AMK
amkspeaker.com

Dante™
Enabled Ceiling Speakers

AMK Commercial Series

DS64-C / DS64-C-X

Network powered speakers
Dante™ Enabled Network Audio
6" Coaxial Loudspeaker Assembly
(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.
- **4** Channel Audio
- UL 2043 Listed Enclosure

The **AMK DS64-C** (**DS64-C-X** for AES67, DDM Ready) is a Dante™ audio network addressable and self-amplified ceiling speaker system. The speaker is powered by PoE+ network switch meaning no external power supply is required.
The speaker includes a Class D amplifier which provides effective use of power. This system will solve the issue of having to provide a separate amplifier or I/O interface for speaker installations.
The system comes with 6.5" coaxial 25W loudspeaker driver, CX602, that has excellent dispersion, wide bandwidth and a smooth frequency response which makes this the top choice for today's overhead commercial applications.
One PoE+ amplified speaker can power a total of (4) speakers, including (3) additional passive speakers, with one speaker per audio zone.
This assembly can be used in wide range of projects for paging and background music applications. The DS64-C is ideal for hotels, education, hospitals, retail stores, performing art centers, restaurants, airports, houses of worship, and board rooms.
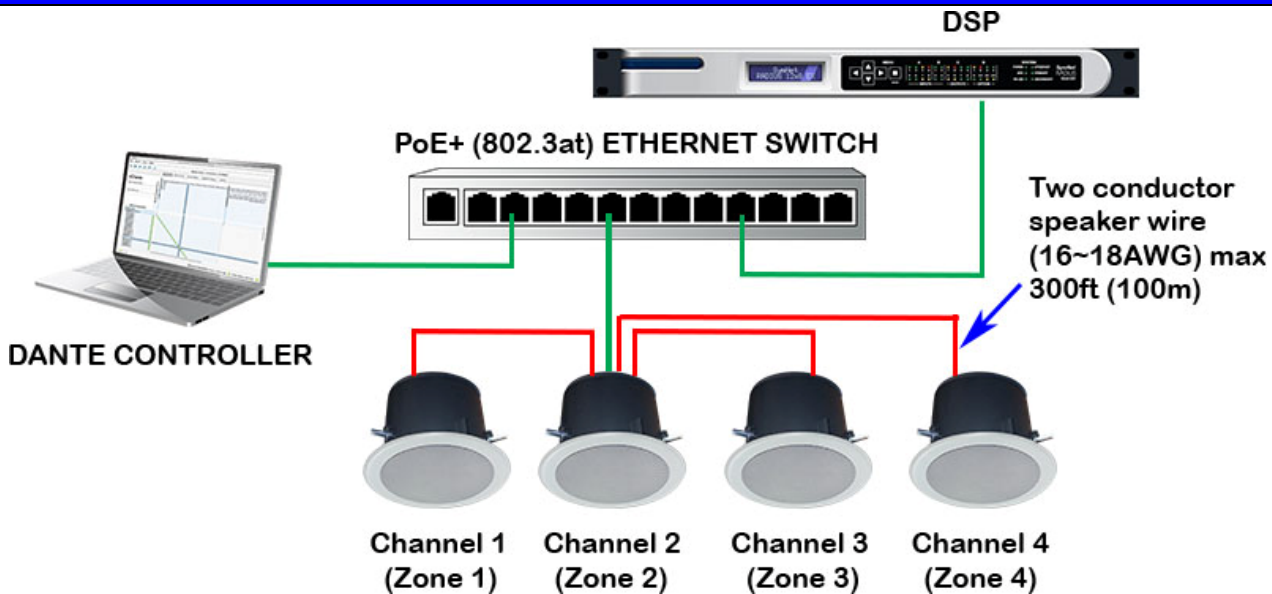
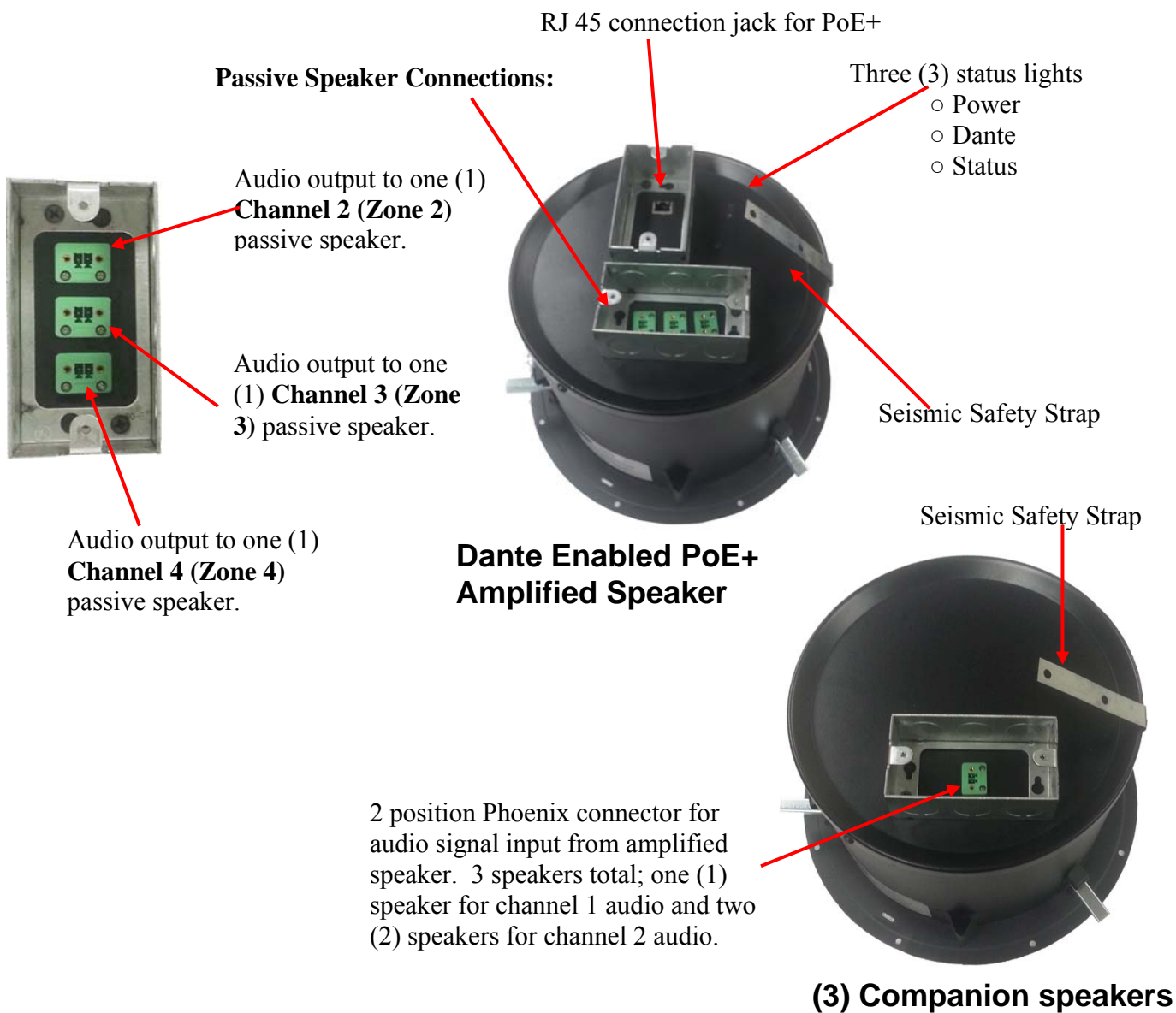**For details on Dante Networking, please visit:**
https://www.audinate.com/resources/networks-switches

