



DA-APX

POE / POE+ DANTE OUTDOOR WEATHER RESISTANT
HORN LOUDSPEAKER

INSTALLATION GUIDE



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INTRODUCTION

AtlasIED Dante™ PoE loudspeakers consist of a speaker, amplifier, control board and a Dante interface. The AtlasIED DA-APX is a constant directivity weather resistant, wall / pole mount IP PoE / PoE+ Horn Loudspeakers with a 60" x 40" horn pattern. The internal amplifier producing up to 15-watts RMS of power in single channel mode or up to 2 x 10-watts in dual channel mode with IEEE 802.3at compliant PoE+ switches and 10-watts single channel mode or 2 x 5-watts in dual channel mode with PoE power. Interconnection is via a top panel mounted female RJ-45 connector.

All AtlasIED Dante PoE loudspeaker models are compatible with the Audinate® Dante digital audio transport platform. The DA-APX features user configurable amplifier mode's, Input EQ and level control. All control is applied via the AtlasIED IP Discovery and Control software. Through this software, the active IP loudspeaker can be discovered on the network with the ability to custom name each loudspeaker with a location tag for system management. The AtlasIED control software features an audible ping-me locator making it convenient to physically locate the device. System tuning can be applied to individual loudspeakers or assigned groups.

DANTE OVERVIEW

Audinate created Dante; an uncompressed, multi-channel digital media networking technology, with near-zero latency and synchronization. Many Dante-enabled products are available from many manufacturers, enabling interoperability with other Dante-enabled devices from multiple manufacturers.

One cable does it all. Dante eliminates the need for heavy, expensive analog or multicore cabling, replacing it with low-cost, widely available CAT5e or CAT6 cable for a simple, lightweight, and economical solution. Dante integrates media and control for your entire system over a single, standard IP network.

Dante systems can easily scale from a simple pairing of a console to a computer, to large capacity networks running thousands of audio channels. Because Dante uses logical routes instead of physical point-to-point connections, the network can be expanded and reconfigured at any time with just a few mouse clicks.

Since the audio is transmitted digitally, common analog challenges like interference from other electrical equipment, crosstalk between cables, or signal degradation over long cable runs is not a problem. Setting up Dante networks is simple, even the most complex networks can be set up and configured quickly and easily with Dante, making system integration simple. Dante automatically handles the technical complexities.

Dante Controller™ is a powerful software application that manages devices on the network. Setting up a Dante network is typically just a matter of plugging devices into an Ethernet switch and connecting a computer to the network. All Dante devices are automatically discovered and displayed in Dante Controller, so a system can be up and running quickly.

Visit www.audinate.com for details or to learn more on using Dante.

Prior to Starting Installation

Before installing, note the unit's MAC address found under the top cover (example 00:02:C1:81:00:00). Once connected to a network and powered, the Dante IP endpoint speaker will boot up and automatically obtain an IP address from a DHCP server on the network. All AtlasIED Dante PoE speakers come preconfigured in DHCP mode. Once the speaker is powered on, it can be discovered in the Audinate's Dante Controller software or the AtlasIED IP Discovery and Control Software. The AtlasIED Dante speaker will appear in Dante Controller software as an AtlasIED speaker. **Example:** Dante Model name is DA-APX with the Dante Device Name of DA-APX-82001B, with the last 6 digits being from the MAC address. Using Dante controller software, audio signals can be routed to the DA-APX loudspeaker. Making amplifier configuration changes or audio processing adjustments to the DA-APX loudspeaker requires using the AtlasIED IP Discovery & Control software. This software can be downloaded using the following link: <http://autoupdate.atlasied.com/atlasieddiscover/setup.exe>. To access AtlasIED IP speakers, a username and password is required for login.

Factory assign Username and Passwords are:

- User ID "admin"
- Access key "admin"

After logged in you will be asked to change the Username and Password. **Note:** If the login reset is selected, all setting will be cleared and set back to the original factory settings.



