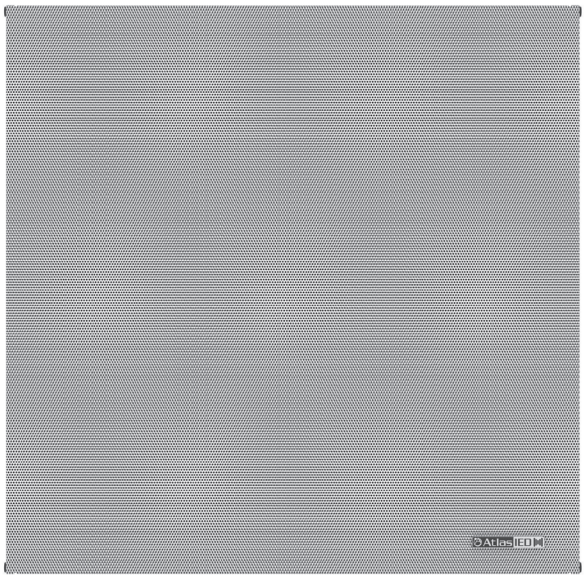
DA-22SYS

Indoor 2' x 2' Suspended Ceiling Mount Dante PoE IP Speaker Install Sheet



Introduction

AtlasIED DA-22SYS is a 2' x 2' suspended ceiling mount IP PoE amplified loudspeaker featuring the Audinate® Dante™ digital audio transport platform. DA-22SYS speakers consist of a factory assembled speaker and baffle with PCB amplifier / control board. The DA-22SYS amplifier is capable of producing up to 15-watts RMS of amplification 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 models are compatible with Audinate's Dante digital audio transport platform.

The DA-22SYS features user configurable amplifier modes, Input EQ, Level Control, and Masking with room tuning EQ. All controls are done via the AtlasIED IP Discovery and Control software. Through this software, the active IP speaker can be discovered on the network with the ability to custom name each speaker with a location tag for system management. The AtlasIED control software features an audible ping-me locator making it convenient to physically locate the speaker. System tuning can be done on an individual speaker or by an assigned group.

The DA-22SYS ships configured for single speaker use. It can also be configured to Dual mode to drive a second passive speaker of the same type. When the DA-22SYS amplifier is configured to Dual mode the amplifier power is split between the DA-22SYS and the 8-ohm passive speaker. The secondary speaker output shares the same factory EQ settings as the DA-22SYS. Amplifier levels can be adjusted separately.

The DA-22SYS includes a top cable access plate that is easily removed for installation. The cover also completely conceals the Ethernet cable terminations.

Dante Overview

Audinate created Dante, is an uncompressed, multi-channel digital media networking technology, with near-zero latency and synchronization. Hundreds of Dante-enabled products are available from many manufacturers, enabling you to mix other Dante-enabled devices from multiple manufacturers.

One cable does it all. Dante does away with 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 signal 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 easy, 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.

Signal routing and system configuration with Dante is fast, simple, and incredibly flexible. 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

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a computer to the network. All Dante devices are automatically discovered and displayed in Dante Controller, so a system can be up and running in seconds.

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-22SYS with the Dante Device Name of DA-22SYS-82001B, with the last 6 digits being from the MAC address. Using Dante controller software, audio signals can be routed to the DA-22SYS speaker. Making amplifier configuration changes or audio adjustments to the DA-22SYS speaker 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:

- Username "admin"
- Password "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.

Suspension and Mounting

Suspending or "flying" speaker systems requires training and expertise. Improper rigging of a flying speaker may result in injury, death, equipment damage, and legal liability. Installation must be carried out by fully qualified installers, in accordance with all required safety codes and standards at the place of installation.

A 5:1 design factor is a generally accepted minimum standard. However, legal requirements for overhead suspension vary by municipality, please consult your local safety standards office before installing any product. We also recommend that you thoroughly check any laws and bylaws prior to installation.

Speakers flown in theaters, nightclubs, conference centers, or other places of work and entertainment must be provided with an independent, correctly rated and securely attached secondary safety in addition to the principal suspension point(s). This secondary safety must prevent the speaker from dropping more than 6" should the principal suspension device fail. If you lack the skills, training, and proper ancillary equipment to fly a speaker system, do not attempt to do so.

