

Prestel
ADP-4I4O

User manual

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till Sep 2021. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



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1. Technology Overview

1.1 Introduction to Technology

The audio input (Analog / Dante) and output (Dante / Analog) expansion equipment of ADP-4I4O is specially designed for series DSP Matrix with Dante function. Four Analog input parameters (sensitivity 0~48dB, +48V phantom power supply) and four Analog outputs can be configured by DSP software.

ADP-4I4O has no mechanical switch and the system is simpler, less expensive, and less failure probability;

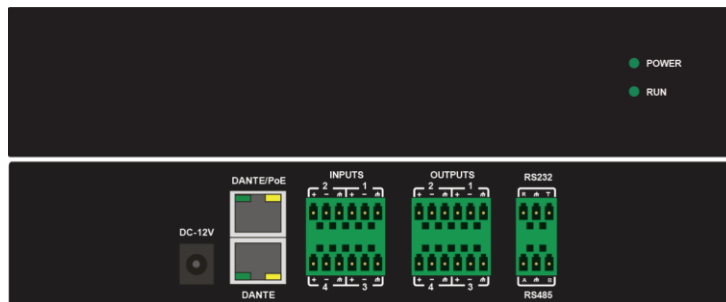
1.2 About Dante AES67

Dante/AES67 audio networking utilize standard IP networks to transmit high-quality, uncompressed audio with near-zero latency. It's the most economical, versatile, and easy-to-use audio networking solution, and is scalable from simple installations to large capacity networks running thousands of audio channels. Dante/AES67 can replace multiple analog or multicore cables with a single affordable Ethernet cable to transmit high quality multi-channel audio safely and reliably. With Dante software, the network can be easily expanded and reconfigured with just a few mouse clicks. Dante/AES67 is the audio networking choice of nearly all professional audio manufacturers, with hundreds of Dante-enabled audio products now available.

For more information, please visit the Audinate website at www.audinate.com.

1.3 Audio Input Section

The device supports up to 4 balanced Analog audio inputs, all support microphone and / or line-level signals, 48V phantom power can be adopted for each input. DP-4



Preamp gain and phantom power can be controlled conveniently via DSP software.



1.4 Audio Output Section

The Analog output section offers 4 balanced channels, 24-bit D/A conversion provides excellent signal to noise ratio. With input and output faders set to 0dB the unit operates at unity gain. Nominal output level is +4dBu with 20dB headroom. 0dBFS digital signal is equivalent to +18dBu.

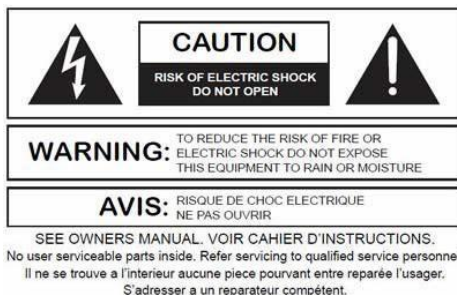
2. Hardware

2.1 Safety Instructions

Safety Instructions

Important safety instructions:

1. Read these instructions.
2. Keep these instructions well.
3. Pay attention to all warnings.
4. Follow all instructions.
5. Please keep the device away from water. The device shall not be exposed to water drips or water splashes; make sure that there is no object with liquid near the device, such as vase.
6. Please use dry cloth to clean up the device.
7. Please do not block the vent. Please get the device installed based on the manufacturer's instructions.
8. Please do not install any heat source, such as radiator, heat register, furnace or other devices (including amplifiers) that generate heat.
9. Please adopt protective grounding connection to connect the device to the power socket. Please do not use polarized plug or grounding plug. A polarized plug has two leaves, and one is wider than another. A grounding plug has two leaves and a third ground terminal. The wide leaf or third ground terminal can provide safety for the users. If the plug provided does not accord to the power socket, please contact the electrician to replace the old socket with a new one.
10. Protect the power cord so that it will not be tramped or protruded, especially the plug, the socket and the connections of cord and device.
11. Please use the accessories designated by the manufacturer.
12. Please only use the cart, the tripod, the holder or the desk designated by the manufacturer or sold together with the device. When using the cart, please take care with the mobile cart/device to avoid injury from rollover.
13. Please unplug the device during a thunderstorm or during the idle period.
14. Please find qualified maintenance personnel to deal with all maintenance problems. When the device gets damaged in any manner, the maintenance is required. For example, the power cord gets damaged, liquid spill or the object falls into the device; the device is exposed to the rainwater or moisture; the operations are not correct, or the device falls off.



