

XMP 240

DANTE EXPANSION DSP MATRIX PROCESSOR



The XMP 240 Dante Expansion DSP Matrix Processor features an extensive mix matrix with 24 channels of AEC and 48x48 Dante connectivity in only a half rack space. The XMP 240 can also be used standalone for matrix processing in an all network audio system. When connected to a DMP Plus Series processor via Dante or the EXP expansion port, a complete system is created that features up to 36 channels of AEC, a USB audio interface, analog connectivity, and optional VoIP. A system expanded with an XMP 240 is capable of supporting multiple beam forming microphone arrays alongside numerous other Dante sources, with enough outputs to support multiple zones and destination devices. Ideal for network audio systems, the XMP 240 allows for high channel count audio processing.

- ▶ 24 channels of AEC - acoustic echo cancellation
- ▶ Dante audio networking with Dante Domain Manager and AES67 support
- ▶ Extensive mix matrix with input and output processing
- ▶ FlexInput capability on all inputs for input source selection
- ▶ Macros allow the sequencing of commands that can be sent to the local device or external devices via the LAN port
- ▶ Compact half rack size

DESCRIPTION

Designed for Large Network Audio Systems

With connectivity for up to 48 sources and 48 destinations via Dante or AES67, the XMP 240 is ideal for applications that utilize many network audio devices. Dante Domain Manager support provides user authentication, role-based security, and seamless expansion of Dante systems over any network infrastructure.

FlexInputs

All inputs of the XMP 240 offer FlexInput source selection to route any network audio input or expansion input to a specific DSP channel. This enables the XMP 240 to process audio from any source with the full range of DSP capabilities, including AEC.

Acoustic Echo Cancellation

The XMP 240 includes Extron AEC for conferencing applications. AEC is essential for effective remote room-to-room conversations, ensuring clear, natural communication for all participants. AEC processing can be challenged by conditions such as double-talk, when talkers from both ends are speaking simultaneously, and when near end talkers use wireless microphones. Extron AEC features advanced algorithms that deliver fast echo canceler convergence for optimal intelligibility, even in challenging conditions.

The DSP Configurator Software simplifies AEC and noise cancellation setup with a user-friendly interface that provides real-time metering for ERL - Echo Return Loss, ERLE - Echo Return Loss Enhancement, and TER - Total Echo Reduction levels. Guided alerts appear whenever ERL is outside of the optimal range for echo cancellation and DSP templates serve as starting points with routing optimized for AEC workflows. Optional settings include fine adjustments for NLP - Non-Linear Processing to maximize AEC performance in acoustic environments with significant sonic reflections or reverberation.

Automixer

The XMP 240 features a 48 channel automixer with gated and gain sharing modes that can manage up to eight groups of microphone signals. Gating threshold, signal level reduction, and timing parameters are user-adjustable per channel. This allows for fine-tuning to avoid the “chopped” sound characteristic of a traditional automixer when a mic is gated off. As the number of active microphones is doubled, system gain is automatically reduced, uniformly attenuating microphone signal levels to minimize audible changes in the overall sound and the possibility of feedback. For a natural sounding mic mix, the automixer also offers a gain sharing mode which allows all mics to remain on, while the gain for each mic is adjusted in real time to ensure a constant system gain.

