ENTERPRISE SCALE MICROPHONE SOLUTIONS

FOR MANAGED AV ENVIRONMENTS

Vivid, lifelike audio for conferencing.

Contemporary working, learning and AV conferencing environments provide remarkably smart, comfortable and productive places for people to meet and engage.

The Microflex™ Wireless platform was developed by Shure with these innovative new spaces in mind. It provides flexible and elegant solutions for capturing and managing vivid, lifelike sound in managed AV environments.

Every system shares the same building blocks: intelligent rechargeable microphone transmitters and charging stations, discreet wireless access point transceivers, flexible audio network interfaces, and comprehensive software tools.

Easy to configure and expand, versatile Microflex™ Wireless wireless solutions easily scale from custom boardrooms to networked enterprises.

8-Bay Networked Charging Station MXWNCS8

Site
unseen.

Microflex™ Wireless systems bring wireless elegance and vivid, lifelike sound to signature boardrooms where a wired solution is not preferred or to historic buildings where running cables and drilling holes is not possible.

With a single Microflex Access Point Transceiver mounted discreetly in the room, you can easily manage up to 8 wireless microphones in any configuration your application requires— boundary, gooseneck, bodypack or handheld. Add more Access Point Transceivers for up to 40 compatible channels.

When you need to reconfigure a room—from a formal boardroom set-up to an AV workroom—modular, wireless components easily flex to meet the channel capacity and transmitter requirements of new conferencing applications.

Boardroom Application

a. Wireless Microphones
Elegant boundary, gooseneck, bodypack and handheld transmitters send and receive audio signal and data wirelessly to the Access Point Transceiver.

b. Access Point Transceiver
Manages the wireless link with transmitters and connects to the Audio Network Interface via Ethernet over a single Cat5e cable for power (PoE), digital audio and control signal routing.

c. Networked Charging Stations
4- and 8-bay stations fully charge batteries within 2 hours and connect to the Audio Network Interface via Ethernet over Cat5e cable. They provide real-time monitoring of charge status and one-touch linking of docked wireless microphones.

d. Audio Network Interface
Converts Dante™ digital networked audio from the Access Point Transceiver to per-channel analog audio output for connectivity to tele-conference systems, local sound reinforcement or other audio components. Also provides a 4-port switch, making it easy to set up a Microflex Wireless system without needing additional networking hardware.

e. Microflex™ Wireless Control Software
Browser-based software provides remote control of key set-up and monitoring functions. Remotely view spectrum usage and remaining battery life in hours and minutes, adjust audio levels, set mute button and light ring behavior, and configure system connections. Also allows custom integration into third party control systems such as AMX and Crestron.

Simply configured wireless.

Tailored Solutions, Discreet Designs
With 4- or 8-channel configurations, up to 40 compatible channels and a versatile offering of modern, low-profile wireless transmitters, Microflex Wireless systems are designed to fit comfortably into diverse AV environments.

Pristine Audio
Microflex microphone elements flawlessly capture the natural characteristics and nuances of the human voice. Legendary Shure quality and reliability preserves the vocal details that premiere AV conferencing and telepresence systems require for realistic effect.

Easy Meeting Setup
Transmitters become instantly active and connected to the network when removed from a Networked Charging Station. Standby mode allows energy saving between uses and a 9-hour battery life ensures each transmitter can operate for a full working day.

Automated Frequency Coordination
Microflex Wireless systems actively scan the available spectrum and coordinate clean, compatible frequencies for every microphone channel. While in use, systems automatically move away from unexpected interference.

Compact (7"×7"×1½") Access Point Transceiver units include a wall/ceiling mounting plate with a paintable cover and can be powered over Ethernet by the Audio Network Interface.

Enterprising solutions.

For sites where AV and IT teams manage conferencing solutions that span rooms, floors, buildings and campuses, networkable Microflex™ Wireless components extend the reach and efficiency of team resources.

All components in the Microflex Wireless system are connected and accessible over Ethernet networks with Microflex Wireless Control Software. Teams can use the software to make comprehensive real time adjustments to system settings. Any number of networked systems can be setup, managed, monitored and controlled on site or remotely from a laptop via a web browser. Additionally, Microflex Wireless systems are fully compatible with third-party control systems such as AMX and Crestron that offer customized interfaces and touchscreen panels.

