Data sheet Cisco public



Cisco Ceiling Microphone Pro

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Cisco Ceiling Microphone Pro is an intelligent conferencing microphone device designed to capture clear, high-fidelity sound in meeting rooms, boardrooms, training rooms and multi-purpose spaces. It supports your modern and flexible workspace layouts with Al adaptive beamforming that intelligently picks up active speakers' voices while following room dynamics and design changes. Better still, this ceiling microphone allows for rapid setup via zero-touch configuration, scalable IP connectivity, embedded signal processing, and versatile mounting options.



Figure 1.The Ceiling Microphone Pro in Arctic White with optional wire hanging mounting kit.

Product overview

The Cisco Ceiling Microphone Pro is an Al adaptive ceiling microphone enabling natural, high-fidelity sound for remote participants and supporting an integrated, distraction-free audiovisual experience when connected with Cisco video devices.

High-quality, equitable audio experience

It's an audio peripheral that provides directional voice capture through beamforming with eight adaptive beams that automatically focus on the active speakers while blocking out other areas of the meeting space to efficiently suppress background noise and reverberation. With a voice pickup coverage of up to a 3.5-meter (11.5 feet) radius, the ceiling microphone offers an effective, high-quality audio solution for a range of meeting rooms and large, multi-purpose spaces. It is unique in leveraging rich visual data originating from Cisco cameras to continually optimize sound pickup accuracy and only focus where sound is coming from.

The Ceiling Microphone Pro supports precise camera tracking and multi-camera scenarios to offer a smooth and engaging far-end visual experience. While the microphone features embedded audio intelligence, it is also augmented with advanced noise removal, mixing, and smart Al processing from the connected Cisco video device to provide crisp sound for remote video meeting participants. Moreover, its deep integration with Cisco video devices and camera solutions allow these to act as one intelligent room ecosystem that helps you enable the ultimate audio and visual experience in your video meetings where distance is no longer a barrier.

Faster to set up and simpler to manage

The Ceiling Microphone Pro is faster to set up than ever before by offering zero-touch, automatic positioning for lightning-fast tuning and reduced deployment effort for your audiovisual and IT teams. It provides single-cable convenience by connecting with the video system in a snap over IP, removes the need for external Digital Signal Processing (DSP) units, and works with multiple ceiling mount options.

Offering remote, unified cloud device management and diagnostics of your Cisco video devices, IP microphones and other peripherals in Control Hub, your IT admins can benefit from the simplicity of having a single management tool instead of multiple third-party management dashboards and design software solutions for the room deployment.

Combined with secure encryption and continuous feature upgrades, it helps to reduce the AV cost and complexity inherent in conventional audio deployments while protecting your meeting room investment.

Flexible and convenient for modern and adaptable workspace designs

Available in Arctic White or Carbon Black, it is a discrete yet powerful audio device designed for unparalleled flexibility and convenience to support modern meeting room designs and adaptable workspace layouts. Adaptive by design, it provides more flexibility to change the room layout and support flexible spaces.

The Ceiling Microphone Pro is designed to support the circular economy while offering flexible mounting options for a variety of common ceiling types to help you achieve a clean look and feel – for medium, everyday meeting rooms through large, divisible spaces. The unobtrusive, out-of-sight solution provides excellent, tamper-free coverage for an everyday meeting room, and can be automatically combined with other Ceiling Microphone Pros to scale and provide an outstanding acoustic experience in large and multi-purpose room scenarios.



Figure 2.The Ceiling Microphone Pro in Carbon Black with optional ceiling bracket mounting kit.

