



TeamConnect Ceiling 2

Ceiling microphone array

FEATURES

- Ceiling microphone array with patented automatic speaker position detection and dynamic beamforming for best speech intelligibility
- Analog and digital (Dante™) audio outputs for easy connectivity to video and audio conference systems
- Configuration and monitoring via Sennheiser's unique Control Cockpit software
- Open API for media and camera control applications
- 802.1X network configuration via SSH
- Several installation options via suspension kit, flush-mount or surface bracket
- Certified for Microsoft Teams Rooms when deployed with Microsoft-certified DSPs.

TeamConnect Ceiling 2 offers superior audio quality for voice and video conferences. Thanks to Sennheiser's patented adaptive beamforming technology it automatically follows the active speaker's voice, letting people speak naturally – whether they are sitting, standing or walking around the room. TeamConnect Ceiling 2 offers great versatility and interoperability with support for Dante™ networks and Power over Ethernet. It is compatible with Sennheiser's Control Cockpit software for efficient remote management, and offers remote configuration and monitoring via an open media control protocol (API), allowing for easy integration into media systems.



DELIVERY INCLUDES

- TeamConnect Ceiling 2 ceiling microphone array
- 3-pin Phoenix Connector (3.81 mm)
- 8 self-adhesive rubber feet
- Instruction manual
- Supplement sheet with manufacturer declarations

ACCESSORIES

SL CM FB	Ceiling mounting frame	Art. no. 506846
SL CM EB US	Extension brackets (for 2 ft ceiling grid)	Art. no. 508528
SL CM EB 625	Extension brackets (for 625 mm ceiling grid)	Art. no. 508290
SL CM SK	Ceiling suspension kit	Art. no. 508291
SL CM VB	VESA adapter	Art. no. 508620

CONTROL SOFTWARE

Sennheiser Control Cockpit



free download at:

www.sennheiser.com/control-cockpit-software

PORT REQUIREMENTS

Port	Protocol	Service	Product
45	UDP	SSC (Sennheiser Sound Control Protocol)	TeamConnect Ceiling 2
69	UDP	tftp (only temporary during firmware update)	TeamConnect Ceiling 2
5353	UDP	mDNS via Multicast 224.0.0.251	TeamConnect Ceiling 2
8181	HTTP	Web UI	Control Cockpit
80	HTTP	Control Cockpit update service	Control Cockpit



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SPECIFICATIONS

Product properties

Dimensions (L x B x H)	590 x 590 x 43 mm
Weight	5670 g (12.5 lbs)
Audio Output	1 x 3-pin terminal (fits Phoenix contact MCVW 1.5-3-ST-3.81) 2 x Digital Dante Network Audio (RJ-45 Primary and Secondary)
Ethernet / Control	1 x RJ-45 Ethernet Port for PoE power supply and data/control communication
Supply voltage	44 – 57 V DC PoE IEEE 802.3af Class 3
Power consumption	max. 8.8 W
Safety certification	UL 62368 certification (including UL 2043 testing and compliance)

Acoustic properties

Transducer principle	Pre-polarized condenser microphone
AF frequency response	160 Hz - 18,000 Hz
Sensitivity	0 dBV/Pa (988 mV/Pa)
Signal-to-noise ratio	83 dB (A)
Latency	4 ms
Equivalent noise level	11 dB (A)
Number of KE 10-237 mikrofon capsules	28
Pick-up pattern	Beam Pattern
Max. sound pressure level	104 dB SPL
Dynamic range	93 dB (A)

Ambient conditions

Temperature	Operation: 0 - 40°C (32 - 104 °F) Storage: -10 - 60°C (14 - 140 °F)
Relative air humidity	20 - 95 %, non-condensing

INSTALLATION VARIANTS

Variant 1

installed flush in a dropped/coffered ceiling (600 x 600 mm)



Accessories:

SL CM EB US (590 mm to 2 ft) or
SL CM EB 625 (590 mm to 625 mm)
angle brackets

Variant 2

mounted directly below the ceiling



Accessories:

SL CM FB Ceiling mounting frame

Variant 3

suspended from the ceiling



Accessories:

