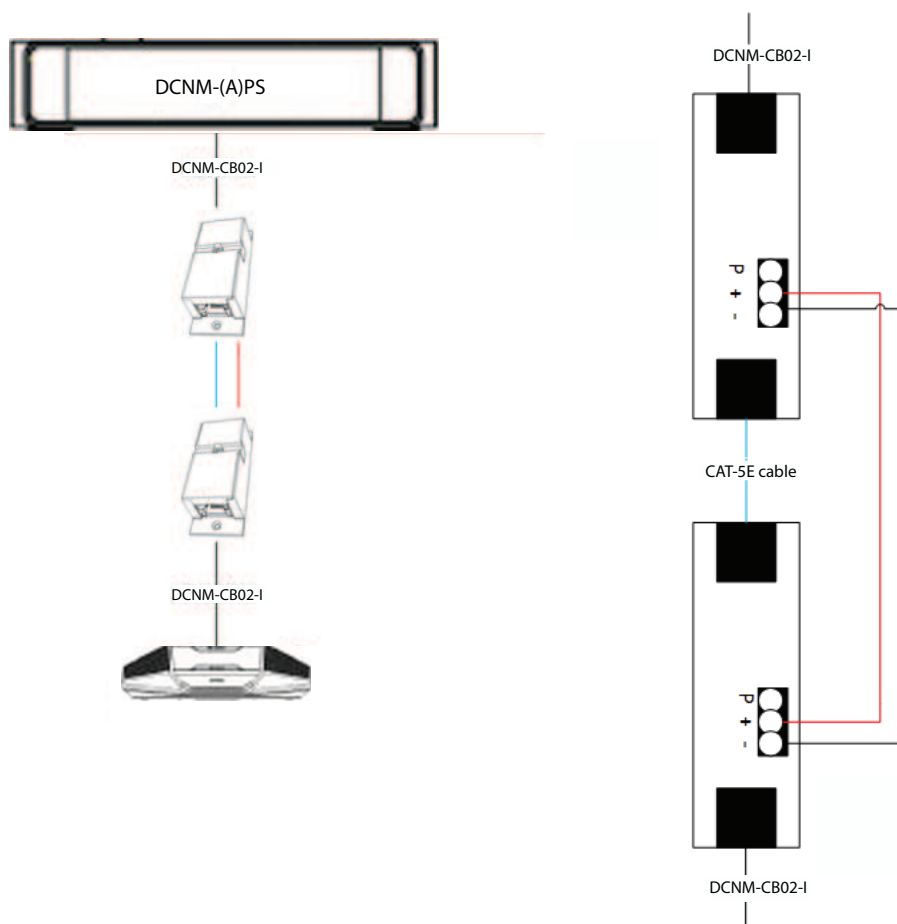




Cable coupler used as interface

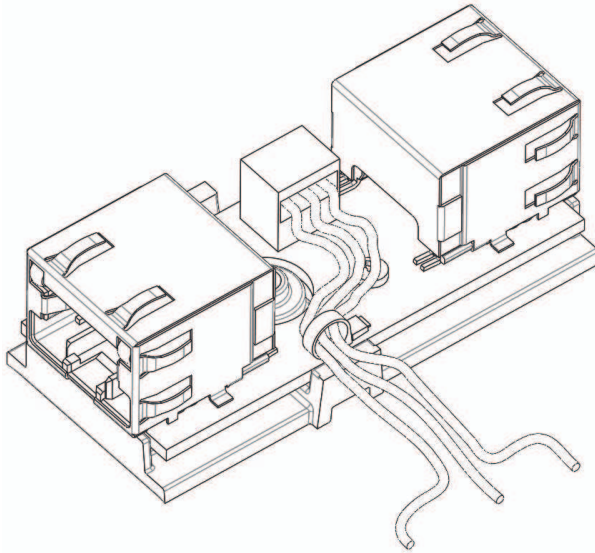


Figure 5.3: Creating a tension relief, tie wrap prevents the power cables from being pulled out accidentally.

5.5.4

Using a cable coupler to insert power locally

The cable coupler can be used to insert a local power supply, enabling you to place a third-party 48 VDC power close to the participant devices.

To set this up:

1. Open the housing of the cable coupler.
2. Connect the power cables to the screw terminals + and -.
3. Remove the break-out of the housing to guide the power cables through.
4. Create a tension release.