Installing the DA-22SYS

1. The DA-22SYS fits industry standard 2' x 2' drop-in speaker system acoustic ceiling grids. Safety straps can be added to the locations indicated in the images below. Refer to the local code requirements for securing a drop in ceiling grid speaker. (Figures 2 and 3)

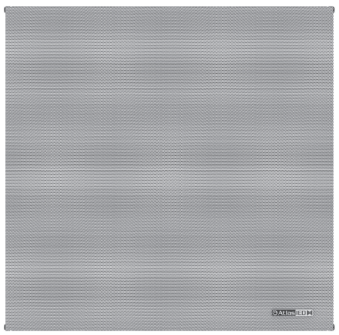

Figure 1

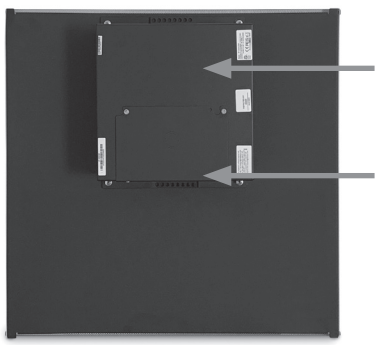

Figure 2

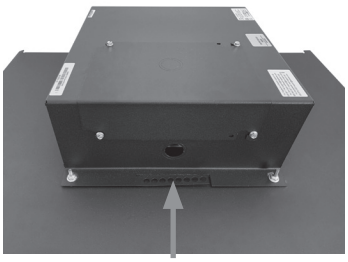

Figure 3

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Wiring the DA-22SYS

1. Loosen the 4 screws and remove the cover plate. (Figure 4)
2. There are two knockout sizes available, ½" and ¾", for electrical cable access. (Figure 5)
3. Insert the electrical cable retainer. Refer to local codes for low voltage wiring regulations. (Figure 6)

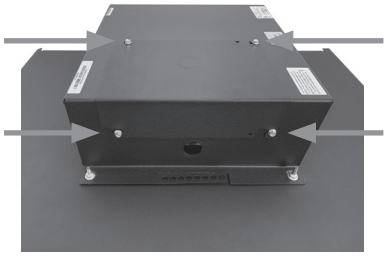

Figure 4

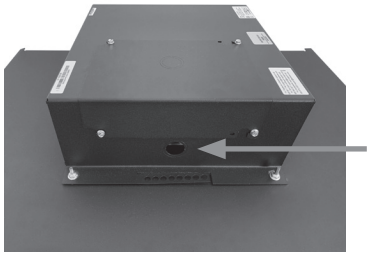

Figure 5

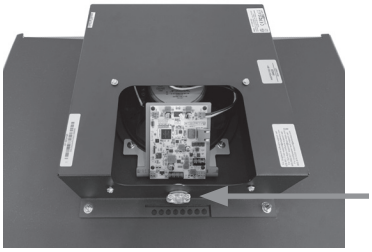

Figure 6

4. Determine if the DA-22SYS will be used as a single stand-alone speaker or used with a secondary 8-ohm speaker of similar acoustical characteristics as the DA-22SYS. 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-22SYS but does have separate level control. If configured to 1 Channel mode, the DA-22SYS will get the full power of the amp up to 20W on a PoE+ switch. If configured to 2 Channel mode, the DA-22SYS will receive 10W of power and the Secondary Parallel speaker will receive 10W on a PoE+ switch.

Wiring the DA-22SYS to Single Channel Mode

Amplifier Configuration - The DA-22SYS UI amplifier ships preconfigured for 1 CH (Speaker) Mode allowing for the full PoE / PoE+ power to be delivered to the speaker.

Ethernet Connection - Run a plenum rated Ethernet Cat5e/6 cable through the cable retainer as shown below. **Note:** Do not overtighten the Cat5e/6 cable retainer or damage may occur to the conductors. Connect the opposite end of the Ethernet cable to a LAN PoE / PoE+ switch. No other wiring is required. Refer to local electrical codes for low voltage wire types.

