



DATA SHEET

Digital Audio Processing Server Axe-8000II



The Axe-8000II Next Generation Intelligent Digital Audio Processing server is the heart of our hot computing system platform. This platform runs on the real-time Linux operating system and has been developed to provide better localization functions. The drag-and-drop module has a user-friendly configuration interface and offers a wide range of data processing capabilities. It utilizes the digital network environment to create medium and large-scale network audio scene applications.

The Axe-8000II features powerful network backup and dual-host backup functions. Our intelligent algorithms are expertly designed to seamlessly facilitate automatic backup. With identical configurations on the master and slave servers, mirror backup is effortlessly achieved through our cutting-edge system mechanism. By integrating both "static" and "dynamic" approaches, we provide an unyielding combination of physical and logical backup, ensuring unwavering system security and uninterrupted operation.

The system has 8 card slots that can accommodate various types of audio cards, such as a 4-channel analog input card, 4-channel analog output card, 4-channel AEC card, 2×2 channel USB sound card, etc. This allows for complete signal compatibility. It also supports up to 32 analog channels locally. Both the integrated channels and independent channels feature exceptionally high hardware quality, including frequency response, dynamic range, and total harmonic distortion.

Support 64×64 Dante network channels, 64×64 streams, and more audio processing can be completed with the help of the DSP resources of the AEC card. The openness and diversity of the system and server can be used to complete the usage scenarios that meet user needs.

The thermal computing system platform supports various I/O peripheral devices for different applications in environments like theme parks, airports, railway stations, and supermarkets.

The system has built-in Lua scripts that can be written in standard C language. It is designed to be embedded in applications, providing flexible expansion and customization functions. When combined with the host's GPIO and RS232/RS485 interface, it can enable applications in more scenarios.

The system has a simple and intuitive interface for easy operation. Users can adjust parameters and plans for the entire audio system using simple mouse operations. The graphical control interface allows for a visual representation of the signal and can be installed on a computer or accessed through a wireless touch screen for convenient control.

- Independent intellectual property rights
- 64x64 Dante network channels
- AEC: Supports 32 channels of custom-added independent AEC modules, expandable to 96 channels
- (Active/Stand-by) dual host backup mode
- Easily configurable GUI, editable according to needs, supports mobile device
- Built-in Lua script for flexible expansion and customization functions
- Dual power supply redundancy (AC/DC)

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 AEC mic/line input card

Axe-EI4

The AEC input card provides 4 channels of AEC (Acoustic Echo Cancellation), phantom power, level control from -60 to +24dB, and gain control from 0 to +54dBu. It offers AEC wide-band processing with a tail time of up to 512ms, and each channel has independent input and direct output for local sound reinforcement.

- 4-channel AEC input card with DSP processing capability
- Does not consume host DSP resources
- With additional DSP processing capabilities to serve the system
- 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)	>91dBu
Maximum output level (@1% distortion)	+22dBu
Interface	4 of 3-pin European split terminals

4-channel mic/line input card

Axe-AI4

The 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)	<0.002%
Maximum output level (@1% distortion)	+22dBu
Interface	4 of 3-pin European split terminals

2x2USB sound card

Axe-USB2

The USB sound card accesses USB-type signals for recording, video conferencing, and test signal access. It has a level fader range of -60 to 0 dB and supports connection status display. The Class 2 USB interface enables convenient connection with a PC or other USB-type devices.

- Sampling rate: 48kHz, quantization bit: 24bit
- 2x2 line I/O mode using USB Class 2
- Hot-swap support
- With quick installation interface
- Control and configuration via software



Sampling	48kHz
Bit Rate	24bit
Input	Gain, inversion, mute, level meter
USB Status	channel name link, streaming
Output	Gain, Mute, Level Meter, Channel Name

*aiwia reserves the final right of interpretation for this information. The technical parameters of related products are subject to change without prior notice.

System Design Software

The aiwia System offers better localization functions, a full operating interface, and drag-and-drop functional modules, surpassing the limitations of other network audio systems and maximizing performance.



The independent audio system design solutions are created using Aiwia System software. The operating interface and drag-and-drop module design enable users to conveniently and flexibly compile suitable audio system engineering designs based on on-site equipment environment and needs.

UCI interface

The system features a user command interface design function that can design a personalized user control interface, edit a graphical scene layout interface, centrally manage the audio system, conduct unified and flexible control, and monitor and control signal routing transmission for the entire audio system, simplifying operators' work.



Axe-8000II

Channel Capacity

Network Channel: 64×64 standard Dante channels, support AES67

Audio I/O: 8 audio I/O card slots

Configuring the Audio I/O Card:

- Axe-AI4: Mic/Line Input Card
- Axe-AO4: Line Output Card
- Axe-EI4: 4-way AEC (acoustic echo cancellation) mic/line input card
- Axe-USB2: 2×2 USB sound card

Dynamic Range: >118dB

Frequency Response (± 0.2 dB): 20Hz~20kHz

Input impedance: 5.5k Ω

Channel Crosstalk: <-112dB

Total Harmonic Distortion (THD+N): <0.002%

Common mode rejection ratio (@0dBu): >91dBu

Maximum input level (@1% distortion): +22dBu

Controls and Indicators

Front Panel Controls: Touch information control buttons

Front Panel Indicators: Power light, Status light

Information screen: 3.12-inch flip display

Rear panel connection ports

RS232/485: 1 RS232, 1 RS485

GPIO: 16 GPIO

Dante Primary: RJ45 1000Mbps

Dante Secondary: RJ45 1000Mbps

Control network port: aiwia manager (software), controls communications

AC main power supply: IEC connector

DC backup power supply: 24VDC 4A 2pin 5.81mm Phoenix socket

Voltage: 100VAC - 240VAC ,50Hz

Current: 4A maximum @100VAC (actual current depends on the specific configuration, such as I/O card slot connection, media storage configuration, DSP configuration and network configuration)

Operating temperature range: 0~45 °C

BTU/hour: 600 (estimated under load)

Humidity: 85% relative humidity maximum

Safety: CCC CE RoSH FCC

Product dimensions (WxHxD): 483x88x384mm

Shipping package dimensions: 612x165x480mm

Shipping weight: 8.5KG

