BOSCH

CCSD-CU Control unit
CCS 1000D

▶ Plug-and-play functionality for quick and easy connection of up to 80 Discussion Devices

▶ Intuitive web browser interface control for advanced configuration and control

▶ On-board support for automatic HD camera control

The Control Unit is the main component of the CCS 1000 D Digital Discussion System. It supplies DC power to all connected Discussion Devices (CCSD-DS/ CCSD-DL) and monitors and controls the discussion system.

• Up to 80 Discussion Devices can be connected to a single Control Unit; the system can be expanded to a maximum of 245 Discussion Devices by using Extension Units (CCSD-EXU).
• Touch-button control allows for easy configuration and operation of the unit, while intuitive LED indicators give a clear indication of the system settings.
• Conveniently positioned connections at the rear of the unit enable peripheral equipment to be connected to the discussion system, such as audio equipment, Ethernet switches, video switches, Bosch HD Conference Domes, and a PC or laptop.
• An intuitive web browser interface control allows basic and advanced system settings to be easily viewed and changed, as required.

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, which ensures fast installation and reconfiguration times.

Web browser control
Basic and advanced system settings, including microphone management, can be easily viewed and configured using a web browser interface in combination with a tablet, laptop or PC.

• Changes made in the web browser interface are automatically updated in the Control Unit and vice-versa.
• An energy saving mode in the web browser interface allows the Control Unit and connected devices to automatically shut down if they are not used for two hours.
• The standby mode can be used during a meeting break. When this mode is selected, the Control Unit is set to standby and all Discussion Devices are switched off.
• The web browser interface also has an option to select a fixed IP address.

A RESTful API (Application Program Interface) can be used to:

• control the speaker's microphone.
• control the discussion modes and waiting lists.
• set the system to, and recover the system from, standby.
• retrieve and set the microphone sensitivity of an individual Discussion Device.
• facilitate web-casting and recorder solutions requiring microphone information, third-party Pan Tilt Zoom (PTZ) camera systems, and synoptic layouts for enabling and disabling microphones.

Microphone management
The maximum number of microphones that can be activated at the same time 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 25 microphones in the web browser interface.

Interruption microphone option
A Discussion Device can be configured as an interruption microphone that can always get the floor regardless of the number of open microphones. Typically an interruption microphone is positioned at a podium for use by guest speakers. The web browser interface allows a total of 25 Discussion Devices to be configured as interruption microphones or chairperson's devices.

Discussion modes
One of the following microphone modes can be selected by pressing the 'Microphone-mode' button on the front of the Control Unit:
- **Open mode** - Participants can speak by pressing their microphone buttons. 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 microphone that has been activated for the longest time (the chairperson's microphone is not included in the number of open microphones and, therefore, cannot be overridden by a participant).
- **Voice activation mode** - Participants can activate their microphones by speaking into them. A microphone can be temporarily muted by pressing and holding down the microphone button.
- **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.

Camera control
All Onvif Profile-S compliant cameras are automatically discovered.
The Camera Control offers:
- Control of Onvif Profile-S compatible cameras with username and password.
- Panasonic camera support via its IP protocol:

- AW-HE40, AW-HE50, AW-HE60, AW-HE120, AWHE130, AW-UE70.
- Sony camera support via its IP protocol:
  - SRG-300SE and SRG 360SHE.
- Control of the TvOne CORIOmatrix and the Kramer MV-6 video switches.
- The enabling of HD-SDI video switching, so that HD SDI video signals can be automatically switched and displayed with low-latency on one or more hall displays.

Interface for connecting peripheral equipment
The Control Unit enables the following equipment to be connected to the Digital Discussion System:
- System cameras - for giving a clear visual overview of the proceedings. A maximum of six Bosch HD Conference Dome cameras can be connected to the system with native support (the camera presets can be configured in the web browser interface). The CCS 1000 D Digital Discussion System supports the tvONE CORIOmaster mini C3-510 and the Kramer MV-6 3G HD-SDI Multiviewer video switchers.
- 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.

