



# AC-DANTE-E

## USER MANUAL

2-CHANNEL ANALOG AUDIO INPUT DANTE™ ENCODER

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# IMPORTANT SAFETY INSTRUCTIONS



Before installing, configuring, and operating the devices and other vendor equipment, AVPro Edge strongly recommends that each dealer, integrator, installer, and all other necessary personnel access and read all the required technical documentation, which can be located by visiting [AVProEdge.com](http://AVProEdge.com).

**Read and understand all safety instructions, cautions, and warnings in this document and the labels on the equipment.**


## SAFETY CLASSIFICATIONS IN THIS DOCUMENT

 <b>NOTE:</b>	Provides special information for installing, configuring, and operating the devices and equipment.
 <b>TIP:</b>	Provides suggestions and considerations for installing, configuring, and operating the devices and equipment.
 <b>IMPORTANT:</b>	Provides special information that is critical for installing, configuring, and operating the devices and equipment.
 <b>CAUTION:</b>	Provides special information for avoiding situations that may cause damage to the devices and equipment.
 <b>WARNING:</b>	Provides special information for avoiding situations that may cause physical danger to the installer, end user, etc.

## ELECTRICAL SHOCK PREVENTION

 <b>ELECTRIC SHOCK:</b>	Provides special information that is critical for installing, configuring, and operating the devices and equipment.
 <b>ELECTRICAL DISCONNECT:</b>	Provides special information for avoiding situations that may cause damage to the devices and equipment.

## WEIGHT INJURY PREVENTION

 <b>WEIGHT INJURY:</b>	Installing some of the devices and equipment requires two installers to ensure safe handling during installation. Failure to use two installers may result in injury.
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## SAFETY STATEMENTS

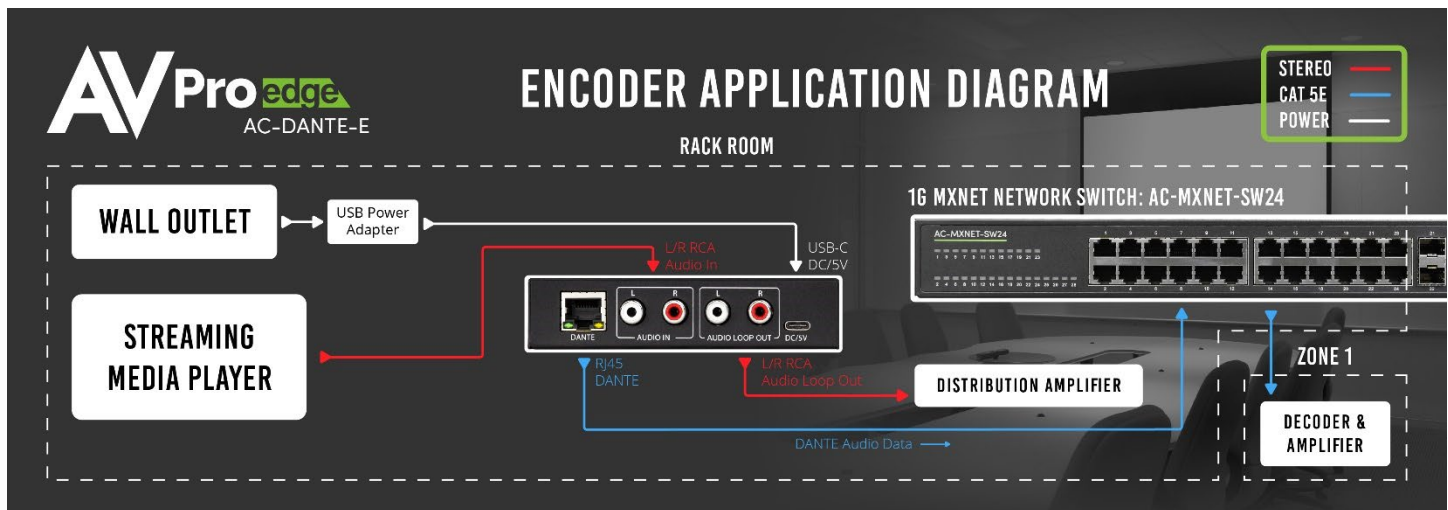
Follow all of the safety instructions listed below and apply them accordingly. Additional safety information will be included where applicable.

- 1 Read and keep these instructions.
- 2 Heed and follow all warnings.
- 3 Clean devices and equipment only with a dry cloth.
- 4 Do not use the devices near water or expose them to rain and moisture.
- 5 Do not block any ventilation openings.
- 6 The devices and their accessories should never be exposed to open flames or excessive heat.
- 7 Only use attachments and accessories specified by the manufacturer.
- 8 Install in accordance with the manufacturer's instructions.
- 9 Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 10 Do not defeat the safety purpose of the polarized / grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or third prong, are provided for your safety.
- 11 Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the devices.
- 12 Unplug the devices during lightning storms or when unused for long periods of time.
- 13 To reduce the risk of electrical shock or damage to the devices and their operators, never handle or touch the devices and power cord with damp or wet hands.
- 14 To reduce the risk of injury, some of the devices and equipment may require two installers to ensure safe handling during installation. Failure to use two installers may result in injury.
- 15 Refer all servicing to qualified service personnel. Servicing is required when the devices have been damaged in any way, such as the power cord or plug is damaged, liquid has been spilled, objects have fallen into the devices, the devices have been exposed to rain or moisture, do not operate normally, or have been dropped.

