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## EXT3-21-XR-TR

2x1 4K60 HDMI/USB Switcher Extender over  
100m HDBaseT 3.0

| HDMI | Ethernet - RJ-45 | HDBaseT



EXT3-21-XR-TR is a high-performance, extended-reach HDBaseT 3.0 extender for 4K60Hz (4:4:4) HDMI, USB, Ethernet, RS-232, and IR signals over twisted pair, flexibly set as transmitter-side or receiver-side device.

EXT3-21-XR-TR transmitter-side converts all input signals into the transmitted HDBaseT 3.0 signal, and extends uncompressed video signals to up to 100m (330ft) over CAT copper cables at up to 4K@60Hz (4:4:4) video resolution.

EXT3-21-XR-TR receiver-side is an auto-switcher with HDMI and HDBaseT inputs that receives the HDBaseT 3.0 signal and converts it back into the original input signals. The connected USB 3.1 peripherals, such as a room camera and microphone, are switchable for use of the active USB host, for convenient hybrid meeting operation with both room and online participants

## FEATURES

**Hybrid-meeting Collaborative Switching** - Controllable coupled-signals switching of both AV and USB host inputs, for concurrent connection with AV output and room USB devices, allows collaborative hybrid meeting where multiple meeting participants are switched to share their content with both room and online meeting participants

**High Performance Standard Extender** - Professional HDBaseT extender for providing extended-reach signals over twisted-pair copper infrastructures. EXT3-21-XR-TR is a standard extender that can be connected to any market-available HDBaseT-compliant extension product. For optimum extension reach and performance, use recommended Kramer cables

**HDMI Signal Switching and Extension** - HDCP 2.3, EDID and CEC signals are passed through from the source to the display. Supports HDR10, deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS-HD, 2K, 4K, and 3D as specified in HDMI 2.0

**HDMI Mirroring** - Transmitter-side extender mirrors input HDMI signal to loop output port for connecting a local monitor or an additional unit in a daisy chain

**Auto Switcher Ease of Use** - Automatically plays the signal of the plugged source on the connected display, according to user-configured preferences, such as last-connected input, or user control commands

**Flexible USB Switching and Extension** - An active USB 3.1 host is connected to the extender at either the transmitter or receiver sides. USB 2.0 signals are extended between the extender transmitter and receiver sides, and switched at the receiver side, enabling connection of the active USB host to both local and remote USB devices, such as camera and audio devices, or HID (Human Interface Devices) mouse or keyboard devices

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

**Audio De-embedding** - The digital audio signal passing-through to the output, is de-embedded, converted to an analog signal and sent to the stereo balanced analog audio output. This enables playing the audio on a locally connected professional audio system (such as DSP) and speakers, in parallel to playing it on the speakers connected to the AV acceptor device (such as TVs with speakers)

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

**Convenient Power On/Off Control of Display** - Simply press the DISPLAY ON button to toggle on and off the power of the connected display using the configurable control interface and commands, and view display power on/off status at all times via button LED indication

**Built-in Intelligent Control Gateway** - Remote IP-driven intelligent control of connected AV, USB, motorized projector screen and sensor devices via CEC, RS-232, IR, I/O or Relay. 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

**Simple Control** - Remote IP-controller connection, browser operation webpage, local panel buttons, or remotely connected contact-closure buttons, for easy and fully flexible user ports selection, signals routing, and switcher extender control

**Ethernet Extension** - Ethernet interface data flows in both directions, allowing extension of up to 1 Gbps 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

**Secured Operation** - Standard IT-grade 802.1x authentication for secured IT LAN connectivity operation

**Comprehensive Management** - Local panel status LED, remote IP-driven firmware upgrade and management via user-friendly embedded web pages, and remote IP or local serial service and management via API commands and responses communication, for flexible service options and ensure lasting, field proven deployment

**Cost-effective Maintenance** - Status LED indicators for HDMI, Loop, HDBT, and USB active host ports, facilitate easy local maintenance and troubleshooting

**Easy and Elegant Installation** - PoE powering via LAN port connection, or bidirectional PoE powering via HDBaseT port connection, and MegaTOOLS™ fan-less enclosure for dropped-ceiling mounting, on or under table, or side-by-side mounting of 2 units in a 1U rack space with the recommended rack adapter, for easy switcher extender deployment



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## TECHNICAL SPECIFICATIONS

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Inputs	Receiver Side: 1 HDBT: On an RJ-45 connector  1 HDMI: On an HDMI Connector
Outputs	Transmitter Side: 1 HDBT: On an RJ-45 connector  Transmitter Side: 1 HDMI Loop: On an HDMI connector  Receiver Side: 1 HDMI: On an HDMI connector  Transmitter or Receiver Side: 1 Balanced Stereo Audio Line: On a 5-pin terminal block connector
Ports	1 USB 3.1 (Host) On a USB-B female connector  3 USB 3.1 (Device) On USB type-A female connectors  1 LAN PoE 1000BaseT Ethernet On an RJ-45 female connector, for LAN connection  1 RS-232 On a 3-pin terminal block connector  1 IR On a 3.5mm mini jack  2 GPIO On a 2-pin terminal block connector  2 Relay On a 4-pin terminal block connector
Extension Line	Reach Up to 100m (330ft), using Kramer HDBaseT cables  Standards Compliance HDBaseT 3.0
Video	Max Data Rate 18Gbps bandwidth (6Gbps per graphic channel)  Max Resolution 4K@60Hz (4:4:4) 24bpp resolution  Content Protection HDCP 2.3  HDMI Support 4K, as specified in HDMI 2.0b  Receiver-side Max Inputs Switching Time HDMI to HDBT: 5sec, HDBT to HDMI: 8 sec
USB Features	USB 3.1 Data Rate Up to 10Gbps  Integrated USB Hubs: 1  Standards Compliance USB 3.2 GEN 2, 2.0 and 1.1
Extended USB	USB 2.0 Data Rate Up to 480Mbps  Transmitted Data Bandwidth Up to 300Mbps  Standards Compliance USB 2.0 and 1.1
Extended Ethernet	Max Data Rate 1 Gbps
Extended RS-232	Baud Rate 300 to 115200
Analog Audio	Max Level 15dBu

	Impedance 500Ω
	Bandwidth 20Hz — 20kHz
	THD + N 0.002% @1kHz at nominal level
	S/N Ratio -93dB, 20Hz — 20kHz
	Coupling: DC
Power	Power Adapter: Source: 48V 1.36A
	Consumption: 48V 0.73A
	Max. Power: 35W
	PoE Consumption: 200mA
	Max. Power: 9.6W
	USB Device Charging Max. Total Current: 2A
Enclosure	Size Mega Tools
	Material Aluminum
	Cooling Convection ventilation
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
General	Net Dimensions (W, D, H) 19 cm x 11.6 cm x 2.7 cm (7.48" x 4.56" x 1.06")
	Shipping Dimensions (W, D, H) 34.5 cm x 16.5 cm x 5.2 cm(13.58" x 6.5" x 0.41")
	Net Weight 0.60 kg (1.32 lbs)
	Shipping Weight 1.11 kg (2.44 lbs)
Accessories	Included Power Adapter & cord & Bracket set & QS
Product Dimensions	19.00cm x 11.60cm x 2.70cm (7.48" x 4.57" x 1.06" ) W, D, H
Product Weight	0.6kg (1.3lbs) approx
Shipping Dimensions	34.50cm x 16.50cm x 5.20cm (13.58" x 6.50" x 2.05" ) W, D, H
Shipping Weight	1.1kg (2.4lbs) approx

