MXE5 DSP matrix mix engine 24x24 channels

DYNACORD

- DSP matrix mixer focused on performance audio

- Combining matrix control with mixing functionality

- 24x24 matrix with Dante/OCA

- Controlled via SONICUE

- 12 mic/line inputs, 8 line outputs

The MXE5 Matrix Mix Engine is a 24 x 24 audio matrix and system controller with professional sound quality, intuitive zone mixing features, Dante network and AES70 control. Featuring leading-edge 48 / 96 kHz signal processing, extremely low audio signal latencies, professional routing and mixing functionalities, it is the perfect fit for venues requiring high quality foreground music, such as stadiums and sports facilities, live music venues, contemporary churches, performing art centers, theatres, conference centers and clubs.
MXE5 is completely integrated into Dynacord's SONICUE Sound System Software for easy control. Dedicated user control is possible via the Touch Panel Controller with intelligent zone control and unique universal wall box compatibility.

Parts included

Quantity	Component
1	MXE5 DSP Matrix Mix Engine
10	6-pin Euroblock-type connector, inputs/outputs
1	15-pin Euroblock-type connector, control port/ GPIO
2	Mains input AC power cables, US- and EU-types
1	Installation manual
1	Safety instruction booklet

Technical specifications

DESCRIPTION AND FEATURES

MXE5 DSP Matrix Mix Engine	Audio system manager with integrated matrix mixing, signal processing, network routing, system control and supervision
Audio	24 x 24 channel audio mix matrix 12 analog inputs, 8 analog outputs 24 OMNEO / Dante network inputs and outputs
Safety / Redundancy	Internal supervision, system monitoring, watchdog, fault output Redundant audio networking supported
Configuration and Control Software	SONICUE audio system design and control application Integration of MXE series, remote amplifiers, loudspeakers, peripheral devices Configuration, control, and monitoring for complete audio systems Programmable user control panels and access levels

AUDIO SPECIFICATIONS

Frequency Response	
ref. 1 kHz, analog in to analog out, 48 kHz	20 Hz to 20 kHz (±0.5 dB)
ref. 1 kHz, analog in to analog out, 96 kHz	20 Hz to 40 kHz (±0.5 dB)
Signal to Noise Ratio	
A-weighted, analog input	> 118 dB
A-weighted, analog output	> 118 dB
A-weighted, analog input to analog output	> 115 dB
EIN Equivalent Input Noise	< -128 dB
20 Hz to 20 kHz, A-weighted	
THD+N	< 0.002 %
1 dB below max., @ 1 kHz	
Crosstalk	< -105 dB
1 dB below max., @ 1 kHz	
Common Mode Rejection	> 70 dB
@ 1 kHz, nominal Level	
Phantom Power	+48 V / 10 mA, switchable per analog input
Voltage @ Current	

Input gain	0 dB to +60 dB
Analog inputs	

DIGITAL SIGNAL PROCESSING

Sampling rate	48 kHz / 96 kHz, OMNEO / Dante synchronized
Signal Delay / Latency	
Analog In to Analog Out, 48 kHz / 96 kHz	< 0.45 ms / < 0.22 ms
Signal Processing	32/40 bit, floating point
Filter	PEQ, Lopass, Hipass, Loshelv, Hishelv, X-Over, FIR
Dynamics	Ducker, Compressor, Noisegate
Limiter	Peak (PA) limiter, RMS / TEMP limiter
Pilot tone	Generator, Detector with Notch
Generators	Sine, Pink noise, White noise
Mixer/Router	Router, Mixer, Matrix Mixer
Misc	VU Meter, Level, Polarity, Mute, Delay
Special Algorithms	Speaker Processing
Memory	
DSP Presets	60