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Mounting the DA-APX

Installation must be carried out by fully qualified installers, in accordance with all required safety codes and standards at the place of installation. **Note:** It is the installer's responsibility to mount the product in a safe manner. When selecting a mounting location, make sure that the location and mounting method will support the weight of the loudspeaker. Additionally, take into consideration other factors such as wind, vibration, snow / ice accumulation, etc. to eliminate the possibility of injury or property damage.

Determine the mounting requirement and select from one of the following methods, wall mount, pole mount, electrical box mount or flush mount.

1. **Wall Mount:** Attach base directly to wall via (4) holes provided in base using suitable strength fasteners.



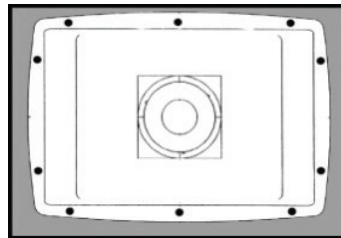
2. **Strap or Clamp Mount to a Pole or Beam:** Attach base directly to pole or beam via a $\frac{1}{2}$ " hose clamp or suitable banding strap. A beam clamp may also be utilized with the DA-APX base. Make sure that the strap, banding, or clamp is correct for the installation location/ environment.



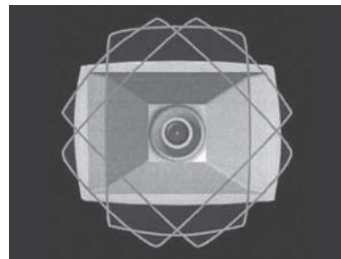
3. **Single Gang, Two Gang or 4" Sq. E.O. Box Mount:** Using a box screw (#6) or a nail, align center 2 knock out holes (4 on 2 gang) in base and knock out holes with hammer. Remove rubber grommet in base and pull ethernet cable through hole in base. Seal around cable opening (if required) Attach base through 2 center knocked out holes (4 outer holes on 2 gang box).



4. **Flush / Bulkhead Style Mounting:** Cutout size of the loudspeaker is $13 \frac{1}{8}$ " x $8 \frac{5}{8}$ " K.O's are $\frac{1}{4}$ " holes.



5. **Rotate horn (if required):** Loosen the tip assembly in horn bell by turning $\frac{1}{2}$ " turn counterclockwise, rotate bell to position (in 15" increments) and lock in place by turning tip $\frac{1}{2}$ " turn clockwise.



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Wiring the DA-APX

1. Determine if the DA-APX will be used as a single stand-alone speaker or used with a secondary APX40N. One channel or two channel operation mode configuration is done in the AtlasIED Discover software. **Note:** The Secondary Parallel Speaker Output has the same EQ settings as the DA-APX but does have separate level control. If configured to 1 Channel mode, the DA-APX will receive the full power of the amplifier, up to 15W on a PoE+ switch or 10W on a PoE switch. If configured to 2 Channel mode, the DA-APX will receive 10W of power or 5W on a PoE switch and the Secondary speaker will receive 10W on a PoE+ switch or 5W on a PoE switch.

Wiring the DA-APX to Single Channel Mode

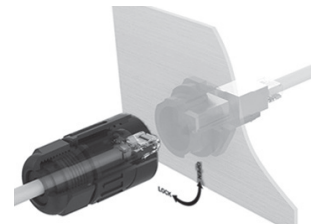
- a. On the rear side of the DA-APX remove the cover cap to access the RJ45 connector. This allows access to the RJ45 Ethernet receptacle.
- b. The DA-APX horn utilizes the weatherproof IP65/67 Cnlinko YT-RJ45-CPE-01-001 Ethernet connector. This is included with the DA-APX.
- c. Select the Ethernet cable & RJ45 connector.
 - We recommend using Cat5e/6 cable.
 - Do not use premade cables with connectors that have protective boot coverings
 - Remove the locking tab from the Ethernet connector.



- d. Remove the external weatherproof RJ45 connector assembly from accessory package and assemble the connector and Ethernet cable / RJ45 as shown in the pictures below.



