



## Microflex® Advance™

### Elegant design, Eloquent performance

**Preview:** April 4 – 7, The Westin New York at Times Square 270 West 43rd Street

**Launch:** June 4, InfoComm Las Vegas

**Web:** [www.shure.com/mxa](http://www.shure.com/mxa)

Introducing Microflex® Advance™ networked array microphones: versatile and elegant AV conferencing solutions that discreetly and precisely capture the richness of the human voice.

Microflex Advance Ceiling Arrays fundamentally change voice coverage and capture in AV conferencing environments by providing configurable and invisible coverage from above for rooms of any size, shape or application.

Microflex Advance Table Arrays provide versatile and adjustable coverage areas in elegant, low-profile tabletop solutions.

Both feature new Shure software tools that enable AV conference room designers to be more creative and conference managers to be more productive.

Ultimate AV Flexibility | Agile Tabletop Performance  
Both use Steerable Coverage™ technology to position pick-up areas throughout a room with coverage more precise than shotgun microphones, and to capture pristine audio around conferencing tables of different sizes, shapes and uses.



# Microflex<sup>®</sup> Advance<sup>™</sup>

## CEILING ARRAY MICROPHONE

Introducing Microflex<sup>®</sup> Advance<sup>™</sup> Ceiling Array microphones, premium networked AV conferencing microphones that provide configurable and invisible coverage from above for rooms of any size, shape or application. The Ceiling Array is ideal for formal boardrooms where a clean work surface is preferred. This versatile and elegant solution discreetly and precisely captures the richness of the human voice.

### Configurable Coverage

Configure up to eight pick-up patterns in three dimensions and adjust them for uniform acoustic performance throughout the room. Each Ceiling Array lobe can be steered toward a participant using the Auto Configuration mode in the control software for quick audio setup and capture.

### Steerable Coverage<sup>™</sup>

Revolutionary technology includes Steerable Coverage which utilizes up to eight independent lobes to capture high quality participant audio from overhead.

### 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.

### Workflow Efficiency

The microphone includes nine templates to speed initial set-up and ten presets for importing or exporting array configurations between multiple arrays and/or PCs. Browser-based control software provides an intuitive user interface that allows for simple configuration of presets, templates and polar patterns.

### Digital Signal Processing

Microflex Advance Ceiling arrays feature the new Shure IntelliMix<sup>®</sup> DSP Suite for precise coverage settings, automatic mixing, equalization, and echo reduction.





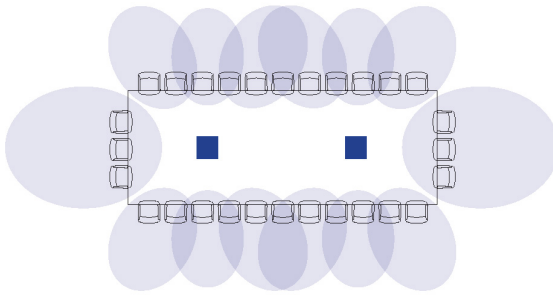
# MXA910 Ceiling Array Coverage

## Large Conference Room

2 Ceiling Arrays

Profile  
28 Chairs  
1 Rectangular Table

14 Coverage Areas

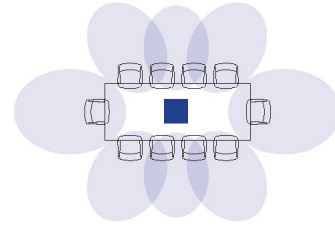


## Medium Conference Room

1 Ceiling Array

Profile  
10 Chairs  
1 Rectangular Table

8 Coverage Areas

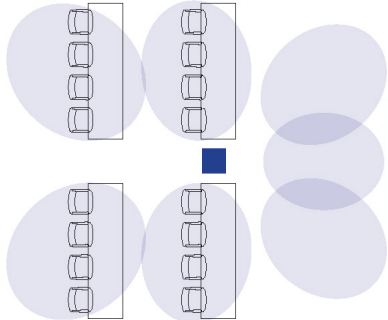


## Multi-Purpose Room | Classroom Setup

1 Ceiling Array

Profile  
16 Chairs  
4 Rectangular Tables

7 Coverage Areas

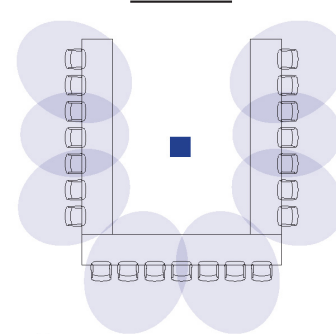


## Multi-Purpose Room | Conference Setup

1 Ceiling Array

Profile  
21 Chairs  
3 Rectangular Tables

8 Coverage Areas

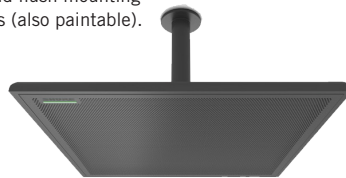


### Architectural details

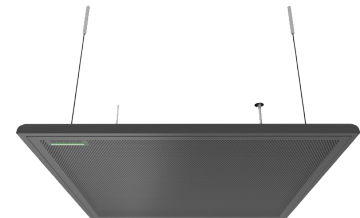
Ceiling Array microphones are designed for suspension, pole and flush mounting in imperial or metric formats. Black, white & aluminum finishes (also paintable).



