

DM® Essentials 4K60 4:4:4 Transmitter and 2x1 Auto-Switcher for HDMI® Signal Extension over CATx Cable



- *Point-to-point extension of an HDMI® signal over CAT5e or higher cable*
- *USB-C input with DisplayPort Alt Mode capability*
- *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*
- *Automatic switching of HDMI inputs*
- *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 or DMPS Essentials switcher*

The HD-TX-4KZ-201 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 an HDMI® signal. A CAT5e or higher twisted pair cable (Crestron [DM-CBL-8G](#) or [DM-CBL-ULTRA](#) sold separately) is needed to connect the HD-TX-4KZ-201 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.¹

Interoperability with a DM Essentials Receiver or DMPS Essentials Switcher

The DM Essentials output port of the HD-TX-4KZ-201 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-TX-4KZ-201 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-TX-4KZ-201. In addition, control system programming and .AV Framework™ software support of the HD-TX-4KZ-201 is hosted by the switcher.

4K60 4:4:4 and HDR Support

The HD-TX-4KZ-201 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-201 is used with a DMPS Essentials 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-201. Switching between the two HDMI 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-201 enable the desired input to be selected manually.

Compact, Surface-Mountable Design

Compact in design, the HD-TX-4KZ-201 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-201 can receive power from the included power pack or from the remote DM Essentials receiver or DMPS Essentials switcher.³

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Specifications

Video

Input Signal Type	HDMI® with HDR10, HDR10+, Dolby Vision®, Deep Color, and 4K60 4:4:4 support ² (DVI and Dual-Mode DisplayPort™ interface compatible ⁴)
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
Progressive	2560x1600 WQXGA	60 Hz	4:4:4	8 bit
		1920x1080 FHD 1080p	60 Hz	4:4:4
Interlaced	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

Input Signal Type	HDMI
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

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

Connectors

HDMI INPUT 1-2	(2) HDMI Type A connectors, female; HDMI digital video/audio inputs; DVI and Dual-Mode DisplayPort™ interface compatible ⁴
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, 5}
24V 2.5A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included ³
SERVICE	(1) USB 2.0 Type-A connector, female; Used for firm-ware 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) Bicolor amber/green 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 Essentials switcher); (1) LED, red indicates that the SETUP push button is pressed
HDMI 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.

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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.

Available Accessories

For a list of available accessories, visit the [HD-TX-4KZ-201](#) product page.

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 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

1.54 lb (0.70 kg)

Compliance

Regulatory Model: M202046002

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

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Included Accessories

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

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Notes:

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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 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.
3. 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.
4. 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 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.

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HDMI

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