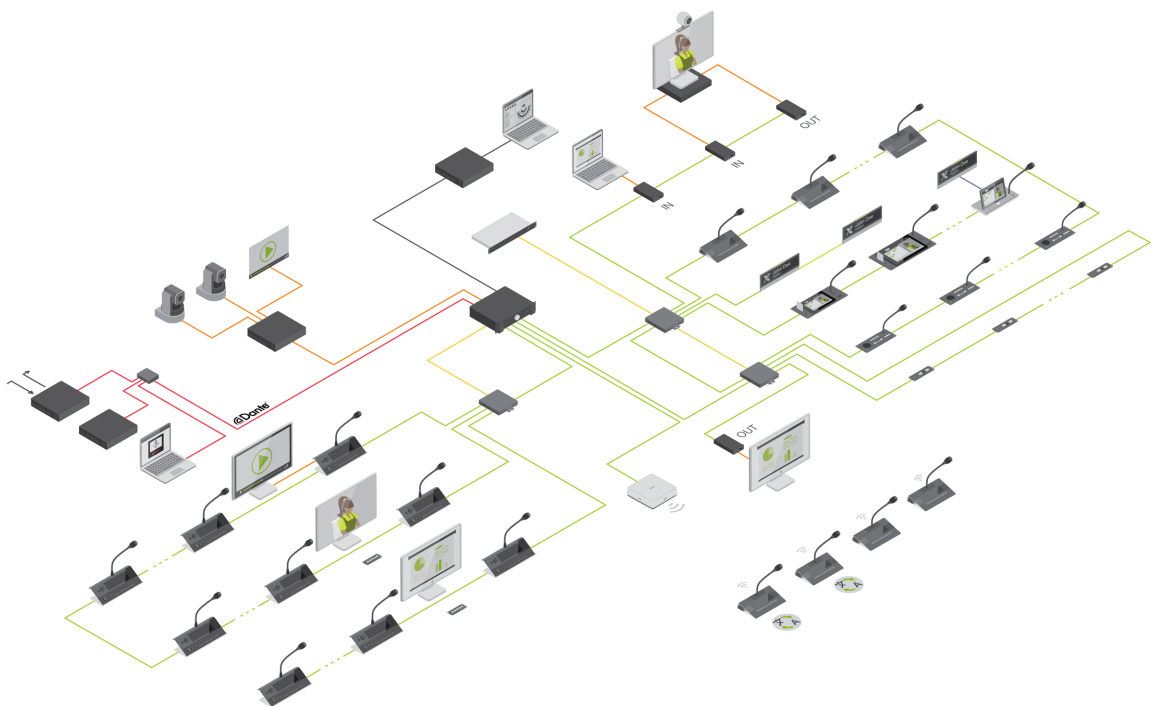


# PLIXUS

## INSTALLATION GUIDE



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# GETTING STARTED

## About This Manual

Throughout this guide we use icons to designate different types of information:

	This is a note. A note gives additional information, such as the meaning of the color of the microphone LEDs. A note also provides information that may only be applicable to some situations.
	This is a tip. A tip gives you an alternative way to do a particular step or procedure, or lets you know of an option that you may find helpful.
	This indicates that something is very important. Important information is something that you need to do in order to accomplish a certain task.
	This provides safety precaution information, that is, information that you need to be careful about to prevent potential problems when using our systems.

# Compatibility

This user manual applies to the following products:

Product	Version
Plixus MME	≥ CRP 5.2
Plixus AE-R	≥ CRP 5.2
Confidea WCAP G3 ( <i>discontinued</i> )	≥ 3.1
Confidea G3 units ( <i>discontinued</i> )	≥ 3.1
Confidea WAP G4	≥ 7.4
Confidea G4 units	≥ 7.4

# ABOUT PLIXUS

## Concept And Design

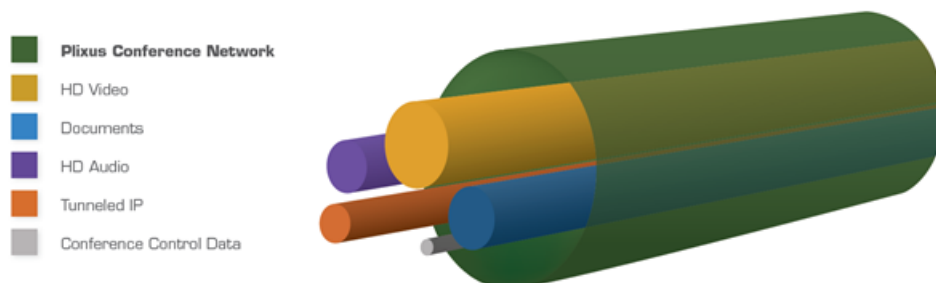


Figure 1-1 Plixus CAT 5e cable characteristics

Plixus is a state-of-the-art conference architecture that excels in **performance, security & reliability**.

It is a packet-based IP network that radically simplifies the conference architecture by sending all information over a single CAT 5e cable. HQ audio, HD video, and data travel over a single cable. Dedicated bandwidth is reserved for audio and video. The result is permanent and uninterrupted crystal-clear audio and video. Plixus also eliminates the large amount of equipment and cabling that was traditionally required to bring video to each delegate. Video splitters, distribution amplifiers and several cables to each delegate position are no longer needed. As a result, Plixus drastically reduces the installation cost and simplifies the maintainability of the total system architecture.

The Plixus architecture is also engineered with redundancy & maintenance in mind. All delegate stations are interconnected in daisy-chain and the last unit in the chain can close the loop for increased reliability and redundancy. Moreover, Plixus is conceived with a self-healing topology: data will always travel the shortest route and in the case of an error, Plixus will self-correct and reroute data via the fastest available pathway. Ultimately, it offers all parties peace of mind with Plixus' rock-solid reliability.

Finally, Plixus offers the best of both worlds. The mission-critical part of the central unit is entirely closed off while the DANTE™ interface enables third-party devices to communicate with the closed core network. As a result, Plixus acts as a gatekeeper who guarantees safe & secure communication and allows device extensibility via the DANTE™ interface.



# SAFETY INSTRUCTIONS

The safety instructions contain general safety guidelines that integrators, installers, operators, end users, and anyone else who installs or uses Televic material is required to read and follow at all times.

## Safety

All Televic systems are state of the art devices and have been designed to meet all quality standards. Nevertheless, the individual components of the conference system can cause danger for persons and material assets if

- › the conference system is not used as intended,
- › the conference system is set up by personnel not familiar with the safety regulations,
- › the conference system is converted or altered incorrectly,
- › the safety instructions are not observed.

## FCC & ICES Information

*(U.S.A and Canadian Models only).*

This Class B digital apparatus complies with Canadian norm ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- › Reorient or relocate the receiving antenna
- › Increase the separation between the equipment and receiver
- › Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- › Consult the dealer or an experienced radio/TV technician for help

- Consult the Federal Communications Commission’s manual “How to Identify and Resolve Radio-TV Interference Problems”

Wireless discussion units and the Wireless Access Point comply with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation.



Changes or modifications made to this equipment not expressly approved by Televic Conference NV may void the FCC authorization to operate this equipment.



Wireless discussion units and the Wireless Access Point comply with FCC radiation exposure limits set forth for an uncontrolled environment. These Wireless discussion units and the Wireless Access Point should be installed and operated with minimum distance of 20 cm between the radiator and your body. The RF-parts of the Wireless discussion units and the Wireless Access Point must not be co-located or operating in conjunction with any other antenna or transmitter.

## Conformity And Certification Info For Japan

This device has been granted a designation number by Ministry of Internal Affairs and Communications according to:

### **Ordinance concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment (特定無線設備の技術基準適合証明等に関する規則)**

Article 2 clause 1 item 19/3

Approval No.:

- 202WW10120791/2”
- 202XW10120791/2



This device should not be modified, otherwise the granted designation number will be invalid.

## Important Safety Instructions

1. **Read Instructions.** All the safety and operating instructions should be read before the product, device or system is operated.
2. **Retain Instructions.** The safety and operating instructions should be retained for future reference. The instructions should be kept in the vicinity of the product or system.
3. **Heed Warnings.** All warnings on the product and the operating instructions should be closely adhered to.
4. **Follow Instructions.** All instructions for installation or operating/use should be followed closely.
5. **Cleaning.** Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use only a damp cloth for cleaning. Do not use isopropanol based detergents to clean uniCOS units.
6. **Ventilation.** Any slots and openings in the device or equipment are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
7. **Heat.** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat. Do not use or operate any equipment in environments that exceed the standard operating temperatures.
8. **Modifications.** Do not use any modifications, extension, or other attachments not recommended by the product manufacturer as they may cause hazards.
9. **Accessories.** Only use attachments/accessories specified by the manufacturer. Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
10. **Water and Moisture.** Do not use this product near water or in a moistures environment - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool, in an unprotected outdoor installation; and the like.

11. **Moving.** A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

12. **Power Sources.** This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

13. **Power Lines.** An outdoor system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.

14. **Grounding or Polarization.** Do not defeat the safety purpose of the polarized or ground-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

15. **Power-Cord Protection.** Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plug, convenience receptacles, and the point where they exit from the product.

16. **Lightning.** For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges. (Not applicable when special functions are to be maintained, such as evacuation systems.)

17. **Overloading.** Do not overload wall outlets, extension cords or integral convenience receptacles as this can result in a risk of fire or electric shock.

18. **Object and Liquid Entry.** Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

19. **Inflammable and Explosive Substance.** Avoid using this product where there are gases, and also where there are inflammable and explosive substances in the immediate vicinity.

20. **Heavy Shock or Vibration.** When carrying this product around, do not subject the product to heavy shock or vibration.



21. **Servicing.** Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

22. **Damage Requiring Service.** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power-supply cord or plug is damaged.
- b. if liquid has been spilled, or objects have fallen into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e. If the product has been dropped or damaged in any way.
- f. When the product exhibits a distinct change in performance-this indicates a need for service.

23. **Replacement Parts.** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

24. **Safety Check.** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

25. **Coax Grounding.** If an outside cable system is connected to the apparatus, be sure the cable system is grounded. U.S.A. models only: Section 810 of the National Electrical Code, ANSI/NFPA No.70-1981, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge apparatus, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

26. **Usage:** Non-uniform use of pixels, such as prolonged display of non-moving images (text or graphics), can create a permanent ghost-like image of these objects or otherwise degrade image quality. It can lead to uneven use results in uneven light output over time, and in severe cases can create a ghost image of previous content. While this phenomenon is inherent to LCD technology, Televic recommends a maximum use of 10 consecutive hours of displaying the same content for any product with an LCD or OLED display. After 10 hours of use or at the end of the day it is

recommended, if possible, to turn off the displays by shutting down the system. Televic highly discourages any user from leaving a system containing units with an LCD running 24/7.

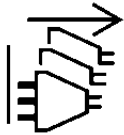
## General Conformity Information

The Plixus system complies with the IEC/EN 62368-1 safety standard.

The following labels may appear on the bottom of the apparatus:



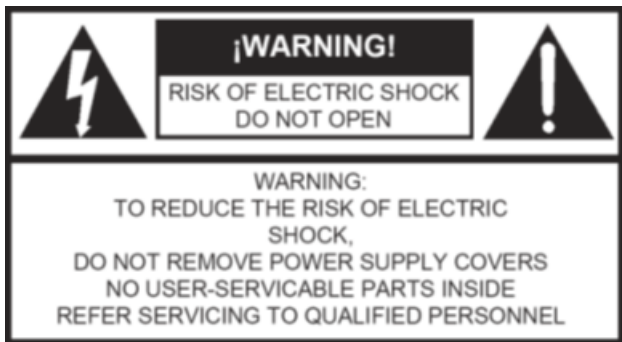
as per the IEC 60417-6042 standard (caution, risk of electric shock), where **x** depends on the apparatus.



as per the IEC 60417-6172 standard (all power sources shall be disconnected before servicing to avoid shock hazard).

## Power Connections

For permanently connected equipment, a readily accessible disconnect device shall be incorporated in the fixed wiring; For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.



This label may appear on the bottom of the apparatus due to space limitations.



The lightning flash with an arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of un-insulated 'dangerous voltage' within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Do not open the cabinet; refer servicing to qualified personnel only.



To prevent electric shock, do not use this (polarized) plug with an extension cord receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.



Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.



Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.



# COMPONENTS

## General Overview

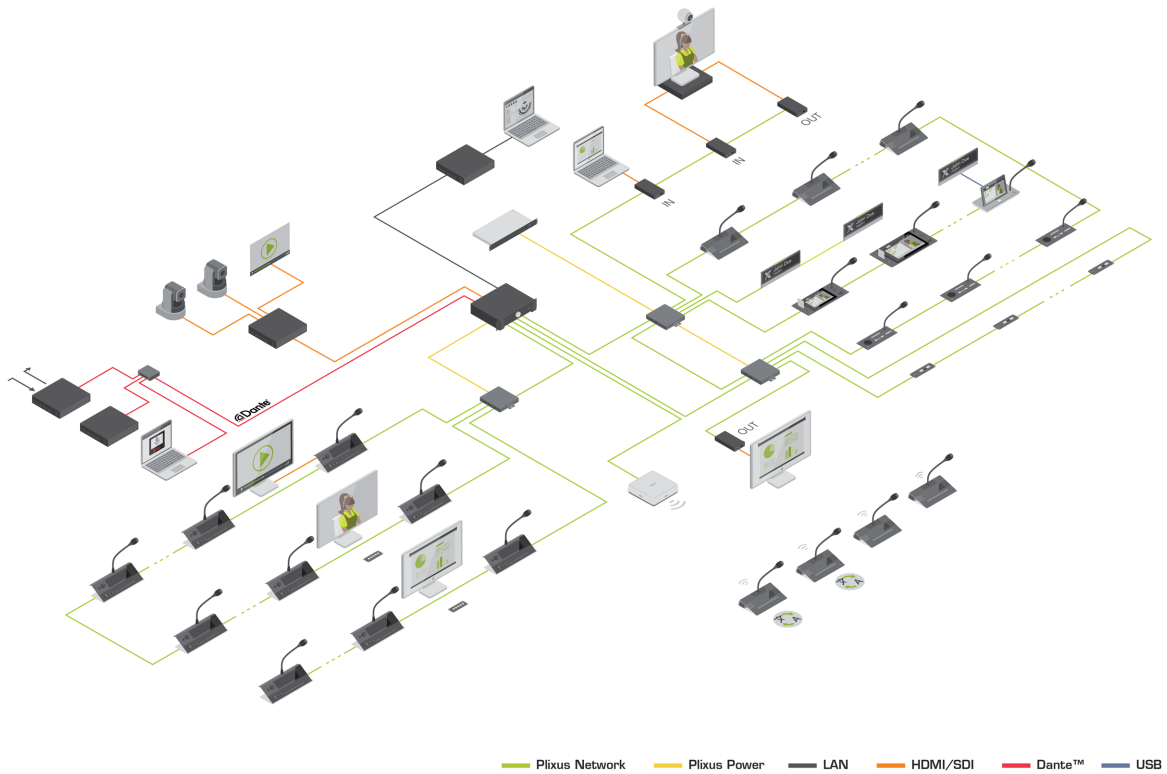


Figure 1-2 Plixus architecture diagram with example setup

The Plixus architecture allows for a mix & match of components: from flushmount devices over multimedia units and interpreter desk to PTZ cameras and third-party Dante™-enabled applications.

A typical setup consists of the following components:

- › A central engine (multimedia or audio-only)
- › CAT 5e network cables
- › Depending on the size of the network: one or more power supplies.
- › Depending on the size of the network: one or more network extenders. Each network extender powers a separate branch. It permits 4 branches or 2 loops.
- › CoCon management software to manage every aspect of the meeting
- › T-Rex recording software to record audio

- › A combination of units
  - › uniCOS units: multimedia flushmount and tabletop units
  - › Confidea T units (*discontinued*): tabletop units (discussion/voting/interpretation)
  - › Confidea F units: flushmount units (discussion/voting/interpretation)
  - › Confidea FLEX units: audio-only tabletop units with interactive display
  - › Plixus Nameplate: single and double sided
  - › Confidea G3 (*discontinued*) and G4 (Flex and GO) units: the wireless solution
  - › Lingua Interpreter Desks
- › Video IN-OUT boxes
- › A combination of peripherals
  - › PTZ cameras
  - › External displays
  - › Dante™-enabled devices
  - › Tablets running Congressify

# COMPONENT RANGE

As discussed earlier, you can include different components in your Plixus network. These components can be divided into four different categories:

- › **Central equipment:** the heart of the Plixus network, with these devices you can set up, configure and maintain the Plixus network.
- › **Network equipment**
- › **Multimedia:** these devices support the usage of multimedia during the meeting such as viewing video on delegate units or video injection / extraction from the Plixus network.
- › **Audio:** these units only support receiving and sending audio.
- › **Interpreter equipment:** all equipment needed for interpretation.

# PLIXUS MME

## Overview



Figure 1-3 Plixus MME front view

The Plixus Multimedia Engine is the heart of the Plixus system. It controls all delegate units and interconnects to other systems either via the external audio connections or control ports (camera control, Dante, central software, API).

The central unit can drive a maximum of 80 Plixus units directly from the engine. In case a large number of units are required, the system can be extended with multiple Plixus Network Extenders.

## Control Dial Functionality








The front of the Plixus MME has a Jog Wheel with the following options:

- > **Push** the dial to select a Level 1 setting
- > **Turn** the dial to select a Level 2 setting

The following table details the control dial options:

Level		Function
1	2	
	0 to max	Loudspeaker volume



Level		Function
1	2	
	   	Microphone mode: Direct access  Microphone mode: Request  Microphone mode: VoX  Microphone mode: Group
	0 to 25	Maximum number of open microphones
	0 to max	Plixus MME headphone volume



Additional icons are displayed to indicate different states:



indicates that CoCon server is connected to the Plixus Multimedia Engine



indicates an error state.



indicates a Controller/Peripheral setup.



Control button key lock activation/deactivation. Press and hold control dial for 5 sec. You can still browse through the settings when locked.

# Rear Connectivity

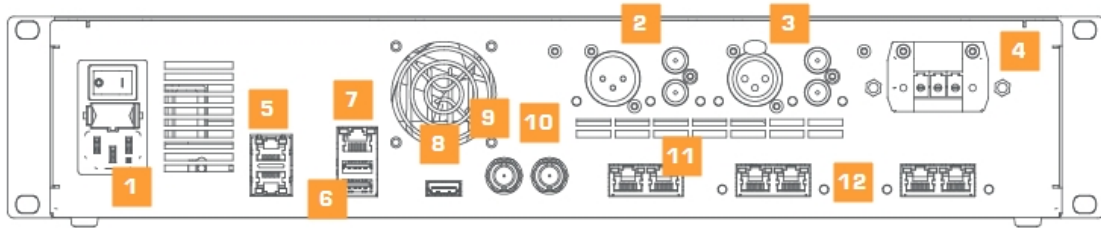


Figure 1-4 Plixus MME rear view

The rear of the Plixus MME has the following connectivity options:

1. AC power inlet & fuse holder
2. Balanced (XLR) and two unbalanced (RCA) audio outputs
3. Balanced and (XLR) two unbalanced (RCA) audio inputs
4. 48 V power output (400 W)
5. Two redundant DANTE™ network ports (these ports can only be used on Plixus MME devices that include the Dante™ card)
6. Two USB 2.0 ports (for future use)
7. IP configuration port (LAN)
8. Digital video output (HDMI) (for future usage)
9. SDI video input
10. SDI video output
11. Two back bone conference network ports that are not powered (for future use)
12. Four powered Plixus conference network ports

## Supported Video Formats

SD SDI	> PAL > NTSC
HD SDI	> 720p: 23.976, 24, 25, 29.97, 30, 50, 59.94 and 60 Hz > 1080p: 23.976, 24, 25, 29.97 and 30 Hz

## Factory Defaults Restore Button

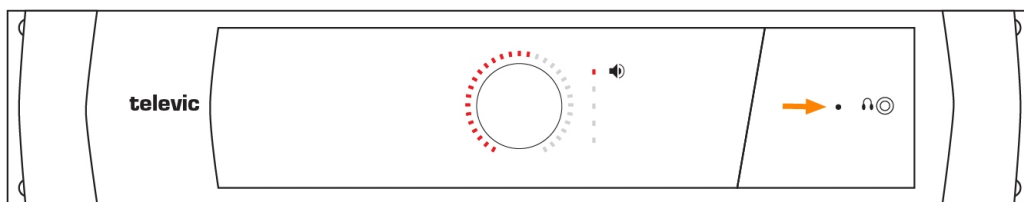


Figure 1-5 Reset button on Plixus MME

Depending on the amount of seconds you press and hold the reset button, different outcomes are possible:

- > Press and hold the button for **less than 5 seconds**: the units will restart.
- > Press and hold the button for **5 up to 20 seconds**: the IP address resets to the default IP address and the unit restarts. This is indicated by the blinking LED lights of the unit.
- > Press and hold the button for **more than 20 seconds**: configurations are not cleared, but inactivated, IP address is reset to the default IP address and the unit restarts. This is indicated by the continuously lit LED lights.

# PLIXUS AE-R

## Overview



Figure 1-6 Plixus AE-R front view

The Plixus audio engine is a 19" rack mountable device that provides audio processing and signal handling required for the Plixus network. It controls all delegate units and interconnects to other systems either via the external audio connections or control ports.

With the volume dial you can adjust the volume and using the record button you can easily start or stop recording the meeting. In contrast to the multimedia engine the Plixus AE-R does not have an internal power supply, meaning you will need at least one external power supply.

## Recording Feature

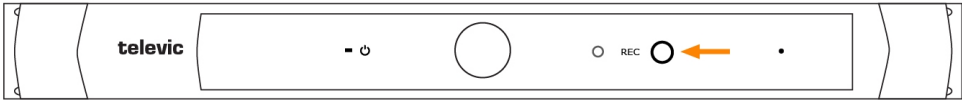


Figure 1-7 How to use the recording feature

With the Plixus AE-R you can record the floor and up to three different languages. You can use the button on the engine or the Plixus Core web server to control recording.

The LED next to the recording button shows the status of recording. The Plixus AE-R has an internal recording capacity of 8 GB. Depending on the selected bitrate you can record over 100 hours of audio. Use the USB port on the back to expand the recording memory.

You can download all Recorded meetings from the Plixus Core web server. There is an option to configure different recording features using the web server. See "Recording" on page 127 for more information.

## Rear End Connectivity

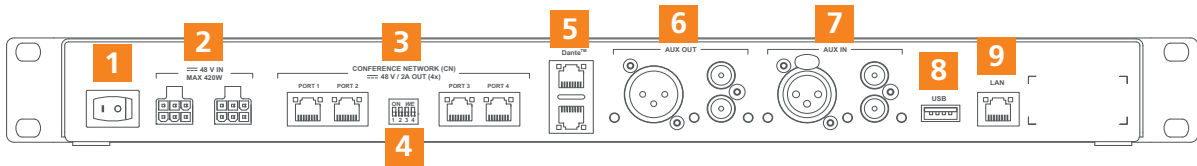


Figure 1-8 Back view of Plixus AE-R

1. On/off switch
2. Two power connectors for power supply injection
3. Plixus conference ports
4. DIP switch: each switch enables and disables 48V power to the corresponding conference port
5. Two redundant Dante™ network ports (these port are only usable on Plixus AE-R devices that include the Dante™ card)
6. Balanced (XLR) and two unbalanced (RCA) audio outputs
7. Balanced (XLR) and two unbalanced (RCA) audio inputs
8. USB 2.0 port to plug in USB device for audio recording
9. LAN port

## Power Supply

The Plixus AE-R does not have an internal power supply. By default one external power supply of 220 W is delivered together with the engine. You can use a second power supply for redundancy. However for larger setups you need the additional power to power the units, preventing you to use the second power supply for redundancy. See "Power supply design" on page 63

## Factory Defaults Restore Button

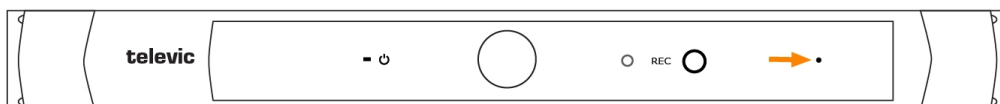


Figure 1-9 Reset button on Plixus AE-R

Depending on the amount of seconds you press and hold the reset button, different outcomes are possible:

- › Press and hold the button for **less than 5 seconds**: the units will restart.
- › Press and hold the button for **5 up to 20 seconds**: the IP address resets to the default IP address and the unit restarts. This is indicated by the blinking LED lights of the unit.
- › Press and hold the button for **more than 20 seconds**: configurations are not cleared, but inactivated, IP address is reset to the default IP address and the unit restarts. This is indicated by the continuously lit LED lights.

# PLIXUS POWER SUPPLY

The Plixus MME has an internal power supply of 48 V/10 A (480 W). However the Plixus AE-R does not. By default you receive one Plixus power supply with the AE-R. When the internal power supply of the MME or the external power supply of the AE-R is insufficient, a separate power supply is necessary.

For more information on how many power supplies your system requires see "Power supply design" on page 63.

## Plixus AE-R Power Supply

In contrast to the MME the Plixus AE-R doesn't have an internal power supply. By default the Plixus AE-R comes with one external power supply.

## Plixus Power Supply

The power supply is a 19" rack mount version. The front panel is equipped with a rocker mains switch with built-in indicator and two mains fuses.

The use of an additional power supply is needed when the internal power supply of the Plixus MME/AE-R is insufficient.

The 230 V mains is connected to the power supply through a male connector (1) at the back of the power supply. A power good TTL output on a D9 connector (2) allows you to check whether the power is okay. Six female Phoenix connectors (3) are available to branch off the 48 V.

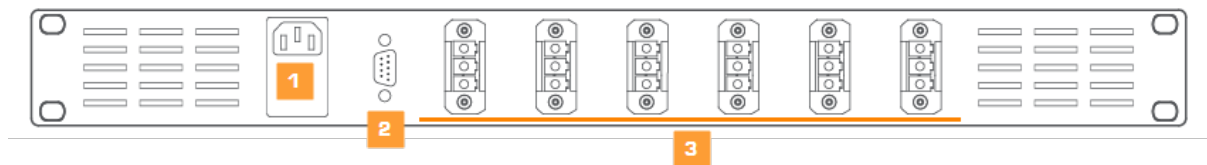
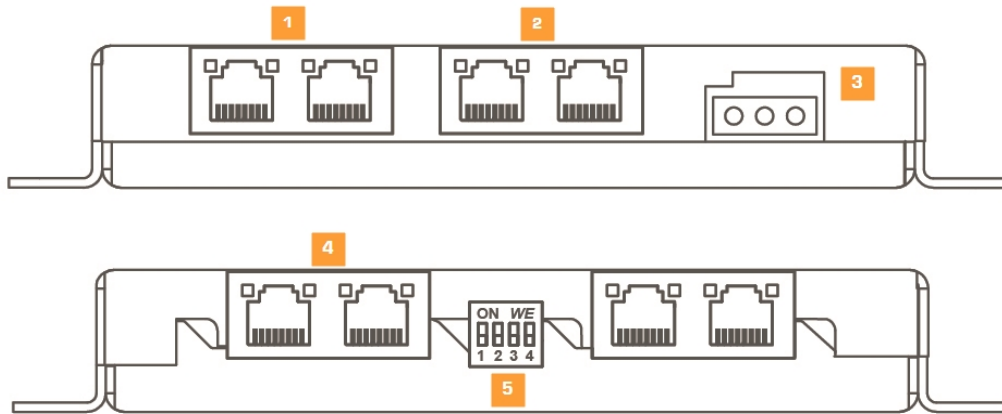


Figure 1-10 Rear power supply connections

# PLIXUS NEXT

Plixus NEXT is the next generation of Plixus network extenders which have the same functionality and connectivity, but additionally offer the option to configure (via DIP switches) a delayed power up of the conference extension ports (see DIP switch table below).