Flush mount installation



VESA/ pole mount installation



Suspension mount installation

## Specifications

All specifications measured from cardioid polar pattern. Values for all patterns are within  $\pm 3$  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 or Class 3

### Logic Connections

Sent as Ethernet command strings  
LED IN, MUTE OUT

### Weight

4.26 kg (9.4 lbs)

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

### 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  
0.65 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

### Intelligibility Scale

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

Cardioid distance multiplied by 1.6

# Microflex® Advance™

## TABLE ARRAY MICROPHONE

Introducing Microflex® Advance™ Table Array is a networked array microphone ideal for AV Conferencing applications where premium audio and a low profile appearance are paramount. Shure IntelliMix® DSP Suite Steerable Coverage™ technology deploys four discrete zones of table coverage for best in class audio capture, configuring all parameters seamlessly through a browser-based graphical user interface.



**Color Options:**  
Available in white, black and aluminum finishes

### Proprietary Steerable Coverage™

Set the coverage geometry for up to four areas in 15° increments, and specify the polar pattern for each configuration including cardioid, supercardioid, hypercardioid, omnidirectional, bi-directional and a patent pending toroid pattern.

### Flexible Networking

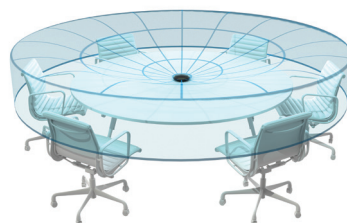
Mix, route and manage the signals from up to four coverage areas as discrete channels on a Dante network over a single Ethernet cable. An individual automix channel provides added flexibility.

### Mute Control

Program the touch-sensitive mute button for toggle, push-to-mute, push-to-talk or disable settings or to send controls to external devices.

### Configurable LED

The configurable multi-colored LED light ring shows the mute status of the microphone in use and displays lighted segments during set-up to confirm coverage areas and automix settings.



### Toroid Pattern

Optimizes the voices of seated or standing participants and rejects overhead noise from projectors or other sources.



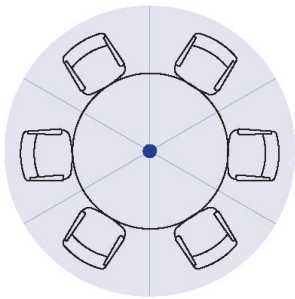
# MXA310 Table Array Coverage

## Round Work Surface

1 Table Array

Profile  
6 Chairs  
1 Round Table

3 Bi-Directional Patterns

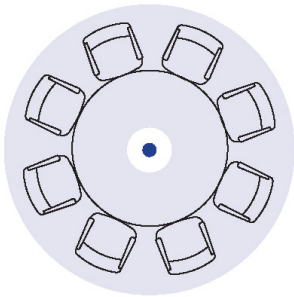


## Round Work Surface

1 Table Array

Profile  
8 Chairs  
1 Round Table

1 Toroid Pattern

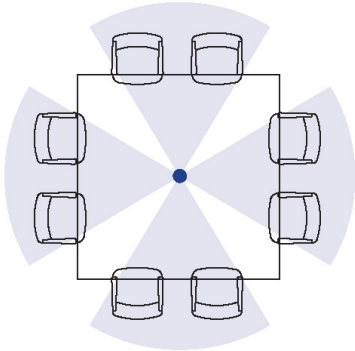


## Square Work Surface

1 Table Array

Profile  
8 Chairs  
1 Square Table

2 Bi-Directional Patterns

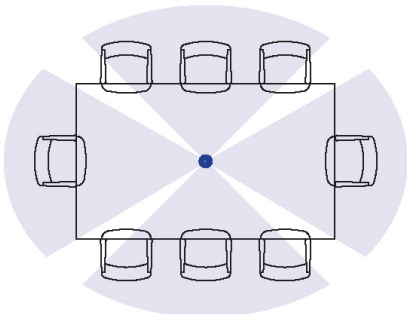


## Rectangular Work Surface

1 Table Array

Profile  
8 Chairs  
1 Rectangular Table

1 Bi-Directional Pattern  
2 Cardioid Patterns



## Specifications

All specifications measured from cardioid polar pattern. Values for all patterns are within  $\pm 3$  dB of these specifications unless otherwise noted.

### Polar Pattern

All channels independently adjustable  
Cardioid, Hypercardioid, Supercardioid, Toroid,  
Omnidirectional, Bidirectional

### Connector Type

RJ45

### Power Requirements

Power over Ethernet (PoE)  
Class 2 or Class 0

### Logic Connections

Sent as Ethernet command strings  
LED IN, MUTE OUT

### Weight

362 g (0.8 lbs)

### Dimensions

H x W x D  
3.6 x 13.4 x 13.4 cm (1.4 x 5.3 x 5.3 in.)

