

E5-MX

Switch and Distribution Amplifier

- Excellent short term stability and phase noise
- Comprehensive specification & options
- Manual or Automatic selection of redundant inputs
- Flexible signal configuration
- Five years warranty



Description

The E5-MX is an intelligent low noise Rack Mount distribution amplifier which can be configured to output multi-input signals to 6-24 channels. Each output channel of E5-MX can be configured to distribute sine wave, IRIG timecodes or pulse signals from one or two inputs.

The E5-MX provides remote access, monitoring, control and alarm output on user interface ports. The E5-MX is controlled through RS232, USB and Ethernet port connection using command line. The input channels, A and B, can be set to be the primary or secondary input signal. The mode of the redundancy module can be set to automatic or manual. In the event of input failure, the automatic mode will detect if signal is present and switchover to an active input (A/B) and the manual mode requires user to select and switch to an active input channel.

Features

- Multiple inputs & outputs
- Low phase noise
- >80dB at 10MHz isolation
- Adjustable output level
- 0 dBm to +16dBm input
- Internal battery backup (Optional)
- High isolation & Low distortion

Applications

- Industrial calibration laboratories
- Telecom applications
- Laboratories reference distribution
- Production Test Reference for instrumentation

Specification

Sine wave input/output

Input characteristics

Frequency	5MHz to 20MHz
Impedance	50 Ω or 1K Ω
Input level	0 to +13dBm (±1dBm)
Input SWR	<1.2:1 at 10MHz

Output characteristics

Impedance:	50 Ω or 1K Ω
Output level	0 to +13dBm (±1dBm)
Output SWR	<1.2:1

Additive Phase Noise (SSB) Frequency Stability Allan Deviation

1Hz: -125 dBc/Hz	$\tau = 1s$	2×10^{-13}
10Hz: -140 dBc/Hz	$\tau = 10s$	2×10^{-14}
100Hz: -160 dBc/Hz	$\tau = 100s$	2×10^{-15}
1KHz: -160 dBc/Hz	$\tau = 1000s$	5×10^{-16}
10KHz: -160 dBc/Hz		

Spurious

Spurious	<-100dBc/Hz
Broadband Noise	<-155dBc/Hz

Harmonics

Harmonics	<-40Bc
Non-harmonics	<-80dBc

Isolation

Output to output	>80dB at 10MHz
Output to input	>80dB at 10MHz
Non-adjacent output	>80dB at 10MHz
Input A to input B	>85 dB at 10MHz

Pulse/IRIG timecode input/outputs

Input Pulse/DC IRIG timecode

Frequency	1PPS to 10MPPS
Level	0 to 6V _{pp}
Impedance	50 Ω or 1K Ω
Duty Cycle	0% to 100%

Output Pulse/DC IRIG

Frequency Level	1PPS to 10MPPS
Impedance	50 Ω
Output level	0 to +6V peak
Rise time	<10ns
Fall time	<10ns
Jitter(rms)	<200ps
Skew	<±2ns

Input and output AM IRIG timecode

Frequency	Modulation frequency up to 1MHz
Code format	Any IRIG format, IEEE 1344, NASA 36 2137, XR3
Level	Input & output 0-6 V _{pp}
Impedance	50 Ω

Isolation

Output to output	>85dB
Output to input	>85dB
Non-adjacent output	>100dB
Input A to input B	>85 dB

Outputs See options

No of inputs: 4 2 sine 2 pulse

No of outputs: 12 Configurable up to 24 outputs

Connector: BNC or SMA

Environmental

Temperature :	Operating	-20°C +60°C
	Storage	-40°C +80°C

Temp stability : -20°C +60°C 1x10⁻⁹

Relative humidity : 95% non-condensing

Magnetic Field sensitivity : <1x10⁻¹¹ Gauss

Approximate MTBF : 200,000 Hrs, Stationary

Dimensions (1U) : 44mm X 444mm X 221mm

Power requirement

AC power: 90-245 VAC, 20W, 50Hz – 60Hz

Built-in options

Option 01: Redundant switchover for external power back-up

Option 11: 1 input 24 output

Option 12: 2 inputs 12/24 outputs

Option 13: 3 inputs 12/24/32 outputs

Option 18: Extended warranty

Option 51: Rack Mount 19" 1U

Option 52: Rack Mount 19" 2U

Option 53: Rack Mount 19" 3U

Option 62: AC Input 110V

Option 64: DC input: Specify +12V, +24V, +48V or +60V

Option 75: Add internal battery, up to 24 hours of battery life.

