RTX6001 Audio Analyzer

Technical Specifications
(Preliminary)

System	
Sample rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
ADC and DAC resolution	24 ADC, 32 bit DAC
Frequency accuracy	±30 ppm
PC Interface	USB 2.0 High Speed

Analog Generator	
Number of Channels	2 outputs, 2 inputs
Output Connectors	XLR for Balanced Outputs BNC for Unbalanced Outputs 4 mm Banana Jack (ground)
Frequency range	DC to 90 kHz
Output impedance Balanced Unbalanced	 100 ohm (±1%) 50 ohm (±1%)
Maximum Level (sine) Balanced Unbalanced	 10 V rms, no load 5 V rms, no load
Level accuracy	< ±0.1 dB @ 1 kHz
Level flatness	±0.01 dB DC to 20 kHz ±0.2 dB DC to 80 kHz
Output attenuator	3 steps, 10 V, 1 V, 100 mV
THD @ 0dBV THD 48 kHz sample rate 1) fundamental 20 Hz to 20 kHz THD 192 kHz sample rate 1) fundamental 20 Hz to 20 kHz	 typical -124 dB @ 1 kHz < -116 dB typical -121 dB @ 1 kHz < -115 dB
THD @ 10dBV THD 48 kHz sample rate 1) fundamental 20 Hz to 10 kHz THD 192 kHz sample rate 1) fundamental 20 Hz to 40 kHz	 typical -119 dB @ 1 kHz < -115 dB typical -119 dB @ 1 kHz < -115 dB
THD+N, 1 kHz @ 0 dBFS 1) THD+N 48 kHz sample rate THD+N 192 kHz sample rate	20 kHz BW typical -107dB typical -107dB
Output related crosstalk 2) 10 Hz to 20 kHz 20 kHz to 80 kHz	 < -120 dB < -110 dB
DC offset on outputs	< 1 mV typical
Test signals	Defined by PC application

1) System specification, Generator and Analyzer combined
2) System specification, Generator and Analyzer combined, one output channel muted

Analog Analyzer	
Number of Channels	2
Input Connectors	XLR for Balanced Inputs 4 mm Banana Jack (ground)
Input bandwidth	DC to 90 kHz
Input coupling	AC (-3dB at 2 Hz) DC (- 3 dB at 1 Hz, -0.1 dB at 6.5 Hz in ADC)
Input impedance Balanced Unbalanced	 200 kohm / 20 pF 100 kohm / 37 pF
Maximum Level (sine) Balanced Unbalanced	Input protected in all ranges 100 V rms 100 V rms
Input ranges	7 steps, 100 mVrms to 100 Vrms, 10 dB steps
Level measurement accuracy	< ±0.05 dB @ 1 kHz
Level measurement flatness AC coupling OFF AC coupling ON	 ±0.01 dB 20 Hz 20 kHz ±0.2 dB 10 Hz to 80 kHz - 0.1dB @ 20 Hz, - 0.6 dB at 5 Hz
Level measurement residual noise 3) 20 kHz BW A-weighted 20 kHz BW 80 kHz BW	 0.4 uV typical, ≤ 0.5 uV (-126 dBV) 0.55 uV typical, ≤ 0.75 uV (-122 dBV) 1.0 uV typical, ≤ 1.5 uV (-116 dBV)
CMRR (10 Hz to 20 kHz) DC coupl. Input range ≤ 0dBV Input range = 10dBV Input range = 20dBV	AC coupling reduces CMRR at low frequencies ≥ 85 dB ≥ 70 dB ≥ 45 dB
Analyzer residual THD 1 kHz fundamental 20 Hz to 20 kHz	 typical -130 dB, < -120 dB @ 0 dBV < -115dB @ 0 dBV
Analyzer THD+N, 1 kHz @ -1 dBFS THD+N 48 kHz sample rate THD+N 192 kHz sample rate	20 kHz BW typical -105dB typical -105dB
Inter-channel phase accuracy 10 Hz to 20 kHz 20 kHz to 80 kHz	DC coupled ± 0.2° ± 0.5º

3) 20 kHz BW measured at 48 kHz sample rate. 80 kHz BW measured at 192 kHz sample rate. All measurements done with inputs shorted to ground, input range = -20dBV. Measured using AudioTester V3.0.

General data	
Power supply	100 – 120 VAC or 220 to 240 VAC 50/60 Hz 40 VA max. Switchable
Temperature range operating conditions storage	 +15º to +35ºC (+59º to +95ºF) -20º to +60ºC (-20º to +140ºF)
Mechanical dimensions width 257 mm height 95 mm depth 355 mm	 25.7 cm (10.1") 9.5 cm (3.75") 35.5 cm (14")
Weight	4.4 kg (9.7 lbs)
EMC	
Safety	
Isolation	The measurement section is electrically isolated from the USB connection.

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Specifications are believed to be accurate, but minor changes may occur.
Specifications may be changed without further notice.