

# SONIA C5



Sonia C5 is a 5.25" in-ceiling speaker with Category cable connection, designed to enable anyone to deploy speaker systems into meeting rooms, classrooms and discussion spaces using standard IT infrastructure. Sonia C5 mounts into suspended ceiling grids using an included tile bracket and double-stepped dog ears, enabling blind installation from below. Sonia C5 features no proprietary audio connectors and is connected to a Sonia Amp using standard Category cable. Each Sonia C5 features VoiceMatch™ technology when used in conjunction with Sonia Amp/Solaro Series, enabling speech optimization for added intelligibility. Sonia C5 features a magnetic, fully-paintable grille with removable logo and offers integrated mounting for Sonia Amp, allowing the entire speaker system to be contained within a drop ceiling with no in-room racks.

## BENEFITS

- › Sonia C5 enables intelligible sound with consistent volume and coverage across meeting rooms, classrooms and discussion spaces without the requirement to run expensive, hefty copper wire. Installation is simple and quick using standard Category cable with RJ45 connectors.
- › Sonia C5 offers a 5.25" driver with a wide dispersion pattern and VoiceMatch technology to allow for fewer speakers in large rooms.
- › Integrated 'backpack'-style mounting allows for amplifier and speaker to both be hidden in the ceiling, eliminating the need for in-room racks.
- › When paired with a Sonia Amp, integrated fault monitoring between Sonia C5 and Sonia Amp products enables the same level of monitoring as found in an individually-addressable IP loudspeaker without the cost.
- › Up to four (4) individual rooms can be covered with a single Sonia C5/Sonia Amp system, and each Sonia Amp can accommodate up to eight (8) Sonia C5 speakers in pairs.

## ENGINEERING SPECIFICATIONS

The loudspeaker shall be 8 ohm, 2-way and consist of one 134mm (5.25 in) low-frequency transducer and one 19mm (0.75 in) high frequency transducer with an integrated crossover in a sealed enclosure. The low-frequency transducer shall have a polypropylene cone material with a rubber surround, and the high frequency transducer shall be constructed of silk material using a balanced-cone configuration. An integrated passive limiter shall protect the speaker from over-current. The backcan shall be 116mm (4.6 in) deep and be constructed of drawn steel painted with black, textured finish. The speaker grill shall be magnetically attached and include a safety tether wire, provide full coverage of speaker front and be constructed from powder-coated perforated steel painted RAL 9010 white. The speaker grill shall be paintable with a removable logo badge. Performance specifications shall be as follows: frequency range of 50Hz to 20kHz (-10dB), sensitivity more than 91 dB (at 1m), rated power of 30W at 8 Ohms, with a coverage angle of 180 degrees (-6dB at 2kHz) and 107 degrees (-6dB at 10kHz). The loudspeaker shall include RJ45 connections for audio input and output, safety tether wire attachment points, four blind-mount ceiling attachment wings that accommodate ceiling tile thickness from 0.9mm (0.35 in) to 40.9mm (1.6 in) and mounting capability for a networked amplifier. The loudspeaker shall be rated for operation between 0-40C. The loudspeaker shall be the Xilica Sonia C5.

## TECHNICAL SPECIFICATIONS

### Electrical

Input/Output

*Audio in:* RJ45, CatX, amplified audio over Category cable;

*Audio out:* RJ45, CatX, amplified audio over Category cable (link)

Rated Power	30W at eight (8) Ohms
Operating Temperature	32–104°F (0–40°C)
Ethernet	(2) RJ45 with Link and Speed indicators
Fault Sensing	Yes; to Sonia Amp
VoiceMatch Support	Yes; via Sonia Amp/Solaro Series

### Mechanical

Speaker Type	Two-way, eight (8) Ohm, 5.25" coaxial, in-ceiling
Transducer(s)	<i>Low Frequency:</i> 134mm (5.25") polypropylene cone, rubber surround; <i>High Frequency:</i> 19mm (0.75") silk dome tweeter
Frequency Range	50Hz to 20kHz (-10dB)
Coverage Angle	180 degrees (-6dB at 2kHz), 107 degrees (-6dB at 10kHz)
Sensitivity	>91dB (at 1m)
Dimensions	<i>Diameter:</i> 269mm (10.6") <i>Depth:</i> 121mm (5.7") Cutout Diameter: 222mm (8.75")
Enclosure	Drawn steel backcan with ABS baffle; Powder-coated, magnetically-attached speaker grille, painted white
Color	Grille: RAL 9010 (white)
Min/Max Ceiling Thickness	0.9mm (0.35") to 40.9mm (1.6")
Coverage Angle	180 degrees (-6dB at 2kHz), 107 degrees (-6dB at 10kHz)
Weight	5kg / 11lbs

### General

Compliance	CE, RoHS
Warranty	Xilica Five Year Limited Warranty
Part Number(s)	2200–007–0102
Included Accessories	Sonia Tile Bridge Kit; Connector cover (with knockouts for conduit connection)