1. Two Plixus network conference ports (uplink).
  - a. Gives Plixus network signal to conference extension ports of the central engine or other network extender.
  - b. Allows connection in branch / loop.
2. LAN ports are not used.
3. 48 V power supply: powers the four conference ports.
4. Four Plixus network conference ports (downlink).
5. DIP switches enable / disable power of conference ports and allow sequential startup.



## DIP Switch Table

DIP switch settings				Ports powered at startup	Startup delay of first port(s)	Port interval(s)	Remark
1	1	1	1	All ports	0	0	Standard settings
0	0	0	0	None	NA	NA	No power, only data. Switches activated after startup, will power corresponding ports
1	0	0	0	Port 1	0	NA	1 port powered
0	1	0	0	Port 1 + 2	0	0.5	2 ports powered
1	1	0	0	Port 1 + 2 + 3	0	0.5	3 ports powered
0	0	1	0	All ports	0	0.5	delay 0 to 1.5
1	0	1	0	All ports	2	0.5	delay 2 to 3.5
0	1	1	0	All ports	4	0.5	delay 4 to 5.5
1	1	1	0	All ports	6	0.5	delay 6 to 7.5
0	0	0	1	All ports	8	0.5	delay 8 to 9.5
1	0	0	1	All ports	10	0.5	delay 10 to 11.5
0	1	0	1	All ports	12	0.5	delay 12 to 13.5
1	1	0	1	All ports	14	0.5	delay 14 to 15.5
0	0	1	1	All ports	16	0.5	delay 16 to 17.5
1	0	1	1	All ports	18	0.5	delay 18 to 19.5
0	1	1	1	None	NA	0	Remote control*

\*planned for future releases

## General Network Extender Guidelines

- › The maximum distance between the central unit and the first Plixus network extender or delegate unit in the branch is 100 m.
- › The maximum distance between two Plixus network extenders is 100 m.

- › The Plixus network extender must be powered externally (through power supply of Plixus MME or Plixus power supply).
- › One branch or loop cannot consist out of more than 8 Plixus network extenders (for optimized packet propagation)
- › One branch or loop may consist of no more than 20 Plixus devices (less if power is limiting factor).
- › Restrict a downlink port branch to 1 network speed: 100 Mbit or 1 Gbit!

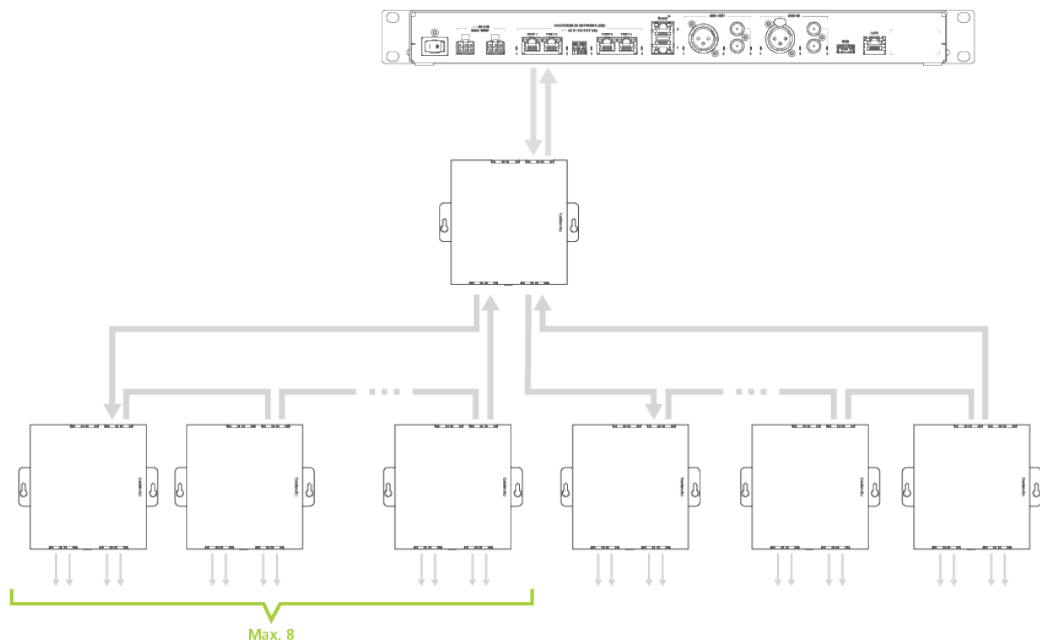
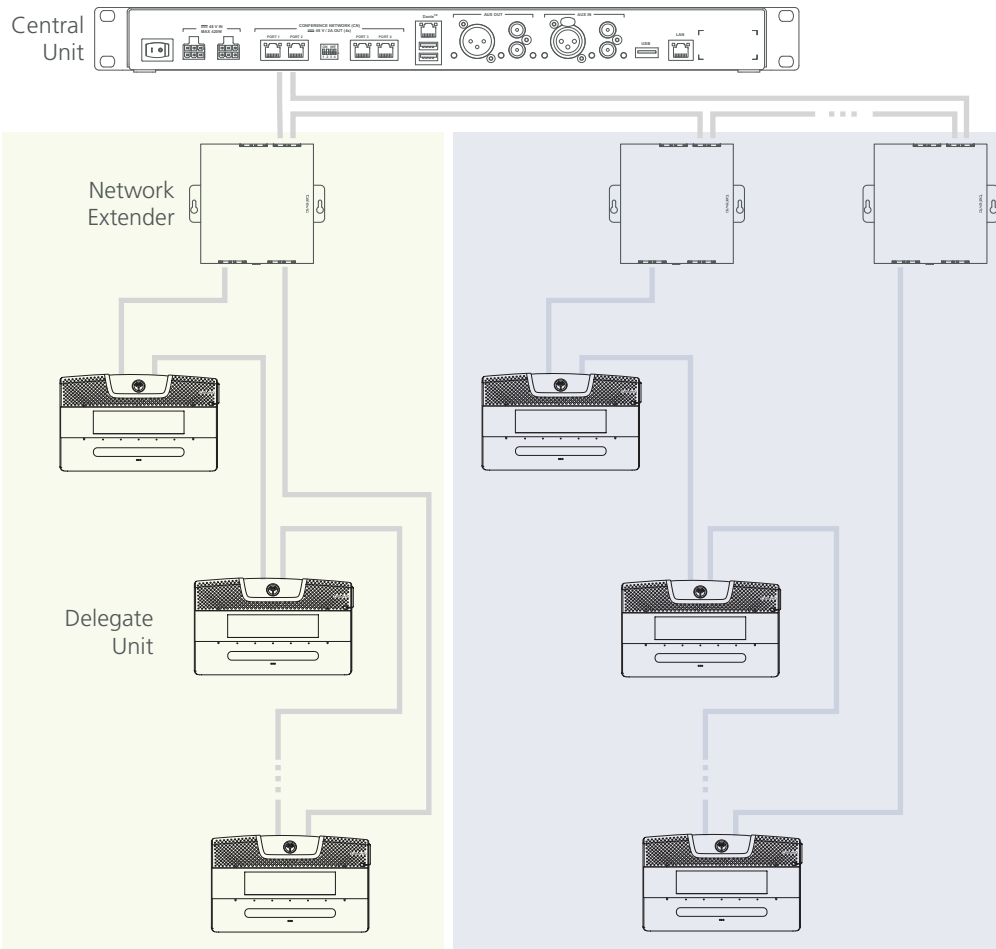


Figure 1-11 Example network extender configuration

## Redundancy

In Plixus it is possible to insert a type of fail-safe mechanism by creating redundancy. You can get redundancy by inserting loops in your network. When there is a loop, Plixus can still access the device using a different route when a cable or a device in one side of the loop breaks.



**Redundancy for cables and delegate units**

**Redundancy for cables, network extenders and delegate units**

Figure 1-12 How to create redundancy using a network extender.

# VIDEO-IN

## Video-In Box

Through the Plixus Video-IN (V-IN) box you can insert a HDMI video stream anywhere in the Plixus network. There are two modes available for the V-IN box:

- > Fixed routing
- > Push to show

You can use multiple V-IN boxes in a Plixus network. Group V-IN boxes in order to create a presentation stream based on a push to show principle (using the Video-Request button or dry contacts). A total of six streams can be active in the Plixus network at any given time.

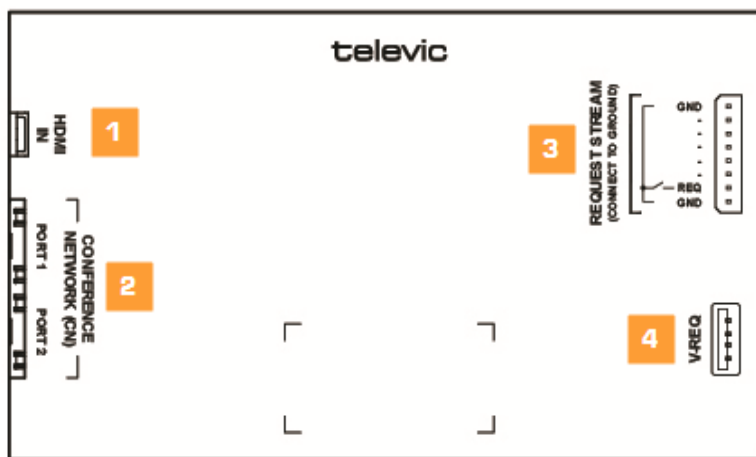


Figure 1-13 Video-IN box

1. Insert HDMI video stream
2. Two Plixus conference ports
3. Dry contacts for video stream input request
4. USB connection to V-REQ



The USB connection for the V-REQ is not a standard USB connection. This connection only works for the V-REQ.

The V-IN box supports the following formats:

- > 1920×1080p60
- > 1920×1080p30
- > 1280×720p30
- > Interlace is not supported

## Video Request

The video stream input request can be done via dry contacts or by using the Plixus V-REQ (video input request button), see image below.

Connection of V-REQ to the Video In Box is done through the included micro USB cable.

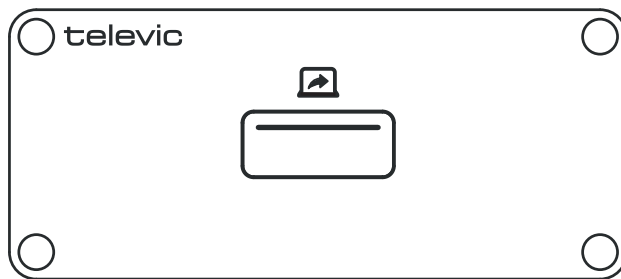


Figure 1-14 Video-Request button

# VIDEO-OUT

## Video-Out Box

You can use the Plixus Video-OUT Box to extract any HDMI video stream from the Plixus network to an external device using HDMI. Two modes are available:

- › fixed stream routing
- › selection of available streams (using Video-Selection (V-SEL) or dry contacts)

You can assign multiple V-OUT boxes to a group, routing a specific stream to these boxes.

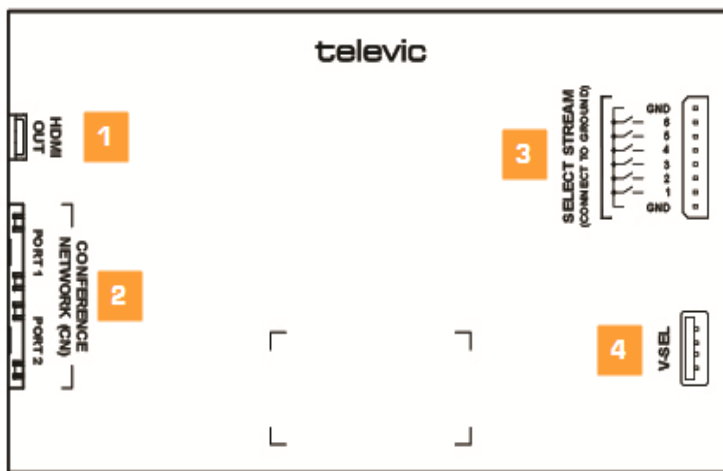


Figure 1-15 Video-OUT box

1. HDMI OUT connection
2. Two Plixus conference ports
3. Dry contacts for video stream selection (six streams available)
4. USB connection for V-SEL



The USB connection for the V-SEL is not a standard USB connection. This connection only works for the V-SEL.

The V-OUT box supports the following formats:

- › Supports all resolutions with a maximum of 1920×1080p60
- › Interlace is not supported

## Video Selection

Video stream selection can be done via dry contacts or by using the Plixus V-SEL accessory. Connect the V-SEL to the Video-OUT Box is done through the included micro USB cable.

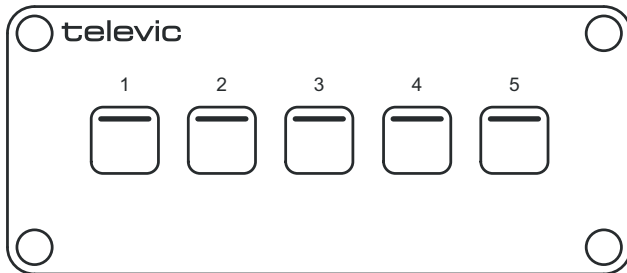


Figure 1-16 Plixus V-SEL accessory

# VIDEO STREAM ROUTING

You can configure video stream routing using the CoCon Video application (CoCon & Plixus CRP version  $\geq 5.0$ ).

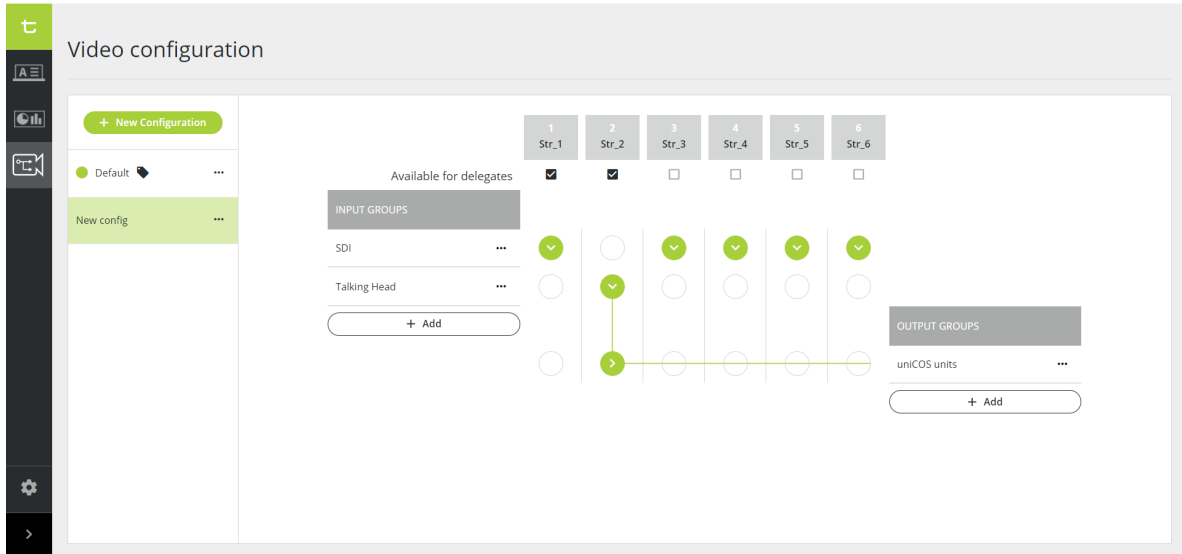


Figure 1-17 Configure video stream routing in CoCon

In the application you can define the video input and create input groups ( shown on the left side of the figure). In the middle you can see the six available video streams, you can change the name of each of these streams. Disable streams by unchecking the option **Available for delegates**, these streams will not be available for the V-SEL.

Assign a specific input to one or more streams, the downwards arrow indicates that the input is put on that video stream. The output is shown on the right side, the arrow pointing to the right indicates that the video stream is connected to the output.

See CoCon user guide for more information.



# UNIBOX

The uniBOX comes with all connections to combine almost any screen with different Confidea F modules such as a microphone button, a voting board, an RFID badge reader, and different other components. Link the uniBOX to a desktop screen or go for a more integrated look, and combine the uniBOX with a motorized screen that disappears into the table.

You can power the uniBOX over the Plixus network or you can power it using the snap and lock mini DIN power connector. For more information see the [Power Supply](#) section.

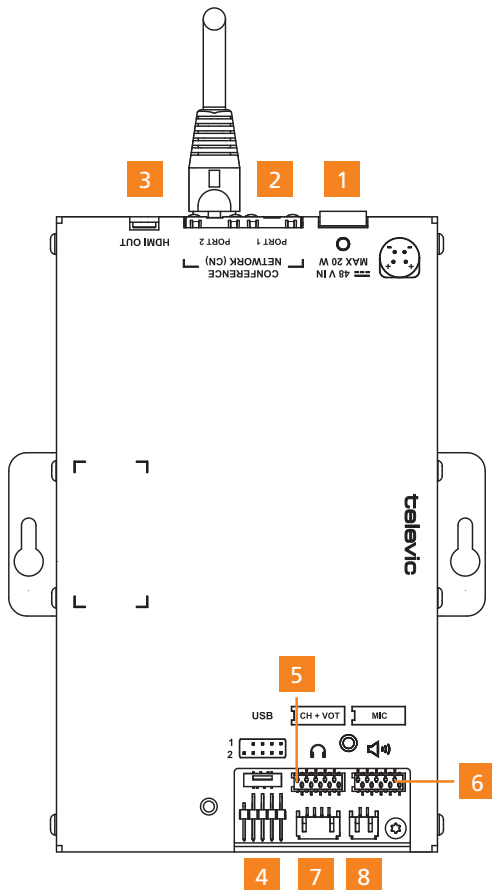


Figure 1-18 uniBOX and its connections

The uniBOX has the following connections:

1. Snap and lock mini DIN power plug
2. Two Plixus conference ports
3. HDMI OUT connector
4. Two USB connectors

5. Micro-MaTch connector for voting, RFID, channel selection board
6. Micro-MaTch connector for microphone button board
7. Headphones port
8. Loudspeaker port

# F-BOX

The F-BOX is a compact Plixus audio interface to be installed under a table, between the armrest of a chair, underneath an elevated floor, etc. It comes with embedded ports and connectors to plug a microphone, a microphone status button, voting buttons, a loudspeaker and headphones.

You can power the F-BOX over the Plixus network using an RJ45 Cat5e cable.

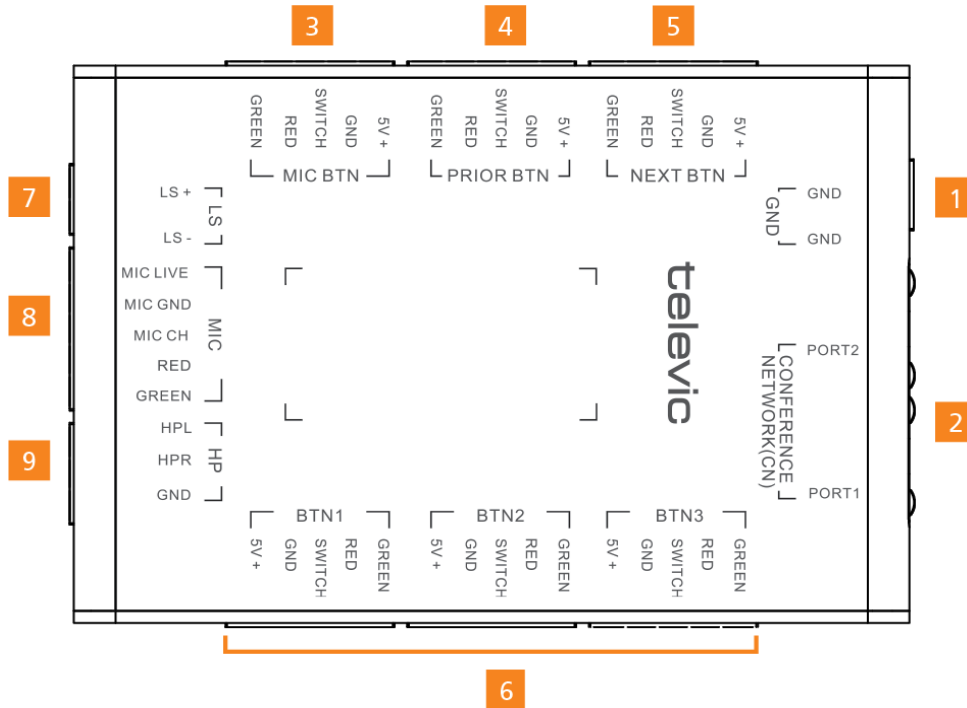


Figure 1-19 F-BOX and its connections

The F-BOX has the following connections:

1. Ground port
2. Two Plixus conference ports
3. Microphone button connector
4. Prior button connector
5. Next button connector
6. Three voting button connectors
7. Loudspeaker port

8. Screw lock microphone connector

9. Headphones port (stereo)

# DELEGATE EQUIPMENT

You can add different types of units and other peripherals to your Plixus architecture depending on your requirements. Below you can find a list of all delegate equipment that you can combine with Plixus together with a short description.

## Audio Only Equipment

Product	Description
Tabletop: Confidea T <i>(discontinued)</i>	The audio-only unit of the Plixus network.
Flushmount: Confidea F	
Confidea FLEX	Televic Conference's latest audio-only unit with an interactive display that shows meeting information and offers additional control. There is only one type of unit that can have more functionalities by the use of licenses
Confidea G3 <i>(discontinued)</i>	Televic's third generation of wireless units.
Confidea G4	Televic's fourth generation of wireless unit that can have more functionalities by the use of licenses.
Confidea GO G4	Discussion-only wireless unit.
Lingua interpreter desk	Unit specifically designed to support interpretation. This unit only supports audio.

## Multimedia Equipment

Product	Description
uniCOS 7 " <i>(discontinued)</i>	The touch screen multimedia unit. Allows delegates and chairmen to see additional information, video, but also documents that are relevant for the meeting or the agenda.
unicos 10 "	

## Advanced Delegate Equipment

Product	Description
Plixus Nameplate	Is a double or single sided nameplate based on E-ink technology which automatically updates the display when delegates sign in or by input of the conference manager. Daisy chain to connect to the Plixus network connect directly to multimedia units using USB. Use the CoCon Nameplate software to configure the nameplate.

For more information on how to use these different peripherals consult the Plixus end user guide. Chapter "[Installation design](#)" on page 50 describes how to set up all these units in the Plixus network.

# INTERPRETER EQUIPMENT

Within the Plixus network it is possible to configure interpretation. Different units are available for interpreters. Below you can find a list of all these units, together with a short description.

Product	Description
Lingua interpreter desk (video enabled):  - Lingua ID-MM <i>(discontinued)</i>  - Lingua ID-MM Mike	Unit specifically designed to support interpretation. In the video enabled version you can extract video from the units HDMI output.
Lingua Interpreter desk (Audio):  - Lingua ID <i>(discontinued)</i>  - Lingua ID Mike	Unit specifically designed to support interpretation, that does not support video.

# PLIXUS NAMEPLATE PROPERTIES

The Plixus use the E Ink technology to display user-specific content. The nameplate has two sides that can display different content. When the power of the nameplate is off, then the content will still be visible on the nameplate.

## Overview

Below you can find an overview of the different functionalities available on the nameplate.

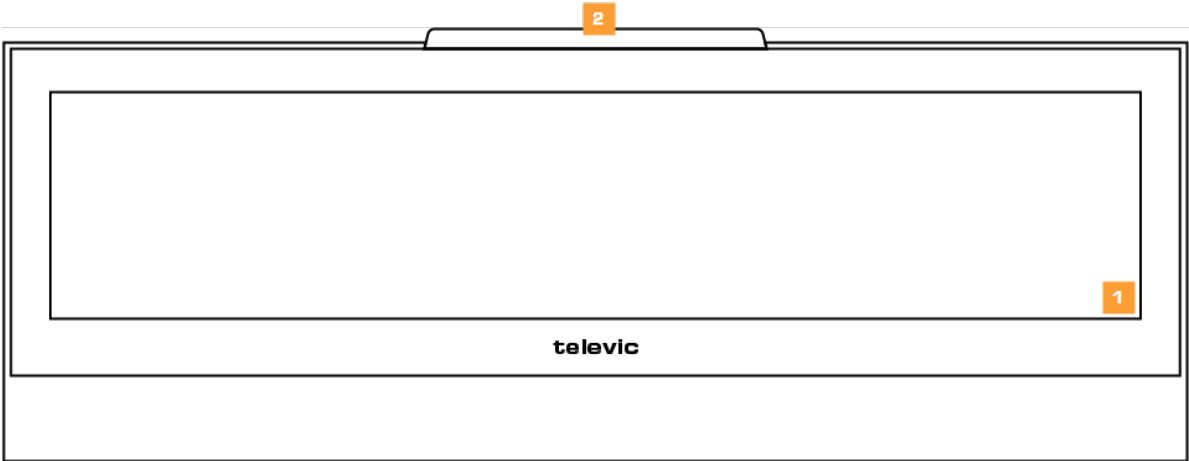


Figure 1-20 Plixus Nameplate front side

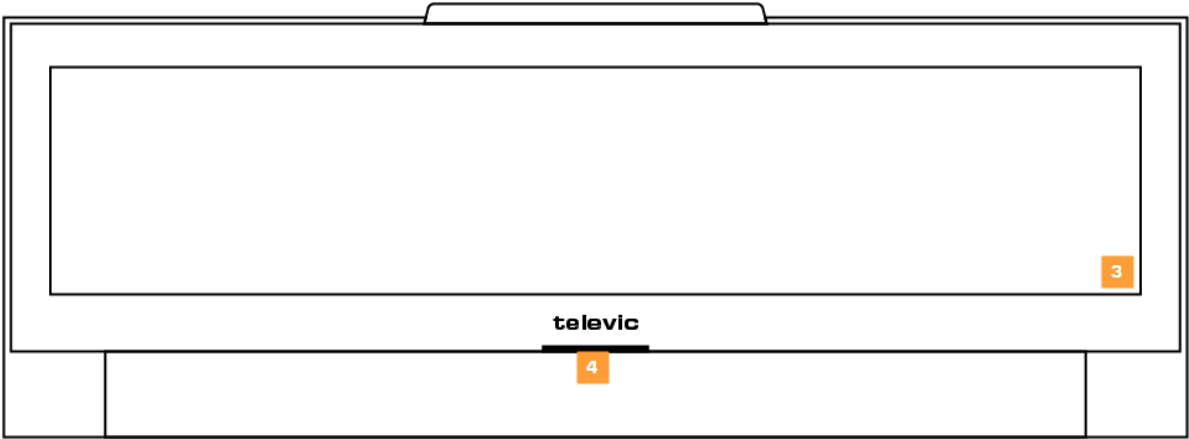


Figure 1-21 Plixus Nameplate back side





Figure 1-22 Plixus top view

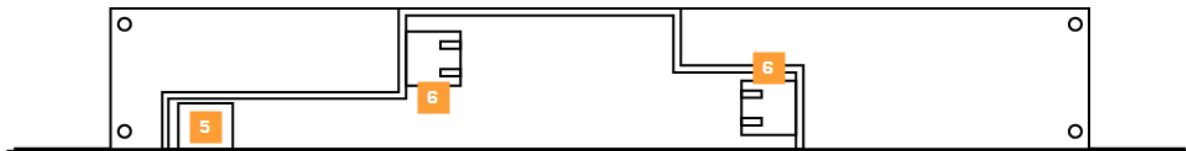


Figure 1-23 Plixus bottom view

The Plixus has the following components:

1. Front screen
2. LED light: lights up when you press the request button on the nameplate
3. Back screen: can be different from the front screen
4. Request button: push button to indicate request to speak
5. USB connection
6. Two Plixus conference ports



When the nameplate is connected via USB as well as the Plixus conference ports, then the nameplate will always use the USB connection.



# PLIXUS COMPONENT PROPERTIES

It is not possible to combine all Plixus components on the same branch because some units are **powered over the Plixus cable**, while others require external power.

