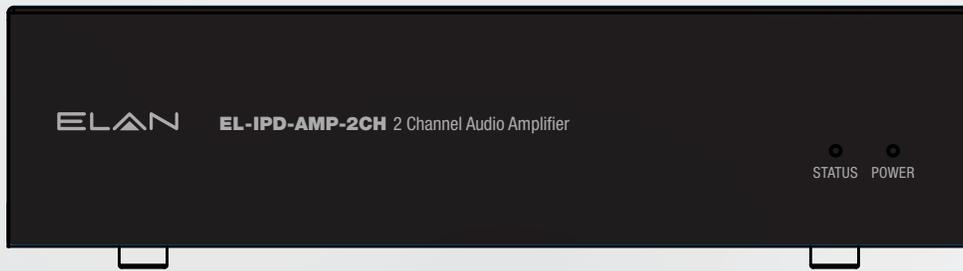


# ELAN<sup>®</sup>



## EL-IPD-AMP-2CH

2 Channel Audio Amplifier

### Quick Start Guide



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## FCC and IC Information

This Class B digital apparatus complies with Part 15 of the FCC rules and with Canadian ICES-003.

### Operation is subject to the following conditions:

1. This device may not cause interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

*Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment / les interférences qui peuvent affecter son fonctionnement.*

## Energy Efficiency - Commission Regulation (EC) no 1275/2008

### POWER CONSUMPTION:

**Off Mode:** 0W

**Standby Mode:** ≤ 0.5W - The device will automatically enter standby mode after approximately 30 minutes of no signal or no user input.

## Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or 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 the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The power supply cord (sometimes referred to as the "Mains Plug") is used as the disconnect device and shall remain accessible and operable at all times.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.



19. Open flame sources, such as lighted candles, should NOT be placed on the apparatus.
20. Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.



**WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## FCC Required Text:

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate, radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Overview

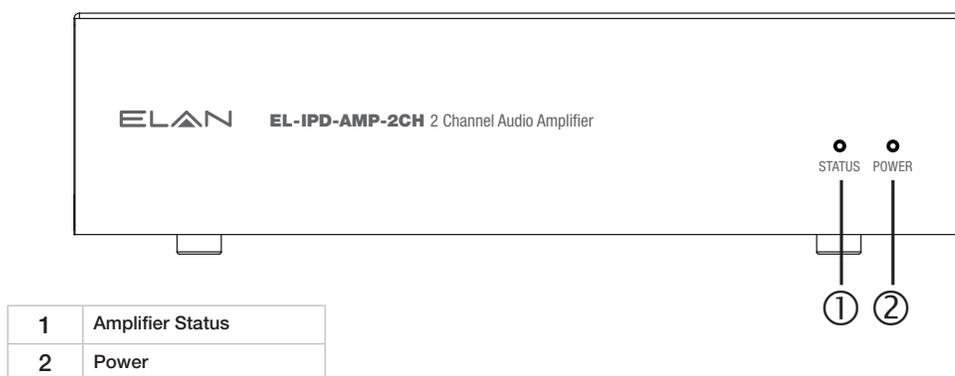
The EL-IPD-AMP-2CH 2 Channel Audio Amplifier is designed to be used in a stand-alone configuration or with other amplifiers and pre-amps within the ELAN® IP audio distribution family of products using Dante® Audio Networking. ELAN IP enabled audio distribution simplifies whole house audio distribution and enhances the intelligent home by delivering high quality audio over an existing network. Easily scaling from a single chassis solution to a decentralized multi-chassis / multi-source implementation, ELAN IP audio distribution meets the needs for projects of any size.

