

Echo AIO-LT

Combination Line-level and Digital Test Interface



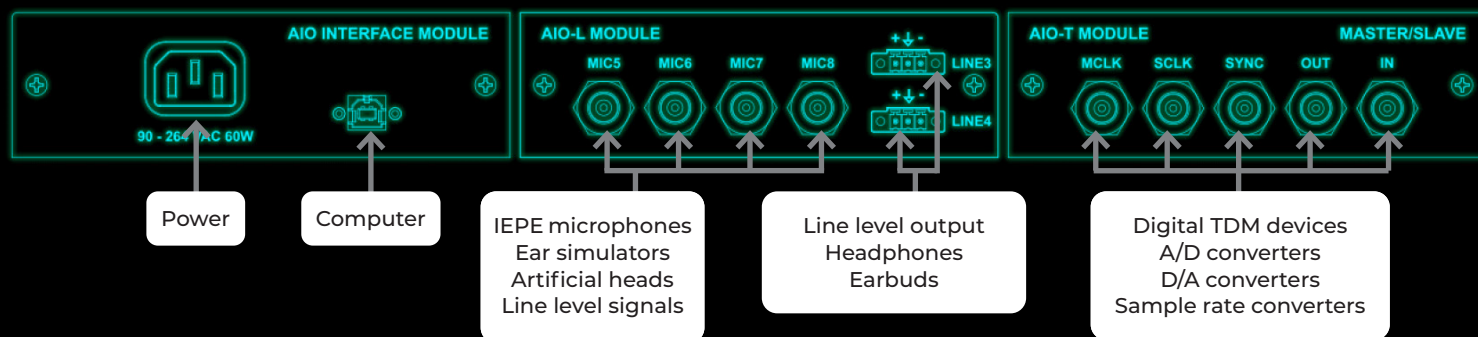
The **Echo AIO-LT** is a combination acoustic and digital test interface built for production-line testing and QA/QC verification. Combining two balanced line-level/headphone outputs, four mic/line analog inputs, and a 10-channel full duplex TDM bus in a single unit, the AIO-LT is an integrated, cost-effective, 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 MΩ |
| 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 | ±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 Ω |
| Full-scale output voltage | 2.65 Vpk |
| Frequency response | ±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) |