents.crestron.com).

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### HDMI

Specifications are subject to change without notice.

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