## What's Included

- EL-IPD-AMP-2CH 2 Channel Audio Amplifier
- Power Cord
- Mounting Brackets

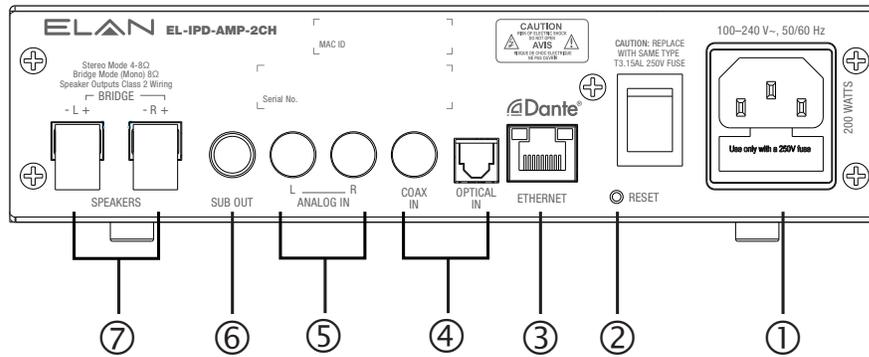
## Functions and Indicators

### FRONT VIEW



Condition	Amplifier Status	Power/Network Status
Power On, Booting	Off	Flashing Blue
Power On, Connected to Network	Off	Solid Blue
Self-Check Failure	Off	Flashing Red
Boot Failure	Solid Red	Solid Red
No Network Found	Off	Solid Amber
Power Off	Off	Off
Chassis in Low Power Mode	Solid Blue	Solid Blue
Chassis in Sleep Mode	Off	Solid Red
Amplifier or Preamp Channel Clipping	Solid Amber	Solid Blue
Amplifier Channel in Protection Mode	Solid Red	Solid Blue
Chassis Identify Mode	Flashing Amber	Flashing Blue

REAR VIEW



Item	Description
1	Power AC 100-120 / 220-240 V~ 50/60Hz, 200W
2	Network Reset Using a paper clip, with power on press and hold for 10 seconds to reset to DHCP
3	Network • 1 RJ45 Jack 100/1000 Ethernet DHCP Enabled by Default
4	Digital Audio Inputs • 1 Optical TOSLINK Input • 1 Coaxial RCA Input Stereo, PCM, 96kHz, 24-bit
5	Line Level Audio Inputs • Stereo Analog RCA Max input level 2.0 VRMS Input Sensitivity: 0dbV (1.0 VRMS) Input Impedance: 47k Ω-49k Ω
6	Subwoofer Output • RCA Variable, follows main volume setting of the amplifier. Impedance: 470 Ω
7	Amplifier Output • 2 Stereo Amplifier Outputs • Bridgeable Output Power: 80W at 8Ω 100W at 4Ω 200 W in Bridge mode THD: < 0.05% @ 1kHz Frequency Response: 20Hz to 20kHz, +.5dB/- .5dB Crosstalk: >60dB @ 1kHz/1W Signal to Noise: >90dB
Lip Sync Delay	Delay Time: 0 - 400ms Adjustable: 10ms increments • Individual Lip Sync Delay for Each Speaker Zone
Tone Control	Five-band equalizer Loudness on/off • Individual Tone Control for Each Zone
Temperature	Operating Temperature: +5° C – +45° C (+41°F - +113°F) Operating Humidity: 0 – 90% non-condensing Storage Temperature: 0° C – +60° C (32°F - +140°F)
Dimensions	7.00D X 7.91W X 1.97H in. / 178D X 201W X 50H mm
Weight	4.10 lbs / 1.86 Kg

