

Panasonic 1.9 GHz Digital Wireless Microphone System

Product Lineup



Panasonic CONNECT

WX-AM800
Ceiling Array Microphone

High-quality Audio Capture from Above to Make Online Participants Feel Like They Are Present



More Information ▶ na.panasonic.com/us/audio-video-solutions/professional-audio

Email ▶ proaudio@us.panasonic.com



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Panasonic
CONNECT

Panasonic Connect Co., Ltd.

Important

- Safety Precaution : Carefully read the Important Information, Installation Guide and operating instructions before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.
- Masses and dimensions are approximate.
- Specifications are subject to change without notice.

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Overcoming Audio Challenges for Seamless Communication in Hybrid Meetings, Classes.

While hybrid meetings, classes, etc. offer many conveniences, it has proven to be a challenge for online participants to clearly hear face-to-face conversations and people speaking far away from a microphone. Also, organizers are obliged to deal with the time-consuming task of setting up microphones for each session. To address these concerns, Panasonic now introduces the WX-AM800 Ceiling Array Microphone, which provides clear sound coverage throughout meeting rooms, even when multiple people speak simultaneously, and streamlines the audio-system setup process. Leveraging Panasonic's extensive acoustic expertise, this innovative solution offers a significant step forward in the online communication experience.



WX-AM800
Ceiling Array Microphone



Beamforming

Clear Sound Capture Targeting Specific Areas and Speakers



Beamforming technology controls directivity and sensitivity in specific directions based on the time that different voices take to reach the ceiling microphone, enabling the voices of up to four people speaking at the same time to be captured accurately. As a result, discussions taking place among people in a room can be delivered clearly to online audiences.

- Coverage area: up to 30 ft x 30 ft
- Installation height: 8 ft to 12 ft from the floor
- Pick up to 4 people speaking simultaneously.
- Up to four units can be used as a system for large rooms.
- Four types of coverage areas can be set. (See page 4 for more on coverage areas)

Ducking

Seamless Integration of Ceiling and Wireless Microphones

The WX-AM800 ceiling microphone can be used in combination with Panasonic's 1.9 GHz Wireless Microphones by connecting a WX-AU202 Wireless Antenna Unit. Ducking can be initiated to automatically stop capturing sound via the ceiling microphone when using a wireless microphone to eliminate howling and acoustic echo from amplified loudspeakers, ensuring high-quality audio for both on-site and remote audiences.

WX-AU202

Wireless Antenna Unit

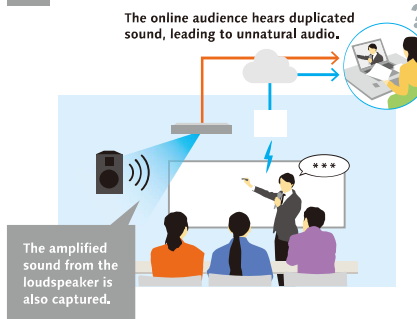
- A receiver with a built-in antenna diversity
- Two wireless microphones can be used with one unit.



Challenge

The online audience hears the instructor's voice via both the wireless microphone and loudspeakers in the room.

The online audience hears duplicated sound, leading to unnatural audio.

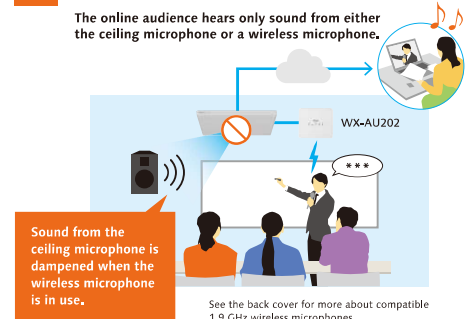


The amplified sound from the loudspeaker is also captured.

Solution

Audio ducking resolves this issue by enabling the wireless microphone to capture the instructor's voice while the ceiling microphone captures only the students' voices.

The online audience hears only sound from either the ceiling microphone or a wireless microphone.



Sound from the ceiling microphone is dampened when the wireless microphone is in use.

See the back cover for more about compatible 1.9 GHz wireless microphones.

Remote Camera Link

Built-in Voice Tracking with 1 Panasonic PTZ Camera

The WX-AM800 ceiling microphone can be used with a Panasonic PTZ camera to automatically track the speaker and to adjust the camera angle by recalling Camera Presets. This simple system ensures seamless, natural communication by promptly identifying the current speaker.

