SHURE®

Microflex® Advance™

# ELEVATE YOUR AUDIO.

## SIGNATURE AV CONFERENCING

# Elegant design, eloquent performance

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**
Celling Array microphone
Table Array microphone

Shure Microflex Advance array microphones feature patent-pending new technologies that fundamentally change voice coverage and capture in AV conferencing environments.

Microflex Advance Ceiling Arrays provide 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.

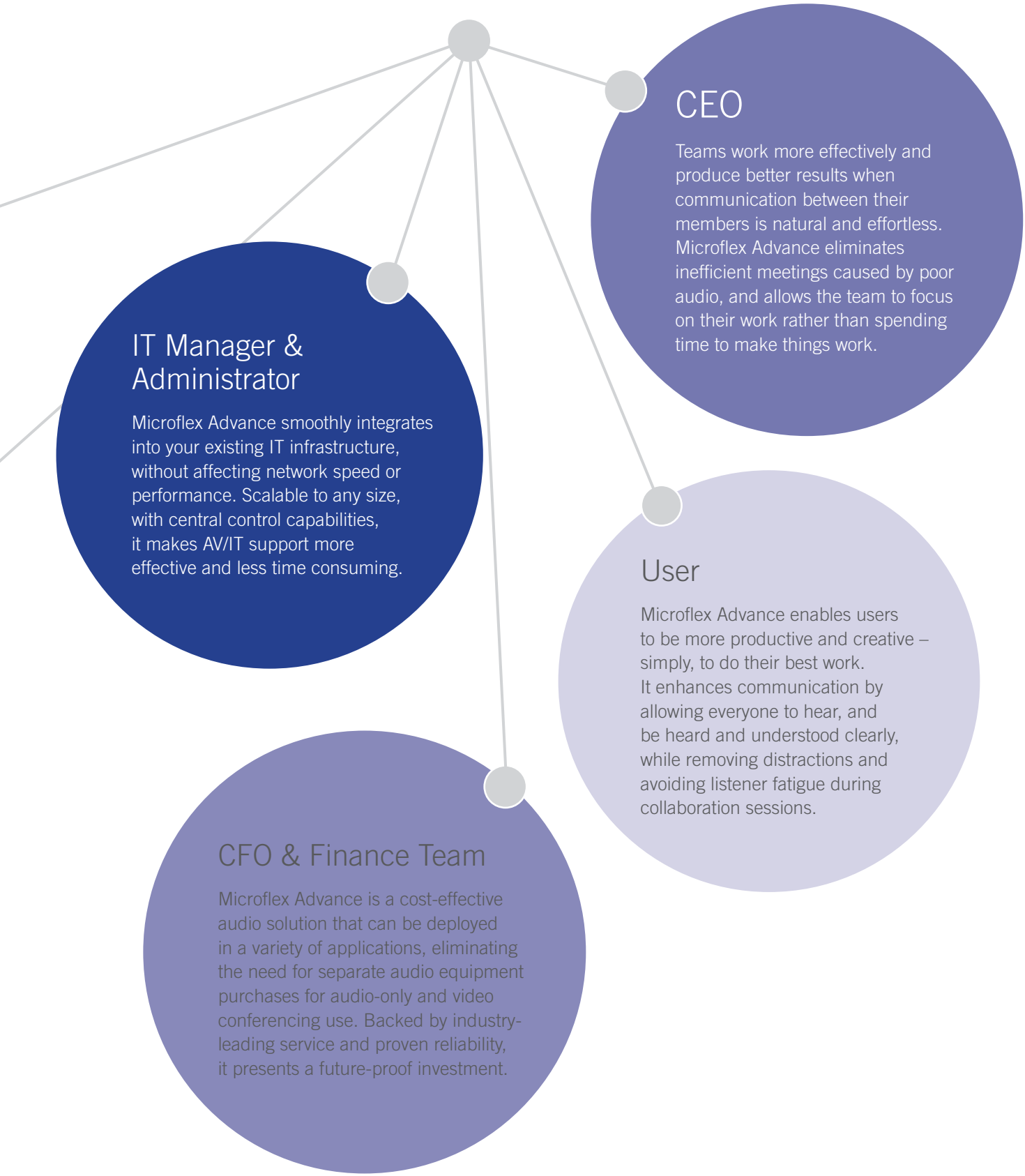
## System Designer & Integrator

Microflex® Advance™ offers increased efficiency and unique application flexibility that let you deliver great AV solutions much faster. The power of Shure Intellimix® and Dante™ make system design, installation, and configuration simple and straightforward.

## Architect & Interior Designer

Providing an “invisible” audio solution, Microflex Advance enables architects and interior designers to create visually stunning workspaces, without sacrificing sound quality. It gives clients the style they want and the audio quality they need.

# Benefits For The Entire Organization



## CEO

Teams work more effectively and produce better results when communication between their members is natural and effortless. Microflex Advance eliminates inefficient meetings caused by poor audio, and allows the team to focus on their work rather than spending time to make things work.

## IT Manager & Administrator

Microflex Advance smoothly integrates into your existing IT infrastructure, without affecting network speed or performance. Scalable to any size, with central control capabilities, it makes AV/IT support more effective and less time consuming.

## User

Microflex Advance enables users to be more productive and creative – simply, to do their best work. It enhances communication by allowing everyone to hear, and be heard and understood clearly, while removing distractions and avoiding listener fatigue during collaboration sessions.