In addition there is a difference in network speed for audio-only devices versus multimedia devices. As a consequence, three different categories of devices are possible that you cannot mix on the same branch.

The following tables list the properties of all components. Please note the different categories:

- > **100 Mbit powered over Plixus Cable**
- > **1 Gbit powered over Plixus Cable**
- > **1 Gbit externally powered**

## 100 Mbit Powered Over Plixus Cable

Component type	Plixus Network Speed	Power over Plixus cable	Max Power Consumption
Confidea F	100 Mbit	+	5 W
Confidea T	100 Mbit	+	4.5 W
Confidea CS	100 Mbit	+	2 W
Confidea FLEX	100 Mbit	+	6 W
Lingua ID (audio only)	100 Mbit	+	11 W
Lingua ID Mike (audio only)			
Confidea G3 WCAP	100 Mbit	+	10 W
Confidea G4 WAP	100 Mbit	+	24 W
Plixus Nameplate	100 Mbit	+	3 W
F-BOX	100 Mbit	+	5 W

## 1 Gbit Powered Over Plixus Cable

Component type	Plixus Network Speed	Power over Plixus cable	Max Power Consumption
Lingua ID-MM (video)	1 Gbit	+	12 W
Lingua ID-MM Mike (video)			
uniCOS F-MM7	1 Gbit	+	12 W (1 USB port) + 2.5W when using second USB
uniCOS F-MM10	1 Gbit	+	15 W (1 USB port) + 2.5W when using second USB
uniCOS T-MM10	1 Gbit	+	15 W (1 USB port) + 2.5W when using second USB
Confidea F-DIV-C	1 Gbit	+	12 W
Video Out Box	1 Gbit	+	5.5 W
Video In Box	1 Gbit	+	6 W
uniBOX	1 Gbit	+	11.3 (1 USB port) + 2.5W when using second USB

## 1 Gbit Externally Powered

Component type	Plixus Network Speed	Power over Plixus cable	Max Power Consumption
uniCOS F-MM7	1 Gbit	-	12 W (1 USB port) + 2.5W when using second USB

Component type	Plixus Network Speed	Power over Plixus cable	Max Power Consumption
uniCOS F-MM10	1 Gbit	-	15 W (1 USB port) + 2.5W when using second USB
uniCOS T-MM10	1 Gbit	-	15 W (1 USB port) + 2.5W when using second USB
Plixus NEXT	100 Mbit / 1 Gbit	-	7 W
uniBOX	1 Gbit	-	11.3 (1 USB port) + 2.5W when using second USB



**A branch cannot mix products with different network speeds.** A single branch is restricted to components from one and the same category.



**A branch can only contain units that are all powered over cable or that are all externally powered, not the combination of both.**

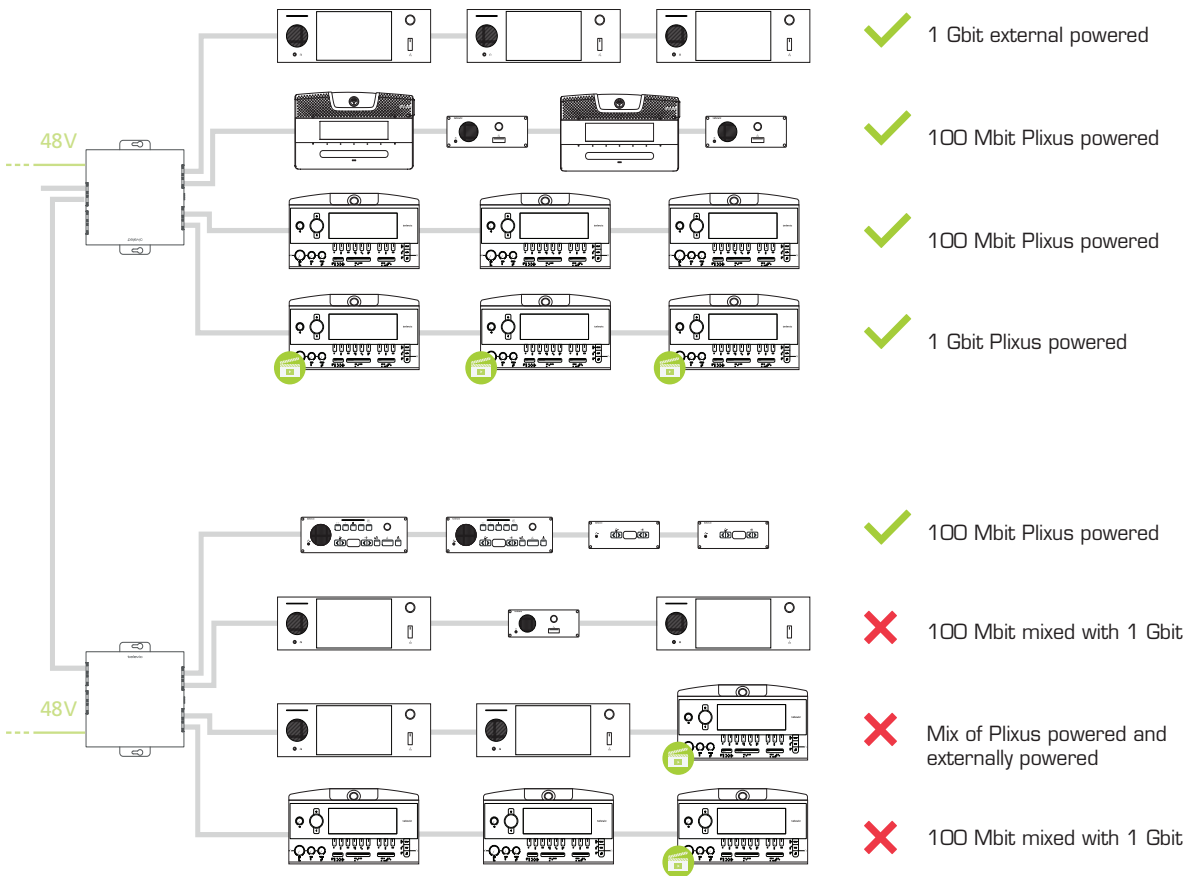


Figure 1-24 Dos and don'ts of combining units

💡 It is strongly recommended to only place Plixus Network Extenders in one branch, and not to mix them with uniCOS Multimedia units (although they belong to the same category).

# GENERAL INSTALLATION GUIDELINES

The following installation design rule apply for one branch / loop powered only by the Plixus engine (internal 48 Vdc power supply) or an external Plixus Power Supply:

- › A maximum of 100 W
- › A specific maximum of devices per product family per branch / loop
- › A maximum cable length between two units of 100 m

## Units Per Branch / Loop

Depending on the type of unit, we advise to add a maximum amount of devices per branch. This is to ensure that the last device in the branch receives enough power (only for devices powered over Ethernet) and limit delay data transmission.



When building your configuration, always refer to the Plixus Power Calculator tool available here: <https://conference.televic.digital/knowledgebase/products/plixus/#tab-f9accbaab20a6cf930a>

In the table below you can see the maximum allowed devices per branch.

Device type	Max. number per branch
Confidea T/F	20
Confidea FLEX	10
Confidea F channel selector	30
uniCOS F/MM (externally powered)	30
uniCOS F/MM7 (powered over cable)	6
uniCOS F/MM10 (powered over cable)	5
Lingua Interpreter Desk	8
uniBOX (externally powered)	30
uniBOX (powered over cable)	6
Video IN / OUT	10
Plixus NEXT	8

Device type	Max. number per branch
Confidea WCAP G3	8
Confidea WAP G4	4
Confidea F-DIV-C	8
Plixus Nameplate	8

## When To Use A Network Extender

When the four Plixus conference ports provided by the engine are insufficient for your system, you can extend your range by using network extenders (Plixus NEXT). A network extender has four additional conference ports, which allows you to add much more units to your network.



The Plixus NEXT requires a 48V power supply.

There are two possible configurations to use these network extenders, you can daisy-chain them or put them in a tree structure. When you daisy-chain network extenders you can use a maximum of eight extenders per branch. In a tree structure there are no limitations. See "Installation diagram" on the next page for a schematic representation of these cases.



# INSTALLATION DIAGRAM

## Configuration With Plixus Engine Only

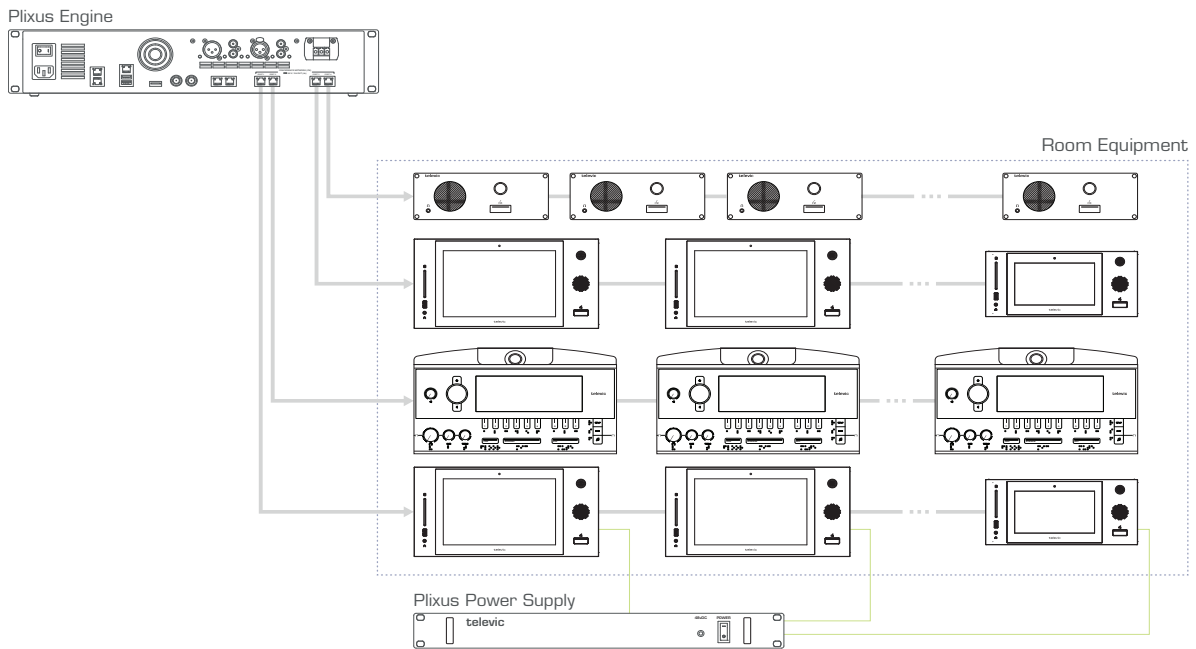


Figure 1-25 Example of Plixus network with engine only

For a setup where you only need an engine, connect the units directly to the conference ports of the Plixus engine. Daisy chain the different units in the branch. If your system contains uniCOS units, you need an external power supply.

Only mix compatible units in one branch. For more information on which units you can combine see "Plixus component properties" on page 51. In this table you can also see the power consumption, which you need to know how many units you can have in one branch. Use the power calculator tool to validate your configuration ("Power supply design" on page 63).

## Configuration With Network Extender

### DAISY-CHAIN NETWORK EXTENDERS

When you daisy-chain network extenders, you can have a maximum of 32 network extenders ( eight per branch and this for the four Plixus conference ports).

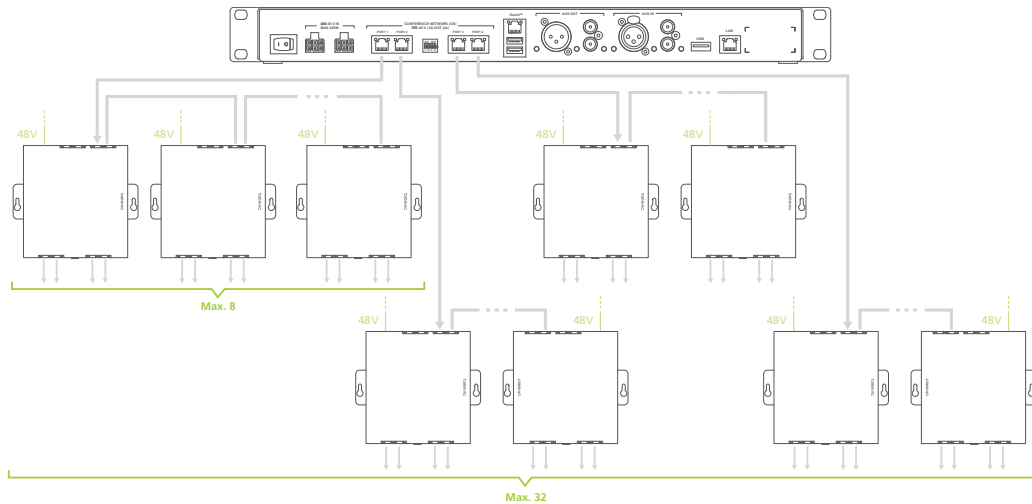


Figure 1-26 How to put network extenders in daisy-chain configuration

To create redundancy in your system you can insert loops (see "Plixus NEXT" on page 32)

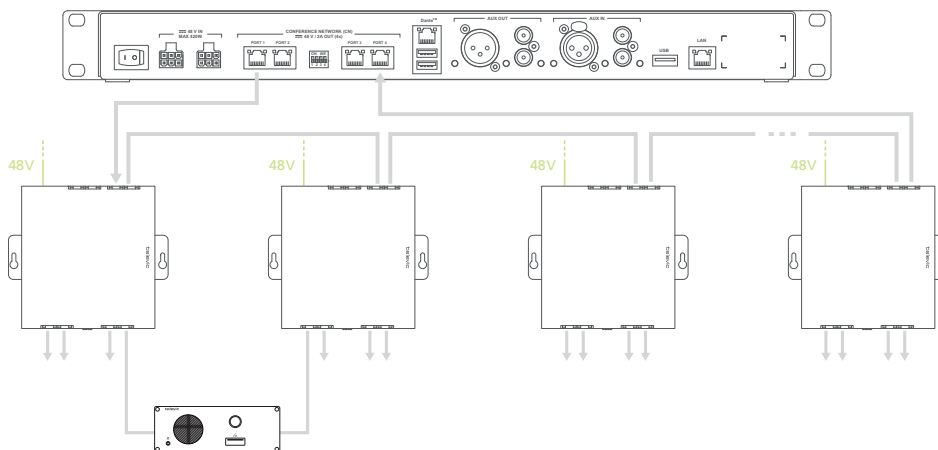


Figure 1-27 Plixus network with daisy-chained network extenders and loops

## TREE STRUCTURE OF NETWORK EXTENDERS

For larger setups you can put the network extenders in a tree structures. Here there is no limitation on the amount of network extenders you can put in the tree.

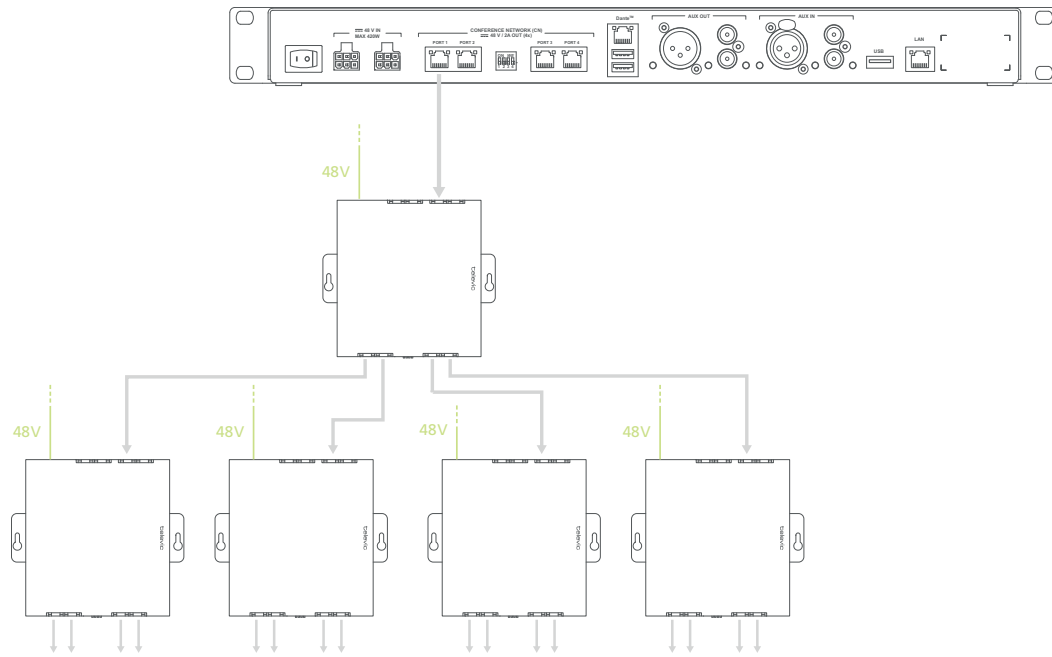


Figure 1-28 How to use network extenders in a tree structure

You can also create redundancy in a tree structure, the figure below shows you how to achieve this.

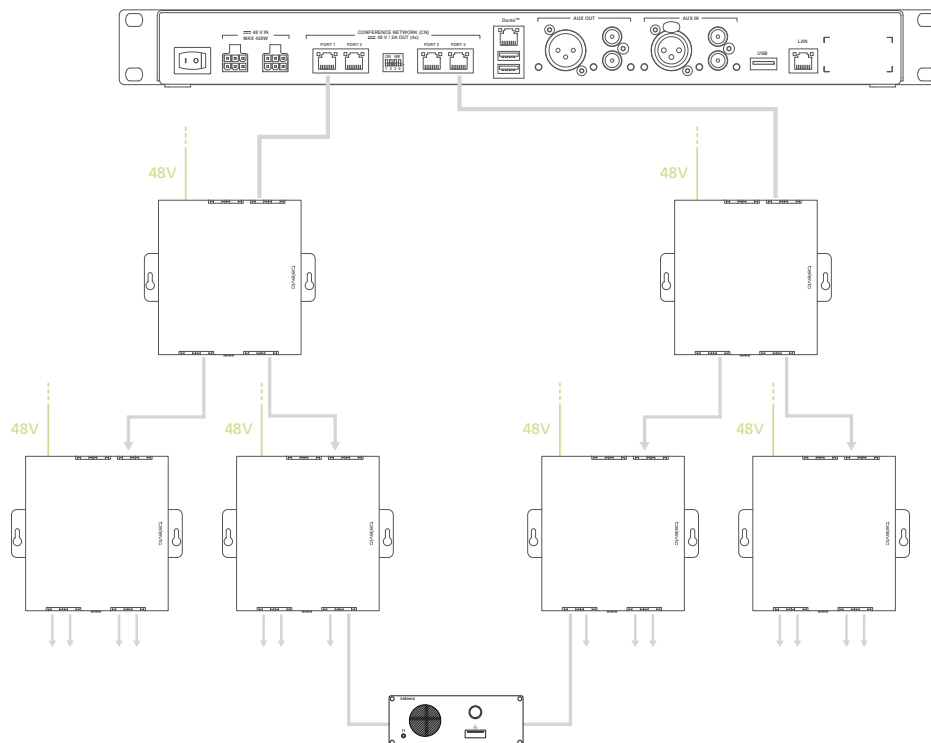


Figure 1-29 Pixus network with network extenders in tree structure and with loops

## PLIXUS SETUP WITH NETWORK EXTENDERS

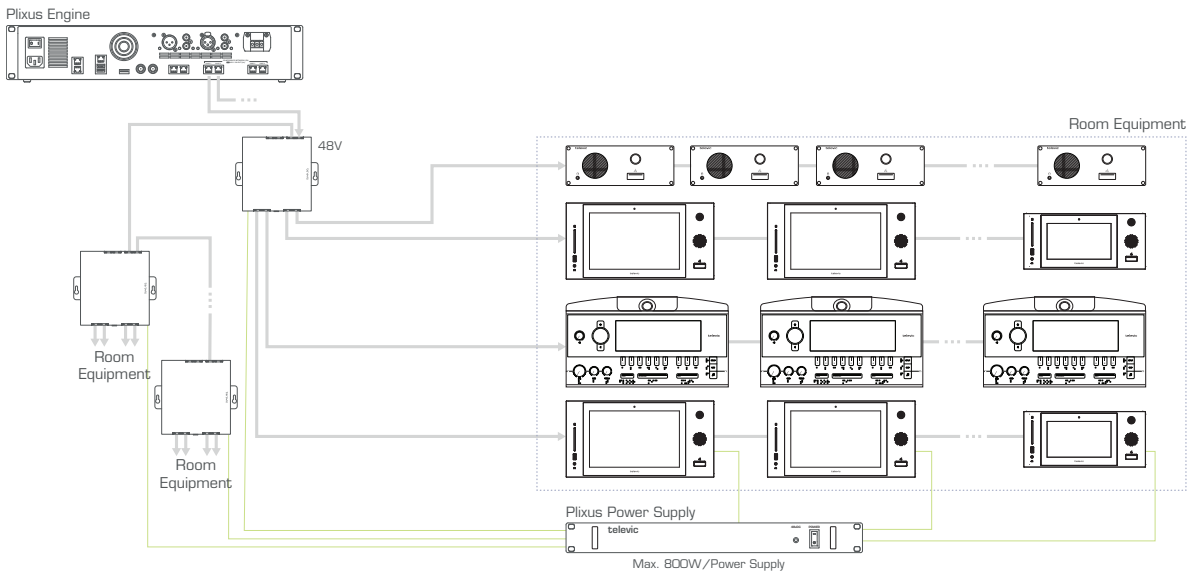


Figure 1-30 Example of Plixus network with network extenders.

For installation with a network connector, use the conference port on top of the network extender to connect with the Plixus engine. Use the second top conference port to form a daisy chain with another network extender. Use the conference ports on the bottom of the extender to connect the units inside the room. To connect the extender to the units the same principles apply as for the direct connection of the engine to the units. See "Configuration with Plixus engine only" for more information.

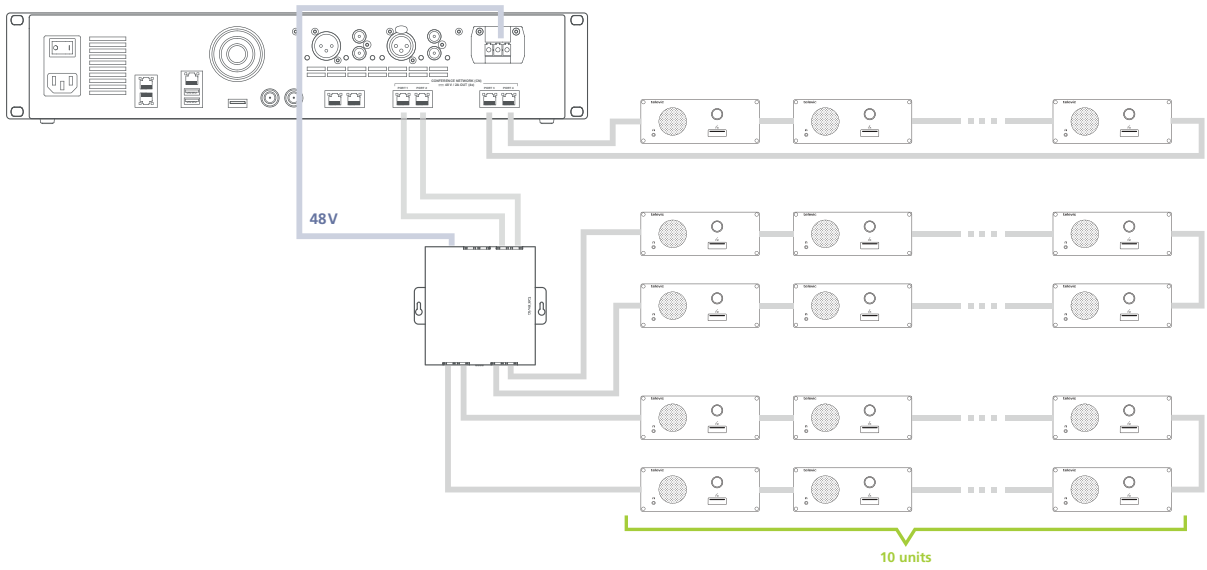
The network extender and uniCOS units (can also be powered over cable) require an external power supply. There is a maximum of power that the power supply can foresee. Use the power calculator tool to see how many power supplies you require ("Power supply design" on page 63).



The Plixus AE-R does not have an internal power supply and comes with one power supply of 220 W by default. Check the table with power consumption details and use the power calculator tool to check how many power supplies you need. You can find more information on the power needed for your system in "Power supply design" on page 63.

# Examples

## EXAMPLE WITH 50 CONFIDEA F UNITS



# Configuration With Plixus AE-R And Lingua IDs

When your setup contains an audio-only engine and many interpreter booths, it is best not to mix the interpreter desks with other delegate or chairperson units on the same branch. Consequently, at least one branch of the engine only contains Lingua IDs. For large setups, it is best practice to create loops with or without network extenders, to guarantee a fully functional system even if one unit fails. Therefore, you should devote two branches to the interpreter desks.

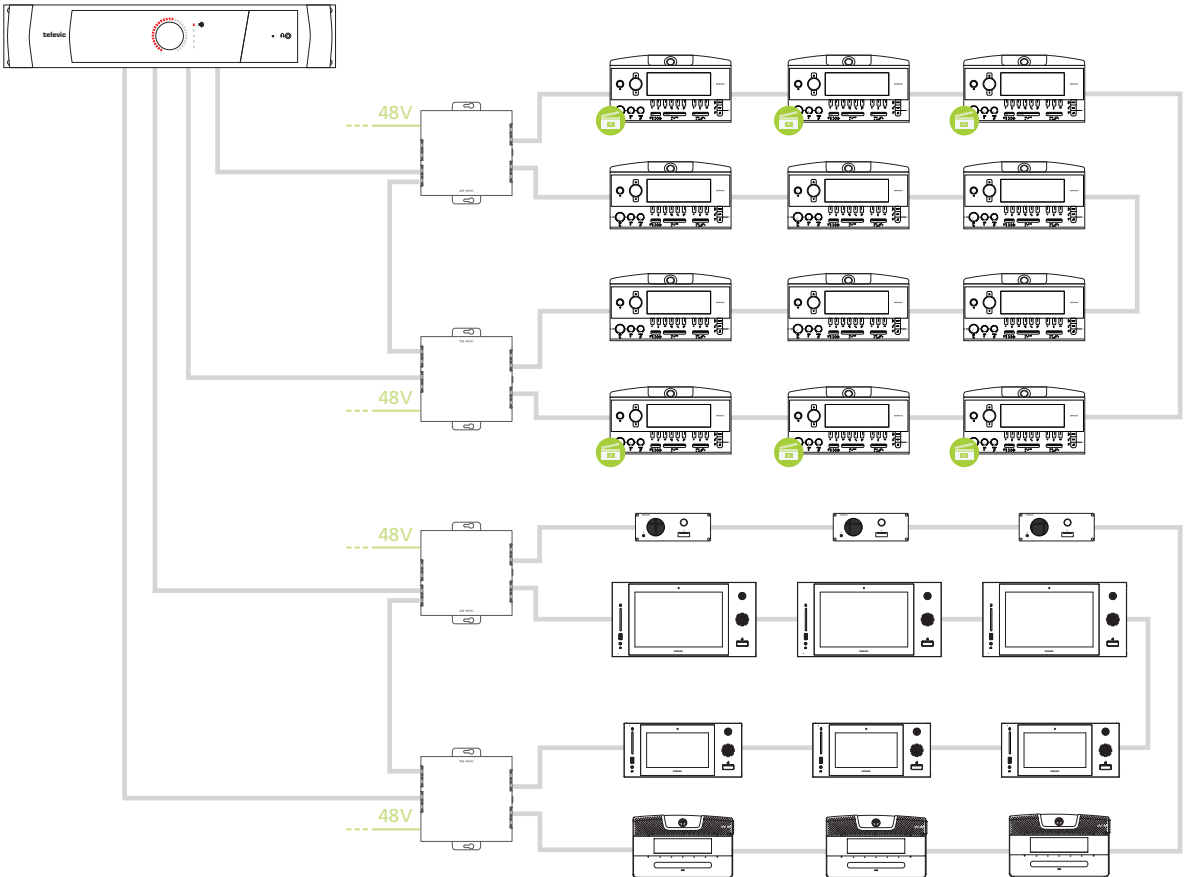


Figure 1-31 How to set up an audio-only system with a large amount of Lingua IDs

# POWER SUPPLY DESIGN

## Power Availability And Consumption Table

Power availability	
Plixus MME total power supply	500 W (400 W available for Plixus ports)
Plixus AE-R power supply	220 W
One single Plixus port allows	100 W (engine ports or extension ports)

Maximum power consumption		
71.98.0105 - 71.98.0118	Confidea T	Max 4.5 W
71.98.0501 - 71.98.0515	Confidea F	5 W
71.98.0551	Confidea CS	2 W
71.98.0131	Confidea FLEX	6 W
71.98.2002	uniCOS F-MM7	12 W (1 USB port) + 2.5W when using second USB
71.98.2001	uniCOS F-MM10	15 W (1 USB port) + 2.5W when using second USB
71.98.2003	uniCOS T-MM10	15 W (1 USB port) + 2.5W when using second USB
	Plixus NEXT	7 W
71.98.2004	uniBOX	11.3 (1 USB port) + 2.5W when using second USB
71.98.2100	Lingua Interpreter Desk - Audio only	11 W
71.98.2101	Lingua Interpreter Desk - Video	12 W
71.98.2920	Video-IN box	6 W
71.98.2922	Video-OUT box	5.5 W

Maximum power consumption		
71.98.0033	Confidea WCAP G3	10 W
71.98.0034 - 71.98.0035	Confidea WAP G4 (with and without Dante)	24 W
71.98.2051 - 71.98.2050	Plixus Nameplate (double sided & single sided)	4 W
Maximum distance between units		100 m (signal regenerated in every unit)
Minimum required voltage per unit		36 V



The general rule states that you should use a maximum **20 delegate units per branch / loop**.

