



APx585 Multichannel Audio Analyzer with HDMI

The only HDMI & Blu-ray Disc audio test solution

The APx585 is a dedicated 8 channel audio analyzer that combines a next generation user interface with AP's legendary commitment to performance.

The APx is capable of taking 14 measurements in as fast as 7 seconds, automatically generating a report of results and saving all test settings in a single, sharable project file. Real-time signal monitors include residual THD+N in oscilloscope view and a one million point FFT.

With the APx HDMI option, engineers can now use the same tools to measure HDMI audio quality and audio format compatibility on devices such as surround sound receivers, set-top boxes, HD TVs, and DVD & Blu-ray Disc™ players.

Fast HDMI audio measurement

The APx HDMI option provides connections for source and sink devices as well as an auxiliary video input and a monitor output.

On the input (HDMI Sink) the APx will accept an HDMI signal and analyze the audio content. All standard audio measurements are available including level, SNR, distortion, phase, crosstalk, group delay and others.

Generated video formats and HDCP encryption can be toggled to test for effect on embedded audio. Multiple signal paths can be defined to test all input and output variations (HDMI input to speaker output; SPDIF input to HDMI output etc.).



The APx585 multichannel audio analyzer with HDMI option

Verifying Dolby & dts encoded audio

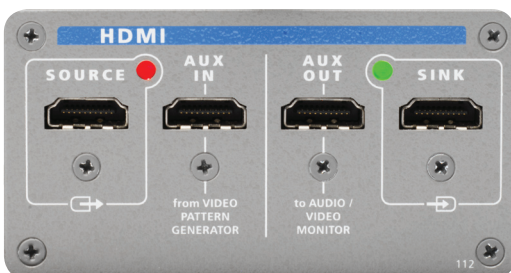
In addition to generating linear / PCM audio streams, APx can stream lossless formats (such as dts-HD Master Audio™) and compressed formats (such as Dolby Digital™ and dts Digital Surround™) from pre-encoded audio test files.

This feature makes it easy to troubleshoot component compatibility and downsampling / downmixing / transcoding issues. Streaming of .wav, .ac3, .dts, and .cpt over the SPDIF, TOSLINK, and AES/EBU digital outputs is also supported.

Key Features

- HDMI 1.3A Source and Sink
- HDMI audio Layout 0 or 1
- Generates linear PCM audio on up to 8 channels at 44.1, 48, 88.2, 96, 176.4, and 192 kHz up to 24 bit
- Generates lossless formats such as dts-HD Master Audio at 48, 96 and 192 kHz, 24 bit
- Generates compressed formats such as Dolby Digital and dts Digital Surround
- Generates and displays E-EDID values*
- Generates a video test signal at all HDMI standard resolutions, color depths (incl. deep color), and refresh rates
- Auxiliary interfaces for third party video test equipment
- Full support for HDCP encryption on source and sink
- Bit-for-bit verification of digital data reproduction*

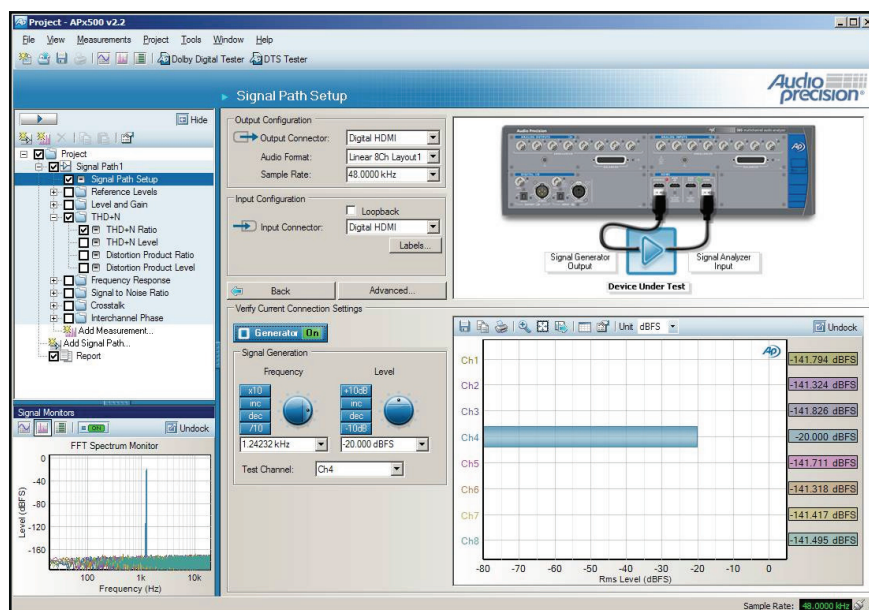
* Available Fall 2008



Close up of APx HDMI module



Winner of
Pro Audio Review's
PAR Excellence Award 2006
and
Test & Measurement World's
Best in Test 2007



The APx500 measurement software UI

Easy Blu-ray & DVD player test

Because Blu-ray and other disc players cannot accept an incoming audio stream, test signals must be played from disc. Every HDMI APx includes a Blu-ray Disc with high-resolution versions of a wide selection of audio test signals in the same formats as the APx generator.

AP's DVD-01 has the same tones (though only up to 96 kHz) for traditional DVD players.

Video and third party support

The APx HDMI option has a basic video generator. The user can generate a single color video test signal and control the resolution (up to 1080p), the color of the image, and the color depth (including deep color).

Use of third party video pattern generators is supported by the "Pass External Video Through" option. When an external video signal is provided, APx combines it with the audio stream from the APx's generator and outputs a single audio/video stream.

The system also forwards E-EDID and CEC data transparently between the device under test and any device connected to AUX IN.

The APx itself does not analyze video; however, all signals delivered to the sink are mirrored to the AUX OUT monitor connector. This allows the user to send the video signal to an external video analyzer or monitor the signal on a display.

APx585 Key Specifications

BASIC FORMAT

Channels

8

Computer interface

3U

GENERATOR PERFORMANCE

Sine Frequency Range

5 Hz – 80.1 kHz

Frequency Accuracy

3 ppm

IMD Test Signals

SMPTE, MOD, DFD

Maximum Amplitude (balanced)

14.4 Vrms

Amplitude Accuracy

±0.05 dB

Flatness (20 Hz–20 kHz)

±0.008 dB

Residual THD+N (20 kHz BW)

–103 dB + 1.4 µV

Analog Output Configurations

unbalanced & balanced

Digital Output Sampling Rate

22 kHz–192 kHz (SPDIF,TOSLINK,AES/EBU)
44.1 kHz–192 kHz (HDMI)

ANALYZER PERFORMANCE

Maximum Rated Input Voltage

110 Vrms

Maximum Bandwidth

>90 kHz

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

Residual THD+N (20 kHz BW)

–103 dB + 1.4 µV

Individual Harmonic Analyzer

d2–d10

Max FFT Length

Up to 1 million (1024 K)

IMD Measurement Capability

SMPTE, MOD, DFD

DC Voltage Measurement

Yes



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