Features and benefits

 Table 1.
 Features and benefits

Feature	Benefits
Al adaptive beamforming	 Multi-directional, adaptive beamforming with a 64-element microphone array powering 8 auto- adaptive beams that intelligently track, focus on and capture voices of the active speakers while following room dynamics and workspace design changes
	• Effectively filters out noise and reverberation from other directions – resulting in a high signal-to- noise ratio and improved acoustic experience for remote participants.
	 Camera Al enhancement: the microphone is first to leverage rich positional and contextual data from Cisco cameras and video devices in real time to enhance pickup accuracy
	• The microphone's built-in noise cancellation architecture and signal processing is augmented with Al noise removal and advanced audio processing from the connected Cisco video device
	 Applies intelligent levelling, equalization and mixing of voices captured to enable natural sound for participants on the far end
	• Provides audio triangulation for dynamic camera tracking in single and multi-camera deployments, and cinematic meeting scenarios (cross-view, extended speaker view, presenter and audience, and more)

Feature	Benefits
Simplified setup and management	 Radically simple, zero-touch AV setup with automatic positioning of a single or multiple Ceiling Microphone Pros using a smart configuration wizard
	 Plug-and-play connectivity with Cisco video devices, including Cisco video bars, room kits, and integrated systems
	 Embedded digital signal processing in the microphone removes the need for an external DSP unit between the microphone and the video system
	 Audio over IP makes it easier to install with a single Ethernet cable, scale your setup over a PoE compatible switch, and leverage better compatibility and manageability for the deployment
	 Seamless extension of room coverage by connecting up to 8x Ceiling Microphone Pros depending on the number of IP microphones supported by the connected Cisco video device. (Please note that the setup may require a PoE switch to extend the number of LLN (link local network) depending on the number of microphones connected)
	• Unified cloud device management in Control Hub with full inventory, monitoring, and diagnostics of the Ceiling Microphone Pro, Cisco video devices, and other Cisco and third-party peripherals.
	Continuous software upgrades to increase the value of the deployment
	 Supports AES-128 encrypted audio to help ensure that captured voice is processed in a safe environment without exposing it to the network
Flexible design	Keeps the technology out of sight and removes the risk of tampering
	 Adapts to changing meeting dynamics and room designs without reconfiguration
	• Scalable to cover everyday meeting rooms through large, flexible and multi-purpose spaces
	Circular design - optimized for easy disassembly, repair, recycling, and low energy consumption
	• Discrete design and two color options (Arctic White or Carbon Black) for room aesthetics
	• Versatile ceiling mount options (ceiling bracket mount, drop ceiling grid mount, wire hanging mount kit)



Figure 3.Ceiling Microphone Pro I/O area and rear panel, side view with wire hanging mount kit, and front grille with status LED.



Figure 4.Ceiling Microphone Pro mount options: drop ceiling grid mount, ceiling bracket mount, and wire hanging ceiling mount.



Figure 5. Adaptive beams tracking and capturing in-room participants' voices in a medium meeting room.

Product specifications

 Table 2.
 Product specifications

Features	Specification	
Description	 IP-based, multi-boundary type ceiling microphone featuring a 64-element microphone array and supporting adaptive beamforming with 8 auto-adaptive beams 	
Default components	 Ceiling Microphone Pro unit (Arctic White or Carbon Black) with built-in 100x100 VESA mounting pattern Note: All Ceiling Microphone Pro mounting options and Ethernet cables are to be ordered separately from the main microphone unit. 	
Optional components	 Ceiling Microphone Pro Mounting Options (sold separately) Wire Hanging Ceiling Mount Kit (featuring 3m / 9.8 ft long wires) Ceiling Bracket Mount Kit Drop Ceiling Grid Mount Kit Ceiling Microphone Pro Ethernet Cables (sold separately) CAT5E Plenum Rated 20 meter (65.6 feet) CAT5E Plenum Rated 30 meter (98.4 feet) 	