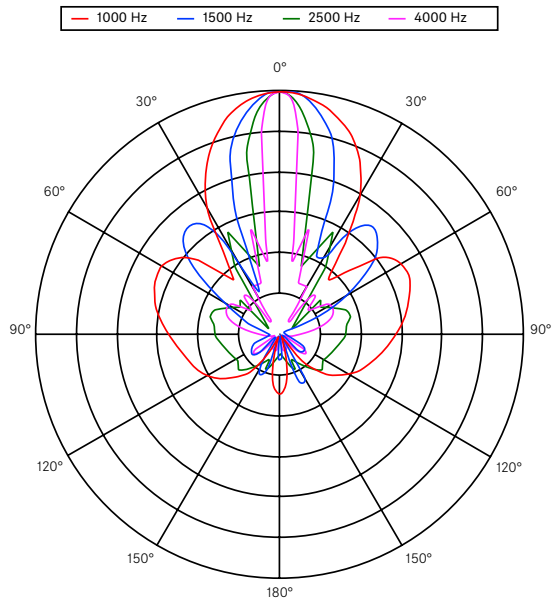
SL CM SK Ceiling suspension set



TeamConnect Ceiling 2

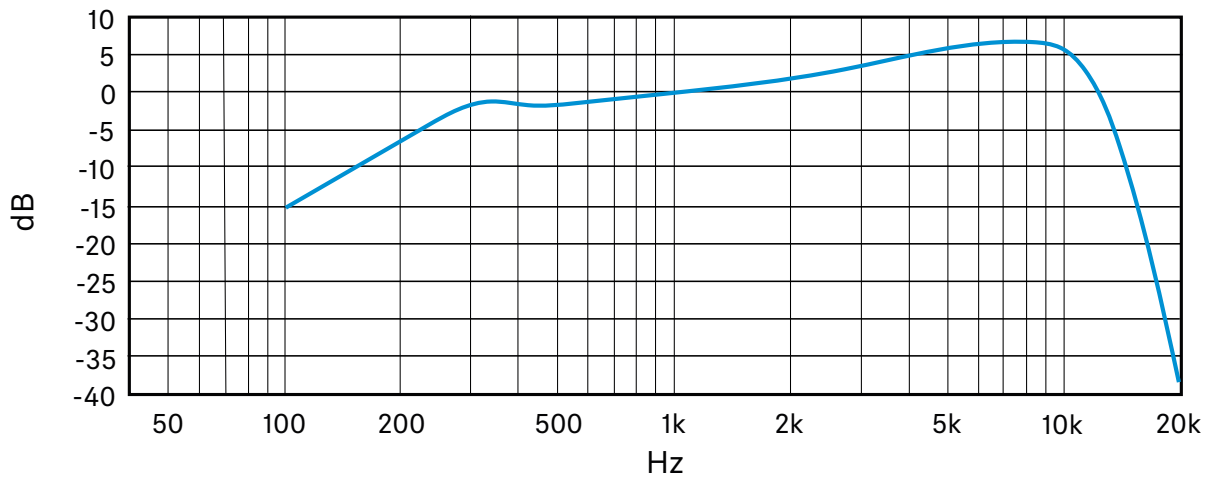
Ceiling microphone array

POLAR PATTERN



FREQUENCY RESPONSE

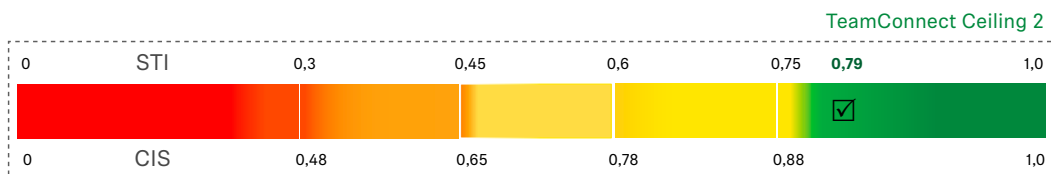
Frequency response measured directly on-axis at a distance of 2.90 m.