Microflex Wireless extends the Shure legacy of best-in-class audio to boardrooms and conferencing environments of all sizes to deliver enterprise scale solutions with confidence.

a. **Multi-Purpose Room**
   Flexible, scalable rooms that are easily reconfigured for training sessions and events.

b. **Auditorium / Theater**
   Media rich presentation halls for direct, keynote-type presentations with audience participation.

c. **AV Conferencing Room**
   Intimate conference spaces for engaging with remote participants.

d. **Boardroom**
   Highly aesthetic spaces for executive-level meetings and presentations.

Enterprise Connectivity:
Corporate Network Switch

Remotely managed wireless.

Microflex™ Wireless Control Software
A comprehensive browser-based software tool for system setup and real-time control that extends the reach and efficiency of AV and IT teams. Use the software to monitor battery conditions, make microphone gain adjustments, collect RF spectrum scan results and set key preferences that customize the behavior of each system on the network.

Dante™ Digital Audio Networking
Dante offers a total solution for transporting low latency, uncompressed audio over standard IP Ethernet networks.

Gigabit Ethernet Connectivity
Connect to corporate networks and third party control systems using standard networking protocols for remote management and campus-wide implementation.

Advanced Rechargeable Solutions
Smart lithium-ion rechargeable batteries deliver up to 9 hours of continuous use and enable remote monitoring of remaining battery life and charge details in hours and minutes over the network.

Secure Transmissions
Wireless audio transmission is protected by AES-256 encryption—the same secure standard used in US and international government applications. Corporate-uplink mode can be used to keep digital audio off the corporate network while still allowing remote monitoring and system control.

Wireless Microphone Transmitters & Networked Charging Stations

## All Microflex Wireless Microphones Feature:

- AES-256 encryption
- Advanced lithium-ion rechargeability with up to 9 hours continuous use
- Programmable mute button
- Full range audio (mic dependent)
- Bi-directional wireless for real time remote control of microphone settings
- Up to 50 m (160 ft.) transmission range

- Range warning alert emits beeping sound when range exceeded
- Connects to any standard USB power source for "always on" usage
- Standby mode significantly extends battery life during periods of inactivity
- Commshield® technology prevents audible interference from consumer wireless devices.
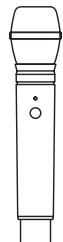
CommShield® Technology

MXW2
Handheld Transmitter

Durable, lightweight handheld transmitter with integrated antenna. Accepts signature Shure vocal microphone capsules.

- Interchangeable microphone heads
- Dual transmit antennas maximize signal strength depending on hand placement
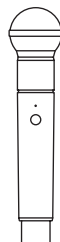
With SM58® and Beta 58A® microphone cartridges

With SM86 and VP68 microphone cartridges

MXW8
Gooseneck Base Transmitter

Stylish, contoured design with minimal footprint. Accepts Microflex modular gooseneck microphones available in multiple lengths with polar pattern and LED options.

- Programmable LED light ring
- Earphone output for return channel audio
- Concealed power switch prevents accidental powering off
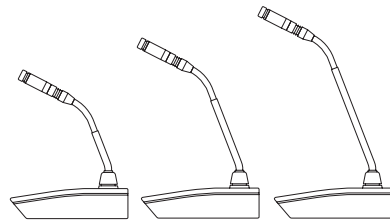
Compatible with 5, 10, and 15 inch Microflex Modular Goosenecks

MXW6
Boundary Transmitter

Low-profile wireless boundary microphone offers flexible placement on any surface in front of one or multiple speakers.
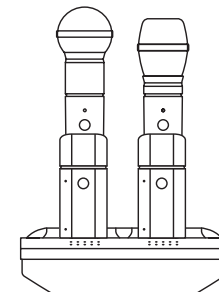
- Available with cardioid or omnidirectional pickup patterns
- Low battery indicator LED
- Earphone output for return channel audio
- Concealed power switch prevents accidental powering off

MXW1
Hybrid Bodypack Transmitter

Compact bodypack with integrated omni microphone perfect for use on a lanyard or in a shirt pocket, with external mic input and belt clip included for attachment to clothing.

