



kramer

MTX3-88-PR-PRO

8x8 4K60 All in one Hybrid Presentation Matrix

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



MTX3-88-PR-PRO is a high-performance video processing and fast-switching scaling matrix, with independent audio-visual (AV) and USB routing. The matrix has unmatched flexibility with USB-C, HDMI, HDBaseT 3.0 ports, air-casting inputs and network stream output.

The unit is enhanced with audio capabilities including an integrated DSP, integrated dual-zone power amplifier, DANTE and USB audio routing.

The flexibility and processing power of the MTX3-88-PR-PRO makes it a perfect system for numerous deployment scenarios

FEATURES

Premium All-in-one Matrix - High-resolution scaling matrix with multi-signal routing of wired and wireless user interfaces

Dual-screen USB-C routing capability allowing to connect any Alt-mode DP capable laptop with an extended desktop to be displayed on any selected pair of outputs

Eight HDBaseT 3.0 extension ports with PoE remote device powering. Each HDBaseT 3.0 port has configurable direction (input or output) and can extend multi-signals over twisted-pair copper infrastructures for un-matched system flexibility

Advance video processing capabilities with several Multiview presentation layouts and two independent video wall presentations

Rich set of audio interface options including analog (line, microphone and speaker), Dante and USB audio devices

A sophisticated audio DSP configured by an intuitive graphic dash-board style user interface. The audio DSP allows mixing, condensing, expanding, noise filtering and echo cancelling to ensure echo-free, noise-free, and crystal-clear sound distribution

Fast <1sec AV Routing - Clean and instantaneous routing between matrix inputs and outputs, with smooth and uninterrupted transition between presented content on local and remote displays

Hybrid-meeting Collaborative Sessions - Controllable multi-signals routing of both AV and USB host inputs. AV and USB routing may be performed independently or in USB-follow-AV mode

Six local USB device ports divisible into two groups for enhanced host - device USB routing flexibility 60W charging for USB-C connected devices

High-Performance Scaling Experience - Built-in ProcAmp & high-resolution scaling technology for optimal up- or down image scaling

Open Standard Streaming and Recording - Session content sharing and recording via the popular H264/5 open streaming standard over IT Lan and WAN networks

Room Control - Includes gateways and a rich set of relays, RS-232 and GPIOs to reduce the systems complexity offering the end-user a smooth and sophisticated room control experience

Standard Enterprise-Grade Secured Operation - Standard IT-grade authentication for secured IT LAN connectivity, and secured web-UI browsing and communication, with OWASP-10 (Open Web Application Security Project) standard penetration protection certification

Comprehensive Management - Local panel buttons operation, remote and secured management via integrated user-friendly web-UI server, and remote via IP-driven API control and management communication, for flexible service options and ensure lasting, field proven deployment



TECHNICAL SPECIFICATIONS

Inputs	2 Full-featured USB-C: On USB type-C female connectors 8 HDMI: On HDMI female connectors 1 Air-cast Wi-Fi: On a 2xRF antenna female connectors 4 Analog Mic or 2 Balanced Stereo Audio: On 3-pin terminal block connectors 4 Analog Balanced Stereo Audio: On 5-pin terminal block connectors
Outputs	8 HDMI: On HDMI female connectors 1 H.264/5 Encoder: On a USB type-C female connector for recording 8 Analog Audio Balanced Stereo Line Level: On 5-pin terminal block connectors 8 Dante Streaming Channels: On an RJ-45 female LAN connectors 2 Power Amplifier Audio Stereo Line: On 4-pin large terminal block connectors Note: On MTX3-88-PR-PRO model only 4 IR: On 2-pin terminal block connectors
Interchangeable Inputs/Outputs	8 HDBT: On RJ-45 female connectors
Ports	3 1000BaseT Ethernet: On RJ-45 female connectors for LAN connection & extension 1 100BaseT Ethernet: On an RJ-45 female connector for LAN connection and management 4 USB 3.2 Device: On USB type-A female connectors 2 USB 3.2 Device: On USB type-C female connectors 1 USB 2.0 Device: On a USB type-C female connector for monitoring & recording 4 RS-232: On 3-pin terminal block connectors 4 SPDT Relay: On 3-pin terminal block connectors 4 GPIO: On 2-pin terminal block connectors
Video	Max Bandwidth: 18Gbps (6Gbps per graphic channel) Max Resolution: 4K@60Hz 4:4:4 24bpp resolution Content Protection: HDCP 2.3 Compliance: HDMI 2.0b
Video Performance	Scaling: Up, down or cross-scaling Minimum Resolution: 480p Max Resolution: 4K@60Hz 4:4:4 24bpp resolution 1sec Max Switching Time Max Latency: 2 video frames
Multi View	Window Layouts: PiP, Side-by-side, Split
Video Wall	Output Wall Layout: 2x2