SPEECH TRANSMISSION INDEX (STI)

Room conditions: RT60 = 430 ms @ 1 kHz
at room noise level (weighted) = 40 dB(A) SPL (according to IEC 60268-16)

STIPA: 0.79

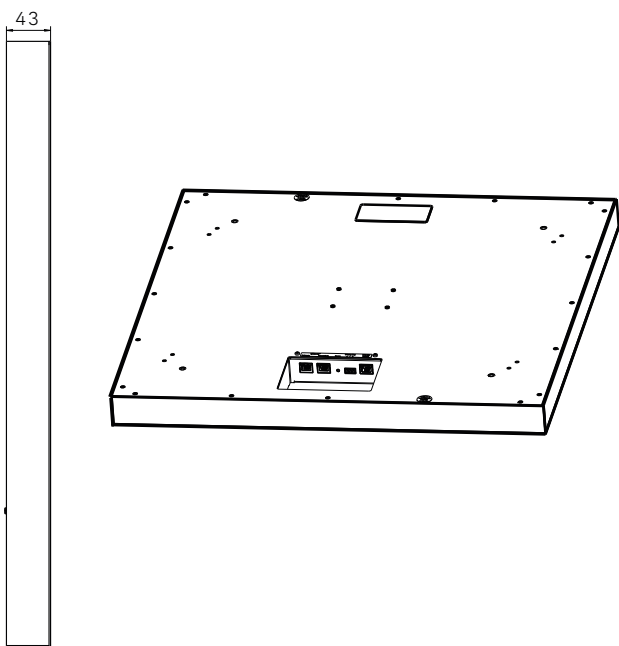
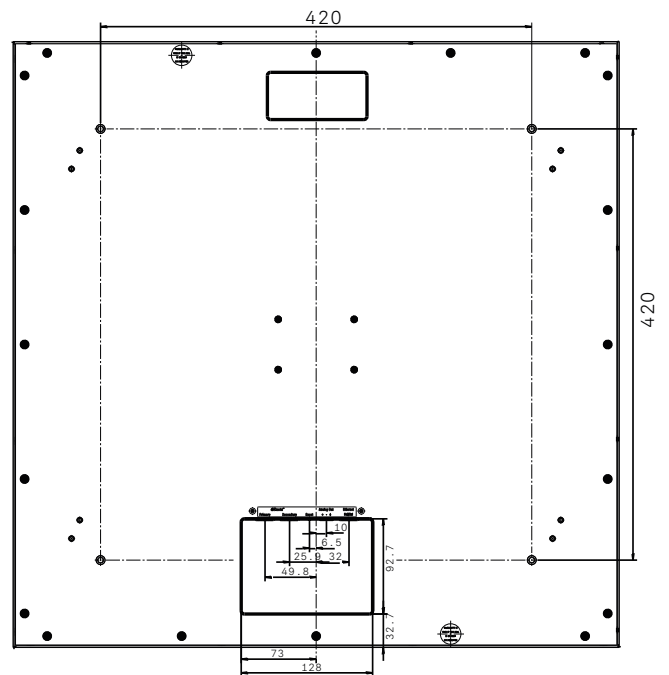
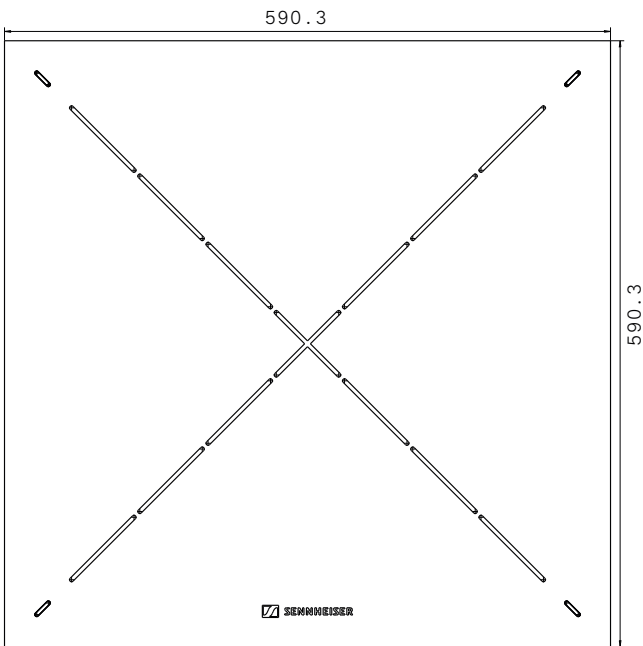




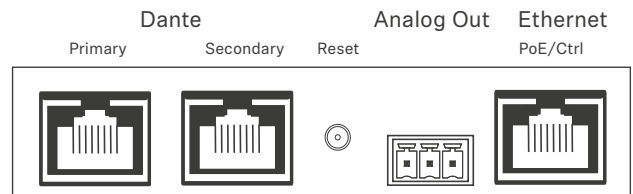
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DIMENSIONS

