AUDIO PRECISION

APx525

The Audio Precision APx525 is a high-performance, two-channel audio analyzer designed for R&D, design validation, and production testing. It features versatile analog and standard digital I/O, combining extreme accuracy with the powerful APx500 measurement software.

SPECIFICATIONS

General

Interfaces	USB 2.0 (PC connection), AUX Control, Trigger I/O, Reference Clock I/O
Display	None (PC software controlled)
Warm-up Time	20 minutes

Physical

Power Supply	100 - 240 V AC, 50/60 Hz, 120 VA maximum
Operating Temperature	5 to 45 °C
Dimensions (W×H×D)	432 x 146 x 451 mm
Weight	9.3 kg

System Performance & Metrology

System Bandwidth	10 Hz to 90 kHz
Frequency Accuracy	±3 ppm
System Residual THD+N	≤ -105 dB + 1.4 µV (typically < -110 dB at 1 kHz, 2.5 V)
System Amplitude Flatness	±0.008 dB (20 Hz to 20 kHz)
Input-to-Output Crosstalk	≤ -120 dB (10 Hz to 20 kHz)
Sampling Rate Range (A/D & D/A)	Up to 192 kHz

Analog Generator (Source) Specifications

Generator Channels	2
Output Configurations	Balanced (XLR), Unbalanced (BNC)
Output Impedance (Balanced)	100 Ω, 150 Ω, or 600 Ω
Output Impedance (Unbalanced)	50 Ω, 100 Ω, or 600 Ω
Maximum Output Amplitude (Balanced)	21.21 Vrms (28.75 dBu)
Maximum Output Amplitude (Unbalanced)	10.61 Vrms (22.73 dBu)
Amplitude Accuracy (Generator)	±0.03 dB at 1 kHz
Amplitude Flatness (Generator)	±0.008 dB (20 Hz to 20 kHz)
Frequency Range (Generator)	0.1 Hz to 80.1 kHz
Frequency Resolution	0.001 Hz
Waveforms	Sine, Sine+DC, Split Sine, Var Phase Sine, Dual Sine, Square, Noise, IMD
Residual THD+N (Generator)	≤ -105 dB + 1.4 µV (at 1 kHz)
Inter-channel Crosstalk (Generator)	≤ -120 dB (10 Hz to 20 kHz)
Output Coupling	AC or DC

Analog Analyzer (Receiver) Specifications

Analyzer Channels	2
Input Configurations	Balanced (XLR), Unbalanced (BNC)
Input Impedance (Balanced)	200 kΩ
Input Impedance (Unbalanced)	100 kΩ
Maximum Rated Input Voltage	160 Vrms (230 Vpk)
Frequency Range (Analyzer)	10 Hz to 90 kHz
Amplitude Measurement Accuracy	±0.03 dB at 1 kHz
Amplitude Flatness (Analyzer)	±0.008 dB (20 Hz to 20 kHz)
Residual THD+N (Analyzer)	≤ -105 dB + 1.4 µV
Residual Noise (Analyzer)	≤ 1.4 µVrms (20 kHz BW)
Common Mode Rejection Ratio (CMRR)	≥ 80 dB (10 Hz to 5 kHz)
Crosstalk (Inter-channel Analyzer)	≤ -120 dB (10 Hz to 20 kHz)
Input Coupling	AC or DC

Filters & Signal Conditioning

Weighting Filters	A-weighting, C-weighting, CCIR, CCITT, ITU-R 468
User-defined Filters	Supported via custom coefficient upload

Digital Audio I/O Specifications

Digital Interface Formats	AES3 (AES/EBU), S/PDIF (coaxial), TOSLINK (optical)
Digital Output Impedance (AES3)	110 Ω
Digital Output Impedance (S/PDIF)	75 Ω

Measurement Modes & Capabilities

Measurement Functions	THD+N, THD, IMD, Frequency Response, Phase, Group Delay, FFT Spectrum
IMD Standards	SMPTE, MOD, DFD
FFT Size	Up to 1.2M points
FFT Windowing Types	Hann, Blackman-Harris, Flat Top, Rife-Vincent, Hamming

Connectivity & Interfaces

Analog Inputs	2 x XLR Female
Analog Outputs	2 x XLR Male
Digital Inputs	1 x XLR (AES3), 1 x BNC (S/PDIF), 1 x TOSLINK
Digital Outputs	1 x XLR (AES3), 1 x BNC (S/PDIF), 1 x TOSLINK
Reference I/O	BNC (Ref In, Ref Out)
Trigger I/O	BNC (Trigger In, Trigger Out)
Monitor Output	1/4" (6.35 mm) headphone jack (front panel)

Software & Automation

Control Software Suite	APx500 Control Software
Automation APIs	Python, LabVIEW, MATLAB, .NET

Physical, Power & Environmental

Cooling	Forced air (internal fans)
Recommended Calibration Cycle	1 Year

Hardware Options & Expansion

Expansion Slots	1 slot for optional hardware I/O modules
Supported I/O Modules	HDMI+ARC, Bluetooth, PDM, Digital Serial (I2S/TDM), Advanced Master Clock (AMC)

A/D & D/A Conversion

A/D Converter Resolution	24-bit
D/A Converter Resolution	24-bit

Phase Measurement

Phase Measurement Range	±180°

TECHNOLOGY

Audio Test and Measurement

APPLICATIONS

Audio R&D, Production Line Testing, Design Verification

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.