## CFO & Finance Team

Microflex Advance is a cost-effective audio solution that can be deployed in a variety of applications, eliminating the need for separate audio equipment purchases for audio-only and video conferencing use. Backed by industry-leading service and proven reliability, it presents a future-proof investment.

# Ultimate AV flexibility

Ceiling Arrays use Steerable Coverage™ technology to position pick-up areas throughout a room with coverage more precise than shotgun microphones.

## 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.

## 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 multiple templates to speed initial set-up and ten presets for importing or exporting array configurations.

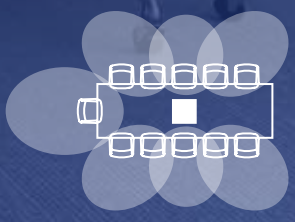
## Digital Signal Processing

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

## Application Profile

A Ceiling Array microphone is ideal for formal boardrooms where a clean work surface is preferred. This microphone is configured to capture seven discrete listening areas with coverage for an 11-seat meeting.

Under average room conditions, at a height of 10 feet with seated participants, the recommended coverage diameter is 30 feet.



**Coverage Map**
11 Chairs
1 Rectangular Table
7 Coverage Areas

# Agile tabletop performance

Table Array microphones use Steerable Coverage™ technology to capture pristine audio around conferencing tables of different sizes, shapes and uses.

## Configurable 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

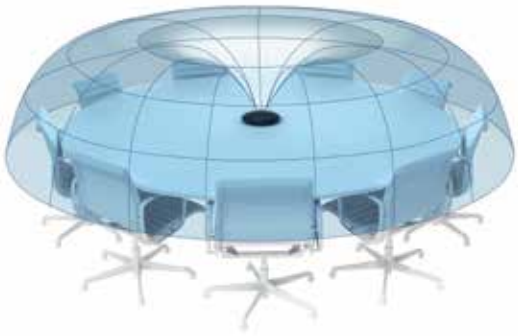
Mix, route and manage the signals from up to four coverage areas as discrete channels on a Dante™ network over a single Ethernet cable. An individual automix channel provides added flexibility.

## Mute Controls

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

## LED Displays

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.



**Exclusive Toroid Pattern**
Rejects overhead noise from HVAC, projectors and other sources, optimizing the voices of seated or standing meeting participants.