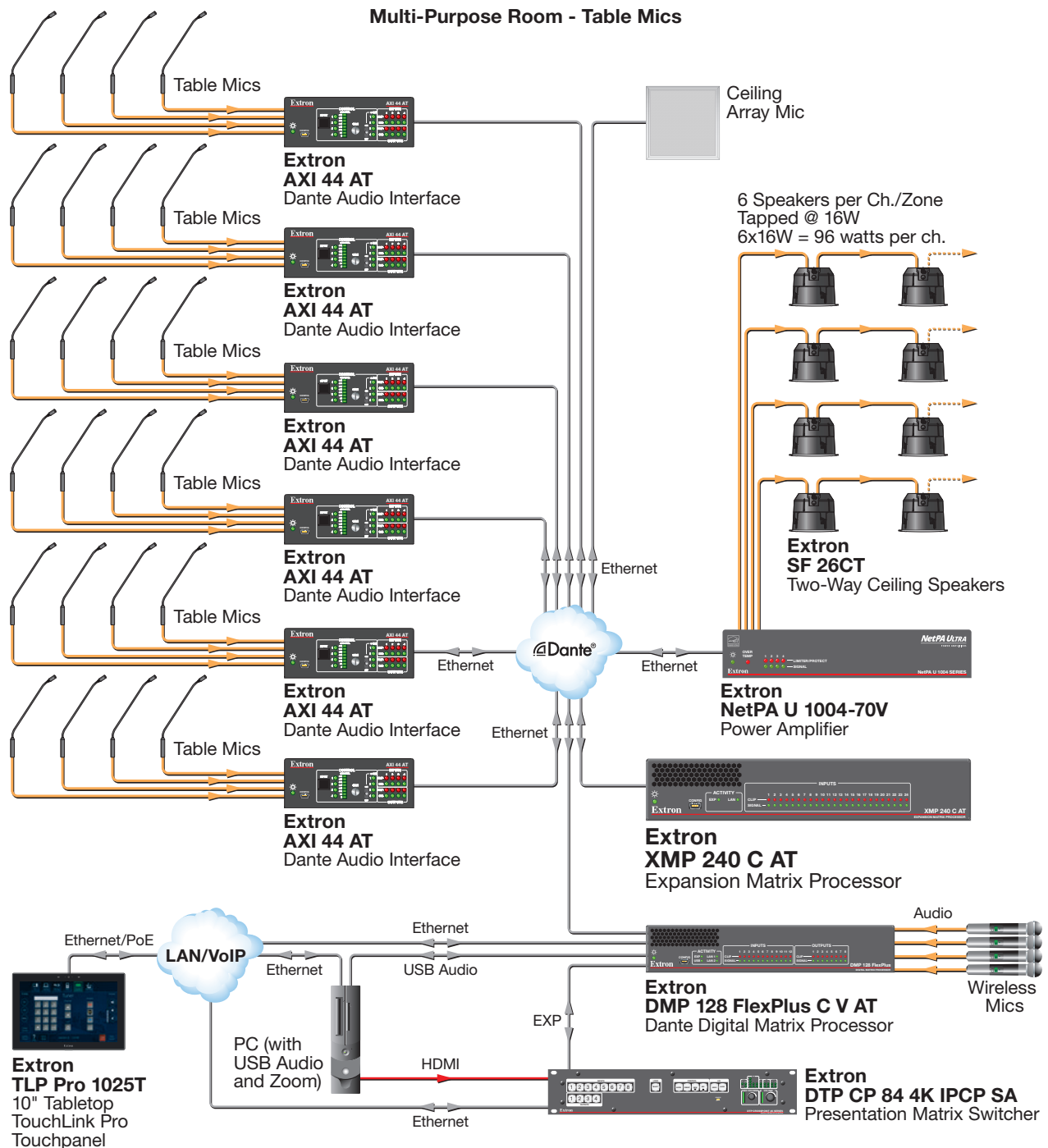
ProDSP

Extron's exclusive ProDSP is engineered from the ground up using a powerful 64-bit floating point DSP engine to provide very wide dynamic range and reduce the potential for clipping. ProDSP also utilizes studio grade 24-bit audio converters with 48 kHz sampling to maintain audio signal transparency. ProDSP is loaded with powerful, easy-to-configure tools to control level, adaptive gain, automixing, dynamics, filters, delay, ducking, loudness, feedback suppression, and AEC.

FEATURES

- ▶ **24 channels of AEC - acoustic echo cancellation** – The XMP 240 includes 24 independent channels of high performance AEC, as well as selectable noise cancellation. Extron AEC features advanced algorithms that deliver fast echo canceler convergence for optimal intelligibility in situations that challenge AEC performance.
- ▶ **Dante audio networking with Dante Domain Manager and AES67 support** – Dante audio networking provides scalability for creating larger audio matrixes over a local area network using standard protocols. A built-in two-port Gigabit switch can be configured to support primary and redundant Dante audio networks.
- ▶ **Extensive mix matrix with input and output processing** – Allows all inputs to be discretely routed to any or all outputs, with processing.
- ▶ **FlexInput capability on all inputs for input source selection** – All 48 inputs offer FlexInput capability to select a Dante channel or expansion input. This allows incorporating the full range of DSP capabilities, including AEC, for any incoming signal.
- ▶ **Macros allow the sequencing of commands that can be sent to the local device or external devices via the LAN port** – A single XMP 240 can act as the central interface from a control system, sending commands to other DMP Plus, AXI AT, and DTP CrossPoint devices.
- ▶ **Compact half rack size** – Allows more input and output channels, with more processing power, to be installed in less space.
- ▶ **Low latency** – Powerful DSP maximizes performance, resulting in latency that is very low, from input to output, regardless of the number of active channels or processes. While latency increases in channels with AEC enabled, and marginally with the automixer, overall latency remains low. This keeps audio in sync with video and prevents distractions to presenters or performers resulting from delayed live audio.
- ▶ **Advanced audio processing on all outputs** – Up to 48 speaker zones can be implemented on one XMP 240 with full processing for each zone, making it ideal for full mix-minus implementations.
- ▶ **Ethernet monitoring and control** – Engineered to meet the needs of professional AV environments, Ethernet control enables the XMP 240 to be proactively monitored and managed over a LAN, WAN, or the Internet, using standard TCP/IP protocols.
- ▶ **Automixer with eight groups** – The XMP 240 features an automixer with gated and gain sharing modes for managing up to eight groups of microphone signals. Gating threshold, signal level reduction, and timing parameters are user-adjustable per channel, allowing for fine-tuning to avoid the “chopped” sound characteristic of a traditional automixer when a mic is gated off.
- ▶ **ProDSP 64-bit floating point signal processing** – The XMP 240 features 64-bit floating point audio DSP processing, which maintains very wide dynamic range and audio signal transparency, to simplify management of gain staging while reducing the possibility of DSP signal clipping.