System Specification

Frequency Response	100 Hz - 20 kHz (+/- 3dB)
Maximum SPL at 1M	102 dB
Voice-coil diameter	1."
Magnet	Barium Ferrite (for high efficiency of the speaker driver)
Nominal Coverage Angle (500Hz – 4kHz Average)	140° 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
Controls	Dante™ controller software
UL Listed Enclosure	UL 2043

AMK Dante Ceiling Speaker Advantage

* 4 channels broadcasting system for four separate zones.

* No need to have separate dante enabled amp or I/O interface

* A Single RJ45 connection to main active speaker with two conductor wire connection to each of the passive speakers.

* Highly efficient speaker driver due to barium ferrite magnet.

* Cost effective simple one system solution.

Physical Speaker Data

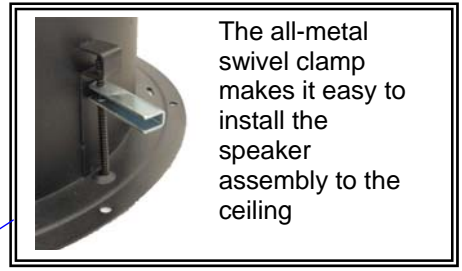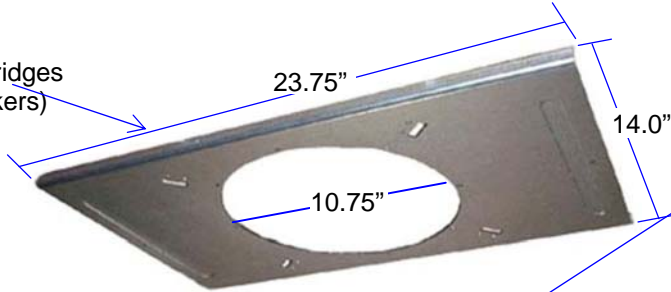|	
Tweeter	13mm polyamide hard dome
Woofer Cone	Polypropylene
Surround Material	Inverted rubber Surround
Crossover Frequency	5.0 kHz
Depth	8.25"
Diameter of the Enclosure	9.25"
Diameter of the Grille	12.75"
Enclosure Mounting	Metal Swivel Clamp
Net Weight of single speaker (Grille, Back Enclosure, and Loudspeaker)	9.0 lbs
Shipping Weight (2 boxes of 4 speakers)	52.0 lbs

