Audio Precision

APx58x Series │ AUDIO ANALYZERS

8- and 16- channel modular audio analyzers

KEY FEATURES

- Multichannel analog configurations
  APx582: 8 inputs / 2 outputs
  APx585: 8 inputs / 8 outputs
  APx586: 16 inputs / 8 outputs

- AES/SPDIF digital I/O

- Typical THD+N < –107 dB

- A powerful, intuitive UI with one-click measurements

- Powerful automation and sophisticated reporting

- Support for the complete range of APx digital I/O options

APx586 16-channel analyzer

APx582 8-channel analyzer

Channel count meets broad range of digital I/O for simultaneous multichannel audio test

The **APx58x Series** combines an award-winning user interface with Audio Precision's legendary commitment to fast and accurate performance. APx's user-friendly innovations include a range of connectivity options, two easy-to-use UI modes, one-click measurements, code-free automation, a sophisticated reporting engine, and multiple signal paths within a project.

A true multichannel analyzer

The **APx585** is a true multichannel audio analyzer, with 8 simultaneous analog outputs and inputs for testing multichannel audio devices. A multichannel analyzer allows not just faster testing, but also a complete picture of performance that a two channel analyzer with switchers might miss, such as output sag across channels during full power output tests or phase and crosstalk interactions. With the HDMI option, it is ideal for designing and testing consumer devices such as home theatre receivers.

The **APx586** adds a second input module for 16 simultaneous analog input channels, ideal for high-speed, high-channel count test such as automotive or pro audio mixers and other applications.

The **APx582** provides the same 8 channels of analog input, but with 2 channels of high-performance analog output that includes DIM/TIM distortion tests and selectable output impedances of 20, 50, 75, 100, and 600 Ω.

Automation and reporting

Repetitive bench tests and production testing can easily be automated with the built-in measurement sequencer and saved as a project that can be used with any APx analyzer. Access the API if you prefer: documentation for VB.NET, C#.NET, MATLAB and LabVIEW is included. Create powerful reports with Microsoft Word that let you define your own formatting and add graphs, tables and logos.

OPTIONS

Select the options that match your needs.
All models use the same software, so sharing projects is easy and modular hardware allows for future upgrades.

DIGITAL I/O

Digital Serial	Adds interface for I²S, TDM, DSP	**PDM**	Adds direct connectivity for digital MEMS mics
***Bluetooth*®**	Adds Bluetooth radio for Bluetooth audio test	**ASIO**	Adds software connectivity for PC audio interfaces
HDMI+ARC	Adds HDMI source, sink, monitor, aux and ARC I/O	**ADIO**	Adds Advanced Digital I/O and Advanced Master Clock modules

Versatile, Powerful Audio Test

With its redesigned software platform, the powerful APx Audio Analyzer Series provides never-before-seen flexibility and usability. This bold new interface offers users two easy-to-use modes. Choose between Bench Mode for real-time visibility into device behavior across a variety of parameters, and Sequence Mode for fast production testing and automated measurements.

APx Digital Options

APx audio analyzers offer world-class performance and flexibility. Our modular systems allow you to select the interfaces and options that make sense for the work you do, covering the widest range of digital I/O in the industry.

HDMI

The APx HDMI option (HDMI+ARC) allows you to measure HDMI audio quality and audio format compatibility on devices such as surround sound receivers, set-top boxes, HDTVs, smartphones and tablets, and DVD or Blu-ray Disc™ players.

Bluetooth®

The APx Bluetooth option is the best solution in the world for testing Bluetooth audio.

No other analyzer combines integrated Bluetooth controls with APx's best-in-class speed, ease-of-use and performance.

Digital Serial

The Digital Serial I/O option adds a multichannel digital serial interface. This provides a direct connection to chip-level interfaces such as I²S and supports all popular serial interface formats including left justified, right justified, and DSP.
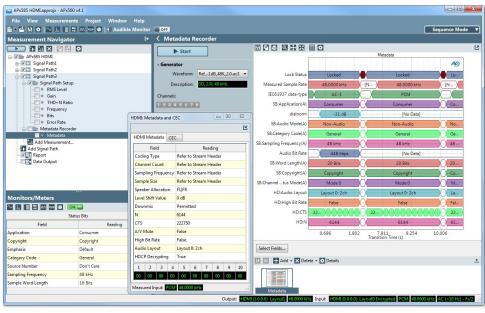
PDM

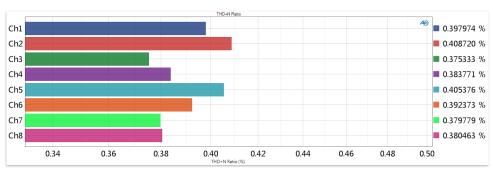The APx PDM option provides direct connectivity for audio devices that have a PDM output (such as a MEMS microphone) or input (such as the decimator on a smartphone chip). In addition to all the standard audio measurements, APx provides variable DC voltage, variable sample rate, and a PSR (power supply rejection) measurement to test the device's full operating parameters. Also supports DSD, up to DSD256.

APx500 Measurement Software metadata recorder tracking metadata changes during an HDMI hotplug event.

APx 585 and 586 are true multichannel analyzers; shown above is an 8-channel THD+N Ratio measurement.

KEY SPECIFICATIONS

SYSTEM PERFORMANCE

Residual THD+N (20 kHz BW)
–103 dB + 1.4 µV
Typical <–108 dB (1 kHz, 2.5 V)

GENERATOR PERFORMANCE

Sine Frequency Range
5 Hz to 80.1 kHz

Frequency Accuracy
3 ppm

IMD Test Signals
SMPTE, MOD, DFD

Maximum Amplitude (balanced)
14.4 Vrms
21.22 Vrms (APx582)

Amplitude Accuracy
±0.05 dB

Flatness (20 Hz - 20 kHz)
±0.008 dB

Analog Output Configurations
Unbalanced and balanced

Digital Output Sampling Rate
22 kS/s - 216 kS/s

Dolby / DTS Generator
Yes (encoded file)

ANALYZER PERFORMANCE

Maximum Rated Input Voltage
160 Vpk

Maximum Bandwidth
1 to 16 channels of analog input 90 kHz

IMD Measurement Capability
SMPTE, MOD, DFD

Amplitude Accuracy (1 kHz)
±0.05 dB

Amplitude Flatness (20 Hz - 20 kHz)
±0.008 dB

Residual Input Noise (20 kHz BW)
1.3 µV

Individual Harmonic Analyzer
d2–d10

Maximum FFT Length
1248K points

DC Voltage Measurement
Yes

Accredited by A2LA under ISO/IEC: 17025 for equipment calibration

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