- External mic input for easy connection to ear-worn and lavalier mics
- Integrated omnidirectional mic with auto switchover when external input is used
- Earphone output for return channel audio

MXWNCS4 | MXWNCS8
Networked Charging Station

Versatile 4- and 8-bay chargers include docking USB charge ports that accept any Microflex Wireless microphone. Ethernet system connection supplies remote battery status monitoring via the control software and easy transmitter linking to the Access Point Transceiver.

- Connects to the system over Ethernet
- Monitor remaining battery life and charge levels in hours and minutes over the network
- Easy linking of docked microphones to Access Point Transceivers
- Charges to full in 2 hours; 50% charge in 1 hour
- Front panel LEDs report 10, 25, 50, 75 and 100% levels

4-bay charging station with docked boundary and handheld microphones

Network Connectivity & Software Control

Spectrum Scanner

Preferences Tab

Audio Network Interface

Microflex Wireless Control Software

Browser-based control software that offers comprehensive remote monitoring and control of all settings and status parameters over the web, a corporate network or an AV local area network.

- Spectrum scanner provides data on spectrum availability with channel count estimates
- Battery life and charge level monitoring in hours and minutes
- Mic gain, low and high pass audio adjustment
- Individual and global mic controls for powering on/off and triggering mute and standby modes
- Set preferences to program default system behavior

MXWAPT4 | MXWAPT8
Access Point Transceiver

Low-profile Access Point Transceivers maintain two-way audio and data links with 4 or 8 synced wireless microphones. The Access Point Transceiver features Power over Ethernet connectivity, is easily installed and connected to the network, and ships with wall/ceiling mounting plate and a paintable cover to match the room color.

- Slim profile with paintable cover
- Plenum rated for installation flexibility
- 4- or 8-channel models, up to 40 compatible channels per room
- Bi-directional wireless for both audio signal and control data
- Automated frequency coordination
- Dante™ digital networked audio enables audio routing over Ethernet to any Dante-equipped mixer.
- AES-256 encryption

Paintable Cover   Access Point   Wall/ceiling Mounting Plate

4-Channel Audio Network Interface: Rear Panel

8-Channel Audio Network Interface: Rear Panel

MXWANI4 | MXWANI8
Audio Network Interface

With per-channel analog outputs and a versatile 4 port gigabit Ethernet switch, these rack-mountable 4-channel and 8-channel units are the central point for connecting Microflex Wireless systems to teleconferencing and presentation AV networks.

- 4 or 8 block connector channel outputs
- 1 or 2 mono block connector inputs for return channel audio
- 4 port gigabit switch with optimized port configurations
- Power over Ethernet (PoE) connection to the Access Point Transceiver
- Front panel controls allow adjustment of input and output levels and channel muting and soloing
- Supports Dante™ networking of digital audio for low latency transport and recording
- Headphone output to solo audio channels

SYSTEM

Working Range:
50 m (160 ft)
Note: Actual range depends on RF power setting, signal absorption, reflection and interference.

RF Carrier Frequency Range:
USA, Canada, Mexico: 1920–1930 MHz
Europe, Asia, Middle East: 1880–1900 MHz

Audio Frequency Response:
50 Hz–20 kHz (+1, −3 dB)
Note: Dependent on microphone type

Dynamic Range:
>99 dB, A-weighted

System Gain
Mic gain @ 0dB to line level output on MXWANI through Dante
+50 dB

Latency:
18 ms, nominal

RF Sensitivity:
−87 dBm, minimum

RF Output Power:
19dBm (80mW) maximum

Cable Requirements:
Cat 5e or higher, shielded, 100 m maximum between network devices

Network Addressing Capability:
DHCP, link-local, static

Operating Temperature Range:
0°C (32°F) to 49°C (120°F)

Storage Temperature Range:
−29°C (−20°F) to 74°C (165°F)

NETWORKED CHARGING STATION

Charge Time:
MXW1, MXW6, MXW8: 2 hours
MXW2: 3 hours

Network Interface:
10/100 Mbps Ethernet

Power Requirement:
15 V DC @ 3.3 A maximum

Dimensions:
NCS8: 68 mm × 343 mm × 184 mm
(2.7 in. × 13.5 in. × 7.25 in.)
NCS4: 68 mm × 191 mm × 184 mm
(2.7 in. × 7.5 in. × 7.25 in.)

