

Low Noise Distribution Amplifier

- Excellent short term stability and phase noise
- Comprehensive specification & options
- 1MHz – 100MHz Bandwidth
- Three years warranty



Optional configuration: 10MHz input 1MHz, 5MHz & 1PPS output

Description

The E5000 Distribution Amplifier is a 1U Rack Mount unit. The E5000 allows a cost and space efficient way to distribute reference frequencies throughout a system or lab with virtually no signal degradation. The standard E5000 accepts input frequencies of 1MHz to 100MHz and provides twelve outputs of the same frequency.

Features

- Multiple inputs & outputs
- -132dB phase noise at 1Hz offset at 10MHz
- >80dB at 10MHz isolation
- Adjustable output level
- 0 dBm to +12dBm input
- Internal battery backup (Optional)
- High isolation & Low distortion
- Remote access and control via RS232 or Ethernet port

Applications

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

Included with shipment:

Calibration certificate, Certificate of Conformance, and 36 month warranty.

Available products in the same family

- **A5000P:** Pulse, CMOS, TTL distribution amplifier. 1, 2 or 3 inputs and 12, 24 or 36 outputs.
- **E5-6:** 1 input 6 outputs distribution amplifier
- **E5-6P:** 1 input 6 outputs Pulse, CMOS, TTL distribution amplifier

Specification

Outputs <i>See options</i>		
See options 11, 12 & 13		
No of inputs	1	Multiple inputs available
No of outputs	12	Multiple of 6 or 12 outputs available
Connector	BNC	SMA (Optional)
Input characteristics		
Options A		
Impedance	50Ω	75Ω
Input level	0 to +12dBm	
Input SWR	<1.2:1 at 10MHz	
Input return loss	>21dBm	
Output characteristics		
Options B		
Impedance	50Ω	75Ω
Output level	+5 to +12dBm (max) into 50 Ω at 10MHz	
Output SWR	<1.2:1	
Frequency response		
Range	1MHz to 100MHz	
Harmonics	Source harmonics <-60dBc 2 nd Harmonic <-50dBc 3 rd Harmonics <-50dBc	
Isolation		
Output to output	>80dB at 10MHz	
Output to input	>80dB at 10MHz	
Non- adjacent output	>80dB at 10MHz	
Frequency Stability <i>Allan Deviation</i>		
Frequency	10MHz	
$\tau = 1s$	2x10 ⁻¹³	
$\tau = 10s$	2x10 ⁻¹⁴	
$\tau = 100s$	5x10 ⁻¹⁵	
Additive Phase Noise (SSB)		
Frequency	10MHz	
1Hz	-132 dBc	
10Hz	-148 dBc	
100Hz	-160 dBc	
1 kHz	-165 dBc	
10KHz	-168 dBc	
Spurious		
Spurious	<-100dBc/Hz	
Broadband Noise	<-155dBc/Hz	

Contact us to configure this product to meet your requirement.
Designed and manufactured in the U.K.

Included with shipment: Calibration certificate, Certificate of Conformance, and 36 month warranty.

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 :	2x10 ⁻¹¹ Gauss	
Approximate MTBF :	200,000 Hrs, Stationary	
Dimensions :	1U 19" rack mount 44 X 444 X 221	

