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AMK Commercial Series

## DT81-A / DT81-A-X

Network powered speakers  
 Dante™ Enabled Network Audio  
 8" Coaxial Loudspeaker Assembly  
 2 x 2 lay-in tile grill  
 (Preliminary)



### Features:

- ◆ Network enabled Loudspeaker by Dante™
- ◆ PoE+ powered without a need for local power.
- ◆ RJ45 connection for audio from PoE+ Ethernet.
- ◆ 6" polypropylene cone with inverted rubber surround.
- ◆ 1" Polyamide dome tweeter
- ◆ Weather and water resistant.
- ◆ Single Channel Audio
- ◆ Plenum Rated

The **AMK DT81-A (DT81-A-X for AES67, DDM Ready)** is a Dante™ audio network addressable and self-amplified ceiling speaker system. It is a 2x2 lay in grille speaker system for easy ceiling tile installation. No external power supply is required. The speaker system has a Class D amplifier which provides efficient use of power. The assembly comes with AMK's CX 802, highly efficient coaxial loudspeaker. This system will solve the issue of having to provide a separate amplifier or I/O interface for speaker installations.

The CX802 loudspeaker driver has excellent dispersion, wide bandwidth and a smooth frequency response which makes this the top choice for today's overhead commercial applications.

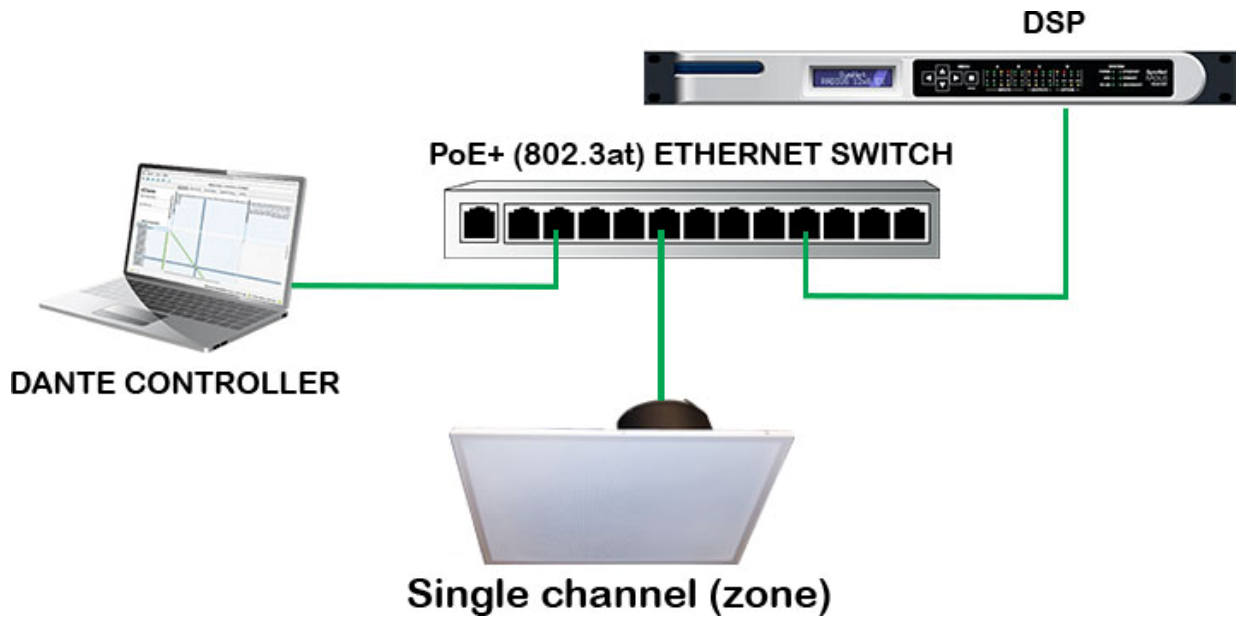
This assembly can be used in wide range of projects for paging and background music applications. The DT81-A is ideal for hotels, education, hospitals, retail stores, performing art centers, restaurants, airports, houses of worship, and board rooms. The end users will appreciate both the sound and visual quality of these speakers.

For details on Dante Networking, please visit:

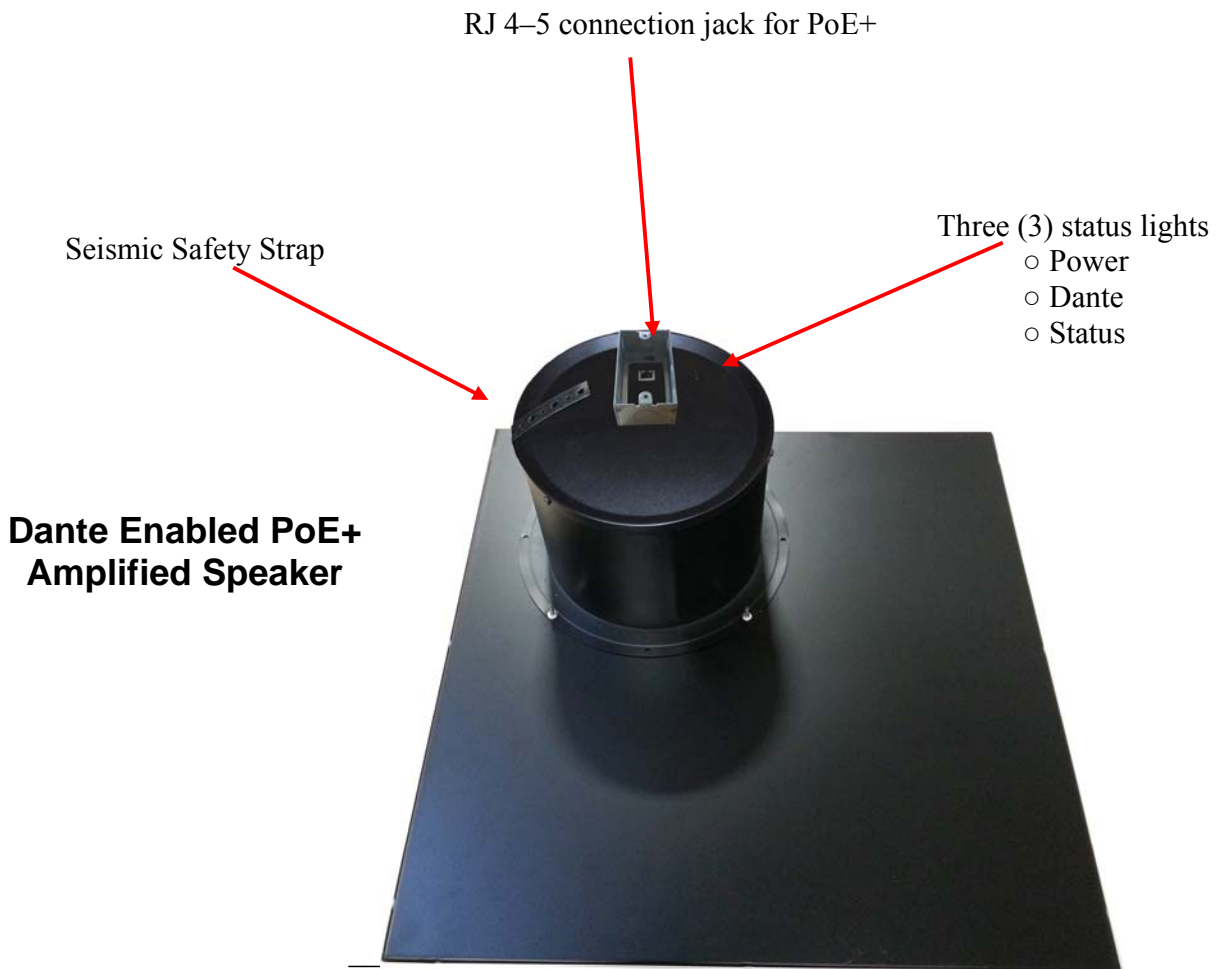
<https://www.audinate.com/resources/networks-switches>

System Specification		AMK Dante Ceiling Speaker Advantage	
Frequency Response	50 Hz - 20 kHz (+/- 3dB)	<ul style="list-style-type: none"> <li>* No need to have separate dante enabled amp or I/O interface</li> <li>* A Single RJ45 connection to main active speaker with two conductor wire connection to each of the passive speakers.</li> <li>* Highly efficient speaker driver due to barium ferrite magnet.</li> <li>* Cost effective simple one system solution.</li> <li>* 2' x 2' ceiling tile lay in system for fast installation and visually attractive alternative</li> </ul>	
Maximum SPL at 1M	105 dB		
Voice-coil diameter	1."		
Magnet	Barium Ferrite (for high efficiency of the speaker driver)		
Nominal Coverage Angle (500Hz – 4kHz Average)	110° Conical Average		
Audio Input	Dante Audio via Ethernet		
Output Power	10W / Channel (5W per speaker)		
Signal to Noise Ratio	>99dB		
Power consumption	2 Watts Standby, 25 Watts Maximum		
Input connector on active speaker	RJ-45		
Maximum wire length to companion speakers	300ft (100m) at 16-18AWG		
PoE+	IEEE 802.3at-2009	<h3>Frequency Response</h3>	
Controls	Dante™ controller software		
<b>Physical Speaker Data</b>			
Tweeter	13mm polyamide hard dome		
Woofers Cone	Polypropylene		
Surround Material	Inverted rubber Surround		
Crossover Frequency	5.5 kHz		
Enclosure Depth with Handybox	8.25"		
Grille dimension	24.0" x 24.0"		
Net weight of the speaker	17.0 lbs		
Shipping Weight (2 boxes of 4 speakers)	44.0 lbs		

## CHANNEL ZONING ILLUSTRATION



## SPEAKER CONFIGURATION \*



## Architect's & Engineer's Specifications

The powered loudspeaker system shall be **AMK DT81-A (DT81-A-X for AES67, DDM Ready)**. The speaker shall feature Audinate / Dante™ network audio signal that broadcasts 1 channel of audio. The speaker system shall be a single speaker with one channel broadcasting..

