



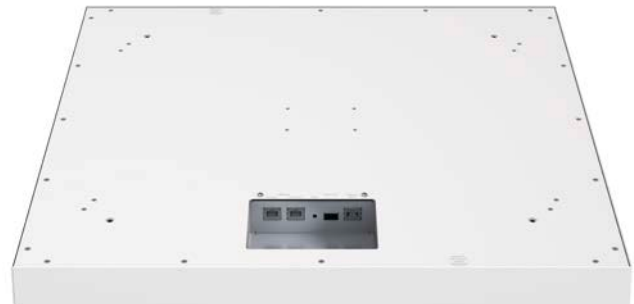
# TeamConnect Ceiling 2

## Ceiling microphone array (Firmware $\geq$ 1.5.1)

### 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
- Instrucion 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](http://www.sennheiser.com/control-cockpit-software)

### PORT REQUIREMENTS

| Port | Protocol  | Service                                      | Product               |
|------|-----------|--|-----------------------|
| 45   | UDP   TCP | 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       |



# TeamConnect Ceiling 2

## Ceiling microphone array (Firmware $\geq$ 1.5.1)

### 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)<br>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<br>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)<br>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:

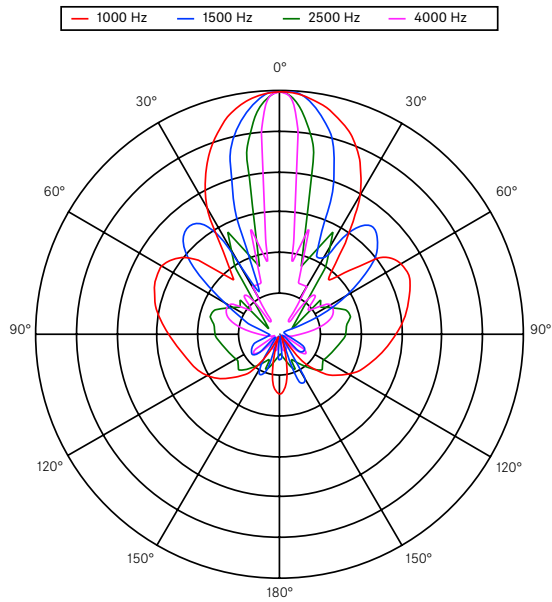
**SL CM SK** Ceiling suspension set



# TeamConnect Ceiling 2

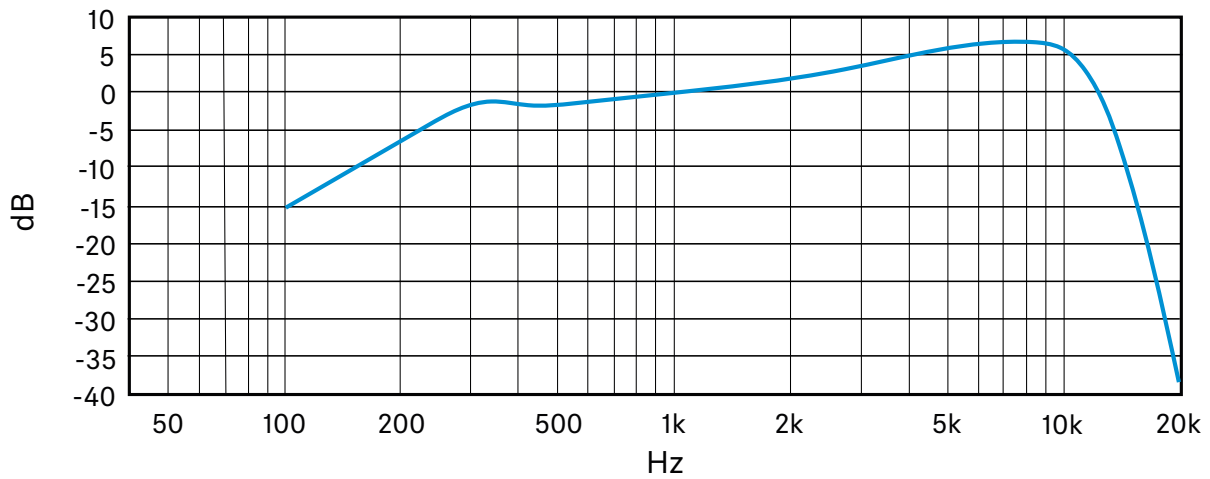
## Ceiling microphone array (Firmware $\geq$ 1.5.1)