Compatible PTZ cameras (as of January 2024)

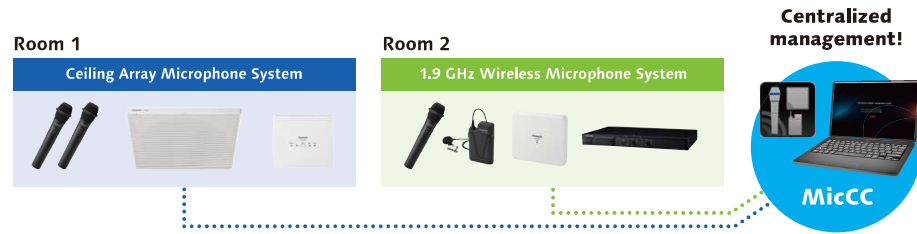
AW-UE160	AW-UE150	AW-UE100
AW-UE80	AW-UE50	AW-UE40
AW-UE20	AW-UE4	AW-HE20



Easy Setup

Software Management of Multiple Systems in Multiple Rooms

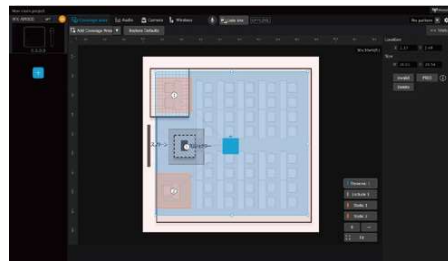
The free Microphone System Configuration Center (MicCC) software configures and monitors Panasonic's ceiling microphone and 1.9 GHz digital wireless microphone systems for easy management of multiple systems and rooms from one PC.



Microphone System Configuration Center (MicCC)

Coverage Area Settings

The Panasonic's ceiling microphone uses preset coverage areas for precise capture of speaker voices. Four types of coverage areas are offered to suit different operating environments and needs. Beam coverage is displayed on-screen for easy confirmation that the speaker is within the designated coverage area.

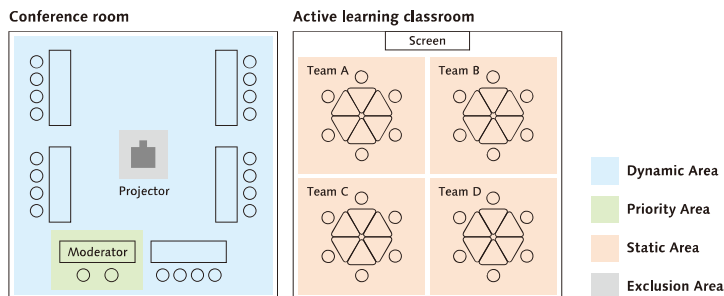


Coverage areas

Type	Function	Max. areas
Dynamic Area	Beams can be assigned dynamically to capture up to four voices simultaneously within a designated area.	4
Priority Area	A position within a dynamic area can be designated for priority audio pickup, for example, to prioritize a moderator over other speakers.	4
Static Area*	Assigning beams to fixed positions allows each beam to cover a specific area.	4
Exclusion Area	Audio capture in specific areas of a room may be excluded to reduce noise from sources such as creaky doors, noisy HVAC, etc.	4

*One static area is occupied by one audio function. The number of people's voice that can be simultaneously captured in a Dynamic Area is reduced by the number of Static Areas set.

Coverage area setting examples



Audio Settings

Audio settings can be used to adjust audio captured by ceiling microphones and to monitor audio input to these microphones. Eight out of the twelve audio signals can be assigned to Dante® output channels.



1 PEQ

The frequency characteristic can be adjusted for the collected audio in 4 bands (LOW, LOW MID, HIGH MID and HIGH).

2 HPF

Allows adjustment of the frequency at which the low frequencies of the collected audio are cut.

3 Ducking

Ducking is possible for dampening sound picked up by the ceiling microphone when amplifying audio from the wireless microphone through the loudspeaker. Fine adjustments can be made via the Detailed Settings screen.

4 AEC

Cancels echoes that occur when audio from the remote destination that is picked up by the wireless microphone connected to this unit and the wireless antenna unit return to the remote destination.

