

DMP 64 Plus

6X4 ProDSP DIGITAL MATRIX PROCESSORS



ProDSP

VoIP

Dante

DANTE DOMAIN
MANAGER READY

AES67

EVERLAST
POWER SUPPLIES

The DMP 64 Plus compact Digital Matrix Processor is a flexible audio processing solution that brings full rack performance into a half rack space. Offering four models to meet a variety of needs for smaller systems, the DMP 64 Plus provides key capabilities like flexible control options, phantom power, and powerful automixing. From a collaboration space to a conference room, the DMP 64 Plus ensures ease of use and exceptional audio quality.

- ▶ Four models with 6 mic/line inputs and 4 line outputs
- ▶ Six channels of AEC - acoustic echo cancellation
- ▶ All models include a configurable USB Audio interface
- ▶ AT models provide Dante audio network connectivity
- ▶ V models include up to eight VoIP lines
- ▶ Full rack performance in a half rack enclosure

Extron

DESCRIPTION

The **Extron DMP 64 Plus** series of compact Digital Matrix Processors features six DSP input channels with AEC, in only a half rack space. With a flexible mix matrix, a USB audio interface, and 6x4 analog connectivity, the DMP 64 Plus provides the ability to easily connect and route signals to accommodate system requirements. The AT models can be powered by PoE+ and provide 32x16 Dante connectivity for popular Dante microphone arrays, and other Dante devices, while the V models include up to eight VoIP lines for collaboration applications. Featuring an ACP bus for audio control panels, an expansion port for bidirectional digital audio connection with a DTP CrossPoint® or another DMP, eight audio file players, and configurable macros, the DMP 64 Plus can be used in a wide variety of smaller systems.

Acoustic Echo Cancellation

The DMP 64 Plus series includes Extron AEC for conferencing applications. AEC is essential for effective remote room-to-room conversations, ensuring clear, natural communication for all participants. These models include six independent channels of high performance AEC, as well as selectable noise cancellation. 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.

Dante Connectivity

The Dante-equipped DMP 64 Plus AT models provide scalable audio transport, with Dante Domain Manager support, over a local area network using standard network protocols. Each DMP 64 Plus AT model sends out 16 channels of digital audio and can receive 32 channels over the network, offering easy connectivity to popular Dante microphones. A built-in two-port Gigabit switch provides direct connection to other Dante-enabled devices to create simplified, cost effective audio systems. Additionally, the DMP 64 Plus AT models can be configured to support primary and redundant Dante audio networks, as well as AES67 compatibility. Setting up a network of Extron Dante-enabled audio devices requires Dante Controller, and Extron DSP Configurator Software.

Power Over Ethernet

The AT models with Dante connectivity can be powered by PoE+.

FlexInputs

All six main DSP channels of the DMP 64 Plus offer FlexInput source selection to route any Dante input, expansion input, or one of the six mic/line inputs, to a main DSP channel. This enables the DMP 64 Plus to process audio from any source with the full range of DSP capabilities, including AEC.

USB Audio Interface

The configurable USB audio interface provides connectivity to a computer for use with soft CODEC applications and computer sourced audio and can be set to 0x8, 2x6, 4x4, 6x2, or 8x0. This allows for more input or output streams, as required by the system application.

