

PowerSoft 0304 DSP+D

Dante Network DSP Amplifier



DESCRIPTION

The Aniston PowerSoft0304 DSP+D is a professional-grade, 4-channel Dante-enabled DSP power amplifier engineered for demanding commercial AV and sound reinforcement environments. Designed in a compact 1U chassis, it combines powerful Class-D amplification with intelligent digital signal processing, network flexibility, and long-term reliability.

Delivering 4×300W @8Ω and 4×450W @4Ω, with support for 70V/100V constant voltage speaker systems, the 0304 DSP+D is ideal for large-scale installations, distributed zones, and hybrid Hi-Z/Lo-Z audio infrastructures. Its bridge mode delivers 2×900W @ 8Ω, making it versatile for both high-power and zone-based applications.

The integrated AI-powered DSP engine operates at 48kHz / 24-bit resolution and includes a 300MHz fixed-point core for ultra-low latency and noise. It supports advanced signal tuning via FIR filters, PEQ, matrix mixing, limiters, AFC (Automatic Feedback Control), and dynamic control. Full system access is provided via USB, TCP/IP, RS232/RS485, and GPIO interfaces.

FEATURES

- **Dante-Enabled Network Audio Integration**

4×4 Dante audio interface for seamless digital signal routing across IP networks

Primary and secondary Dante port support for redundancy

AES67-compatible for cross-protocol system integration

- **Advanced FIR-Based DSP Architecture**

48kHz / 24-bit fixed-point DSP engine with 300MHz processing core

Independent PEQ: up to 15-band input EQ and 10-band output EQ per channel

- **High-Efficiency Multi-Mode Power Amplification**

Class-D amplifier delivering 4×300W @ 8Ω, 4×450W @ 4Ω

Bridge mode: 2×900W @ 8Ω

Supports 70V / 100V constant voltage speaker systems

Output modes: Stereo, Bridge, Parallel, Matrix mode

- **Comprehensive Audio Control & Protection**

Compressor and peak limiter per channel

Input noise gate and AFC (Automatic Feedback Control)

Intelligent fan control with ultra-low idle noise

Multi-protection system: DC, thermal, surge, short circuit, peak current, startup delay

- **Professional-Grade I/O Design**

4×Balanced XLR analog inputs (Neutrik compatible)

4×Analog speaker outputs (Phoenix terminal block or SpeakON depending on variant)

Dante input via RJ45 (CAT5e/6)

USB audio configuration port (Type A-B, no driver required)

- **Control, Display & Remote Monitoring**

Dual RJ45 ports for TCP/IP control and daisy chaining (up to 5 devices)

RS232, RS485, GPIO expansion for third-party control systems

320×240 IPS color display with real-time temperature/voltage/current monitoring

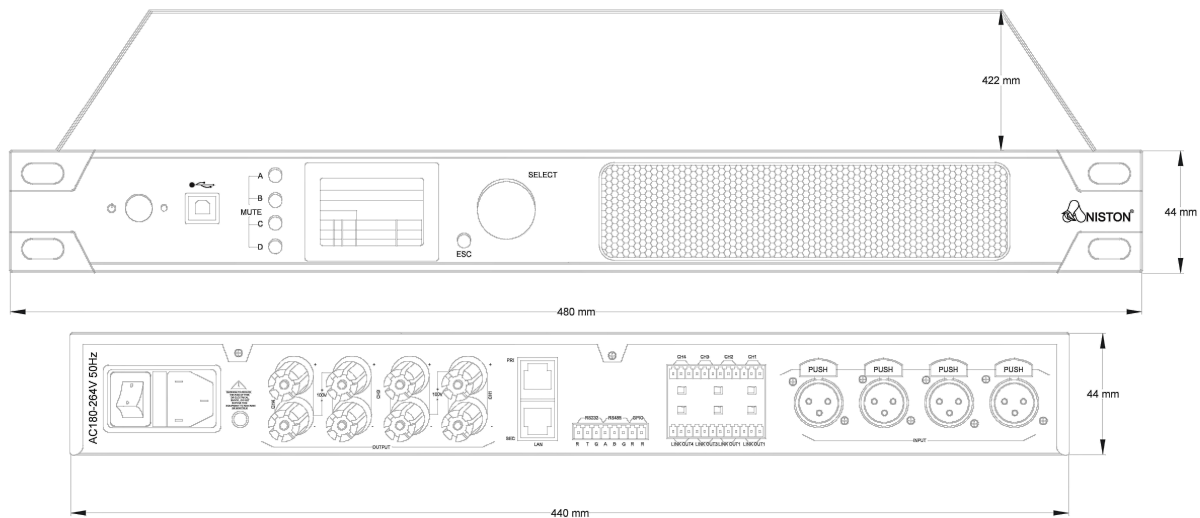
GUI software for Windows 7/8/10/11 with complete DSP parameter control