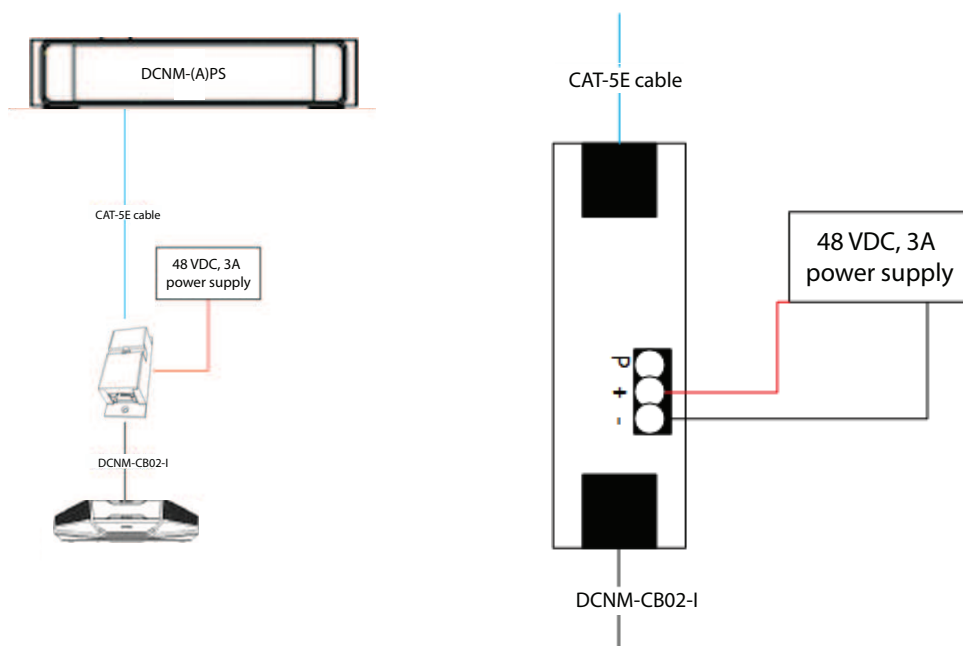
Warning!

Risk of electric shock. Exposed power cables are a potential hazard. Make sure all power cables are securely fastened by fixing them with a tie wrap on the inside of the box (see drawing 'Creating a tension relief').

5. Close the housing and fix the screw with torque 0.4 Nm.

Note:

- Requirements for the power supply:
 - nominal output of 48 VDC (ranging from 47 - 49 VDC)
 - the ripple should be less than 200 mV pk-pk
 - maximum output current should not exceed 3.0 A (or limited to 3.0 A, because DICENTIS cables and devices have a maximum rating for this current)
- Advice
 - It is strongly advised that the power supply has its own short circuit protection with a short circuit output current ranging from 4.3 to 5.0 A.
 - When the power supply has an automatic restart after a short circuit, this restart function should have an interval time of 3 to 4 seconds and should have no more than 4 restart attempts.
 - Upon powering off the power supply, the output should be less than 9 V, 1 mA.
- The maximum distance between the (A)PS and the conference device is limited to 100 m due to the Ethernet properties.



Transporting the power via cable

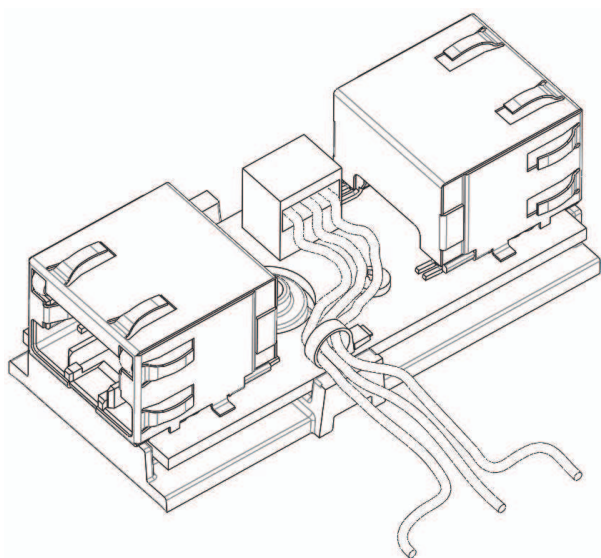


Figure 5.4: Creating a tension relief, tie wrap prevents the power cables from being pulled out accidentally.