The lightning logo (an equilateral triangle with an arrow) is used to make the users aware of the uninsulated "dangerous voltage" within the product shell, which may cause electric shock. An equilateral triangle with an exclamation mark is adopted to make the users understand the importance of the operations and maintenance instructions given in the appendixes attached to the product.

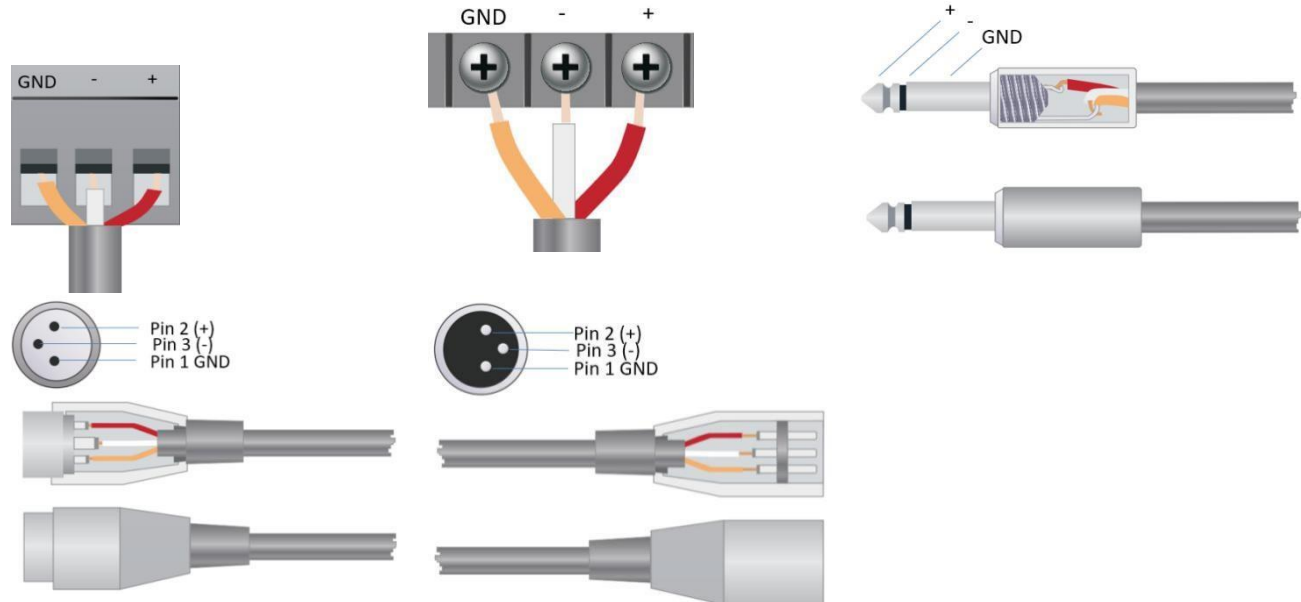
Warning: In order to prevent electric shock, please do not use a polarized plug provided by a device with an extension cord. The socket outlet cannot be inserted except for sharp end.