# INTRODUCTION

The AVPro Edge AC-DANTE-E is a compact, 2-channel, analog stereo-to-Dante™ platform encoder. Analog audio signals from sources with RCA-type stereo output connectors are digitally encoded by the AC-DANTE-E for distribution to other devices on a Dante™ network. Installation applications for house-of-worship, education, hotel/conference, and restaurant/retail with support equipment such as mixers, SD/USB recorders, and computer-related audio may use Dante™ devices for high quality, near-zero latency distribution of voice and music signaling.

The diagram below shows the basic application of the AC-DANTE-E encoder and the AC-MXNET-SW24 managed network switch.



## FEATURES

- Complete Dante™ system compatibility
- Audio Loop-out provides analog signal pass-through
- Plug and play support
- Sample rates up to 96kHz
- 16-, 24-, and 32-bit audio support
- Dante™ port LEDs indicate link status and activity
- Unit ships with power supply and USB Type A to Type C cable

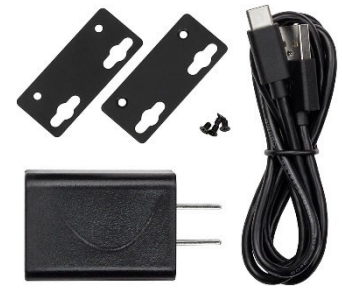
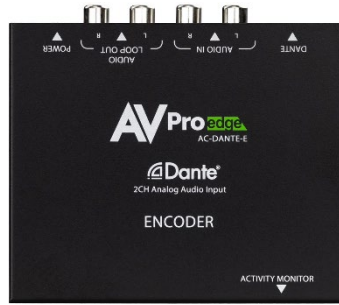
## KEY BENEFITS

- Easily interface analog audio sources with a Dante™ system
- Audio Loop-out for signal system continuity
- Low profile, compact design for placement options
- Auto device-discovery on a Dante™ network
- Activity LEDs provide power and Dante™ mute status

# PRODUCT OVERVIEW

## BOX CONTENTS

- (1x) AC-DANTE-E (Unit)
- (1x) 5V 1A USB Power Adapter
- (1x) USB-A to USB-C Cable
- (2x) Mounting Brackets
- (4x) Mounting Screws

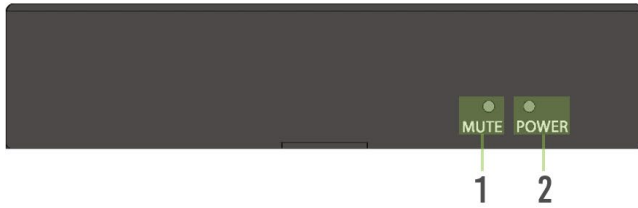


## TECHNICAL SPECIFICATIONS

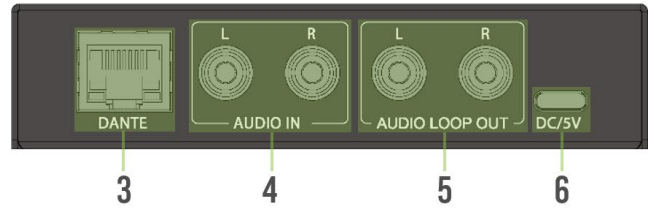
AUDIO	
Frequency Response	20-20kHz
Analog Input Voltage	Unbalanced 1VRMS (2.828VP-P)
Loopback Output Voltage	Unbalanced 1VRMS (2.828VP-P)
Format	LPCM
Supported Sample Rates	44.1kHz, 48kHz, 88.2kHz, 96kHz
Supported Bit Depths	16, 24, 32
Latency	Configurable 1, 2, 5ms
AUDIO CONNECTIONS	
Analog Input	1x Stereo RCA
Analog Output	1x Stereo RCA
Dante Network Audio	1x RJ-45
POWER	
USB Type-C Power Adapter	Input: 100-240VAC, 50/60Hz, 0.5A Output: 5VDC, 1A
ENVIRONMENTAL	
Operating Temperature	23°F (-5°C) to 125°F (51°C)
Storage Temperature	-4°F (-20°C) to 140°F (60°C)
Humidity Range	5% to 90% RH (no condensation)
DIMENSIONS	
Mounting	Furniture Mount Support
Height x Width x Depth (Single Unit)	Millimeters: 110 x 96 x 25 Inches: 4.33 x 3.78 x 1
Height x Width x Depth (Packaged Unit)	Millimeters: 193 x 136 x 41 Inches: 7.6 x 5.35 x 1.62
Weight (Single Unit)	0.5 lbs (0.23 kg)
Weight (Packaged Unit)	0.85 lbs (0.38 kg)
Product Warranty	10 Years
*Specifications are subject to change without notice. Mass and dimensions are approximate.	