### POLAR PATTERN



### FREQUENCY RESPONSE

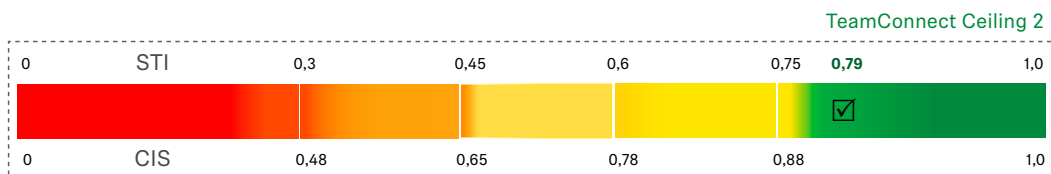
Frequency response measured directly on-axis at a distance of 2.90 m.



### 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



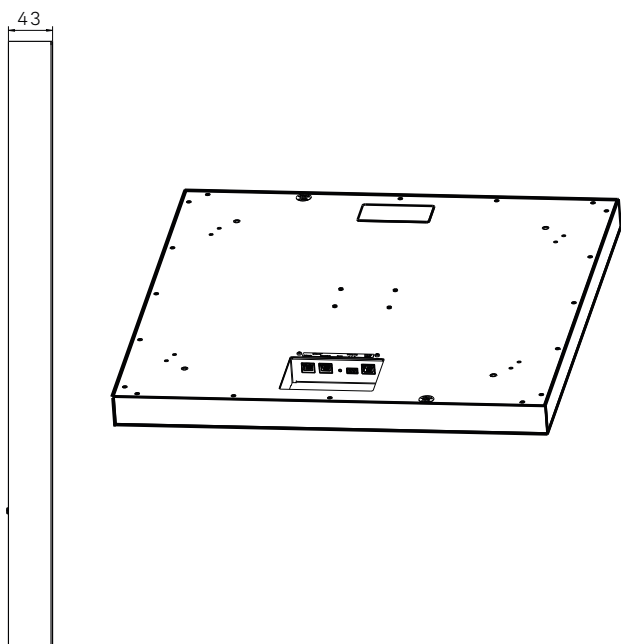
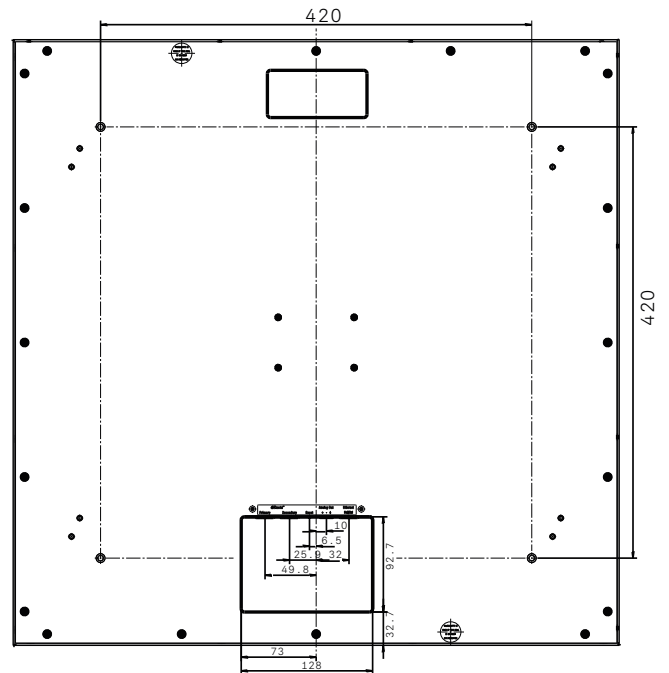
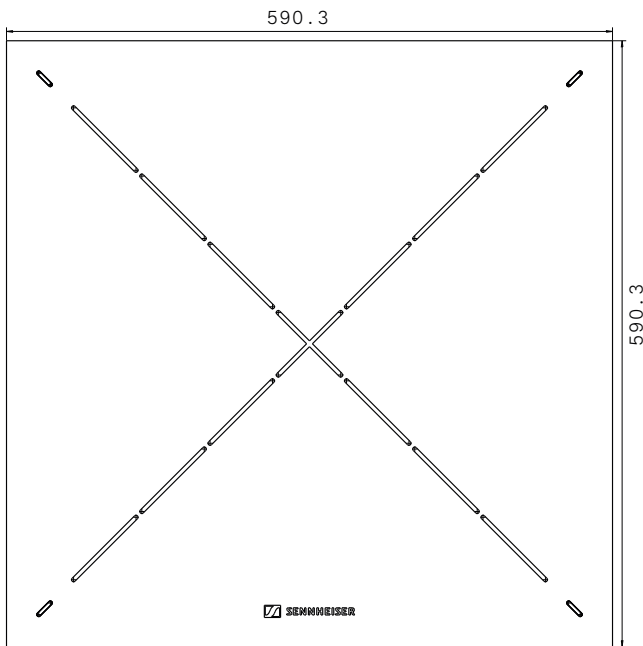


