

DEALER INSTALLATION GUIDE

IP-AUD Series

Dante Audio Interfaces

Installation, wiring, Dante Controller setup, commissioning and troubleshooting for Netvio dealers and professional AV installers.

COVERS FIVE MODELS

IP-AUD-2CH-DNT-10 | IP-AUD-DNT-2CH-10 | IP-AUD-XLR-DNT-10 | IP-AUD-DNT-XLR-10 | IP-AUD-USBC-DNT-10

Dealer document | Rev 1.0 | September 2026

Contents & Quick Start

STEP	SECTION	WHAT YOU WILL DO
1	Before You Install	System requirements, switch compatibility, cabling and power
2	Understand the Range	Choose the correct transmitter, receiver or bidirectional interface
3	Install & Wire	Physical placement, analogue wiring and power
4	Configure Dante	Discovery, routing, sample rate and latency
5	Commission	Verify network, routing, levels and end-to-end audio
6	Troubleshoot	Fast fault isolation by symptom

Five-minute installation sequence

- Confirm the correct IP-AUD model and signal direction before wiring.
- Connect the Dante RJ45 port to a suitable Dante network. Use PoE where available, or the supported local power input for that model.
- Connect the local audio source or destination. For Phoenix models, confirm balanced/unbalanced wiring before applying audio.
- Open Dante Controller on a PC or Mac connected to the same network and confirm the adaptor is discovered.
- Create the required Dante subscriptions, then set local gain/sensitivity and verify clean audio at the destination.

Cable & Connections

Important Notice on Cable Installation and Performance

Published cable distances are provided as a guide and assume correctly installed, good-quality cabling. Actual transmission performance can be affected by cable construction and quality, termination, installation practices, patch panels, faceplates and environmental factors such as electromagnetic interference (EMI).

Category Cable

IP-AUD products are designed for use with unshielded twisted pair (UTP) Cat5e, Cat6 and Cat7 category cabling. Cat6 or above is recommended for new installations. Where shielded (STP) category cable is used, ensure that shielding and drain wires are correctly terminated and grounded throughout the installation.

RJ45 Termination

- Terminate RJ45 connections in accordance with TIA/EIA-568B.
- Use the same termination standard at both ends of the cable.
- Maintain the twist of each cable pair as close as practical to the point of termination.
- Do not confuse straight-through pin numbering with pair assignment: correct T568B pair placement must be maintained, including the green pair on pins 3 and 6.

- Poor termination, excessive untwisting or incorrectly paired conductors can significantly affect network performance.

Cable Installation Guidelines

- Avoid sharp bends, kinks and twisting. Maintain a minimum bend radius of approximately 25mm wherever possible.
- Do not stretch or excessively tension category cable during installation. Maximum pulling force should not exceed 11kgf.
- Dress and secure cable using moderate-to-low pressure so the cable jacket is not crushed or pinched.
- Do not splice, bridge or unnecessarily join category cable.
- Minimise unnecessary couplers, patch points and intermediate connections.

Electromagnetic Interference (EMI)

Keep category cabling at least 300mm away from potential EMI sources where practical, including mains electrical cabling, transformers, motors and lighting equipment. Where category and electrical cables must cross, crossing at approximately 90 degrees can help minimise interference.

Testing & Certification

All installed category cabling should be tested before system commissioning. A simple continuity or wire-map test confirms basic connectivity but does not certify cable performance. For permanent installations, Netvio recommends using an appropriate cable certification tester to verify that the installed link meets the required category performance.

Local Regulations

Always install cabling in accordance with applicable local electrical, building and fire regulations, including requirements governing cable type, fire rating, containment and installation location.

Safety Information

Service & Repair

Do not attempt to open, dismantle or remove the product casing. Doing so may expose internal components and could result in electric shock, equipment damage or personal injury.

There are no user-serviceable parts inside. Service or repair should only be carried out by suitably qualified personnel. For service or repair assistance, contact Netvio Ltd or an authorised Netvio reseller and follow the approved service procedure.