- e. Now that the Ethernet cable and connector are wired they can be connected to the DA-APX speaker. On the side of the DA-APX, remove the cover cap for access to the RJ45 female connector. Insert the male RJ45 firmly and rotate the outer sleeve clockwise locking the speaker and the Ethernet cable together.



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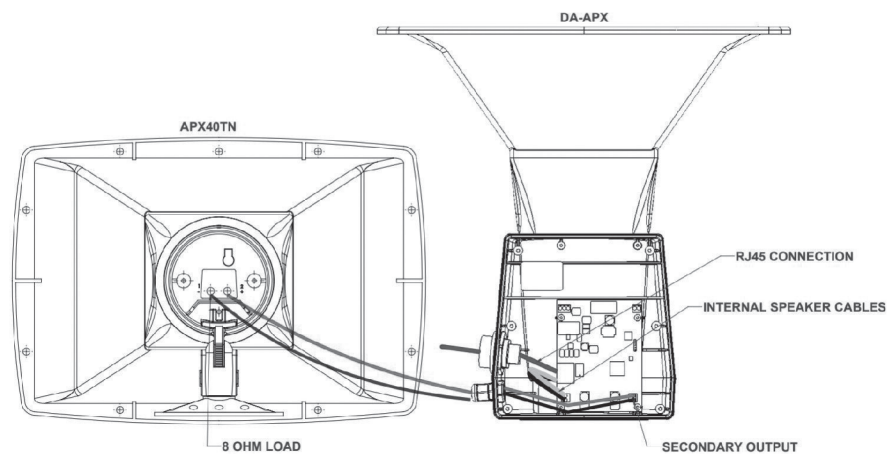
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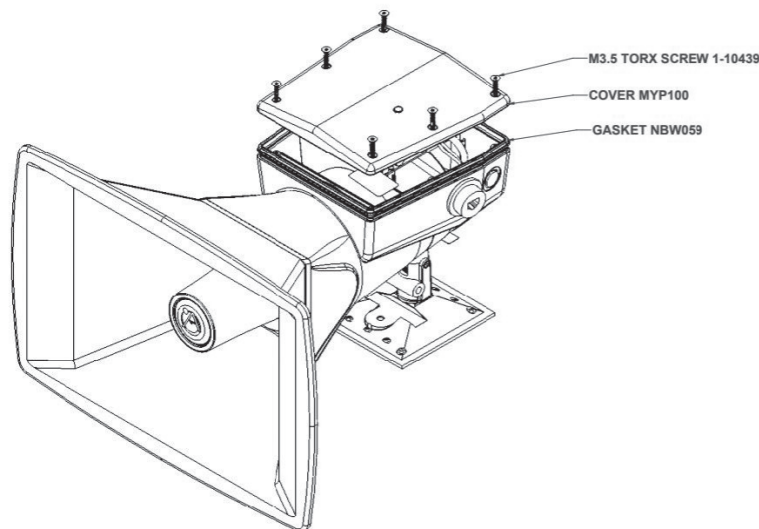


Wiring the DA-APX to Dual Channel Mode

- A. Amplifier Dual Channel Mode - The DA-APX ships (default) preconfigured for Single Mode operation. To configure the DA-APX amplifier to power and control a second loudspeaker such as the APX40TN, go into the amplifier UI settings, and change the amplifier operation mode to Single channel mode to Dual channel mode. Note: The secondary speaker APX40TN impedance needs to be tapped at 8 ohm. The Secondary APX40TN will have the same EQ settings as the DA-APX. Each speaker will have their own level control. When Dual Channel Mode is selected, the DA-APX will receive 50% of the PoE / PoE+ power and the Secondary APX40TN will receive the remaining 50% of the power.



- B. Remove the Qty. 6 M3.5 Torx screws from cover using #10 torx screwdriver and remove lid from unit. Set (6) screws aside. Carefully remove the cover avoiding damage to the gasket.



