

CCS 1000 D Digital Discussion System

Compact yet versatile



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Invented for life





CCS 1000 D Discussion Devices

Designed for plug-and-play, ease-of-use and highly productive meetings

- Excellent speech intelligibility with built-in Digital Acoustic Feedback Suppression
- Built-in audio recording on internal memory and/or USB memory stick
- Native support for automatic HD camera control
- Advanced configuration and control via built-in web browser
- "Energy saving mode" for automatic switch-off after two hours of inactivity

Excellent speech intelligibility

The system delivers excellent speech intelligibility thanks to advanced digital audio processing and superior microphone and loudspeaker performance. The loudspeaker and the microphone are activated simultaneously to create a more natural face-to-face meeting feel, encouraging participants to more easily take part in the meeting. The system also utilizes built-in Digital Acoustic Feedback Suppression (DAFS) so you can reach higher volumes without causing any 'howling' effect.

Simple control with convenient recording

The front panel on the Control Unit provides all the necessary controls for setting up a meeting, here the Chairperson can select the number of open microphones, choose microphone mode, and set the system volume. The Control Unit can record up to 4,000 hours of discussion on a single USB stick, and its internal memory can also record up to eight hours of discussion, so it is never a problem if the USB stick has been disconnected.

Control Unit

- Supplies power to all system elements - up to 80 Discussion Devices per Control Unit
- Intuitive control of microphone operating mode and loudspeaker volume via front panel capacitive buttons
- Advanced configuration and control via built-in web browser and tablet
- Native support for automatic HD camera control (Max 6 Cameras)
- Internal recording for up to 8 hours
- External recording via USB up to 128 GB (>4,000 hours)
- Built-in Digital Audio Feedback Suppression (DAFS)
- Optimized for courtroom usage with four individual microphone outputs
- Two types of Control Unit are available
 - : CCSD-CU
 - : CCSD-CURD additional features such as MP3 recording and Digital Acoustic Feedback Suppression (DAFS). The four RCA outputs at the rear of the CCSD-CURD ensure that the unit is optimized for use in courtrooms, i.e. for the recording of individual speakers.

Functions

Plug-and-play functionality

The plug-and-play functionality of the Control Unit allows Discussion Devices and system cameras to be conveniently connected to and removed from the system as required. A power down or restart of the system is not necessary.

Web browser control

Basic and advanced system settings, including microphone management and recording options, can be easily viewed, managed and configured by using a web browser in combination with a tablet, laptop or PC.

Open microphone control

The maximum number of microphones that can be activated by pressing the microphone buttons on the Discussion Devices can be selected with the 'Number of Open Microphones' (NOM) button on the Control Unit. A maximum of four microphones can be selected on the Control Unit. This can be further extended to 10 microphones in the web browser.

Discussion control

the front of the Control Unit:

- **Open mode** – When the maximum number of open microphones is reached, the next participant that presses their microphone button is added to a waiting list. The first participant in the 'waiting list' is allowed to speak when an activated microphone is disabled.
- **Override mode** – Participants can override each other by pressing their microphone buttons. When the maximum number of open microphones is reached, the next participant that presses their microphone button will deactivate the longest time activated microphone.
- **Voice activation mode** – Participants can activate their microphones by speaking into them.
- **Push to talk (PTT) mode** – Participants can speak by pushing and holding in their microphone buttons. The microphone is deactivated when the microphone button is released. The maximum number of participants that can speak is determined by the number of open microphones.