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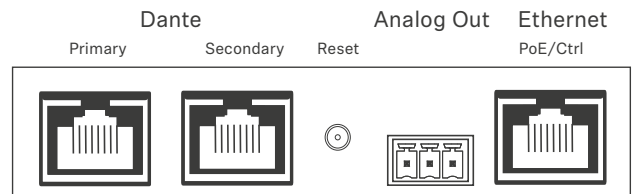
Ceiling microphone array (Firmware  $\geq$  1.5.1)

## 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

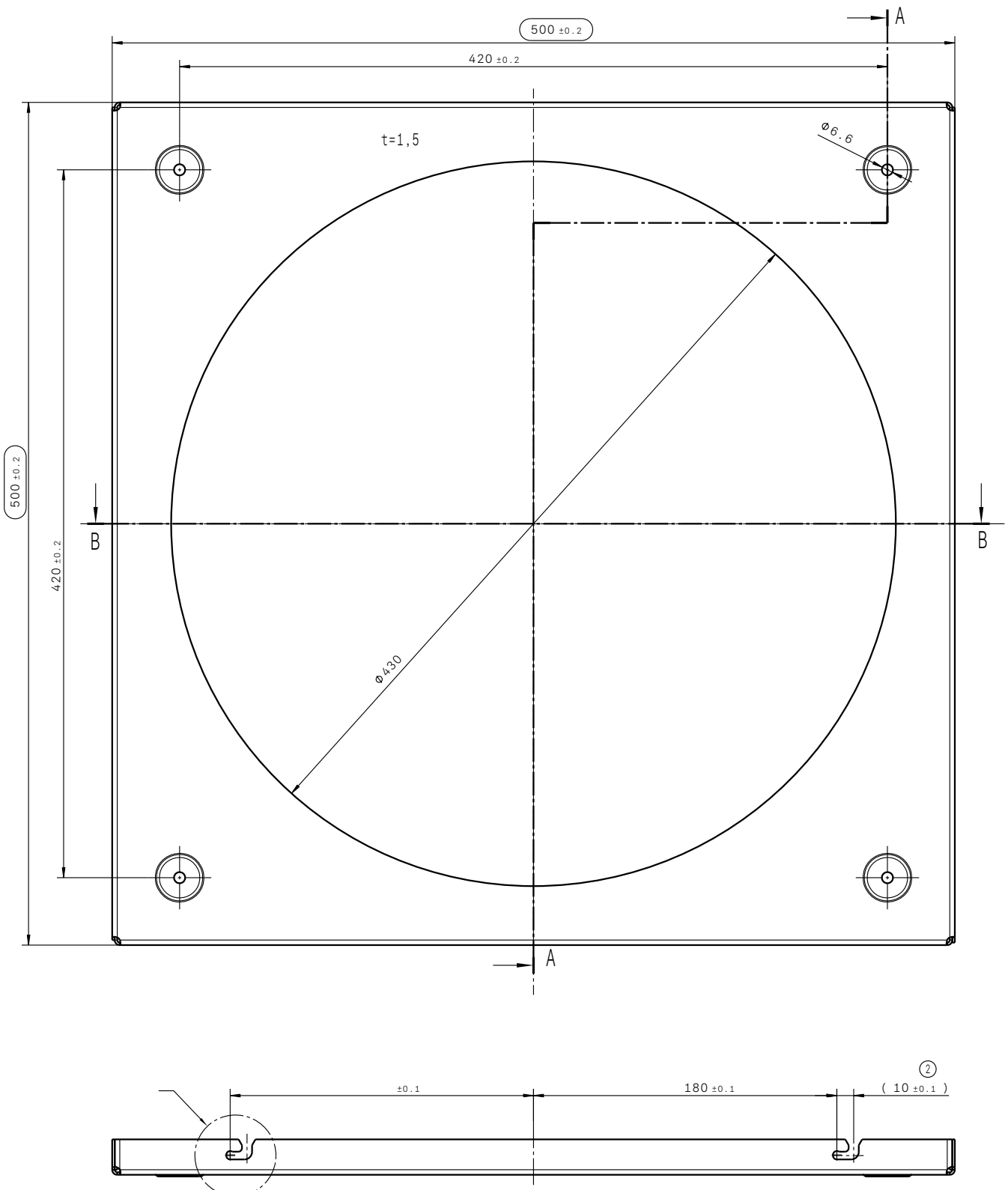


# TeamConnect Ceiling 2

## Ceiling microphone array (Firmware $\geq 1.5.1$ )

### DIMENSIONS

#### SL CM FB - Mounting bracket (Surface)



