



# KRAMER

## TP-594Rxr

4K HDR HDMI Receiver with Ethernet,  
RS-232, IR, ARC & Stereo Audio  
Embedding/De-embedding over PoE  
Extended-Reach HDBaseT 2.0

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



TP-594Rxr is a high-performance, extended-reach HDBaseT 2.0 receiver for 4K60Hz (4:4:4) HDR, HDMI, Ethernet, RS-232, IR, ARC and stereo audio signals over twisted pair. TP-594Rxr receives the transmitted HDBaseT 2.0 signal and routes it to the HDMI output while enabling flexible audio routing of either the transmitted audio or the received ARC signal. It extends video signals to up 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

## FEATURES

**High Performance Standard Extender** - Professional HDBaseT extender for providing extended-reach signals over twisted-pair copper infrastructures. TP-594Rxr is a standard extender with backward HDBT compatibility, enabling it to be connected to any market-available HDBaseT-compliant extension product. It employs 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 HDBT 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

**Built-in Intelligent Control Gateway** - Remote IP-driven intelligent control of connected AV devices, via CEC (through the HDMI output) or RS-232/IR (through the corresponding output ports), using existing LAN or HDBaseT connectivity. Eliminating the need for an external control gateway, this feature reduces installation complexity and costs, to enable easy integration with control systems, such as Kramer Control

**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™, lip sync, 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

**Audio De-embedding** - As selected by the user, the transmitted digital audio signal is de-embedded from the AV signal and converted to an analog signal for transmission to stereo balanced analog audio output, in parallel to being transmitted to the HDMI AV output. This enables high-quality audio playback by routing the audio to external speakers in addition to routing the audio to the connected AV acceptor device's local speakers (such as TVs with speakers)

**Intelligent ARC (Audio Return Channel) Routing** - As selected by the user, the ARC signal received from the HDMI output, the digital audio input, or the analog audio bidirectional port is routed back to the transmitter via the HDBaseT line. This enables high-quality ARC playback and user volume control by routing the ARC to audio speakers connected on the transmitter side, either directly or via an 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** - Useful LED indicators, 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

**Quick and Efficient Management** - Compatible with Kramer Network enterprise management platform providing: Automatic discovery through the network, FW upgrade management, integrated Maestro automation, and more

**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	HDBT: On an RJ-45 connector Optical (Digital Audio): On a TOSLINK® connector
Outputs	HDMI: On a female HDMI 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	Front Panel: Gateway activity 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: 20kHz to 100kHz
Power	Consumption: 1.1A Source: 12V DC, 2A
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