TeamConnect Ceiling 2



CONNECTIONS AND OPERATING ELEMENTS



- Dante** Dante™ interface with two RJ 45 sockets
Primary and Secondary
- Reset** Factory reset switch
- Analog Out** 3-pin terminal for analog audio out
- Ethernet** RJ 45 socket for network control and PoE

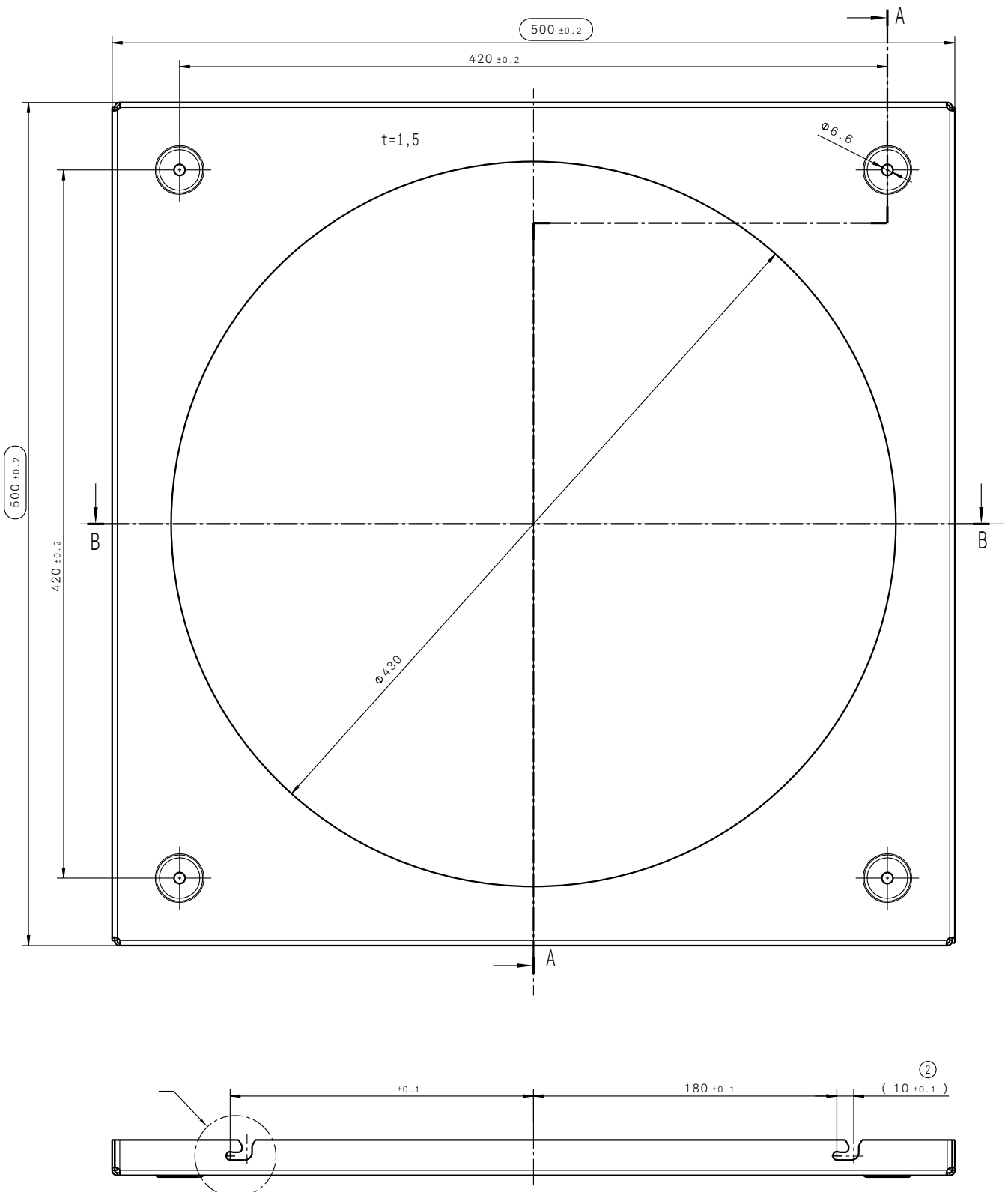


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DIMENSIONS

SL CM FB - Mounting bracket (Surface)