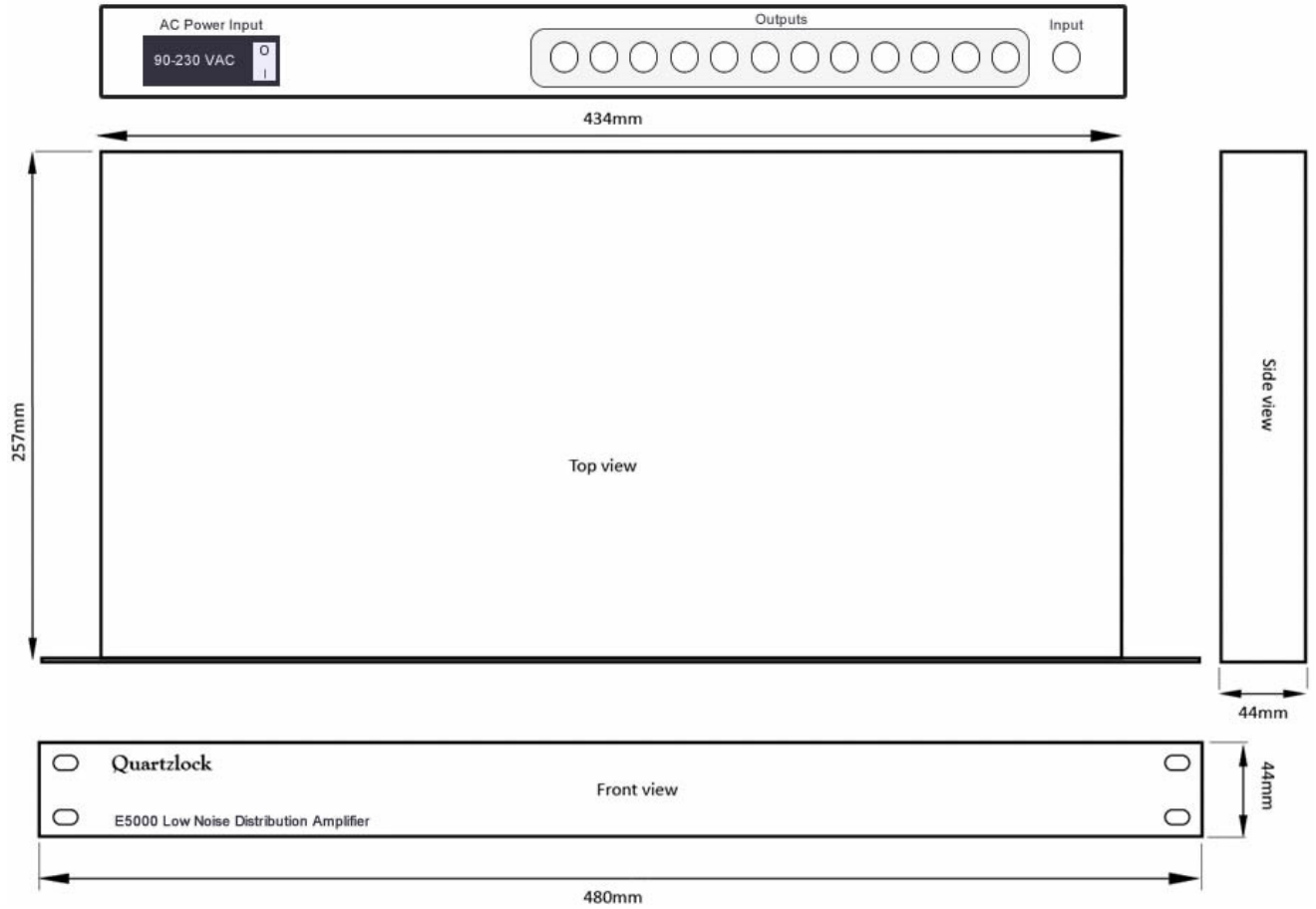
Remote access via Ethernet port

10/100Mbps Ethernet
TCP/UDP/Telnet modes
DHCP/Static IP address
Automatic or manual mode

Status

Sensing signal on all inputs and outputs
Fault indicator LED on front panel
Alarm output on interface RS232 and Ethernet

Dimensions: 1U 19 inch rack mount enclosure



The Quartzlock logo is a registered trademark.
Quartzlock continuous improvement policy: spec subject to change without notice and not part of any contract. Copyright © 2020. Issue 17.02

