

The TDM Test Module (AIO-T) is designed for making advanced digital measurements of the TDM data-stream of a device under test (DUT)—typically A/D and D/A converters, DSP, and other ICs. AIO-T is a configuration option for the AIO Test System and requires the AIO chassis to operate.

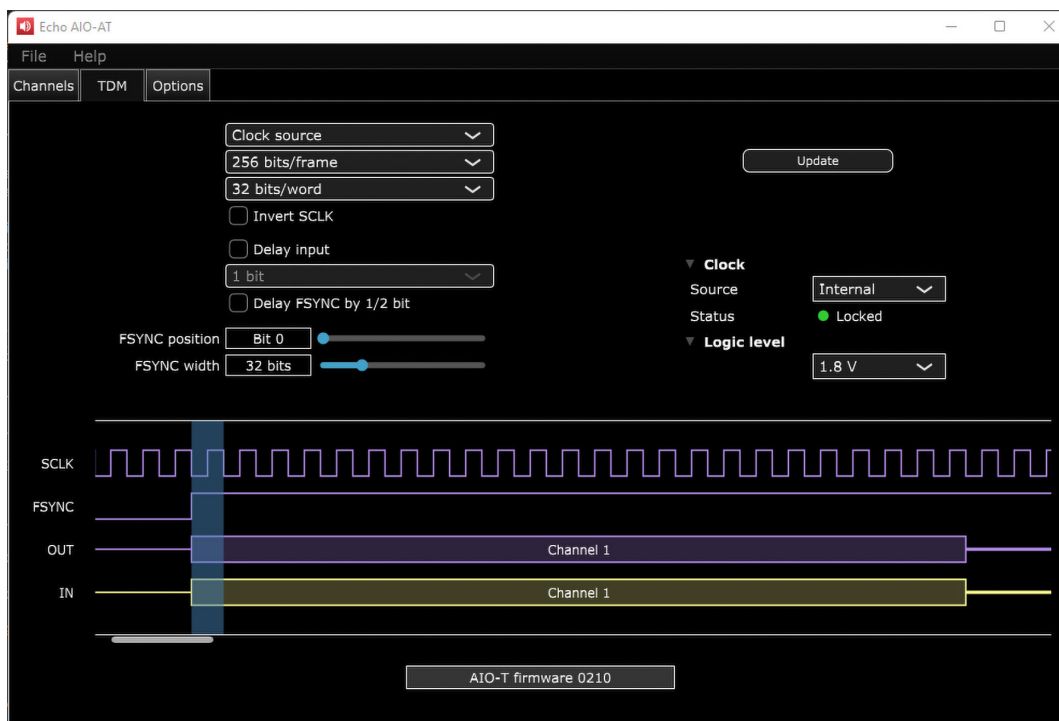


HARDWARE FEATURES:

- 2, 4, 8, or 10 channels
- Internal or external clock
- 64, 128, or 256 bits/frame
- 24 or 32 bit samples

KEY APPLICATIONS:

- A/D converters
- D/A converters
- DSP and other digital ICs
- I2S and DSP data formats



Complete control over TDM settings is available from the AIO control panel (shown above), as well as through the API or command-line application.

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.

TDM 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-AT	AIO-A	AIO-T	4			2		TDM 10/10			
AIO-HT	AIO-H	AIO-T	2			2	1	TDM 10/10			
AIO-LT	AIO-L	AIO-T	4	2				TDM 10/10			
AIO-ST	AIO-S	AIO-T	2			2	1	TDM 10/10			
AIO-TI		AIO-T						TDM 10/10			

SPECIFICATIONS:

TDM	
Channels	2, 4, 8, or 10
Clock source	Internal or external
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 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-AT rear view with one **A** acoustic and one **T** TDM test module.

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.

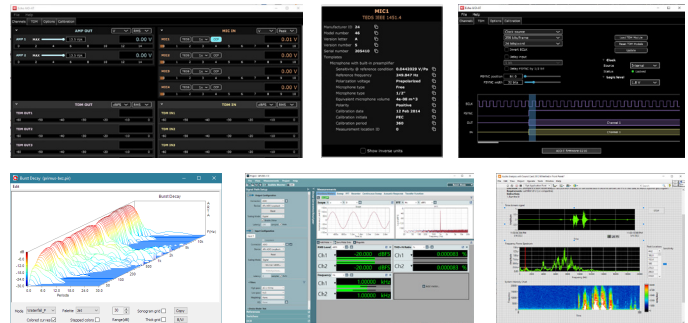
Echo Test + Measurement

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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.



Specifications are subject to change without notice. All trademarks or registered trademarks are the property of their respective owners. The AIO Test System is CE compliant.

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