Frequency Response

CHANNEL ZONING ILLUSTRATION

DSP

PoE+ (802.3at) ETHERNET SWITCH

DANTE CONTROLLER

Two conductor speaker wire (16~18AWG) max 300ft (100m)

Channel 1 (Zone 1)   Channel 2 (Zone 2)   Channel 3 (Zone 3)   Channel 4 (Zone 4)

SPEAKER CONFIGURATION *

RJ 45 connection jack for PoE+

Passive Speaker Connections:

Three (3) status lights
- ○ Power
- ○ Dante
- ○ Status

Audio output to one (1) **Channel 2 (Zone 2)** passive speaker.

Audio output to one (1) **Channel 3 (Zone 3)** passive speaker.

Audio output to one (1) **Channel 4 (Zone 4)** passive speaker.

Seismic Safety Strap

Dante Enabled PoE+ Amplified Speaker

Seismic Safety Strap

2 position Phoenix connector for audio signal input from amplified speaker. 3 speakers total; one (1) speaker for channel 1 audio and two (2) speakers for channel 2 audio.

(3) Companion speakers

INSTALLATION SCHEMATICS

Standard Ceiling Tile Bridges
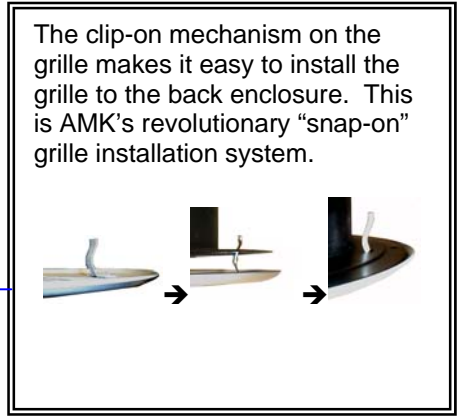(Included for all 4 speakers)

23.75"

14.0"

10.75"

The all-metal swivel clamp makes it easy to install the speaker assembly to the ceiling

Plenum Compatible
Back Enclosure
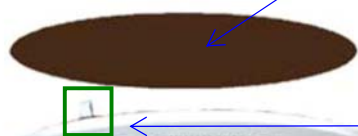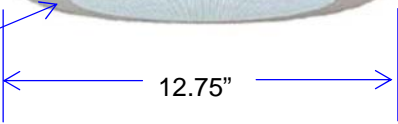for **UL 2043** Listed for
Plenum Fire Rating.

The clip-on mechanism on the grille makes it easy to install the grille to the back enclosure. This is AMK's revolutionary "snap-on" grille installation system.
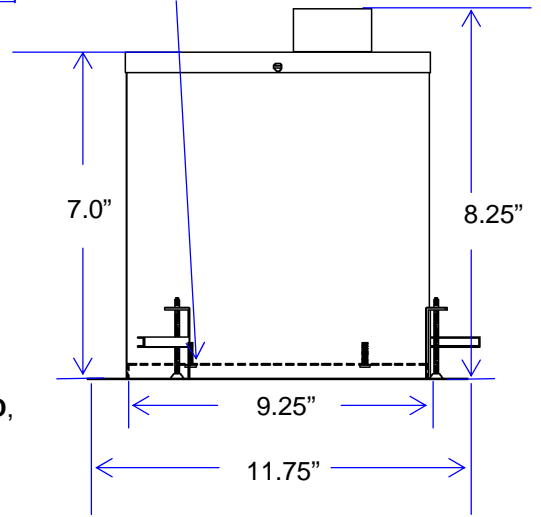
Cardboard
Paint Mask (To
be discarded
<u>after</u> Painting)

Guide for alignment of
enclosure to tile bridge
for grille installation

Recessed speaker baffle plate

White Perforated
Metal Grille

12.75"

7.0"

8.25"

For hard lid ceiling installations – Retro fit, (drywall, gypsum, wood or other non-removable material) C-ring, **SACSD**, is available.

9.25"

11.75"

Model	Mounting	Dante	AES 67
DS64-C	Tile Bridge	YES	NO
DS64-C-X	Tile Bridge	YES	YES
DS64-C-S	SACSD Ring	YES	NO
DS64-C-X-S	SACSD Ring	YES	YES

Architect's & Engineer's Specifications

The powered loudspeaker system shall be **AMK DS64-C** (**DS64-C-X** for AES67, DDM Ready). The speaker shall feature Audinate / Dante™ network audio signal that broadcasts 4 channels of audio. The speaker system shall consist of a set of 4 speakers with 2 speakers for each channel of audio broadcast.