# FRONT AND REAR PANELS

Front Panel



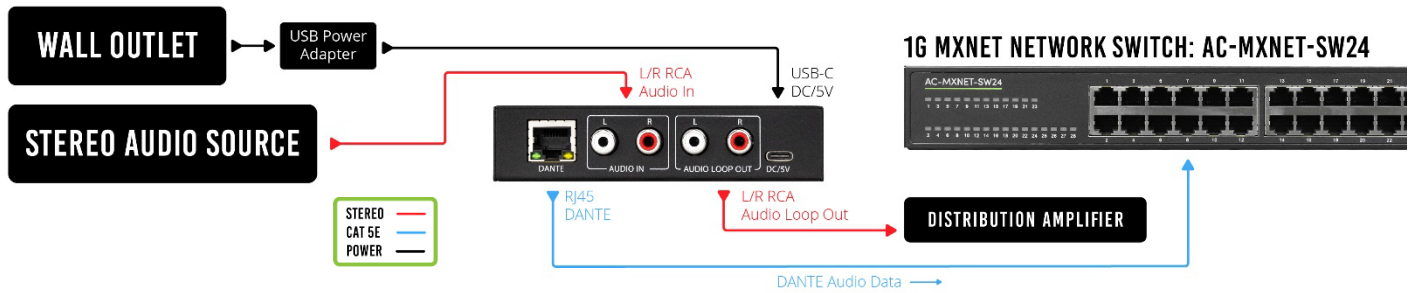
Rear Panel



<b>1</b>	<b>MUTE</b>	<ul style="list-style-type: none"><li>• Red LED status indicator light</li><li>• Illuminates solid red when Dante™ audio stream is muted</li></ul>
<b>2</b>	<b>POWER</b>	<ul style="list-style-type: none"><li>• Green LED status indicator light</li><li>• Illuminates solid green when power is present on the AC-DANTE-E</li></ul>
<b>3</b>	<b>DANTE</b>	<ul style="list-style-type: none"><li>• 8-pin RJ-45 female connector port</li><li>• Encoded Dante™ digital audio output port</li><li>• Connects to the network switch with CAT5e (or better) cable</li></ul>
<b>4</b>	<b>AUDIO IN</b>	<ul style="list-style-type: none"><li>• Stereo RCA analog audio input</li><li>• Connects to the audio source device</li></ul>
<b>5</b>	<b>AUDIO LOOP OUT</b>	<ul style="list-style-type: none"><li>• Stereo RCA analog audio outputs</li><li>• Audio Loop-out connection for distributing audio signal</li></ul>
<b>6</b>	<b>DC/5V</b>	<ul style="list-style-type: none"><li>• USB Type C female connector port</li><li>• Connects to DC 5V 1A power supply with USB-A to USB-C cable</li></ul>

# INSTALLATION

Once the AC-DANTE-E is powered on and connected to the network switch, it will automatically be discovered on the network using the Dante™ Controller software.



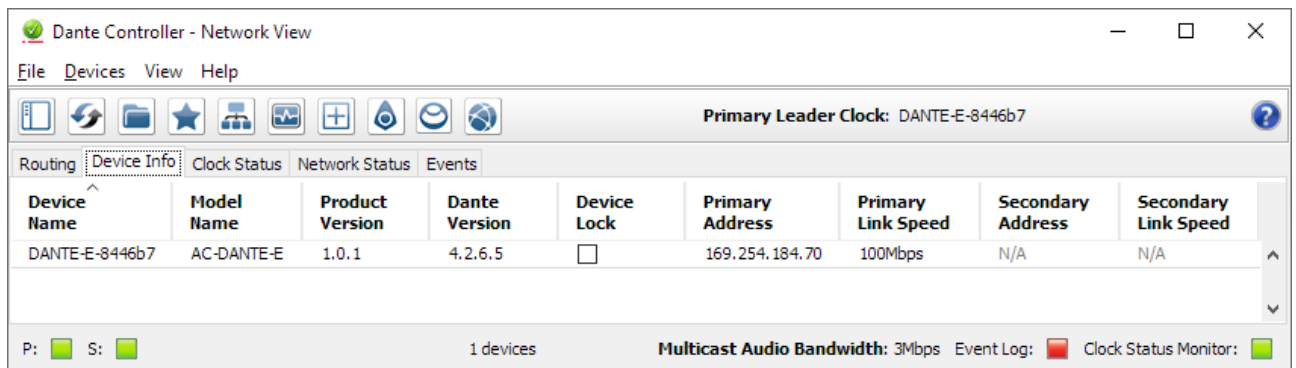
## CONNECTING THE DEVICES

- 1 Connect the provided USB-A to USB-C cable between the 5V 1A power supply and the AC-DANTE-E encoder's DC/5V port. Then plug the power supply into a suitable power outlet.