Weight:
NCS8: 2.9 kg (6.4 lbs)
NCS4: 1.7 kg (3.7 lbs)

TRANSMITTERS

Gain Adjustment Range:
−25 to +15 dB (in 1 dB steps)

Maximum Input Level:
Mic gain @ −16 dB
−9 dBV

Headphone Output:
3.5 mm (1/8"), dual mono
(will drive stereo phones)

Maximum Headphone Output Power:
1kHz @ 1% distortion, peak power, @16Ω
17.5 mW

Antenna Type:
Internal, Spacial Diversity,
Linear Polarization

Battery Type:
Rechargeable Li-Ion

Battery Life:
Up to 9 hours (MXW1, MXW6, MXW8)
Up to 15 hours (MXW2)

Charge Connector:
USB 3.0 Type A

Housing:
Molded Plastic

Storage Temperature Range:
−29°C (−20°F) to 74°C (165°F)

MXW1 Hybrid Bodypack Transmitter
Microphone Connector:
4-Pin male mini connector (TA4M),
See drawing for details

Internal Microphone:
Omnidirectional (20 Hz – 20 kHz)

Dimensions:
22 mm × 45 mm × 99 mm
(0.9 in. × 1.8 in. × 3.9 in.)

Weight:
85 g (3.0 oz.)
with batteries, without microphone

MXW2 Handheld Transmitter
Microphone Capsule:
SM58®, SM86, Beta58A®, VP68

Dimensions:
226 mm × 51 mm
(8.9 in. × 2.0 in.) L × Dia.
including SM58 microphone capsule

ACCESS POINT TRANSCEIVER

Network Interface:
RJ45: Gigabit Ethernet,
Dante digital audio

Power Requirement:
Power over Ethernet (PoE)
Class 0, 6.5W

Antenna Type:
Internal, Spacial Diversity,
Circular Polarization

Housing:
Molded Plastic, Cast Zinc

Plenum Rating:
UL2043

Dimensions:
24 mm × 170 mm × 170 mm
(1.35 in. × 6.7 in. × 6.7 in.)
Without mounting plate or cover

Weight:
APT8: 856 g (1.9 lbs)
APT4: 845 g (1.9 lbs)

AUDIO NETWORK INTERFACE

Network Interface:
Four-Port Gigabit Ethernet Switch,
Dante digital audio

AD/DA Converter:
24-bit, 48 kHz

Latency:
Estimated Nominal, ±0.1 ms
Analog-to-Dante: 0.21 ms
Dante-to-Analog: 0.24 ms + TN

TN = Network latency in milliseconds, as set in Dante Controller. Note: Dante network latency is typically associated with the receiving device.

Audio Frequency Response:
20 Hz to 20 kHz (+1, −1.5 dB)

Dynamic Range:
20 Hz to 20 kHz, A-weighted, typical
Analog-to-Dante: 113 dB
Dante-to-Analog: 110 dB

Power Requirements:
100 to 240 V AC, 50-60 Hz, 1 A

Output Noise:
20 Hz to 20 kHz, A-weighted, typical
Line: −84.5 dBV
Aux: −95.2 dBV
Mic: −106.5 dBV

Dimensions:
44 mm × 483 mm × 366 mm
(1.7 in. × 19.0 in. × 14.4 in.)

Weight:
MXWANI4: 3.1 k.g (6.9 lbs)
MXWANI8: 3.2 kg (7.1 lbs)

Weight:
323 g (11.4 oz.)
with batteries, including SM58 microphone capsule

MXW6 Boundary Transmitter
Microphone Capsule:
MXW6/O R183B
MXW6/C R185B

Dimensions:
23 mm × 44 mm × 114 mm
(0.9 in. × 1.75 in. × 4.5 in.)

Weight:
108 g (3.8 oz.) *with batteries*

MXW8 Gooseneck Base Transmitter
Microphone Connector:
6-pin connector for Shure MX405/10/15

Dimensions:
36 mm × 71 mm × 124 mm
(1.4 in. × 2.8 in. × 4.9 in.) H × W × D

Weight:
193 g (6.8 oz.)
with batteries, without microphone

Dante is a trademark of Audinate Pty Ltd.

SHURE®
LEGENDARY PERFORMANCE™