**Color LED Choices**
Specify one of 8 LED colors to communicate microphone mute states, room security levels or other conditions.

## Application Profile

Table Arrays are ideal for meeting rooms where the number of attendees varies and an uncluttered table is preferred.

The image above shows the MXA310 with two cardioid patterns and one bi-directional pick-up pattern to capture the voices of six participants. Note that this application scenario is one of many that can utilize up to four channels.

**Coverage Map**
6 Chairs | 1 Round Table
1 Bi-Directional Pattern
2 Cardioid Patterns

# 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.

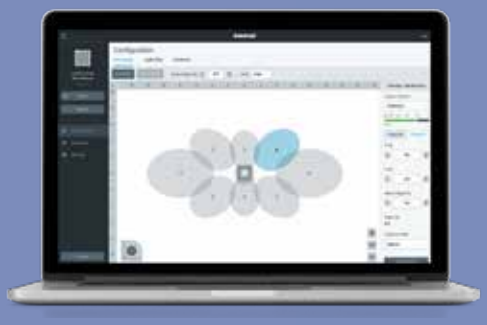
## Shure Intellimix® DSP Suite

**Steerable Coverage™**
Configure and control incredibly accurate polar patterns captured from participants in any location of a meeting space. Pre-configured templates in the control software simplify setup.

**Automatic Mixing**
Increases clarity and reduces noise. This yields improved quality, intelligibility and seamless interaction between conference sites.

**Echo Reduction** *(Ceiling Array only)*
Employs a simple way of reducing acoustic echo by preventing far end participants from activating local microphone channels. 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.

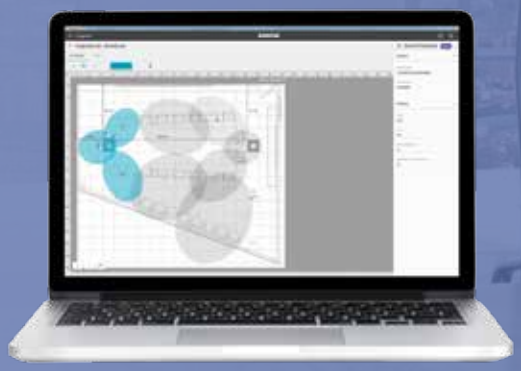


### Browser-Based Tools

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 and specify mixing preferences.

### Designer System Configuration Software

- Create projects with multiple “virtual” MXA910 Ceiling Arrays on top of an imported image, such as a room layout diagram
- Identify how many MXA910s are needed for a given room or floor and see their lobes in relation to each other
- Pickup lobes and other settings for each MXA910 can be configured and saved on the user’s computer, without being connected to any MXA910 hardware
- Settings can be exported as device preset files, which can be imported into each MXA910 through its user interface
- Requires Windows 7 or higher

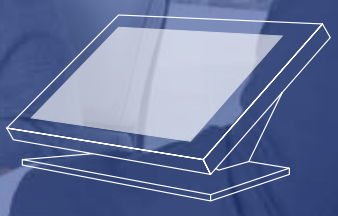


**Elegant Modern Design**
Seamlessly integrate arrays within room designs via flush mounting, slightly proud, pole or suspension mounts.

## 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.



# Application flexibility

Match single or multiple arrays to the AV conferencing needs of rooms of any size, configuration or activity: formal presentations, intimate discussions, distance learning or collaborative work.

