



## IPD-SM500i-II PRODUCT SPECIFICATIONS

System Type	5.25" coaxial, surface-mount, ported, Dante™/AES67-enabled, network
Frequency Response ( $\pm 3$ dB) <sup>1</sup>	86 Hz - 22 kHz
Frequency Response ( $\pm 10$ dB) <sup>1</sup>	60 Hz - 22 kHz
Max. SPL dB @ 1 M RMS <sup>2</sup>	98 dB
Coverage Angle ( $\pm 6$ dB @ 2 kHz)	75° Horizontal   90° Vertical
Coverage Angle ( $\pm 6$ dB @ 10 kHz)	120° Horizontal   125° Vertical
Coverage Angle (Avg. 2-10 kHz)	100° Horizontal   100° Vertical
Aiming Angle (Radial)	360°
Aiming Angle (Horizontal)	0° - 90°
Directivity Factor (Q)	4.6 (Averaged 100 Hz - 10 kHz)   9.8 @ 2 kHz
Directivity Index (DI)	5.6 dB (Averaged 100 Hz - 10 kHz)   9.9 dB @ 2 kHz
Low-Frequency Driver	1 x 133 mm (5.25") polypropylene cone, butyl rubber surround
High-Frequency Driver	25.4 mm (1") convex titanium tweeter with waveguide
Low-Frequency Voice Coil	25.4 mm   1"
Crossover Frequency	3 kHz
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	12 dB per octave, 2nd order
Enclosure Material	Injection-molded ABS, glass fiber reinforced
Grille	Aluminum with powder-coat finish
Inputs	RJ45 Ethernet port
Height	289.56 mm   11.4"
Width	212.26 mm   8.36"
Depth (Including Bracket)	266.3 mm   10.48"
Weight	4.3 kg   9.5 lbs
Included Accessories	Safety cable with speaker mounting bolt, wall mount bracket
Optional Accessories	N/A
Packaging	One per box
IP-Rating	IP44
Certifications	CE, RoHS, UL 2043, UL 60065

<sup>1</sup> Frequency response measured in half or full space as dictated by speaker mounting configuration<sup>2</sup> Max output based on max continuous power

## Description

The IPD-SM500i-II is a 5.25" two-way, surface-mount speaker for IP-addressable audio networks on the Dante and AES67 platform. It incorporates a 5.25" polypropylene woofer and 1" convex titanium tweeter with waveguide in an injection-molded, glass fiber reinforced ABS enclosure. The speaker delivers frequency response of 60 Hz - 22 kHz ( $\pm 10$  dB) with consistent, broad high-frequency dispersion supplied through SoundTube's proprietary BroadBeam Ring™ technology.

Power, audio, and control are delivered to the speaker via a CAT5 or CAT6 cable; connection on the other end is made to the STNet Switch, which provides 40 W PoE (Power over Ethernet) to each speaker. Configuration and zoning of the speaker is done via software. Should any problem occur with the speaker during operation, it will be reported immediately via SoundTube monitoring software.

Mounting hardware for the IPD-SM500i-II is included and features SoundTube's proprietary Stealth™ bracket mounting system, with a security knob to reduce tampering after placement. The speaker also offers unlimited directional aiming and a low profile. The system includes a detachable mounting plate designed for pre-mounting in either wall or pole applications.

## Features

- IP-addressable, self-powered (PoE) speaker.
- Dante™ and AES67 I/O for interconnectivity with Dante and AES67-enabled audio systems.
- BroadBeam® waveguide technology delivers a consistent dispersion pattern up to 10 kHz for maximum coverage area per speaker.
- One 5.25" (133 mm) polypropylene woofer and one 1" (25.4 mm) convex titanium tweeter with FerroFluid™ cooling.
- Fast connection of power, audio, and control functions via one CAT5 or CAT6 cable.
- 40 W PoE provided by SoundTube STNet Switch; also works with standard PoE+ and PoE switches.
- Provides report-back on any problems via SoundTube software.
- Aluminum grille with powder-coat finish.
- Includes Stealth™ bracket mounting system.
- Vertical and horizontal pivoting allow the IPD-SM500i-II to be aimed anywhere within the installation space.
- Low profile enclosure design keeps the speaker close to the wall.
- High-quality black or white paint finish.
- Included accessories: safety cable with speaker mounting bolt and wall mount bracket

## Applications

Developed for Dante audio platforms, the IPD-SM500i-II is ideal for hotels, museums, education, retail stores, restaurants, casinos, airports, or corporate installations. This speaker is ideal for indoor uses. The full frequency dispersion pattern and high sensitivity make the IPD-SM500i-II ideal for both music and paging.

