



# APx582, APx585 and APx586

Multichannel audio test and measurement for today's technologies



APx585 8-channel analyzer shown with DSIO, HDMI+ARC and Bluetooth modules

## 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

The **APx585** family 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, 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 include 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 than can be used 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.



APx586 16-channel analyzer



APx582 8-channel analyzer

## Digital I/O Options

Digital Serial	Adds interface for I <sup>2</sup> S, TDM, DSP
Bluetooth®	Adds Bluetooth radio for Bluetooth audio test
HDMI+ARC*	Adds HDMI source, sink, monitor, aux and ARC I/O
PDM	Adds direct connectivity for digital MEMS mics
ASIO	Adds software connectivity for PC audio interfaces**

\* not available for APx586  
\*\* standard on all 585 models



## The APx500 advantage

Audio Precision has been a leader in audio test since 1985. The APx500 software that powers our APx analyzers is the most powerful and elegant audio test engine we've ever developed, encapsulating our many years of experience so that you can get accurate, meaningful results in the shortest time and with the least effort.

## 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, HD TVs, 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.



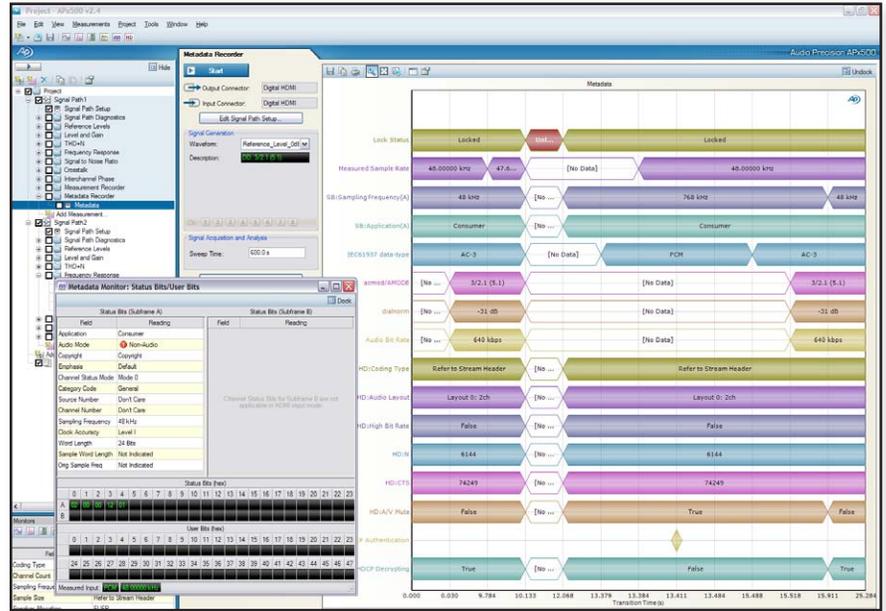
### Digital Serial

The Digital Serial I/O option adds a multichannel digital serial interface. This provides a direct connection to chip level interfaces such as I<sup>2</sup>S and supports all popular serial interface formats including left justified, right justified, and DSP.



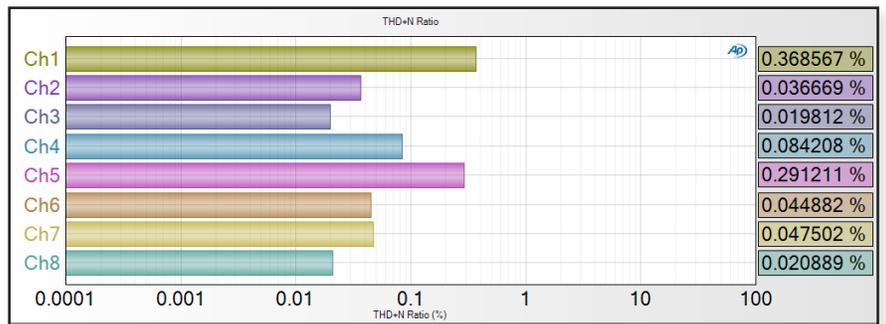
### PDM

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.



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

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



APx585/586 Audio Analyzer Key Specifications

<p><b>SYSTEM PERFORMANCE</b></p> <p>Residual THD+N (20 kHz BW) -103 dB + 1.4 µV Typical &lt;-107 dB (1 kHz, 2.5 V) Typical &lt;-108 dB (1 kHz, 2.5 V) (APx582)</p> <p><b>GENERATOR PERFORMANCE</b></p> <p>Sine Frequency Range 5 Hz to 80.1 kHz Frequency Accuracy 3 ppm</p> <p>IMD Test Signals SMPTE, MOD, DFD</p> <p>Maximum Amplitude (balanced) 14.4Vrms 21.22Vrms (APx582) Amplitude Accuracy ±0.05 dB</p> <p>Flatness (20 Hz-20 kHz) ±0.008 dB</p> <p>Analog Output Configurations unbalanced &amp; balanced</p> <p>Digital Output Sampling Rate 22 kHz-192 kHz</p> <p>Dolby / DTS Generator Yes</p>	<p><b>ANALYZER PERFORMANCE</b></p> <p>Maximum Rated Input Voltage 160 Vpk, 115 Vrms (bal/unbal) 110 Vrms unbalanced (APx582)</p> <p>Maximum Bandwidth 1 to 8 channels: of analog input 90 kHz 9 to 16 channels of analog input: 45 kHz</p> <p>IMD Measurement Capability SMPTE, MOD, DFD</p> <p>Amplitude Accuracy (1 kHz) ±0.05 dB</p> <p>Amplitude Flatness (20 Hz-20 kHz) ±0.008 dB</p> <p>Residual Input Noise (20 kHz BW) 1.3 µV</p> <p>Individual Harmonic Analyzer d2-d10</p> <p>Max FFT Length 1248K points</p> <p>DC Voltage Measurement Yes</p>
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Accredited by A2LA under ISO/IEC: 17025 for equipment calibration.