



PKN AUDIO



AoIP 02 IN

AoIP 02 OUT

User Manual

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1. Specifications

Parameter	Details
Connectors	AoIP 02 In: RJ45 + XLR Female AoIP 02 Out: RJ45 + XLR Male
Analog/Network Audio Channels	AoIP 02 In: 2 x Network In / 2 x Analog Out AoIP 02 Out: 2 x Network Out / 2 x Analog In
Max Signal Level (Balanced)	18dBu
Frequency Response	20Hz–20kHz, ±0.5dB
Dynamic Range	110dB @+18dBu, A-weighted
Signal-to-Noise Ratio	99dB @+4dBu
THD+N	0.005% @+4dBu, 1kHz
Sample Rate	48/96kHz
Bit Depth	16bit, 24bit, 32bit
Network Latency	1ms, 2ms, 5ms, 6ms
Network Protocol	AES67, ST2110, RAVENNA
DSP Functions	HPF, LPF, PEQ, Delay, Phase Inversion, FIR Filter, Compressor, Limiter, Expander, Noise Gate, Signal Generator, Feedback Suppression
Power Supply	Class 1 IEEE 802.3af PoE
Dimensions	155mm × 45mm × 25mm (+450mm with cables and connectors included)
Weight	0.25kg

2. Safety Warnings

To reduce the risk of electric shock or fire, DO NOT OPEN the device casing, or expose the device to rain or moisture!

The product must be kept away from heat sources, as the aluminium casing provides passive cooling to the internal CPU!

DO NOT OPEN THE DEVICE!

Please refer all servicing to qualified service personnel!

Servicing may be necessary if:

1. Foreign objects or liquid might have entered the device's casing.
2. The device has been exposed to rain.
3. The device does not appear to operate normally, or there is noticeable issues with its performance.
4. The device has been dropped, or the casing is damaged.

If you have any questions, please contact your PKN Audio dealer, or write us an e-mail:

info@pknaudio.com

3. Product Overview

The **AoIP 02 IN** and **OUT** devices aim to be a perfect solution, for all circumstances that could require Analog and Digital audio conversions, such as converting a mixer's stereo output to AES67 digital audio (with AoIP 02 IN), or connecting an active loudspeaker (or two) to a remotely managable, DSP enabled ecosystem, using a single ethernet cable (with AoIP 02 OUT).

Our **DSP Matrix Series** devices, including the **AoIP 02**, natively support **AES67**, **ST2110**, and **RAVENNA** protocols, and they are able to transmit lossless, ultra-low latency digital audio streams over a local area network (LAN) with Layer 3 capabilities, which can interconnect even with other mainstream AoIP devices (such as QSC, Dante, Dolby, etc.) as well.

All our DSP enabled devices are in the same ecosystem, and can be managed remotely from the **PKN Audio DSP Controller Software** where you can customize every DSP feature, along with analog/digital audio matrix routings.

You can download the latest software from [Our Website!](#)

4. Installation

The interface is automatically powered on via PoE (Power over Ethernet, 802.3af Class 1). Once the Ethernet connector's network port indicator lights up, the device will take ~20 seconds to boot, then it's operational.

Make sure that the computer, running the **PKN Audio DSP Controller** is on the same network, as the AoIP 02, and the correct network card is selected in the software (Menu → Set Network Card).

