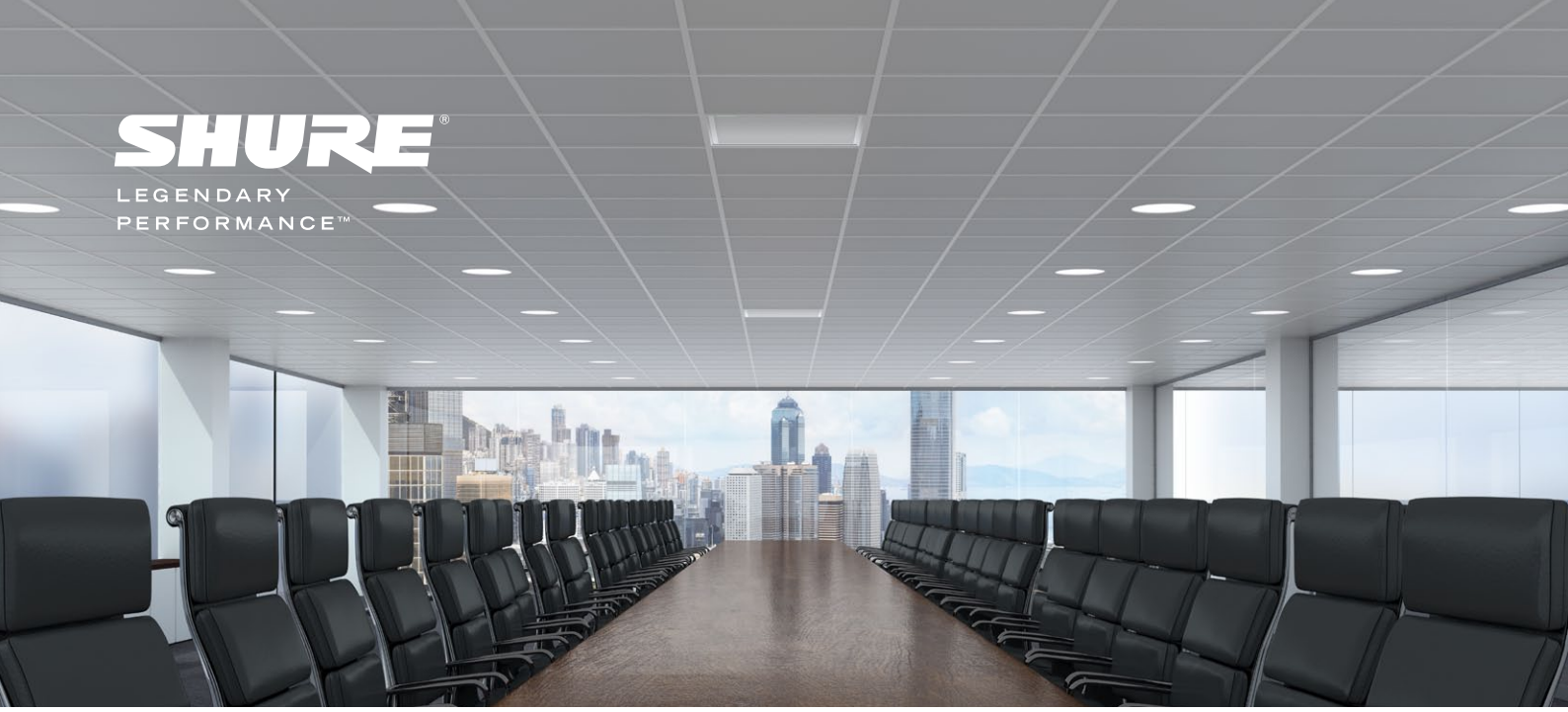



# MICROFLEX™ ADVANCE™

## MXA910 Ceiling Array Microphone

The Microflex Advance Ceiling Array is a premium networked array microphone for AV Conferencing that captures best-in-class audio from above the meeting space. Proprietary Steerable Coverage™ technology allows to position pick-up areas throughout a room, with coverage more precise than shotgun microphones.