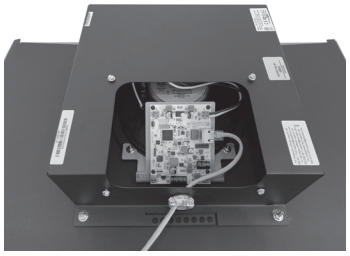

Figure 7

Wiring the DA-22SYS to Dual Channel Mode

Amplifier Configuration - The DA-22SYS ships (default) preconfigured for Single Channel Mode. To configure the DA-22SYS to power and control a second speaker, go into the amplifier UI settings, and change the amplifier operation mode from Single Channel Mode to Dual Channel Mode. **Note:** The secondary speaker impedance needs to be 8-ohm or greater. The secondary speaker or Ch 2 Output has the same EQ settings as the DA-22SYS but does have separate level control. When Dual Channel Mode is selected, the primary speaker will receive 50% of the PoE / PoE+ power and the secondary speaker or Ch 2 amplifier output will receive the remaining 50% of the power.

Secondary Speaker Wiring - Run a 16-18 gauge 2-conductor plenum rated speaker wire from the second speaker to the DA-22SYS. Refer to local electrical codes for low voltage wire types. Run the speaker wire through the cable retainer as shown below.

Wiring the Secondary Speaker 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 below for connection and location to the amplifier secondary output terminals.

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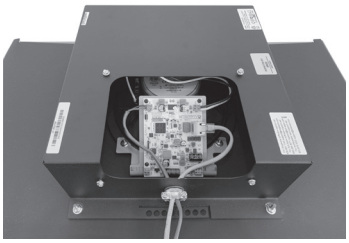


Figure 8

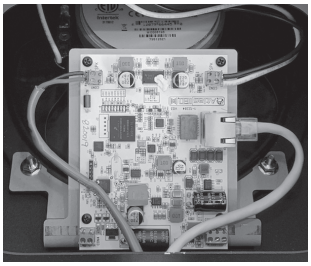
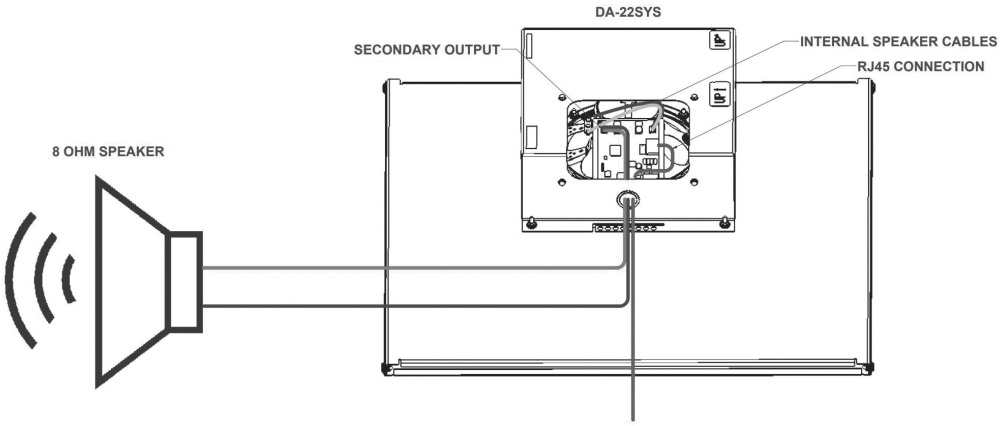
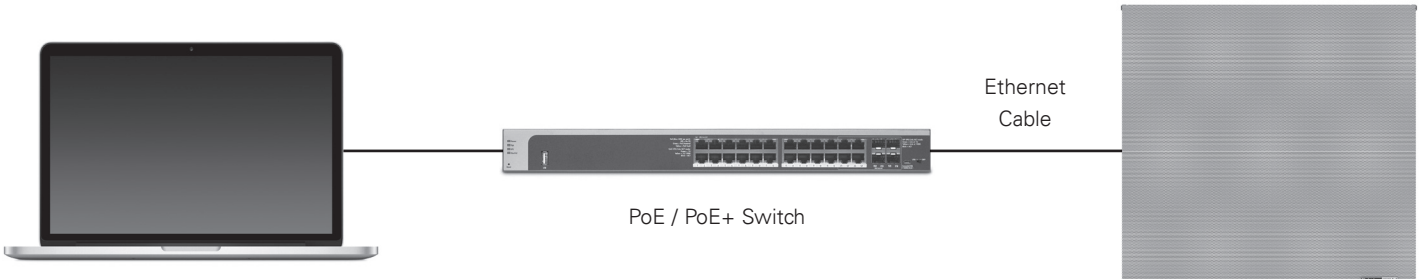


Figure 9

Wiring the Secondary Output to A Passive Speaker - We recommend the secondary passive speaker is of the simulate type as the DA-22SYS. This because the secondary amplifier signal has the same EQ and power limiter configurations as the DA-22SYS. The passive speaker must be an 8-ohm speaker and if it is a 70V speaker, select the 8-ohm tap. The wiring illustration below shows the DA-22SYS amplifier's secondary output wired to an AtlasIED DT22T 8-ohm power tap.