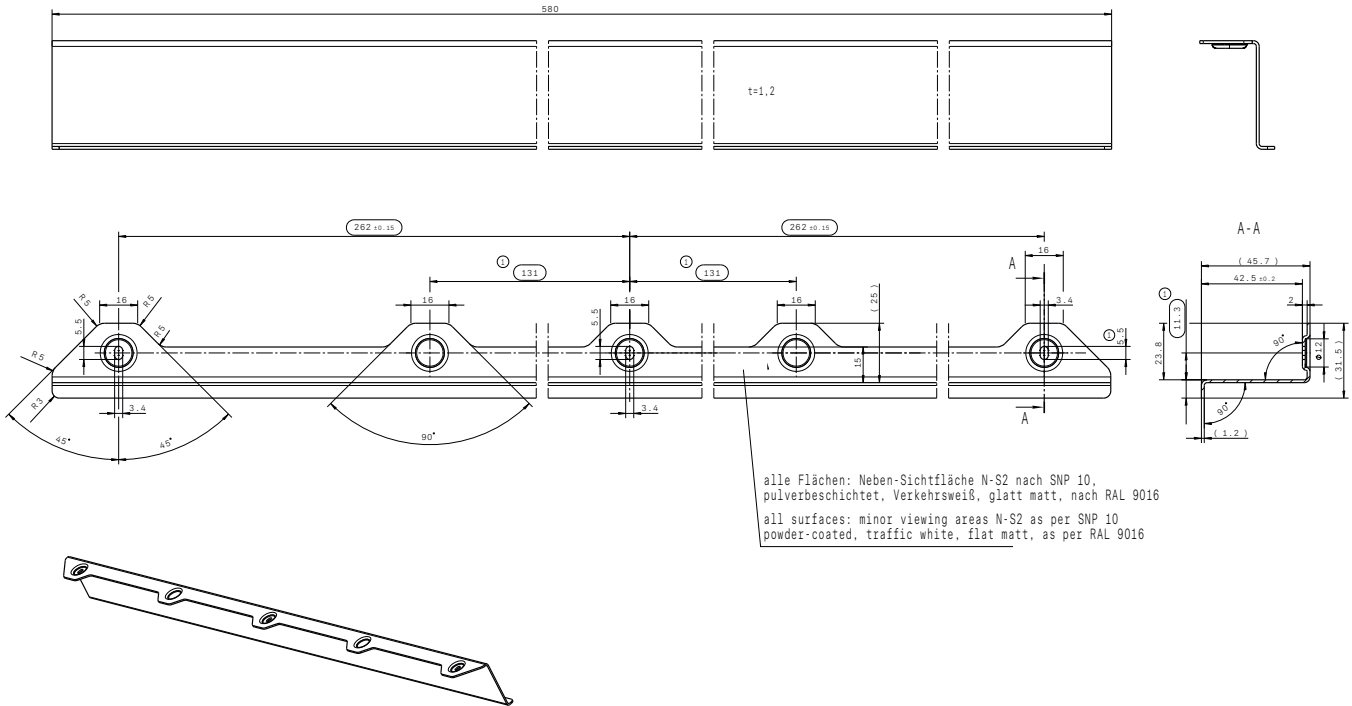




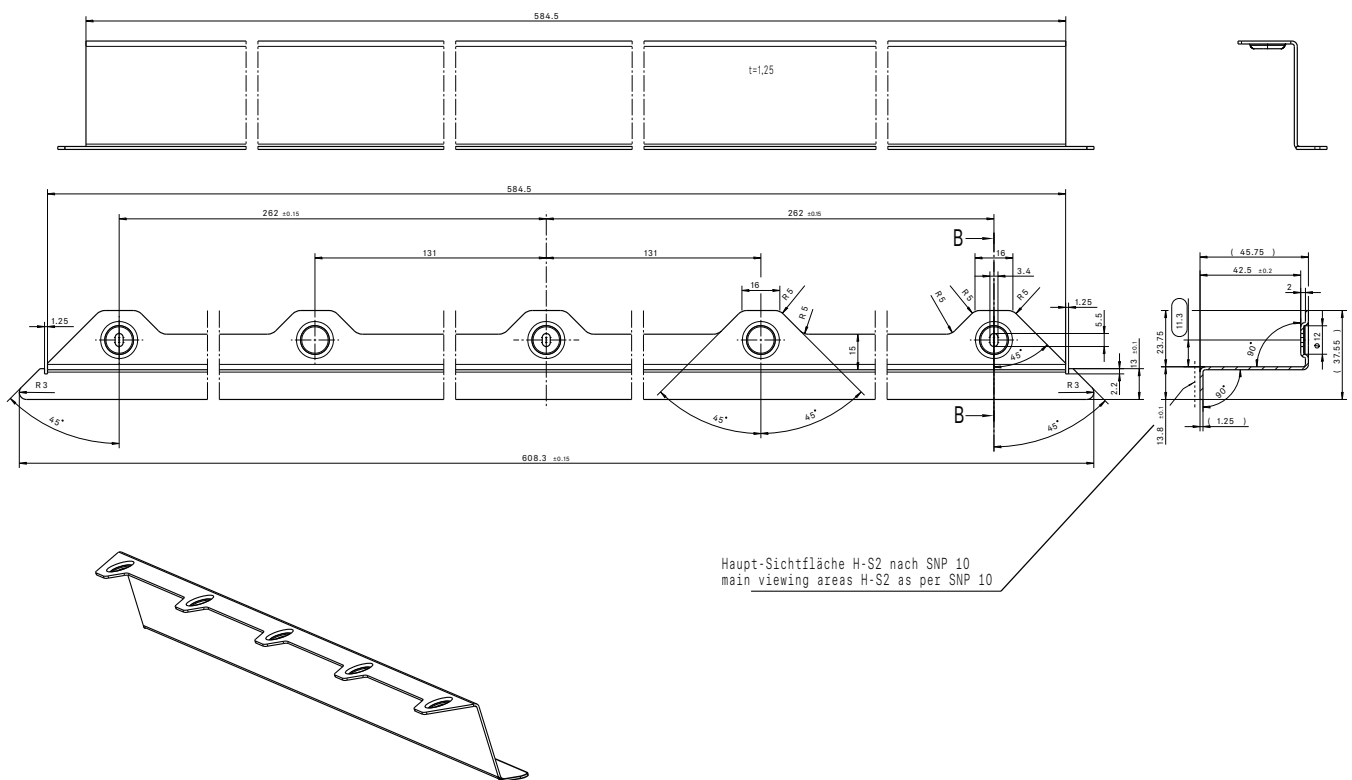
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DIMENSIONS

SL CM EB US - Extension brackets 2 ft (609.6 mm)