KEY FEATURES

- ▶ **Four models with 6 mic/line inputs and 4 line outputs**
- ▶ **Six channels of AEC - acoustic echo cancellation**
- ▶ **All models include a configurable USB Audio interface** – Easy connectivity to computer based soft codecs and program playback sources. The input/output configuration of the USB Audio Interface can be set to 0x8, 2x6, 4x4, 6x2, or 8x0.
- ▶ **AT models provide Dante audio network connectivity** –
 - Receives 32 channels from a Dante network
 - Transmits 16 channels to a Dante network
 - Supports Dante Domain Manager
 - AES67 support
- ▶ **V models include up to eight VoIP lines** – Supports generic Session Initiation Protocol - SIP 2.0 connectivity per RFC 3261
- ▶ **Compact half rack size**
- ▶ **FlexInput capability on main inputs** – All six main inputs offer FlexInput capability to select a Dante channel, expansion input, or a local mic/line input. This allows incorporating the full range of DSP capabilities, including AEC, for incoming Dante channels.
- ▶ **AT models can be powered by PoE+**
- ▶ **Optional ACP Series audio control panels provide intuitive audio system control** – Directly connects to the DMP 64 Plus, offering flexible audio control for configurations that do not require a full control system.
- ▶ **Digital I/O ports for remote control or feedback** – Six digital input and output ports are provided, so that the DMP 64 Plus can be programmed to sense and then respond to external triggers such as mic activation, muting, and recall of presets.
- ▶ **Macros allow the sequencing of commands that can be sent to the local device or external devices via the LAN port** – A single DMP 64 Plus can act as the central interface from a control system, sending commands to other DMP and DTP CrossPoint units.
- ▶ **Advanced audio processing on all four analog outputs and all 16 direct Dante/Expansion outputs** – Up to 20 speaker zones can be implemented on one DMP 64 Plus with full processing for each zone, making it ideal for full mix-minus implementations.
- ▶ **Extensive mix matrixing in every DMP 64 Plus allows all inputs to be discretely routed to any or all outputs** – A 54x28 mix matrix allows all main inputs, aux inputs, Dante inputs and virtual bus returns to be discretely routed to any or all of the analog outputs, aux outputs, Dante outputs and the virtual bus sends.
- ▶ **16 virtual processing loops allow for great flexibility in sub-mixing and processing** – Processing common to many inputs can be applied using a single virtual channel.
- ▶ **Up to eight audio file players can be used to play back audio files for system set-up or as part of the system design** – Use the provided pink noise, white noise, and sine wave files, or import your own WAV, MP3, WMA, AIFF, AAC, or RAW files. Supported file formats are automatically converted to 24-bit, 48 kHz RAW for approximately 20 minutes of playback time and saved to the onboard storage.

OVERVIEW

Six FlexInput Channels

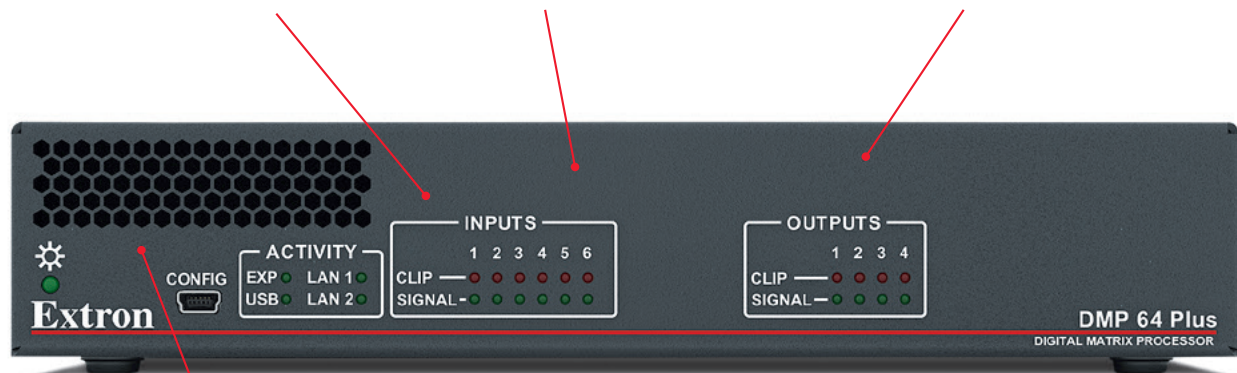
With full DSP, including AEC, filters, dynamics, automixing, delay, and ducking