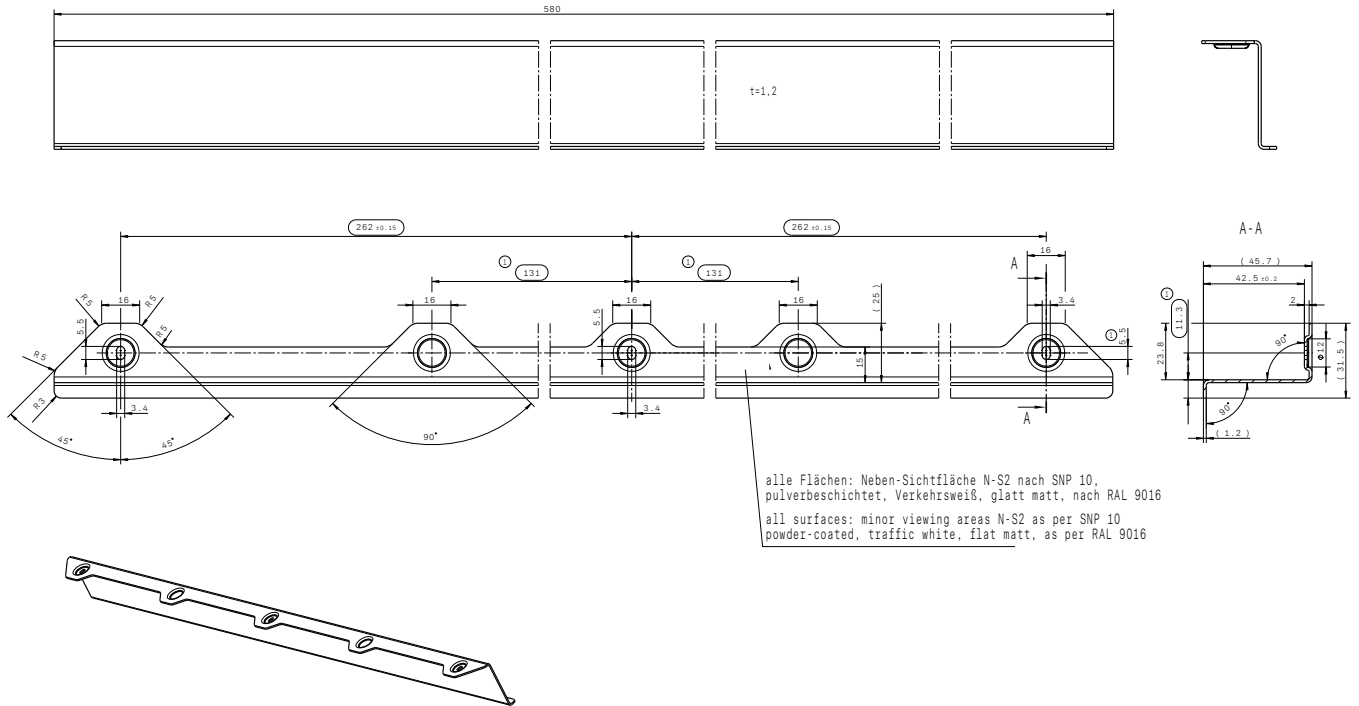


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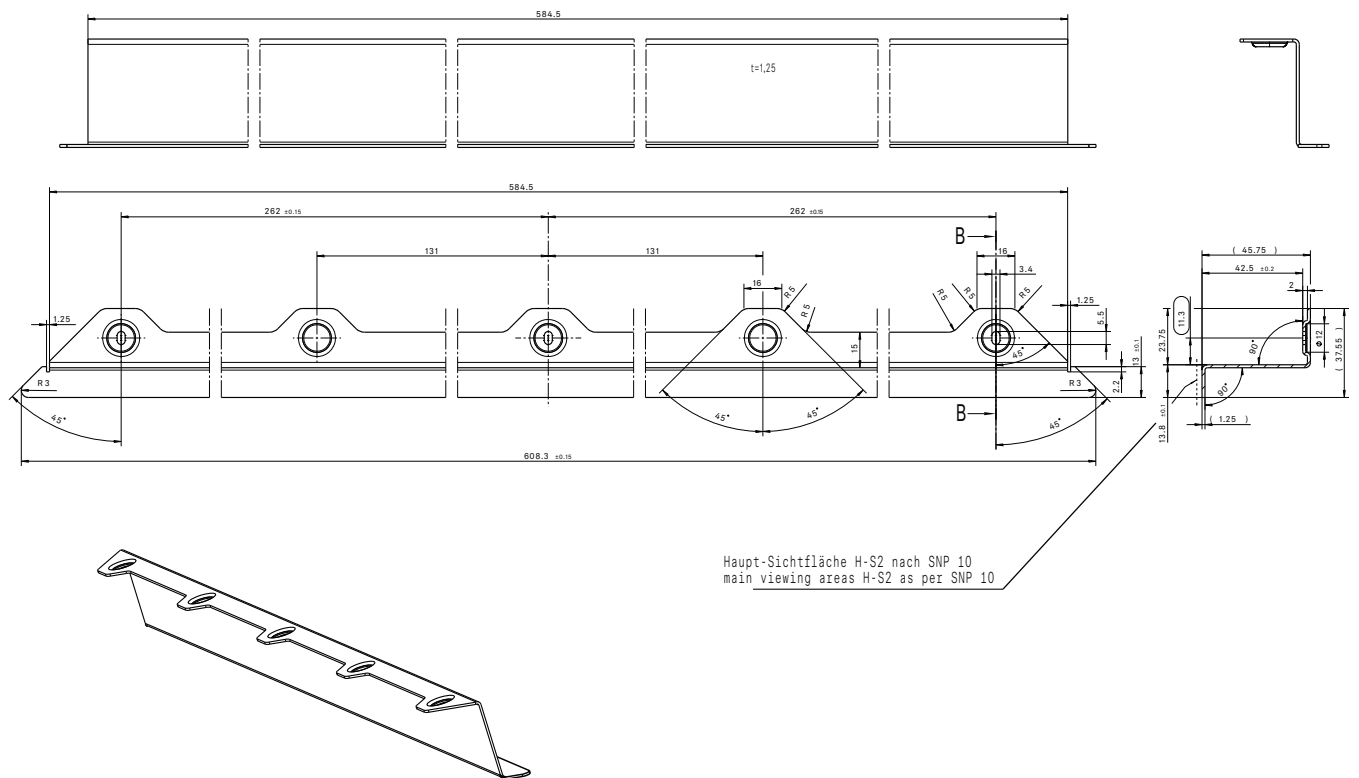
## Ceiling microphone array (Firmware $\geq 1.5.1$ )