6 Mechanical installation of Central Equipment

6.1 Audio processor and powering switch and Powering switch

The Audio processor and powering switch is used:

- to control system audio signals,
- to route audio signals to/from devices,
- to supply power to devices,
- as an Ethernet switch to connect the PC and DICENTIS devices (DCNM-D / DCNM-DVT / DCNM-DSL / DCNM-DE / DCNM-MMD / DCNM-MMD2).

The Powering switch is used to:

- supply power to devices.

Scope of delivery

The Audio processor and powering switch and Powering switch are shipped with the following parts:

- 1x Mains power cord.
- 1x Safety instructions.
- 1x Set of 19 inch mounting brackets.
- 4x bottom feet.
- 1x DVD containing manuals and software (only with Audio processor and powering switch).

Front view

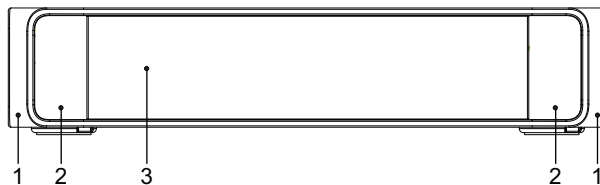
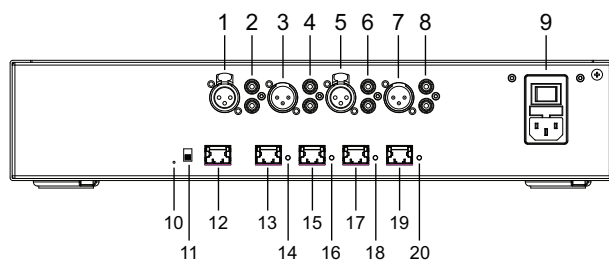
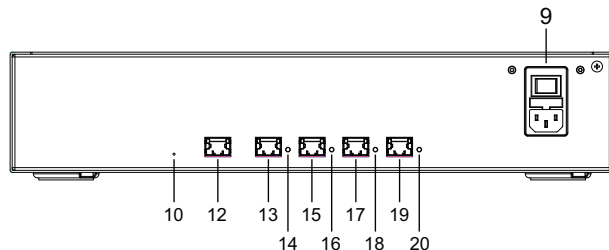


Figure 6.1: Audio processor and powering switch / Powering switch

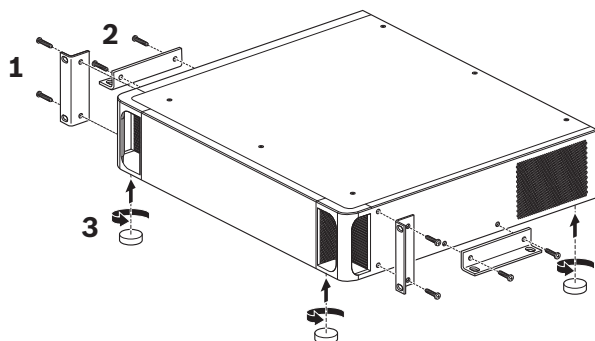
Item	Description
1	19" mounting brackets.
2	Ventilation inlet.
3	Indication LED: Off: Switched off. Green: Switched on. Amber: Standby. Blinking: Services on the server PC are not running. Alternating green amber: When a software download is required.

Rear view**Figure 6.2: Audio processor and powering switch****Figure 6.3: Powering switch**

Item	Description
1, 5	XLR line outputs 1 and 2.
2, 6	RCA line outputs 1 and 2.
3, 7	XLR line inputs 1 and 2.
4, 8	RCA line inputs 1 and 2.
9	Mains inlet, mains switch and fuse holder.
10	Reset button.
11	Ground switch (grounded or floating).
12	Socket 1 without power.
13	Socket 2 low power.
15, 17, 19	Socket 3, 4, 5 high power.
14, 16, 18, 20	Overload LED for sockets 2-5: Green: Power OK. Red: Overload. Remove cable and wait a few seconds for the system to reset the overload.

How to install

1. Install the Audio processor and powering switch or Powering switch in a 19 inch device rack system or on a flat surface. Two 19 inch mounting brackets and four bottom feet are supplied with the Audio processor and powering switch and Powering switch. Refer to the following illustration.
2. Connect all required cabling.
3. Connect the mains supply.

**Figure 6.4: 19 inch rack, flat surface and feet mounting**

Item	Description
1	19 inch rack mounting (bracket)
2	Flat surface mounting (bracket)
3	Feet mounting

**Notice!**

The unit extends 30 mm in front of the 19" mounting brackets when installed in a 19" rack system.