Compact Half Rack Size

Requires less rack space or easily fits under a table

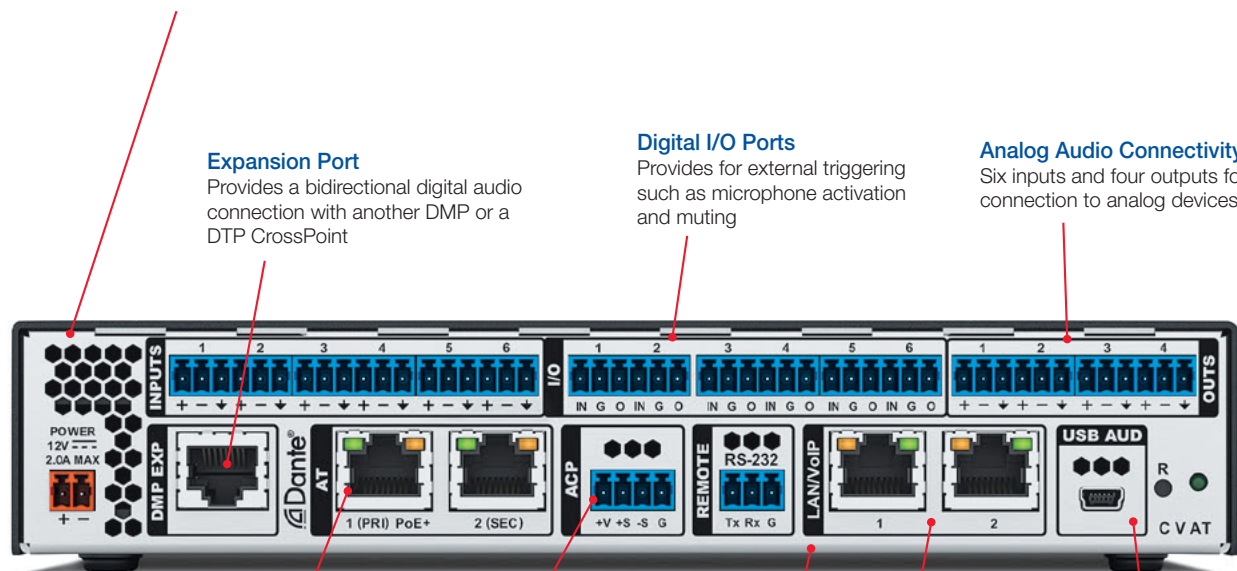
Up To 46x28 Total Inputs and Outputs

Via Dante, expansion bus, analog, USB, and VoIP



Front to Back Ventilation

Allows side by side and above or below rack mounting of other devices



Expansion Port

Provides a bidirectional digital audio connection with another DMP or a DTP CrossPoint

Digital I/O Ports

Provides for external triggering such as microphone activation and muting

Analog Audio Connectivity

Six inputs and four outputs for connection to analog devices

ACP Bus

Connects to the ACP Series of audio control panels to provide control of volume and preset/macro recall

VoIP Support

Up to eight VoIP lines that support generic Session Initiation Protocol - SIP 2.0