### Configurable Coverage

Configure up to eight individual pick-up areas in three dimensions for uniform acoustic performance throughout the room and highest quality participant audio. For quick setup, each lobe can be automatically steered toward a participant using Auto Configuration in the browser-based control software.

### Flexible Networking

Mix, route and manage the signals from up to eight coverage areas as discrete channels on a Dante network over a single Ethernet cable. An individual automix channel provides added flexibility.

### Digital Signal Processing

Microflex Advance Ceiling arrays feature the new Shure IntelliMix™ DSP Suite for precise coverage settings, automatic mixing, equalization, and echo reduction.

### Workflow Efficiency

The microphone includes multiple templates to speed initial setup and ten presets for importing or exporting array configurations.

Available in aluminum, black, and white finishes. All paintable.

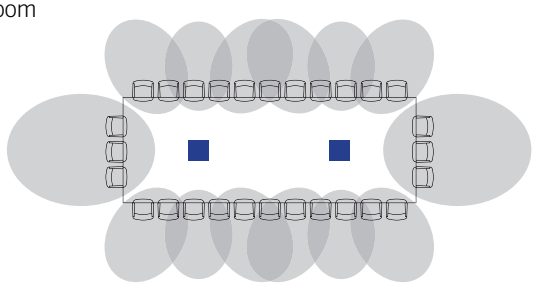
Intuitive, browser-based software allows quick and simple configuration and setup.

## Ceiling Array Coverage Examples

### Large Conference Room

*Profile*
1 Rectangular Table
28 Chairs

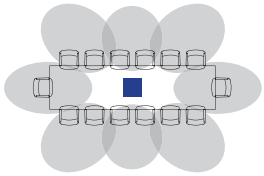
*Setup*
2 Ceiling Arrays
**14 Coverage Areas**



### Medium-Size Conference Room

*Profile*
1 Rectangular Table
14 Chairs

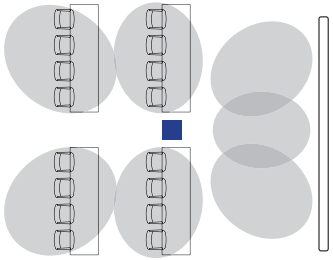
*Setup*
1 Ceiling Array
**8 Coverage Areas**



### Multi-Purpose Room | Classroom Setup

*Profile*
4 Rectangular Tables
16 Chairs

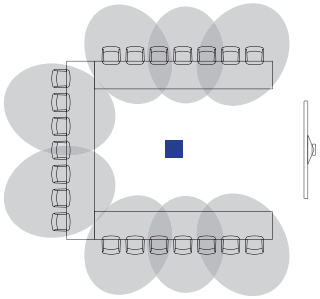
*Setup*
1 Ceiling Array
**7 Coverage Areas**



### Multi-Purpose Room | Conference Setup

*Profile*
3 Rectangular Tables
21 Chairs

*Setup*
1 Ceiling Array
**8 Coverage Areas**



## Mounting Options

Flush mount installation

VESA-format pole mount

Suspension mount

# Specifications

*All specifications measured from narrow beam width. Values for all widths are within ± 3 dB of these specifications unless otherwise noted.*

**Beam Width**

| | | |
|---|---|---|
| Adjustable | Narrow | 35 degrees |
| | Medium | 45 degrees |
| | Wide | 55 degrees |

**Connector Type**

RJ45

**Power Requirements**

Power over Ethernet (PoE), Class 0

**Power Consumption**

9W, maximum

**Weight**

4.26 kg (9.4 lbs)

**Dimensions**

| | |
|---|---|
| MXA910xx | 603.8 x 603.8 mm (23.77 x 23.77 in.) |
| MXA910xx-60CM | 593.8 x 593.8 mm (23.38 x 23.38 in.) |
| A910-25MM | 619.7 x 619.7 mm (24.4 x 24.4 in.) |

Note: the adapter accessory converts the 600 mm model to fit into a 625 x 625 mm ceiling grid.