Both the POWER and MUTE LEDs on the front panel will illuminate solid for 6 seconds, after which the MUTE LED will shut off and the POWER LED will stay on, indicating the AC-DANTE-E is powered on.

**NOTE:** The AC-DANTE-E does not support PoE and must be powered locally using the provided 5V 1A power supply and USB-A to USB-C cable.

- 2 Connect the audio source device to the AUDIO IN port with a stereo RCA cable. Ensure the audio source device is powered on.
- 3 Connect a CAT5e (or better) cable between a computer running the Dante™ Controller software and the network switch.
- 4 Connect a CAT5e (or better) cable between the DANTE port on the AC-DANTE-E and the network switch. The AC-DANTE-E will be automatically discovered and routed using the Dante™ Controller software.

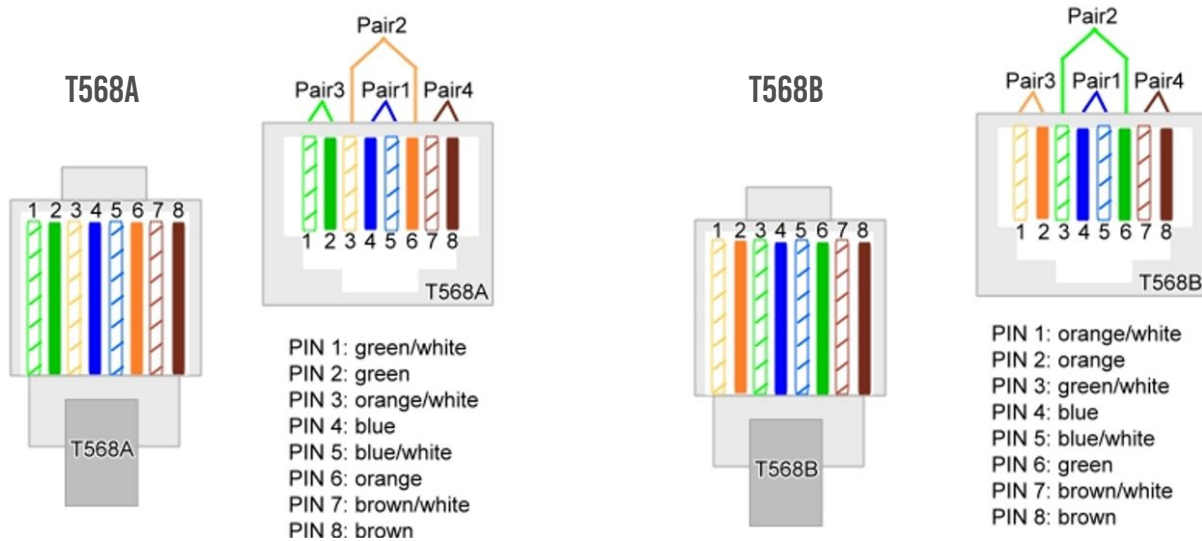


**NOTE:** The computer running Dante™ Controller and the AC-DANTE-E must both have a physical connection to the Dante™ network in order for the AC-DANTE-E to be discovered by Dante™ Controller.

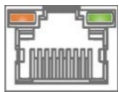


## DANTE PORT WIRING

The DANTE audio output port on the encoder utilizes the standard RJ-45 connection. For maximum performance, the recommended cabling is CAT5e (or better) based on TIA/EIA T568A or T568B standards for the wiring of the twisted pair cables.



The DANTE audio output port features two status indicator LEDs to show active connections while troubleshooting.



### RIGHT LED (AMBER) – Link Status

Indicates there is data present between the AC-DANTE-E and the receiving end (typically a network switch). Steady blinking amber indicates normal operations.

### LEFT LED (GREEN) – Link/Activity

Indicates there is an active link between the AC-DANTE-E and the receiving end. Solid green indicates the AC-DANTE-E and the receiving end device have been identified and are communicating with one another.

If either LED is not illuminating, check the following:

- Ensure the AC-DANTE-E is powered on from the DC/5V port.
- Verify cable length is within the maximum distance of 100 meters (328 feet).
- Connect the AC-DANTE-E directly to the network switch, bypassing all patch panels and punch-down blocks.
- Re-terminate connector ends. Use standard RJ-45 connectors and avoid using push-through or “EZ” type ends as these have exposed copper wiring at the tips that can cause signal interference.
- Contact AVPro Edge Technical Support if these suggestions do not work.