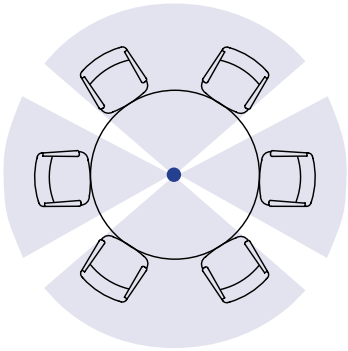
## Table Array Coverage Maps

### Small Round Table

1 Table Array

**Profile**
*6 Chairs*
*1 Round Table*

**1 Bi-directional Pattern**
**2 Cardioid Patterns**

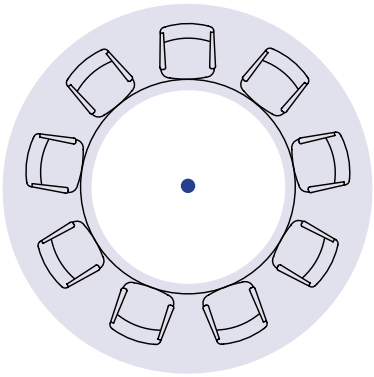


### Medium Round Table

1 Table Array

**Profile**
*9 Chairs*
*1 Round Table*

**1 Toroid Pattern**

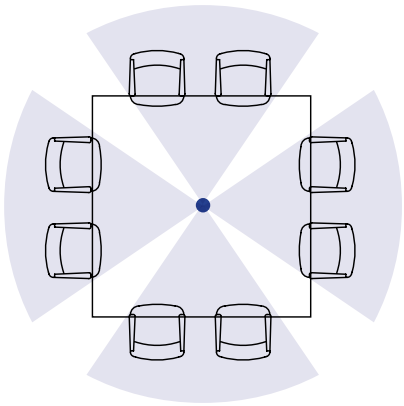


### Square Table

1 Table Array

**Profile**
*8 Chairs*
*1 Square Table*

**4 Supercardioid Patterns**

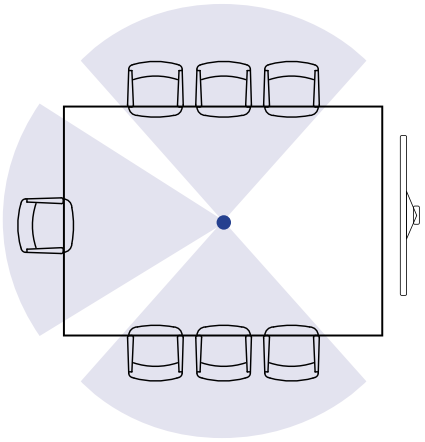


### Rectangular Table

1 Table Array

**Profile**
*5 Chairs*
*1 Rectangular Table*

**1 Supercardioid Pattern**
**2 Cardioid Patterns**



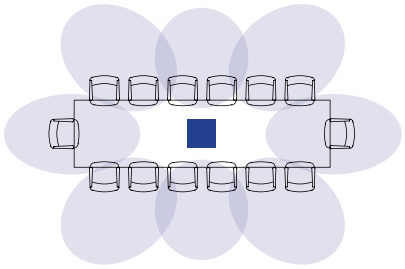
# Ceiling Array Coverage Maps*

## Medium Conference Room

1 Ceiling Array

**Profile**
*14 Chairs*
*1 Rectangular Table*

**8 Coverage Areas**

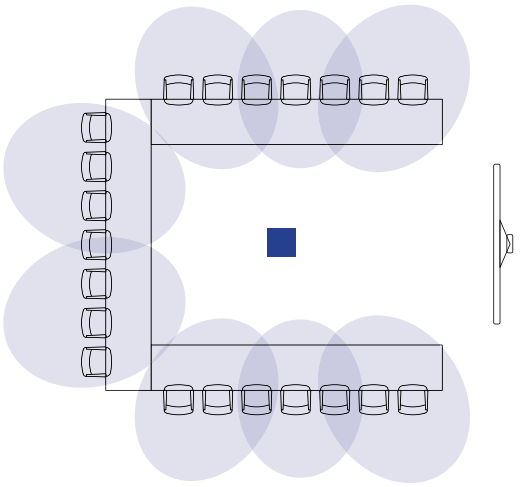


## Videoconference Room

1 Ceiling Array

**Profile**
*21 Chairs*
*3 Rectangular Tables*

**8 Coverage Areas**

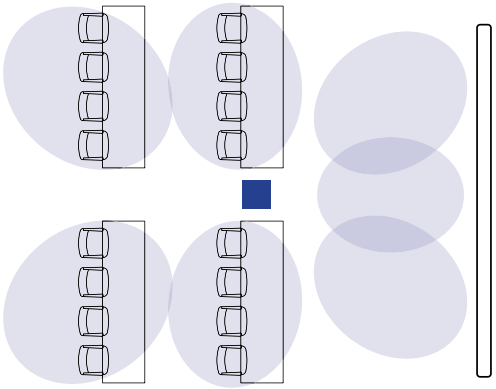


## Classroom/Presentation Room

1 Ceiling Array

**Profile**
*16 Chairs*
*4 Rectangular Tables*

**7 Coverage Areas**

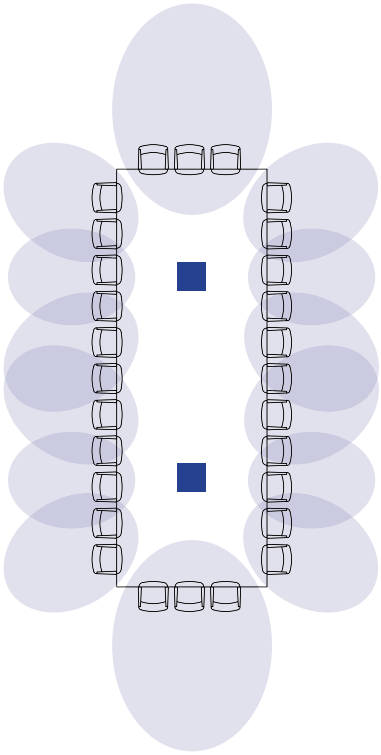


## Large Conference Room

2 Ceiling Arrays

**Profile**
*28 Chairs*
*1 Rectangular Table*

**14 Coverage Areas**



* **Coverage Capabilities**
Installed at a height of ten feet (3 meters), Ceiling Arrays capture audio from seated participants to a recommended area of 30 feet (9 meters) in diameter, meeting the STIPA "A" intelligibility rating.† Note: Ceiling Arrays are capable of picking up participants beyond 30 feet.

† Room conditions: RT60 (reverb time) = 500 ms @ 1kHz, weighted room noise = 40dBSPL(A). IEC-602682-16.