5. Run a plenum rated Ethernet Cat5e/6 cable through the cable retainer as shown below. Connect the opposite end of the Ethernet cable to a LAN Router / PoE / PoE+ switch. No other wiring is required. Refer to local electrical codes for low voltage wire types. **Note:** Audinate Dante audio requires managed type specific with specific switch configurations. We recommend you consult with Audinate for these switch requirements.
6. Tighten the cable retainer to secure the wires. Do not overtighten the Cat5e/6 or damage may occur to the conductors.
7. Install the access cover.
8. Connecting to PoE / PoE+ Switch / Router / Computer – For DA-22SYS configuration and room tuning refer to the AtlasIED Discovery Tool software.



DA-22SYS Configuration

PoE / PoE+ Switch

DA-22SYS

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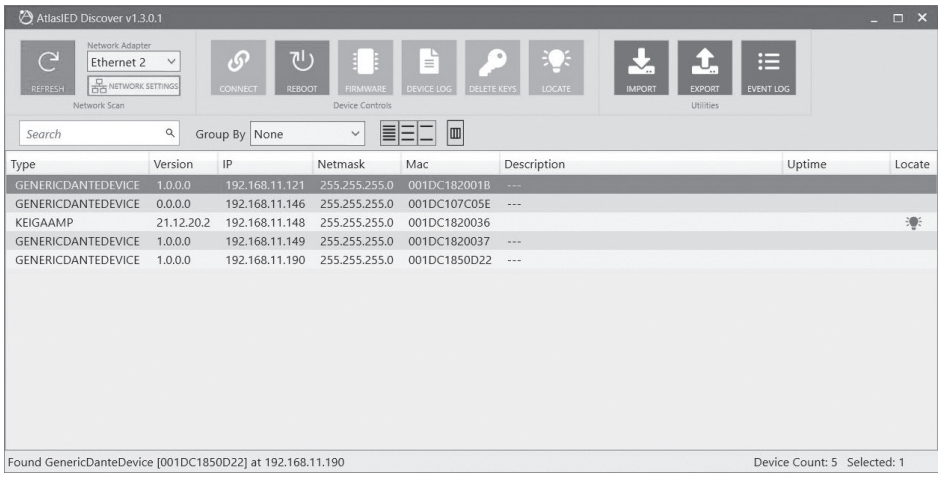
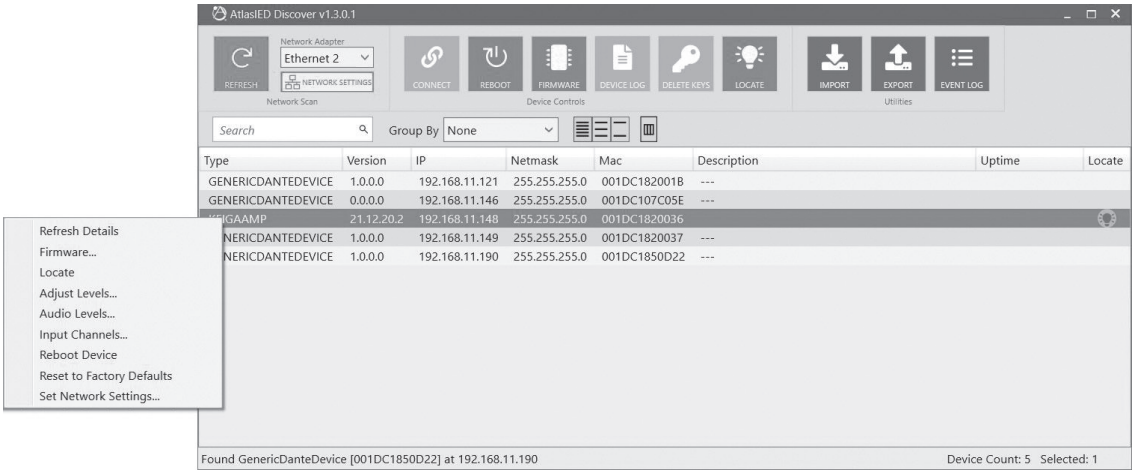
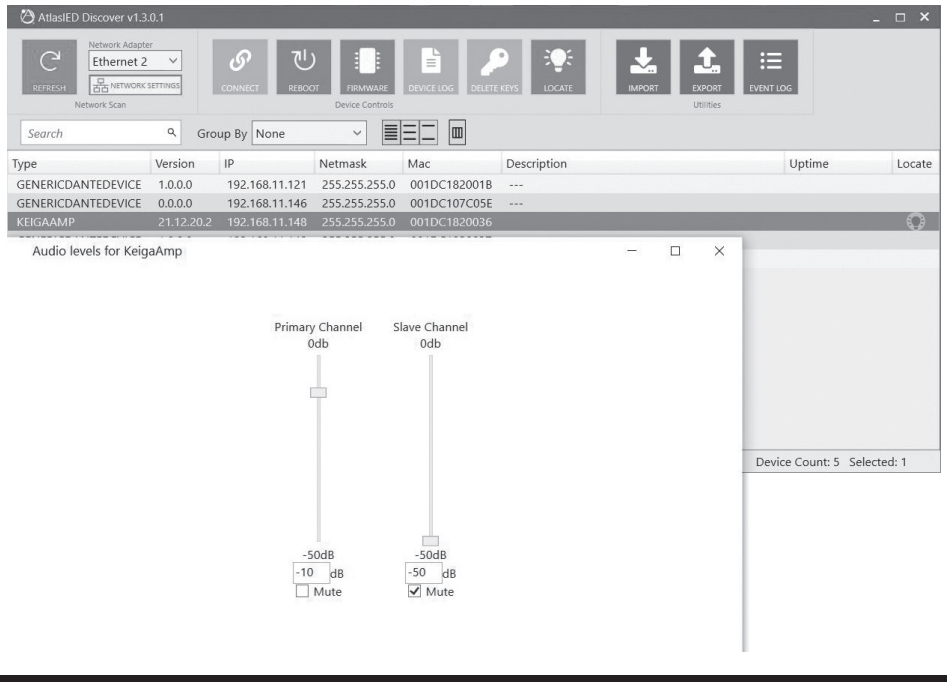
AtlasIED Discovery & Control Software