### DIMENSIONS

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



#### SL CM EB 625 - Extension brackets 625 mm



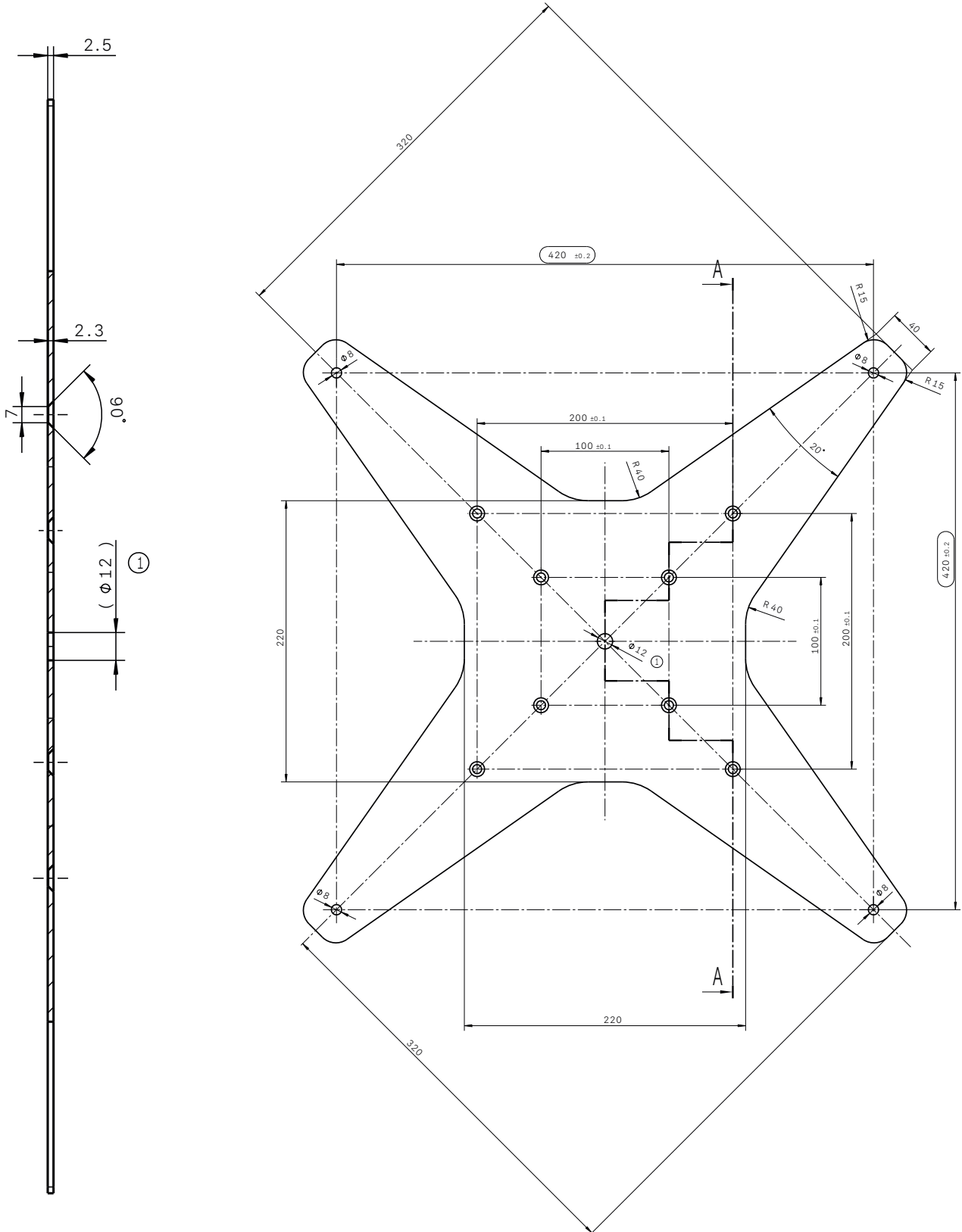


# TeamConnect Ceiling 2

## Ceiling microphone array (Firmware $\geq 1.5.1$ )

### DIMENSIONS

#### SL CM VB - VESA adapter





## TeamConnect Ceiling 2

### Ceiling microphone array (Firmware $\geq$ 1.5.1)

#### 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.