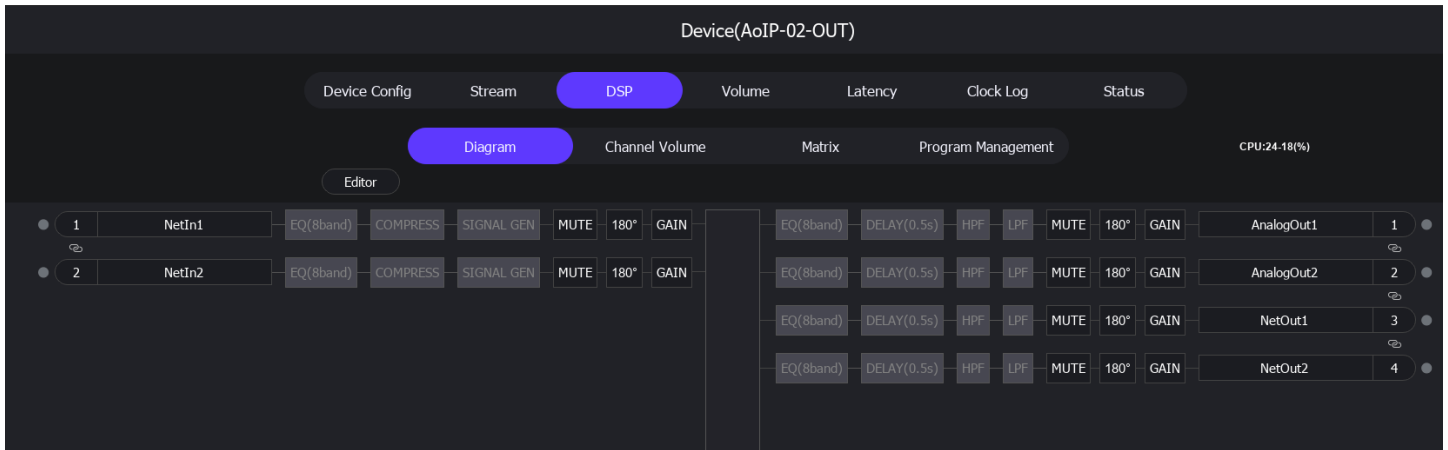
If the devices don't show up, please consult the **5. Troubleshooting** section.



Once the device is found you can set up its network channel routings, or configure it by double clicking it's name from any menu.

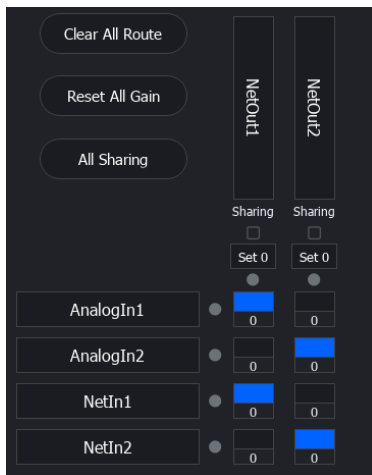
Both AoIP 02 IN and OUT devices have 2 digital in and 2 digital outputs.

Difference is that the **AoIP 02 IN** has balanced stereo **Analog XLR Inputs**, **AoIP 02 OUT** has balanced stereo **Analog XLR Outputs**.

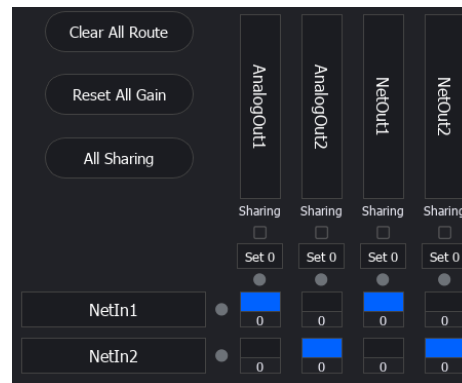


Each channel's DSP functions are modifiable, by clicking on the *Editor* button, and the routings can be set up in the *Matrix* tab. By default, the matrix is set up to route the inputs to their corresponding outputs, as the following:

AoIP 02 IN



AoIP 02 OUT



For further, more detailed informations about all features, please consult the [DSP Software Manual](#).

5. Troubleshooting

- *The device's LEDs are dark.*

-Make sure the ethernet cable is connected properly on both ends, and the Power over Ethernet is sufficient.

- *The software doesn't recognize the device, it doesn't show up in the GUI.*

-Check the Ethernet connector's LED status: GREEN means good communication, FLASHING ORANGE means the communication is abnormal, or there is no sufficient power through the PoE.

-If the status shows green, make sure that the computer's firewall or antivirus software is not blocking the software's network functions.

- *I can see the device in the software, but cannot control it properly.*

-Reboot (power cycle) the device.

-Check for static or dynamic (DHCP) IP settings.

-Make sure that the device's IP address and the computer's IP address are in the same subnet (e.g., if the device's IP is 192.168.10.123, the computer's IP should be 192.168.10.xxx), and ensure that no other devices on the network conflict with either the device's or computer's IP address.

- *There is no output.*

- Ensure the input signals are present on the software, they're not muted and the matrix connections are set up properly both in the software's main **Routing** and the Device's **DSP** → **Matrix** menus.