# Better Together

Shure Networked Audio Processors and Interfaces seamlessly integrate with Microflex Advance and enhance collaboration by offering a complete, high-quality audio conferencing solution and the most intelligible meeting sound.

## Audio Performance

Enhanced meeting room audio for natural communication and better interaction in AV conferences with remote team members.

## Connectivity

Connect how you want, with options for Dante devices, analog room conference systems, PC-based soft codecs via USB, or mobile devices.

## Simplicity

Pre-defined templates for system configuration reduce programming time, and allow installation within seconds.

## Compact & Quiet Design

Silent and small-size form factor allows fast and discreet installation behind a TV screen or under the table, without any audible fan noise.

**P300**
**Intellimix® Audio Conferencing Processor**
The Intellimix P300 Audio Conferencing Processor offers DSP algorithms optimized for AV conferencing applications with Microflex Advance microphones. Featuring acoustic echo cancellation, noise reduction and automatic gain control for up to 8 Dante channels, the P300 ensures echo- and noise-free conference room audio that facilitates communication and collaboration. Easy to install and configure, the P300 provides Dante, analog, USB and mobile connectivity options that make joining room systems and collaborating with laptops and mobile devices easier than ever.

**ANIUSB-MATRIX**
**USB Audio Network Interface with Matrix Mixing**
The ANIUSB-MATRIX Audio Network Interface provides a versatile hub for collaboration in small to medium-size meeting rooms, suitable for both room video conference systems and soft codec solutions. The device presents a budget-friendly companion to Microflex Advance microphones, for AV conferencing applications that leverage the integrated processing functionality of existing video codecs in the room.