5 AGC

Automatic adjustment of volume levels when mixing audio captured via microphones minimizes volume fluctuations to ensure clearer audio on the online side.

6 DNR

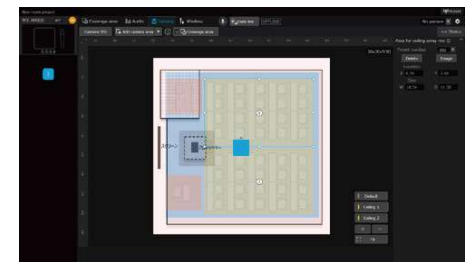
This feature reduces background noise from objects such as projectors and air conditioning systems.

7 Mute and Mute Group

Muting is possible for each channel and Mute Group allows muting of multiple channels grouped together.

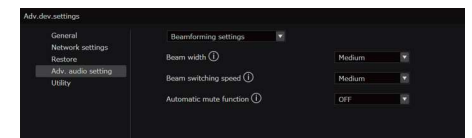
Camera Link Settings

When using Panasonic PTZ cameras, the camera area can be set for a targeted speaker. Sixteen areas can be designated for the ceiling microphone and two for the wireless microphone. Voice detection level, speech start detection time, and speech end detection time can be configured in advanced camera area settings based on specific usage scenarios.



Advanced Device Settings

Precise configurations for the ceiling microphone and utility items in advanced device settings, including beam width adjustment, beam switching speed and auto-mute under Beamforming settings.

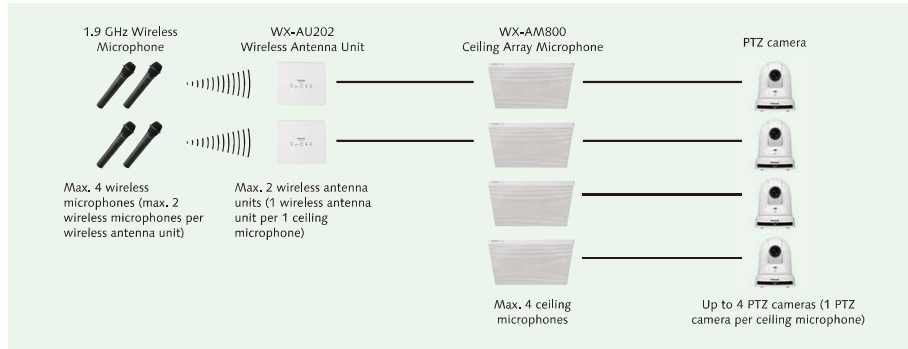


- **Beam Width:** Narrow, Medium and Wide settings are possible.
- **Beam Switching Speed:** Slow, Medium and Fast settings are possible.
- **Automatic Mute Function:** The audio level of beam channels can be attenuated to reduce noise when no one is speaking.

