



# KRAMER

## TP-594Txr

4K HDR HDMI Transmitter with Ethernet, RS-232, IR, ARC & Stereo Audio Routing over PoE Extended-Reach HDBaseT 2.0

| HDMI | Ethernet - RJ-45 | HDBaseT  
| 4K/60 UHD (4:4:4)



TP-594Txr is a high-performance, extended-reach HDBaseT 2.0 transmitter for 4K@60Hz (4:4:4) HDR, HDMI™, Ethernet, RS-232, IR, ARC (Audio Return Channel) and stereo audio signals over twisted pair. TP-594Txr converts all input signals into the transmitted HDBaseT 2.0 signal and enables routing the received ARC signal to the HDMI input and to the digital/analog audio ports. It extends video signals to up to 100m (330ft) over CAT copper cables at up to 4K@60Hz (4:4:4) 24bpp video resolution and provides even further reach for lower HD video resolutions. The analog port also enables embedding audio into the HDBaseT signal

## FEATURES

**High Performance Standard Extender** - Professional HDBaseT extender for providing extended-reach signals over twisted-pair copper infrastructures. TP-594Txr is a standard extender with backward HDBaseT compatibility, enabling it to be connected to any market-available HDBaseT-compliant extension product. It employs standard low-level video compression technology that delivers visually lossless performance for 4K@60 (4:4:4) and HDR signals with near-zero latency. For optimum extension reach and performance, use recommended Kramer cables

**Future-Proof, Standard Extender** - Standard HDBaseT extender, backwards compatible with other standard HDBaseT extenders. It extends either compressed or uncompressed HDBaseT signal, by auto-adapting to the compression capabilities of its connected extender. This enables it to be connected to any market-available HDBaseT-compliant extension product

**Intelligent Compression Handling** - Automatically detects the compression capabilities of a standard HDBaseT extender. Then, it either enables compression when the detected compression is compatible or disables compression when the detected compression is not compatible or when it detects that compression is not supported at all

**HDMI Signal Extension** - Supports HDCP 2.2, deep color, x.v.Color™, HDMI uncompressed audio channels, Dolby TrueHD, DTS-HD, 2K, 4K, CEC, and 3D as specified in HDMI 2.0

**I-EDIDPro™ Kramer Intelligent EDID Processing™** - Intelligent EDID handling, processing and pass-through algorithm that ensures Plug and Play operation for HDMI source and display systems

**Multi-channel Audio Transmission** - Up to 32 channels of digital stereo uncompressed signals for supporting studio-grade surround sound

**Intelligent Source Forward Audio Routing** - When you select the balanced analog stereo audio port signal it is converted into a digital signal and embedded into the transmitted HDMI signal, replacing the embedded HDMI audio input signal. This enables embedding a selectable audio source over HDMI. For example, a presenter can display a video clip and temporarily override the audio of the source media with another audio source, such as from a microphone

**Audio Extension** - Audio channels data flows in both directions, allowing extension of both, transmitter forward-audio channels and receiver return-channel, to peer connected devices

**Intelligent ARC (Audio Return Channel) Routing** - The HDBaseT-ARC signal is routed to the HDMI input and, in parallel, you can select to route the ARC signal to the digital output and/or analog audio bidirectional port. This enables you to play the audio on high-quality external speakers and control the volume using an IR remote control either via a receiver-side AV acceptor device (such as a display) or via a transmitter-side AV acceptor device (such as an AV Receiver with speakers)

**Ethernet Extension** - Ethernet interface data flows in both directions, allowing extension of up to 100Mbps Ethernet connectivity for LAN communication and device control

**Bidirectional RS-232 Extension** - Serial interface data flows in both directions, allowing data transmission and device control

**Bidirectional Infrared Extension** - IR interface data flows in both directions, allowing remote control of peripheral devices located at either end of the extended line

**Cost-Effective Maintenance** - PoE, link, input detection and power LED indicators for HDMI and HDBT ports, remote web UI management and support, and RS-232 connection for local technician management and support, facilitate easy local maintenance and troubleshooting. Remote firmware upgrade via Ethernet or local via USB connection, ensure lasting, field-proven deployment

**Easy and Elegant Installation** - Single cable connectivity for both HDBaseT signals and power.

Compact MegaTOOLS™ fan-less enclosure for dropped-ceiling mounting, or side-by-side mounting of 2 units in a 1U rack space with the recommended rack adapter



## TECHNICAL SPECIFICATIONS

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Inputs	HDMI: On a female HDMI connector
Outputs	HDBT: On an RJ-45 connector Optical (Digital Audio): On a TOSLINK® connector
Ports	Balanced Stereo Audio: On a 5-pin terminal block connector Ethernet: On an RJ-45 female connector for device control and LAN extension RS-232: On a 3-pin terminal block for serial link extension IR : On a 3.5mm mini jack for IR extension Control RS-232: On a 3-pin terminal block for device control USB: On a female USB-A connector for device firmware upgrade
Extension Line	Compression: Low-level standard DSC compression for signals above 4K@60 (4:2:0) 4K@60 (4:4:4) Range with Compression Up to 100m (330ft) 4K@60 (4:2:0) Range with No Compression Up to 100m (330ft) Full HD (1080p@60Hz) Range with No Compression Up to 130m (430ft), Full HD (1080p@60Hz) Range in Ultra-Long Mode Up to 180m (590ft) Compliance: HDBaseT 2.0 Note: Use Kramer shielded cables to achieve optimum extension ranges
Video	Max Bandwidth with Compression 17.95Gbps (5.98Gbps per graphic channel) Max Bandwidth with No Compression 10.2Gbps (3.4Gbps per graphic channel) Max Resolution with Compression 3840x2160@60Hz 4:4:4 24bpp Max Resolution with No Compression 4096x2160@60Hz 4:2:0 24bpp Compliance: HDCP 2.2, HDR 10
User Interface	Indicators Active source detection, PoE status, HDBaseT link and power LEDs Rear Panel: DIP-switches
Extended RS-232	Baud Rate: 300 to 115,200
Extended Ethernet	Data Rate: Up to 100Mbps
Extended IR	Frequency: 0kHz to 60kHz
Power	Consumption of TP-594Txr when supplying PoE to TP-594Rxr 0.65A Consumption of TP-594Txr alone 0.45A Source: 48V DC, 1.36A
Environmental Conditions	Operating Temperature: 0° to +40°C (32° to 104°F) Storage Temperature: -40° to +70°C (-40° to 158°F) Humidity: 10% to 90%, RHL non-condensing
STANDARDS COMPLIANCE	Safety: CE, UL

Environmental: RoHs, WEEE

Enclosure

Size: MegaTOOLS®

Type: Aluminum

Cooling: Convection ventilation

Accessories

Included: power adapter, power cord and bracket

Product Dimensions

19.00cm x 11.50cm x 2.70cm (7.48" x 4.53" x 1.06" ) W, D, H

Product Weight

0.4kg (0.9lbs) approx

Shipping Dimensions

34.50cm x 16.50cm x 5.20cm (13.58" x 6.50" x 2.05" ) W, D, H

Shipping Weight

1.0kg (2.1lbs) approx