## AUDIO LOOP OUT

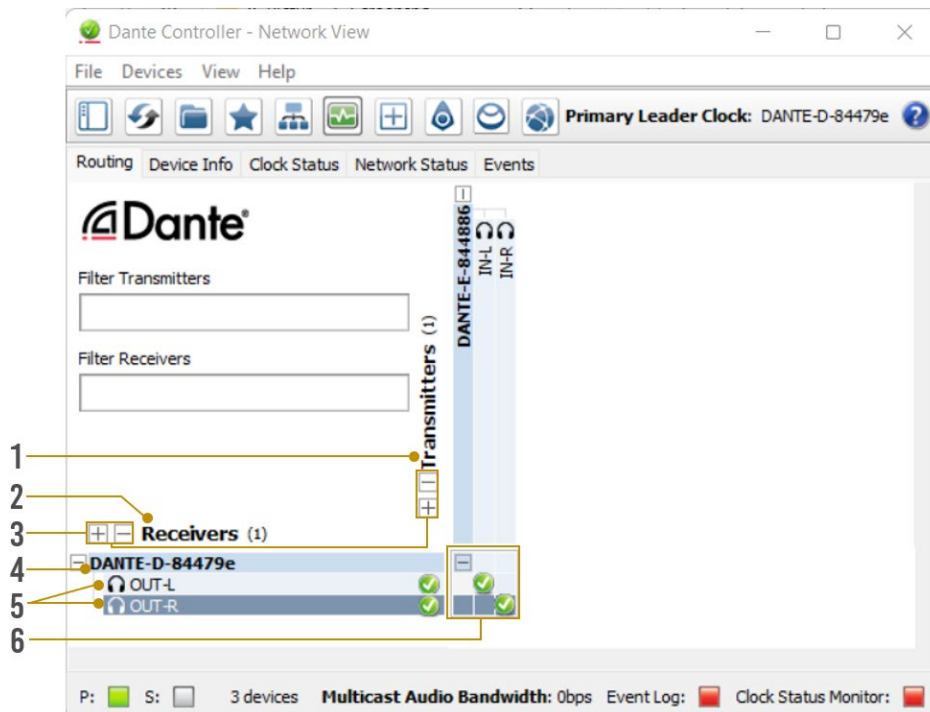
The AUDIO LOOP OUT port is a direct mirror of the DANTE audio input port and can be used to relay line level audio to a distribution amplifier or separate zone amplifier using an RCA cable.

# DEVICE CONFIGURATION

Configuring the AC-DANTE-E requires installing Audinate’s Dante Controller software on a computer sharing the same network as Dante devices, such as the AC-DANTE-E. Dante Controller is a powerful tool used to configure network settings, signal latency, audio encoding parameters, Dante flow subscriptions, and AES67 audio support. The latest version of Dante Controller can be found [here](#) along with additional supplementary instructions that can be obtained via the online help support tool located under the Help tab in the Dante Controller.

## BASIC NAVIGATION AND DANTE FLOW SUBSCRIPTION

Dante Controller will open to the routing tab by default where discovered Dante devices are organized according to transmitter or receiver status. Signal routing from Dante encoders (transmitters) to Dante decoders (receivers) can be achieved by clicking the box located at the intersection of the desired transmit and receive channels. Successful subscription is denoted by a green check mark icon.




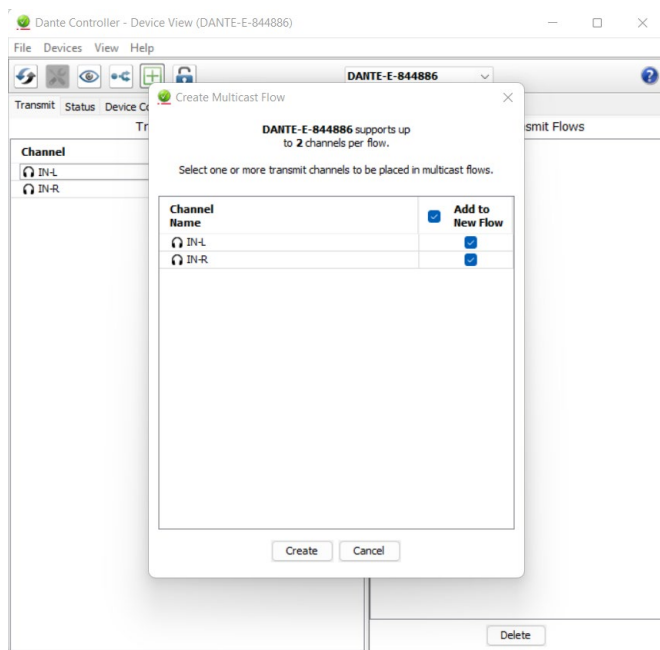
1	TRANSMITTERS	<ul style="list-style-type: none"> <li>Discovered Dante encoders</li> </ul>
2	RECEIVERS	<ul style="list-style-type: none"> <li>Discovered Dante decoders</li> </ul>
3	+/-	<ul style="list-style-type: none"> <li>Select the (+) to expand or (-) to collapse view</li> </ul>
4	DEVICE NAME	<ul style="list-style-type: none"> <li>Displays the name assigned to the Dante device</li> <li>Device name is customizable in Device View</li> <li>Double-click to open Device View</li> </ul>
5	CHANNEL NAME	<ul style="list-style-type: none"> <li>Displays the name of the Dante audio channel</li> <li>Channel name customizable in Device View</li> <li>Double click associated Device Name to open Device View</li> </ul>
6	SUBSCRIPTION WINDOW	<ul style="list-style-type: none"> <li>Click the box to create a unicast subscription between the overlapping <ul style="list-style-type: none"> <li>Subscription in process</li> <li>Subscription successful</li> <li>Subscription error</li> <li>Subscription warning</li> <li>Device part way through setting up a subscription</li> </ul> </li> </ul>