2.2 Audio Wiring Reference

Balanced Connection

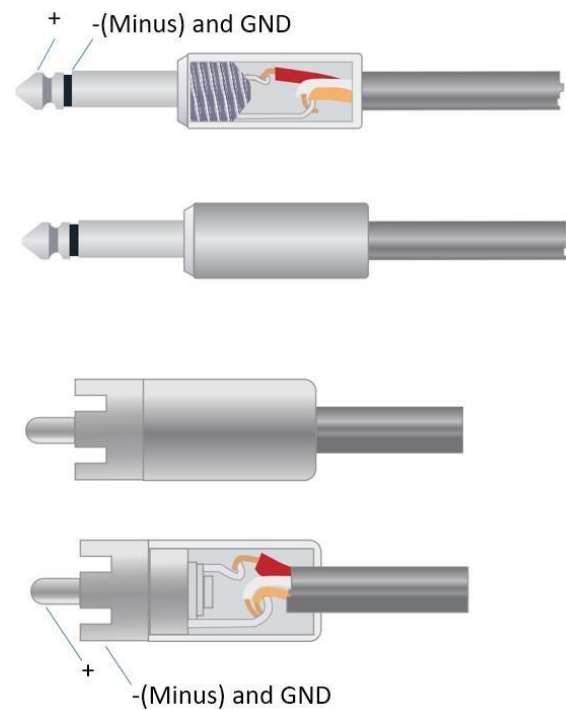
Any of these interfaces may occur on both sides of the connection.

Note: For one XLR interface, the female connects to the output device and the male connects to the input device.



Unbalanced Connection

RCA interface and 1/4-inch TS interface are unbalanced interfaces. A multi-strand shielding conductor may be installed on both ends of unbalanced connection.



2.3 Specifications

Sample rate/bit depth	48kHz/24bit
Input gain steps	0/6/12/18/24/30/36/42/48dB
Phantom Power	48V
Frequency Response (20Hz~20KHz)	±0.5dB
Maximum Level	+18dBu
THD + Noise	0.003% @4dBu
Dynamic Range	110dB
Background Noise (A-weighted)	-91dBb
Common Mode Rejection Ratio @60Hz	80dB
Channel Isolation @1KHz	108 dB
Input Impedance (Balanced Connection)	5.6kΩ
Input Impedance (Balanced Connection)	300Ω
System Delay	<3ms
Power requirements	PoE or 12V
Power adapter	AC110~240V 5Hz-60Hz, 12V DC / 2A output
Maximum Power Consumption	10W
Dimensions (Width x Depth x Height)	215 x 162 x 44mm
Shipping Weight	2kg

2.4 Mechanical Data

Space required:

1/2 U (W x D x H: 215 x 162 x 44mm).

At least 70mm should be reserved for the connections on the rear panel. Reserved depth depends on the wire used and the connection mode.

Ventilation:

The recommended high operating ambient temperature is 30°C / 86°F.

Make sure that there is no blockage of the venting holes on both sides of the unit. A gap of at least 5cm shall be reserved).

Electrical Property:

The unit can be powered by PoE (802.3af) or with a 12V power adapter.

Universal input power adapter: AC110~240V 5Hz-60Hz, 12V DC / 2A output.

Shipping Weight:

2 kg

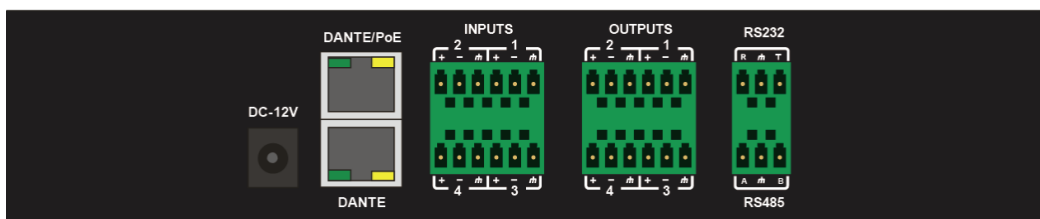
2.5 Front Panel



Power: LED power indicator.

Run: The operation status indicator of the device.

2.6 Rear Panel



Power Source:

Power connector: 12V DC / 2A

Dante/PoE

100 Base-T Ethernet connector, provide up to 8 (4x4) channel Dante network audio. Uses the UltimoX4 chip. This interface is also used for communication with PC software and any third-party external controller.