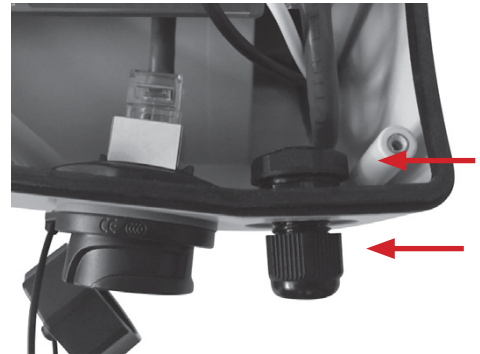
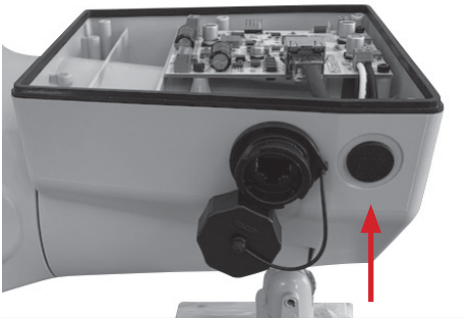
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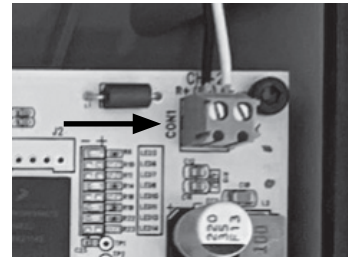
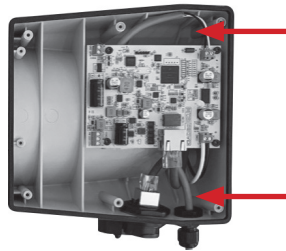
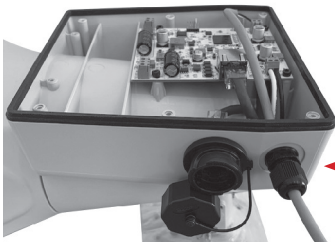
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- C. Remove Plug for secondary speaker wire plug from side of the unit. Take the external speaker wire connector from accessory package and unscrew the top cap. Take plug portion, fit it into mounting hole in enclosure and screw on cover, one rotation, to hold plug in place.



- D. Run a 16-18 gauge 2-conductor plenum rated loudspeaker wire from the DA-APX Ch 2 amplifier output to the APX40TN. Refer to local electrical codes for low voltage wire types. Run the loudspeaker wire through the cable retainer as shown below.



- E. Wiring the Secondary loudspeaker to the CH 2 Amplifier Terminals – Connect the wire to the CH 2 amplifier output connector, paying attention to the wiring polarity. Tighten the connections securely but do not force. Refer to the picture above for connection and location of the amplifier secondary output terminals.
- F. Place cover plate back onto housing making sure the gasket is in place. Install and secure the 6 Torx screws. **Note:** Do not overtighten screws or pinched the gasket or the housing will leak.
- G. Follow steps A-E of "Wiring the DA-APX to Single Channel Mode" for wiring an Ethernet cable to the DA-APX.



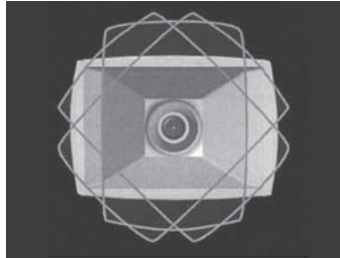
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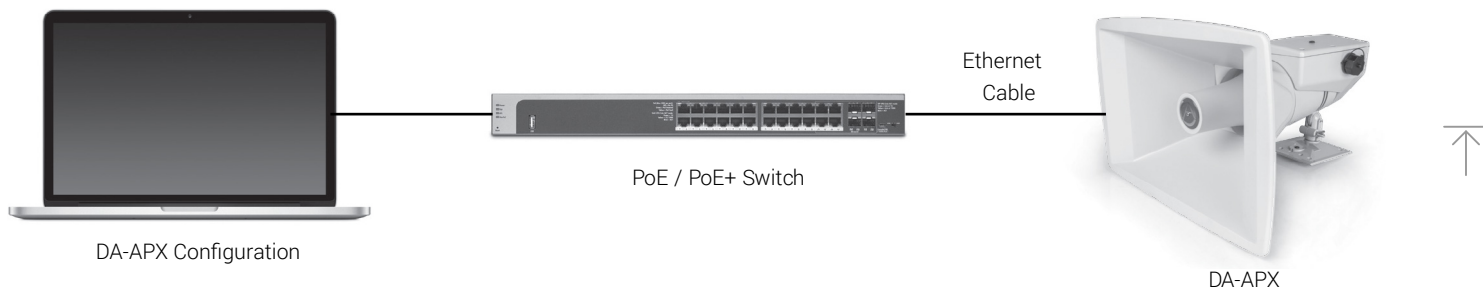
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2. Aim the loudspeaker in the appropriate direction and lock into place by tightening wingnut on base assembly.
3. Rotate horn bell (if required) - Loosen the tip assembly in horn bell by turning $\frac{1}{2}$ " turn counterclockwise, rotate bell to position (in 15" increments) and lock in place by turning tip $\frac{1}{2}$ " turn clockwise.