Interface for peripheral equipment

The Control Unit enables the following equipment to be connected to the CCS 1000 Digital Discussion System:

- System cameras – A maximum of 6 Bosch HD Conference Dome cameras can be connected to the system
- External wired or wireless microphone – to allow a guest speaker or an audience to participate in a discussion
- Sound reinforcement system – for transmitting the proceedings to an audience in the same room or an adjacent room
- Audio equipment – for broadcasting music through the loudspeakers of the discussion system
- External audio processor – for modifying the floor signal distributed to the participant loudspeakers and headphones (i.e. equalizing)
- Telephone coupler – to allow a remote participant to join a discussion via a telephone/video connection
- External recorder – for recording and playing back discussions
- Computer (connected via micro USB connector – for transferring recordings (discussions) from internal memory of the Control Unit

Built-in MP3 recorder (CCSD-CURD only)

The built-in recorder can record discussions in the MP3 format to the internal memory or a USB memory stick with a maximum capacity of 128 GB, which can store up to 4,000 hours discussion. recordings are divided into files of one hour's duration containing the date and time of recording.

- **Internal memory** record up to 8 hours discussion.
- **USB memory stick** automatically saved to a USB memory stick when it is connected to the Control Unit. 128 GB can record up to 4,000 hours discussion. Three short beeps and a red flashing LED indicate when 5 minutes of recording are left. A long beep and a red / green flashing LED indicate when it is not possible to record a discussion (i.e. internal memory full and USB memory stick not connected to the Control Unit, USB memory stick full or damaged).

Built-in monitor loudspeaker (CCSD-CURD only)

- Live monitoring of a meeting
- Prelisting of audio files before replaying to the floor

Built-in Digital Acoustic Feedback Suppression (DAFS) (CCSD-CURD only)

The built-in Digital Acoustic Feedback Suppression (DAFS) feature suppresses acoustic feedback (known as 'howling') This improves speech intelligibility by allowing the speaker volume to be set as loud as required without any risk of acoustic feedback.



CCSD-CU Control Unit CCSD-CURD Control Unit Recorder & DAFS

Connections

Front of unit (CCSD - CURD only):

- 1 x 3.5 mm stereo headphone socket
- 1 x USB connector

Rear of unit:

- 1 x micro USB connector (CCSD - CURD only)
- 4 x RCA outputs for individual microphone recording, e.g. for recording individual speakers in a courtroom (CCSD - CURD only)
- 1 x 4-pole circular female 24 VDC power input connector
- 2 x 6-pole circular female connectors for loop-through connection of 40 Discussion Devices per trunk
- 1 x RJ45 Ethernet connector for communication with web browser application
- 1 x 3-pole XLR female microphone input connector with phantom supply
- 1 x RCA input for 'Floor' (i.e. external audio source, such as a CD or DVD player)
- 1 x RCA output for a 'sound reinforcement system'
- 1 x RCA input / output for either:
 - 'Recorder' for connecting an external recorder
 - 'Insertion' for connecting an external audio processor
 - 'Telephone / mix minus' for allowing a remote participant to join a discussion via a telephone / video connection
 - 'Participant loudspeaker' for distributing the participant loudspeaker signal to a sound reinforcement system.

Only one piece of audio equipment can be connected to this RCA input / output at any one time. The RCA input / output has to be configured by selecting the required option in the web browser.

Certifications and approvals

EU	: CE, WEEE ¹
US	: UL, FCC
CA	: CSA, ICES-003, EPS ¹
AU/NZ	: RCM, MEPS ¹

Note: ¹ Only applicable for the power adaptor.

Technical specifications

Electrical

Mains voltage	: 100 to 240 VAC \pm 10%
Current consumption	: Maximum 0.6 A (100 VAC) to 0.2 A (240 VAC)
DC supply to Discussion Devices	: 24 V \pm 1 V (current limited)
Number of Discussion Devices per Control Unit	: Max. 80 devices (40 per trunk)
Discussion Device loudspeakers volume control	: 15 steps of 1.5 dB (starting from -10.5 dB)
Limit threshold level to unit	: 12 dB above nominal level
Frequency response	: 30 Hz to 20 kHz
Sample rate	: 44.1 kHz