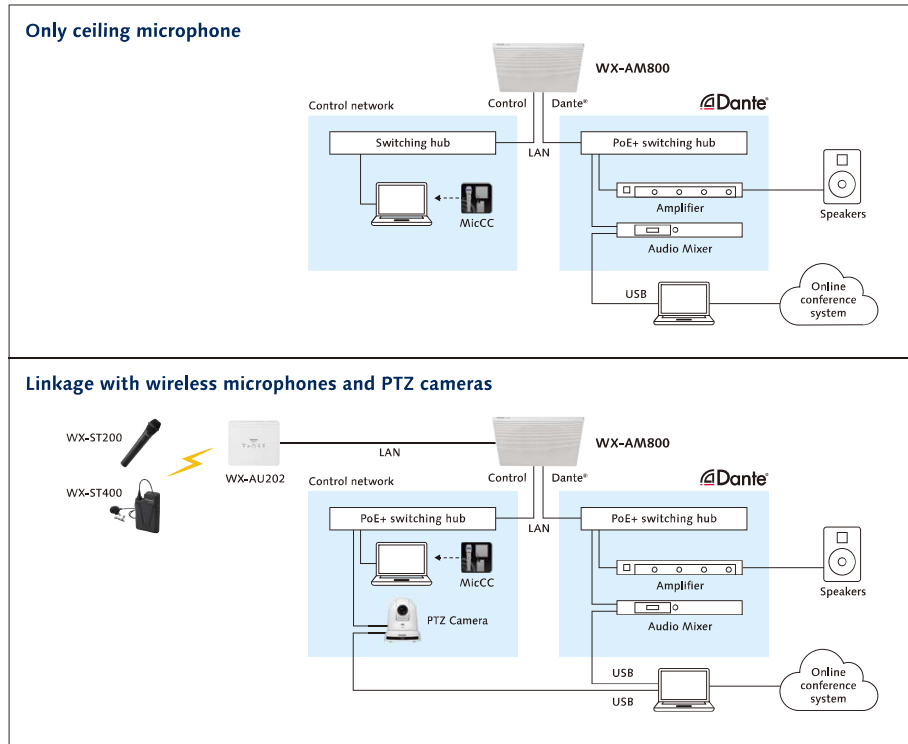
Installation options



Maximum units for installation in one system



System Configuration Examples



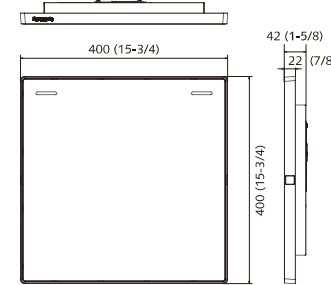
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Specifications/Dimensions

As of February, 2024

WX-AM800

Ceiling Array Microphone



Unit: mm (inches)

General specifications

Power	PoE+ (IEEE802.3at)	
Power consumption	Max. 18 W	
Operating temperature range	0 °C to 40 °C (32 °F to 104 °F)	
Operating humidity range	10 % to 90 %	
Wireless antenna unit connection terminal	Number of connections	1
	Connector	RJ-45
Network connection terminal	Cable used	CAT 5e/CAT 6 straight-through cable
	Connector	RJ-45
PoE/Dante® connection terminal	Communication method	100BASE-TX
	Status indicator	LINK/ACT (status), 100M (speed)
	Connector	RJ-45
	Connection network	Dante® network
Number of output channels	Number of output channels	8 channels
	Number of input channels	8 channels
Status indicator	LINK/ACT (status), 1G (speed)	
Dimensions	Approx. 400 mm (W) x 400 mm (D) x 42 mm (H) (15-3/4 inches x 15-3/4 inches x 1-5/8 inches)	
Weight	Approx. 2.4 kg (5.3 lb) (Main unit only; brackets, etc. are not included)	
Finish	White finish (approximate color Munsell N9,3)	
Plenum Rating	UL2043 (Only when using Board bracket and Ceiling cover)	

Audio specifications

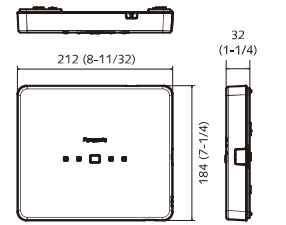
Frequency characteristic	100 Hz to 16 kHz
Sampling rate	48 kHz
Bitrate	24
Sensitivity	-18 dBFS/0,1 Pa
Maximum input sound pressure level	105 dB SPL
SNR (Ref.74 dB SPL at 1 kHz)	60 dBA
Dynamic range	93 dB
Directivity	Beam pattern

Standard accessories



WX-AU202

Wireless Antenna Unit



Unit: mm (inches)

Wireless	Operating frequency	1921.536 MHz to 1928.448 MHz
	Antenna	Internal antenna
	Reception	3 Diversity reception
Power	Power source	DC24 V Power source: Ceiling Array Microphone WX-AM800
	Connector	RJ-45
Field selection	Compatible cables	CAT 5e/CAT 6 straight-through cable*
		Three step selection
Microphone reception	Number of receptions	2 channels
	Number of lines	2 lines
Audio output	Rated output	-20 dBV balanced
	Frequency characteristic	100 Hz to 15 kHz
Display (indicators)	Connector	RJ-45
		POWER, REG, MIC1, MIC2
Operating temperature range	0 °C to 40 °C (32 °F to 104 °F)	
Dimensions	212 mm (W) x 184 mm (H) x 32 mm (D) (8-11/32 inches x 7-1/4 inches x 1-1/4 inches)	
Mass	Approx. 480 g (1,06 lbs) (unit only)	
Finish	White finish (approximate color Munsell N9,3)	
Installation	Ceiling, wall	

*Use a wire gauge with a diameter larger than AWG26.

Product specifications, accessories and design are subject to change without notice.