TECHNICAL SPECIFICATIONS

| | |
|-------------------------------|--|
| Model | PowerSoft 0304 DSP+D |
| Output Channels | 4× Independent Power Amplifier Channels |
| Output Power @ 8Ω | 4×300W RMS |
| Output Power @ 4Ω | 4×450W RMS |
| Bridge Mode Output | 2×900W RMS @ 8Ω |
| Output Mode Support | >Stereo / Bridge / Parallel / Matrix |
| Output Configurations | Constant Voltage (100V / 70V) and 4Ω/8Ω |
| Amplifier Class | Class D |
| Frequency Response | 20Hz – 20kHz (±0.5dB), RL = 8Ω, Po = 1W (Low-Z / High-Z) |
| Total Harmonic Distortion | ≤ 0.2% @ 1kHz (20ms burst, 8Ω) |
| Signal-to-Noise Ratio (SNR) | ≥ 100dB (A-weighted) |
| Crosstalk | ≤ -60dB |
| Voltage Gain | 31.7dB (RL = 8Ω, Double Power Mode) , 35.2dB @ 70V ,38.2dB @ 100V |
| Input Sensitivity | +4dBu (RL = 8Ω) |
| Maximum Input Voltage | +24 dBu |
| Input Impedance | 20kΩ (balanced), 10kΩ (unbalanced) |
| DSP Processor | 300 MHz Fixed-Point Core |
| Sampling Frequency | 48 kHz |
| FIR Filter Taps | User-selectable: 256 / 512 / 768 / 1024 |
| Input PEQ | Up to 15 bands per channel |
| Output PEQ | Up to 10 bands per channel |
| Filter Types | HPF, LPF, All-Pass, Butterworth, Bessel, Linkwitz-Riley |
| Matrix Mixing | 4×4 fully routable, level-adjustable |
| Auto Mixer | Yes, with gating and microphone priority settings |
| Compressor / Limiter | Independent per channel |
| Feedback Control | AFC (Adaptive Feedback Canceller), Noise Gate |
| Analog Inputs | 4 × XLR Balanced (Mic / Line Level) |
| Analog Outputs | 4 × Phoenix / SpeakON-compatible terminals (Barrier Strip × 4 pairs) |
| Digital Inputs (Dante) | 4 × Dante Channels via RJ45 |
| Digital Networking Ports | RJ45 × 2 (Dante PRIMARY / SECONDARY, redundant) |
| Control Ports | 1 × USB (Type-A), 2 × RJ45 (TCP/IP), RS232, RS485, GPIO |
| Remote Fault Output | Euroblock (3P) × 1 |
| Load Protection | Power switch on/off, output mute, DC-fault: power supply shutdown, clip limiting |
| Thermal Protection | Output mute at heatsink temp ≥90°C (auto restore) Amplifier shutdown at ≥100°C) |
| Overcurrent Protection | Output mute (auto restore) |
| Low Load Impedance | Output mute (auto restore) |
| Integrated Power Protection | Automatic gain reduction (auto restore) |
| Cooling | Dual 3-speed intelligent fans, front-to-back airflow |
| Output Power (High Impedance) | 4 × 125 W @ 100V / 70V lines |

| | |
|-----------------------------|---|
| Power Supply Range | 85 – 264 VAC, 50/60 Hz, PFC Enabled |
| Power Requirements | 100V, 120V, 230V-240V; 50Hz / 60Hz |
| Power Consumption | 150W (1/8 Power @ 4Ω Pink Noise) ,37W (Idle) ,18.5W (Standby) |
| Dimensions (W × H × D) | 480 mm × 88 mm × 422 mm (18.9" × 3.5" × 16.6") |
| Net Weight | 8.1 kg (17.9 lbs) |
| Certifications / Compliance | CE, ISO 9001:2015, RoHS, CCC |

PRODUCT DIMENSION



HQ Asia

asia@anistonav.com
anistonav.com

Europe

europe@anistonav.com
anistonav.com/europe



United States

unitedstates@anistonav.com
anistonav.com/us/

Middle East

uae@anistonav.com
anistonav.com/uae

ANISTON TECHNOLOGIES LLP

anistonav.com

E-mail: info@anistonav.com

All information copyright Aniston Technologies LLP, 2024. Aniston Technologies LLP reserves the right to change this document without notice.