**Control Application**

HTML5 Browser-based

**Plenum Rating**

*Requires Fyrewrap® fire protective wrap system (Included)*

UL 2043 (Suitable for Air Handling Spaces)

**Dust Protection**

IEC 60529 IP5X Dust Protected

**Operating Temperature Range**

–6.7°C (20°F) to 40°C (104°F)

**Storage Temperature Range**

–29°C (-20°F) to 74°C (165°F)

## Networking

**Cable Requirements**

Cat 5e or higher (shielded cable recommended)

## Audio

**Frequency Response**

180 to 17,000 Hz

**Dante Digital Output**

| | |
|---|---|
| Channel Count | 9 total channels (8 independent transmit channels, 1 IntelliMix® Automatic mixing transmit channel) |
| Sampling Rate | 48 kHz |
| Bit Depth | 24 |

**Sensitivity**

*at 1 kHz*

0.75 dBFS/Pa

**Maximum SPL**

*Relative to 0 dBFS overload*

93.25 dB SPL

**Signal-To-Noise Ratio**

*Ref. 94 dB SPL at 1 kHz*

83 dB A-weighted

**Latency**

*Not including Dante latency*

6 ms

**Self Noise**

11 dB SPL-A

**Dynamic Range**

82.25 dB

**Built-in Digital Signal Processing**

| | |
|---|---|
| Per Channel | Equalizer (4-band Parametric), Mute, Gain (140 dB range) |
| System | IntelliMix® Automatic mixing, Echo Reduction |

**Intelligibility Scale**

*Equivalent acoustic performance, compared to a cardioid gooseneck microphone (environment dependent)*

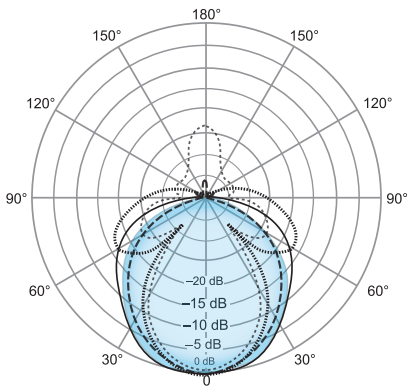
Cardioid distance multiplied by 1.6

[1] 1 Pa=94 dB SPL

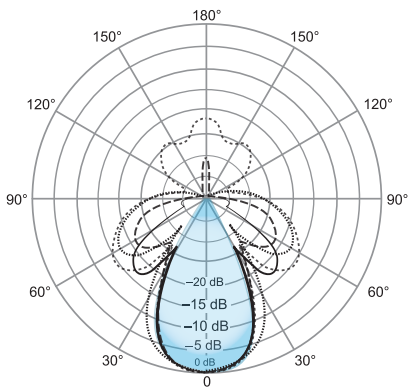
# Polar Response

Polar response measured directly on-axis from a distance of 6 feet (1.83 m).

