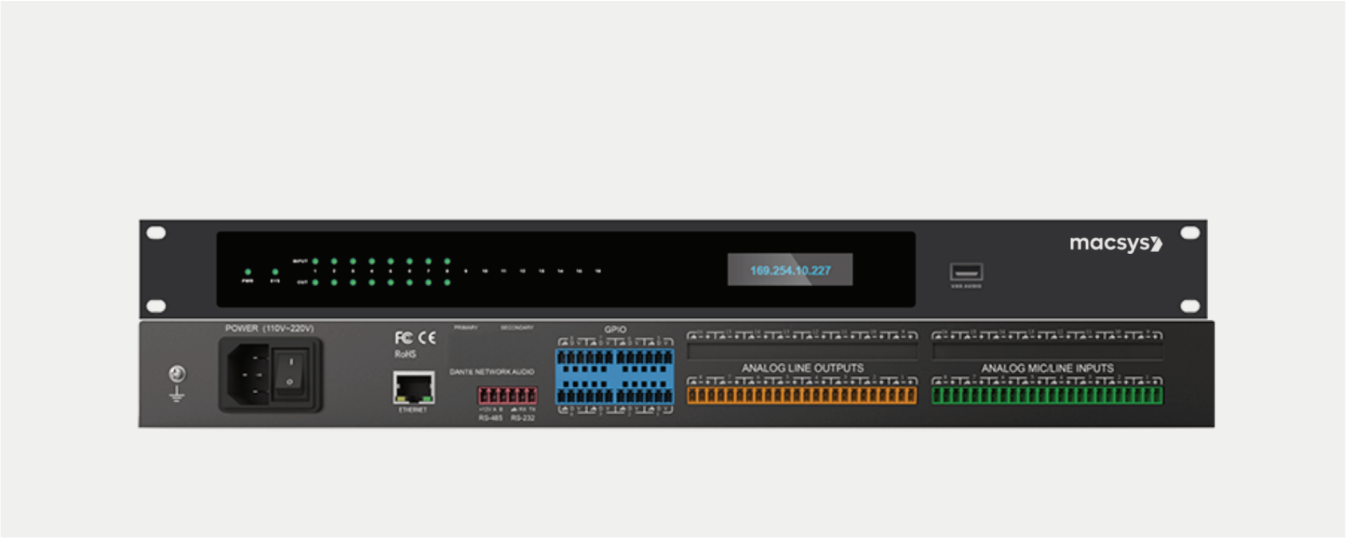
Datasheet

PAS-NAPCU | Network Audio Processing Controller Unit



Key features

- 8×8 analog I/O with flexible, configurable DSP processing.
- Built-in USB sound card (1×1) for playback, recording, and software video conferencing.
- Advanced DSP algorithms: AEC, AFC, ANS, AGC, ANC, AMC, Ducker, Gate Mixer.
- 12-band British parametric EQ with Parametric, Lowshelf, Highshelf, Lowpass, and Highpass filters.
- Central control capability enabling unified control and one-click system startup.
- High fidelity audio: 48 kHz/24-bit sampling, low latency (<3 ms), and wide dynamic range.
- Professional connectivity: RS232, RS485, GPIO, and network integration.

Product Overview

The Macsys PAS-NAPCU is a professional 8×8 Network Audio Processing Controller Unit powered by the ADI SHARC 21489 40-bit floating-point DSP running up to 450 MHz. Engineered for conference rooms, halls, auditoriums, and administrative centers, it ensures precise, low-latency digital audio processing.

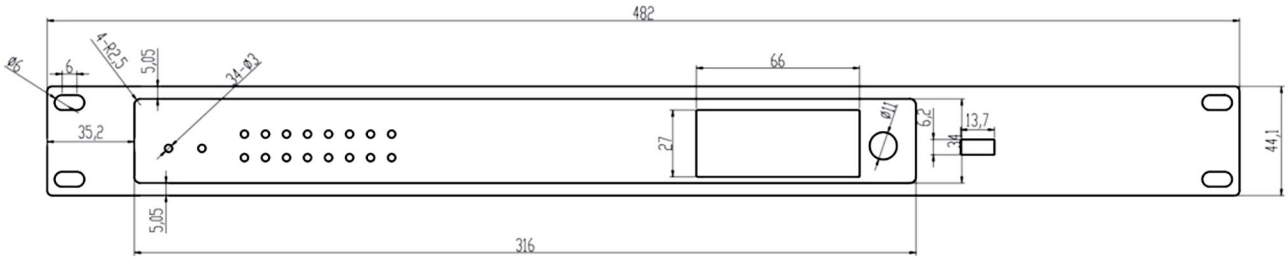
Equipped with a built-in USB sound card (1×1), the PAS-NAPCU supports music playback, recording, and seamless software video conferencing. Its flexible processing modules and advanced algorithms including AEC, AFC, ANS, AGC, ANC, Ducker, AMC, and Gate Mixer—enable optimized system performance. A 12-band British parametric EQ with multiple filter options ensures fine-tuned sound shaping.

With 8 analog inputs and 8 outputs, <3 ms latency, and centralized control for unified power, signal, and environment management, the PAS-NAPCU offers a robust and scalable solution for modern audio environments.

Techinical Specification

Featues	Detail
DSP Type	ADI SHARC 21489, 40-bit floating-point DSP, up to 450 MHz
Core Algorithms	AEC (Acoustic Echo Cancellation), AFC (Adaptive Feedback Cancellation), ANS (Automatic Noise Suppression), AGC (Automatic Gain Control), ANC (Active Noise Cancellation), AMC (Automatic Microphone Mixing – Gain Sharing), Ducker (Priority-based Auto Level Control), Gate Mixer (Threshold Automatic Mixing)
USB Sound Card	One-in-one-out; playback, recording, and software video conferencing
Analog Channels	8 inputs, 8 outputs
Sampling Rate	48 kHz / 24-bit
Input Gain Settings	0 to +48 dBu (17 steps)
Phantom Power	48V
Frequency Response Maximum Level	20 Hz – 20 kHz (±0.3 dB) +18dBu
THD+N	< -94 dB @ 17 dBu
Input Dynamic Range	110 dB
Output Dynamic Range	112 dB
Channel Isolation (1 kHz)	108 dB
Input Impedance (Balanced)	5.4 kΩ
Output Impedance (Balanced)	600 Ω
Latency (Time Delay)	< 3 ms
Operating Temperature	0–40 °C
Power Supply	AC 110–240V, 50/60 Hz
Dimensions (W×D×H)	482 × 260 × 45 mm
Weight	4 kg
Rear Interfaces	Network port; RS232 + RS485; GPIO (8 logic outputs, 5V pull-up, low=0V, polarity/threshold settable); analog I/O
Front Panel	Power indicator; working status indicator; channel status indicator; display; USB port
Accessories	1× PAS-NAPCU Unit, 1× Connecting Cable, 6× 12P Phoenix Terminal, 1× 6P Phoenix Terminal, 1× Small Screwdriver, 4× Foot Pads
Certification	CE, RoHS Compliance

Dimension



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