**Caution!**

Do not obstruct the airflow vents on the front side and rear left and right sides.

7 Mechanical installation of Contribution Devices

7.1 DICENTIS devices

The DICENTIS devices (DCNM-D, DCNM-DVT, DCNM-DSL, DCNM-DE, DCNM-MMD, DCNM-MMD2) are used to:

- participate in a meeting or conference.
- monitor and control a meeting or conference (chairperson use, depending on the configuration).

DCNM-MMD / DCNM-MMD2

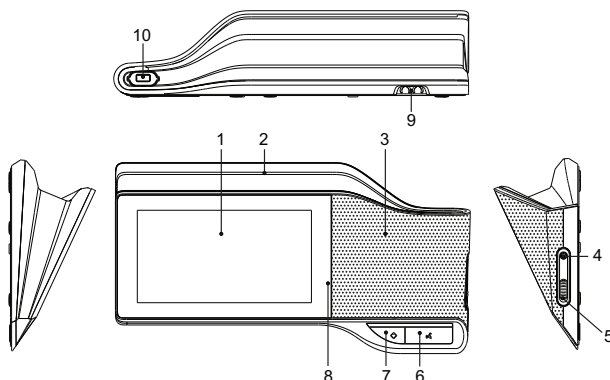


Figure 7.1: Front, top, rear and side views

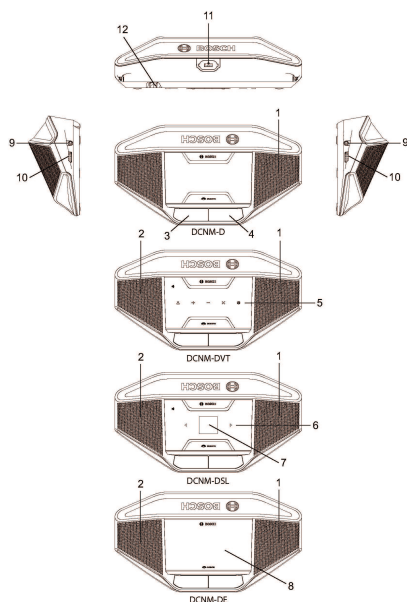
Item	Description
1	7" capacitive touch screen.
2	LED strip.
3	Two-way loudspeaker.
4	3.5 mm stereo jack for headphone or headset with integrated microphone.
5	Headphone volume control.
6	Microphone request button.
7	Chairperson priority or microphone mute button.
8	Near Field Communication (NFC) reader (DCNM-MMD2 only).
9	Cable guides.
10	Microphone input connector.

- DCNM-MMD2 is compliant with the Radio Equipment Directive (RED) 2014/53/EU.
- Operating frequency is 13.56 MHz. Maximum field strength is 8.05 dBμA/m @ 3m.



Warning!

This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference. This equipment is intended for environment Class A.

DCNM-D / DCNM-DVT / DCNM-DSL / DCNM-DE**Figure 7.2: Front, top, rear and side views**

Item	Description
1	Two-way loudspeaker.
2	Near Field Communication (NFC) reader.
3	Chairperson priority button, microphone mute button, or microphone request button for second participant.
4	Microphone request button.
5	Voting buttons.
6	Language selection buttons.
7	Language display.
8	4.3" capacitive touch screen.
9	3.5 mm stereo jack for headphone or headset with integrated microphone.
10	Headphone volume control.
11	Microphone input connector.
12	Cable guides.

- DCNM-DE, DCNM-DVT and DCNM-DSL are compliant with the Radio Equipment Directive (RED) 2014/53/EU.
- Operating frequency is 13.56 MHz. Maximum field strength is -8.4 dBμA/m @ 10m.

Connecting DICENTIS devices

The DICENTIS Conference System can be quickly and easily configured as a daisy-chain configuration or as a star configuration:

- **Daisy-chain configuration:** Uses dedicated cabling, consisting of CAT-5e cables including two additional power conductors (see *Typical system setup*, page 10).
- **Star configuration:** Each DICENTIS device is connected with an individual standard CAT-5e cable. An Ethernet switch is also required for providing Power over Ethernet (PoE).



Notice!

When Power over Ethernet is used, DICENTIS devices cannot be daisy-chained. Please use unshielded cable for the DICENTIS discussion devices.

The star configuration makes use of connectors underneath the devices, ensuring for a neat, tidy system installation, especially advantageous for TV coverage.