Total harmonics

Nominal input (85 dB SPL)	: < 0.5%
Max. input (110 dB SPL)	: < 0.5%

Audio inputs

XLR nominal microphone input	: -56 dBV
XLR maximum microphone input	: -26 dBV
RCA nominal input	: -24 dBV (+/- 6 dB)
RCA maximum input	: +6 dBV
S/N	: > 93 dBA
Frequency response	: 30 Hz to 20 kHz
THD	: < 0.1%

Audio outputs

RCA nominal output	: -24 dBV (+6/- 24 dB)
RCA maximum output	: +6 dBV
S/N	: > 93 dBA
Frequency response	: 30 Hz to 20 kHz
THD	: < 0.1%

Recorder (CCSD-CURD)

Recording/ Playback (bit rate)	: 64, 96, 128, 256 Kbit/sec
Recording/ Playback (sample frequency)	: 44.1 kHz

Monitoring loudspeaker (CCSD-CURD)

Nominal output	: 72 dB SPL
Loudspeaker output power	: 4 W
Gain range mute	: -10.5 to +12 dB

USB memory stick compatibility (CCSD-CURD)

SanDisk USB memory stick	: Formatted FAT32 file system. Maximum size: 128 GB.
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Recording capacity in hours (CCSD-CURD)

Bite rate	Internal memory hours	USB memory stick hours			
		16 GB	32 GB	64 GB	128 GB
64	8 hrs	500	1000	2000	4000
96	5 hrs	350	700	1400	2800
128	4 hrs	250	500	1000	2000
256 *	2 hrs	125	250	500	1000

* Supported when recording floor only.

Mechanical

Dimensions including feet	: 45 x 440 x 200 mm (H x W x D) 19" wide, 1 RU high
Height of feet	: 5.5 mm
Mounting	: Tabletop 19-inch rack
Weight (CCSD-CU)	: Approx. 3.2 kg
Weight (CCSD-CURD)	: Approx. 3.4 kg
Material (Top & Base)	: Painted metal
Color	: Traffic black (RAL 9017) mattgloss
Rim	: Pearl light grey (RAL 9022) mattgloss

Environmental

Operating temperature	: 5 °C to +45 °C
Storage temperature	: -40 °C to +70 °C
Relative humidity	: 5% to 98% non-condensing

Ordering information

CCS 1000 D Control Unit : Order number CCSD-CU
Control Unit for the CCS 1000 Digital Discussion System, provides power for the Discussion Devices, enables peripheral equipment to be connected to the discussion system.

CCS 1000 D Control Unit Recorder DAFS : Order number CCSD-CURD
Control Unit for the CCS 1000 Digital Discussion System, has MP3 recording and DAFS, provides power for the Discussion Devices, enables peripheral equipment to be connected to the discussion system.



CCSD-DS Discussion Device Short CCSD-DL Discussion Device Long

Discussion Device

- Enables participants to speak & listen to the proceedings
- Can be used either as delegate or chairperson device
- Enables chairperson to mute microphones of participants
- "Possible-To-Speak" indicator
- "Request-To-Speak" indicator
- Cable lock facility
- GSM immune
- Built-in loudspeaker
- Microphone: with mic-active LED indicators, flexible stem (either 31 or 48 cm length)
- Headphone socket with built-in volume control

Functions

Possible-to-speak indication

A white possible-to-speak indicator above the microphone button indicates when the microphone can be activated.

Request-to-speak indication

A green request-to-speak indicator above the microphone button and in the head of the microphone indicate when a request-to-speak has been added to the waiting list. The indicators flash green when the request-to-speak is first in the waiting list.

GSM immunity

Immunity to mobile phone interference ensures for clear, uninterrupted discussion.

Short or long microphone with flexible stem

The fixed microphone with flexible stem can be easily adjusted to suit the user. For maximum comfort, a short 310 mm or long 480 mm microphone stem is available.

Built-in loudspeaker with volume control

To ensure for optimum intelligibility, the loudspeaker volume of all Discussion Devices is centrally controlled from the Control Unit.