Unauthorised modification or repair, or the use of non-approved replacement components, may invalidate the product warranty.

Warranty

5-Year Product Warranty

Netvio IP-AUD Series hardware is covered by a 5-year product warranty, subject to Netvio's published Warranty Policy and the applicable terms, conditions, eligibility requirements and exclusions.

For the current published warranty policy, visit: **www.netvio.io**

Support & Compliance

For technical assistance, firmware information and product support, contact Netvio technical support at support@netvio.co.uk.

Dante is a registered trademark of Audinate Pty Ltd. All other product names and trademarks are the property of their respective owners.

IMPORTANT SWITCH COMPATIBILITY

IP-AUD products must not be connected to Netvio IP-SW-24P-10 or IP-SW-48P-10 pre-configured AVoIP switches. They are compatible with Netvio IP-SW-N Series switches and appropriately configured Dante-capable network infrastructure.

PLAN FIRST

1. Choose the Correct Interface

Every IP-AUD product carries two channels. The key installation decision is the direction of audio at the local connection.

MODEL	SIGNAL DIRECTION	DANTE ROLE	LOCAL CONNECTION	POWER
IP-AUD-2CH-DNT-10	2CH -> Dante	TX	Phoenix analogue input	PoE / 12V DC
IP-AUD-DNT-2CH-10	Dante -> 2CH	RX	Phoenix analogue output	PoE / 12V DC
IP-AUD-XLR-DNT-10	XLR -> Dante	TX	2 x XLR input	PoE / USB-C
IP-AUD-DNT-XLR-10	Dante -> XLR	RX	2 x XLR output	PoE / USB-C
IP-AUD-USBC-DNT-10	USB-C <-> Dante	TX + RX	USB-C audio I/O	PoE / USB-C

Signal-direction rule

SOURCE INTO DANTE

Use a transmitter: IP-AUD-2CH-DNT-10 or IP-AUD-XLR-DNT-10. These place local analogue audio onto the network.

DANTE TO LOCAL EQUIPMENT

Use a receiver: IP-AUD-DNT-2CH-10 or IP-AUD-DNT-XLR-10. These extract network audio for a local analogue destination.

COMPUTER / USB AUDIO

Use IP-AUD-USBC-DNT-10 for bidirectional USB audio. It can send USB audio to Dante and receive Dante audio back over USB.

2. Network, Cabling & Power

System requirements

- Dante-compatible Ethernet network and a network switch suitable for Dante audio transport.
- PC or Mac running Audinate Dante Controller.
- Cat5e or better network cabling; Cat6 or above is recommended.
- A suitable local audio source or destination device.
- PoE or the correct local power source for the selected model.

Network connection

All models use a 100M RJ45 Dante network port. A valid connection is indicated by the LINK LED; the DATA LED flashes with network activity. Maximum specified network cable distance is up to 100m using the recommended cable category for the model.

Power by model

PRODUCT TYPE	POWER OPTIONS	INSTALLER NOTE
Phoenix TX / RX	PoE (IEEE 802.3af Class 0) or 12V DC	Use PoE where practical; otherwise use the supported 12V DC input.
XLR TX / RX	PoE (IEEE 802.3af Class 0) or USB-C 5V/500mA	USB-C is also used for firmware on the XLR input model; secure local power leads.
USB-C I/O	PoE (IEEE 802.3af Class 0) or USB-C 5V/500mA	Use the correct USB-C port: audio I/O and power/firmware functions are distinct.

INSTALLATION PRACTICE

Install in a dry, ventilated location. Avoid moisture, excessive heat and vibration. Provide strain relief behind furniture, under tables and inside lecterns. Use correctly terminated network cables and surge protection where appropriate.

3. Audio Wiring & Level Planning

Balanced vs unbalanced analogue audio

Balanced audio is recommended wherever possible, particularly for longer analogue cable runs or electrically noisy environments. The XLR products support balanced/unbalanced analogue audio. The Phoenix products also support balanced/unbalanced operation; for an unbalanced Phoenix connection use the signal + and GND terminals as indicated by the product labelling.