CONNECTIVITY

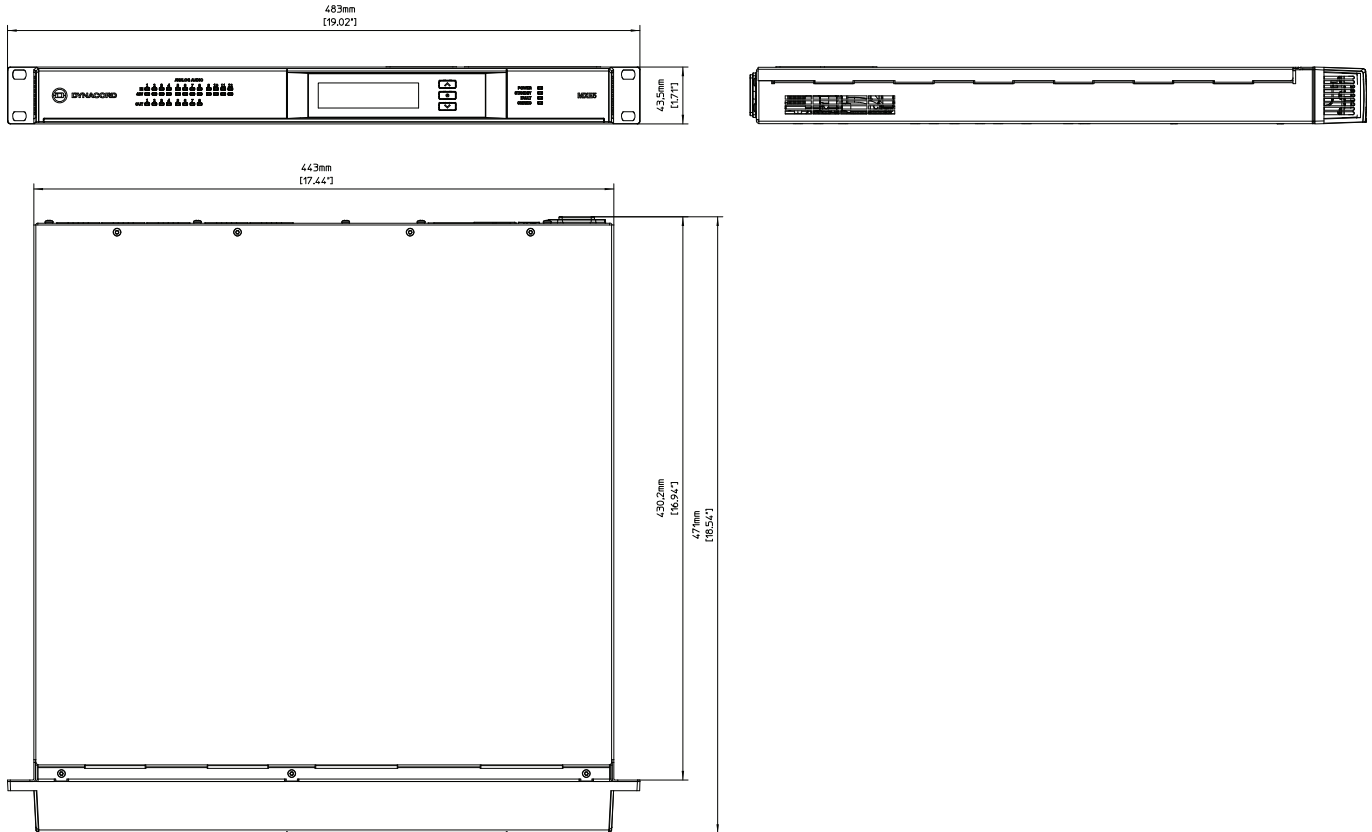|	
Analog Audio Input / Output	
Type	12 mic/line level inputs, 8 line level outputs, electronically symmetric
Connectors	10 x 6-pole Euroblock connectors, 2 channels each
Nominal Input / Output Level	+6 dBu / 1.55 V
Maximum Input / Output Level	+22 dBu / 9.7 V
Reference level equal to digital input	+22 dBu for 0 dBFS
Input Impedance, active balanced	2.2 kΩ
Output Impedance, active balanced	47 Ω
Min. Load Impedance	600 Ω
Network	
Type	3 x RJ45

Standards	1000base-T / 100base-TX, integrated switch
Network Audio Inputs	24 channels, 48 kHz / 96 kHz, OMNEO/Dante format
Network Audio Outputs	24 channels, 48 kHz / 96 kHz, OMNEO/Dante format

GPIO Control Port

Type	15-pole Euroblock connector
Ports and Operating Modes	8 x GPIO, switchable Analog In / Digital In / Digital Out
Analog Input Range	0 V to +11 V, 110 kΩ input resistance
Digital Inputs	ON: < 1.5 V OFF: > 2.0V, internal pull-up (10 kΩ)
Digital Outputs	ON: Output switched to GND, max. 200 mA OFF: Open Collector (110 kΩ to GND)
Reference Voltage Output	+10 V, max. 200 mA, supervised, short circuit protected
READY / FAULT contact	Galvanic isolated relay, max. 30 VDC / 500 mA

Mains Input	1 x IEC appliance inlet

USER INTERFACE

Display	Black/white OLED 256 x 64 pixel
Front panel indicators	12 x Input LEDs (Signal/Clip) 12 x Phantom Power LEDs (+48 V) 8 x Output LEDs (Signal/Clip) 4 x status LEDs (POWER, STANDBY, FAULT, OMNEO)
Front panel operating elements	3 push buttons (UP, ENTER, DOWN)
Rear panel indicators	1 x status LED (STATUS)
Rear panel operating elements	Mains Switch

GENERAL SPECIFICATIONS

Power Requirements	100 V to 240 V, 50 Hz to 60 Hz AC

Power Consumption

Operating Mode	50 W typical, 55 W max
Protections	High Temperature, Mains Over-/ Undervoltage Protection
Cooling	Front-to-rear, temperature controlled fan
Ambient Temperature Limits	-5 °C to +45 °C (+23 °F to +113 °F)
Operating Altitude	2000 m
IEC Protection Class	Class I (grounded)
Electromagnetic Environment	E1, E2, E3
Certifications	CE, IEC 62368, IEC 60065, CAN/CSA 60065:16, UL Std No. 60065-2015, EN55032, EN61000-3-2, EN61000-3-3, EN55103-2, FCC Part 15 Class B, ICES-003, RoHS/WEEE compliant
Color	Black
Dimensions (W x H x D)	483 x 43.5 x 471 mm (19", 1 RU)
Weight	6.0 kg (13.2 lb)
Shipping Weight	8.1 kg (17.9 lb)

Dimensions: MXE5

Ordering information

MXE5 DSP matrix mix engine 24x24 channels
12 mic/line, 8 line outputs, 24x24 Dante channels,
48kHz / 96 kHz sample rate, GPIO and OCA controller
Order number **MXE5**