Face-to-face meeting feeling

An authentic face-to-face meeting feeling is achieved by allowing the loudspeaker and microphone to be on at the same time.

Controls and Indicators

- Microphone button
- Color-coded LED indicator above microphone button for showing the following states: microphone on, request-to-speak, and possible-to-speak
- Light-ring indicator in head of microphone
- Rotary thumbwheel on side of device for adjusting the headphones volume
- Concealed initialization button at base of device for reassigning the network address
- Concealed slide-switch at base of Discussion Device for configuring as a 'Delegate's Device' or 'chairperson's Discussion Device'
- Chairperson's configuration only – separate microphone button and 'priority button'

Connections

- 1 x 6-pole circular female connector with cable locking recess – for loop-through connection of Discussion Devices
- 1 x 3.5 mm stereo headphones socket on side of device
- 1 x 2 m cable with a 6-pole circular male connector with cable lock

Certifications and approvals

EMC	: EN 55103-1 EN 55103-2
Environment	: EN 50581
US	: FCC Part 15B

Technical specifications

Electrical

Frequency response : 30 Hz to 20 kHz
THD : < 0.5%
S/N : >93 dBA
Sampling rate : 44.1KHz
Headphones load impedance : > 32 ohms
< 1k ohm

Microphone nominal input : 85 dB SPL
Loudspeaker nominal output : 72 dB SPL
Loudspeaker output power : 4 W

Mechanical

Dimensions device without : 64 x 203 x 146 mm
microphone (H x W x D)

Weight : Approx. 1 kg

Mounting : Tabletop (portable or fixed)

Material (top) : Plastic ABS+PC

Material (base) : Metal ZnAl4

Color (top) : Traffic black (RAL 9017) mattgloss

Color (base) : Pearl light grey (RAL 9022) mattgloss

Environmental

Operating temperature : 0 °C to +35 °C

Storage temperature : -40 °C to +70 °C

Relative humidity : 15% to 90%

Air pressure : 600 to 1100 hPa

Ordering information

CCS 1000 D Discussion Device Short

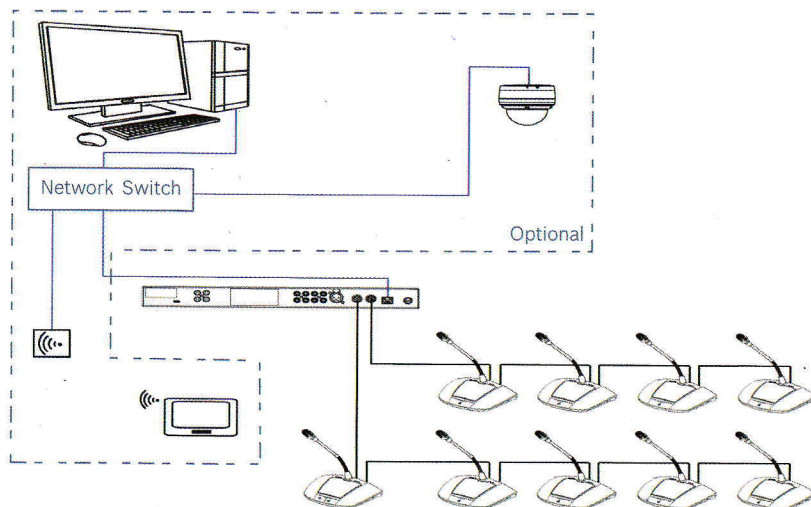
: Order number CCSD-DS

Discussion Device for the CCS 1000 Digital Discussion System, supplied with short-stem fixed microphone, configurable as a delegate device or chairperson's device.

CCS 1000 D Discussion Device Long

: Order number CCSD-DL

Discussion Device for the CCS 1000 Digital Discussion System, supplied with long-stem fixed microphone, configurable as a delegate device or chairperson's device.



DEALER STAMP