SL CM EB 625 - Extension brackets 625 mm



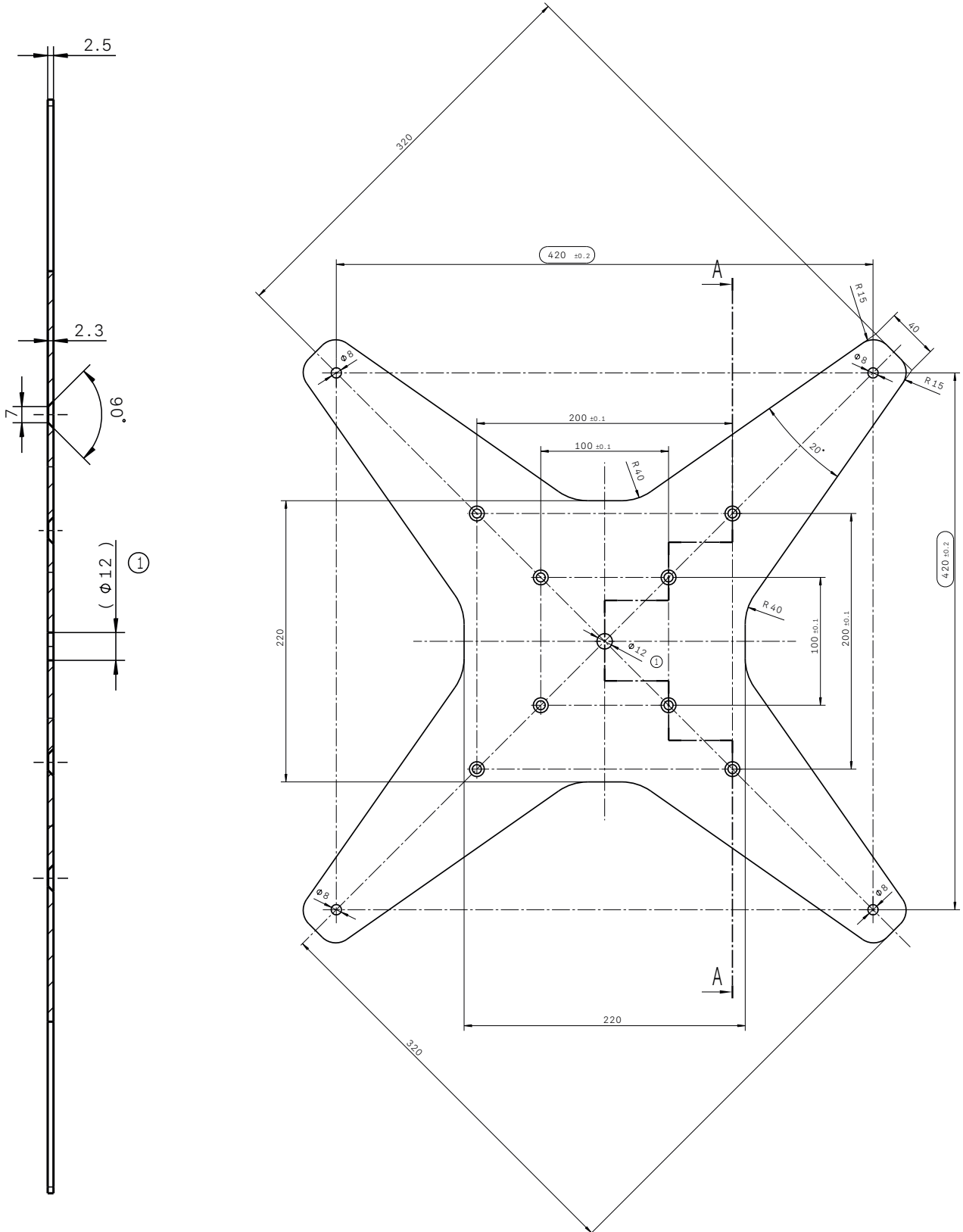


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DIMENSIONS

SL CM VB - VESA adapter





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ARCHITECT'S SPECIFICATION

The ceiling mounted microphone array shall be designed for fixed installation in medium to large conference rooms. The microphone array shall fit within the space of a standard 600 mm (2 ft.) ceiling panel and shall be mountable either onto or flush with the ceiling itself. Several mounting accessories shall be available, including a ceiling suspension kit, a ceiling fixation bracket as well as mounting brackets for US size ceiling panels and for 625 mm ceiling panels. Additionally, a VESA adapter shall be available for all standard 100 mm and 200 mm VESA mounting material.

The microphone array shall consist of 28 Sennheiser KE 10-237 pre-polarized condenser microphone capsules and shall use beamforming technology that automatically focuses on whoever is speaking in the room. The beam will automatically detect the position of the person speaking and will follow the person around the room at all times. A threshold for the detection shall be adjustable. Live monitoring of the horizontal and vertical angle of the position shall be available in the Sennheiser Control Cockpit control software.

The microphone array shall have a Dante™ interface with two RJ 45 sockets (Primary and Secondary) for digital audio output, supporting both redundant and daisy-chain modes. The microphone array shall also feature a 3-pin terminal for analog audio output, which is compatible with Phoenix contact MCVW 1.5-3-ST-3.81 connectors.

In addition, the microphone array shall have an RJ 45 Ethernet socket for network control and easy configuration and monitoring using the Sennheiser Control Cockpit control software. The RJ 45 Ethernet socket shall also support Power over Ethernet, using the PoE IEEE 802.3af Class 3 standard.

802.1X network configuration shall be possible via SSH protocol.

The microphone array shall feature a reset button for restoring the factory settings.

The microphone sensitivity shall be 0 dBV/Pa (988 mV/Pa). The maximum sound pressure level shall be 104 dB SPL. The dynamic range shall be 93 dB(A).

The microphone dimensions (L x W x H) shall be 590 x 590 x 43 mm (23.2" x 23.2" x 1.7"), weight shall be 5670 g (12.5 lbs). The operating temperature shall range from 0 °C to +40 °C (+32 °F to +104 °F). The storage temperature shall range from -10 °C to 60 °C (14 °F to 140 °F). The microphone array shall be tested according to UL 2043 rating.

The microphone array shall be the Sennheiser TeamConnect Ceiling 2.