## Patented Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

## BroadBeam® Wide Dispersion Technology

SoundTube's proprietary BroadBeam technology incorporates a high-frequency waveguide mated to a 1" convex aluminum tweeter. BroadBeam waveguide technology delivers a consistent BroadBeam dispersion pattern across the upper registers of the frequency spectrum. The result is an audio system requiring fewer speakers with higher intelligibility, offering reduced powder needs, shorter installation time and cost savings on shipping and labor.

## Technical Data and Specification Tools

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data is available from SoundTube Entertainment or at [www.soundtube.com](http://www.soundtube.com).

Technical data and downloads include:

- EASE™ data - 3-D polar plots.
- EASE™ Address - 2-D modeling for distributed systems
- AutoDes® Revit® software
- Tech Sheets - technical information and architectural specs for system engineers
- SoundTubeSPEC™ - Proprietary speaker placement software

## Independent Data Acquisition and Verification

All data for SoundTube speakers is independently collected from and verified by NWAA Labs ([www.nwaalabs.com](http://www.nwaalabs.com)) using their proprietary MACH testing system. All data is collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

## Architectural Specifications

The loudspeaker shall consist of a 133 mm (5.25") low-frequency transducer and a 25.4 mm (1") high-frequency transducer with a frequency dividing network installed in a vented enclosure. The low-frequency voice coil diameter shall be 25.4 mm (1"). The high-frequency transducer shall be constructed of titanium with a proprietary BroadBeam waveguide.

Performance specifications of a typical production unit shall be as follows: Usable frequency range shall extend from 60 Hz - 22 kHz ( $\pm 10$  dB). The frequency dividing network shall have a crossover frequency of 3 kHz. The unit shall accept 40 W PoE in addition to PoE+ and standard PoE, as well as the audio signal from a provided network switch, and shall be configurable via software. Maximum continuous output at 1 M with a 40 W input shall be 98 dB.

Installation for the speaker shall be by the new Stealth bracket mounting system. A tool-free system with locking mounting plate for either wall or pole mount applications shall be used. For safety redundancy, a secondary cable shall be included and attached to the speaker chassis via an included 1/4-20 UNC bolt. The external wiring input connector shall be via RJ45 Ethernet port, accepting standard RJ45 Ethernet cable. The system shall be for indoor applications.

The enclosure shall be constructed of injection-molded, glass-reinforced ABS. The grille shall be constructed of powder-coated aluminum for lasting performance. Overall cabinet dimensions shall be no more than 289.56 mm (11.4") in height by 212.26 mm (8.36") in width by 266.3 mm (10.48") in depth (including SM bracket). The unit shall include Euroblock connector and weather boot.