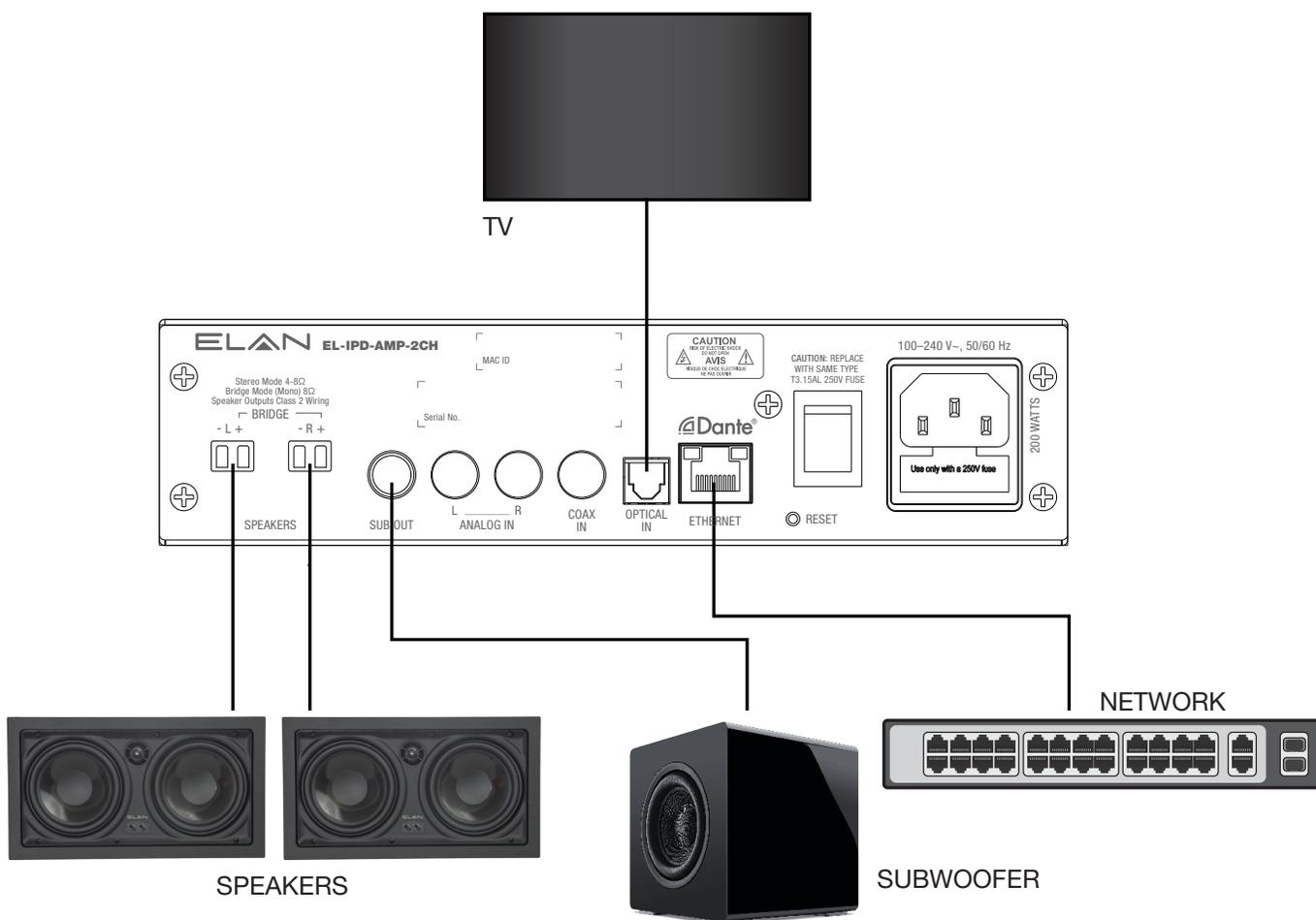
## Applications

The following applications are examples of how the EL-IPD-AMP-2CH 2 Channel Audio Amplifier Matrix can be used. For more detailed system design guidelines, see the Design Guide for the ELAN IP Amplifier from [www.elancontrolsystems.com](http://www.elancontrolsystems.com).