**TIP:** Hovering the mouse over the subscription indicator symbol will provide further details about the subscription and can be useful in troubleshooting

## CREATING MULTICAST DANTE FLOWS

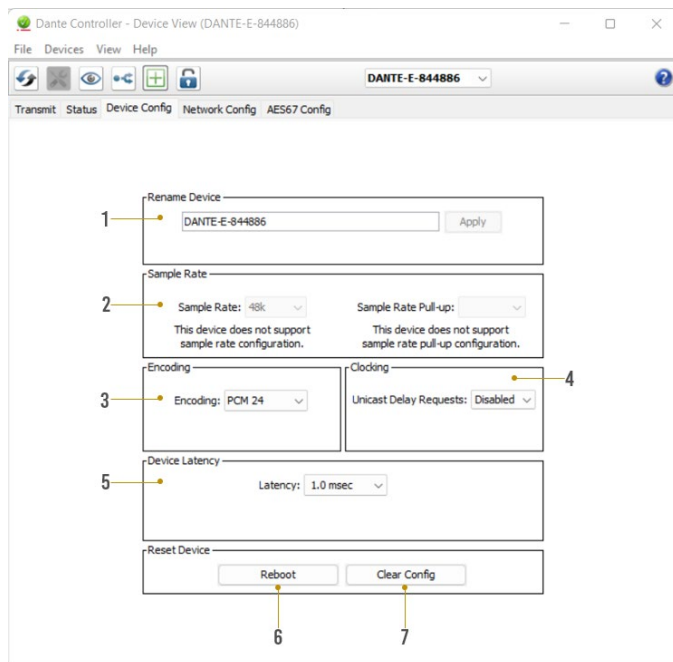
Due to Dante flow limitations, it may be necessary to create multicast flows in order to route audio from the AC-DANTE-E to a higher receive channel count. The AC-DANTE-E can transmit each output channel to 2 receive channels with unicast while both channels can be assigned to 8 devices with multicast.

To configure multicast flows, double-click on the AC-DANTE-E device name to open Device View and click on the flow icon  located at the top of the Device View window. A secondary window will pop up where you can select the AC-DANTE-E channels to assign to a multicast flow. Click create to create the multicast flow. Subscriptions of the selected channels will now be assigned to the multicast flow instead of unicast.



## CHANGING DEVICE NAME AND ENCODING CONFIGURATION

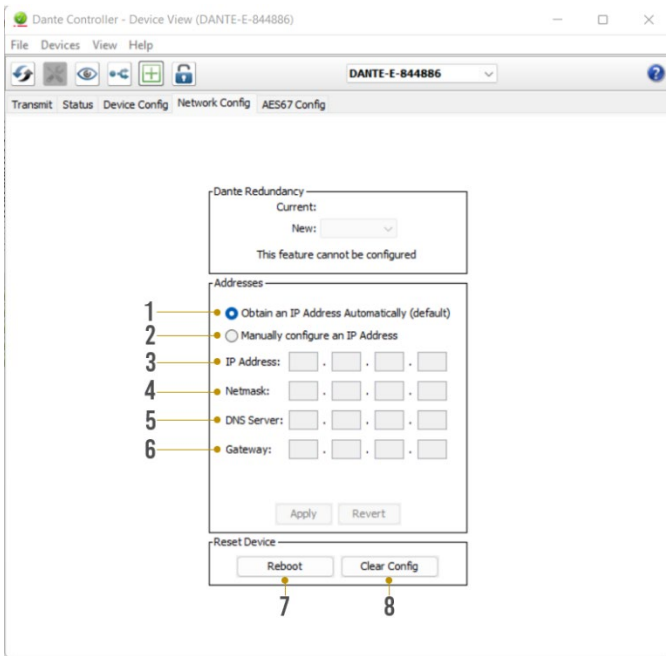
To configure the AC-DANTE-E audio stream, open the Device View by double clicking the Device Name for the AC-DANTE-E and navigate to the Device Config Tab.



1	<b>DEVICE NAME</b>	<ul style="list-style-type: none"> <li>Device Name for the AC-DANTE-E</li> <li>Device Name can be changed by typing a new name and clicking apply</li> </ul>
2	<b>SAMPLE RATE</b>	<ul style="list-style-type: none"> <li>Set AC-DANTE-E input sample rate</li> <li>44.1, 48, 88.2, 96 kHz sample rates supported</li> </ul>
3	<b>ENCODING</b>	<ul style="list-style-type: none"> <li>Set the bit depth of the sampled audio input signal</li> <li>16, 24, 32 bit sampling supported</li> </ul>
4	<b>CLOCKING</b>	<ul style="list-style-type: none"> <li>Enable/Disable unicast delay requests</li> </ul>
5	<b>DEVICE LATENCY</b>	<ul style="list-style-type: none"> <li>Set latency for subscribed Dante flows</li> <li>1, 2, 5 millisecond latencies supported</li> </ul>
6	<b>REBOOT DEVICE</b>	<ul style="list-style-type: none"> <li>Reboot the AC-DANTE-E</li> </ul>
7	<b>CLEAR CONFIG</b>	<ul style="list-style-type: none"> <li>Factory Reset Settings</li> </ul>

# NETWORK CONFIGURATION

DHCP for the AC-DANTE-E is enabled by default and will automatically be assigned an IP address when connected to the Dante network. Additionally, a static IP address can be assigned by opening the Device View for the AC-DANTE-E and navigating to the Network Config tab.