## Plixus AE-R Power Supply

The Plixus AE-R does not have an internal power supply, however it does have two power connectors. By default you get one power supply together with the engine. You can extend this power supply with another as redundancy or when the system requires more power.

To check how many power supplies you require, consult the flowchart shown below.

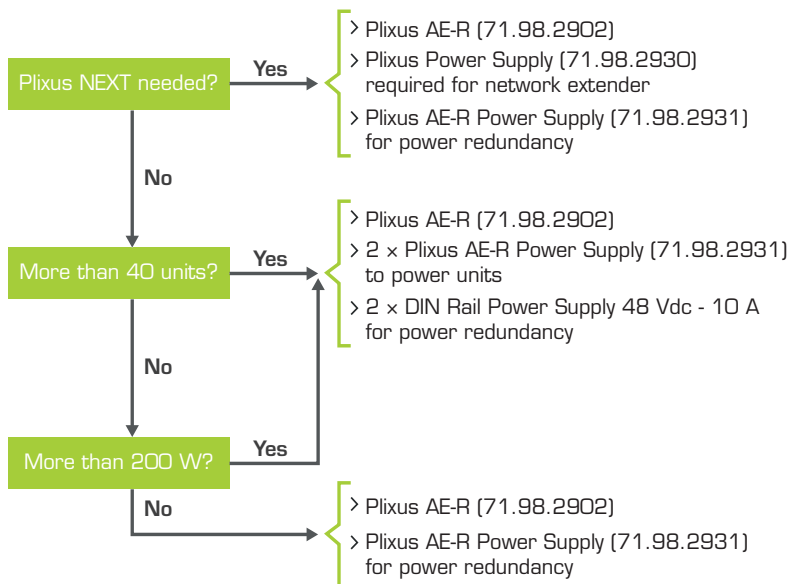


Figure 1-32 How to decide to need an additional Plixus AE-R power supply



## Calculator Tool



The Plixus Power Calculator Tool allows you to validate a configuration in more detail. It takes into account the network cable lengths, power cable lengths and the different types of equipment.

The Plixus Power Calculator Tool can be easily found in the Plixus section of the Televic's Knowledge Base here ("Tools" tab):

<https://conference.televic.digital/knowledgebase/products/plixus/>

Regardless of the calculator values, the maximum values above still apply. If more units, more power or a larger length is needed, then you need to create a separate branch using a Network Extender.

## Cable Requirements



Televic advises to use minimum **CAT 5e F/UTP 23 AWG** for **run cables** and **CAT 5e F/UTP 24 AWG patch cables**.

Televic strongly advises that cables for all **video-enabled products** are created in **loop**.

Please follow the cable guidelines described here, they are important to guarantee correct system performance.

- › Keep all cable runs **under 90% of the maximum distance** supported for each media type as specified in the relevant standard. This extra headroom is for the additional patch cables that will be included in the end-to-end connection.
- › Always use the **same type of cable** (except AWG) in the end-to-end connection.
- › Cabling installations and components should be compliant with the **ISO/IEC 11801 standard**.
- › **Do not stress the cable** by doing any of the following
  - › Applying additional twists
  - › Pulling or stretching beyond its specified pulling load rating
  - › Bending it beyond its specified bend radius

- › Creating tension in suspended runs
- › Stapling or applying pressure with cable ties
- › **Avoid** placing **copper cables** near equipment that can generate high levels of **electromagnetic** interference. Generally avoid locations near power cords, fluorescent lights, building electrical cables and fire-prevention components.
- › Use the **Plixus Power Calculator** to ensure sufficient power for all units in the network.

# INSTALL NAMEPLATE IN PLIXUS NETWORK

The Plixus Nameplate requires a network speed of **100 Mbit**. This means that when you want to use the nameplate in your Plixus network, you can only combine it with units that require the **same speed** (in that branch). For a detailed list of all Plixus compatible units and their network speed see the Plixus Installation Guide. You could, for example, combine the nameplate with a Confidea T or F unit in the same branch, but not with an uniCOS unit.

However, there is a possibility to combine the nameplate with **multimedia** units, such as the uniCOS units, on the same branch. To connect the units, you can use the **USB connection** available on both units.

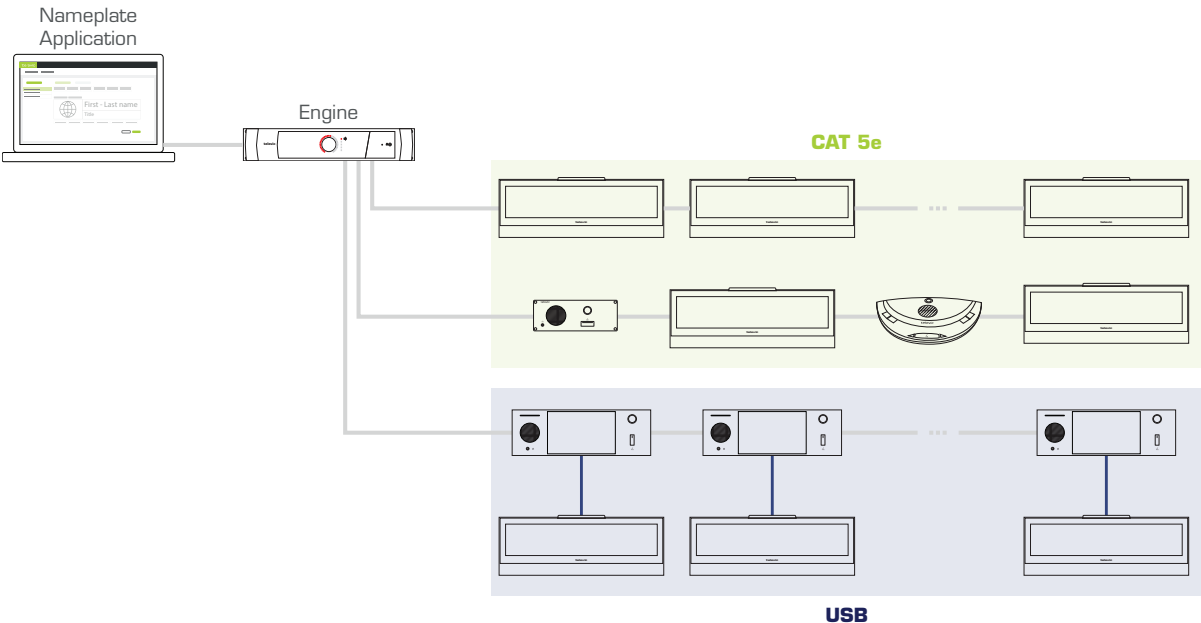



Figure 1-33 How to integrate the nameplate in the Plixus network

There are two different ways of using the nameplate. First, it is possible to associate the **nameplate with a delegate unit on the same seat**. However, you can also use the nameplate in **standalone mode**. In this case the nameplate works independently of the delegate unit.

 When the nameplate is connected via USB as well as the Plixus conference ports, then the nameplate will always use the USB connection.

## Use Nameplate And Delegate Unit On The Same Seat

Associate a nameplate with a delegate unit on the same seat. The benefit of this setup is that the nameplate is synced with your unit. This means that when a delegate microphone is active, the LED of the nameplate will also become active. In this case you can use the nameplate together with an **RFID card**. When the delegate inserts his card into the unit, the nameplate can show the name of the delegate on that seat.

## Use Nameplate In Standalone Mode

If you just want to use the nameplate to **display delegate information independently of the conferencing system**, you can use it in **standalone** mode. In this mode you can use the Nameplate Manager alone to configure the layout of the nameplate and display the content on the nameplate devices inside the room.

When you want to use the nameplate in standalone mode you will have to perform the following steps in the Nameplate Manager (for every step you can find the link to the description of the procedure):

1. Initialize units using CoCon Core or the Plixus Core web server ("Initialize nameplates" on page 1).
2. Create a layout ("Add nameplate layout" on page 1).
3. Create a meeting ("Create meeting" on page 1).
4. Add delegates to the meeting ("Add delegates to meeting" on page 1).
5. Assign delegates to seats ("Manage delegates and seats" on page 1).
6. Prepare meeting and publish the nameplate content ("Publish Nameplate content" on page 1).

# COMBINE PLIXUS WITH CONFIDEA G3 OR G4

## Combine Wired And Wireless Units

With Plixus it is possible to combine wired and wireless units. This can be the case when disabled people require a wireless microphone. You can also use the wireless units to extend the amount of people that can join the meeting. A third reason to combine wired and wireless, is to use the wireless system as backup.

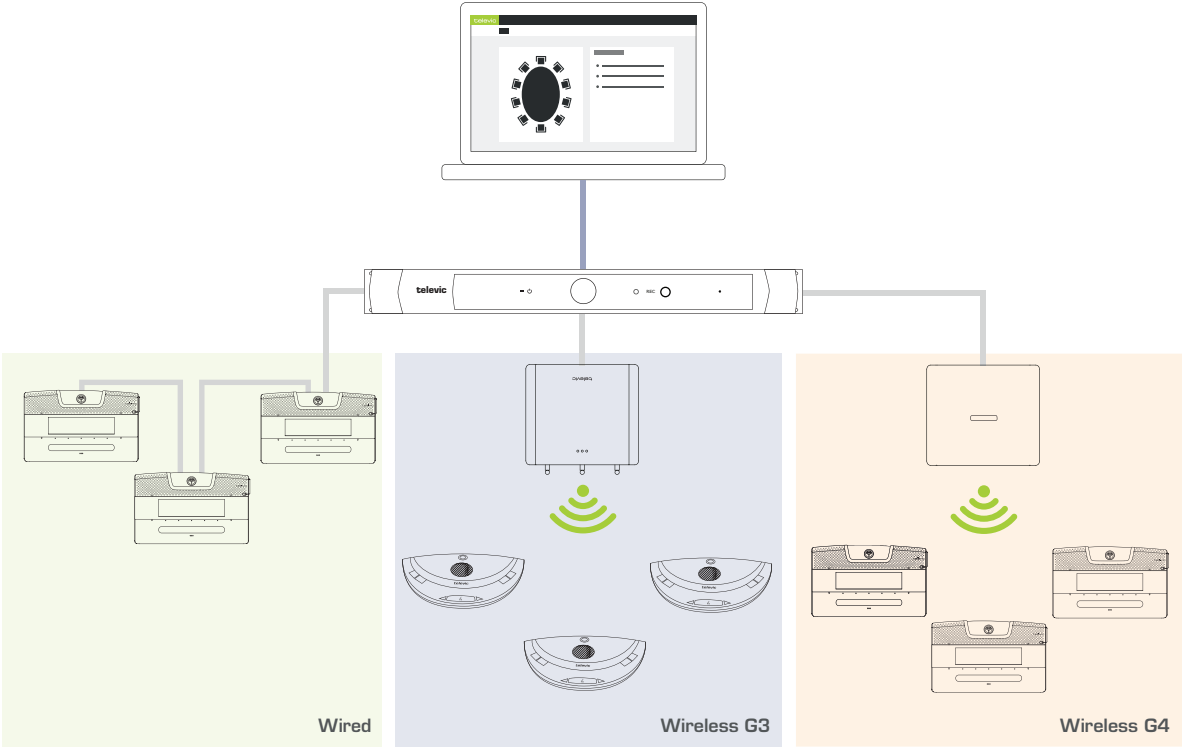


Figure 1-34 How to combine wired and wireless units in a single Plixus setup

# Combine Interpretation With Wireless Units

In the Confidea G3 and G4 unit product ranges, multiple units that can support that support channel selection, are available:

- > The G3 units support the Floor + first 4 languages,
- > The G4 units support the Floor + first 8 languages.

Couple such units with the Plixus engine to receive the channels from the Lingua Interpreter Desks in your Plixus network.

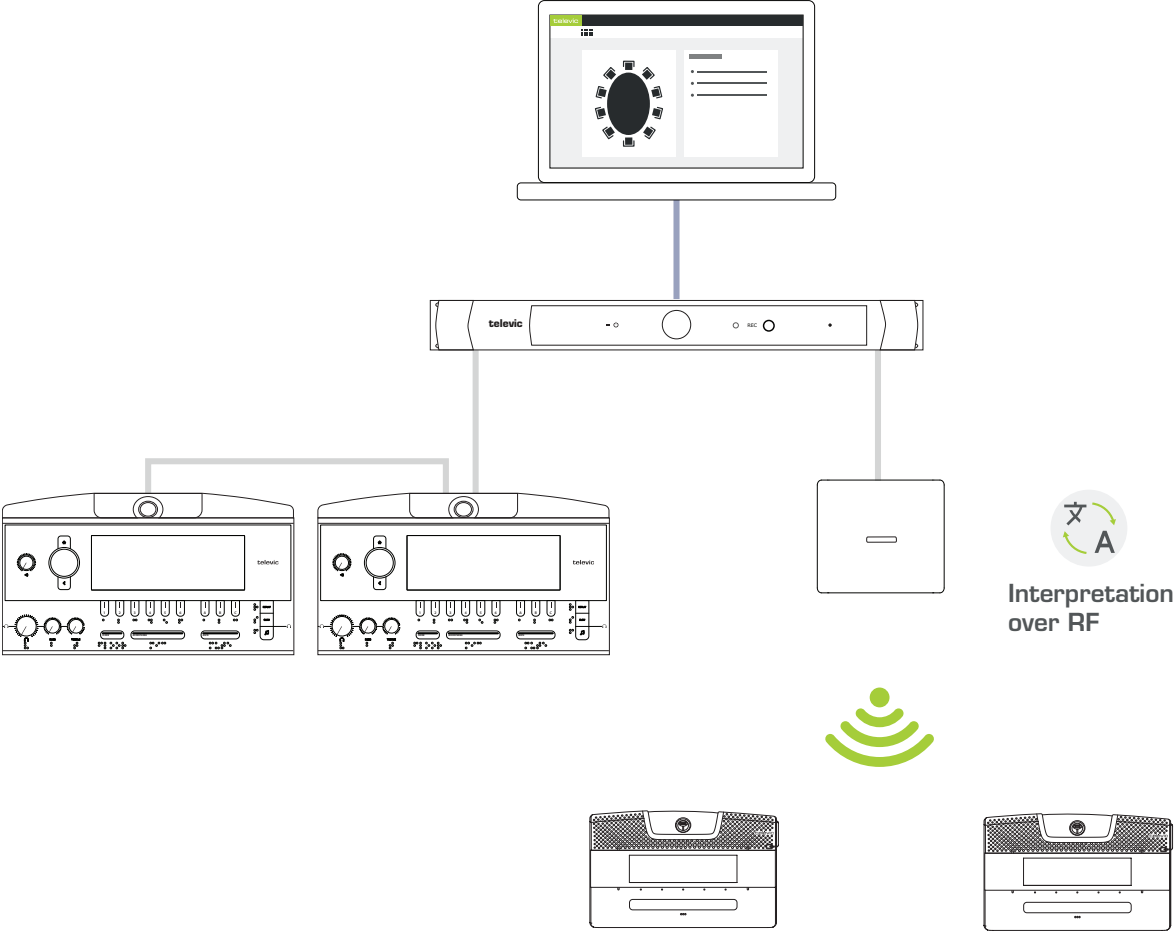


Figure 1-35 How to distribute languages using radio frequency

# Range Extension With Multiple Access Points

Improve the range of your room by using multiple WAPs / WCAPs. By using multiple WAPs / WCAPs, you are able to connect to much more units spread out over the entire meeting room. For more information on how to position the WAP or WCAPs for optimal transmission, see the dedicated user guide for Confidea G4 or Confidea G3 respectively.

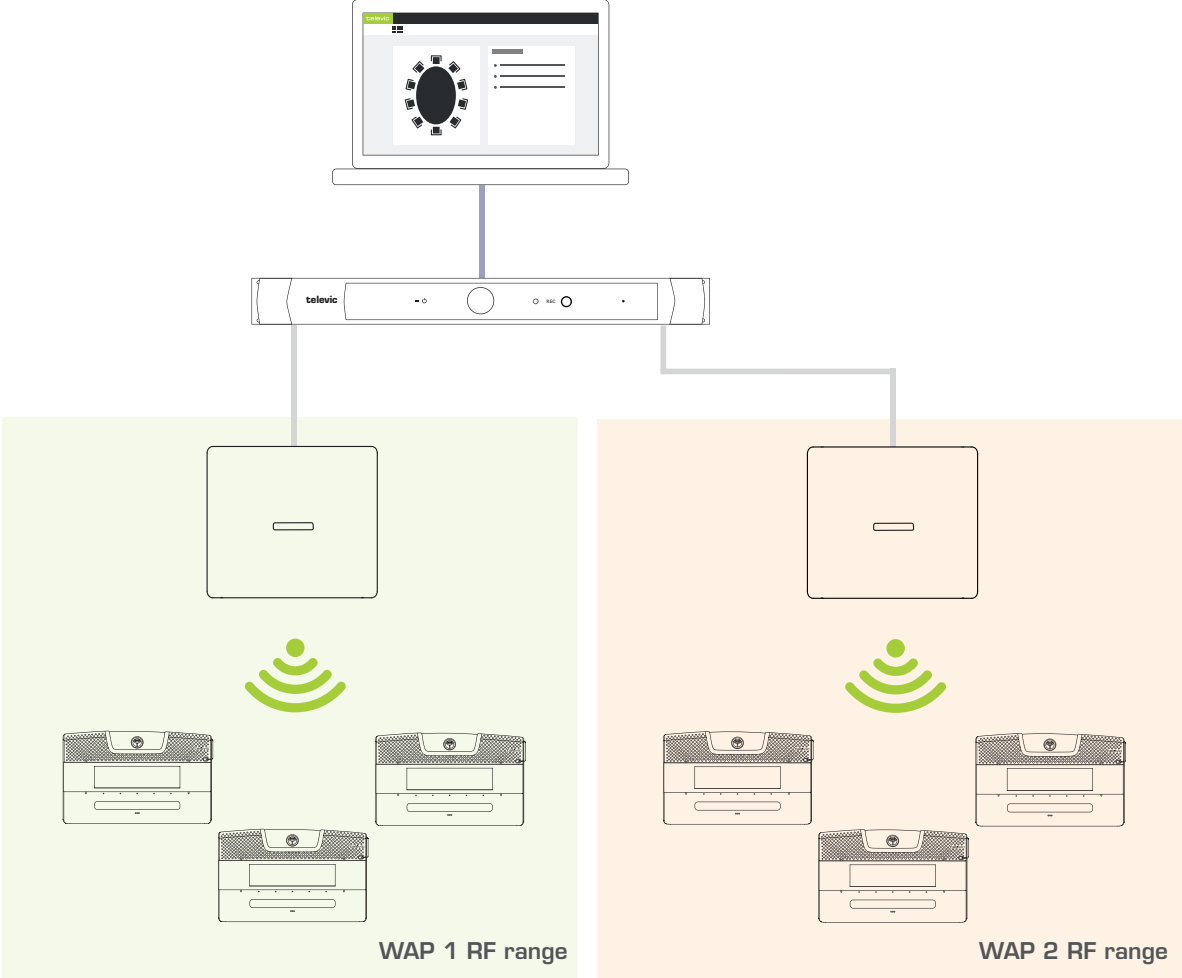


Figure 1-36 Improve the range of your system by using multiple WAPs

## Split And Combine Rooms

Use the WAP / WCAP in standalone mode for small meetings. For larger meetings you can combine multiple rooms by coupling the WAP / WCAPs with the Plixus engine. In this way you can manage all units centrally using the Plixus engine and web server.

When you need to split the room again, simply uncouple the WAP / WCAP from Plixus. The WAP / WCAP will go back to standalone mode where it remembers all its previous settings.

The Plixus engine will remember the WAPs / WCAPs once they were coupled. Just couple them using the web server whenever you need to combine rooms.

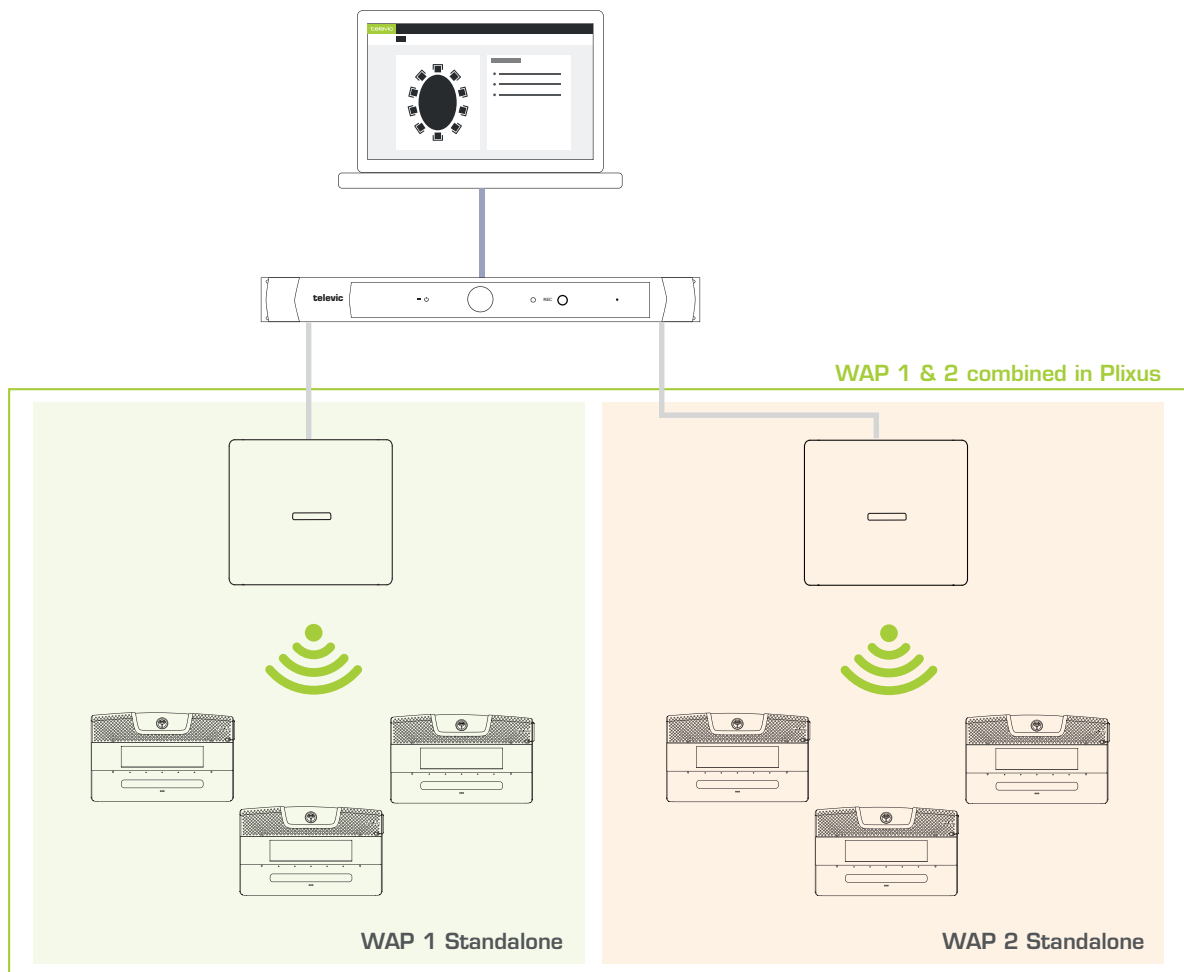


Figure 1-37 Use the WAPs in standalone mode when you need to separate rooms or combine to rooms into one by coupling the WAPs to the Plixus network.





# INTRODUCTION



Before you start, make sure to take all necessary precautions. Refer to the tables above and ensure all components are installed and sufficiently powered.

Before you install the Plixus system, make the installation design as described in "Installation design" on page 50 to ensure correct installation. In this design you will calculate the following elements:

- › The system power consumption
- › The amount of external power supplies needed
- › Cable length needed

# POWER SUPPLY

## Power Network Extenders

To supply power to the network extenders 48 VDC is required. A WAGO Power Connector supplies the necessary power. It is advised to use strain reliefs.

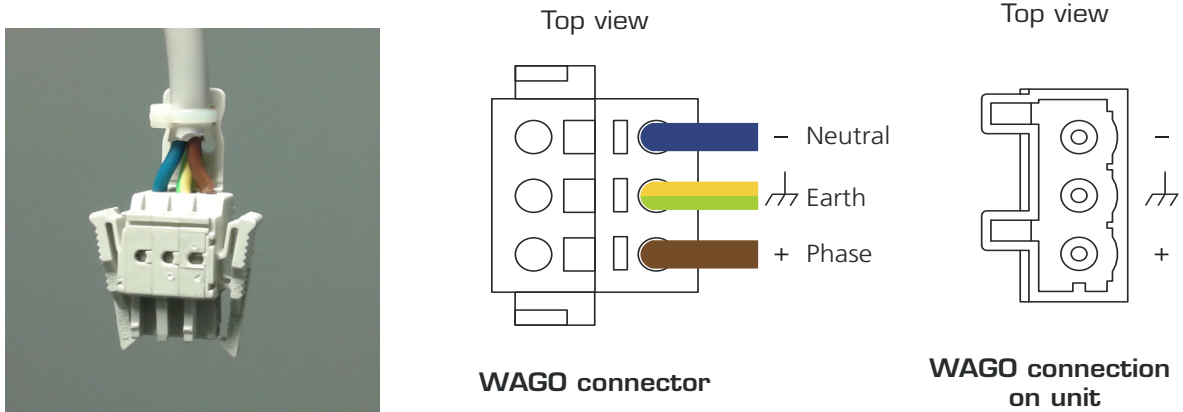


Figure 1-38 WAGO connector together with the connection available on the devices



Each power connector has two interfaces with three contacts that allows you to daisy chain units.