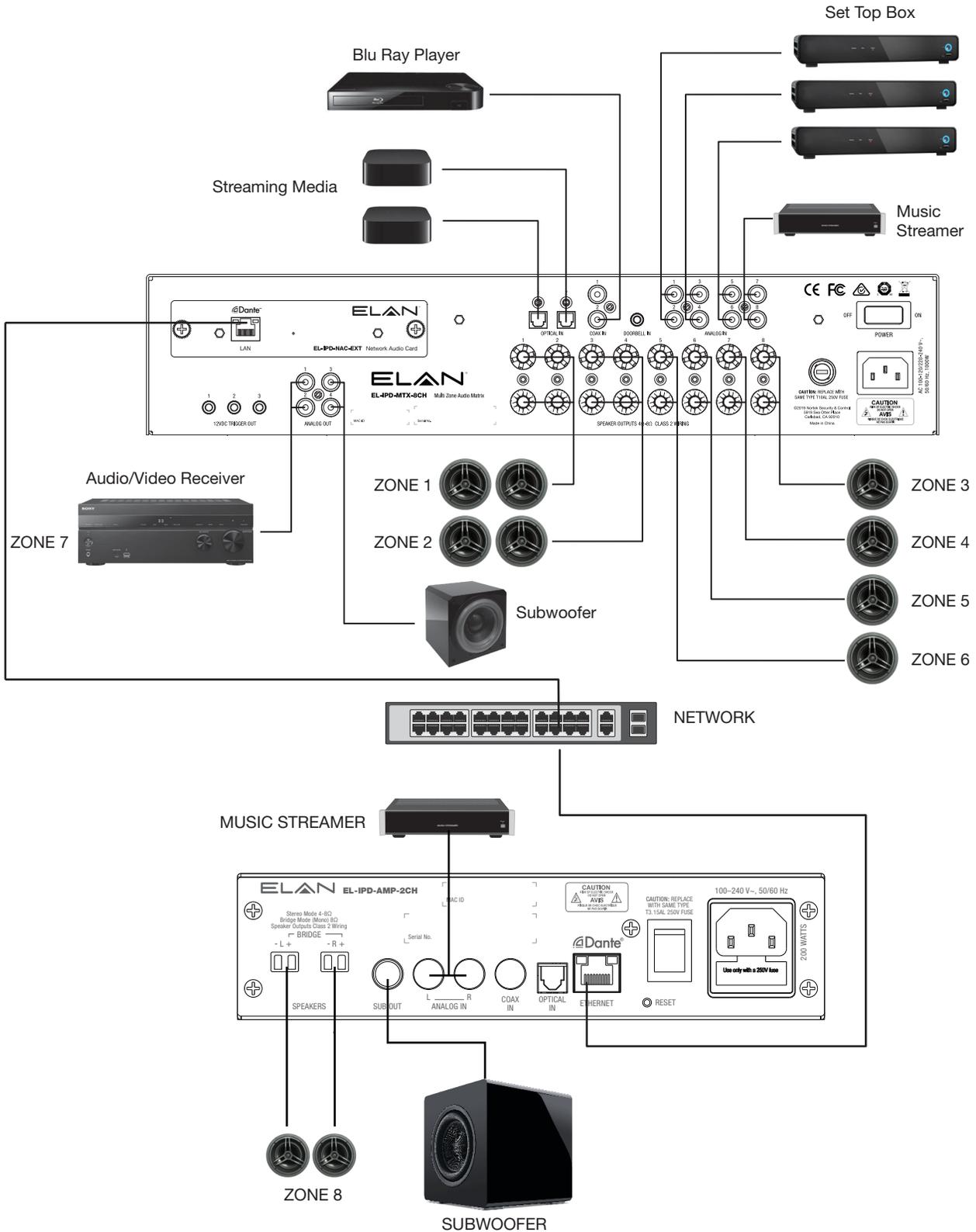
Combining the EL-IPD-AMP-2CH 2 Channel Audio Amplifier with the EL-IPD-MTX-8CH Multi Zone Audio Matrix with the optional EL-IPD-NAC-EXT Network Audio Card adds an additional audio zone. Multiple EL-IPD-AMP-2CH 2 Channel Audio Amplifiers can be added to a system as more remote audio zones are needed.

**NOTE: The amplifier is limited to one input device at a time. The input (Analog, Coax, or Optical) is selected using ELAN Configurator during installation.**

### Single Chassis

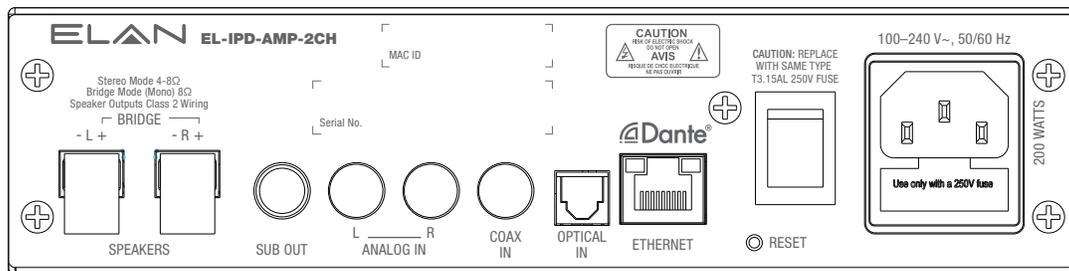


Zone Extender



## Installation

Mount the EL-IPD-AMP-2CH 2 Channel Audio Amplifier in a cabinet by setting it on a sturdy shelf. As with any electronic device the EL-IPD-AMP-2CH generates heat at all times, but considerably more when in use. Ensure clear positive airflow within the cabinet by using fans. Locating the EL-IPD-AMP-2CH in a completely enclosed cabinet is not recommended due to heat build up. Use the included mounting brackets to secure to a wall or other surface if needed.



