

# Echo AIO-LT

## Combination Line-level and Digital Test Interface



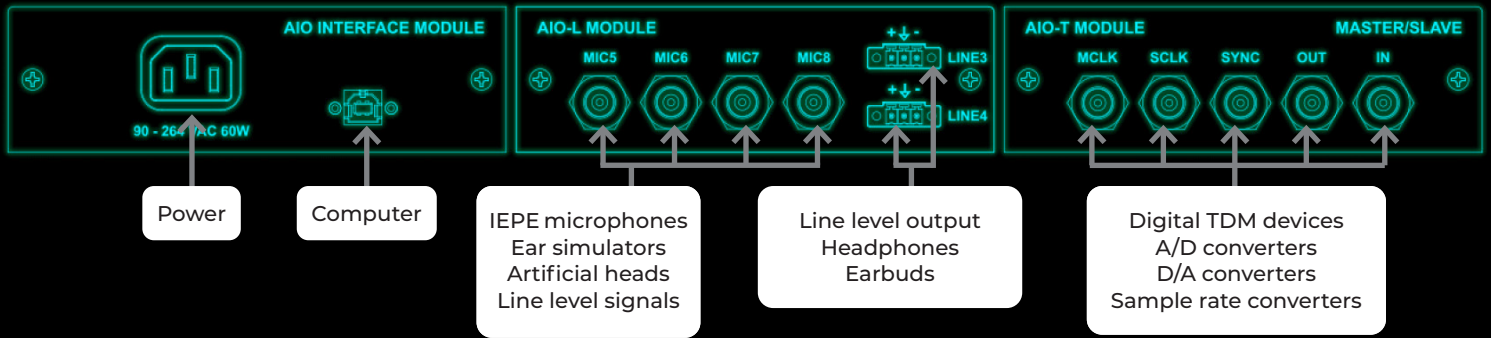
The **Echo AIO-LT** is a combination acoustic and digital test interface built for production-line testing and QA/QC verification. Combining two balanced line-level/headphone outputs, four mic/line analog inputs, and a 10-channel full duplex TDM bus in a single unit, the AIO-LT is an integrated, cost-effective, and reliable high-throughput audio test solution.

Each analog input can be individually configured as a line level input or as a measurement microphone input. Microphone inputs include an IEPE microphone conditioning amplifier with integrated constant current power supply (CCP). Line level outputs can also drive most headphones.

The AIO-LT presents a standard USB audio sound card interface and is compatible with most audio test software including APx500 Flex, LabVIEW, SoundCheck, and ARTA.



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## AIO-LT SPECIFICATIONS

### Microphone / Line Inputs

Input bandwidth	72 kHz
Input impedance	1 M $\Omega$
Input gain	1x, 10x, and 100x
Full-scale input voltage (1x gain)	8.75 Vpk
Maximum input voltage	15 Vpk (do not exceed)
Dynamic range (1x gain, A-weighted)	> 110 dB
THD+N (1x gain, A-weighted)	< -95 dB (20 Hz – 20 kHz)
Frequency response	$\pm 0.5$ dB (20 Hz – 20 kHz)
Constant current supply	4 mA, 21 V excitation voltage
TEDS	IEEE 1451.4 Class 1

### Line Outputs

Output power (THD+N < .1%)	32 mW continuous at 1 kHz
Minimum load	32 $\Omega$
Full-scale output voltage	2.65 Vpk
Frequency response	$\pm 0.5$ dB (20 Hz – 20 kHz)
Output bandwidth	80 kHz
Dynamic range (A-weighted)	> 110 dB
THD+N (A-weighted)	< -94 dB (20 Hz – 20 kHz)

### TDM

Channels	2, 4, 8, or 10
Clock source	Internal or external clock sync
Bits per frame	64, 128, or 256
Bits per sample	24 or 32
Frame sync width	1-128 bits
Frame sync position	Bit 0-255

### Interface

Sample rate	48 kHz
USB	USB 2.0 audio class compliant
Supported operating systems	Windows 7 or later, macOS
Audio APIs	ASIO, WASAPI, CoreAudio
AC power	Universal power supply, 90 - 264 VAC at 50 or 60 Hz

### Dimensions and Weight

Single unit	17.5" (44.4 cm) x 8.75" (22.2 cm) x 1.75" (4.4 cm), 7.2 lbs (3.3 kg)
Single unit boxed with cables	21" (53 cm) x 10" (25.4 cm) x 5" (12.7 cm), 8.75 lbs (4 kg)
Shipping carton (4 AIOs)	22" (55.8 cm) x 22" (55.8 cm) x 12.6" (32 cm), 42.5 lbs (19.3 kg)