When connecting the power cables, please note the correct order of the cables and their corresponding colors, see the picture above.

## Power UniCOS Units And UniBOX

When you do not provide power to these units over the Plixus cable, you can use the **snap and lock mini DIN power plug**. Plug in the connector to the unit and connect the wires on the other end of the DIN power plug to the Plixus power supply you are using. You can use any connector of your choice for this (for example a WAGO connector, a junction box, a power bus distributor, etc.). By default a WAGO connector is supplied with the unit. You can power the uniCOS and uniBOX units as depicted in the image below and using the description of the WAGO connector in the previous section.

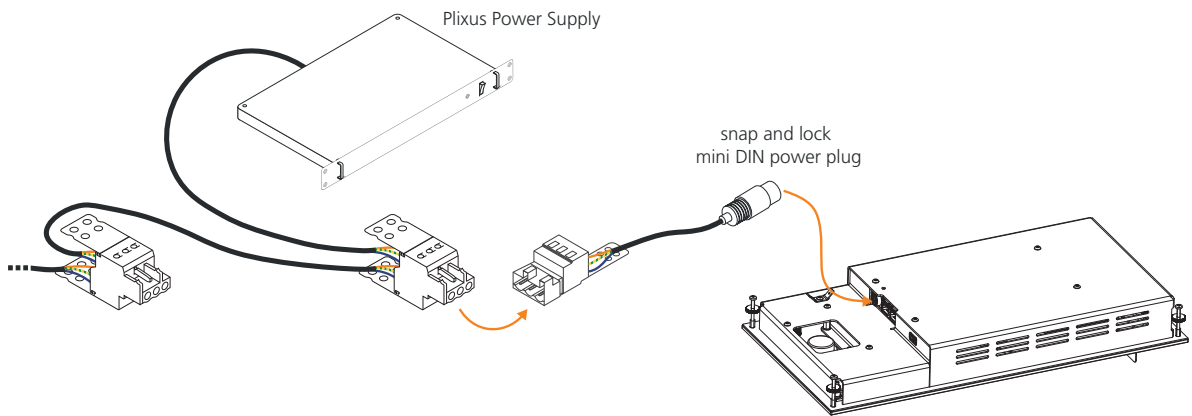


Figure 1-39 How to power the uniCOS unit using the Plexus Power Supply and the supplied WAGO connector

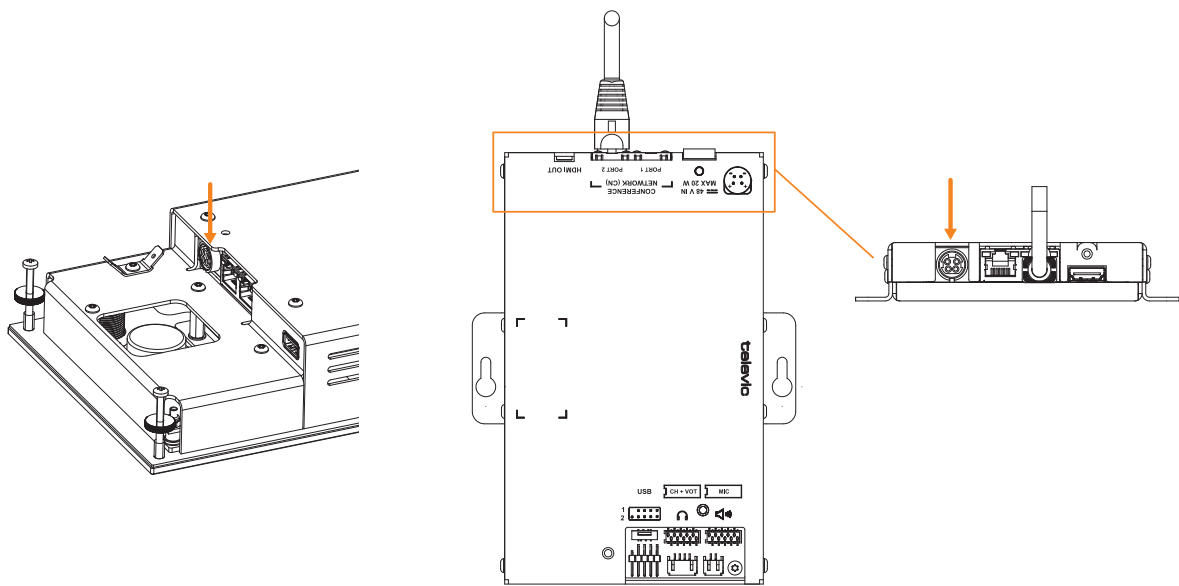


Figure 1-40 Position of the snap and lock mini DIN power plug on the uniCOS units and uniBOX

## Power Supply Of The Central Unit



When connecting power at the back of the central engine, please note the correct order of the cables and their corresponding colors

### PLIXUS AE-R

To supply power to the Plexus AE-R using the power outlets on the engine. You can add two 220 V power supplies. Use a second one when 220 V is insufficient or as a redundant power supply.

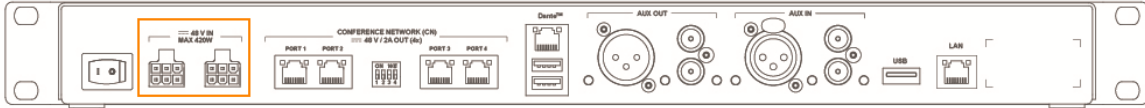


Figure 1-41 How to supply power to the Plixus AE-R

## PLIXUS MME

The Plixus MME has an internal power supply. To supply power to the units using the Plixus MME put the cables in the correct order:

1. Blue cable = 0 V
2. Green / yellow cable= earth
3. Brown cable = 48 VDC

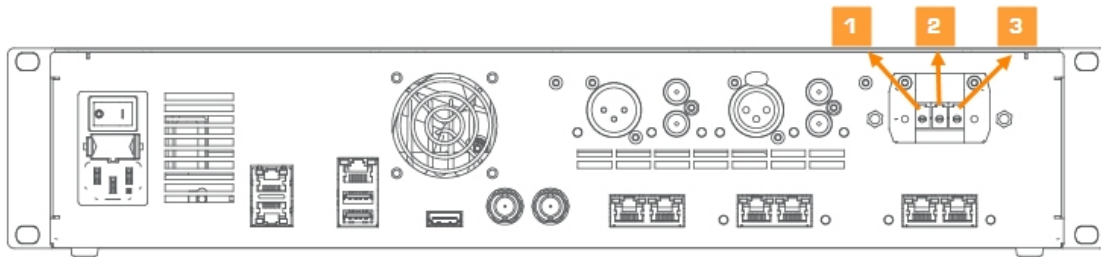


Figure 1-42 Power connection of Plixus MME

You can supply power the units over Ethernet. Each **conference ports** can supply a **maximum of 100 W**.

# INSTALL CABLES

Use CAT 5e cables to connect Plixus AE-R or MME to the delegate and chairmen units, and to connect the different units in a branch / loop. For more information on cable details, see "Cable requirements" on page 65.

Televic has standard pre-made cables available in different lengths:

- > ICC5/2 2 m
- > ICC5/5 5 m
- > ICC5/10 10 m
- > ICC5/20 20 m

The voltage level at the output of the central unit is 48 V. A voltage drop is caused by the length of the cable and the number of units. The last unit of the branch should receive at least 36 V.

# INSTALL MICROPHONES

## General Microphone Characteristics

All Plixus compatible units have either a screw-lock connector (older models) or a push-and-lock connector (newer models) to insert pluggable microphones. The microphones comes in various lengths and types:

### PUSH-AND-LOCK MICROPHONES (FOR NEW UNITS)

Reference Number	Microphone Model	Microphone Type	Length
71.98.0094	Mike LPM	Low Profile	10 cm
71.98.0093	Mike PLM 301 F	Gooseneck, single flex	30 cm
71.98.0094	Mike PLM 401 F	Gooseneck, single flex	40 cm
71.98.0095	Mike PLM 502 F	Gooseneck, double flex	50 cm
71.98.0096	Mike PLM 602 F	Gooseneck, double flex	60 cm
71.98.0098	Mike PLM 402 F	Gooseneck, double flex	40 cm
71.98.0099	Mike PLM 40FF	Gooseneck, full flex	40 cm

### SCREW-LOCK MICROPHONES (FOR OLDER UNITS)

Reference Number	Microphone Model	Microphone Type	Length
71.98.0053	D-MIC 30 SL	Gooseneck, unidirectional	30 cm
71.98.0054	D-MIC 40 SL	Gooseneck, unidirectional	40 cm
71.98.0055	D-MIC 50 SL	Gooseneck, unidirectional	50 cm
71.98.0057	D-MIC 70 SL	Gooseneck, unidirectional	70 cm
71.98.0059	D-MIC 40 FF	Gooseneck, fully flexible	40 cm
71.98.0072	D-MIC 40 BC	Goosneck, cardioid	40 cm
71.98.0073	D-MIC 40 BC	Goosneck, hypercardioid	40 cm

## Technical Microphone Characteristics

Please refer to the datasheet of the microphone for more information:

## Microphone Connector Characteristics

### PUSH-AND-LOCK MICROPHONES

The Mike microphones have a sturdy connection that are easy to connect and disconnect. Make sure the release button of the microphone is positioned backwards, then insert the microphone into the Mike connector of the unit. To remove the microphone, simply press the release button.

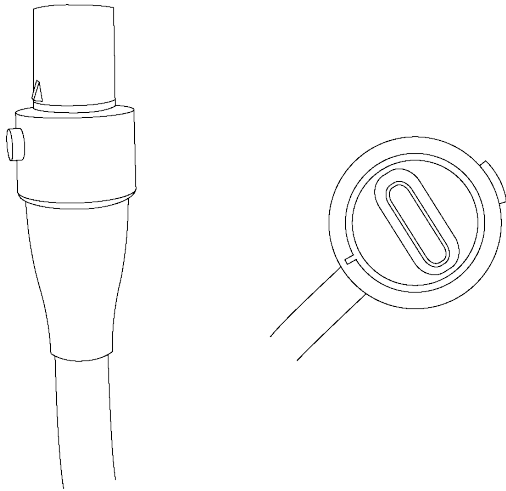


Figure 1-43 Push-and-Lock microphone connection

### SCREW-LOCK MICROPHONES

The Confidea D-MIC microphones have a 5-pin connector to plug into the different Plixus compatible units. Each pin has a distinct function:

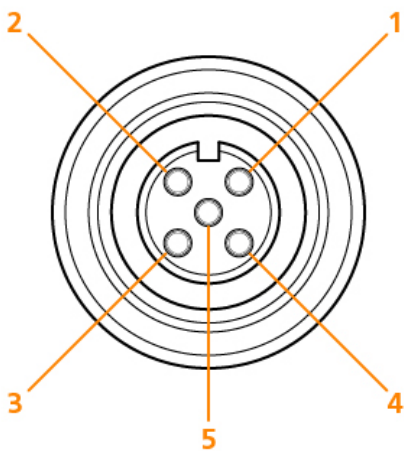




Figure 1-44 Screw-Lock microphone connection

1. Pin 1: Microphone GND
2. Pin 2: Microphone signal
3. Pin 3: not used
4. Pin 4: LED +
5. Pin 5: LED -

## Microphone Operation Modes

The microphone contains the following elements:

- › **Indicator ring:** shows the status of the microphone.
- › **Microphone plug:** connects the microphone to the unit.
- › **Release button** (push-and-lock microphones only): releases the microphone from the unit.

The color of the microphone indicator ring shows the **status** of the microphone:

Color	Status
Red (continuous)	Microphone is active
Red (blinking)	Last minute of speech time (if set via software) Speech Request (if set via software)
Green (continuous)	Microphone is initialized
Green (blinking)	Microphone request

## Mounting The Microphone Connector Of The F-BOX

To mount the screw-lock microphone connector F-BOX\_MIC or the push-and-lock microphone F-BOX\_MIKE to the F-BOX, refer to the quick installation guide here:

<https://documents.televic.digital/conference/index.php/s/b26jBiXofpoD83C>

## Handling Of Gooseneck Microphones

Below are safety instructions and prescriptions for proper use, safety warnings, storage and environmental conditions to keep your microphones healthy over a long lasting period.

## OPERATING

The flexible arm of your gooseneck microphone is able to keep its position, without sagging or vibrating. Its operation is based on the friction developed between the inner spring, constructed as a metal spiral (steel) and the outer cover made of copper (or brass).

Any external treatment on the flexible arm can affect the mechanical or electrical properties of the microphones flexible tube.

### Warnings:

- › Avoid contact with any kind of solid, liquid or gel lubricating substance (oils, soaps, talcum powder, graphite, etc.) since they could cause structural degradation of the product. Even avoid contact with water as it may cause oxidation.
- › Any kind of cleaning needs to be oil or lubricant-free or the product will be permanently damaged. Above products will eliminate the friction between the metal surfaces mentioned earlier and are strictly forbidden.
- › Your gooseneck microphone has been tested for bending angles of up to 90°. Do not try to bend or twist the flexible arm for more than 90° as permanent damage will occur.



## USE, MAINTENANCE AND STORAGE

- › Clean the flexible tube only with a dry cloth.
- › Respect the application limits at room temperature ranging between +5° C and + 40° C, and a relative humidity < 60 %.
- › Store your gooseneck microphone at constant temperature and the lowest humidity rate possible (< 50 %) to avoid condensation which can damage the flexible arm as well as the electret microphone cell.
- › Respect the load times and the minimum bending angles stated in our technical sheets.

## SPEAKING DISTANCE

The recommended **speaking distance** from the mouth to the top of the microphone is between **20 to 40 cm**. In order to accommodate the variety of speakers and speaking distances, microphones are available in various lengths:

## MAXIMUM ANGLE USE

The microphones mentioned below can be used with the following maximum angle (°), measured from a flat surface (0°):

Reference Number	Microphone Model	Maximum Angle From a Flat Surface
71.03.2430	TGM2430	90
71.03.2450	TGM2450	20
71.98.0053	D-MIC 30 SL	90
71.98.0054	D-MIC 40 SL	60
71.98.0055	D-MIC 50 SL	20
71.98.0057	D-MIC 70 SL	00*
71.98.0059	D-MIC FF	60
71.98.0072	D-Mic 40 BC Cardioid	60
71.98.0073	D-Mic 40 BC Hypercardioid	60
71.98.0091	Mike LPM (low profile microphone)	20
71.98.0093	PLM 301 F	90
71.98.0094	PLM 401	60
71.98.0095	PLM 502F	20
71.98.0096	PLM 602 F	00*
71.98.0098	PLM 402 F	60

\* "00" means that it can only be mounted on a horizontal surface

## WARRANTY

The warranty automatically expires if the above prescriptions were not fulfilled or if the product has been modified, changed or improperly stored. Any claim should be sent to Televic together with some explanatory technical document. Products can only sent back after prior authorization of Televic.

# INSTALL DELEGATE UNITS

Keep at least one meter between two consecutive units to prevent howling effects.

## Connect Plixus Units

For all system cable connections use CAT 5e FTP cables with an RJ-45 shielded connector. Plixus units have an automatic port sensing feature. This means that it doesn't matter which port is used, the units automatically detect whether it is an input or output.

Each unit has two conference ports, below you can find a list with all Plixus compatible units and the location of their conference ports.

Unit type	Conference port location
Confidea T ( <i>discontinued</i> )	Bottom side of unit
Confidea F	Built-in part of unit, location may vary depending on the type of unit.
Confidea FLEX	Bottom side of unit
Plixus Nameplate	Bottom side of unit
uniCOS	Built-in part of unit
Interpreter Desk	Back side of unit

## Connect To Plixus Engine

After connecting the different Plixus units to each other, connect the branch of units to one of the conference network ports of the Plixus AE-R, MME or a network extender.

- › The Plixus AE-R and MME have four conference network ports.
- › **General rule:** 80 units can be supported directly by the central unit. However this depends on type on units , cable sections and length. To calculate the exact amount with the Plixus power calculator tool.
- › The central unit can deliver 400 W for external loads (for the Plixus AE-R this is 200 W, which you can increase to 400 W with an additional external power supply)
- › The cable length to the first unit should not exceed 100 m.
- › The cable length between the units should not exceed 100 m.

# Install Confidea FLEX, Confidea FLEX G4 And Confidea GO G4

## MANAGE LICENSES (CONFIDEA FLEX & FLEX G4)

With these units, through licenses, you can activate more functions whenever you want. To activate or deactivate a license, follow the procedure described below:

1. Go to the **Initialization** page of the Plixus web server.
2. Select **Manual initialization** and click **Open initialization**.
3. All units now show the **License screen**.
4. Press the microphone button to initialize the unit, this activates the license screen.
5. Blue buttons indicate that the license is active. Per license, you can see the number of remaining licenses.
6. Press the license button of your choice, to activate or deactivate this license.
7. **Close initialization** .

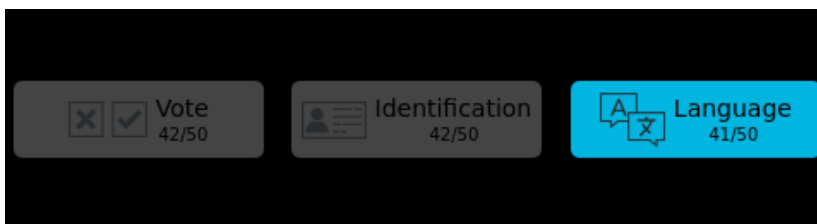


Figure 1-45 License screen on the Confidea FLEX



Note that the Confidea GO G4 only offers the L-Dual license. Unlike the Confidea FLEX G4, it is not possible to add extra licenses such as voting, identification and language.

## CONFIGURE UNITS AS CHAIRPERSON OR DELEGATE

There is only one type of Confidea unit, this means that you can configure the unit as chairperson or as delegate. To change the priority of the unit follow the procedure described below:

1. Go to the **Initialization** page of the Plixus web server.
2. Under Manual initialization, click Edit configuration.

3. Click the priority icon to switch between chairperson and delegate:

- a. ★: delegate (Confidea FLEX with one central microphone LED on the microphone button)



- b. ★: chairperson (Confidea FLEX with microphone LED on the left and PRIOR LED on the right of the microphone button)



4. Click **Stop editing**.

# ATTACH UNICOS T/MM10 TO A FIXED SURFACE

You can attach the uniCOS T/MM10 to a **fixed surface**, so it is no longer possible to move the unit around. The tabletop unit has three small openings on the bottom of the unit, which you can use to attach it to a table.

First drill **three holes** in the table you want to fix the unit to, then you also need to foresee a large opening to guide the cables of the unit through.

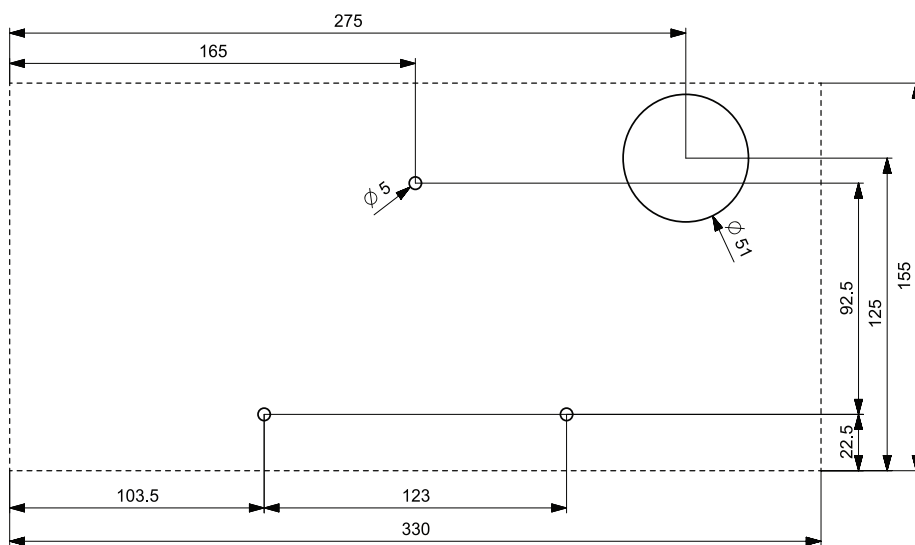


Figure 1-46 uniCOS T/MM10 table cutout

In the next step, insert the cables into the designated opening, and then insert and tighten the screws as depicted in the image below.

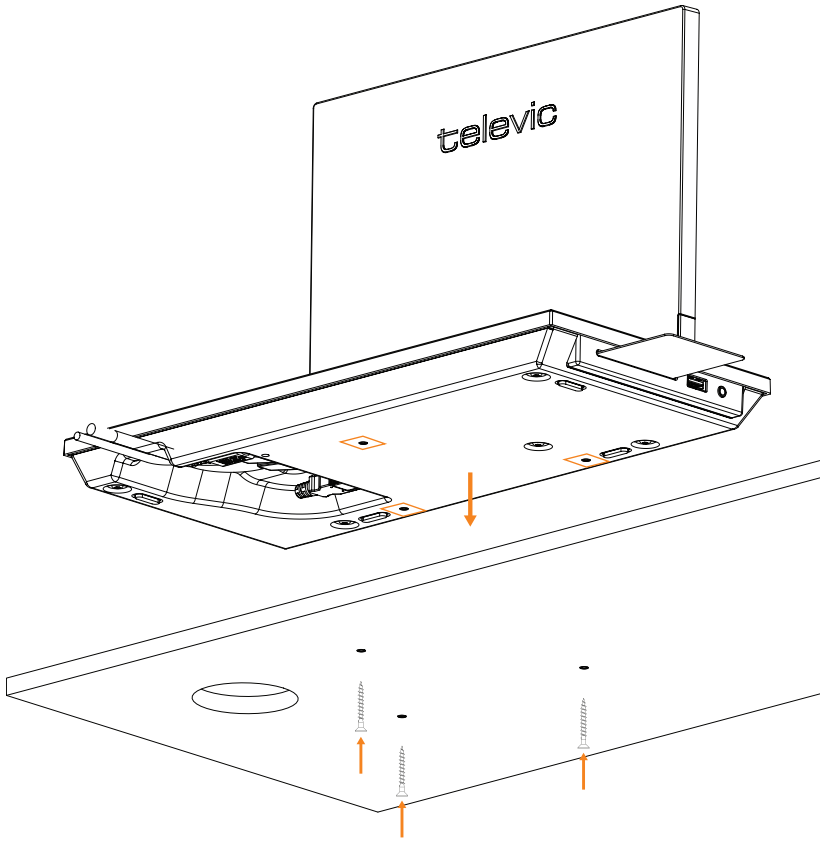


Figure 1-47 How to attach the unicOS T/MM10 to a fixed surface



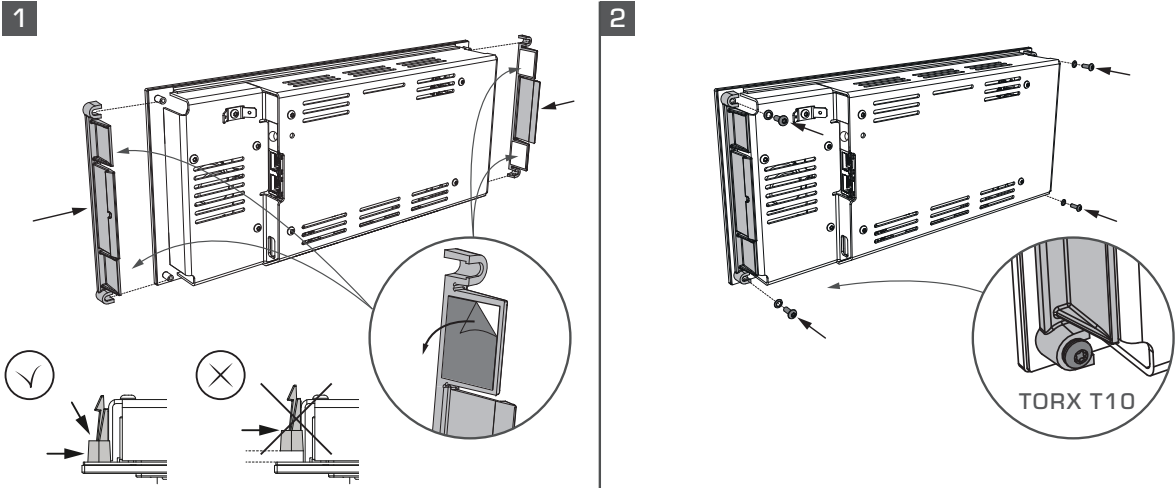
# INSTALL THE UNICOS UNITS IN THE RESPECTIVE MOUNTING BRACKET

You can mount the uniCOS F/MM7 (*discontinued*) and uniCOS F/MM10 as a tabletop unit using the available brackets:

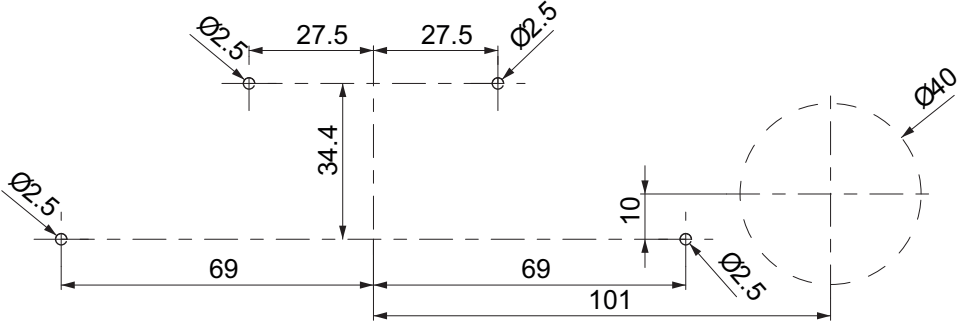
- > uniCOS F/MM7 bracket: **71.98.0012** (*discontinued*).
- > uniCOS F/MM10 bracket **71.98.0013**.

Follow the descriptions described here to mount the brackets on a fixed surface and insert the units into the bracket.