The Network switch must have PoE+ to provide the power that is needed for the system.

The active unit of the system shall have one RJ-45 jack for network audio connection.

The transducer in the loudspeaker system shall be AMK CX 802 coaxial loudspeaker. The woofer shall have a 20 oz. Barium Ferrite magnet. The two reproducer sections shall be coupled through a built-in capacitor bypass crossover. The crossover frequency shall be at 5.5 kHz. The low frequency reproducer shall have 1" (25.4mm) voice coil and the high frequency reproducer shall have 0.51" (13mm) voice coil.

The system shall have a frequency response of 55 Hz- 20 kHz (+/- 5dB). The power handling shall be 40watts at 8 ohm impedance. The sensitivity shall be 91dB at 1watt / 1meter.

The system shall be on 2' x 2' metal perforated grille and 7" deep powered speaker enclosure attached on the back of the grille. The depth of whole speaker assembly 8.5" including the junction box attached.

The total weight of the each of the speaker enclosure, tile bridge, and grille shall not exceed 17.0 lbs.

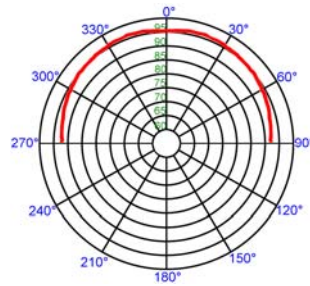
The loudspeaker system shall be AMK Innovations model **DT81-A (DT81-A-X for AES67, DDM Ready)**.

**Conforms to EIA Standards: RS-276-A, RS-278-B, RS-426-A.**

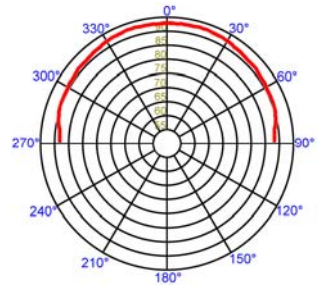
## Polar Responses

(Measurement done in house)

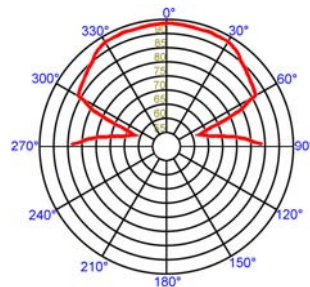
250 Hz



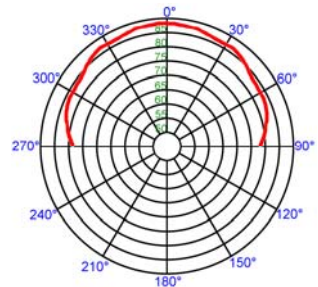
500 Hz



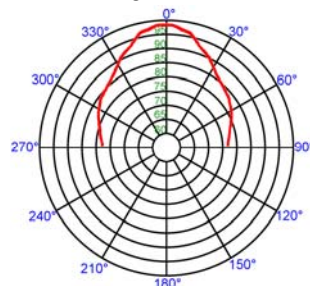
1 kHz



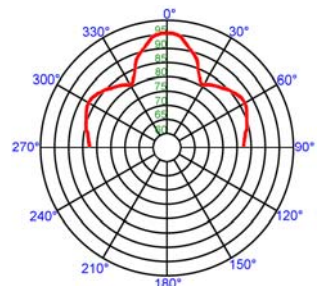
2 kHz



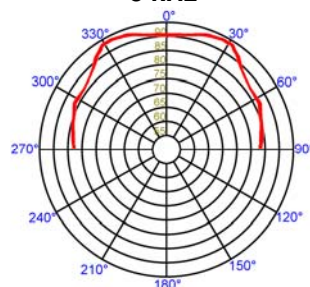
3 kHz



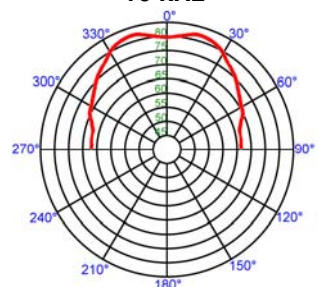
4 kHz



8 kHz



16 kHz



Freq	Deg	Q	DIdB
250 Hz	98°	5.1	7.1
500 Hz	95°	5.7	7.5
1 kHz	55°	9.9	10.0
2 kHz	55°	8.2	9.2
3 kHz	34°	14.4	11.6
4 kHz	25°	18.0	12.6
8 kHz	65°	5.1	7.1
16 kHz	52°	6.9	8.4