**Intellimix® P300 Audio Conferencing Processor**
**ANIUSB-MATRIX USB Audio Network Interface with Matrix Mixing**

## Perfectly Paired Conferencing Audio

The new Intellimix P300 Audio Conferencing Processor was developed to seamlessly integrate with MXA910 Ceiling Array and the MXA310 Table Array Microphones. Working in synergy, the P300 processor and Microflex Advance microphones deliver a hassle-free, cost-effective conferencing audio system. The P300 offers pre-defined templates that enable set up literally in seconds, and an unobtrusive form factor for discreet installations. Versatile features and connectivity options provide freedom of choice when joining a room video system, soft codec, or connecting laptops and mobile devices.

# Shure networked systems

Wired or wireless, analog or digital, Shure components work together as an ecosystem of enterprise-scale microphone solutions for managed AV conferencing environments.

## Microflex® Advance™ | MXA

Both new Microflex Advance array microphones are fully digital for networked set-up, management and control on Dante™ networks.

**Networkable Microphones**
MXA910 Ceiling Array Microphone
MXA310 Table Array Microphone

**Connectivity**
Dante™
PoE

CommShield® Technology

**Both Arrays Feature**
Shure Intellimix® DSP Suite
Single Ethernet cable connectivity
Software-based configuration templates
10 configuration presets
Browser-based remote control
Third-party control string compatible
Per channel 4-band parametric equalization
Black, white & aluminum finishes

## Audio Network Interfaces

ANI4IN and ANI4OUT devices can bring up to four analog wired microphones, including Microflex boundary and gooseneck models, onto or from Dante network for easy audio routing and convenient browser-based remote control.

**Front Panels**
Common LED signals for ANI Input and Output devices

**Features**
Browser-based remote control
Logic Pin state settings (ANI4IN-BLOCK)
Single Ethernet connectivity
10 configuration presets
Third-party control system compatible
XLR and Block connectivity
Power over Ethernet (PoE)
Audio Summing
Per Channel 4-Band Parametric Equalization

**ANI4: Ouputs**
4-Channel Dante Mic/Line Audio Network Interface with XLR or Block Outputs

**ANI4: Inputs**
4-Channel Dante Mic/Line Audio Network Interface with XLR or Block Inputs

Dante™ Audio Networking enables delivery of low-latency, multi-channel, uncompressed digital audio over a standard Ethernet network.

## Microflex® Wireless | MXW

Microflex wireless systems include digital network compatible transceivers and charging stations.

**Networkable Wireless Systems**
Networked Charging Stations | MXWNCS2 / MXWNCS4 / MXWNCS8
2-, 4- and 8-Channel Access Point Transceivers | MXWAPT2 / MXWAPT4 / MXWAPT8

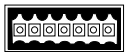
**Connectivity**
Dante™
PoE

## Microflex® | MX

Microflex wired microphones feature the highest standard of quality and efficiency for installed audio applications.

**Network Compatible Microphones**
Low Profile Boundary Microphone | MX395
Multi-Element Boundary Microphone | MX396
Modular Gooseneck Microphone | MX405 / MX410 / MX415

**Connectivity**
XLR, Block



## Networking Devices

Existing Shure Dante-compatible interface devices can provide network connectivity for any Microflex Advance conferencing solution.

**SCM820**
8-Channel Digital Intellimix® Automatic Mixer SCM820 also provides Dante connectivity and versatile configuration options

**Microflex Wireless**
4- and 8-Channel Audio Network Interfaces
MXWANI4 / MXWANI8

# Architectural details

## Ceiling Array microphones are designed for suspension, pole and flush mounting in imperial or metric formats.

**Integrated Vibration Isolation**
Prevents transmission of mechanical noise through the microphone.

**Plenum-Rated**
UL 2043 suitable for air handling spaces and plenum compliant when used with supplied Fyre Wrap® accessory.