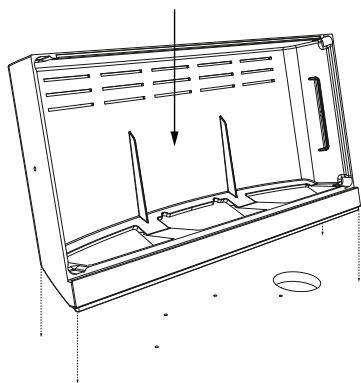
## Mount UniCOS F/MM 7 In The Bracket



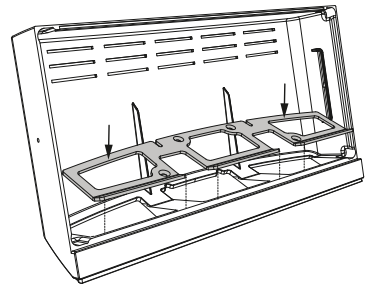
### 3 TABLE CUTOUT



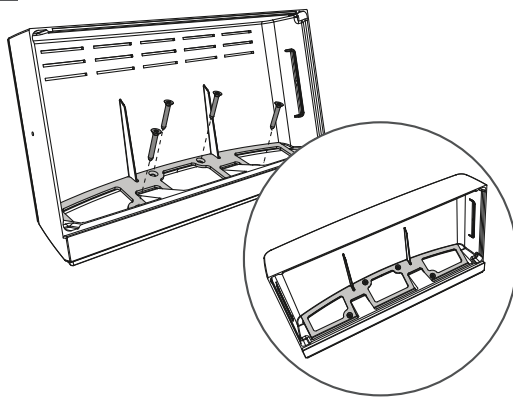
4



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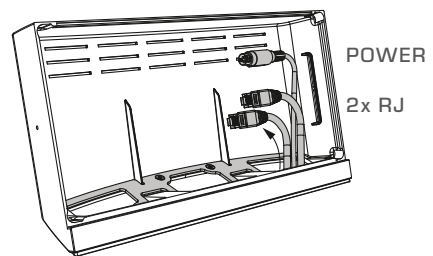


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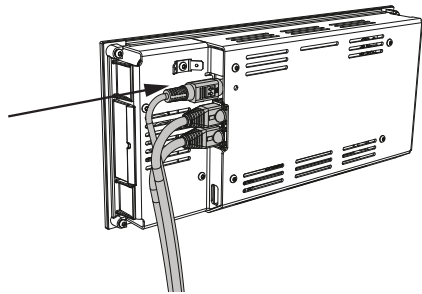


7

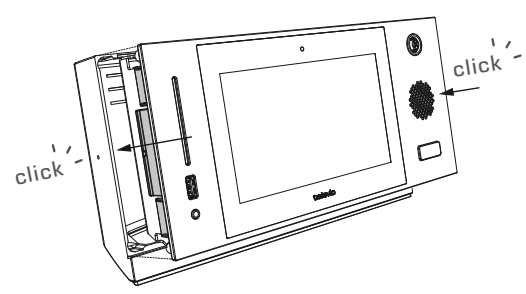
Only when power is applied externally



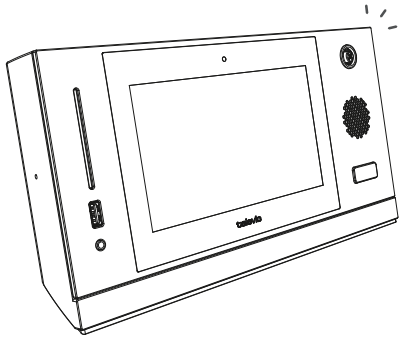
8



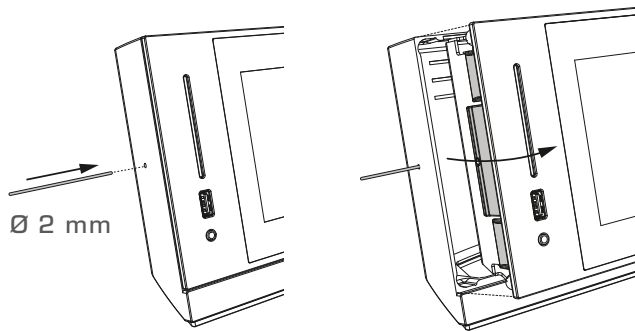
9



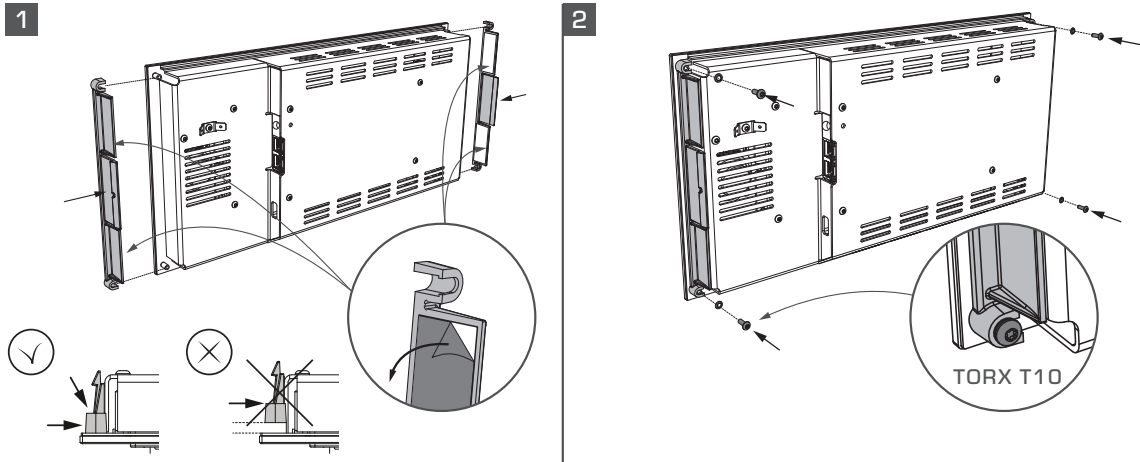
10



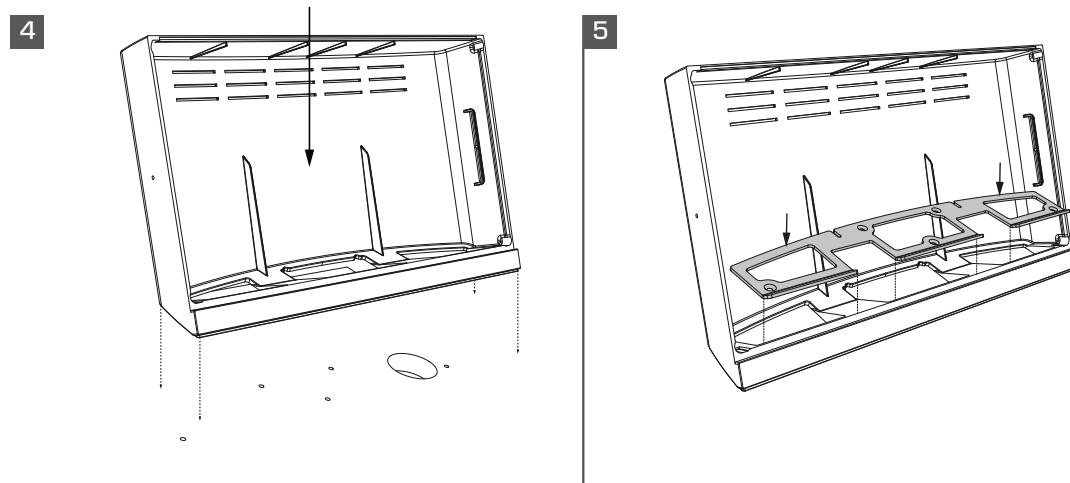
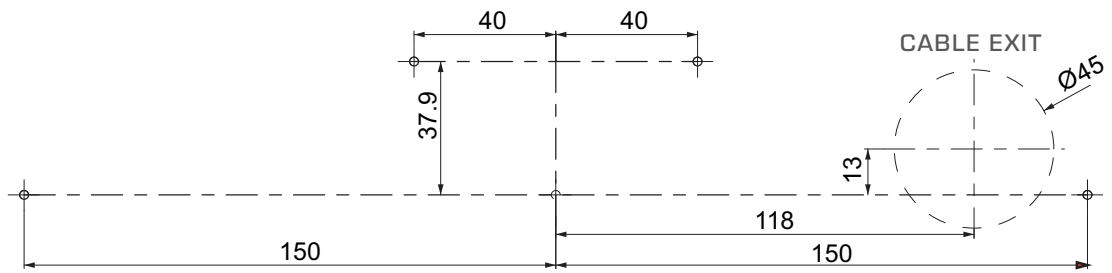
## Remove UniCOS F/MM 7 From The Bracket

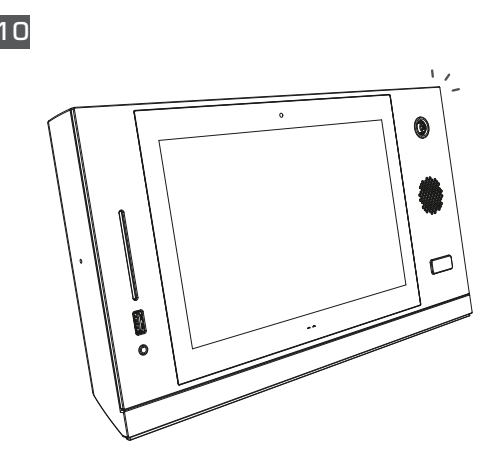
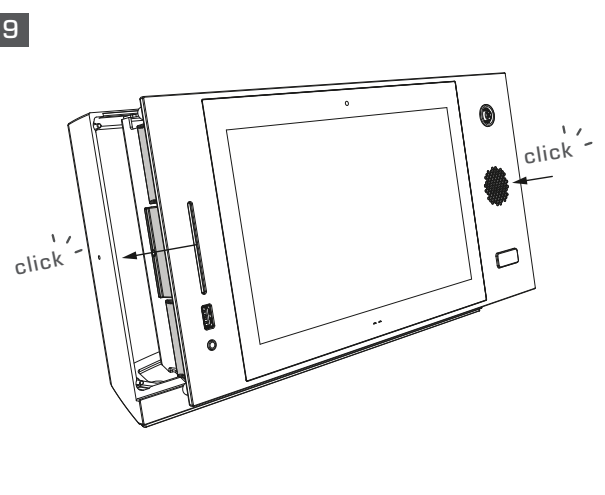
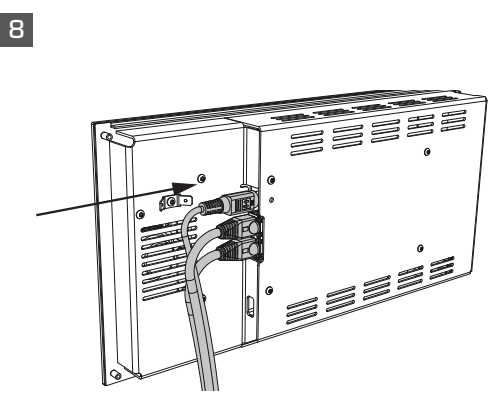
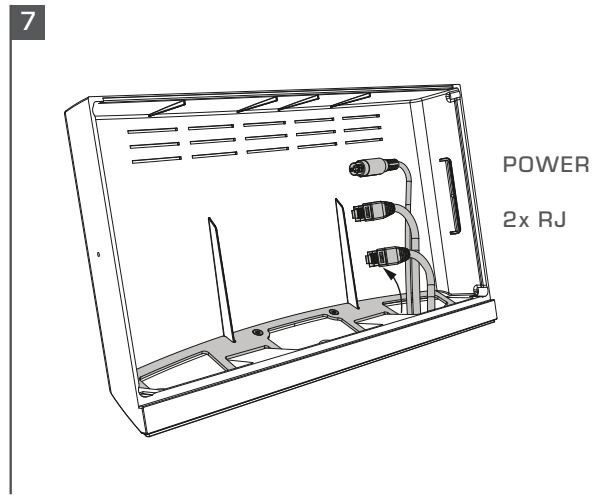
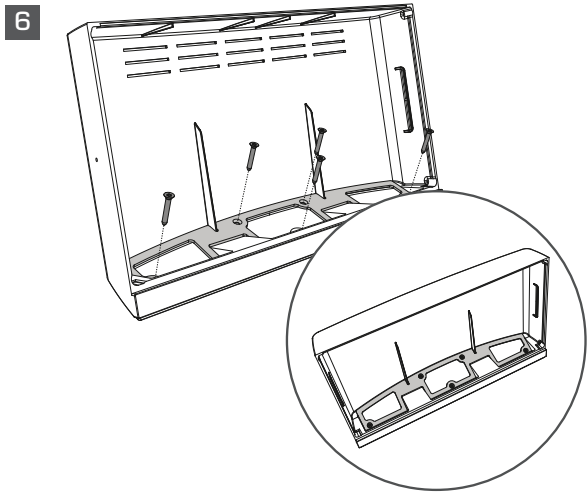


# Mount UniCOS F/MM 10 In The Bracket

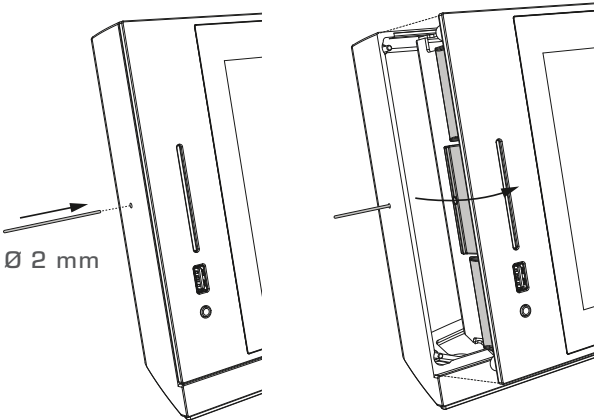


## 3 TABLE CUTOUT





# Remove UniCOS F/MM 10 From The Bracket



# INSTALL CONFIDEA G3 AND G4

Within Plixus it is possible to connect the engine to a Confidea G3 (*discontinued*) or Confidea G4 wireless system. When connected, Plixus will treat the units the same way as all other wired units.

## Connect Wireless Conference Access Point (WAP) To The Plixus Network

Use the conference ports on the WAP to connect to the Plixus engine or a network extender. In some cases you want to have multiple WAPs available ( see " Combine Plixus with Confidea G3 or G4 " on page 69 for more information). You can daisy chain multiple WAPs in one branch. We suggest not to put more than four WAPs on one branch.

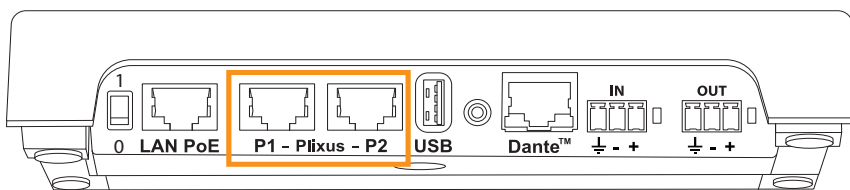


Figure 1-48 Back view with conference ports on Confidea G4 WAP

To supply power to the WAP, you can use the LAN connection to a PC through a PoE+ cable.



When your setup contains multiple WAPs, then these should use a different frequency to allow successful operation.

## Connect Wireless Conference Access Point (WCAP) To The Plixus Network

Use the conference ports on the WCAP to connect to the Plixus engine or a network extender. In some cases you want to have multiple WCAPs available ( see " Combine Plixus with Confidea G3 or G4 " on page 69 for more information). You can daisy chain multiple WCAPs in one branch. We suggest not to put more than eight WCAPs on one branch.

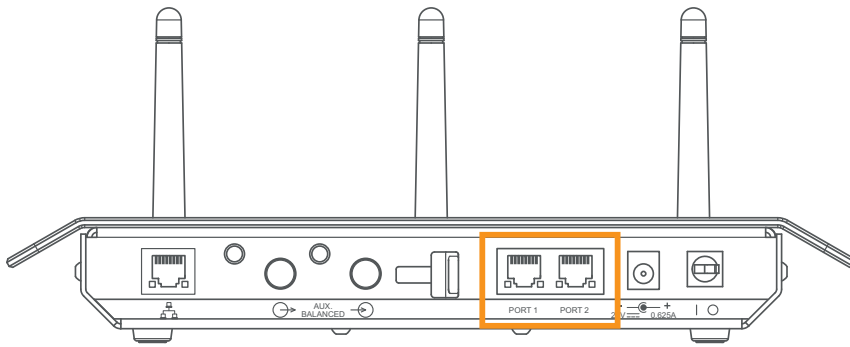


Figure 1-49 Back view with conference ports on Confidea G3 WCAP

To supply power to the WCAP you can use its external power supply, but you can also use the power supplied by the engine or network extender with power over Ethernet.



When your setup contains multiple WCAPs, then these should use a different frequency to allow successful operation.



# CABLING OF NAMEPLATE



Figure 1-50 The bottom side of the Plixus showing all available ports

You can use the Plixus in your Plixus network. There are two options to connect to the nameplate to your system. You can use the Plixus conference ports (1) or use the USB connection (2).

## Connect To Plixus Conference Ports

To daisy-chain the nameplate in a branch connected directly to the engine or a network extender plug in the CAT 5e cable into the conference port.

### PORTABLE USAGE

Guide the cables through the openings on the side of the nameplate base when you want to easily change the location of the nameplate. To see how to attach the side panels see "Mount the Nameplate" on page 100.



Figure 1-51 Bottom view of CAT 5e cabling of nameplate for portable usage

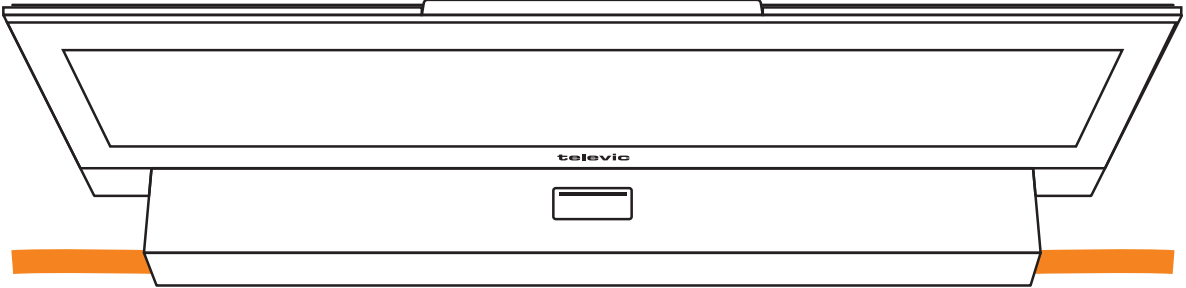


Figure 1-52 Top view of cabling of nameplate for portable usage

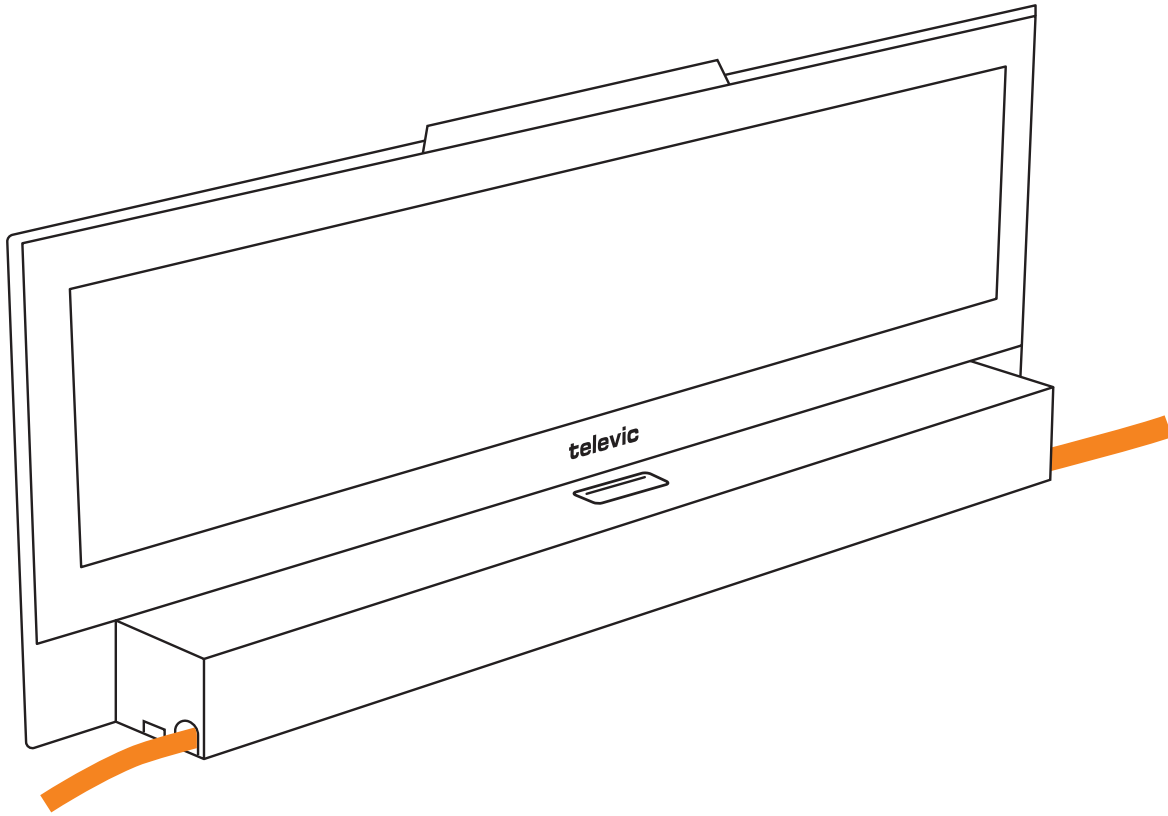


Figure 1-53 Side view of cabling of nameplate in portable usage

## FIXED USAGE

When integrating the nameplate into a table, you can guide the cables through the opening in the mounting bracket and bottom plate into the table. Next attach the side panels for portable usage as shown in "Mount the Nameplate" on page 100.

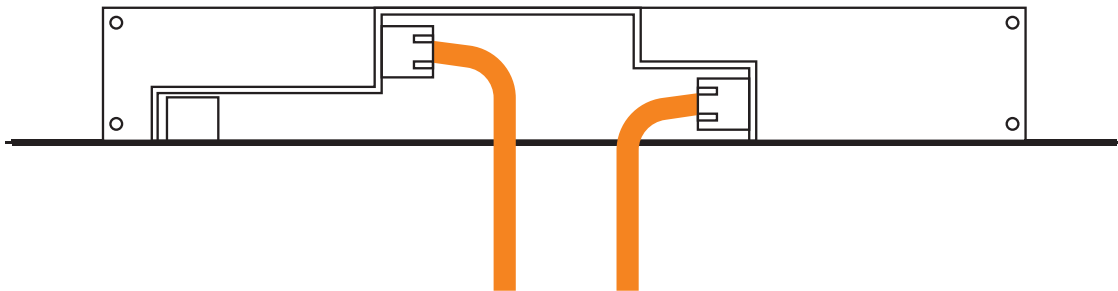


Figure 1-54 Bottom view of cabling of nameplate for fixed usage

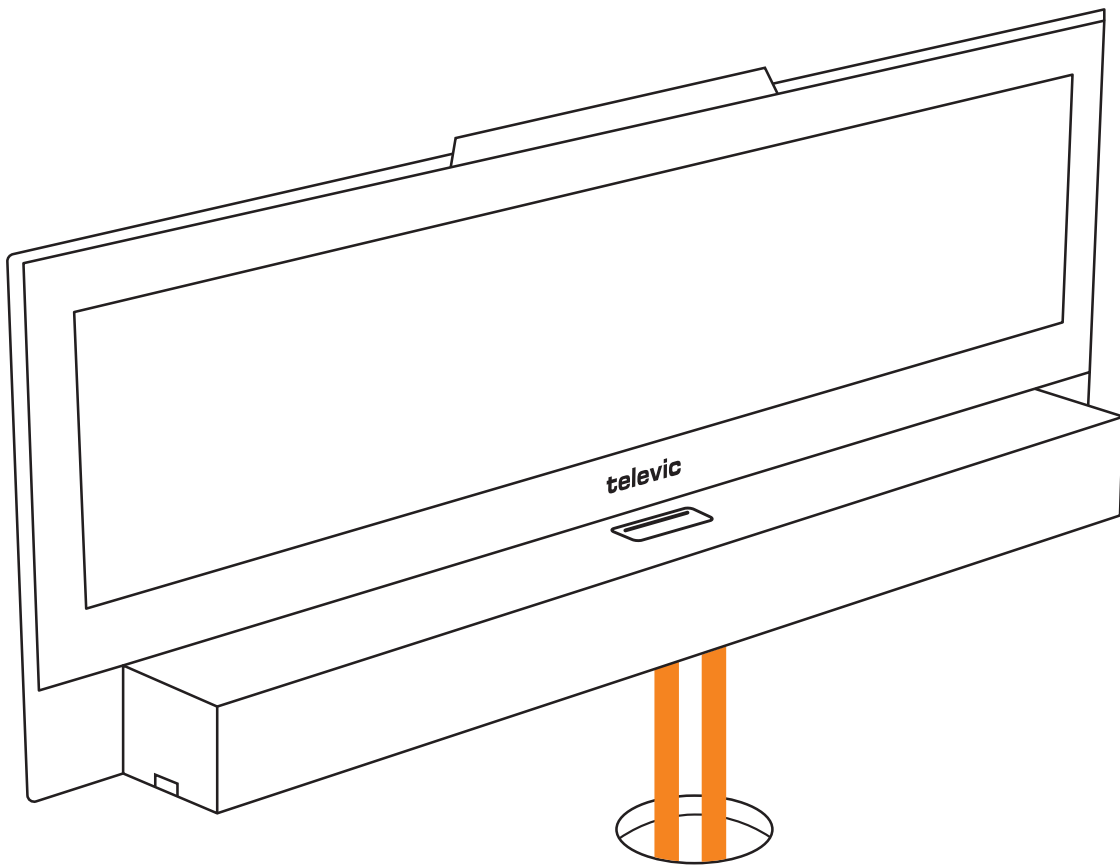


Figure 1-55 Side view of nameplate cabling for fixed usage

## Connect To USB

It is also possible to connect the nameplate directly to a delegate unit using the USB connection. Use this option when you cannot mix the delegate unit and the nameplate because they require a different network speed (e.g. uniCOS and uniBOX units) or you want to use the nameplate independently of your conference system.

# MOUNT THE NAMEPLATE

## Portable Usage

To change the location of your nameplate, you can mount it as a portable unit. To use the nameplate in this mode, the **mounting bracket** (1) is already attached to the **portable base** (2).

Once attached, place the bracket and base so that the side closest to the cable opening, lines up with the backside of the nameplate. Click the nameplate onto the bracket.

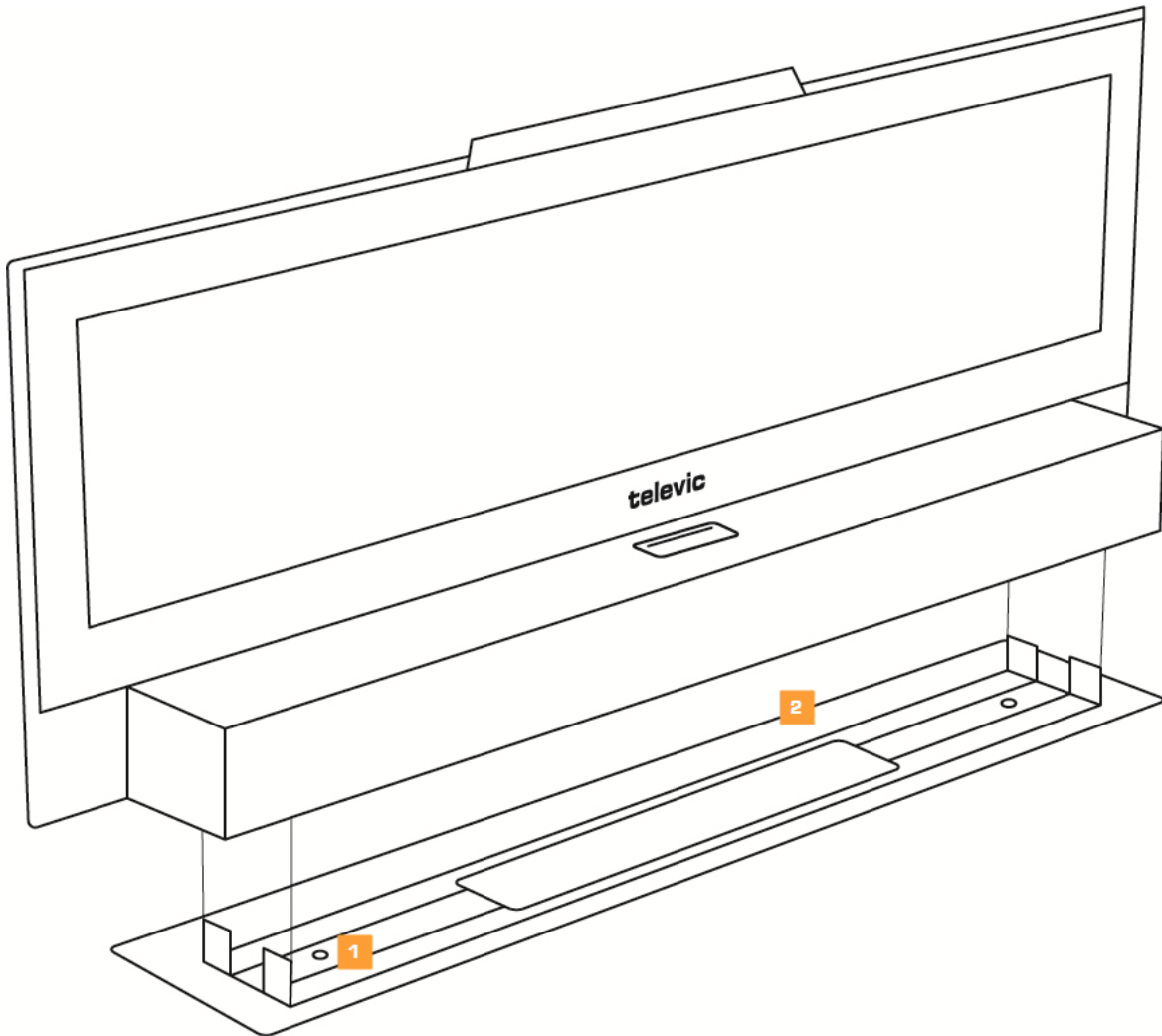


Figure 1-56 How to mount the Plixus for portable use

## Fixed Usage

To use the nameplate on a fixed position, first dettach the portable base from the mounting bracket. Tehn, install the nameplate on the table by attaching the mounting bracket to the table. Click the nameplate onto the mounting bracket.