32x16 Dante Audio Networking

Includes Dante Domain Manager and AES67 support

Control System Connectivity

Externally control DSP functions via RS-232 or network connection

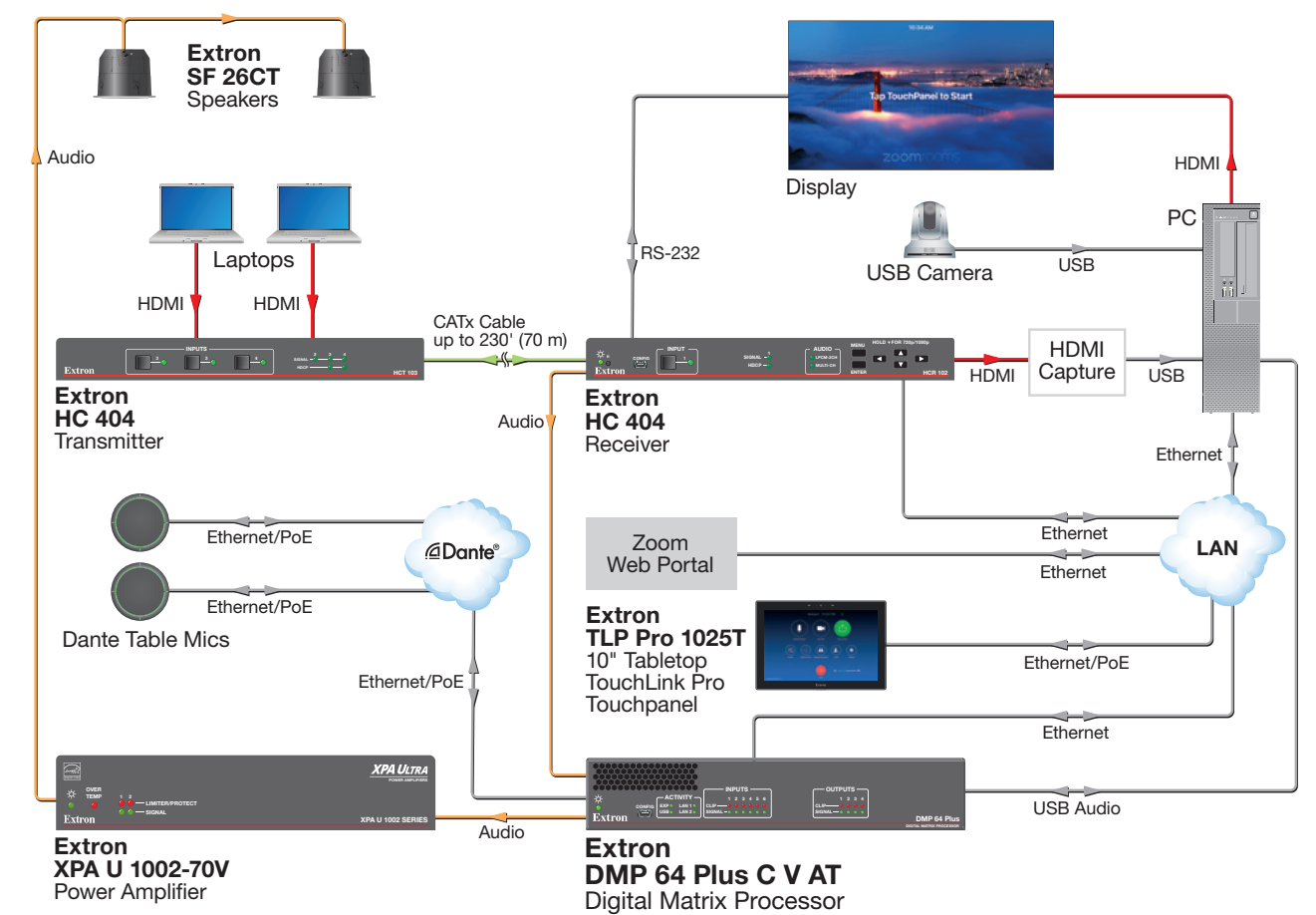
USB Audio Interface

Configurable digital connection to a soft conferencing codec or computer based audio recording/playback

APPLICATION DIAGRAM

Zoom Room Audio

In this Zoom-enabled collaboration space, audio processing is handled by the DMP 64 Plus C V AT while connection to sources and displays is performed by an HC 404 system. Two Dante table mic arrays are connected via Ethernet to the DMP 64 Plus C V AT, where they receive all processing necessary for conferencing, including AEC. Depending on need, the user can switch between the Zoom web portal and a dedicated VoIP server. The entire system is network controlled from an Extron TLP Pro 1025T touchpanel. High performance mix minus audio playback is provided by the XPA U 1002-70V power amplifier feeding a pair of SF 26CT two-way ceiling speakers.



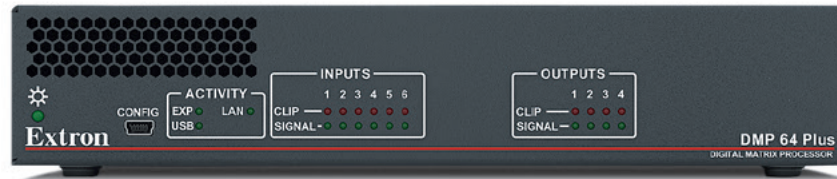
SPECIFICATIONS

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	
Analog In to Analog Out	>109 dB, 20 Hz to 20 kHz, at maximum balanced output (unweighted)
Analog In to Digital Out	110 dB, 20 Hz to 20 kHz, at full-scale output (unweighted)
Digital In to Analog Out	115 dB, 20 Hz to 20 kHz, at maximum balanced output (unweighted)
Crosstalk	<-90 dB @ 20 Hz to 20 kHz, fully loaded
AUDIO INPUT	
Number/signal type	6 mono (or 3 stereo), mic/line, balanced/unbalanced, 6 with phantom power
Connectors	(3) 3.5 mm captive screw, 6 pole, mono, balanced/unbalanced
Impedance	>10k ohms balanced/unbalanced
Nominal level	-60 dBV, +4 dBu, -10 dBV adjustable via input gain
Maximum level	+21 dBu at rated THD+N when mic gain is set to 0 dB
CMRR	>60 dB typical
DC phantom power	+48 VDC, $\pm 10\%$ (inputs 1-6) can be switched on or off per input
AUDIO OUTPUT	
Number/signal type	4 mono (or 2 stereo), line, balanced/unbalanced
Connectors	(2) 3.5 mm captive screw, 6 pole, mono, balanced/unbalanced
Impedance	100 ohms balanced, 50 ohms unbalanced
Gain error	± 0.1 dB channel to channel
Maximum level (Hi-Z)	>+21 dBu balanced, >+15 dBu unbalanced
AUDIO PROCESSING	
A/D, D/A conversion	24-bit, 48 kHz
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)
USB AUDIO PORT	
Connector	1 rear panel USB mini-B
USB standards	USB 2.0, high speed
AT PORTS (DMP 64 PLUS AT MODELS ONLY) — AUDIO TRANSPORT	
Transmission	Dante/AES-67, software selectable
Connectors	2 RJ-45, 2-port 1 Gbps switch to Dante interface
Inputs	32 channels Rx
Outputs	16 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