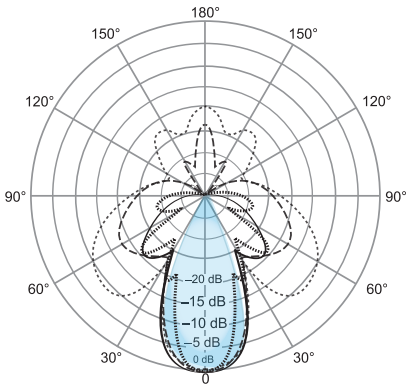
Wide




Medium



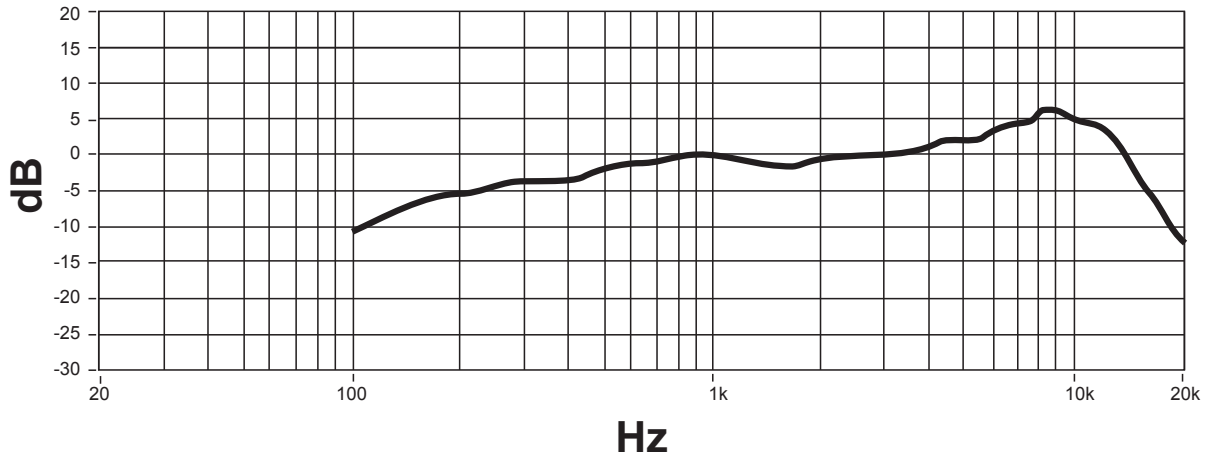

Narrow




1,000 Hz
1,500 Hz
2,500 Hz
4,000 Hz

## Frequency Response

Frequency response measured directly on-axis from a distance of 6 feet (1.83 m).




## IP Ports and Protocols

**Shure Control**

| Port | TCP/UDP | Protocol | Description | Factory Default |
|---|---|---|---|---|
| 21 | tcp | FTP | Required for firmware updates (otherwise closed) | Closed |
| 22 | tcp | SSH | Not supported | Closed |
| 23 | tcp | Telnet | Standard console interface | Closed |
| 68 | udp | DHCP | Dynamic Host Configuration Protocol | Open |
| 80* | tcp | HTTP | Required to launch embedded web server | Open |
| 427 | tcp/udp | SLP† | Required for inter-device communication | Open |
| 443 | tcp | HTTPS | Not supported | Closed |
| 161 | tcp | SNMP | Not supported | Closed |
| 162 | tcp | SNMP | Not supported | Closed |
| 843* | tcp | Flash | Required for web application | Open |
| 2202 | tcp | ASCII | Required for 3rd party control strings | Open |
| 5353 | udp | mDNS† | Required for device discovery | Open |
| 5568 | udp | SDT† | Required for inter-device communication | Open |
| 8023 | tcp | Telnet | Debug console interface | Password |
| 8180* | tcp | Flash | Required for web web application | Open |
| 8181* | tcp | Flash | Required for web web application | Open |
| 8427 | udp | Multcast SLP† | Required for inter-device communication | Open |
| 64000 | tcp | Telnet | Required for Shure firmware update | Open |

**Dante Audio & Controller**

| Port | TCP/UDP | Protocol | Description |
|---|---|---|---|
| 162 | udp | SNMP | Used by Dante |
| [319-320]* | udp | PTP† | Dante clocking |
| 4321, 14336-14600 | udp | Dante | Dante audio |
| [4440, 4444, 4455]* | udp | Dante | Dante audio routing |
| 5353 | udp | mDNS† | Used by Dante |
| [8700-8706, 8800]* | udp | Dante | Dante Control and Monitoring |
| 8751 | udp | Dante | Dante Controller |
| 16000-65536 | udp | Dante | Used by Dante |

*These ports must be open on the PC or control system to access the device through a firewall.