In this multi-purpose room, an XMP 240 is used to bring 24 channels of table microphones, with AEC, into an AV conferencing system built around a DMP 128 FlexPlus C V AT and a DTP CrossPoint Presentation Matrix Switcher with integrated control processor. This system provides a total of 36 channels of AEC processing to accommodate a Dante ceiling mic array and four wireless microphones in addition to the table microphones. A NetPA U 1004-70V provides Dante-enabled amplification to the SF 26CT ceiling speakers, completing an all-Dante networked audio system, controlled over the network by a TLP Pro 1025T Tabletop TouchLink Pro Touchpanel.



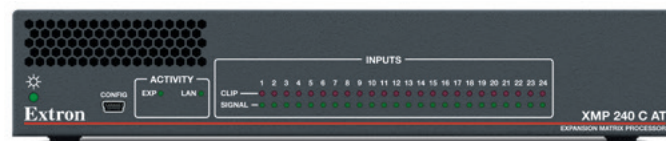
SPECIFICATIONS

AUDIO SYSTEM	
Gain	Balanced output: 0 dB, unbalanced output: -6 dB
Frequency response	20 Hz to 20 kHz, ± 0.2 dB
THD + Noise	<0.01%, 20 Hz to 20 kHz, at maximum level
S/N	
Digital In to Digital Out	115 dB, 20 Hz to 20 kHz, at full-scale output (unweighted)
Crosstalk	<-90 dB @ 20 Hz to 20 kHz, fully loaded
AUDIO PROCESSING	
AEC tail length	>200 msec
AEC convergence	Up to 60 dB/sec
Noise cancellation	Up to 20 dB, software selectable
EXP PORT	
Transmission type	Proprietary
Connector	1 RJ-45
Inputs	16 channels Rx
Outputs	16 channels Tx
Audio format	Uncompressed, 24-bit, 48 kHz
EXP cable	Shielded CAT6 up to 10 meters (1 foot cable included)
AT PORT – AUDIO TRANSPORT	
Transmission	Dante/AES-67, software selectable
Connectors	2 RJ-45, 2-port 1 Gbps switch to Dante interface
Inputs	48 channels Rx
Outputs	48 channels Tx
Audio format	Uncompressed, 24-bit, 48 kHz
Latency	Deterministic, based on user selections: 0.25 ms, 0.5 ms, 1.0 ms (default), 2.0 ms, 5.0 ms
CONTROL/REMOTE	
Serial host control port	1 bidirectional RS-232, 3.5 mm captive screw, 3 pole
Baud rate and protocol	38400 baud, 8 data bits, 1 stop bit, no parity
USB control port	1 front panel USB mini-B
Ethernet host port	1 RJ-45
Data rate	10/100/1000 Base-T
Protocol	ARP, ICMP, IP, TCP, DHCP, HTTPS, Telnet
Web server	Up to 200 simultaneous sessions
Program control	Extron control/configuration program for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®, Telnet
GENERAL	
Power supply	External (included, PS 1215 C) Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 1.5 A, 18 watts
Power input requirements	12 VDC or Power over Ethernet (PoE IEEE 802.3af)
Power consumption	
Power supply	
Device	9.8 watts
Device and power supply	10.5 watts
Power injector (optional, XTP PI 100)	
Device	11.7 watts
Device and power injector	14.3 watts
Thermal dissipation	
Power supply	
Device	33.4 BTU/Hr
Device and power supply	35.8 BTU/Hr
Power injector (optional, XTP PI 100)	

Device	39.8 BTU/Hr	
Device and power injector	48.6 BTU/Hr	
Cooling	Convection, vents	
Mounting		
Rack mount	Yes, with optional 1U rack shelf	
Furniture mount	Yes, with optional under-desk mounting kit	
Enclosure dimensions	1.7" H x 8.7" W x 9.5" D (1U high, half rack wide) (4.3 cm H x 22.1 cm W x 24.1 cm D)	
Product weight	2.00 lbs (0.9 kg)	
Regulatory compliance	CE, c-UL, UL, C-Tick, FCC Class A, ICES, RoHS, VCCI, WEEE	
Warranty	3 years parts and labor	
NOTE: All nominal levels are at $\pm 10\%$.		
Model	Version Description	Part number
XMP 240 C AT	Expansion Matrix Processor w/ 24 AEC and Dante	60-1836-01

For complete specifications, please go to www.extron.com
Specifications are subject to change without notice.

PANEL DRAWINGS



Front - XMP 240 C AT



Back - XMP 240 C AT

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