**Available Ceiling Adapters & Accessories**
*A910-25MM*
Configures a 600 mm Ceiling Array for a 625 mm grid.

*A910-JB*
Allows the Ethernet cable connected to the array to be installed inside flex conduit.

*A910-HCM*
New Hard Ceiling Mount Accessory can be pre-installed in the ceiling and the MXA910 installed later using the access door. Provides knockouts for conduit connections. *Available Summer 2017*

Flush mount installation in ceiling tile grid

Flush mount installation in drywall or hard ceiling with A910-HCM accessory

Suspension mount

VESA-format pole mount

## Installation solutions

Audio Network Interface units are 1/3 rack mountable and can also be mounted under-the-table or on a wall. Table Array microphones also feature through-the-table mounting kits.

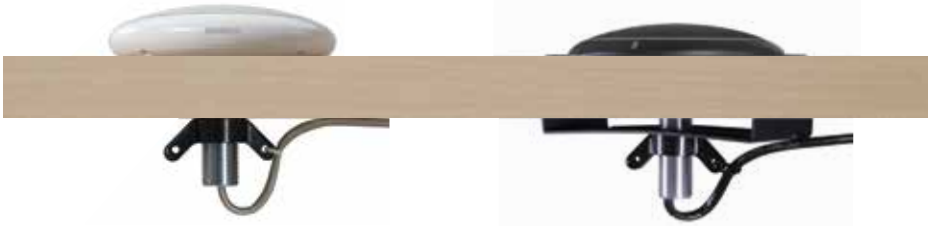


**Table Array Mounting**
Table Arrays include cable management solutions for on-the-table or through-the-table applications.

*MXA310 retrofits existing Shure table mounted MX395, MX396, MX392 boundary microphones.*

**A310-FM Flush Mounting Tray Kit** *(optional)*
Allows MXA310 Table Array to be mounted flush in the table; includes rubber isolation to prevent mechanical vibrations. *Available Summer 2017*

*A310-FM* available in black and aluminum finishes; paintable to match table surface.

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**Audio Network Interfaces** are 1/3 rack mountable and can also be mounted under-the-table or on a wall.