Features	Specification
Product compatibility	 Cisco Room Bar Cisco Room Bar Pro Cisco Room Kit EQ and Cisco Room Kit EQX Cisco Room Kit Pro Cisco Board Pro 55/75 and Cisco Board Pro 55/75 G2 The number of Ceiling Microphone Pro units supported is dependent on the host video device. Please refer to the video device data sheet for the number of microphone units supported by the solution.
Software compatibility	Cisco RoomOS 11.24 or later
Interfaces	 Power over Ethernet RJ45 Ethernet connector MicroUSB service port Factory reset pinhole
Software features	 Acoustic Echo Cancellation (AEC) Al Noise Removal Automatic Gain Control (AGC) Multi-directional audio pickup Al-powered Adaptive Beamforming De-Reverberation Automatic Microphone Positioning Audio Triangulation Ultrasound technology
Pickup coverage	Up to 3.5 m / 11.5 ft radius under optimal acoustic conditions
Frequency range	• 120 Hz to 20 kHz, +/- 6 dB (on axis)
Free field sensitivity	• -36 dBFS/Pa +/- 3dB, 1 kHz
Signal-to-noise ratio	• 70 dB
User interface	Multi-color LED (red, green and white) showing mute status and configuration status.
Mounting options	 Wire hanging ceiling mount kit (featuring 3m / 9.8 ft long wires) Ceiling bracket mount kit Drop ceiling grid mount kit Note: All Ceiling Microphone Pro mounting options are to be ordered separately from the main unit
Configuration	Support for automatic positioning of the microphone elements for a rapid AV deployment
Device management	 Unified cloud device management, device controls, monitoring, and analytics in Control Hub alongside Cisco video devices and peripherals.

Features	Specification	
Physical dimensions	Unit: 42cm x 42cm (16.5in x 16.5in), Height: 4.8cm (2in) Package: 55cm x 52cm x 15cm	
Weight	2.54kg/5.6lbs	
Power consumption	Average: 3.5W, Max: 4.5W Power over Ethernet (PoE) Class 2	
Operating temperature and humidity	 0°C to 40°C (32°F to 95°F) Ambient Temperature 20% to 90% Relative Humidity (noncondensing) 	
Storage and transport temperature and humidity	 -20°C to 60°C (-4°F to 140°F) Ambient Temperature 10% to 90% Relative Humidity (noncondensing) 	
Regulatory compliance and standards	 FCC CFR 47 Part 15B (EMC) Directive 2014/30/EU (EMC Directive) Directive 2014/35/EU (Low-Voltage Directive) Directive 2011/65/EU (RoHS) Directive 2002/96/EU (WEEE) NRTL approved (product safety) Ceiling Microphone Pro is a non-radio product. Please note that due to the Ceiling Microphone Pro design, the product is out of scope for UL 2043 standard. The recommended Ethernet cables to use with the product are also Plenum rated (CMP). The list above reflects the regulations applicable at the time of publishing this document. For an updated list of regulations applicable, see the Product Approval Status Database for approval documents per country 	
Security	 Secure management using HTTPS and SSH protocols Standards-based media encryption on all back-ends (Secure Real-time Transport Protocol [SRTP], using AES-128-GCM or AES-256-GCM) Password protection to access administration Network settings protection AES-128 encrypted audio 	

Ordering information

The Cisco Ceiling Microphone Pro is available as a part of a configured Collaboration video device solution (OPTION) or as standalone unit (SPARE). All Ceiling Microphone Pro Mounting Options and Ethernet Cables are sold separately. To place an order, visit the <u>Cisco Ordering Home Page and refer to Table 3</u>. To download software, visit the <u>Cisco Software Center</u>.