4. Connecting to PoE / PoE+ Switch / Router / Computer – For DA-APX configuration and tuning refer to the AtlasIED Discovery Tool software.



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AtlasIED Discovery & Control Software

The AtlasIED Discovery and Control Software. This software can be downloaded using the following link.
<http://autoupdate.atlasied.com/atlasieddiscover/setup.exe>

AtlasIED Discover v1.3.0.1

Network Adapter: Ethernet 2

Network Scan

Device Controls

Utilities

Type	Version	IP	Netmask	Mac	Description	Uptime	Locate
GENERICDANTEDEVICE	1.0.0.0	192.168.11.121	255.255.255.0	001DC182001B	---		
GENERICDANTEDEVICE	0.0.0.0	192.168.11.146	255.255.255.0	001DC107C05E	---		
KEIGAAMP	21.12.20.2	192.168.11.148	255.255.255.0	001DC1820036	---		
GENERICDANTEDEVICE	1.0.0.0	192.168.11.149	255.255.255.0	001DC1820037	---		
GENERICDANTEDEVICE	1.0.0.0	192.168.11.190	255.255.255.0	001DC1850D22	---		

Found GenericDanteDevice [001DC1850D22] at 192.168.11.190

Device Count: 5 Selected: 1

Refresh Details
Firmware...
Locate
Adjust Levels...
Audio Levels...
Input Channels...
Reboot Device
Reset to Factory Defaults
Set Network Settings...

Audio levels for KeigaAmp

Primary Channel 0db

Slave Channel 0db

-50dB
-10 dB
☐ Mute

-50dB
-50 dB
☒ Mute

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Dante Control Software & Device Information

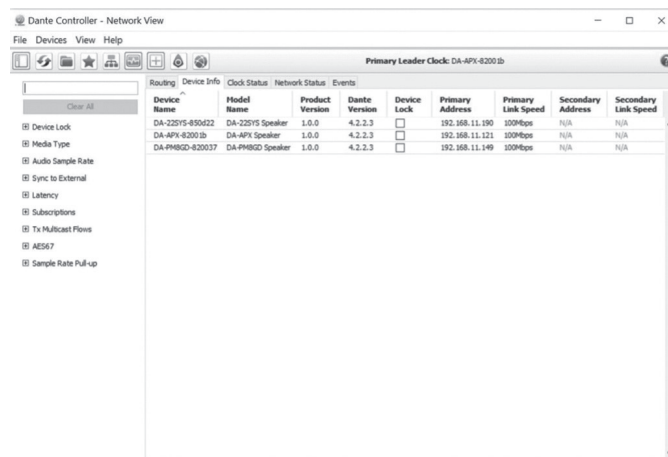
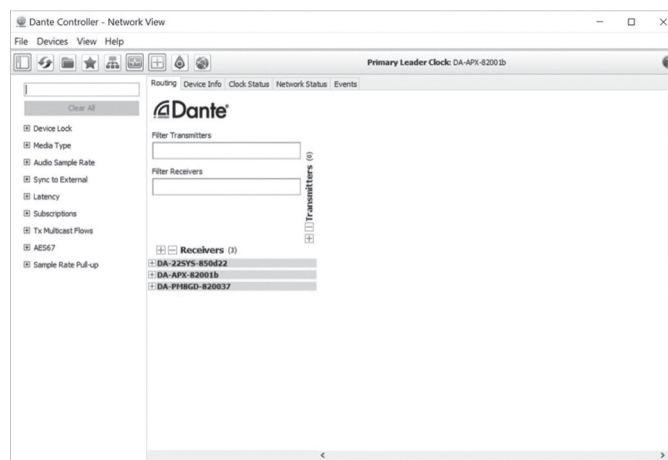
Signal routing and system configuration with Dante is fast, simple, and incredibly flexible. Audinate's Dante Controller is a powerful software application that manages devices on the network. Setting up a Dante network is typically just a matter of plugging devices into an Ethernet switch and connecting a computer to the network. All Dante devices are automatically discovered and displayed in Dante Controller. To download Dante Controller visit: www.audinate.com

