

Cadence AI 8x8

Analog Audio DSP



DESCRIPTION

The Cadence AI 8x8 is a professional-grade, AI-powered Digital Signal Processor (DSP) designed to deliver high-performance audio management in diverse AV environments. Engineered by Aniston, it combines advanced signal processing with intelligent voice control to enhance speech clarity and minimize background disturbances, making it ideal for boardrooms, conference halls, and live event setups.

Featuring 8 analog mic/line inputs and 8 line-level outputs, it provides exceptional flexibility for both input mixing and output routing. With its integrated AI-based processing engine, it effectively eliminates ambient noise, acoustic echo, and feedback, ensuring a clean and professional audio experience.

Seamlessly supporting USB audio, RS232, RS485, TCP/IP, and GPIO interfaces, the Cadence AI 8x8 offers full system integration capabilities, including remote control, auto-mixing, and camera tracking. With its intuitive GUI for Windows and Android, as well as support for optional touch screen control, it provides a complete, scalable solution for modern AV applications.

FEATURES

AI-Driven Audio Processing Engine

- Advanced AI-based DSP architecture with SHARC and ARM quad-core processing for superior real-time audio enhancement.
- Eliminates ambient noise and non-human signals with intelligent voice recognition algorithms.

USB Digital Audio Integration

- Equipped with 2-in/2-out USB interface for direct digital audio connectivity with computers and workstations.
- Plug-and-play compatibility using USB Type A-B with free driver support.

Advanced Noise and Echo Management

- Integrated Acoustic Echo Cancellation (AEC) for crystal-clear conferencing audio.
- Active Noise Control (ANC) reduces unwanted background disturbances in live environments.
- Automatic Feedback Control (AFC) with dual-level adjustment prevents audio loops and feedback issues

Professional-Grade I/O and Power

- 8 analog inputs and 8 analog outputs, switchable between mic-level and line-level.
- +48V phantom power (6.5mA per mic input) supports professional condenser microphones.

Flexible Audio Management

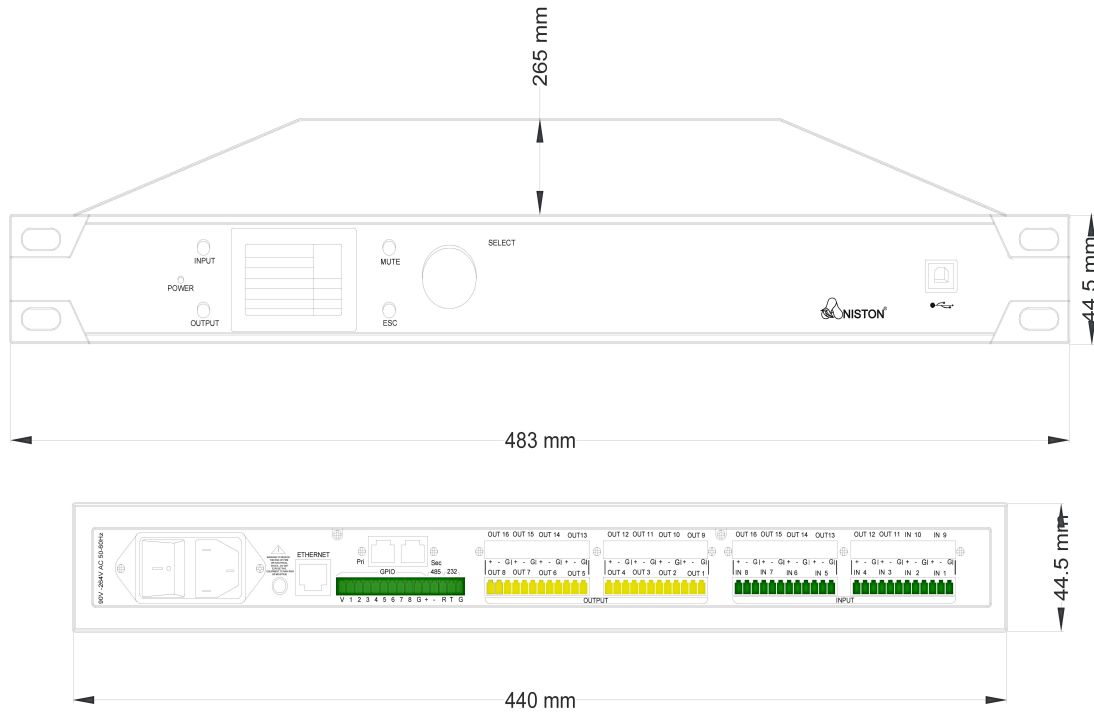
- Supports 15-band or 8-band EQ on inputs and 10 or 8-band EQ on outputs.
- Built-in high-pass and low-pass filters with Butterworth, Bessel, and Linkwitz-Riley filter types.
- Auto-mixing and matrix mixing functionality for tailored audio routing and distribution.

TECHNICAL SPECIFICATIONS

Model	Cadence AI 8x8 Audio DSP
Processor	ADI SHARC 21489 + ARM Quad-Core
Audio Latency	< 3ms (Propagation Delay, 450MHz, 24-bit Processing)
Input Channels	8 Analog Mic/Line Inputs
Output Channels	8 Analog Line-Level Outputs
USB Digital Audio	2-in / 2-out
Phantom Power	+48VDC, 6.5mA per mic input
Dynamic Range	90dB @ 17dBu, 1kHz, A-weighted (Line)
THD+N	-90dB (0.003%) Line / -86dB (0.005%) Mic @ 1kHz, A-weighted
Sampling Rate	48kHz (A/D - D/A Conversion)
Acoustic Echo Cancellation (AEC)	Yes
Active Noise Control (ANC)	Yes
Automatic Feedback Control (AFC)	Yes, Two Selectable Levels
Equalization	Input: 15 or 8 Bands / Output: 10 or 8 Bands
Filters	HPF & LPF (Butterworth, Bessel, Linkwitz-Riley)
Mixing Functions	Auto Mixing, Matrix Mixing
Camera Tracking	Yes, Compatible with Most Control Protocols
Control Interfaces	USB, TCP/IP, RS232, RS485, GPIO
User Interface	Windows 7/8/10/11 GUI, Android App
Touch Screen Control	Optional (RS485 Wire Control)
Power Supply	AC 100V-240V, 50/60Hz
Power Consumption	Typical 35W, Maximum 60W
Operating Temperature	-20°C to 60°C
Weight	3.4 kg
Dimensions	483mm × 265mm × 44.5mm
Network Connectivity	USB Type A-B, Free Driver

PRODUCT DIMENSION

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