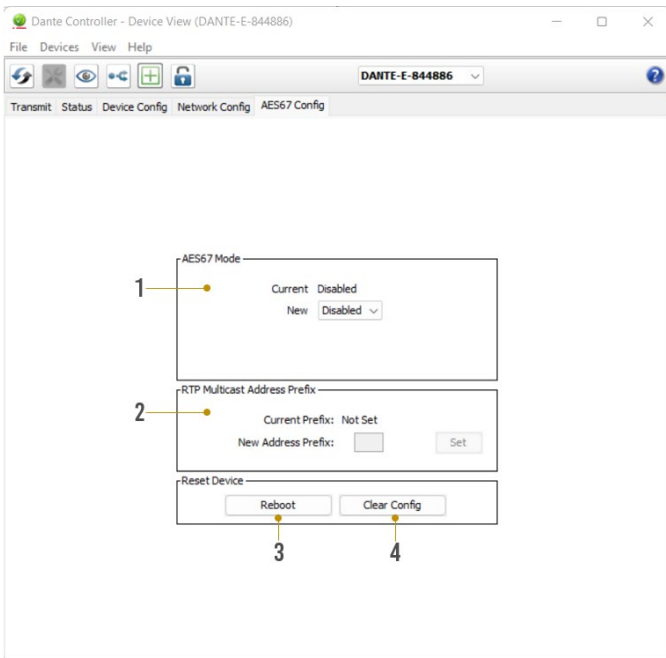


1	<b>AUTOMATIC IP ASSIGNMENT</b>	• Check this button to enable DHCP for automatic IP address assignment
2	<b>MANUAL IP ASSIGNMENT</b>	• Check this button to enable manual (static) IP addressing
3	<b>IP ADDRESS</b>	• Enter the desired IP address
4	<b>SUBNET MASK</b>	• Enter the desired subnet mask
5	<b>DNS SERVER</b>	• Enter the domain name server
6	<b>DEFAULT GATEWAY</b>	• Enter the default gateway
7	<b>REBOOT DEVICE</b>	• Reboot the AC-DANTE-E
8	<b>CLEAR CONFIG</b>	• Factory reset the AC-DANTE-E

**⚠ WARNING:** Manually setting the AC-DANTE-E IP address to a different subnet from the Dante Controller computer will result in loss of communication between Dante Controller and the AC-DANTE-E.

# AES67 AUDIO STREAM CONFIGURATION

The AC-DANTE-E supports multicast transmission of AES67 encoded audio to compatible non-Dante devices. AES67 multicast transmission can be configured by opening the Device View by double-clicking the AC-DANTE-E Device Name and navigating to the AES67 Config tab.



1	<b>AES67 MODE</b>	• Enable/Disable AES67 multicast flows for compatible non-Dante devices
2	<b>RTP MULTICAST ADDRESS PREFIX</b>	• Displays current RTP multicast prefix • Type in a new RTP multicast prefix and click Set to apply
3	<b>REBOOT</b>	• Reboot the AC-DANTE-E
4	<b>CLEAR CONFIG</b>	• Factory Reset the AC-DANTE-E

## TROUBLESHOOTING

- Verify Power – Check that the power supply is properly connected and is outputting 5V.
- Verify Connections – Check that all cables are properly connected and/or terminated where applicable.
- Verify Source Device – Ensure the source device is powered on and all mute settings are disabled.

## MAINTENANCE

To ensure reliable operation of these devices as well as protecting the safety of any person using or handling these devices while powered, observe the following instructions:

- Use the provided power supplies. If an alternative power supply is required, check the voltage and polarity to ensure it has sufficient power to supply the device it is connected to.
- Do not operate these devices outside the specified temperature and humidity range given in the above specifications.
- Ensure there is adequate ventilation to allow these devices to operate efficiently.
- Repair of the equipment should only be carried out by qualified professionals as these devices contain sensitive components that may be damaged by any mistreatment.
- Only use these devices in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these devices.
- Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzene to clean these devices.

## DAMAGE REQUIRING SERVICE

The devices should be serviced by qualified personnel if:

- The DC power supply cord or AC adapter has been damaged
- Objects or liquids have breached the interior of the devices
- The devices have been exposed to rain or moisture
- The devices do not operate normally or exhibit a marked change in performance
- The devices have been dropped or the housing is damaged

## SUPPORT

Should you experience any problems using this product, first refer to the [Troubleshooting](#) section of this manual before contacting AVPro Technical Support. When calling in, the following information should be provided:

- Product name
- Model number
- Serial number
- Details of the issue and any conditions under which the issue is occurring

# WARRANTY

## THE BASICS

AVPro Edge warranties products it manufactures and sells when purchased directly from AVPro Edge or from an authorized AVPro Edge reseller. Products are guaranteed to be free from manufacturing defects and in sound physical and electronic condition when shipped by AVPro Edge.

