BA-1616 DAP-Digital Signal Processor

Product Introduction

The digital signal processor is a freely designable audio processing and control system product. The front panel comes with a high-definition color screen, which can display the current working status of the equipment. using advanced DSP processing technology, the system provides a variety of audio processing modules to choose from, open software architecture, targeted to solve a variety of practical problems in the application scenarios. 128 network audio channels for network audio transmission provides a high-bandwidth, low-latency, high compatibility and low-cost solutions.

Product Features

- Highly integrated, integrating a variety of traditional Analog audio processing equipment in a Digital audio processor;

- High-performance 32-bit floating-point DSP processor, all-digital processing, fast response to feedback cancellation, echo cancellation, noise suppression and other core algorithms;

- High-performance A/D, D/A converter, 24bit/48KHz sampling frequency, high-quality Analog → Digital, Digital → Analog conversion;

- 16 Analog input channels and 16 Analog output channels, very small distortion and ultra-low background noise;

- Rich interface expansion;

- Supports Dante network transmission, which makes audio transmission more stable and faster;

- Humanization, graphical, intuitive and easy-to-operate control software interface;

- Comprehensive matrix mixing functions.

Functions

- Advanced and Reliable Hardware: Analog Devices High Performance DSP Sharc21569 + NXP i.MX ARM Processor;

- Support 64*64 Dante network audio channels (AES67 compatible)

- Open signal flow design, do what you want to do;

- Visualized user control interface design, easily meet customer needs

- Support built-in multi-channel recording & broadcasting;

- Support any signal real-time monitoring, debugging is no longer blind;

- Display IP address & device name, no more worries about not finding the device;

- Built-in all the required software, no more lost CD-ROM trouble;

- Highly optimized DSP, worry-free processing up to 3400 equalization bands

- 4 independent feedback elimination, 2 independent echo cancellation;

- Open Websocket protocol control, easy cloud platform integration, support for RS232, UDP center control control;

- Independent dual control network port, easy network backup;

- Dual Gigabit Ethernet ports, network audio transmission can be redundant backup;

- Built-in graphic equalization, parametric equalization, high and low-pass filtering, all-pass filtering, FIR filtering, crossover, noise gate, limiter, multifunctional mixer, automatic mixing, adaptive echo cancellation, a variety of feedback cancellation algorithms (traps, adaptive filtering), etc.;

- Built-in USB sound card, support for recording and playback functions, playback and recording path selectable, recording storage space real-time display;

- Support audio dynamic level real-time feedback;

- Support real-time analysis of the signal spectrum of each channel.

Specification

Analog channels	16 balanced/line inputs 16 balanced/line outputs
Dante channels	64 input,64 output
Number of 232 serial interfaces	1
Number of GPIO interfaces	8, freely configurable inputs and outputs
Number of RJ45 interfaces	4
Number of USB interfaces	1 USB Type A,1 USB Type B
Sampling Rate	48KHz@24bit
Preamplification	60dB(3dB per stop, 20 stops in total)
Phantom Power	48V
Frequency Response	20Hz ~ 20KHz,±0.2dB
THD+N	≤0.003%@1kHz,4dBu
Analog to Digital Dynamic Range (A-weight)	120dB
Digital to Analog Dynamic Range (A-weight)	114dB
Input Impedance (Balanced)	20kΩ
Output Impedance (Balanced)	100Ω
EIN (A-weight)	≤-125dBu
Channel Isolation	100dB@1KHz,4dBu
Common mode rejection	70dB@50Hz
Signal-to-Noise Ratio	108dB
Maximum Input Level	18dBu

Maximum Output Level	18dBu
Background Noise	-90dBu
Operating Power Supply	AC 110V-220V,50Hz/60Hz
Power Consumption	<40W
Operating Temperature	0-40℃
Operating Humidity	10%~90% No condensation
Product Weight	2.2KG
Product Size	482x258x45mm
Package Weight	2.7KG
Package Size	590×430×110mm