## POWER

The amplifier includes an internal switch mode power supply for use in AC 100-120 / 220-240 V environments.

## NETWORK

Connect the amplifier to the LAN for control and audio routing (if used in a Dante configuration). Please review the ELAN IP Amp Design Guide for proper network setup depending on how the amplifier is being used.

## AUDIO INPUTS

Two 2 channel PCM digital inputs (1 optical and 1 coax stereo), and one line level analog stereo pair audio inputs are available. When used with other Dante-enabled ELAN amplifiers, the input device is available as an independent source available to any zone in the system.

**NOTE:** The amplifier is limited to one input device at a time. The input (Analog, Coax, or Optical) is selected using ELAN Configurator during installation.

## Subwoofer Out

Connect a powered subwoofer.

## SPEAKER OUTPUTS

**CAUTION! ALL SPEAKER WIRE CONNECTIONS MUST BE MADE WITH THE CHASSIS POWER OFF**

When connecting more than one speaker to a set of terminals, be sure to calculate the impedance values and not exceed the rating for the amplifier.

Connect 4ohm or 8ohm speakers - The amplifier outputs' default is 4ohms. If connecting 8ohm speakers, the setting must be changed during system configuration. For more detail, see the Design Guide for the ELAN IP Amplifier.

## CONFIGURATION

For detailed configuration information, download the Design Guide for the ELAN IP Amplifier from [www.elanhomesystems.com](http://www.elanhomesystems.com).

## Network Setup FAQs for Dante

### *What type of Ethernet cable is recommended for Dante?*

Cat5e or Cat6 cable is recommended. For purely 100Mbps networks, CAT5 may be used.

### *Does Dante work with Fiber Optic network cable?*

Yes. Because Dante works with standards based networking technology, using fiber is simple. Use a switch that supports fiber connections to send Dante data over a fiber optic cable.

### *Can Dante operate over a Wi-Fi network?*

No. While possible in principle, the practical limitations of current wireless technology (802.11a/b/g/n) render reliable performance unachievable.

### *Does Dante require any special network infrastructure?*

No, special network infrastructure is not required. Since Dante is based upon universally accepted networking standards, Dante-enabled devices can be connected using off-the-shelf Ethernet switches and cabling.

### *Does Dante require a dedicated network infrastructure?*

No, a dedicated network infrastructure is not required. Dante-enabled devices can happily coexist with other equipment making use of the network.

### *Does Dante require special switches?*

No. But we strongly recommend that Gigabit switches be used due to the clear advantages in performance and scalability. If using a 100Mbps, see the design guide and integration note for ELAN products.

## Limited Warranty

Nortek Security & Control ( 'NSC' ) warrants the E L-IPD-AMP-2CH to be free from defects in materials and workmanship for the period of two years (2 years) from the date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies 'NSC' in writing, 'NSC' shall repair or replace the item at the company's option. This warranty shall not apply (a) to equipment not manufactured by 'NSC', (b) to equipment which shall have been installed by other than an 'NSC' authorized installer, (c) to installed equipment which is not installed to 'NSC's' specifications, (d) to equipment which shall have been repaired or altered by others than 'NSC', (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond 'NSC's' control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond

'NSC's' control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by 'NSC', the warranty obligations of 'NSC' shall in all respects conform to the warranty actually extended to 'NSC' by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement. Except as may be expressly provided and authorized in writing by 'NSC', 'NSC' shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by 'NSC' or services rendered by 'NSC'.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## ATTENTION: To our valued Customers

To ensure that customers obtain quality pre-sale and after-sale support and service, Nortek Security & Control products are sold exclusively through authorized dealers. Nortek Security & Control products are not sold online.

The warranties on Nortek Security & Control products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your Nortek Security & Control reseller is authorized, please call Nortek Security & Control at 800-622-3526.



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