DO NOT GUESS TERMINATIONS

Follow the connector labelling on the product for channel and polarity. Confirm wiring before connecting amplifiers or other downstream equipment.

Gain and sensitivity starting points

MODEL	CONTROL	AVAILABLE SETTINGS
IP-AUD-XLR-DNT-10	Input sensitivity	+24dBu / +4dBu / 0dBu / 0dBV / -10dBV
IP-AUD-DNT-XLR-10	Output gain	+18dBu / +4dBu / 0dBu / 0dBV / -10dBV
Phoenix TX / RX	Input/output gain	+18dBu / 0dBu (default) / -10dBV
IP-AUD-USBC-DNT-10	Local gain	None

- For professional line-level equipment, +4dBu or higher settings are typical starting points where appropriate.
- Use -10dBV for consumer-level sources or destinations where required.
- If audio clips or distorts, reduce the input sensitivity/output gain or reduce the source level.
- If level is too low, increase the setting where appropriate while maintaining headroom.

4. Discovery, Routing & Configuration

All IP-AUD routing and Dante configuration is performed using Dante Controller.

Step 1 - Connect

- Connect the adaptor to the Dante network using the RJ45 Dante port.
- Apply PoE or the supported local power connection.
- Connect the local source or destination audio equipment.
- Connect the Dante Controller computer to the same network.

Step 2 - Discover

Open Dante Controller and confirm that the adaptor appears in the device list. If it does not, verify power, network link, computer network connection, and switch/VLAN configuration.

Step 3 - Route

Create Dante subscriptions from the required transmitter channels to receiver channels. Example: route IP-AUD-XLR-DNT-10 CH1/CH2 to IP-AUD-DNT-XLR-10 CH1/CH2, or route a Dante source to IP-AUD-USBC-DNT-10 when a computer needs to receive network audio over USB.

Sample rates and latency

MODEL GROUP	DANTE SAMPLE RATES	BIT DEPTH	DANTE LATENCY
XLR input / output	44.1 / 48 / 88.2 / 96kHz	24-bit	1 / 2 / 5ms
Phoenix input / output	44.1 / 48 / 96kHz	Up to 24-bit	Use Dante Controller / supported configuration
USB-C Dante side	44.1 / 48 / 88.2 / 96kHz	24-bit	1 / 2 / 5ms

RESET BUTTON

On the XLR and USB-C products, RESET reboots the unit; it is not a full factory-reset control. Device reset settings are handled through Dante Controller/software as supported by the model.

XLR Audio -> Dante

IP-AUD-XLR-DNT-10



Connections & Controls

CONNECTION / CONTROL	TYPE	FUNCTION
DANTE (PoE)	RJ45	Dante audio output and network connection. Supports PoE power.
CH1 SENS.	5-position control	Sets Channel 1 input sensitivity: +24dBu / +4dBu / 0dBu / 0dBV / -10dBV.
CH2 SENS.	5-position control	Sets Channel 2 input sensitivity: +24dBu / +4dBu / 0dBu / 0dBV / -10dBV.
CH1 XLR IN	XLR input	Channel 1 balanced or unbalanced analogue audio input.
CH2 XLR IN	XLR input	Channel 2 balanced or unbalanced analogue audio input.
RESET	Push button	Reboots the unit. Device settings are managed through Dante Controller.
POWER	USB-C	5V / 500mA local power input and firmware update connection.

2-channel Dante transmitter with two balanced/unbalanced XLR analogue inputs.

Typical applications

Mixing console outputs; presentation sources; local room audio into a remote DSP or Dante amplifier.

Key installation data

ITEM	DETAIL
Local audio	2 x XLR analogue input
Network	100M Dante RJ45 with PoE
Power	PoE or USB-C 5V/500mA
Sensitivity	+24dBu / +4dBu / 0dBu / 0dBV / -10dBV
Dante audio	44.1 / 48 / 88.2 / 96kHz, 24-bit
Latency	1 / 2 / 5ms

Dealer setup sequence

01 Connect source to CH1 and/or CH2.
02 Set each channel sensitivity to suit the source level.
03 Confirm the unit appears in Dante Controller.
04 Route CH1/CH2 transmit channels to the required Dante receivers.
05 Verify level and check for clipping at the receiving device.