The Ethernet network 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. Then there shall be (3)three of the two position phoenix type (euro) connections. Each of the connections shall go the passive speakers at different zones.

The speaker unit in the system shall be of the coaxial type with a 6.5" woofer of polypropylene, an inverted rubber surround, and a 1" polyamide soft dome tweeter mounted on a post. The transducer in the loudspeaker system shall be AMK CX 602 coaxial loudspeaker. The woofer shall have a 13 oz. (369g) Barium Ferrite magnet. The two transducer sections shall be coupled through a built-in capacitor bypass crossover.

The crossover frequency shall be at 5.0 kHz. The low frequency transducer shall have 1" (25.4mm) voice coil and the high frequency transducer shall have 0.51" (13mm) voice coil. The system shall have a frequency response of 65 Hz- 20 kHz (+/- 10dB).

The depth of all 4 enclosures shall be 8.25 inches. The rim diameter shall be 11.75". The enclosure diameter shall be 9.25". The depth of the enclosures shall not exceed 8.25 inches. The system shall include 4 tile bridges. The system shall have a metal strap for attachment to a structure for seismic protection.
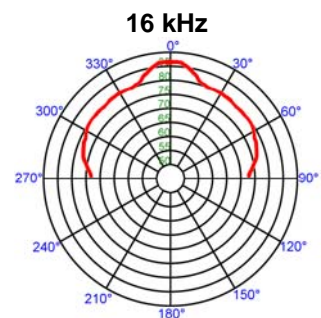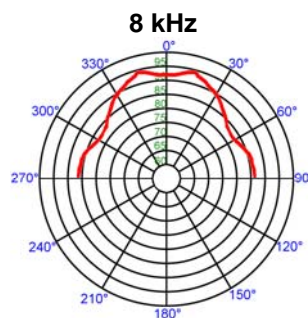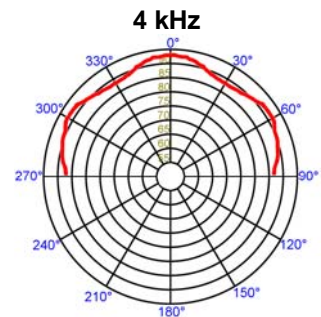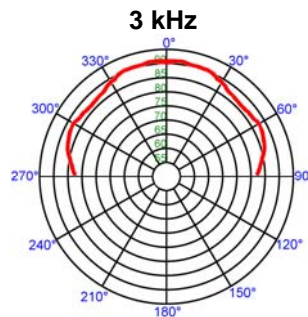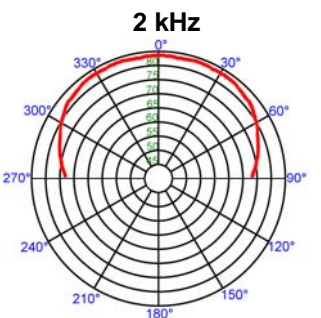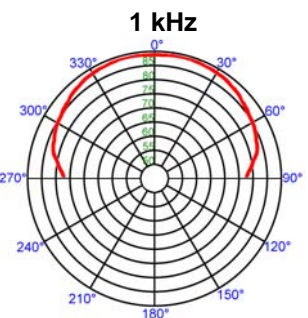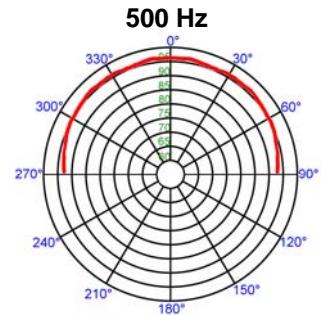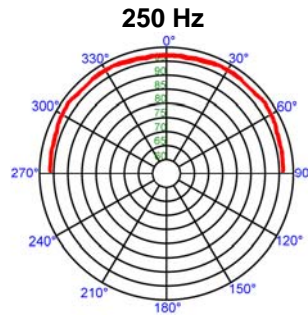
The total weight of the each of the speaker enclosure, tile bridge, and grille shall not exceed 9.0 lbs.

The loudspeaker system shall be AMK Innovations model **DS64-C**(**DS64-C-X** for AES67, DDM Ready).

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

Polar Responses
(Measurement done in house)

Freq	Deg	Q	DIdB
250 Hz	100º	3.8	5.8
500 Hz	96º	4.8	6.8
1 kHz	79º	6.8	8.3
2 kHz	72º	6.7	8.2
3 kHz	66º	9.2	9.6
4 kHz	86º	8.4	9.2
8 kHz	40º	7.1	8.5
16 kHz	16º	15.3	11.8