DATA SHEET

Digital Audio Matrix Processor

Axe-128N

The Axe-128N digital audio matrix processor is a cutting-edge product built on the innovative thermal computing system platform. With its sleek industrial design and seamless integration, this audio processor showcases the unparalleled practicality of aiwia products in audio systems. Boasting flagship features, including design software, a multi-interface unified scheduling management function, and a wide range of flexible processing modules, the Axe-128N offers unparalleled freedom in designing processing architectures and control interfaces. Experience the pinnacle of performance with the Axe-128N, setting new standards in the thermal computing system platform.

The digital audio matrix processor has 24 audio interfaces, comprising 12 mic/line-level analogue audio inputs with 48V phantom power, 8 line-level analogue outputs, and 4 channels that can be configured as either input or output channels. This allows for a maximum setup of 16 inputs and 8 outputs, or 12 inputs and 12 outputs.

The Axe-128N processor enables Dante network digital audio transmission, allowing for the seamless transfer of up to 128x128 channels of audio signals between devices via 128x128 streams. Dante network digital audio transmission is a method that is fully compatible with Ethernet and IP networks, offering ultra-low latency, high-precision synchronization, accurate sampling, simple setup, and user-friendly operation. With Dante, achieving 128×128 channels of uncompressed audio transmission on the local network is straightforward. It supports plug-and-play functionality and is compatible with a wide range of well-known equipment brands.

The system embodies a complete graphical user interface (GUI) with intuitive control functions. Users can easily manage various parameters in the audio system and create and access plans through a unified interface and simple operations. The graphical user interface (GUI) is a cornerstone of this system, providing a "what you see is what you get" experience. This can be achieved by installing software on the computer, and even more convenient wireless control is possible through a wireless touch screen.

Axe-128N is the perfect choice for enhancing the audio experience in small and medium-sized rooms, such as conference rooms or council chambers. Its exceptional digital network channels elevate it to a digital network audio matrix, offering advanced channel processing and control functions compared to traditional audio matrices.

- Independent intellectual property rights
- High quality 24-bit A/D and D/A converters
- 24 analogue audio input/output ports
- 4 customizable audio channels
- Support dual host hot standby, dual machine mirroring, dual power supply backup, and dual network backup
- 128×128 Dante network channels
- 16-way distributed AEC processing with two additional USB ports to accommodate BYOD requirements.
- Built-in 16-track player
- AD/DC dual power backup

Axe-128N

Type:	Digital Audio Matrix Processor
Dante capabilities:	128×128
Number of analog channels:	12 mic/line inputs with phantom power, 8 line outputs. 4 channels can be customized as input or output channels, for a maximum of 16 inputs and 8 outputs or 12 inputs and 12 outputs.
USB:	Dual USB ports, 4×4 channels
AEC:	16-channel assignable and routable AEC processor modules, supporting echo processing tail lengths of 512ms, 200ms, and 100ms optional
Dynamic Range:	>118dB
Frequency Response (±0.2dB):	20Hz~20kHz
Crosstalk, channel to channel:	<-112dB
THD+N:	≤0.002%
Common Mode Noise Rejection (@0dBu):	>91dBu
Maximum Input (@1% distortion):	+22dBu
Controls and indicators	
Front panel control:	Touch information control buttons
Front panel indicator light:	Power light, Status light
Info screen:	2.08-inch flip display
Rear Panel Connection Ports	
RS232/485:	6Pin 3.81mm Phoenix
GPIO:	16Pin 3.81mm Phoenix
Dante Primary:	RJ45 1000Mbps
Dante Secondary:	RJ45 1000Mbps
Control port:	aiwia manager (software), control communications
AC mains requirement:	IEC connector 100VAC - 240VAC ,50Hz
Secondary power supply:	+24VDC, 2pin, 5.81mm Phoenix
Current:	4A max @100VAC
Operating temperature range:	0 ~ 45℃
BTU/hour:	450(estimated under load)
Humidity:	85% relative humidity maximum
Compliance:	CCC CE RoHS FCC

4-channel line output card

Axe-AO4

The analog output card provides 4 channels of line output. It uses plug-in connectors and is electronically balanced. Controls for each output include: gain level and mute control.

- 4 balanced line outputs
- Dynamic Range 118dB
- With quick installation interface
- Control and configuration via software

Dynamic range	>118dB
Frequency response (±0.2dB)	20Hz~20kHz
Output impedance	102 ohms
Channel crosstalk	<-112dB
Total harmonic distortion (THD+N)	<0.002%
Maximum output level (@1% distortion)	+22dBu
Interface	4 of 3-pin European split terminals

4-channel mic/line input card

Axe-AI4

TThe analog input card provides 4 channels of mic/line input, +48V phantom power, -60~+24dB level control range and 0~+54dBu gain control (adjustable in 6dB increments). It uses plug-in balanced input. The control functions of each input include: gain level control, mic preamplifier, mute and signal inversion.

- 4 mic/line inputs
- +48V phantom power
- Dynamic range 118dB
- With quick installation interface
- Control and configuration via software

Dynamic range	>118dB
Frequency response (±0.2dB)	20Hz~20kHz
Input impedance	5.5k ohms
Channel crosstalk	<-112dB
Total harmonic distortion (THD+N)	<0.002%
Common mode rejection ratio (@0dBu)	
Maximum output level (@1% distortion)	+22dBu
Interface	4 of 3-pin European split terminals