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







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Dante Control Software & Device Information

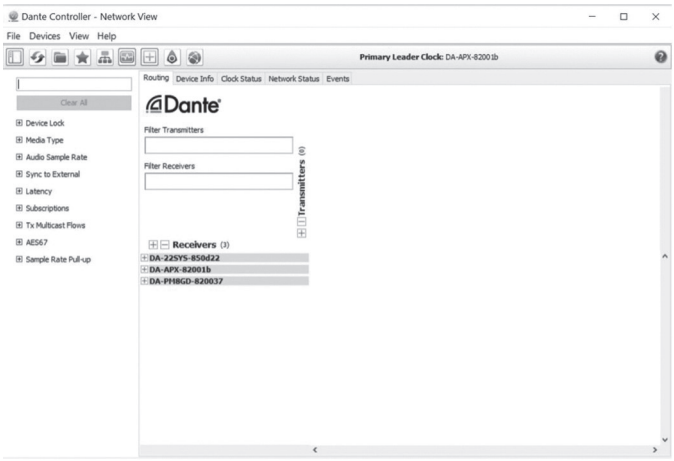
Signal routing and system configuration with Dante is fast, simple, and incredibly flexible. Audinate's Dante Controller is a powerful software application that manages devices on the network. Setting up a Dante network is typically just a matter of plugging devices into an Ethernet switch and connecting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