# SONIA AMP



Sonia Amp is a PoE+ IP-addressable amplifier designed to power up to eight (8) Sonia C5 5.25" speakers from a single unit. Offering four (4) distinct channels that can supply Sonia C5 speakers with either the identical or different audio feeds, Sonia Amp allows a single amplifier to drive audio in anywhere between one and four different rooms. Sonia Amp is entirely CatX-based, requiring no proprietary audio connectors or traditional copper speaker wire. Instead, IT technicians can install Sonia systems with standard Category cable and RJ45 connectors, dramatically lowering time and cost of deployment. Unlike traditional amplifiers that require a dedicated equipment rack for mounting and ventilation, Sonia Amp mounts directly to the rear of any Sonia C5 speaker, eliminating in-room storage and permitting a full room speaker system to be hidden in a suspended ceiling. Sonia Amp is convection cooled without any fan noise. Sonia Amp is Dante enabled, AES67-compatible, and offers an integrated network switch with PoE to enable the powering of a ceiling-mounted microphone array. In this respect, Sonia Amp adds additional value to the IT technician by creating just one single Category cable drop to the ceiling for the full room audio system. When paired with a Xilica Solaro QR1, an entire audio system can be deployed in the drop-ceiling. Sonia Amp additionally offers fault sensing on each channel, providing the same monitoring capabilities as an individually-addressable IP speaker without the cost.

## BENEFITS

- › CatX-based speaker system eliminates traditional copper cable, leveraging standard Category cable and RJ45 connections for rapid deployment by IT technicians.
- › Sonia Amp's integrated fault sensing provides end-users with the same monitoring capabilities of an individually-addressable IP speaker without the cost burden.
- › Sonia Amp mounts directly to the rear of a Sonia C5 speaker, enabling an entire room speaker system to be hidden in a suspended ceiling, eliminating in-room racks.
- › Integrated PoE-capable network switch in Sonia Amp allows for powering of a ceiling-mounted beamforming microphone, allowing just one Category cable drop to the ceiling for an entire audio system.

## ENGINEERING SPECIFICATIONS

The room audio amplifier shall be network-connected and PoE+ (802.3at Class 4) powered, providing up to four channels of Dante/AES67 network audio. The Class D amplifier shall provide up to 15W for a single channel of audio, 6W for dual channels, and 3W for four channels at 8 Ohms, with each channel connected to ceiling speakers over standard CAT5e/CAT 6 wired connections. The amplifier shall include a mic input port that is PoE (802.3af, Class 0) powered, and provides pass through network audio connectivity for a ceiling-mounted mic array. The amplifier shall be convection cooled without fan, and shall include internal temperature sensing and overheat protection. It shall provide current limit protection and fault detection for connected speakers. Configurable standby mode shall be included to reduce energy consumption when not in use. The amplifier shall be the Xilica Sonia Amp.

## TECHNICAL SPECIFICATIONS

### Electrical

Power-over-Ethernet	PoE+ to IEEE 802.3at, Class 4
Power Consumption	30W maximum
Power Output	Four (4) channel, 15W/channel maximum (without Mic port in use); Four (4) channel, 6W/channel maximum (with Mic port in use)

Microphone Port Power	PoE to IEEE 802.3af, Class 0; 15W maximum, 10W typical
Operating Temperature	32–104°F (0–40°C)
Cooling	Convection cooling, no fan
Humidity	0–95% relative humidity, non-condensing
Connectivity	LAN: (1) RJ45, PoE+ powered; Microphone: (1) RJ45, PoE power for microphone array, pass-through network to LAN port; Speaker(s): (4) RJ45, amplified audio out to Sonia C5
Audio Networking	Dante™ with AES67-compliance, four (4) output channels
Amplifier Type	Class D
Amplifier Power	Single channel: 15W; Dual channel: 7W; Four channel: 3W
Frequency Response (20Hz-20kHz)	+/- 1dB
Sample Rate	48kHz
Dynamic Range (20Hz-20kHz BW)	>90dB
THD+N (20Hz to 22kHz)	<0.3%
Intermodulation Distortion (SMPTE)	<0.3%
Crosstalk (Channel-to-Channel at 1kHz)	<-90dB
Controls, Service & Indicators	Reset: Momentary tactile button; Status: RGB LED indicator; LAN (PoE+)/Mic (PoE) RJ45 indicators: Green (left) – Link Status, On = Link Established; Off = No Link; Green (right) – Blink on data activity; Sonia C5 RJ45 indicators: One (1) Sonia C5 connected to RJ45 (8 Ohm load detected) – Left green light (on), right green light (on); Two (2) Sonia C5s connected to RJ45 (4 Ohm load detected) – Left green light (on), right green light (off)

**Mechanical**

Finish	Matt black with ruggedized coating; labels in white
Weight	1.5kg / 0.7lbs
Dimensions (HxWxD)	1.0" × 7.5" × 4.0" (25 × 191 × 102mm)
Mounting	Mounts onto the backcan of any Sonia C5 speaker; mounts onto any flat surface

**General**

Compliance	CE; FCC Part 15B; RoHS; WEEE
Warranty	Xilica Five Year Limited Warranty
Part Number(s)	2200–007–0101