MODEL INSTALLATION

Dante -> XLR Audio

IP-AUD-DNT-XLR-10



Connections & Controls

CONNECTION / CONTROL	TYPE	FUNCTION
DANTE (PoE)	RJ45	Dante audio input and network connection. Supports PoE power.
CH1 GAIN	5-position control	Sets Channel 1 output gain: +18dBu / +4dBu / 0dBu / 0dBV / -10dBV.
CH2 GAIN	5-position control	Sets Channel 2 output gain: +18dBu / +4dBu / 0dBu / 0dBV / -10dBV.
CH1 XLR OUT	XLR output	Channel 1 balanced or unbalanced analogue audio output.
CH2 XLR OUT	XLR output	Channel 2 balanced or unbalanced analogue audio output.
RESET	Push button	Reboots the unit. Device settings are managed through Dante Controller.
POWER	USB-C	5V / 500mA local power input.

2-channel Dante receiver with two balanced/unbalanced XLR analogue outputs.

Typical applications

Local amplifier feeds; DSP analogue inputs; powered speakers; recording devices.

Key installation data

ITEM	DETAIL
Local audio	2 x XLR analogue output
Network	100M Dante RJ45 with PoE
Power	PoE or USB-C 5V/500mA
Output gain	+18dBu / +4dBu / 0dBu / 0dBV / -10dBV
Dante audio	44.1 / 48 / 88.2 / 96kHz, 24-bit
Latency	1 / 2 / 5ms

Dealer setup sequence

01 Connect the XLR outputs to the destination equipment.
02 Power and discover the unit in Dante Controller.
03 Route the required Dante source channels to CH1/CH2.
04 Adjust each output gain to suit the connected input stage.
05 Verify clean audio and correct channel assignment.

MODEL INSTALLATION

Analogue Audio -> Dante

IP-AUD-2CH-DNT-10



Connections & Controls

CONNECTION / CONTROL	TYPE	FUNCTION
AUDIO INPUT (CH1/CH2)	6-pin Phoenix	Two-channel analogue audio input supporting balanced or unbalanced signals.
DC IN	2-pin Phoenix	12V DC local power input when PoE is not used.
DANTE (PoE)	RJ45	Dante audio output and network connection. Supports PoE power; LINK and DATA LEDs indicate network status/activity.
GAIN	3-position switch	Sets input gain to +18dBu / 0dBu (default) / -10dBV.

2-channel analogue encoder with Phoenix line-level input for fixed installations.

Typical applications

Rack/cabinet sources; fixed media players; DSP outputs; programme audio into Dante.

Key installation data

ITEM	DETAIL
Local audio	2CH balanced/unbalanced Phoenix input
Network	100M Dante RJ45 with PoE
Power	PoE or 12V DC
Input gain	+18dBu / 0dBu default / -10dBV
Dante audio	44.1 / 48 / 96kHz, up to 24-bit
Transport	Up to 100m CAT6/6A

Dealer setup sequence

01 Wire the source to the Phoenix input, following product polarity labels.
02 For unbalanced audio use signal + and GND.
03 Set the 3-position input gain to suit the source.
04 Discover the transmitter and route its Dante channels to the required receiver.
05 Verify both channels and confirm there is no clipping.

MODEL INSTALLATION

Dante -> Analogue Audio

IP-AUD-DNT-2CH-10



Connections & Controls

CONNECTION / CONTROL	TYPE	FUNCTION
AUDIO OUTPUT (CH1/CH2)	6-pin Phoenix	Two-channel analogue audio output supporting balanced or unbalanced signals.
DC IN	2-pin Phoenix	12V DC local power input when PoE is not used.
DANTE (PoE)	RJ45	Dante audio input and network connection. Supports PoE power; LINK and DATA LEDs indicate network status/activity.
GAIN	3-position switch	Sets output gain to +18dBu / 0dBu (default) / -10dBV.