To connect the system network cables to the DICENTIS devices (refer to the following figure):

1. Insert the system network cable/connector (2).
2. Lead the system network cable through the cable guides (3).

Installing DICENTIS devices

The DICENTIS devices can be free-standing or fixed in more permanent installations using mounting screws.

1. The distance between the centres of the screw inserts (1) on the bottom is 100 mm.
2. Use M4 type of screws with a device screw insert length of maximum 5 mm when attaching the device to the bottom of the recess (1).

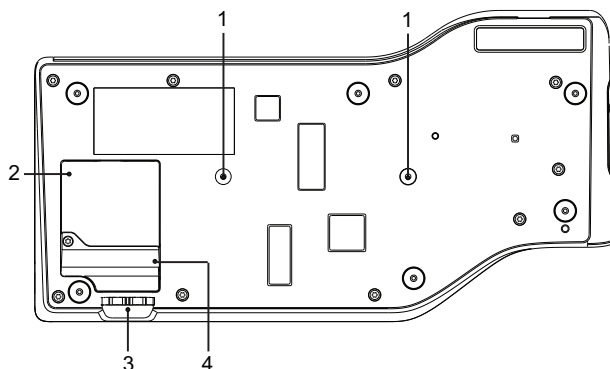


Figure 7.3: Bottom view discussion DICENTIS devices (DCNM-MMD / DCNM-MMD2)

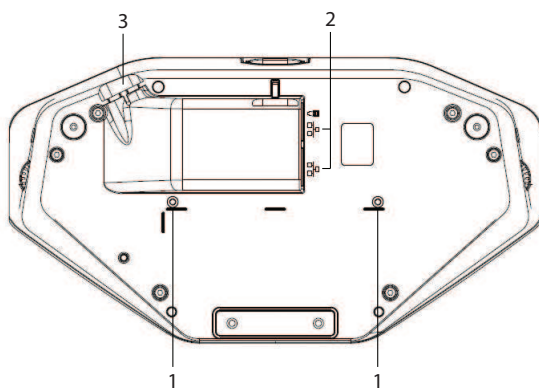


Figure 7.4: Bottom view DICENTIS devices (DCNM-D / DCNM-DVT / DCNM-DSL / DCNM-DE)

Item	Description
1	Screw insert for fixed installation.
2	2x RJ45 connection input/output for system power cable.
3	Cable guides.
4	USB connector, for future use (DCNM-MMD / DCNM-MMD2 only).

See also

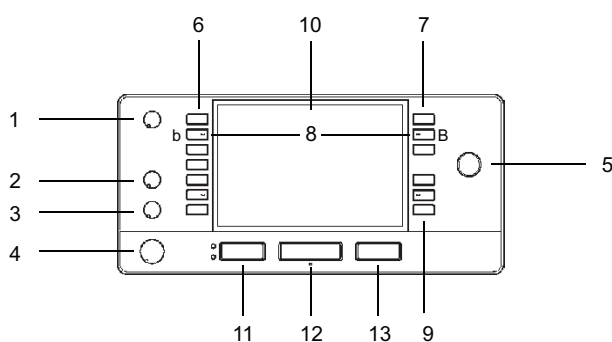
- *DICENTIS System Cable Assemblies*, page 31
- *DCNM-CB250-I System Installation Cable*, page 34

7.2

DCNMM-IDESK / DCNM-IDESKVID Interpreter desk

The Interpreter desks (DCNM-IDESK and DCNM-IDESKVID) are used to:

- interpret the floor language (channel A) in a meeting or conference,
- relay the interpretation to various target languages via channel selection (channel B or C).



Item	Description
1	Loudspeaker volume knob - Adjusts the volume level of the signal that is sent to the loudspeaker of the interpreter desk.
2	Treble knob - Adjusts the level of the treble of the signal that is sent to the headphones.
3	Bass knob - Adjusts the level of the bass of the signal that is sent to the headphones.