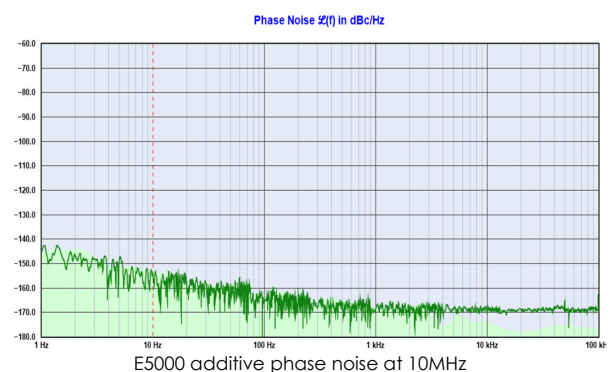
Power supply

AC power:	90-245V AC, 50Hz
Optional redundancy switch:	see option 00

Seamless battery back-up switch

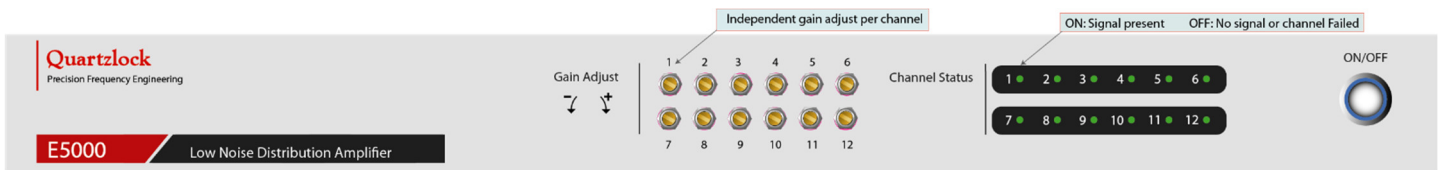
Built-in options

- Option 01:** Redundant switchover for external power back-up
- Option 11:** 1 input 24/32 output
- Option 12:** 2 inputs 12/24 outputs
- Option 13:** 3 inputs 12/24/32 outputs
- Option 18:** Extended warranty to 3 years
- 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.
- Option 91:** 10MHz input 1MHz output
- Option 92:** 10MHz input 5MHz output
- Option 93:** 10MHz input 1PPS output
- Option 94:** Front panel POT to adjust level of each output port
- Option 96:** Monitor and control via Ethernet port
Enable/Disable individual output channels



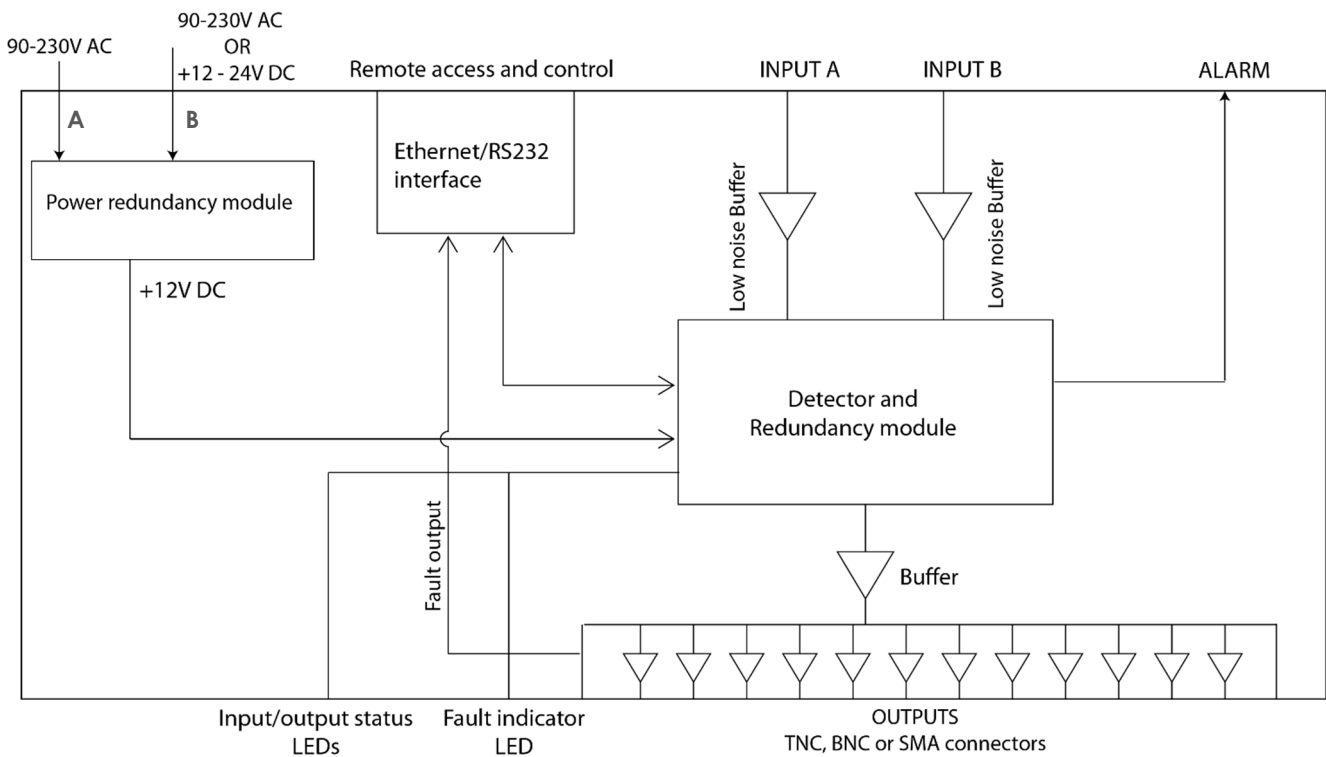
Typical configuration

The E5000 can be configured to multi inputs multi outputs frequencies from 1 to 100MHz of any signal format.



