



APx525 B Series Audio Analyzer with PDM 16 module and PDM 16 pod

## What's New: APx500 version 5.0.3 Nov. 2019

*This document looks at the new and improved features in the latest release of the APx500 software for all models of APx Series audio analyzers.*

*For more information, please contact your local Audio Precision sales partner, or visit the AP website at [ap.com](http://ap.com) for datasheets, technical content, and software downloads.*

## INTRODUCTION TO APx500 VERSION 5.0.3

APx500 5.0.3 is a release update that adds software support for the new PDM 16 module and PDM 16 pod.

### PDM 16

The PDM 16 digital input option is the a PDM module for APx modular analyzer systems. The module supports up to 16 PDM inputs (two per data line, with 8 data lines) through a remote interface pod. It is an ideal solution for analyzing audio signals for up to 16 MEMS microphones simultaneously, and can provide sample-accurate interchannel timing information. The module connects to an acoustically silent pod through a cable, available in lengths up to 10 meters (32 feet). MEMs microphones can be connected to the pod through a commonly available 40-pin, 2-row connector. The PDM module can also supply operating power to a PDM device under test through the interface pod Vdd pin.

Features include:

- 16 channel / 8 data line input
- Clock Master or Slave
- Vdd (0.8-3.6 V up to 50 mA)
- 1/N Decimation rates (N= 32, 64, 128, 256, or 512)
- Acoustically silent remote PDM 16 pod
- Available 2-, 5-, and 10-meter cables
- Can be used simultaneously with a standard PDM I/O module

## THE APx500 FLEX ANALYZER (INTRODUCED IN APx500 VERSION 5.0.2)

The APx500 Flex analyzer is a full-featured analysis solution that allows you, without connecting to APx Analyzer hardware, to perform file analysis or to pair the industry-leading APx500 software with an ASIO audio interface. Functionality is enabled by plugging the included APx500 Flex Key into an available USB port on a computer running the APx500 software. Once the APx Flex Key is connected, the APx software can be run and all licensed options are available in the APx500 software. File analysis can be done and ASIO audio interfaces can be selected and configured for input and output in order to obtain measurement data from a connected DUT. The APx500 Flex Key is portable, allowing you to move your measurement license from one computer to another, and expandable, with additional measurements easily added and managed as measurement requirements evolve.

### ASIO Analog Units

For analog measurement acquisitions using an ASIO audio interface, results can now be displayed in analog units. When analog units are selected, the Scaling Factor control can be used to input the value needed to scale the input or output signal from digital units to analog. For input scaling, there is a separate scaling factor for each channel. The output scaling factor applies to all channels. Additionally, when analog units are

selected as the scaling mode, the Acoustic checkbox is displayed, and it can be checked in order to display settings and results in acoustic units (Pa or dB SPL).

### **ASIO Auto Latency Adjustments**

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The APx software automatically compensates for delay in compatible ASIO audio interfaces. The latency only affects measurements when both input and output are set to ASIO and can be set manually to a custom value if required.

### **Improved Generator Triggering for ASIO Interfaces**

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When both the input and output are set to ASIO, measurements that support triggers, such as Signal Analyzer, Signal Acquisition, and Multitone, now include **Generator** as a trigger option. Measurements such as Transfer function use generator triggering implicitly, so no trigger selection is required. Along with the latency adjustments, this improvement helps to account for phase and delay that can affect measurements.