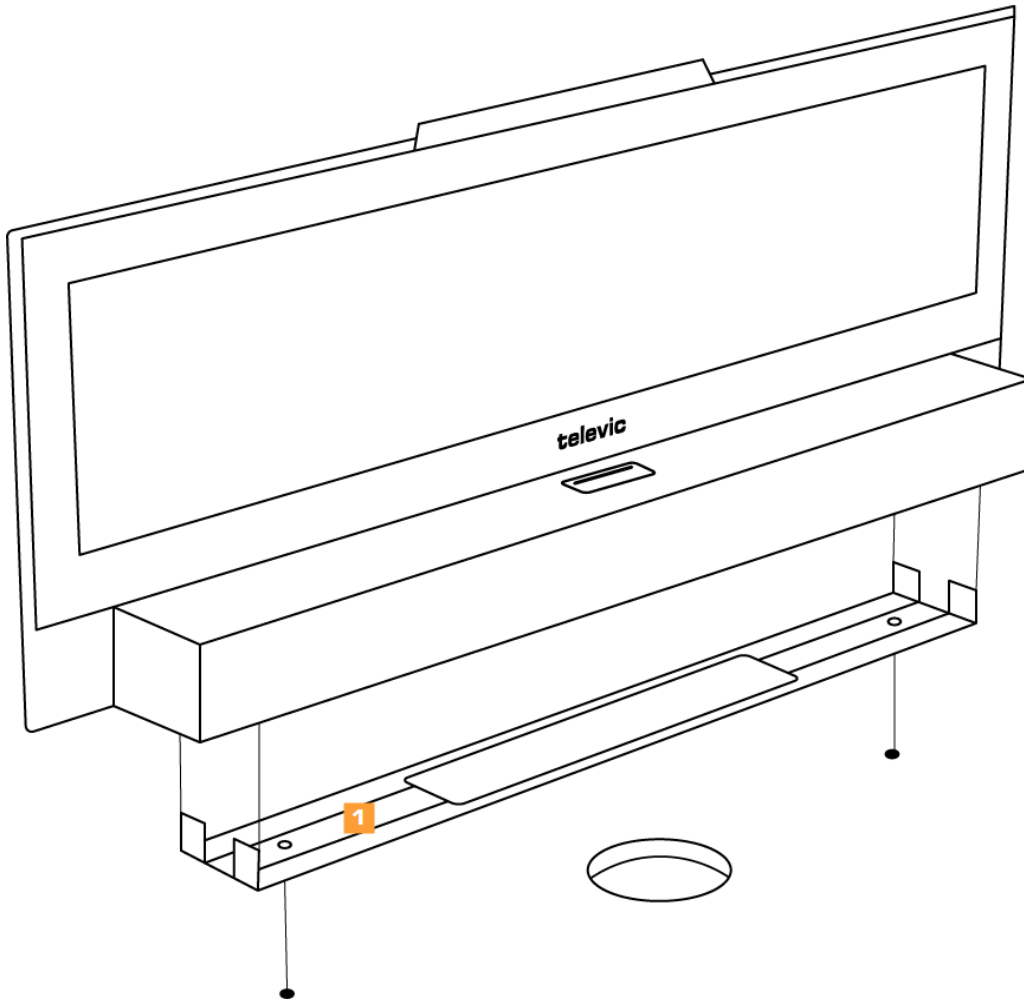


Figure 1-57 How to mount the Plixus for fixed usage

## Mount The Side Panels

Two different types of side panels are provided with the nameplate. Depending on the cabling of the nameplate you should use panel A or B as depicted in the figure below..

To easily switch the position of the nameplate you can place the cables through the opening on either side of the nameplate. In this case use the side panels A as depicted in the figure below. When fixating the side panels beware that the left and right side panel are different

If you use the fixed configuration and place the cables through the bottom opening into the table, use the side panels depicted in B as shown in the figure below.

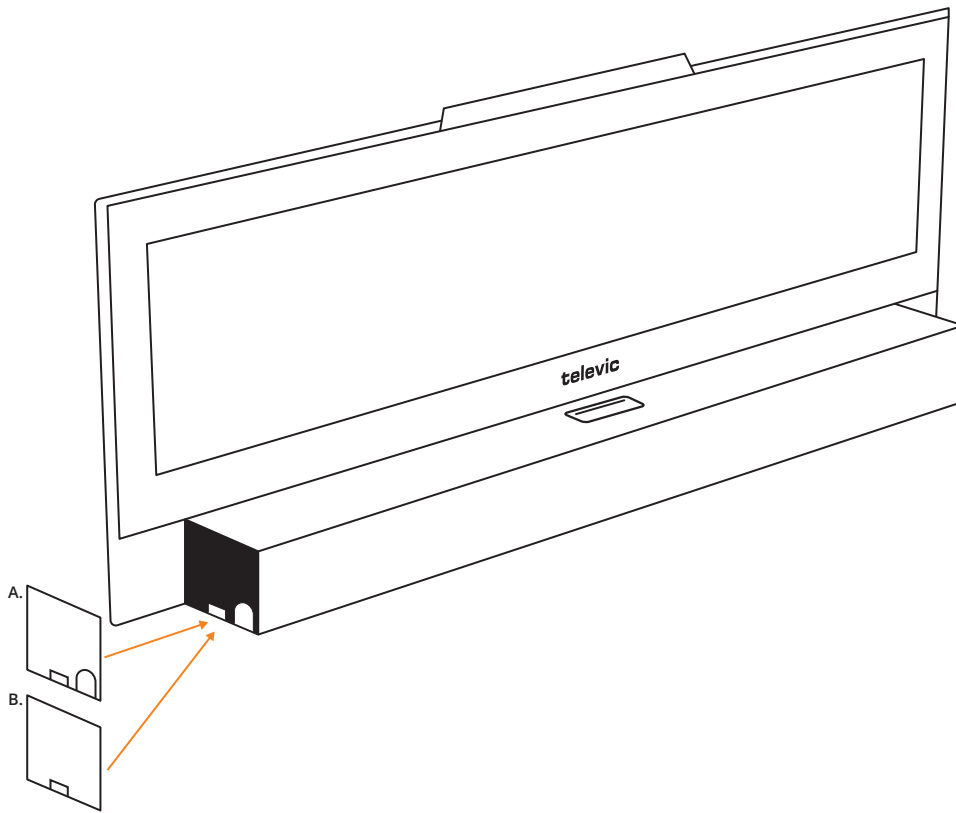


Figure 1-58 How to mount the side panels of the Nameplate depending on the cabling. A. Standalone cabling, B. fixed cabling

## Detach Bottom

To detach the nameplate from the mounting bracket (and bottom plate), use a flat screw driver or something similar. Insert the screw driver into the rectangular opening on the side of the nameplate base and press down.

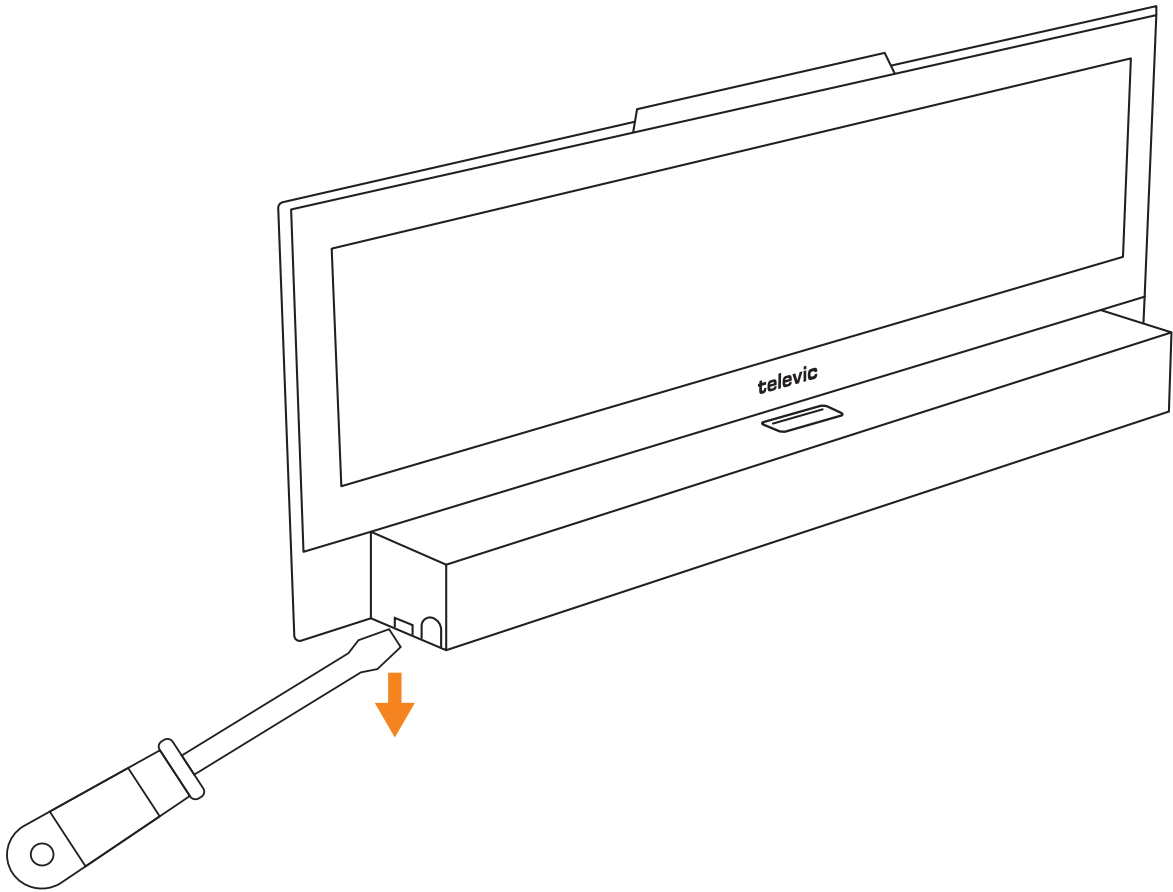


Figure 1-59 How to detach the nameplate from the mounting bracket and bottom plate





# INTRODUCTION

Plixus features two different software components:

- › **Plixus Core:** is a bundle of conference logic that runs on the Plixus system and allows to run the conference system without a dedicated computer, but with the use of a web server.
- › **CoCon:** is the complete software suite for conference management.

## Plixus Core

From CRP 5.1 onwards, the Plixus system provides the possibility to use Plixus Core. Below you can find a list containing all functionality that is available in Plixus Core. This guide will discuss all these features together with how to configure and use them.

- › Initialization of the units, creation of booths
- › Discussion parameters for microphone modes
- › Configuration of different audio settings such as the dynamics processor, auto gain reduction, auxiliary input and output levels
- › Selection of basic audio routing presets (normal audio routing, N-1, external equalizer)
- › Interpretation configuration up to 11 languages and possibility to send language channels to Dante
- › Operator page to control microphones
- › Recording of one or more channels
- › Regional settings such as date and time format
- › Manage network settings
- › Camera protocols
- › API

## Plixus Core Versus CoCon

There are some differences between Plixus Core and the CoCon software. You cannot configure all parameters of each feature in Plixus Core, for this you need a CoCon license. For a detailed description of the difference between the two, see the table below.

	Plixus Core	CoCon 5.2	CoCon 6.0
Start/Stop initialization	Yes	Yes	No
Retrieve initialization	Yes	Yes	No
Creation of synoptics	No	Yes	Yes
Support for multiple synoptics	No	Yes	Yes
Configuration of interpreter booths	Yes	Yes	Yes
Changing seat priority (delegate – chairperson)	Yes	Yes	Yes
Default microphone mode	No default, the last configured mode is used	Yes	Yes
Meeting management	No	Yes	Yes
Delegate management (delegate names, groups)	No	Yes	Yes
Agenda creation	No	Yes	Yes
Voting management	No	Yes	Yes
Speech timers	No	Yes	Yes
Services (uniCOS)	No	Yes	Yes
Messaging (uniCOS)	No	Yes	Yes
Badges and authentication	No	Yes	Yes
Operator control	Yes, limited through web server Operator page	Yes, full Operator control available	Yes
Activation of microphones	Yes	Yes	Yes
All microphone modes supported	Yes	Yes	Yes

	Plixus Core	CoCon 5.2	CoCon 6.0
Meeting statistics	No	Yes	Yes
Import/export of meeting data	No	Yes	Yes
Voting control	No	Yes	Yes
Signage	No	Yes	Yes
Basic interpretation	Yes, up to 11 language configurable from web server in Standalone	Yes	Yes
Advanced interpretation (with all ISO 90107 features)	No	Yes	Yes
Three basic audio configuration (normal, distance conferencing, external equalizer)	Yes, configurable from web server	Yes, included in Plixus Core web server	Yes
Advanced audio configuration	No, but once created with CoCon, selectable from web server	Yes, full audio routing matrix available with Audio application	Yes
Camera protocol	Yes, sent from Plixus engine. Plixus Core website has limited Camera protocol functionality.	Yes, sent from Room Server	Yes

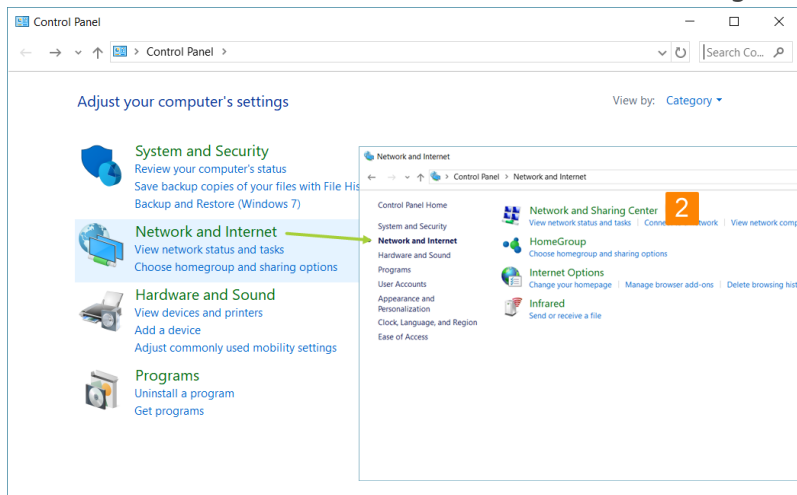
# CONFIGURE IP SETTINGS

Before you start using the Plexus web server you need to configure your local IP settings to be able to access the web server. Follow the procedure below to configure this.

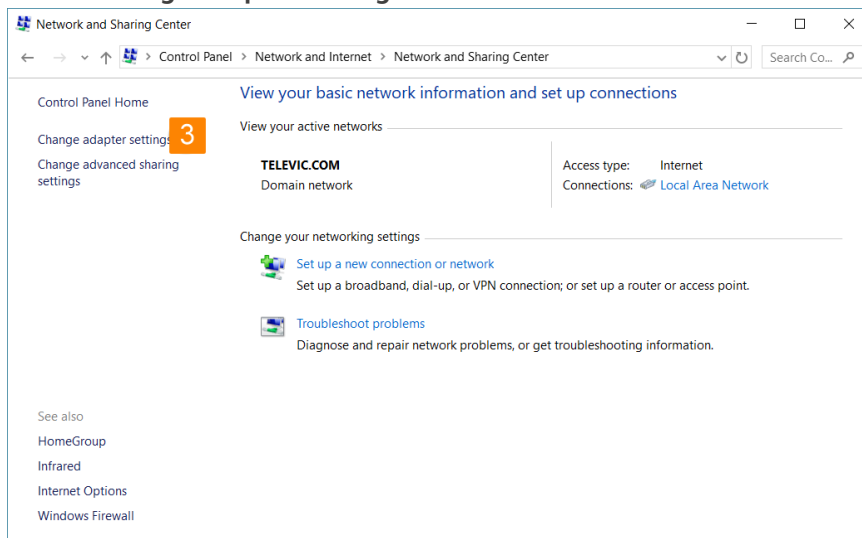
To be able to access the web server your computer needs an IP address and subnet mask that can access the IP address of the engine. The **default IP address** of the engine is **192.168.0.100**, which means the computer should have an IP address that is within the same subnet, like 192.168.0.200. The subnet mask must be the same for all equipment on the network, being 255.255.255.0.

## Change IP Settings In Windows

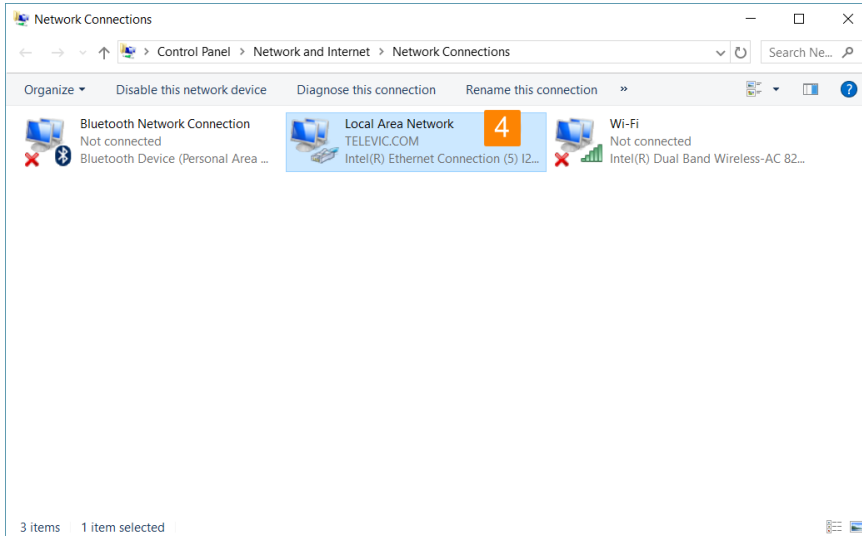
1. Go to **Control panel**.
2. Click **Network and Internet** and then **Network and sharing center**.



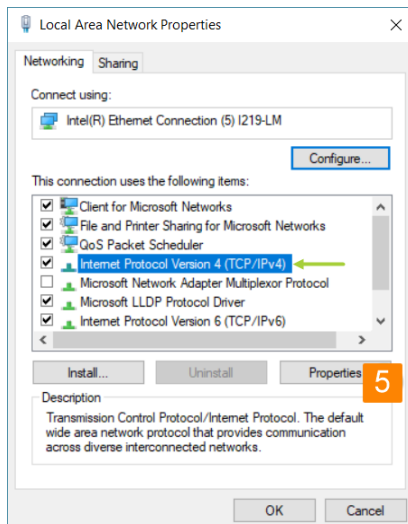
3. Click **Change adapter settings** in the menu on the left.



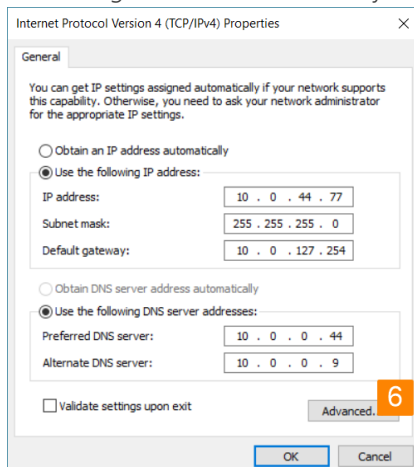
4. Right-click the **Local Area Connection** and select **Properties**.



5. Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.



6. To assign a fixed IP address to your computer, click **Advanced**.



7. Click **Add** in the IP address pane.

8. Enter an IP address in the range of the engine, for example 192.168.0.26. Fill in 255.255.255.0 as subnet mask.

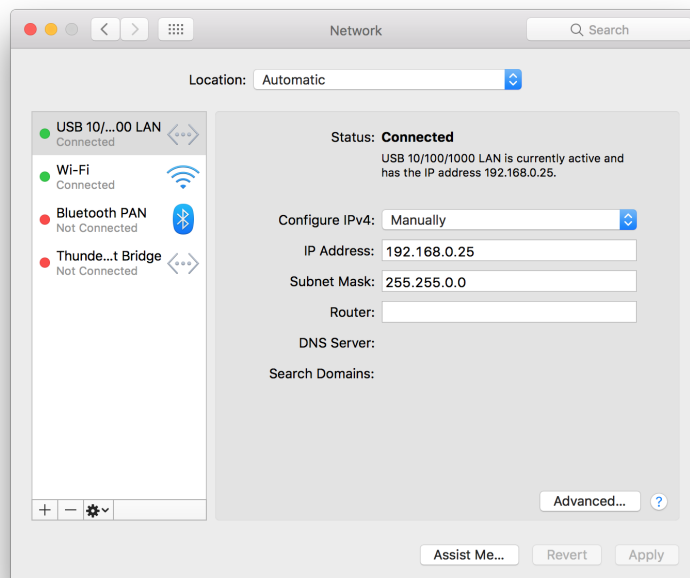
9. Click **OK**. You are now ready to access the engine.

## Change IP Settings In MacOS

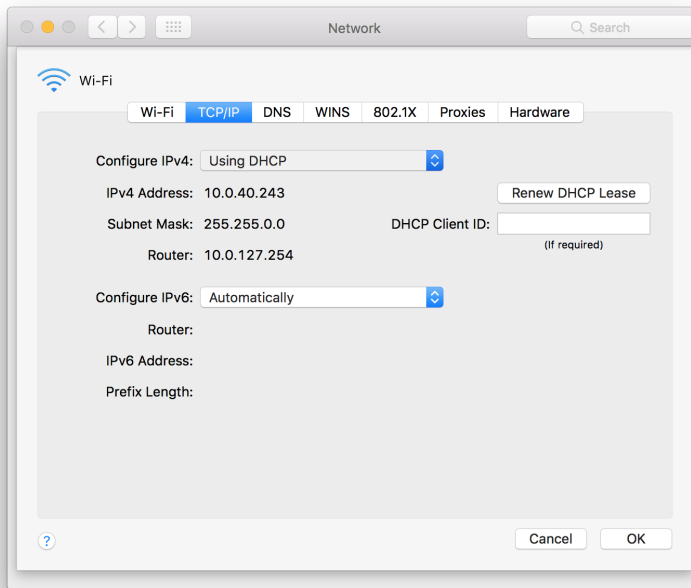
1. Go to the **Apple Menu** and select **System Preferences**.



2. Select **Network** from the menu.

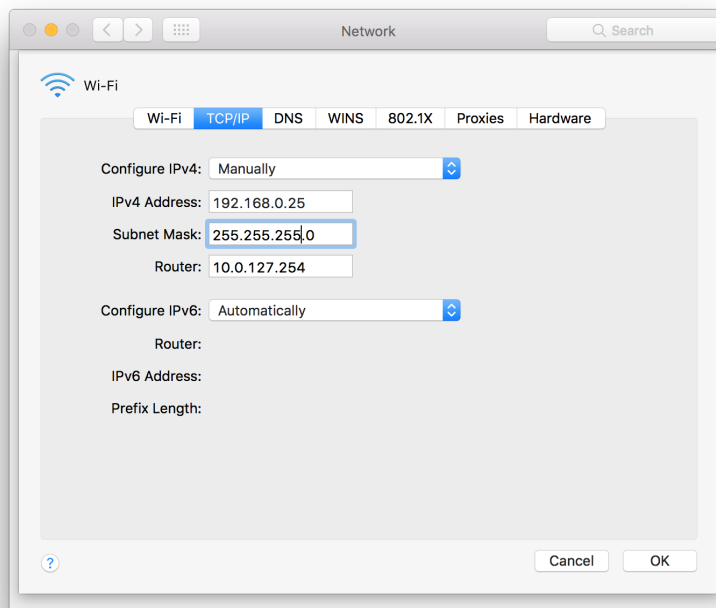


3. Click the **Advanced** button.



4. Select **TCP/IP** in the menu on top.

5. Change **Configure IPv4** to **Manually**.



6. Enter an IP address in the range of the engine, for example 192.168.0.25. Fill in 255.255.255.0 as subnet mask.

7. Click **OK**.




# GETTING STARTED WITH PLIXUS CORE

## Access Plexus Core

To access the web server of the Plexus system, enter the IP address of the Plexus engine in your browser. The default IP address of the Plexus engine is 192.168.0.100 with subnet mask 255.255.255.0.

## Explore Plexus Core

The layout of the web server was designed to be intuitive and easy to use. All pages have a similar layout which eases configuration. The general layout consists out of two parts:

- > **The header element (1):** this part contains the name of the product together with the title of the page. From here you can also access the main menu by clicking the menu icon .
- > **The body element (2):** on this part of the page you can view and configure all settings. The content will change depending on the menu item you select.

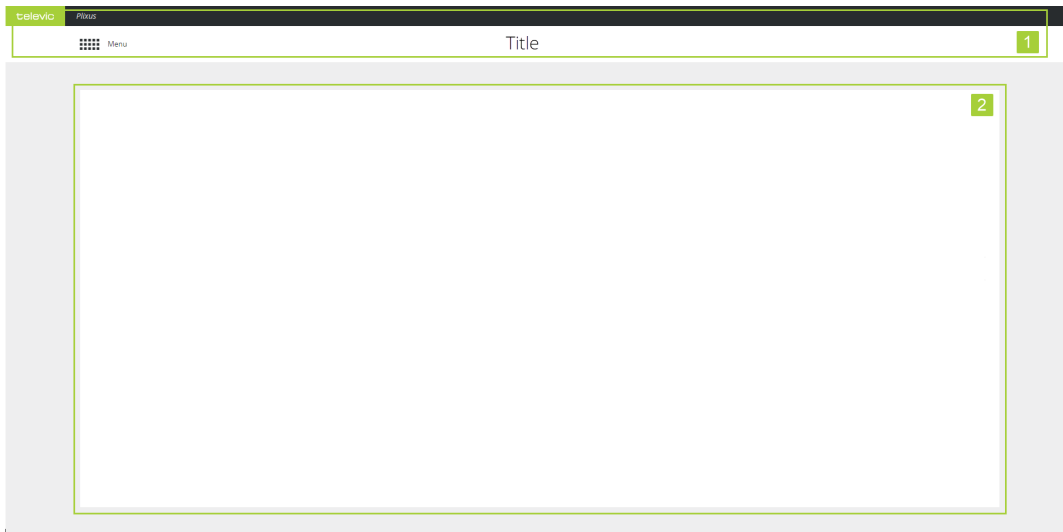



Figure 1-60 General layout of the web server

When you want to configure a certain setting, you simply select the correct sub menu from the main menu . The following sub menus are available:

Icon	Sub menu	Description
	Home	Return to the home screen where you see the most important features and their configuration.
	Initialization	Define and configure units present in the Plixus network.
	Discussion options	Configure discussion options such as microphone to define how to activate a microphone.
	Audio	Configuration of different audio options such as dynamic processing and auto gain reduction.
	Audio routing	Configure the audio routing and the auxiliary input and output levels.
	Interpretation	Configuration of the interpretation channels.
	Operator	Control all microphones in a meeting.
	Recording	Options to record the meeting. (only available on Plixus AE-R)
	Regional settings	Change regional settings.
	Network	Configure network settings and set camera protocol.
	Users	Change user name and password.
	System info	Contains system information such as license information, system logging, (de)activation of Plixus Core and configuration management.
	Update versions	Overview of all firmware and software version together with the option to update to another version.
	Video application	Select the video configuration (only available on Plixus MME)
	Diagnostics	Tools to check the overall status of your system
	Confidea Wireless Coupling	Couple with Confidea G3 or G4

# THE HOME PAGE

This is the default landing page of the web server and it shows general together with crucial information about the current state of your conference system. Click the feature name to go to the dedicated page to configure the setting.