Dante

100 Base-T Ethernet connector, switched network interface (not for redundant Dante use)

RS485

Used for the serial communication port Tx = sending or data output or Rx = receiving or data input that connects to a third-party control device.

RS485 can be used for voice tracking control (or other output commands), or for bus input control. A central command can be used to conveniently integrate it into your software.

Port setting: 115200 baud (default), 8 data bits, 1 stop bit, no parity, no flow control.

RS232

Used for serial communication with external devices. Port Tx = sending data, and Rx = receiving data input from a third-party control device.

Port setting: 115200 baud (default), 8 data bits, 1 stop bit, no parity, no flow control.

3. Software

3.1 Software Installation

A Windows PC with a processor of 1 GHz or higher and:

Windows 7 or higher version.

1 GB free storage space.

1024 x 768 resolution.

24 bit or higher color.

2GB or higher memory.

Network (Ethernet) port.

1. Download software and install files.
2. Double click the downloaded file and install by following the instructions on the screen.

After the software is installed, read other parts of the help file or execute the software.

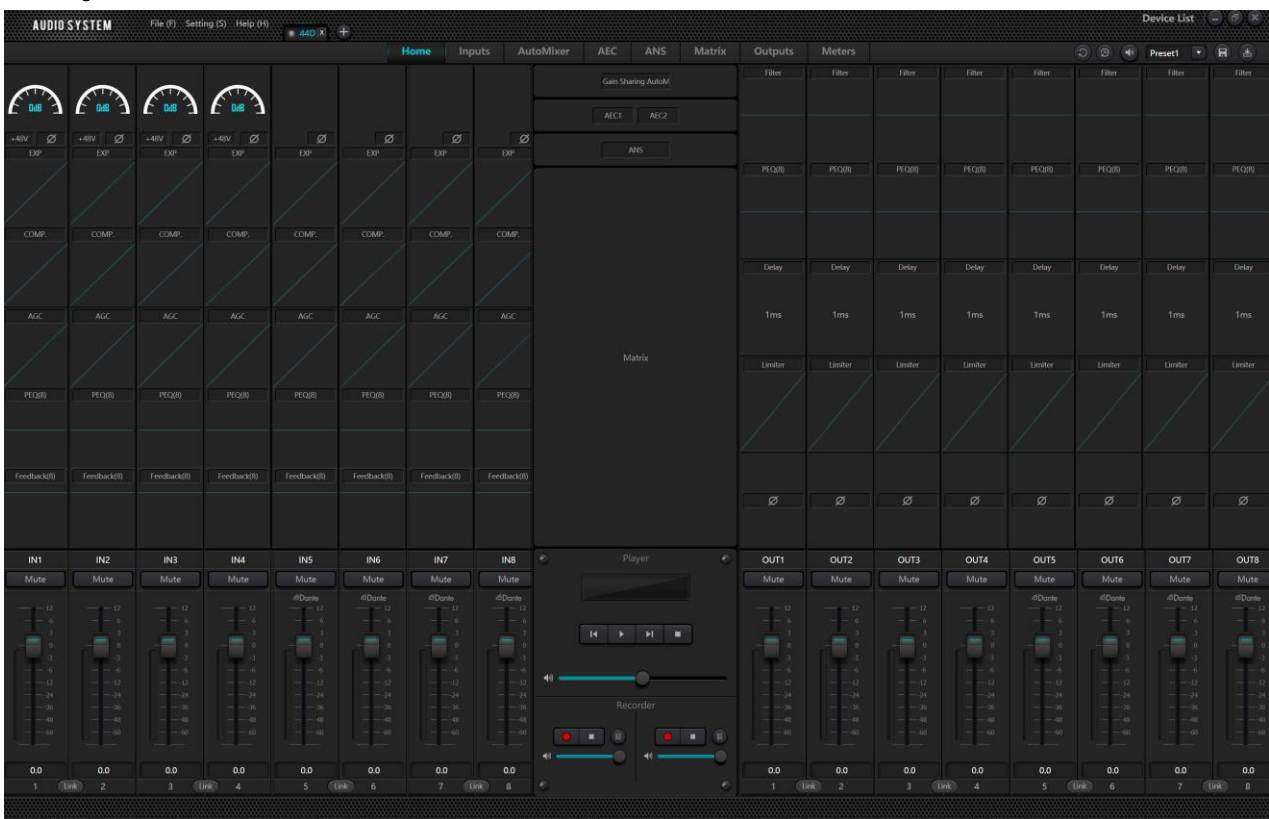
After the software is installed, use one of the following methods to enable the software:

1. Desktop icons:
2. Start menu:

When starting the software for the first time, it may take some time (1-15s) to start it. Please wait for a while.

3.2 Using the Software

After starting the software, the main menu is shown as below:



Click "Device List" in the top right corner of the main menu, to discover all processors in the network automatically.

Click "Connect" to match the device on the network with the unit in the open tab in the software. One processor supports simultaneous connection and control of up to four users.

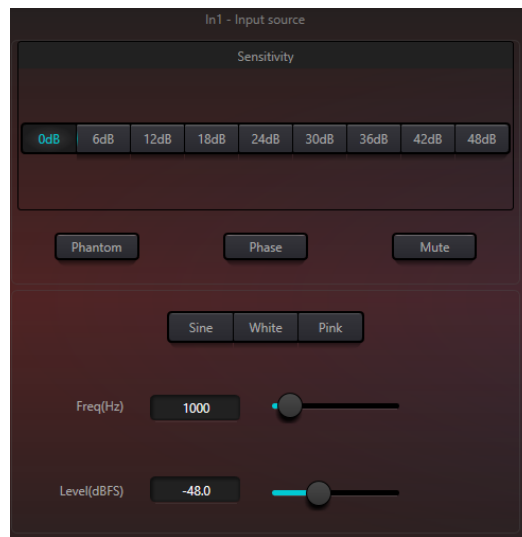
In the "Device List" menu there are also settings for assigning static IP-address.

3.3 Audio Parameters

There are two modes for parameter editing:

- Click the input or output channel modules and enter the parameter interface of the module.
- Right click the module and the configuration interface will pop out. The first mode is adopted for the following module parameters.

3.3.1 Input Source



Sensitivity: Input gain in nine steps (0/6/12/18/24/30/36/42/48dB).

Phantom Power: Provides +48V DC power for condenser microphones. Do not enable phantom power for a line input or when the power is not required, as this may damage the external device.

3.4.1 Device Setting

Device setting

Device name: DSP-0404-3a25

Device IP address: 169.254.1.218

Gateway: 169.254.10.1

Netmask: 255.255.0.0

Mac address: 02-00-00-3A-00-25

Default preset: Previous loaded preset

Center Control Response: ON

Real time saving: OFF

Enable model selection box: OFF

UDP control port: 50000

RS-232

Baudrate: 115200

Data Bit: 8

Stop Bit: 1

Parity Bit: None

RS-485

Baudrate: 115200

Data Bit: 8

Stop Bit: 1

Parity Bit: None

OK Cancel

Information like device name, network address and serial port baud rate can be set in the device settings. Maximum length of the device name is 16 characters.

Default preset: Two start-up preset modes are available for selection. Select any of the 16 presets as start-up preset. Alternatively, selecting previously loaded preset will take the last used preset for the next start-up. For the unit to retain the current parameters after reboot the "Real time save" function must be on.

3.4.2 Dante Setting

Use the Dante Controller software for routing and configuration of the Dante inputs and outputs.

The ADP-4I4O DSP can interface with other Dante devices operating at 48kHz sampling frequency. Click the crosspoint between transmitting and receiving device to establish a subscription of the audio stream on the network.

Please refer to the Audinate Dante Controller user guide for more information https://dev.audinate.com/GA/dante-controller/userguide/webhelp/content/front_page.htm