AVPro Edge has developed a warranty everyone can get behind. We wanted to remove all warranty “red tape” to make it simple. Our 10-Year, NO BS Warranty is based on these 3 fundamentals:

- If you are experiencing trouble, please call us. Our Tech Support specialists will make every troubleshooting attempt at a remedy while you are on the phone.
- If it is determined the product has experienced an uncorrectable failure, we will provide an advanced replacement free of shipping charges, including no-charge return shipping for the unit on site.
- We are confident that you know what you are doing and will never make you go through unnecessary troubleshooting steps with one of our products.

## COVERAGE DETAILS

AVPro Edge will replace or repair (at the customer’s choosing) any defective product. If the failed unit is out of stock or on backorder, replacement with a comparable product of equal value or feature set, if available, may be a viable solution. In rare circumstances, it may be determined repair is the only available option.

Warranty starts upon receipt of the product (determined by confirmed delivery via tracking). Should tracking information be unavailable for any reason, warranty will have a start date coinciding to a thirty-day interval after receipt of order (ARO).

## RED TAPE

AVPro Edge is not responsible to provide warranty for untraceable purchases or those made outside of authorized distribution channels.

If AVPro Edge determines a product has been modified or internally tampered with (as identified by a warranty seal violation and/or physical examination) or has an altered serial number, the warranty will be declared void. Additionally, physical misuse or damage incurred beyond normal installation standards and practices may violate the warranty. Warranties may also be prorated as a mutual means of reconciliation, after examination by an AVPro Edge representative.

Damage caused by “acts of God” (including, but not limited exclusively to: natural disasters, power surges, electrical storms, earthquakes, tornadoes, sink holes, typhoons, tidal waves, hurricanes, or other uncontrolled and unforeseen events related to unnatural weather conditions) are not covered.

Damage caused by incorrect installation will not be covered. Abnormal over- or under-voltage, inadequate cooling, improper cabling, lack of appropriate protection, and static discharge are many examples of improper installation, but warranty exclusions are not solely limited to these examples.

Warranty service for products installed or sold by an authorized AVPro Edge third-party reseller will be provided by that authorized AVPro Edge reseller. Accessories (items included in the original purchase, such as IR cables, RS-232 cables, power supplies, etc.) are not included in the warranty unless identified as the point of failure or the cause of performance that differs from that intended by design.

We will make acceptable efforts to source and supply replacements for defective accessories at a discounted rate as needed.

## OBTAINING AN RMA

Dealers, resellers, and installers can request an RMA (Returned Merchandise Authorization) from an AVPro Edge Technical Support rep or Sales Engineer. Or you may email [support@avproedge.com](mailto:support@avproedge.com) or fill out the general contact form at [www.avproedge.com/contact](http://www.avproedge.com/contact).

End users may not request an RMA directly from AVPro Edge and will be referred back to the dealer, reseller, or installer.

## SHIPPING

For USA (not including Alaska and Hawaii), shipping is covered for advance replacements using FedEx Ground (some Express exceptions may apply). Defective product return shipping is covered by AVPro Edge, using a return label issued via email. Items must be returned within 30 days from receipt of the replacement product. At 40 days, the customer account will be billed. Other return shipping methods will not be covered.

For international (and Alaska and Hawaii) return shipping costs will be the responsibility of the returnee. Once the unit is scanned for return shipping AVPro Edge will ship the new replacement unit.

## LIMITATION ON LIABILITY

The maximum liability of AVPro Global Holdings LLC under this limited warranty shall not exceed the actual purchase price paid for the product. AVPro Global Holdings LLC is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty or condition, or under any other legal theory to the maximum extent permitted by law. Taxes, Duties, VAT, and other freight forwarding service charges are not covered or paid for by this warranty.

Obsolescence or incompatibility with newly invented technologies (after manufacture of product) is not covered by this warranty. Obsolescence is defined as:

“Peripherals are rendered obsolete when current technology does not support product repair or re-manufacture. Obsolete products cannot be re-manufactured because advanced technologies supersede original product manufacturer capabilities. Because of performance, price and functionality issues, product re-development is not an option.”

Discontinued or out-of-production items will be credited at fair market value towards a current product of equal or comparable capabilities and cost. Fair market value is determined by AVPro Edge.

## EXCLUSIVE REMEDY

To the maximum extent permitted by law, this limited warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies, and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, AVPro Global Holdings LLC specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If AVPro Global Holdings LLC cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering this product, including warranties of merchantability and fitness for a particular purpose, shall apply to this product as provided under applicable law.

This warranty supersedes all other warranties, remedies, and conditions, whether oral or written, express or implied.