ClearOne®

BMA 360 Ceiling Tile Microphone Array

Table of Contents

Audio Performance

Architect's and Engineer's Specification

The microphone frequency response of the Beamforming Ceiling Tile Microphone Array (BMA) shall be 20 Hz to 20 kHz with a dynamic range of >70 dB.

The integrated power amplifier of the BMA shall provide a frequency response of 20 Hz to 22 kHz.

The BMA shall have the following features and beamforming performance parameters:

- True Frequency Invariance (FiBeam™) in beam polar pattern across the voice range.
- Deep Sidelobes (DsBeam™) with a depth of less than -40 dB.
- Selectable beam count from one to twelve.

The BMA shall provide-

- Selectable coverage patterns accounting for different room shapes and sizes including rectangular, square, circular and semi-circular designs.
- User definable beam pointing for all 12 beams.

Advanced Audio Processing and Control

Architect's and Engineer's Specification

The BMA shall include the following advanced audio processing functions:

- 6th Generation ClearOne Automatic Echo Cancellation (AEC) processing.
- Noise Cancellation (NC) of up to 25 dB depth.
- Automatic Level Control (ALC) advanced speech normalization companding algorithm.
- Preprocessing audio optimization filtering features.

The BMA shall provide the following Voice Lift routing and management features:

- Submixing and auto-mixing of individual beams with up to 4 unique mixes.
- Beam silencing algorithm.
- Pre-AEC options for Submix channels

Power and Connectivity

Architect's and Engineer's Specification

The BMA shall include P-Link In and P-Link Out connectors for direct communication with a CONVERGE® Pro 2 DSP Processor.

The BMA shall receive up to 35 Watts of power via the P-Link In port, or up to 90 Watts via the PoE++ port.

Power Amplifier Specifications

Architect's and Engineer's Specification

The BMA shall support 4 channels of amplification with the following parameters:

- 5.08 mm Header, Phoenix-type Euroblock connectors
- 4 Channels at 15 Watts per channel
- Bridgeable to 2 channels @ 30 Watts

Dimensions and Mounting

The BMA shall fit 24 in, 600 mm, and 625 mm drop-ceiling grids.

The BMA shall be VESA©-mount ready, with 100 mm hole pattern for use with M4x10 mm screws.

The BMA shall have optional adapter kits to mount the BMA to hard ceilings.

Control and Configuration

Architect's and Engineer's Specification

The BMA shall be controllable by both CONSOLE® AI software and serial commands.

The BMA shall include the BEAMREPORT serial command and associated response which will provide reporting of beam activity when audio is detected. The BEAMREPORT can also be configured to only report activity if the microphone level is above the specified gating threshold.

Compliance and Warranty

Architect's and Engineer's Specification

The BMA shall be compliant with the following:

- EN 55032: 2015
- EN 61000-3-2: 2014
- EN 61000-3-3: 2013
- EN 55035: 2017
- IEC 62368-1:2014 (Second Edition)
- UL2043

The BMA warranty period shall be 3 years from the date the product is sold to the end customer.

Conclusion

The Beamforming Ceiling Tile Microphone Array shall be the BMA 360.

SALES AND INQUIRIES

Headquarters

5225 Wiley Post Way Suite 500
Salt Lake City, UT 84116

Headquarters

Main: +1.801.975.7200

Sales

Tel: +1.801.975.7200
sales@clearone.com

Tech Support

Tel: +1.801.974.3760
audiotechsupport@clearone.com