

BA-88-DAP

Digital Audio Processor

8 × 8 Analog · Dante 4 × 4 · 32-bit DSP · 24-bit / 48 kHz



Front Panel



32-bit Float
DSP



8 In / 8 Out
Analog



Dante
4 × 4



AFC / AEC / ANS
Auto Mixer



Scene
Presets



Web Control
RS232 / 485 / GPIO

Description

The BA-88-DAP digital audio processor combines a high-performance 32-bit floating-point DSP with 24-bit / 48 kHz A/D and D/A conversion and an 8-stage preamplifier circuit. It has built-in feedback cancellation, echo cancellation, noise suppression and automatic mixing, plus full matrix mixing, scene presets and easy-to-use control software. It suits theatres, concert halls, video conferencing, stadiums, places of worship, conference centres, theme parks and public sound reinforcement systems.

Key Features

- ✓ High-performance 32-bit floating-point DSP with all-digital processing.
- ✓ High-performance A/D and D/A converters, 24-bit / 48 kHz sampling.
- ✓ 8 analog inputs and 8 analog outputs with very low distortion and ultra-low noise.
- ✓ Dante network audio: 4 inputs and 4 outputs.
- ✓ Built-in AFC (feedback cancellation), AEC (echo cancellation), ANS (noise suppression) and automatic mixing.
- ✓ Comprehensive matrix mixing.
- ✓ Input channel processing: preamp, expander, compressor, auto gain, 5-band parametric EQ.
- ✓ Output channel processing: delay, crossover, limiter, 31-band graphic EQ.
- ✓ Per-channel phase and mute switches, plus 48 V phantom power on inputs.
- ✓ Test signal generator: sine wave, pink noise and white noise.
- ✓ Camera tracking with VISCA, PELCO-D and PELCO-P protocols and custom commands.
- ✓ Built-in web control for Windows, macOS, Linux, Android and iOS.
- ✓ RS232, RS485, Ethernet and 4 programmable GPIO ports (3.3–24 V).
- ✓ USB music playback and recording.
- ✓ Scene presets with backup to external storage, memory retained on power failure, and one-key reset.



Specifications

Model	BA-88-DAP
Analog Inputs / Outputs	8 / 8
Dante Inputs / Outputs	4 / 4
RS485 Serial Interfaces	1
GPIO Interfaces	4, freely configurable as inputs or outputs
RJ45 Interfaces	2
Sample Rate / Bit Depth	48 kHz / 24-bit
Preamp Gain	42 dB
Phantom Power	48 V
Frequency Response	20 Hz – 20 kHz, ± 0.2 dB
THD+N	$\leq 0.003\%$ @ 1 kHz, 4 dBu
A/D Dynamic Range (A-wtd)	120 dB
D/A Dynamic Range (A-wtd)	114 dB
Input Impedance (Balanced)	20 k Ω
Output Impedance (Balanced)	100 Ω
EIN (A-wtd)	≤ -125 dBu
Channel Isolation	100 dB @ 1 kHz, 4 dBu
Common Mode Rejection	70 dB @ 50 Hz
S/N Ratio	108 dB
Max. Input / Output Level	18 dBu / 18 dBu
Background Noise	-90 dBu
Power Supply	DC 12 V / 2 A
Power Consumption	< 15 W
Operating Temperature	0 – 40 °C
Operating Humidity	10% – 90%, non-condensing
Dimensions (W x D x H)	482 x 206 x 44 mm
Net / Package Weight	2.1 kg / 2.5 kg
Package Size	590 x 430 x 110 mm

Rear Panel



Tender Specification

The digital audio processor shall be a 19" 1U unit with a 32-bit floating-point DSP and 24-bit / 48 kHz A/D and D/A converters. It shall provide 8 analog inputs, 8 analog outputs and 4 x 4 Dante network channels, with 42 dB preamp gain and 48 V phantom power. Processing shall include matrix mixing, automatic mixing, AFC, AEC and ANS. Each input shall have an expander, compressor, auto gain and 5-band parametric EQ, and each output shall have delay, crossover, limiter and 31-band graphic EQ. Frequency response shall be 20 Hz – 20 kHz (± 0.2 dB), with THD+N $\leq 0.003\%$ and S/N ratio of 108 dB. Control shall be via built-in web interface, Ethernet, RS232, RS485 and 4 programmable GPIO ports, with camera tracking (VISCA / PELCO-D / PELCO-P) and USB playback and recording. It shall operate from DC 12 V / 2 A, consume less than 15 W, measure 482 x 206 x 44 mm and weigh 2.1 kg.

