

PCX™ Series

PCX™ 1616 - Digital Audio Matrix Processor

CREST
AUDIO®

PRELIMINARY



Description

The Crest Audio® PCX™ 1616 is a DSP-based, digital audio matrix system that boasts a 96 kHz sample rate and a floating point DSP processor for quiet accurate filter response. The crossover filters are fully adjustable and any input can be routed to any output.

The PCX 1616 supports 32 input and 32 output channels via a digital matrix system offering flexible routing for any application. Sixteen (16) each, local balanced line XLR inputs and outputs, allow direct analog audio connectivity with an additional 16 input x 16 output audio data streams over Ethernet via an optional Dante® network audio card. The units software and advanced DSP algorithms offer professional signal processing and control features to manage, optimise and protect FoH, monitor and multi-zone speaker systems while ensuring exceptional audio signal clarity and integrity without loss or coloration.

Input features include gain, mute, HP / LP filters, 5-band PEQ, phase, feedback control, noise gate and automix. Each output features an additional 5-band PEQ, gain, compressor, phase, up to 680ms of delay, and mute. Crossover & band-pass filters can be selected between Butterworth, Bessel or Linkwitz-Riley with alignments from 1st order (6 dB/Oct) to 4th order (24 dB/Oct). EQ filter types include PEQ, Low-Shelf, Hi-Shelf, Low-Pass, High-Pass, All-Pass1 and All-Pass2. An internal signal generator provides sine, white noise and pink noise.

The PCX Editor Software allows extensive remote setup and operation features for up to 255 units via the front panel USB Type B Program port or alternatively via the back panel Ethernet control port or old school serial DB9.

Features

- 16x16 local XLR in- & outputs
- Additional 16x16 in- & outputs via optional Dante card
- 16 balanced 3-pin Euroblock inputs & 16 balanced 3-pin Euroblock outputs
- 32-bit SHARC DSP
- Sample rate: 96 kHz
- A/D & D/A Converters: 24-bit Delta-Sigma
- Setup & Control via Ethernet or USB-B
- Serial control via RS232 / RS485
- 5-segment LED meters on each input and output
- Automix channel with mixing function
- Input: Gain, Mute, +48V Phantom Power, Noise Gate, Feedback, Phase, HP, 5-band PEQ, Automix
- Output: 5-band PEQ, Gain, Compressor, Phase, Delay, Mute, Crossover / Band-pass filters
- Signal generator: Sine, white noise, pink noise
- PCX Editor software for PC allows complete remote setup and operation via Ethernet or USB

Configuration:	32 Inputs & 32 Outputs	Inputs:	3-pin Euroblock balanced
Local Inputs & Outputs:	16 analog Inputs & 16 analog Outputs	Outputs:	3-pin Euroblock balanced
Additional I/O via optional Dante Card:	16 digital Inputs & 16 digital Outputs	Ethernet Interface:	RJ-45 / 10 Mbps / Static IPv4 address
		USB Interface:	USB "B"
Dynamic Range:	110 dBu		
THD +N @ 1 kHz (0 dBu):	< 0.005%	RS-232 & RS-485:	D-Sub 9
Crosstalk:	> 70 dBu, 20 Hz - 20 kHz	Baud Rate:	115200
Frequency Response:	20 Hz - 20 kHz, -0.3 dB	Data Bits:	8
C.M.R.R.:	> 75 dBu 1 kHz	Parity:	None
		Stop Bits:	1
Maximum Input Level:	+15 dBu		
Maximum Output Level:	+15 dBu	AC Power Input Voltage:	90 to 260 VAC 50/60 Hz
		Fuse:	F2AL 250V (5x20 mm)
Digital Processing:	32-bit SHARC DSP	Power Consumption:	20 Watts
Sample Rate:	96 kHz	Net Weight:	9.92 lbs (4.5 kg)
Delta-Sigma A/D & D/A Converters:	24-bit	Dimensions (HWD):	3.47 x 19 x 10.04 in (88 x 483 x 255 mm)

PCX Editor Software



Architect's & Engineer's Specifications

The unit shall be a 2u rack-mountable digital audio matrix processor and loudspeaker management system, capable of 16 local XLR input channels and 16 local XLR output channels, an additional 16 digital input channels and 16 digital output channels are available with the optional Dante card, all independently assigned.

The unit shall operate at 96 kHz sample rate and 24-bit Delta-Sigma A/D and D/A conversion. All input channels shall provide the following processing: Gain, Mute, Noise Gate, Feedback, Phase, HP, 5-band PEQ, Automix. All outputs shall provide the following processing: 5-band PEQ, Gain, Compressor, Phase, up to 680ms of Delay, and Mute.

All speaker processing outputs shall provide the following processing: Crossover & band-pass filters selectable between Butterworth, Bessel or Linkwitz-Riley each with alignments from 1st order (6 dB/Oct) to 4th order (24 dB/Oct). EQ filter types include PEQ, Low-Shelf, Hi-Shelf, Low Pass, High-Pass, All-Pass1 and All-Pass2.

The unit shall have 16 balanced 3-pin Euroblock inputs and 16 3-pin balanced Euroblock outputs. All input channels shall be routable to any output. An USB B port on the front panel and an RJ-45 Control Network port on the rear of the unit shall be provided for connection to a networked PC running the devices proprietary editor software.

The unit shall have an integrated power supply accepting AC mains voltages of 90 to 260 VAC, 50/60Hz, 20W max via an earthed 3-pin IEC male connector mounted on the rear chassis. The unit shall be no more than 3.47 inches (88 mm) high by 19 inches (483 mm) wide by 10.04 inches (255 mm) deep weighing no more than 9.92 pounds (4.5 kg).

The digital audio matrix processor and loudspeaker management system shall be the Crest Audio PCX™ 1616.