Controls and Indicators
- Mains power on/off button with red/green LED indicator. Red indicates that the system is off (no power available from the external power supply). Green indicates that the system is active (Control Unit and all connected devices powered up).
- Plus/minus buttons for setting the volume range of all connected Discussion Devices - used in combination with LED indicators for showing the selected volume.
- Microphone-mode button for selecting one of the microphone operating modes - used in combination with LED indicators for showing the selected mode.
- Open microphone button for selecting the number of microphones that can be activated at the same time - used in combination with LED indicators for showing the number of activated microphones.
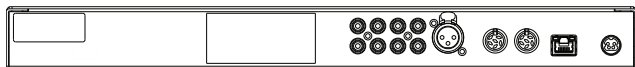
Connections
Rear of unit:

Fig. 1: CCSD-CU rear view
- 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 interface 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 interface.

Installation/configuration notes

This is a professional product that should be installed, used and maintained by trained professionals only.

Parts included

Quantity	Component
1	CCSD-CU Control Unit
1	Mains power cord
1	24 VDC power supply
2	Sets of chairperson's buttons for a Discussion Device
1	Exchange tool for buttons
1	Set of feet for table top use

Quantity	Component
1	Set of 19" 1U mounting brackets
1	Safety instructions
1	Installation note
1	DVD with operation manual and supporting tools

Technical specifications

Electrical

Input voltage (VAC)	100 VAC – 240 VAC
Power frequency	50 Hz; 60 Hz
DC voltage (V)	24 V (6.0 A)
Maximum number of discussion devices per control unit (without extension unit)	40 discussion devices per trunk 80 discussion devices in total 24 V, Max. 5.2 A (short-circuited protected)
Volume control of the discussion device's loudspeakers	15 steps of 1.5 dB (starting from -10.5 dB)
Limit threshold level to unit	12 dB above nominal level
Gain reduction due to number of open microphones (NOM)	1/SQRT (NOM)
Sample rate (kHz)	44.10 kHz
Frequency response (-3 dB) (Hz)	30 Hz – 20,000 Hz
Ethernet speed	1 Gb/s

Total Harmonic Distortions (THD)

Nominal input (85 dB SPL)	< 0.5 %
Maximum input (110 dB SPL)	< 0.5 %

Audio inputs

Nominal input level (dBV) (XLR)	-56 dBV
Maximum input level (dBV) (XLR)	-26 dBV
Nominal input level (dBV) (RCA)	-24 dBV (+/- 6 dB)
Maximum input level (dBV) (RCA)	6 dBV
Minimum signal-to-noise ratio (dBA)	93 dBA
Frequency response (-3 dB) (Hz)	30 Hz – 20,000 Hz

Total harmonic distortion + noise (%)	0.1%

Audio outputs

Nominal output level (dBV) (RCA)	-24 dBV
Maximum output level (dBV) (RCA)	6 dBV
Minimum signal-to-noise ratio (dBA)	93 dBA
Frequency response (-3 dB) (Hz)	30 Hz – 20,000 Hz
Total harmonic distortion + noise (%)	0.1%

Mechanical

Dimensions (H x W x D) (mm) (including feet)	45 mm x 440 mm x 200 mm
Dimensions (H x W x D) (in) (including feet)	1.80 in x 17.30 in x 7.90 in
Height of feet (mm)	5.5 mm
Height of feet (in)	0.2 in
Mounting type	Rack-mounted; Tabletop
Material (top and base)	Painted Metal
Color (RAL) (top and base)	RAL 9017 Traffic black
Color (RAL) (rim front panel)	RAL 9022 Pearl light gray
Weight (g)	3,200 g
Weight (lb)	7.10 lb

Environmental

Operating temperature (°C)	5 °C – 45 °C
Operating temperature (°F)	41 °F – 113 °F
Storage temperature (°C)	-40 °C – 70 °C
Storage temperature (°F)	-40 °F – 158 °F
Operating relative humidity, non-condensing (%)	5% – 98%

Ordering information

CCSD-CU Control unit
Control Unit for the CCS 1000 D Digital Discussion System, provides DC power for a maximum of 80 Discussion Devices, enables peripheral equipment to be connected to the system.
Order number **CCSD-CU | F.01U.298.806 F.01U.400.590 F.01U.429.670**

Accessories
CCSD-EXU System extension unit
Extension Unit for the CCS 1000 D Digital Discussion System, provides DC power for a maximum of 85 additional Discussion Devices.
Order number **CCSD-EXU | F.01U.307.207**

Services
EWE-CCS1DC-IW 12 mths wrty ext CCS 1000D control unit
12 months warranty extension
Order number **EWE-CCS1DC-IW**

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