 Table 3.
 Ordering information

Product Name	Part Number	Compliance Model Number	
Main Offer Summary - configured OPTIONs and standalone S	SPAREs		
Cisco Ceiling Microphone Pro, Arctic White	CS-MIC-CLGPRO	TTC5-19	
Cisco Ceiling Microphone Pro, Carbon Black	CS-MIC-CLGPRO-C	TTC5-19	
Cisco Ceiling Microphone Pro, Arctic White - SPARE	CS-MIC-CLGPRO=	TTC5-19	
Cisco Ceiling Microphone Pro, Carbon Black - SPARE	CS-MIC-CLGPRO-C=	TTC5-19	
TAA Offer Summary - configured OPTIONs and standalone S	PAREs		
Cisco Ceiling Microphone Pro, TAA, Arctic White - Bundle	CS-MIC-CLGP-LBUN++	TTC5-19	
Cisco Ceiling Microphone Pro, TAA, Carbon Black - Bundle	CS-MIC-CLGP-CBUN++	TTC5-19	
Cisco Ceiling Microphone Pro, TAA, Arctic White	CS-MIC-CLGPRO++	TTC5-19	
Cisco Ceiling Microphone Pro, TAA, Carbon Black	CS-MIC-CLGPRO-C++	TTC5-19	
Cisco Ceiling Microphone Pro, TAA, Arctic White - SPARE	CS-MIC-CLGPRO++=	TTC5-19	
Cisco Ceiling Microphone Pro, TAA, Carbon Black - SPARE	CS-MIC-CLGPRO-C++=	TTC5-19	
Customized Model Offer Summary (Select Regions) - configu	ured OPTIONs and standalon	e SPAREs	
Cisco Ceiling Microphone Pro, Customized Model, Arctic White	CS-MIC-CLGPRO	TTC5-19	
Cisco Ceiling Microphone Pro, Customized Model, Carbon Black	CS-MIC-CLGPRO-C	TTC5-19	
Cisco Ceiling Microphone Pro, Customized Model, Arctic White - SPARE	CS-MIC-CLGPRO=	TTC5-19	
Cisco Ceiling Microphone Pro, Customized Model, Carbon Black - SPARE	CS-MIC-CLGPRO-C=	TTC5-19	
Mounting Options - configured OPTIONs and standalone SPAREs - sold separately			
Wire Hanging Ceiling Mount Kit for Ceiling Microphone Pro	CS-MIC-CLGP-WHK		
Ceiling Bracket Mounting Kit for Ceiling Microphone Pro	CS-MIC-CLGP-CBK		
Drop Ceiling Grid Mount Kit for Ceiling Microphone Pro	CS-MIC-CLGP-DMK		

Product Name	Part Number	Compliance Model Number
Wire Hanging Ceiling Mounting Kit Ceiling Mic Pro - SPARE	CS-MIC-CLGP-WHK=	
Ceiling Bracket Mounting Kit for Ceiling Mic Pro - SPARE	CS-MIC-CLGP-CBK=	
Drop Ceiling Grid Mounting Kit Ceiling Mic Pro - SPARE	CS-MIC-CLGP-DMK=	
Ethernet Cable Options - configured OPTIONs and standalone SPAREs - sold separately		
Ethernet CAT5E Plenum Rated - 20 meter - Gray	CAB-CAT5E-CMP-20M	
Ethernet CAT5E Plenum Rated - 30 meter - Gray	CAB-CAT5E-CMP-30M	
Ethernet CAT5E Plenum Rated - 20 meter - Gray - SPARE	CAB-CAT5E-CMP-20M=	
Ethernet CAT5E Plenum Rated - 30 meter - Gray - SPARE	CAB-CAT5E-CMP-30M=	
Replacement Component SPAREs		
Replacement Grille for Ceiling Mic Pro, Carbon Black - SPARE	CS-MIC-CLGP-GRL-C=	
Replacement Grille for Ceiling Mic Pro, Arctic White - SPARE	CS-MIC-CLGP-GRL-L=	

Warranty information

Warranty information is available on Cisco.com at the Product Warranties page.

Cisco Services

Cisco and our partners provide a broad portfolio of smart, personalized services and support that can help you realize the full business value of your Cisco Device investment by increasing business agility and network availability. This portfolio of services accelerates business innovation by harnessing the network as a powerful business platform. For more information about these services, visit: https://www.cisco.com/go/collaborationservices.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's <u>Corporate Social Responsibility</u> (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	<u>Materials</u>
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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For more information

Cisco Ceiling Microphone Pro product page

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