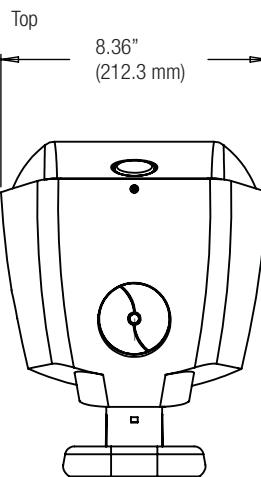
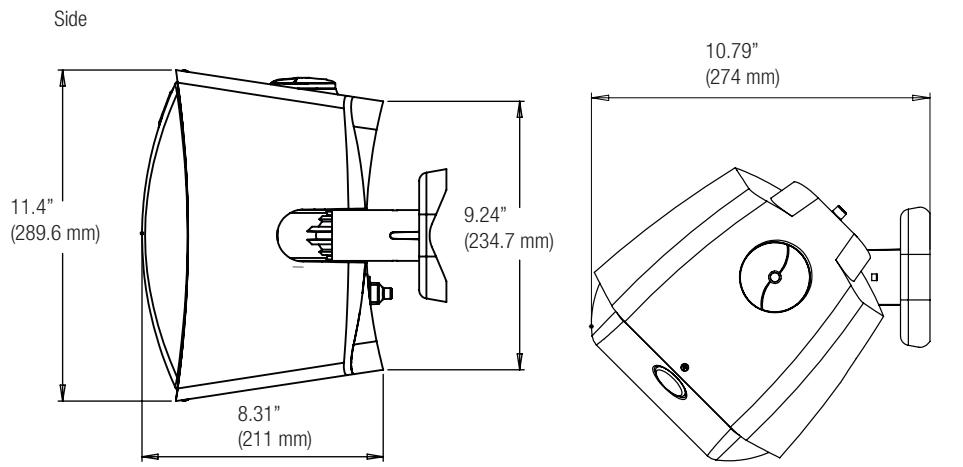
The system shall be the SoundTube IPD-SM500i-II for Dante/AES67 applications.

## SoundTube®

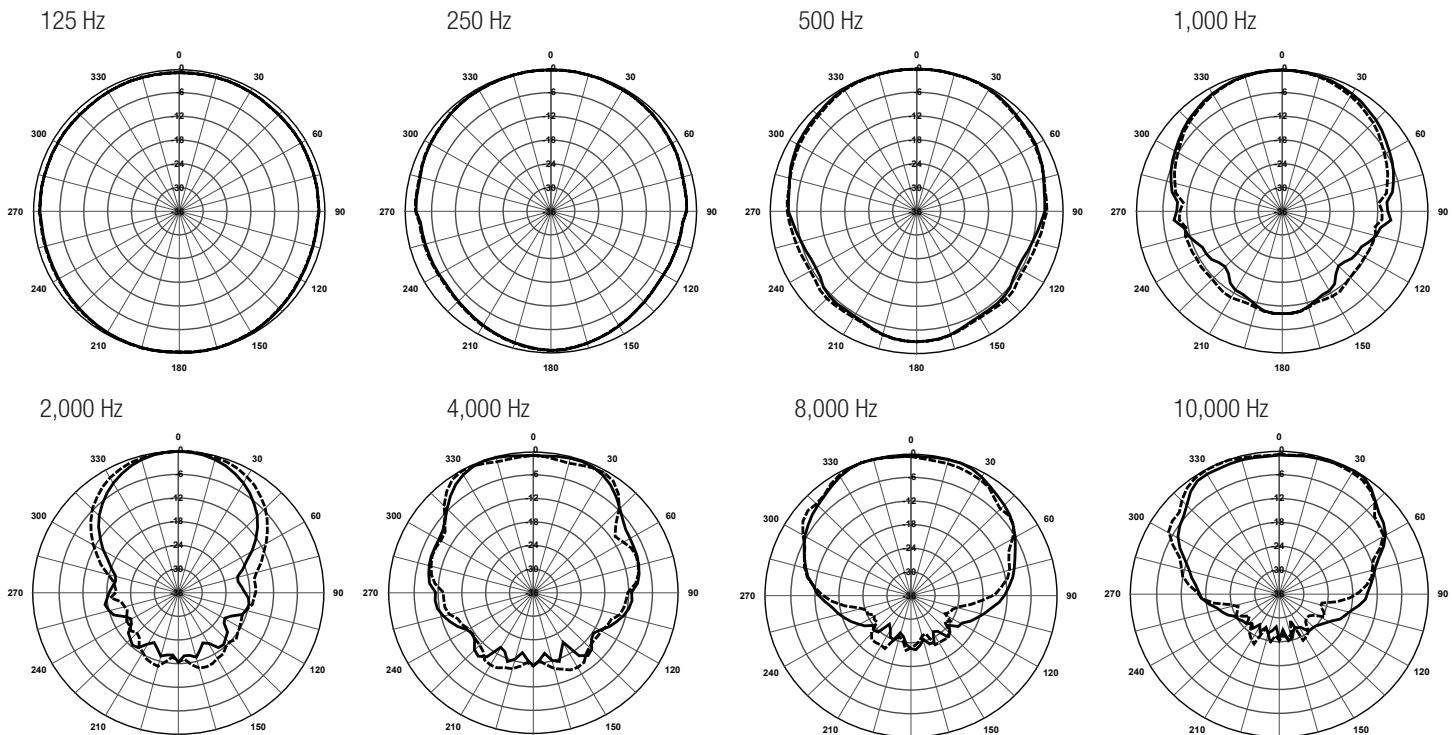
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All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