VOIP PORT (DMP 64 PLUS V MODELS ONLY)		
Connector	1 RJ-45	
Data rate	10/100/1000 Base-T	
Signaling protocol	Session Initiation Protocol (SIP), RFC 3261 and related RFCs	
Discovery protocol	LLDP-MED (optional)	
Lines	Up to 8 concurrent, independent extensions	
Codec support	Various ITU, including wideband	
Default settings	Link speed and duplex level = autodetected IP address = 192.168.1.254 Subnet mask = 255.255.255.0 Default gateway = 0.0.0.0 DHCP = off	
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	
ACP control port	(1) 3.5 mm captive screw, 4 pole, supports up to 8 panels	
Pin configuration	1 = +12V, 2 = +S, 3 = -S, 4 = G	
Power supply	6 Watts max	
Digital I/O	(6) 3.5 mm captive screw, 6 pole (shared with audio input)	
Pin configuration	1 = In, 2 = G, 3 = Out 1	
Voltage range	Input = 0V to +12V Output = 0V (low), 5V (high) Software programmable	
Ethernet host port	1 RJ-45	
Data rate	10/100/1000 Base-T	
Protocol	ARP, ICMP, IEEE 802.1X, IP, TCP, DHCP, HTTPS, Telnet, SSH	
Web server	Up to 200 simultaneous sessions	
Program control	Extron DSP Configurator control/configuration program for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®, Telnet	
GENERAL		
Power supply	External Input: 100-240 VAC, 50-60 Hz	
Power input requirements	12 VDC or Power over Ethernet Plus (PoE Plus IEEE 802.3at)	
DMP 64 Plus C V AT — power consumption		
Device	PoE+ PSE 21.7 watts Power supply (PS 1220)	
Device and power supply	20.4 watts	
DMP 64 Plus C V AT— thermal dissipation		
Device and power supply	Power supply (PS 1220) 53.5 BTU/Hr	
Cooling	Fan, front to back, fixed speed	
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	2.35 lbs	
Regulatory compliance	CE, c-UL, UL, CE, C-Tick, FCC Class A, ICES, RoHS, VCCI, WEEE	
Warranty	3 years parts and labor	
NOTE: All nominal levels are at ±10%.		
Model	Version Description	Part number
DMP 64 Plus C	6x4 Digital Matrix Processor w/ AEC	60-1823-01
DMP 64 Plus C AT	6x4 Digital Matrix Processor w/ AEC and Dante	60-1823-10
DMP 64 Plus C V	6x4 Digital Matrix Processor w/ AEC and VoIP	60-1824-01
DMP 64 Plus C V AT	6x4 Digital Matrix Processor w/ AEC, VoIP, & Dante	60-1824-10

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

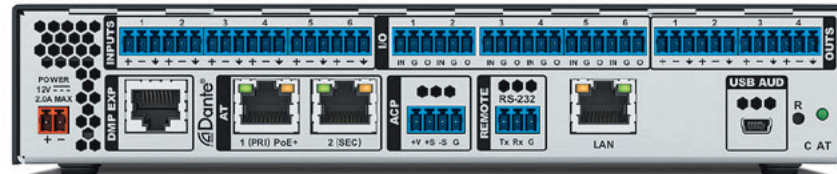
PANEL DRAWINGS



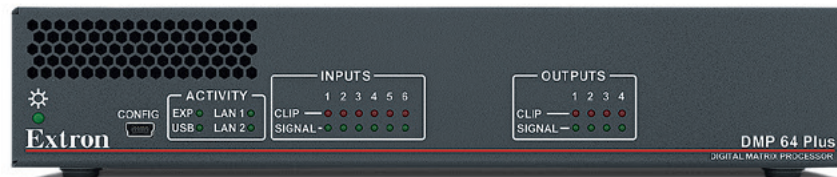
DMP 64 Plus C - Front



DMP 64 Plus C - Back



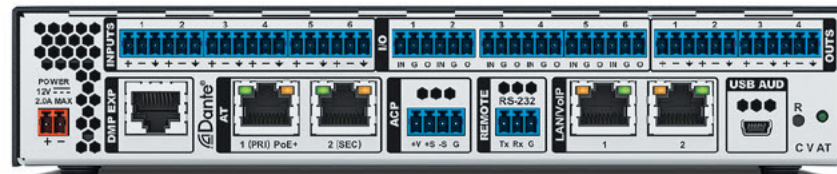
DMP 64 Plus C AT - Back



DMP 64 Plus C V - Front



DMP 64 Plus C V - Back



DMP 64 Plus C V AT - Back

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