	Max Video Walls: 2
USB	<p>Max USB 3.2 Data Rate 10Gbps</p> <p>Integrated USB Hubs (layers) 2</p> <p>USB Devices Groups 2</p> <p>Standards Compliance USB 3.2 GEN 2, 2.0 and 1.1</p>
USB-C	<p>AV Compliance MST DP 1.4a Alt Mode</p> <p>Max AV Resolution 4K60Hz 4:4:4 24bpp</p> <p>Max Input AV Streams 2</p> <p>USB Compliance 3.2 Gen 2</p> <p>Max USB 3.2 Data Rate 10Gbps</p> <p>Charging Compliance PD 3.0</p> <p>Max Charging Power 60W per port</p>
Extension Line	<p>Direction: Transmit or receive (per port)</p> <p>Reach: Up to 100m (330ft)</p> <p>Note: When using Kramer HDBaseT cables</p> <p>PoE+ Providing: 30W per 802.3at Type 2</p> <p>Standards Compliance: HDBaseT 3.0</p>
Extended USB	<p>Max USB 2.0 Data Rate: 480Mbps</p> <p>Max Transmitted Data Bandwidth: 300Mbps</p> <p>Standards Compliance USB 2.0 and 1</p>
Extended Ethernet	Max Data Rate: 1 Gbps
Extended RS-232	Baud Rate: 1200 to 115200
Network Streamed Video	<p>Max Resolution: 4K@60Hz 4:2:0 resolution</p> <p>Max Latency: 130msec</p> <p>Standards Compliance: H.264, H.265</p>
Analog Audio Input	<p>Impedance: Balanced: 20kΩ Unbalanced: 10kΩ</p> <p>Nominal Level: Balanced: +4dBu Unbalanced: -10dBV Note: Adjustable via input gain</p> <p>Max Level: >+21dBu Note: At rated THD+N</p> <p>CMRR: >70dB typical</p> <p>Input Gain Adjustment: -20dB to +10dB, in 0.5dB steps</p>
Microphone Input	<p>Signal Type: Balanced: Condenser (with phantom power) Unbalanced: Dynamic</p> <p>Impedance: Balanced: 20kΩ Unbalanced: 10kΩ</p> <p>Nominal Level -60dBV Note: Adjustable via input gain</p> <p>Max Level: Condenser: -18dBu Dynamic: -36dBV</p> <p>Equivalent Input Noise: <-120dBV (1.0 μVrms) Note: At +40dB input gain</p>

CMRR: >70dB typical

Input Gain Adjustment: -30dB to +24dB, in 0.5dB steps
Note: Adjustable per input

DC Phantom Power +48 VDC

Analog Audio Output Impedance: Balanced: 100Ω
Unbalanced: 50Ω

Gain: Balanced: 0dB
Unbalanced: -6dB

Gain Error: ±0.1dB
Note: Channel to channel

Max Level: Balanced: +21dBu
Unbalanced: +15dBu

Output Volume Range: -90dB to +10dB, in 0.5dB steps

THD + Noise <0.01%, 20Hz to 20kHz
Note: At maximum level

Frequency Response: 20Hz to 20kHz, ±0.1 dB

Dynamic Range: 102dB typical
Note: 20Hz to 20kHz unweighted

S/N Ratio: >90dB, 20Hz to 20kHz
Note: At maximum balanced output (unweighted)

Crosstalk: ≤-90dB @ 20Hz to 20kHz
Note: Fully loaded

Power Amplified Audio Note: On MTX3-88-PR-PRO model only

Number of amplifiers 2x 240W power amplifiers

Amplifier Type: Class D

Lo-Z Stereo Output Impedance: 4Ω or 8Ω

Hi-Z Mono Output Voltage: 70V or 100V

Port Output Power (per amplifier) Lo-Z: 2x120W @ 4Ω or 8Ω
Hi-Z: 1x240W @70V or 100V

Max Voltage Gain 26dB SE / 32dB BTL

Dynamic Range: 119dB

Frequency Response: 20Hz to 20kHz, ±0.1 dB

S/N Ratio: 80dB — 10dBV, 20Hz to 20kHz

Network Streamed Audio Stream Compliance: Dante or AES67

Dante Sample Rates: 44.1 ,48 (default), 88.2, 96kHz

AES67 Sample Rate: 48kHz (default), 96kHz

Security Web-UI Communication: HTTPS

User Access: Multiple roles and credentials

IT LAN Authentication 802.1x

Penetration Protection Certification OWASP-10

Power Source: 85-240V AC

Max Consumption: 1110W

Max Power Providing Per HDMI Port: 2.5W (5V@0.5A)

	<p>Max PoE Providing Power Per HDBT Port: 30W</p> <p>HDBT PoE Providing Compliance: 802.3at, Type 2</p> <p>Max USB-C Charging Power Per USB-C Port: 60W</p> <p>USB-C Charging Compliance: PD 3.0</p> <p>Max USB Device Per Port Charging Power: 5W (5V@1A)</p>
Environmental Conditions	<p>Operating Temperature: 0° to +40°C (32° to 104°F)</p> <p>Storage Temperature: -40° to +70°C (-40° to 158°F)</p> <p>Humidity: 10% to 90%, RHL non-condensing</p>
Regulatory Compliance (Standards Compliance)	<p>Safety: CE, FCC, UL</p> <p>Environmental: RoHs, WEEE</p>
Enclosure	<p>Size: 19" 3U</p> <p>Type: Aluminum</p> <p>Cooling: Fan Ventilation</p> <p>Max Fan Noise: 40dBA</p>
General	Net Dimensions (W, D, H) 44cm x 38cm x 13.3cm (17.4" x 15" x 5.3")
Accessories	Included: 2 Power cords, 1 multi-signal USB-C cable (1m), 2 fuses, 1 set of rack ears
Product Dimensions	19" x 9.33 x 3U (43.6cm x 23.70cm x 13.25cm) W, D, H
Product Weight	10.7kg (23.6lbs) approx
Shipping Dimensions	58.00cm x 49.30cm x 26.20cm (22.83" x 19.41" x 10.31") W, D, H
Shipping Weight	14.6kg (32.1lbs) approx