Item	Description
4	Headphones volume knob - Adjusts the volume level of the signal that is sent to the headphones.
5	Menu knob -Rotary control with integrated push button to configure and operate the interpreter desk.
6	Pre-select buttons - Allows the interpreters to select a channel from which they can render an interpretation (input).
7	Output buttons - Sets the output the target language will be sent to (A, B, C).
8	b - B buttons - Press these 2 buttons (with a small raised dash) at the same time to enter the installation mode and assign the device to a booth and desk. See “DICENTIS Software manual”, chapter 9 on how to configure the interpreter desk.
9	Assignable buttons - 3 buttons that can be freely assigned
10	Display - Shows the configuration, user menus and provides user feedback.
11	Floor/Auto-relay button - Sets the source of the interpretation.
12	Microphone button - Enables or disables the microphone. The microphone button has a red LED that comes on when the microphone is enabled (on-air). A green LED shows that the booth is not in use.
13	Mute button - Temporarily disables the microphone.

Connecting Interpreter desks

Two RJ45 compatible connections for system communication and power are available for quick and easy connection of the interpreter desks. Loop-through cabling can be applied by using DICENTIS System cables or star cabling using standard CAT-5e cables and PoE switches.

Installing Interpreter desks

The interpreter desks can be installed free-standing or fixed in more permanent installations (table-top) using mounting screws.



Warning!

The screws must be M3 and should not be screwed in deeper than 5 mm (0.2 inches) to avoid damaging the device.

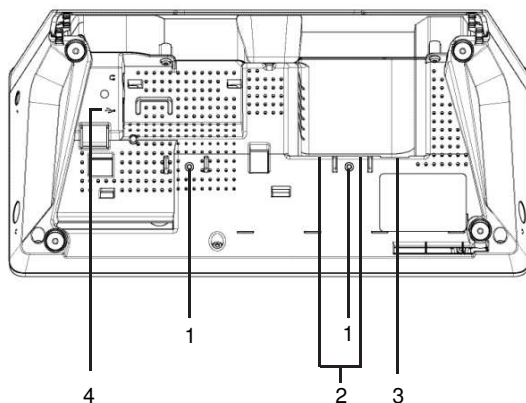


Figure 7.5: DCNM-IDESK / DCNM-IDESKVID bottom view

Item	Description
1	Screw insert for fixed installation
2	2 x RJ45 connection input/output for system power cable
3	HDMI video output (DCNM-IDEKVID only)
4	USB connector for the DCNM-IDEKINT On-air & telephone interface DCNM-IDEK. Refer to section 7.6

7.3 DICENTIS Microphones

Both the DCNM-HDMIC High Directive Microphone and DCNM-MICL/S Stem Microphone are typically used with the DICENTIS devices.