## Mechanical Drawings

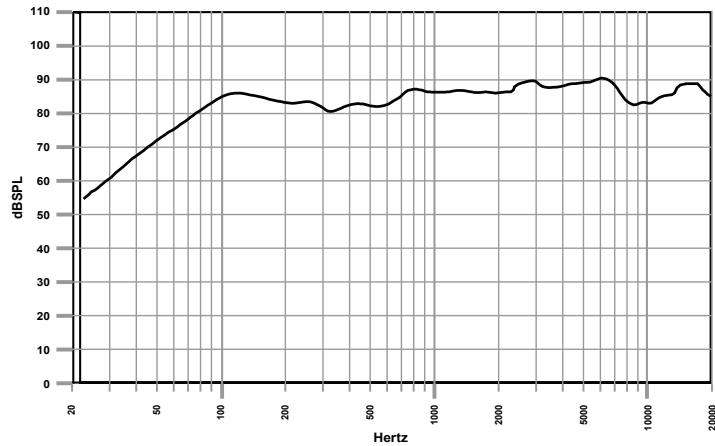


## Plots

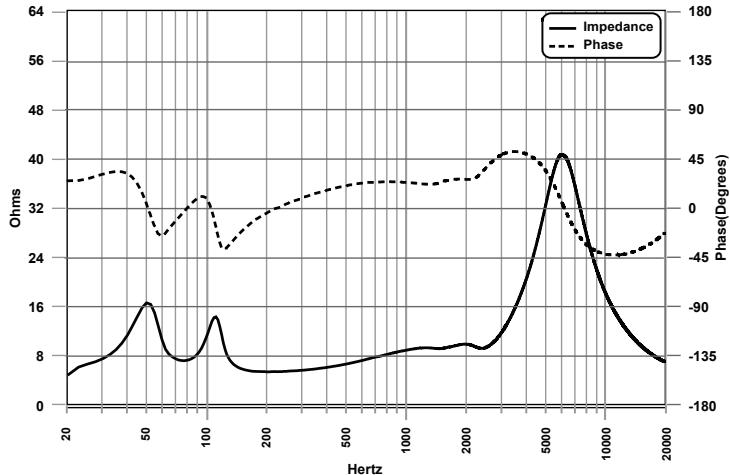


## Graphs

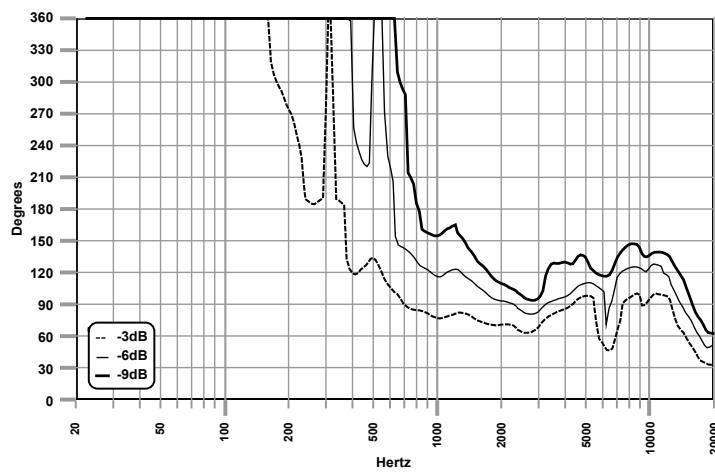
## Frequency Response



## Phase/Impedance Response



## Beamwidth



## Directivity Index (DI)