### Control Application

HTML5 Browser-based

### Audio

#### Frequency Response

100 to 20,000 Hz

#### Dante Digital Output

Channel Count	5 total channels (4 independent transmit channels, 1
Sampling Rate	48 kHz
Bit Depth	24

#### Sensitivity

at 1 kHz, open circuit voltage, -15 dB Gain Setting  
-21 dBFS/Pa

### Maximum SPL

1 kHz at 1% THD, 1 k $\Omega$  load, -15 dB Gain Setting  
115.2 dB SPL

### Signal-To-Noise Ratio

Ref. 94 dB SPL at 1 kHz, -15 dB Gain Setting

Cardioid	75 dB
Toroid	67 dB

### Latency

Not including Dante latency

0.65 ms

### Self Noise

-15 dB Gain Setting

Cardioid	19.2 dB SPL-A
Toroid	26.8 dB SPL-A

### Dynamic Range

-15 dB Gain Setting

Cardioid	96 dB
Toroid	90 dB SPL

### Built-in Digital Signal Processing

Per Channel	Equalizer (4-band Parametric)[2], Mute, Gain (140 dB range)
System	IntelliMix Automatic mixing

## Networking

### Cable Requirements

Cat 5e or higher (shielded cable recommended)

# Microflex<sup>®</sup> Advance<sup>™</sup>

## ANI4IN/4OUT Audio Network Interfaces

New ANI4IN and ANI4OUT devices are 4-Channel Dante<sup>™</sup> Mic/Line Audio Network interfaces with XLR or Block Inputs/Outputs that bring up to four wired microphones onto or from a Dante network for easy audio routing and browser-based connectivity.



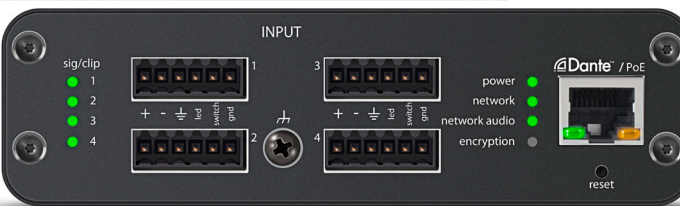
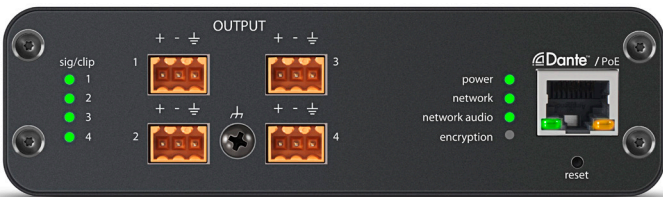
### ANI: Inputs

- 4-Channel Dante<sup>™</sup>
- Mic/Line Audio Network Interface with XLR or Block Inputs



### ANI: Outputs

- 4-Channel Dante<sup>™</sup>
- Mic/Line Audio Network Interface with XLR or Block Outputs



- Browser-based remote control
- Logic Pin state settings (ANI4IN-BLOCK)
- Hardware status LEDs
- Third-party control system compatible



- Power over Ethernet (PoE)
- Audio summing
- Per Channel 4-Band Parametric Equalization

Connectivity  
Dante<sup>™</sup>  
PoE



Dante Audio Networking enables delivery of low-latency, multi-channel, uncompressed digital audio over a standard Ethernet network. ANI converters configure MX wired microphones for Dante digital networking.



**SHURE**  
LEGENDARY  
PERFORMANCE<sup>™</sup>

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## SIMPLY SMARTER SOLUTIONS

Both arrays include the Shure IntelliMix DSP Suite, an expanded toolset of proprietary DSP tools that optimize voice quality by reducing room noise and improving speech intelligibility.

### Steerable Coverage™

Configure and control incredibly accurate polar patterns captured from participants in any location of a meeting space. Preconfigured templates in the control software simplify setup.

### Automatic Mixing

Increases presence and reduces noise pickup and transmission. This yields improved clarity, intelligibility and seamless interaction between conference sites.

### Echo Reduction (Ceiling Array only)

Employs a simple, reliable way of reducing acoustic echo by keeping the microphone channels turned down when no one in the room is talking. Very effective as a front end to codecs with single channel AEC.

### Parametric Equalization (PEQ)

Each Ceiling Array and ANI4 channel features a 4-band PEQ for the precise control of sound, while Table Arrays feature a 4-band PEQ that is assignable to any channel including the Automatic Mixer output channel.

### Browser-Based Tools

Both array microphones and the ANI4s feature browser-based tools that make it easy to remotely monitor and control microphones, configure capture areas using convenient templates, set polar pattern preferences and specify mixing and routing preferences.

### Rich Third-Party Controls

Both microphones work seamlessly with audio conferencing processors, video conferencing codecs, and PC-based conferencing. They also offer an extensive API for versatile integration and control of muting, presets, LED states and other settings via third-party control systems.

