



# 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 with +24V DC phantom power, 4 audio, 4 audio outputs, 4 control outputs and 4 control inputs.

It is built on top of the nnoince™ secure & scalable audio platform. The nnoince™ 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
- **+48V DC phantom power** per balanced input



nnoince™ by Simpleway

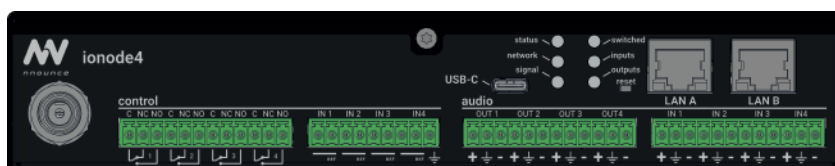
Simpleway Europe a.s., Na Okraji 335/42, 162 00 Prague, Czech Republic,  
Simpleway Inc., 1621 Central Avenue, 82001 Cheyenne, Wyoming, USA

✉ customer@nnoince.com 🌐 [www.nnoince.com](http://www.nnoince.com) 📺 [simplewayglobal/nnoince](https://simplewayglobal.com/nnoince)





<b>Order ID</b>	WA001	
<b>Description</b>	Secure audio integration device with built-in processing and I/O	
<b>Audio</b>	<p>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)                      Phantom power: 24V DC per input</p>	
<b>Connectivity</b>	<p>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</p>	
<b>DSP</b>	<p>Built-in web-based graphical DSP pipeline designer                      60+ Component library                      Extended precision fixed point processing                      API library</p>	
<b>User Interface</b>	Front panel diagnostic LEDs Rear panel diagnostic LEDs	Web-based interface Cloud-connected
<b>Security</b>	<p>Secure boot                      Encrypted firmware                      Tamper sensing                      Secure enclave chip                      AES256-GCM encryption for AES67</p>	
<b>Compatibility</b>	Q-SYS, Bosch PRAESENSA	
<b>Storage</b>	Onboard microSD card slot, included 64 GB card	
<b>Environmental</b>	<p>Operating temperature range 32 °F – 122 °F (0 °C – +50 °C)                      Storage temperature range 14 °F to 140 °F (–10 °C – +60 °C)</p>	
<b>Power</b>	<p>12 V DC secure jack                      IEEE 802.3af power over Ethernet (PoE) or +5 V DC</p>	
<b>Dimensions</b>	<p>210 mm (W) x 275 mm (D) x 40 mm (H)                      1 510 g without mounting kit</p>	
<b>Accessories</b>	Mounting kit	
<b>RAMS</b>	<p>MTBF &gt; 150 000 hours                      MTTR &lt; 4 hours</p>	



REAR VIEW



nnoince™ by Simpleway

Simpleway Europe a.s., Na Okraji 335/42, 162 00 Prague, Czech Republic,  
 Simpleway Inc., 1621 Central Avenue, 82001 Cheyenne, Wyoming, USA

✉ customer@nnoince.com 🌐 www.nnoince.com 📺 simplewayglobal/nnoince