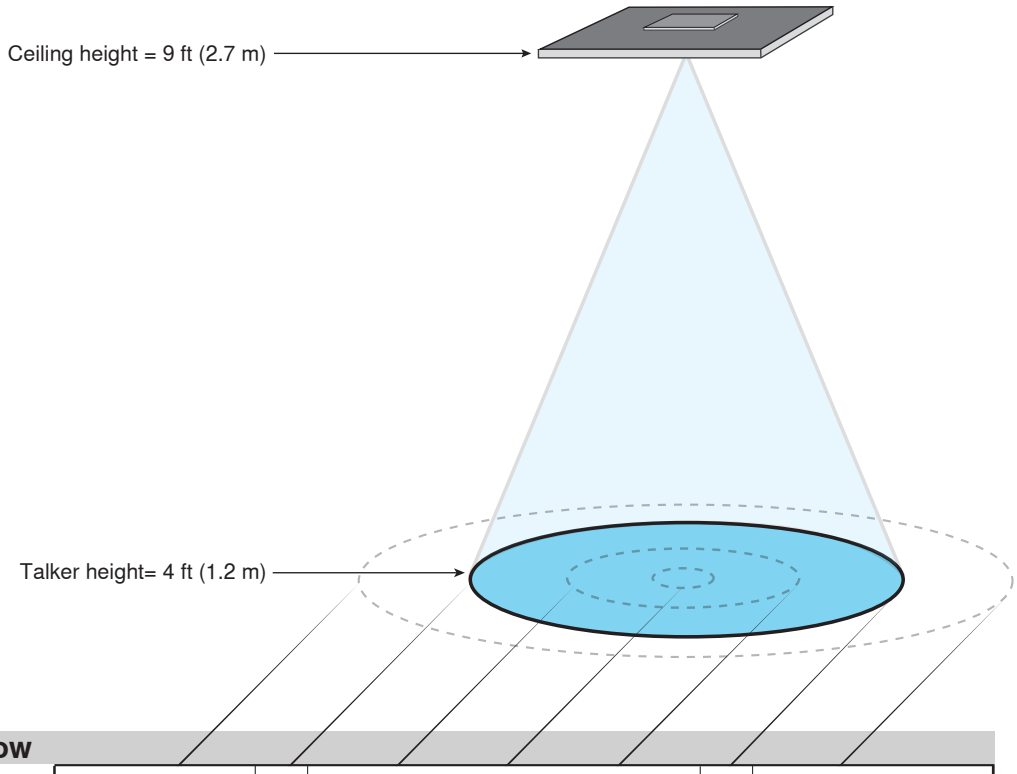
†These protocols require multicast. Ensure multicast has been correctly configured for your network.

# Lobe Sensitivity

The edge of the blue coverage area for each channel in the web application represents where the sensitivity reaches -6 dB. Understanding how lobe sensitivity is displayed helps to:

- Provide complete coverage in a space, either by adding lobes or changing the lobe width. This ensures the sensitivity is within 6 dB in all areas. It is acceptable for lobes to slightly overlap.
- Ensure that spacing and isolation are adequate to reduce noise and maximize automatic mixing performance.

*Measured at 1 kHz, on-axis*




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Narrow** | | | | | | | |
| Centimeters | 55 | 44 | 30 | 0 | 30 | 44 | 55 |
| Inches | 22 | 17 | 12 | 0 | 12 | 17 | 22 |
| **dB** | -12 | **-6** | -3 | 0 | -3 | **-6** | -12 |
| **Medium** | | | | | | | |
| Centimeters | 69 | 47 | 38 | 0 | 38 | 47 | 69 |
| Inches | 27 | 18 | 15 | 0 | 15 | 18 | 27 |
| **dB** | -12 | **-6** | -3 | 0 | -3 | **-6** | -12 |
| **Wide** | | | | | | | |
| Centimeters | 92 | 62 | 44 | 0 | 44 | 62 | 92 |
| Inches | 36 | 24 | 17 | 0 | 17 | 24 | 36 |
| **dB** | -12 | **-6** | -3 | 0 | -3 | **-6** | -12 |