Optional configuration: independent potentiometer to adjust output level of each channel.
Configurable to multiple inputs multiple outputs

Block diagram of E5000 distribution amplifier



Option 96:

User interface

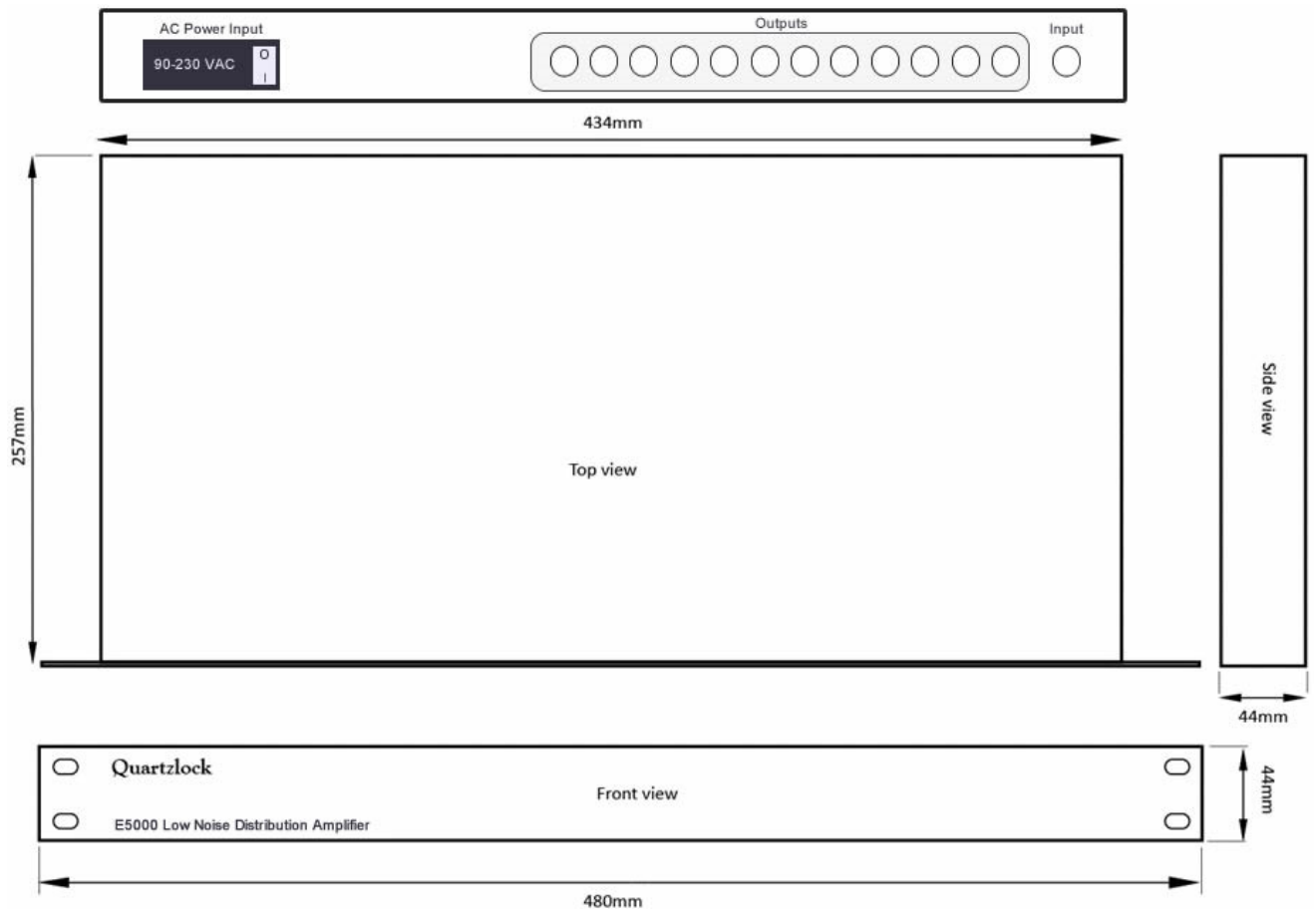
The E5000 configured with option 96 can be monitored and controlled through RS232/Ethernet using command line interface or E5000 GUI software. The input channels, A and B, can be set to be the primary or secondary input signal. The mode of the redundancy module can be set to automatic or manual. In the 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 require user to select and switch to an active input channel.

Power redundancy module will detect and provide seamless switchover to an active input power source. This option will operate automatically, no user input required. The status of the power redundancy module is available on the front panel LED indicator and user software interface.

Remote access via Ethernet port

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

Dimensions: 1U 19 inch rack mount enclosure



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