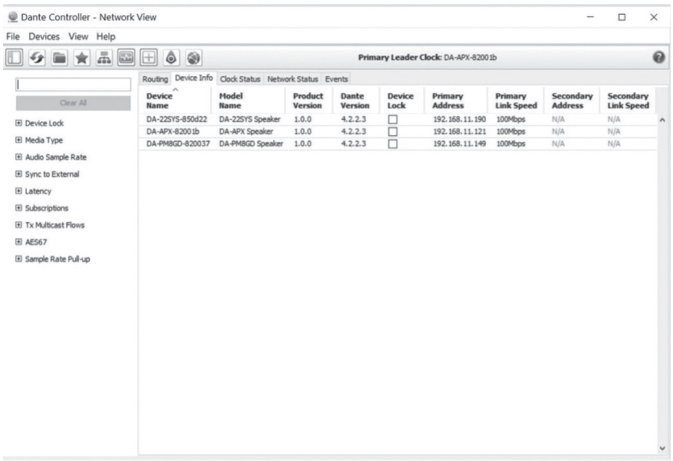
It is extremely important when selecting a router or switch for the Dante network; not all routers or switches are the same. The size of the Dante network will influence which router or switch is needed to handle network traffic. There are three things to look for at a minimum or system dropouts may 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-22SYS Product Information

- Product Model Name (Fixed) is DA-22SYS
- Dante Device Name (User Changeable) is DA-22SYS- XXXXXX, X is last 6 characters of the MAC address.
- DA-22SYS Dante configuration, 1 RX Channel, no TX Channels





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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'op ration pour viter l'exposition des niveaux excessifs pouvant causer des dommages auditifs permanents.

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System	
Type	PoE / PoE+ Indoor 2' x 2' Suspended Ceiling Mount IP Speaker
Operation Mode	Self Powered
Indicators	Network Status (On RJ-45)
Frequency Response (+/- 5dB)	86Hz - 15.5kHz
Vertical Coverage	105° (2kHz Octave Band, -6dB Points)
Horizontal Coverage	105° (2kHz Octave Band, -6dB Points)
Directivity Factor (Q)	17 @ 2 kHz
Max SPL at 1m	110dB SPL Continuous
Recommended Signal Processing	Built-In Processing
Transducers	
LF Transducer Qty and Size	(1) 8" (203mm)
HF Transducer Qty and Size	(1) 1" (26mm)
HF Crossover Frequency	2,800Hz, First Order
Cone Material	Curvilinear, Treated Industrial Paper
Sensitivity	98dB SPL Average
Driver Protection	Active Limiter
Amplification	
Type	Two-Channel Class D Topology
Power Input	PoE (IEEE 802.3af) / PoE+ (IEEE 802.3at)
Single Ch Mode, Power Rating (RMS) PoE (IEEEE 802.3AF)	10 Watts Max
Two Ch Mode, Power Rating (RMS) PoE (IEEEE 802.3AF)	5 Watts Max, plus 5W @ 8-ohm Paralleled Output
Single Ch Mode, Power Rating (RMS) PoE+ (IEEEE 802.3AT)	15 Watts Max
Two Ch Mode, Power Rating (RMS) PoE+ (IEEEE 802.3AT)	10 Watts Max, plus 10W @ 8-ohm Paralleled Output
THD	<.02%
Cooling	Passive / Convection
Driver Protection	Built-In Limiter
Audio Inputs and Outputs	
Input: Network Audio Type(s)	Audinate Dante
Input: Network Connectivity	RJ-45 Female
Output: Parallel Secondary Amplifier Output	PCB Mount 2 Position Screw Terminal
Output: Speaker Connectivity	Two x Secured Screw Terminal Block
Software	
AtlasIED Discovery & Control Software	Discover, Status, Fault Report, User Setup & Control
Audinate Dante Controller	Network Audio Routing

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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
Masking	1/3 Octave EQ Hi & Lo Pass Filter Level
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	White
Grille Material	Powder Coated Steel with 22-Guage Perforated Steel
Baffle Material	19-Guage Corrosion-Resistant Zinc Plated Steel
Mounting / Rigging Provisions	Lay-In Into a Reflected Ceiling Grid
Logo	Black and Silver
Product Dimensions (HxWxD)	23.68" x 24.10" x 5.06" (601mm x 612 mm x 129mm)
Shipping Dimensions (HxWxD)	25.5" x 25.5" x 8.38" (648mm x 648mm x 213mm)
Net Weight	15.12 lbs (6.86kg)
Shipping Weight	20.91 lbs (9.48kg)
Safety Ratings	
Safety Agency Ratings	ETL Listed to Comply with 62368-1, CSA C22.2 #62368-1, IEC 62368-1 CB Scheme and FCC; UL2043
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. Watts: All wattage figures are calculated using the rated nominal impedance.
3. Frequency response and sensitivity are half-space measurements.

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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-22SYS 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.

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