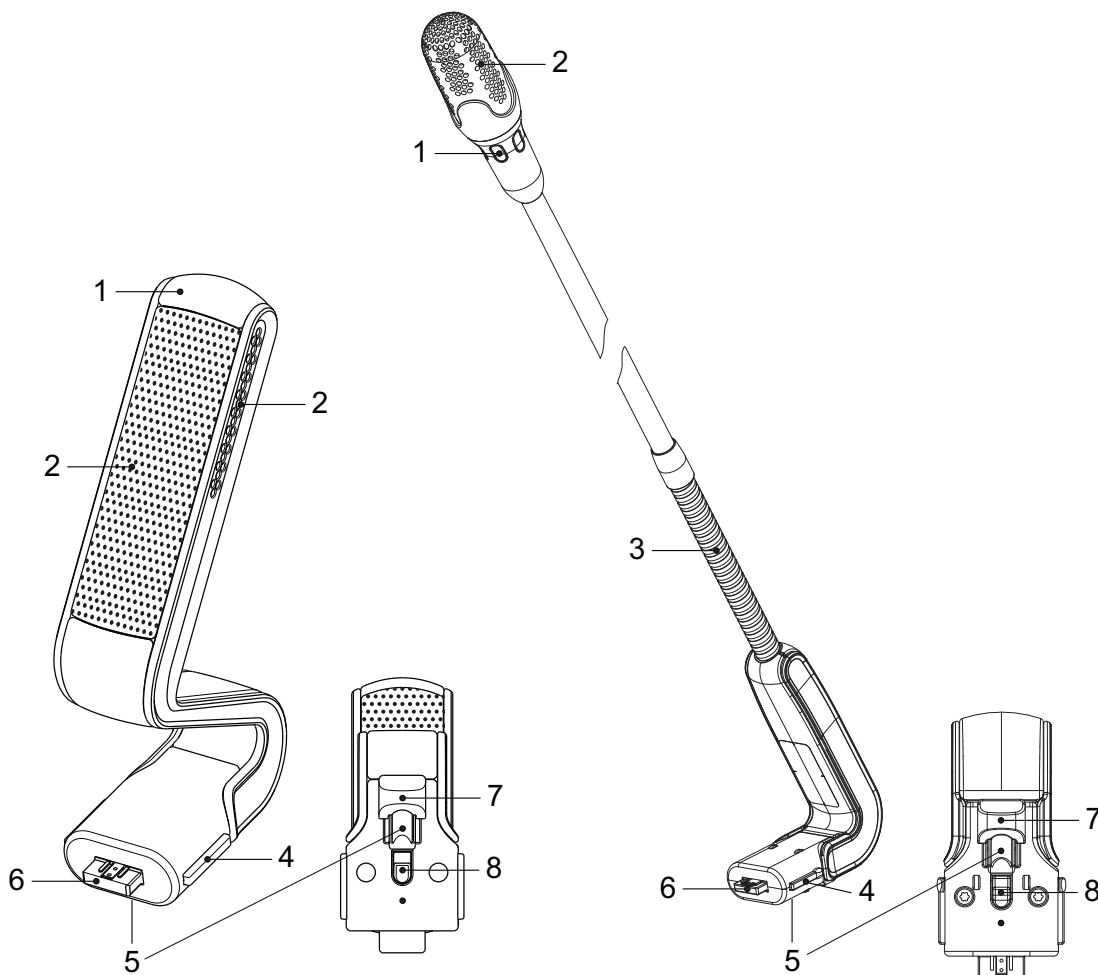


Figure 7.6: DCNM-HDMIC and DCNM-MICS / DCNM-MICL front and bottom view

Number	Description
1	LED indicator.
2	Microphone grill.
3	Adjustable stem (DCNM-MICS / DCNM-MICL).
4	Connection guidance.
5	Slider guidance.
6	Connector plug.
7	Lock-slider for lock release (Press and shift to release).
8	Lock.
9	Device female connector (see following figure).

How to connect or remove the microphone

The microphone can be easily connected to the DICENTIS devices:

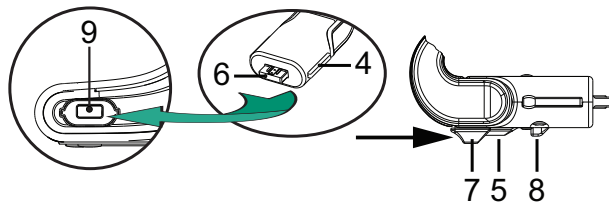


Figure 7.7: DCONM-HDMIC or DCONM-MICS / DCONM-MICL connection

To do so:

1. Gently guide the connection guidance (4) into the DICENTIS device microphone connector (9).
2. Gently push the connector plug (6) into the device microphone connector (9) until the connection lock (5) fits/click into place.
3. To remove the microphone from the device: Shift lockslider (7) towards the device and hold in place lock release (8) and pull out the microphone.

See also

- *DICENTIS devices, page 43*

7.4 DCNM-MMDSP Anti-reflection foil

The DICENTIS anti-reflection foil can be used to protect the tempered glass screen of a DICENTIS multimedia Device.

Installation procedure

1. Use the included alcohol swab and the microfiber fabric to clean the device LCD screen before installation.
2. Peel the positioning adhesive release paper from the rear of anti-reflection foil.
3. Position the anti-reflection foil on the device LCD screen, and then fix the positioning adhesive to the side of the device.
4. Open the anti-reflection foil, and use the “cleaning stick” to clean surface dust from the LCD screen.
5. Peel the protective film from the other side of the anti-reflection foil.
6. Lightly press the anti-reflection foil on to the LCD screen. If air bubbles are trapped under the anti-reflection foil, use the “squeegee” to remove them.

7.5 DCNM-NCH Name Card Holder

The name card holder (1) can be used to permanently display the participant’s name on the rear of a DICENTIS multimedia Device. The name card holder has two magnets (2) that allow it to be easily attached to, and removed from, the rear of the device.

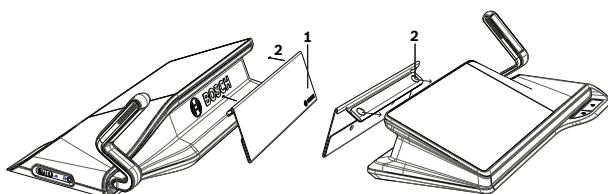


Figure 7.8: DCNM-NCH assembly

Item	Description
1	Name card holder.
2	Magnets.



Notice!