**ANI4 Bracket**
Mounts a single Mic/Line ANI under a table or on a wall (included).

**Available ANI4 Bracket**
CRT1 | Mounts up to 3 ANIs under a table, on a wall, or in a rack.

# Expressive finishes

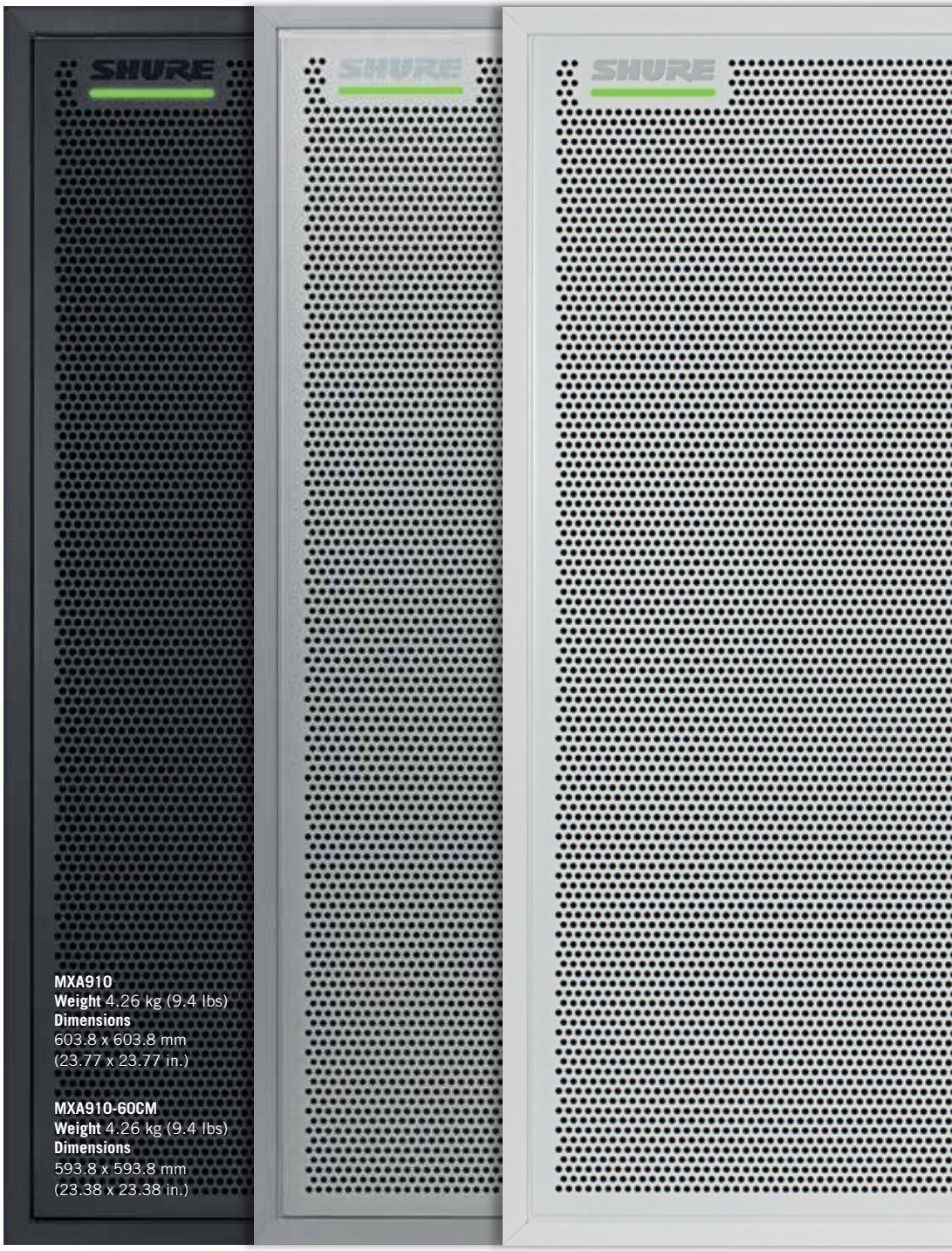
Ceiling and Table Array microphones are available in black, white and aluminum finishes to match room aesthetics or the finishes of other AV system components. The Ceiling Array microphone can also be custom-painted to fit your environment.

Black

Aluminum

White

**MXA310**
**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.)




**MXA910**
**Weight** 4.26 kg (9.4 lbs)
**Dimensions**
603.8 x 603.8 mm
(23.77 x 23.77 in.)

**MXA910-60CM**
**Weight** 4.26 kg (9.4 lbs)
**Dimensions**
593.8 x 593.8 mm
(23.38 x 23.38 in.)

SHURE®

LEGENDARY
PERFORMANCE™

**United States, Canada,**
**Latin America, Caribbean:**
Shure Incorporated
5800 West Touhy Avenue
Niles, IL 60714-4608 USA

Phone: +1 847-600-2000
Fax: +1 847-600-1212 (USA)
Fax: +1 847-600-6446
Email: info@shure.com
www.shure.com

**Europe, Middle East, Africa:**
Shure Europe GmbH
Jakob-Dieffenbacher-Str. 12,
75031 Eppingen, Germany

Phone: +49-7262-92490
Fax: +49-7262-9249114
Email: info@shure.de
www.shure.eu

**Asia, Pacific:**
Shure Asia Limited
22/F, 625 King's Road
North Point, Island East
Hong Kong

Phone: +852-2893-4290
Fax: +852-2893-4055
Email: info@shure.com.hk
www.shureasia.com

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