It is extremely important when selecting a router or switch for the Dante network; not all routers or switches are the same. The size of the Dante network will influence which router or switch is needed to handle network traffic. There are three things to look for at a minimum or system dropouts may occur. Refer to Audinate for products they recommend.

- Gigabit speed.
- Network switch, it must be a "managed switch" type.
- A router with a built-in switch, it should have DD-WRT firmware or Open Source firmware.

Dante Controller Viewer DA-APX Product Information

- Product Model Name (Fixed) is DA-APX
- Dante Device Name (User Changeable) is DA-APX- XXXXXX, X is last 6 characters of the MAC address.
- DA-APX Dante configuration, 1 RX Channel, no TX Channels



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System	
Type	PoE / PoE+ Constant Directivity and Weather Resistant Wall Mount IP Speaker
Indicators	Network Status
Frequency Response (+/- 5dB)	400Hz - 7500Hz
Vertical Coverage	40°
Horizontal Coverage	60°
Max SPL at 1m	107dB SPL Continuous / 120dB SPL Peak
Recommended Signal Processing	Built-In Processing

Transducers	
Transducer Qty	1
Compression Driver	1"
Cone Material	Double Entrant Compression Driver
Sensitivity (1W / 1m)	107dB Average

Amplification	
Type	Two-Channel Class D Topology
Power Input	PoE (IEEE 802.3af) / PoE+ (IEEE 802.3at)
Single Ch Mode, Power Rating (RMS) PoE (IEEE 802.3AF)	10 Watts Max
Two Ch Mode, Power Rating (RMS) PoE (IEEE 802.3AF)	5 Watts Max, plus 5W @ 8 Ohm Paralleled Output
Single Ch Mode, Power Rating (RMS) PoE+ (IEEE 802.3AT)	15 Watts Max
Two Ch Mode, Power Rating (RMS) PoE+ (IEEE 802.3AT)	10 Watts Max, plus 10W @ 8 Ohm Paralleled Output
THD	<.02%
Cooling	Passive / Convection

Audio Inputs and Outputs	
Input: Network Audio Type(s)	Audinate Dante / AES 67
Input: Network Connectivity	RJ-45 Female
Output: Speaker Connectivity	Secondary Speaker Amplifier Output, Screw Terminal Block

Software	
AtlasIED Discovery & Control Software	Discover, Status, Fault Report, User Setup & Control



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User Control Elements	
Amplifier Operation Mode	Single Unit Mode or Two Channel Mode (Parallel Secondary Output)
Login	Username & Password
IP Mode	Static or DHCP
Product Locator	Audible Find Me Ping
Dante Input	Parametric EQ, 3 Filters Hi-Pass Filter Input Limiter Level
Amplifier Level	CH 1 & CH 2
File Export	Settings File Device Profile
File Input	Settings File Device Profile

Network	
Ethernet	IEEE 802.3 10/100Base-T
PoE / PoE+	IEEE 802.3 AF/AT Compliant

Protocols	
IP Addressing	DHCP / Static
Auto-Registration	Dante Controller, AtlasIED Discovery & Control Software
Digital Audio	Audinate Dante Audio
Time	NTP