A paper insert template is included on the DVD that can be downloaded at: <https://licensing.boschsecurity.com/software>

7.6 **DCNM-IDEKINT On-air & telephone interface DCNM-IDEK**

This interface is used to control a booth on-air light and to show a telephone ringing indicator. The interface is connected to the USB port of one of the DCNM-IDEK devices inside the booth.

The USB cable must be purchased separately.

8 Installation Test

An installation test is needed to prevent connection mismatches and find potential product defects at an early stage. Not to do so could result in a system malfunctioning.

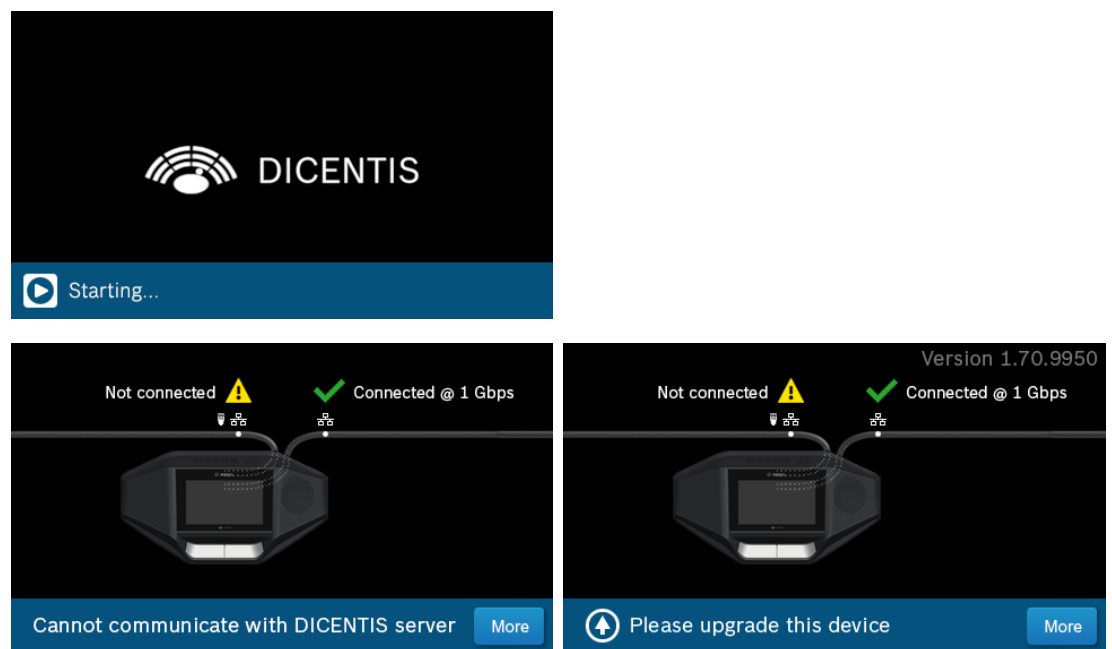
Each DICENTIS device has its own built-in diagnostics, which can be used for faultfinding. The diagnostics starts as soon the DICENTIS device is powered on. The DICENTIS Conference System does not have to be configured with, and connected to, the system controller PC.

Preconditions

1. All system network cables are connected to the devices.
2. The Audio processor and powering switch and Powering switch(es) are installed.

Start the test

Power on the Audio processor and powering switches and Powering switches used in the system: Each connected device powers on and initializes.



1. After the DICENTIS multimedia Device / the DICENTIS discussion Extended have initialized, the diagnostic screen is shown.
2. If the text “Link down” is shown:
 - The network cable is not connected or defective.
 - The device is only connected with one system network cable (“Link down” is shown on the side where the device is not connected).
3. If the system network cable is correctly connected to the network, the network speed is shown.
4. If the DICENTIS multimedia Device / the DICENTIS discussion Extended are connected to an Audio processor and powering switch, Powering switch or another multimedia device, and 100 Mb is shown:
 - Not all wiring inside the system network cable connector is correctly connected or broken. You need to check the wiring and connector.
 - If the cable is connected to a 100 Mb switch, it is correct.
5. Click the info button to see additional information of the multimedia device.
6. When everything is correctly connected, and the device does not have the application software, it shows the text “Please download software”.
7. Now the device can be downloaded:

- Downloading devices is not covered in this manual. Refer to the DICENTIS configuration manual on how to download the devices.

Customer service

If a fault cannot be resolved, please contact your supplier or system integrator, or go directly to your Bosch representative.

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