

The Line-level Test Module (AIO-L) is designed for making basic acoustic or electrical measurements of a device under test (DUT). AIO-L is a configuration option for the AIO Test System and requires the AIO chassis to operate.



HARDWARE FEATURES:

- Four mic/line inputs
- CCP/IEPE/ICP microphone power
- TEDS reader for microphone data
- Two balanced line-level outputs

KEY APPLICATIONS:

- Mobile devices
- Communications systems

MIC/LINE INPUTS:

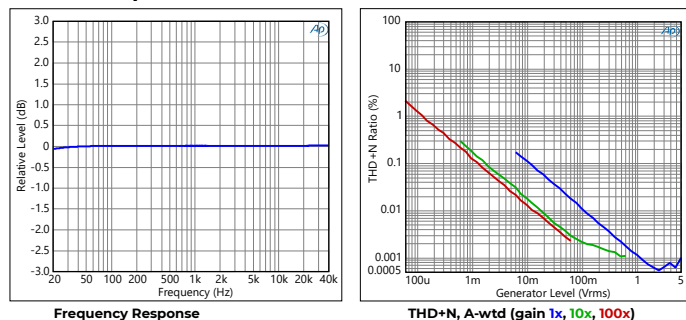
Four low-noise inputs accommodate a very wide range of input voltages, from dynamic microphones to line-level inputs. Features include adjustable gain, constant current power, and TEDS readers.

LINE-LEVEL OUTPUTS:

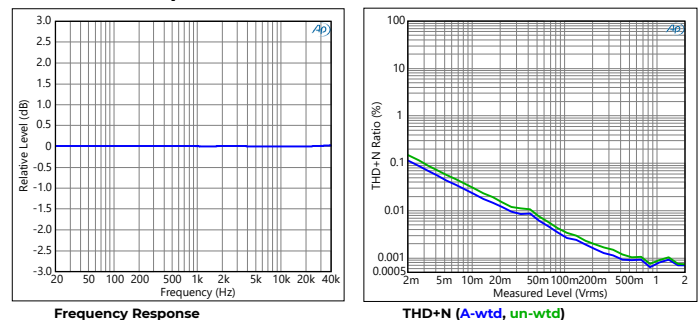
Two high-quality low-noise, low-distortion balanced line-level outputs.

PERFORMANCE GRAPHS:

Mic/Line Inputs



Line-level Outputs



The Echo AIO™ is a modular audio test platform ideally suited for high-volume production-line testing and QA/QC verification. The AIO combines the functionality of multiple standalone devices into a single, integrated unit, making test stations both more reliable and less expensive.

LINE-LEVEL MODULE COMMON CONFIGURATIONS: (Other configurations may be available—check with your dealer.)

Model	Inner Module	Outer Module	Mic/Line Inputs	Line Outputs	Headphone Outputs	Amp Outputs	Impedance	Digital	5VDC & Battery Simulator	GPIO	PTH
AIO-L1	AIO-L		4	2							
AIO-L2	AIO-L	AIO-L	8	4							
AIO-LT	AIO-L	AIO-T	4	2				TDM 10/10			
AIO-SL	AIO-S	AIO-L	6	2		2	1				

SPECIFICATIONS:

Microphone / Line Inputs	
Input bandwidth	72 kHz
Input impedance	1 M Ω
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-wtd)	> 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	CCP/IEPE/ICP, 4 mA
TEDS	IEEE 1451.4 Class 1

Line Outputs	
Minimum load	600 Ω
Full-scale output voltage	2 Vrms (+6 dBV)
Frequency response	± 0.02 dB (20 Hz – 20 kHz)

Output bandwidth (-3 dB)	90 kHz
Dynamic range (A-weighted)	> 117 dB
THD+N (A-weighted)	< -100 dB (20 Hz – 20 kHz)

Interface	
Sample rates	44.1 kHz – 192 kHz
USB	USB 2.0 audio class compliant
Supported operating systems	Windows 10 or later, macOS
Audio APIs	ASIO, WASAPI, Core Audio
AC power	90 – 264 VAC, 50/60 Hz, 60 W

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)
Carton (4 units)	22" (55.8 cm) x 22" (55.8 cm) x 12.6" (32 cm), 42.5 lbs (19.3 kg)

AIO Test System

(see system datasheet for more details)



Shown: AIO-LC rear view with **L** line-level and **C** combo test modules.

FEATURES:

- High accuracy
- Cost effective
- Silent—no fan!
- Standard USB audio interface
- Wide test & measurement software compatibility
- ASIO, WASAPI, & Core Audio protocols



CONTROL PANEL SOFTWARE:

Provides comprehensive level monitoring and control over hardware settings, including transducer power, TEDS data, gain, TDM format, and calibration. Command-line and API access to settings is also available.

TEST & MEASUREMENT SOFTWARE:

Choose from a wide variety of third-party test and measurement software, including APx500 Flex, ARTA, LabVIEW, and MATLAB. The AIO system works just like a standard sound card for Windows, Mac, or Linux.

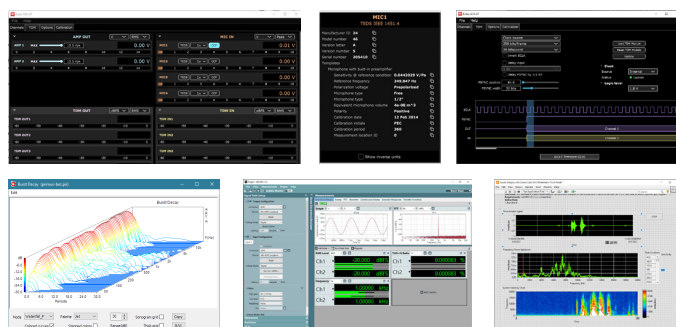
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MODULE OPTIONS:

(see individual datasheets for details and configurations)

- A Acoustic:** Four mic/line inputs with CCP, TEDS; two 10 W class-D amplifier outputs.
- C Combo:** GPIO; 5 VDC fixed supply; 5 VDC battery simulator; Pressure, temperature, and humidity sensor.
- H Headphone:** Four mic/line inputs with CCP, TEDS; two headphone/earbud outputs with impedance measurement.
- L Line Level:** Four mic/line inputs with CCP, TEDS; two balanced line-level outputs.
- S Speaker:** Two mic/line inputs with CCP, TEDS; two 10 W class-D amplifier outputs; built-in speaker impedance measurement.
- T TDM:** Digital TDM, up to 10 channels, 24 or 32 bit samples, 192 kHz.



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