ionode4

Mission critical cloud–to–edge audio integration device

The ionode4 is an audio integration device built for all use cases where security, safety and reliability are essential. It provides 4 audio inputs, 4 audio outputs, 4 control outputs and 4 control inputs.

It is built on top of the nnounce™ secure & scalable audio platform. The nnounce™ platform is growing feature–wise and is evolving every day to counter new IT security threats.

The ionode4 can communicate over the network using all contemporary audio standards such as AES67, RTP or VoIP. It can add an extra encryption layer to prevent eavesdropping by malicious actors.

A secure–enclave element built in enables secure connectivity to all major industry cloud providers. The device can be used with Simpleway CX cloud out of box.

It has powerful built–in signal processing capabilities exceeding capabilities of dedicated signal processors. It is also equipped for neural network accelerator for audio applications.

key features

- Connect your audio infrastructure using **high performance** audio inputs and outputs

- **Integrate & control** using control inputs and outputs (dry contact)

- Wire two devices in parallel for **high availability**

- Process audio using powerful built–in **processing engine**

- Hardware **neural engine** for applications such as gunshot detection and speech–to–text

- Keep your audio streams private by adding **encryption** to industry standard audio protocols such as **AES67**

- Trust your audio devices following latest **IT and physical security** standards

- Securely **connect** your infrastructure to cloud systems such as **Simpleway CX** cloud
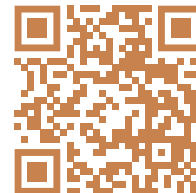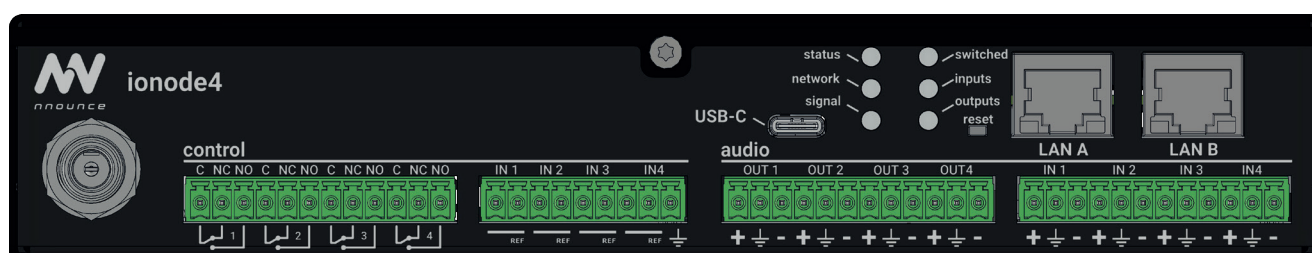
- Practical **compact size** 1U half–rack width

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Description	Secure audio integration device with built-in processing and I/O
Audio	AD Converter: 24 Bit @ 48 kHz 125 dB-A Dynamic Range - 0.00x % THD+N Max input level 18 dBU / 6.16 Vrms Crosstalk (1 kHz) - 60 dB Input impedance 20 kΩ balanced CMRR 60 dB DA Converter: 24 Bit @ 48 kHz 115 dB-A Dynamic Range - 0.00x % THD+N Max output level 7.6 Vrms 2.5 ms end-to-end latency AES67 network audio (with optional encryption)
Connectivity	4 x Balanced input channels 4 x Balanced output channels Audio input and Output connectors can be wired in redundant wiring with standby unit 4 x Supervised control inputs (0-12 V input tolerance, 12 Vref) 4 x Control outputs (Relay NC, NO, COM pins) 1 x USB-C 2 x LAN RJ45 1000 Mbs with PoE
DSP	Built-in web-based graphical DSP pipeline designer 60+ Component library Extended precision fixed point processing API library
User Interface	Front panel diagnostic LEDs Rear panel diagnostic LEDs Web-based interface Cloud-connected
Security	Secure boot Encrypted firmware Tamper sensing Secure enclave chip AES256-GCM encryption for AES67
Storage	Onboard microSD card slot
Environmental	Operating temperature range 32 °F - 122 °F (0 °C - +50 °C) Storage temperature range 14 °F to 140 °F (-10 °C - +60 °C)
Power	12 V DC secure jack IEEE 802.3af power over Ethernet (PoE)
Dimensions	210 mm (W) x 275 mm (D) x 40 mm (H) 1 510 g without mounting kit
Accessories	Mounting kit

REAR VIEW