Mechanical	
Color	Pantone Warm Gray 3 C - RAL 7044
Mounting / Rigging Provisions	Die Cast Base May be Mounted to 1-gang, 2-gang, 4-gang square E.O. or by Band or Pole
Ingress Protection	IP-56
Logo	Black and Silver
Product Dimensions (HxWxD)	8.02" x 14.61" x 13.86" (204mm x 371mm x 352mm)
Shipping Dimensions (HxWxD)	14.25" x 14.875" x 10.32" (362mm x 378 mm x 262mm)
Net Weight	6.45 lbs (2.92kg)
Shipping Weight	7.75 lbs (3.51kg)

Safety Ratings	
Safety Agency Ratings	ETL Listed 62368-1, CSA C22.2 #62368-1, IEC 62368-1 CB Scheme and FCC

Warranty Coverage	
Warranty Period	1 Year

Notes:

1. Sensitivity: Half space pink noise measurement at 6 ft (1.8 m) at 20% power; extrapolated to 1 meter and an input of 2.83 volts RMS.
2. Power: All wattage figures are calculated using the rated nominal impedance.
3. Frequency response and sensitivity are half-space measurements.

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AES67 INTEROPERABILITY MODE

This product supports AES67 interoperability mode, configurable via Dante Controller software. AES67 mode is mutually exclusive with standard Dante operation; select one mode at a time.

Configuration:

1. Open Dante Controller and navigate to the Device View for this unit.
2. Select the AES67 tab.
3. Enable AES67 mode. The device will switch from Dante to AES67 operation.
4. Configure multicast flow parameters (address, port, TTL) as required by your network.

Network Requirements:

- Firmware v2.x or later required.
- Managed Gigabit Ethernet switch with IGMP snooping enabled.
- PTP (IEEE 1588) grandmaster clock source on the network.
- Multicast routing configured if AES67 streams cross network segments.



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Safety Instructions

Please read carefully before installing or operating. Read all instructions carefully. Heed all warnings. Assure that the speaker is securely mounted. Always assure amplifier power is off before making any connections. Keep instructions for future reference. Should any questions arise after reading this document, please call AtlasIED Tech Support at 800-876-3333.

Hearing Damage

CAUTION: All professional speaker systems are capable of generating very high sound pressure levels. Use care with placement and operation to avoid exposure to excessive levels that can cause permanent hearing damage.

Attention

Tous les systèmes de haut-parleurs professionnels sont capables de générer des niveaux de pression sonore très élevés. Utilisez les soins avec le placement et l'opération pour éviter l'exposition des niveaux excessifs pouvant causer des dommages auditifs permanents.



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Limited Warranty

All products manufactured by AtlasIED are warranted to the original dealer / installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all AtlasIED products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. AtlasIED will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to AtlasIED do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any nonwarranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLASIED SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

AtlasIED does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Service

Should your DA-APX require service, please contact the AtlasIED warranty department through the online warranty claim process.

Online Warranty Claim Processes

1. Warranty submissions are accepted at: https://www.atlasied.com/warranty_statement where the type of return Warranty or Stock return can be selected.
2. Once selected, you will be prompted to enter your login credentials. If you do not have a login, register on the site. If already logged-in, navigate to this page by selecting "Support" and then "Warranty & Returns" from the top menu.
3. In order to file a Warranty Claim, you will need:
 - A. A copy of the invoice / receipt of the purchased item
 - B. Date of Purchase
 - C. The product name or SKU
 - D. The serial number for the item (if no serial number exists, enter N/A)
 - E. A brief description of the fault for the claim
4. Once all required fields are completed, select the "Submit Button" You will receive 2 emails:
 1. One with a confirmation of the submission
 2. One with a case# for your reference should you need to contact us.

Please allow 2-3 business days for a response with a Return Authorization (RA) number and further instructions.

AtlasIED Tech Support can be reached at: 1-800-876-3333 or [atlasied.com/support](https://www.atlasied.com/support).

Visit our website at www.AtlasIED.com to see other AtlasIED products.