2-channel analogue decoder with Phoenix line-level output for fixed installations.

Typical applications

Amplifier/DSP feeds; rack/cabinet analogue outputs; fixed local audio destinations.

Key installation data

ITEM	DETAIL
Local audio	2CH balanced/unbalanced Phoenix output
Network	100M Dante RJ45 with PoE
Power	PoE or 12V DC
Output gain	+18dBu / 0dBu default / -10dBV
Dante audio	44.1 / 48 / 96kHz, up to 24-bit
Transport	Up to 100m CAT6/6A

Dealer setup sequence

01 Wire the Phoenix output to the destination input.
02 For unbalanced audio use signal + and GND as indicated by product labelling.
03 Discover the receiver and subscribe the required Dante channels.
04 Set the 3-position output gain to suit the connected equipment.
05 Verify both channels at the destination.

USB-C <-> Dante

IP-AUD-USBC-DNT-10



Connections & Controls

CONNECTION / CONTROL	TYPE	FUNCTION
DANTE (PoE)	RJ45	Bidirectional Dante audio network connection and PoE power input.
USB-C LED	Status indicator	Indicates USB-C power status.
USB-C AUDIO	USB-C	USB audio input/output. Also accepts 5V / 500mA power.
RESET	Push button	Reboots the unit. Device settings are managed through Dante Controller.
POWER	USB-C	5V / 500mA local power input and firmware update connection.

Bidirectional 2-channel USB-C audio interface for Dante networks.

Typical applications

Laptop playback; recording; conferencing; USB audio bridge between computer and Dante.

Key installation data

ITEM	DETAIL
Local audio	USB-C audio I/O, UAC 1.0 / 2.0
Network	100M Dante RJ45 with PoE
Power	PoE or USB-C 5V/500mA
USB -> Dante	Up to 96kHz / 24-bit
Dante -> USB	Up to 192kHz / 24-bit
Dante latency	1 / 2 / 5ms

Dealer setup sequence

01 Connect the Dante RJ45 port and apply PoE or supported USB-C power.
02 Connect the USB-C AUDIO port to the computer/smart device - do not confuse it with the power/firmware port.
03 Confirm the host recognises the adaptor as a USB audio device.
04 Create Dante subscriptions in the required direction(s).
05 For bidirectional applications, verify both USB-to-Dante and Dante-to-USB paths independently.

10. Dealer Commissioning Checklist

Complete this sequence before handing the system over. It is designed to catch the most common installation faults before they become support calls.

AREA	CHECK	PASS
Physical	Correct model and signal direction installed	[ ]
Physical	Unit secure, ventilated and cables strain-relieved	[ ]
Power	Correct PoE/local power method used	[ ]
Network	LINK LED active and DATA activity present	[ ]
Network	Device discovered in Dante Controller	[ ]
Routing	Correct TX-to-RX subscriptions created	[ ]
Format	Sample rate/latency appropriate for the system	[ ]
Audio	CH1 and CH2 verified end-to-end	[ ]
Level	Gain/sensitivity set without clipping or excessive noise	[ ]
USB-C	Host sees USB audio device and correct USB-C port is used	[ ]
Documentation	Final routing/device names recorded for service	[ ]

Recommended handover record

- Record the installed model and physical location.
- Record the Dante device name and connected switch port.
- Record source/destination channel assignments.
- Record local gain/sensitivity settings.
- Retain a Dante Controller screenshot or routing record for future service.

11. Troubleshooting by Symptom

SYMPTOM	LIKELY CHECKS	ACTION
Not visible in Dante Controller	No power; no network link; PC not on same network; switch/VLAN issue	Confirm power -> LINK LED -> PC network -> switch/VLAN configuration.
Visible, but no audio	Missing subscription; source not sending; wiring issue; destination configuration	Check Dante subscription, source meter/activity, local wiring and destination input.
Audio distorted	Input sensitivity/output gain too high; source/destination overdriven	Reduce local gain/sensitivity or source level and re-test.
Audio level too low	Gain/sensitivity too low; source level low	Increase setting where appropriate and verify source output.
USB-C no audio	Wrong USB-C port; host not recognising device; one direction not routed	Use USB-C AUDIO port, verify host audio device, then verify Dante routing in each required direction.
Reset did not restore defaults	RESET is reboot-only on XLR/USB-C models	Use Dante Controller/software reset method supported by the device.

Fast isolation method

- Start at the network: power, LINK, discovery.
- Then verify Dante routing: correct transmitter channel subscribed to correct receiver channel.
- Then verify the local side: source signal, wiring, USB device selection or destination input.
- Finally adjust level controls. Do not use gain changes to compensate for an incorrect route or wiring fault.

SUPPORT ESCALATION

Before contacting Netvio support, record the model, device name, switch/network details, Dante Controller routing, sample rate, power method and a clear description of the fault. Technical support: support@netvio.co.uk

12. Technical Reference

MODEL	ROLE	LOCAL I/O	DANTE AUDIO	POWER	CASE	DIMENSIONS
IP-AUD-2CH-DNT-10	TX	Phoenix in	44.1/48/96kHz; up to 24-bit	PoE / 12V DC	Metal	120 x 47 x 26mm
IP-AUD-DNT-2CH-10	RX	Phoenix out	44.1/48/96kHz; up to 24-bit	PoE / 12V DC	Metal	120 x 47 x 26mm
IP-AUD-XLR-DNT-10	TX	2 x XLR in	44.1/48/88.2/96kHz; 24-bit	PoE / USB-C	Plastic	115 x 40 x 28mm
IP-AUD-DNT-XLR-10	RX	2 x XLR out	44.1/48/88.2/96kHz; 24-bit	PoE / USB-C	Plastic	115 x 40 x 28mm
IP-AUD-USBC-DNT-10	TX/RX	USB-C I/O	Dante 44.1/48/88.2/96kHz; 24-bit	PoE / USB-C	Plastic	115 x 40 x 28mm

Environmental / physical notes

- Phoenix models: operating temperature 0-40°C; storage -20-60°C; humidity 20-90% non-condensing; weight 186g.
- XLR models: operating 0-40°C; storage -20-60°C; operating humidity 20-80%; storage humidity 10-90% non-condensing; weight 173g.
- USB-C model: same operating/storage temperature and humidity range as XLR models; weight 94g.
- XLR and USB-C models specify IEC 61000-4-2 ESD performance of +/-8kV air and +/-4kV contact.

Analogue performance - XLR models

PRODUCT	PARAMETER	SPECIFICATION
XLR input	Max level	+24dBu balanced / +18dBu unbalanced
XLR input	Input impedance	20kΩ balanced / 10kΩ unbalanced
XLR output	Max level	+18dBu balanced / +12dBu unbalanced
XLR output	Output impedance	600Ω balanced / 300Ω unbalanced
XLR input/output	Frequency response	20Hz-20kHz +/-0.5dB
XLR input/output	S/N / dynamic range	>100dB
XLR input/output	THD+N	<0.01% @ 1kHz (specified test level varies by model)

AES67 NOTE

The Phoenix encoder and decoder OEM manuals explicitly specify AES67 RTP audio transmission. The source manuals reviewed for the XLR and USB-C models do not explicitly state AES67 support, so this guide does not make a family-wide AES67 claim.

13. Final Notes & Support

The IP-AUD range is designed to make small-format Dante audio integration straightforward: connect the correct local interface, provide network/power, discover the device, route audio and commission the local level.

THREE THINGS TO REMEMBER

1. Confirm signal direction before installation. 2. Use the correct power and network infrastructure. 3. Perform routing and device configuration in Dante Controller.

Support

For technical assistance, firmware information and product support, contact Netvio technical support at support@netvio.co.uk.

Document basis

This guide provides installation, connection, configuration and commissioning information for the Netvio IP-AUD Series of Dante audio interfaces. It is intended for professional AV dealers, integrators and installers.

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