On the left side you can see the following information:

- > General volume
- > Microphone mode
- > Number of active units
- > Number of faulty units
- > Number of connected but uninitialized units



Faulty units, means that there are units missing, that are normally in the initialization list. If this is the case, this is indicated in red. A reason could be that they are not booted correctly or that they are physically disconnected from the Plixus network.

On the right side you see the following items:

- > IP address of the system
- > MAC address of the Plixus engine
- > Connection status with CoCon Room Server
- > Connection Status with Plixus Core



By default it is not possible to disconnect from Plixus Core, however when Plixus Core crashes home page will show **Plixus Core Not connected**. Click Restart to **restart** Plixus Core.

# INITIALIZATION

## Introduction

The Plixus system always works with seats. A seat is a conceptual name for a unit or a group of units which are combined on that seat. By default this is a one-to-one mapping, so every unit has one seat. However, there can be more advanced cases where units are manually combined on a seat. During initialization you can assign units to seats.

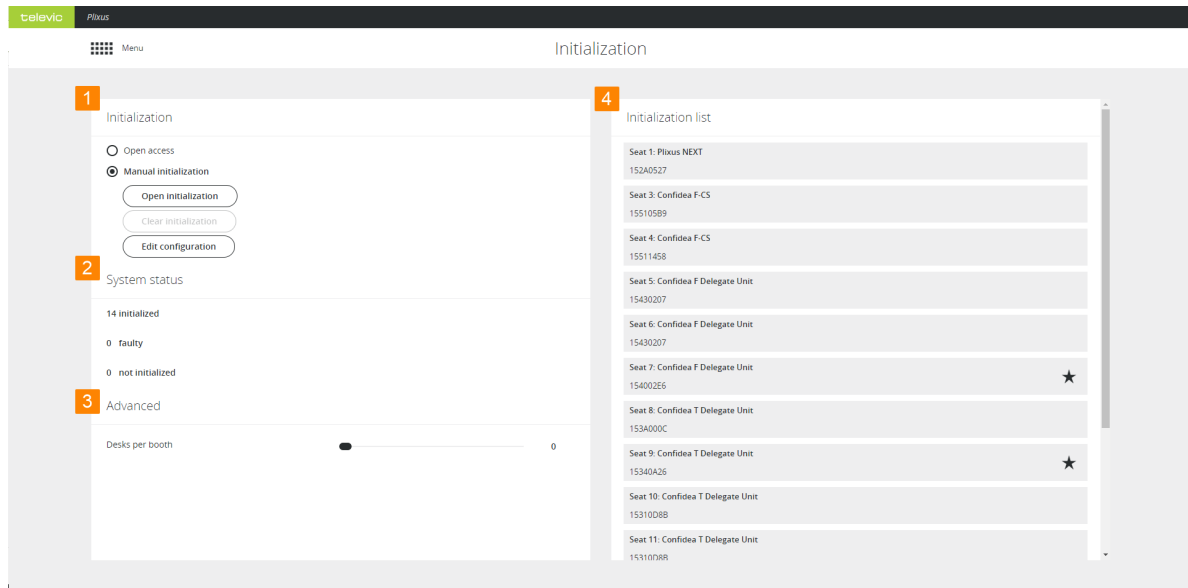


Figure 1-61 Initialization page

1. In **Initialization** on the left side of the page you select the mode of initialization.
2. **System status** shows the status of all units, you can see the amount of **initialized**, **faulty** and **not initialized** units. Faulty units are units that were initialized, but are now missing. Not initialized units are connected, but not yet initialized.
3. In the **Advanced** settings you can define the maximum number of desk per booth (for interpretation).
4. The **Initialization list** on the right side shows all uninitialized units, per unit you can see the following information:
  - a. Seat number: position of the unit in the meeting room
  - b. Unit type
  - c. Chairman capabilities: can unit acts as chairperson, indicated by star icon.

- d. Serial number: of the unit
- e. Booths: all available booths together with the amount of desks per booth and the units.
- f. See if **Intercom** is active

## How To Initialize Units





There are two initialization modes possible: **Open access** and **Manual initialization**.

### OPEN ACCESS

- › This is the default mode. The main purpose of this mode is to provide a quick way to set up and/or test the system.
- › Seats are automatically assigned to the units after startup. Assigning seats is done randomly, based on which unit communicates with the engine first. The same applies for units connected to a Plixus NEXT.
- › Interpreter desks are automatically divided into booths according to the setting **Number of desk per booth**, under **Advanced** settings.
- › Upon restart of the Plixus engine (or Plixus Core) in **Open Access**, the network will be rescanned and seats and desks will be assigned accordingly.
- › In Open Access mode, it is **not possible to edit the configuration** of the units (seat number or delegate/chairperson priority), nor change the configuration of the booths.
- › When changing from **Open access** to **Manual Initialization**, the initialization and seat order is preserved.

### MANUAL INITIALIZATION







- › Use **Manual initialization** when you want to define which unit is assigned to which seat number. This can be important when using camera tracking as well as CoCon seat allocation. Manual initialization allows you to edit the configuration in terms of chairperson / delegate priority and booth configuration after initial configuration.
- › Click **Open initialization** to start the initialization phase. This causes uninitialized microphones to blink red and initialized microphones to blink green. Add units to the initialization list by pressing the microphone button. During manual initialization you can perform the following actions on the units:



- > : click to **swap unit**. When a unit is faulty, it will be greyed out in the web server. Click the icon and enter the serial number of the new unit. Click the checkmark icon  to confirm. Note that you can only replace units with units of the same type.
- > : click to **modify the seat number**. If you do this during the initialization, the next assigned unit number will be the highest unit number + 1.
- > : click to **remove** individual units during initialization. After removal the microphone LED will blink red again.



It might take several seconds before the microphones start to blink when you click **Open initialization**.

You can only manual initialize units with a microphone button. Units without this button (e.g. Confidea channel selector) are automatically assigned to a seat.

- > Click **Stop initialization** to finish and the seats are automatically assigned to the units. Stopping initialization might take a while, up to one moment depending on the number of units. The seat number will automatically map to the unit number and the Lingua ID's to desks in booths according to the setting **Desk per booth**.
- > Click **Edit configuration** to change the following settings
  - > Edit the **label** of the unit or booth: click the edit icon  to change the label of the unit or booth.
  - > **Swap units** : see "Hot swap procedure" for more information.
  - > Change **seat number**: click the icon , specify the seat number and confirm.
  - > **Priority**: click the icon ( (delegate),  (chairperson) or **VIP**) to change priority of the unit. A VIP unit has the same speech priority as a chairperson but without the prior/next and start/stop vote function.
  - > **Booth configuration**: click the booth icon  to change the booth configuration. Create new booths or group desks by changing booth and desk number.

- › **Activate/deactivate intercom:** click the intercom icon  to activate the intercom function of your unit or booth. Click the icon  to deactivate it. Intercom allows the operator or participants with a Lingua ID, multimedia or Confidea units to call each other.



If Intercom is active on a uniCOS unit then the uniCOS interface has an additional tab. On this tab the participant can accept the call or initiate a new call. Lingua ID units have an additional menu item. See "Use Intercom on delegate units" on page 163



Intercom options are only available if you acquired the Intercom license.



Do not reload the page when editing the configuration.

Do not change properties during meetings, because this can disturb your meeting.

You can also use CoCon to configure different settings such as the priority of the unit.

- › Click **Clear initialization** to clear the initialization list, as consequence all units will start to blink red. It is only possible to clear initialization when the initialization is open and units are not faulty. Confirm to finish clearing the initialization.

## Hot Swap Procedure

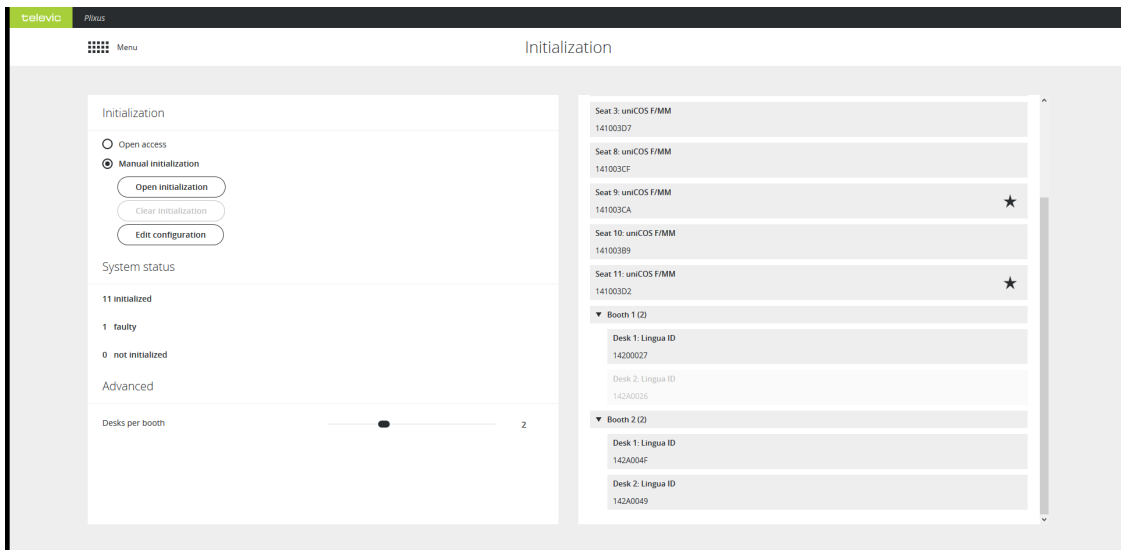
Sometimes you need to swap two or more units in your Plixus setup, for example when your setup contains a faulty unit. In Plixus it is possible to swap these units without the need to reinitialize all units. Follow the procedure described below to swap units:




Please note that you can only swap units of the same type. The new units should have the same software and firmware versions as the unit you are replacing.

1. **Remove the broken unit from the system.** Do not yet install the new unit.

2. Go to **Initialization** in the Main menu. When a unit is defective, this item will be **greyed out** in the initialization list.



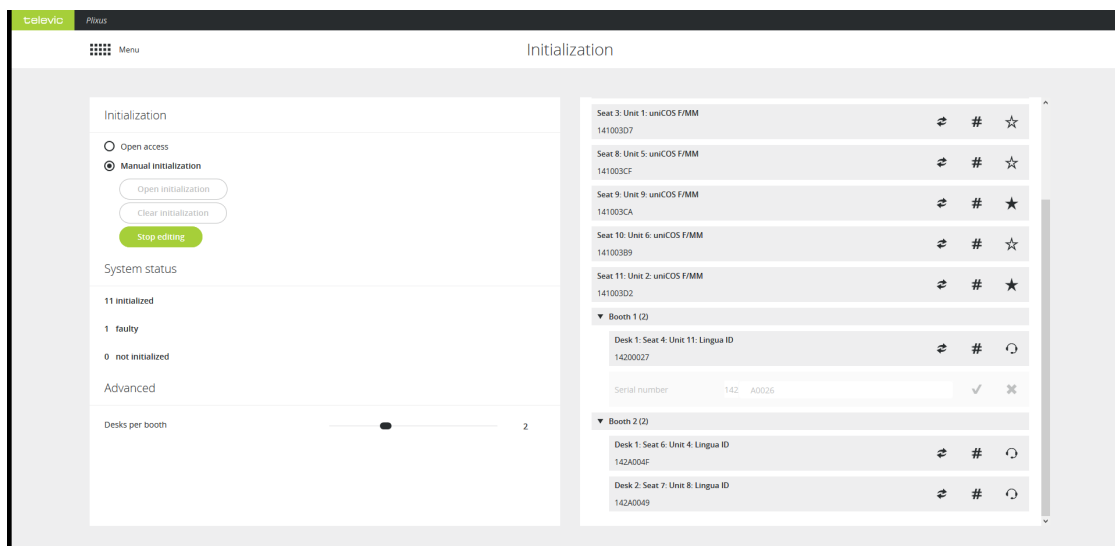
3. Click **Edit configuration**, units are not reinitialized when you select this option.

4. Click the swap icon .

5. Fill in the **serial number** of the unit you want to swap with, the three first numbers are already completed. (you can find the serial number of the unit on the bottom of the device). It is best to check that you are replacing the correct unit by **checking the serial number of the faulty device** with the one present in the Plexus web server.







6. Click  to confirm the change.

7. Now add the new unit to your Plixus network. It doesn't need to be in the same location as the defective unit (branch/loop). Once Plixus detects the new unit, it will no longer be greyed out.




When you replace a uniCOS multimedia unit during a meeting, you need to click Re-send meeting in the CoCon Operator application to set the login screen allow users to login.

## Activate Dante On Seat

Some setups use a wireless microphone to allow people in the audience to ask questions. As chairperson, you want to be able to control this microphone. For this use case you need Dante. In the Plixus web server you can give discussion capabilities to a Dante input. This input then becomes available in the operator view, where you can manage the microphone activity.

### ASSIGN DISCUSSION CAPABILITIES TO DANTE INPUT

To visualize all Dante channels, click the filter icon  next to **Initialization list** and select **Show Dante Channels**. You can recognize Dante **input** channels by their seat number, it has the format: 600XX. Dante **output** channels have the format 610XX.

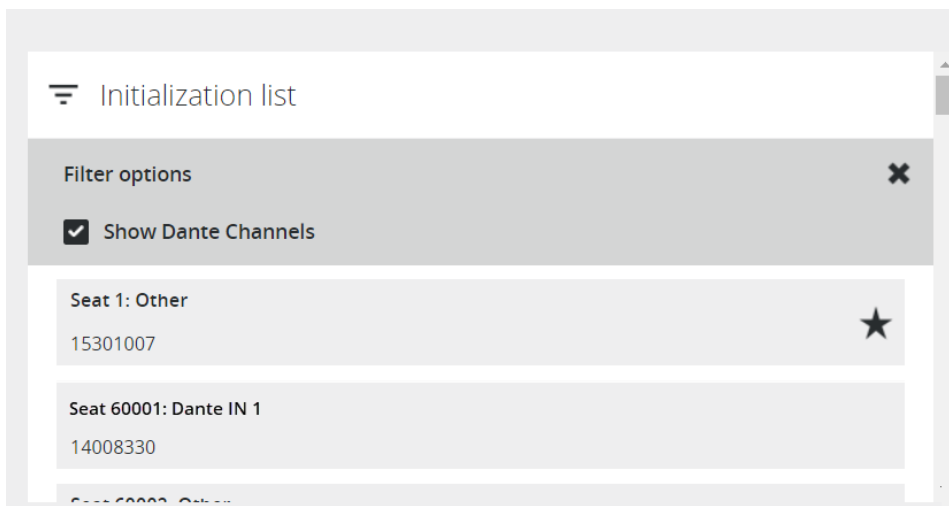




Figure 1-62 How to visualize Dante channels in the Plixus web server

To **assign discussion capabilities** to a Dante channel, click **Edit configuration** and then click the microphone icon  next to the Dante channel. When discussion capabilities are active, the icon changes to . To **remove** the discussion capabilities, click the icon again.

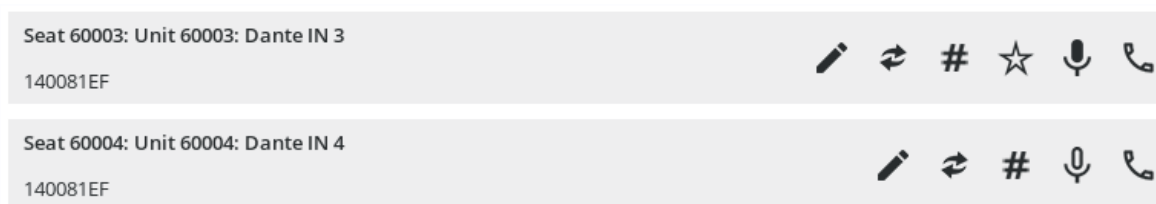


Figure 1-63 Possible actions for Dante channels during Edit configuration on the Initialization page of the web server

If you activate the discussion capabilities of a Dante channel, Plixus treats this seat the same as any other seat with a discussion unit. This means that you can manage the microphone activity using the **Operator** page. In **CoCon** this unit is also visible, there you can drag the unit onto the synoptic in the **Room Configurator** application.

## PUT DANTE INPUT AND OUTPUT ON THE SAME SEAT

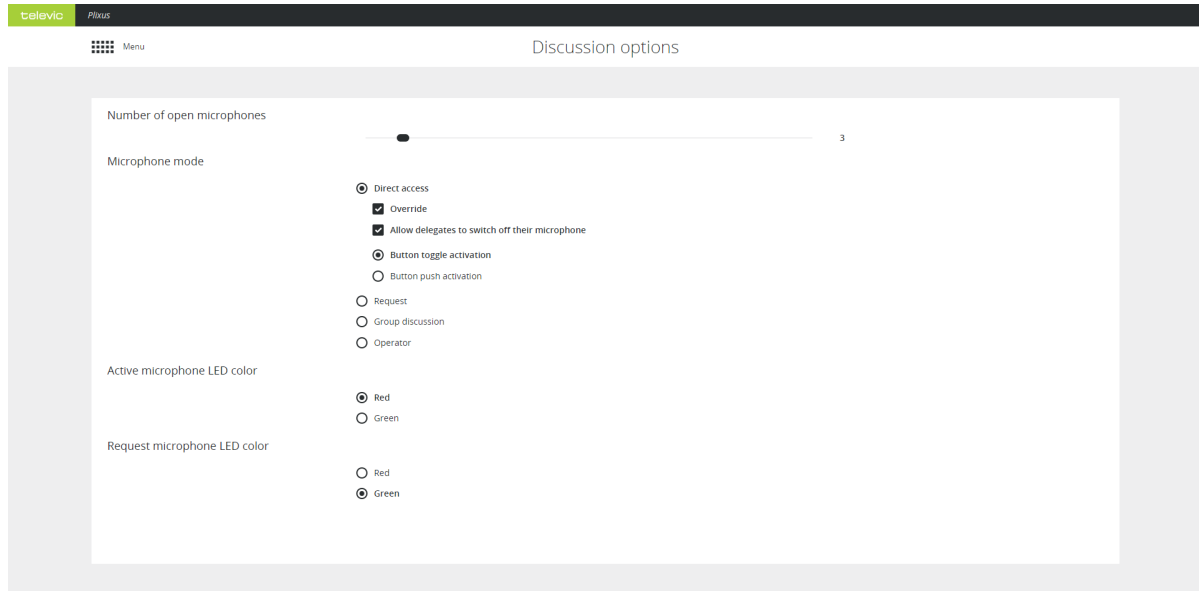
When your conference system contains a third party microphone and speaker, you need to link these on the same seat. To link the Dante input and output, change the seat number of the output to the seat number of the input. The input and output are now treated as one.

## COMBINE DANTE WITH INTERCOM

If you want to initiate an intercom call from a seat with a Dante input to another unit, you need to create an API call. Other units such as the uniCOS and Lingua ID units can use their interface to initiate an intercom call with this seat.

# DISCUSSION OPTIONS

In this chapter you will find all information to configure the most important settings of your meeting. These settings are the number of open microphones, the microphone mode and the color of the microphone LED.



## Number Of Open Microphones

You can set the number of open microphones be between 1 and 25. This does not include the chairperson microphones. You can activate up to eight additional chairperson microphones on top of the 25 delegate microphones.

## Microphone Mode

Different microphone modes are available and depending on the mode, you can configure additional settings.

### DIRECT ACCESS

With direct access delegates can activate their own microphone by pushing the microphone button. The following additional settings are available:

Parameter	Description
<b>Override</b>	<p>&gt; <b>Not-selected:</b> microphone will not become active when the maximum number of open microphones is reached and you press the microphone button. Another active microphone must switch off first. Deactivation is possible by the delegate, via the operator page, through the chairperson using the API or CoCon.</p> <p>&gt; <b>Selected:</b> when the maximum number of open microphones is reached, the first activated microphone will switch off when a delegate presses its microphone button.</p>
<b>Allow delegates to switch off their microphone</b>	With this option you ensure delegates cannot switch off their own microphone. Only the operator or chairperson can do this.
<b>Button toggle activation</b>	Press the microphone button once to activate the microphone.
<b>Button push activation</b>	Keep button pressed to activate to microphone. When you release the button, the microphone will switch off.

## REQUEST

In request mode you do not automatically get the floor when you activate your microphone. First you have to request the floor. The chairperson then assigns the floor to a speaker using the next-in-line button (or using the operator page, CoCon or the API). Which delegate may speak first is defined by the first-in-first-out principle. The chairperson units (or VIP units) can always speak immediately and do not have to request the floor.

For request mode additional settings can be configured:

Parameter	Description
<b>Allow delegates to cancel their request</b>	Select this option to allow user to cancel their request to speak by pressing the microphone button.
<b>Allow delegates to switch off their microphone</b>	Select to allow user to switch off their microphone by pressing the microphone button. If not selected the microphone will only switch off when another events stops the microphone for example by using the operator page.
<b>Enable reply</b>	Select to enable the reply functionality. With this function you can reply to a certain speaker which will put you in different request list that has priority over the default request list. Define which button to use for the reply function (Reply, Prior, Next).

## VOX

Voice activation (VoX) is a mode where the microphone button is not used. The microphone becomes active when it detects sound above a certain threshold. You can configure **Voice activation** in the **Group discussion** mode. The following settings can be configured:

Parameter	Description
Threshold	The system will monitor the ambient sound level and will activate the microphone when it is above the configured threshold value.
Hold time	Determines the number of seconds the microphone stays active after detection of the last sound above threshold.

## GROUP MODE

Group mode is a semi-automatic mode for standalone conferences where less protocol has to be followed and no operator is available. Pressing the microphone button activates the microphone unless the maximum amount of open microphones is reached. In this case the microphone will go into request mode. When another microphone becomes inactive, the first unit in the request list will become active.

This mode has 3 activation types: toggle, push to talk and vox.

Mode	Description
Toggle	Press microphone button once to activate microphone.
Push to talk	Keep microphone button pressed to activate microphone.
Voice activation	Microphone becomes active when it detects sound above a defined threshold. For more information see "VoX" .

## OPERATOR

With the operator mode delegates **cannot activate** their own microphone. Only a command from CoCon, the operator page or the API can activate these delegate microphones. Delegates can deactivate their microphone by pressing the microphone button. **Chairman** can always activate microphones and use the **priority button** if he wants to switch off the delegate microphones.

## Microphone LED

Change the LED color of an active microphone or a microphone in request. By default the LED of an active microphone is red and for a microphone in request green.

# RECORDING

With the Plixus AE-R you have the option to record meetings. You can start recording by pressing the button on the engine or by using Plixus Core. Save the recording on the integrated hard drive or to an external USB device.



Recording is possible on an external USB device with FAT32, NTFS or ext4 format.

## Record Using The Record Button

Press the record button on the front display of the engine to start recording. A LED light next to the button indicates that the engine is recording. Press the button again to stop the recording.

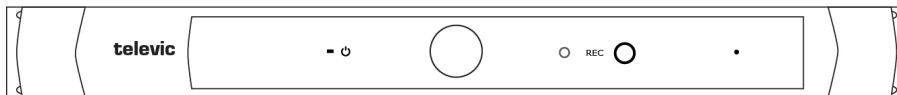


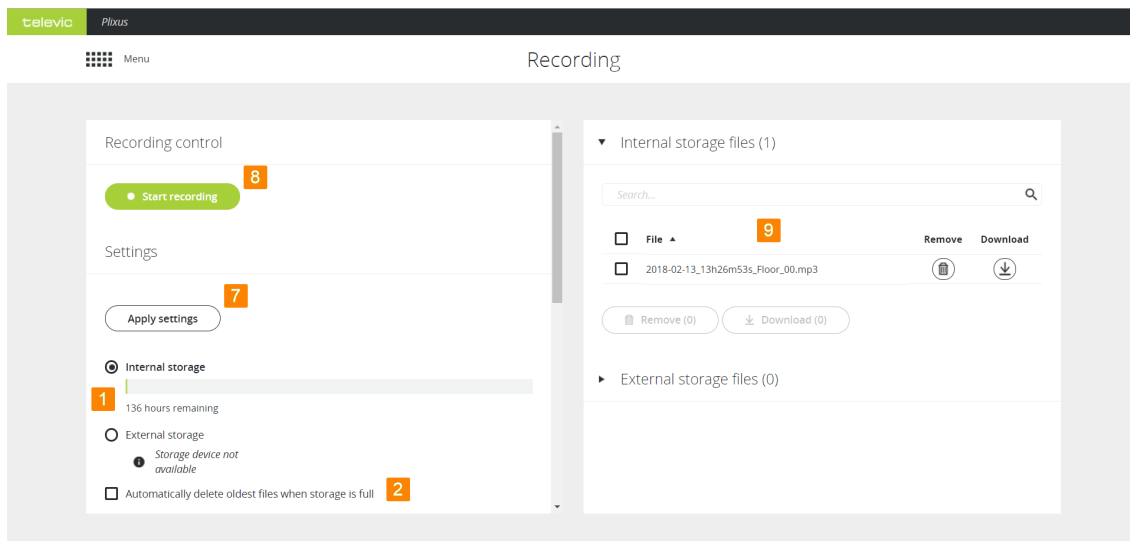
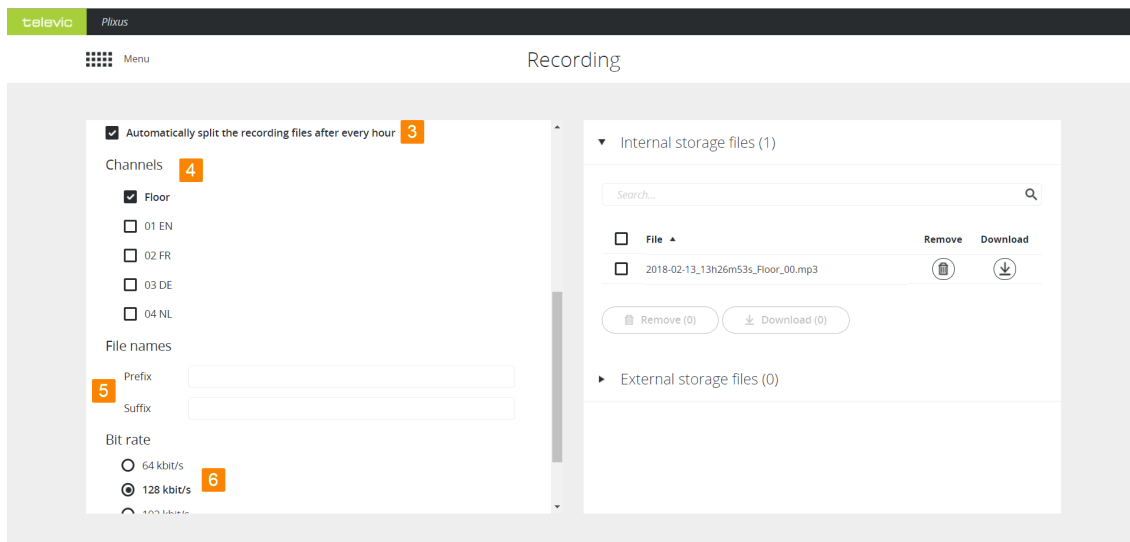


Figure 1-64 Record button on Plixus AE-R engine

## Record Using Plixus Core

To record your conference using Plixus go to the main menu  and select Recording .
















1. Select where to store the recording. Select **Internal storage** to store the recording on the engine locally or select **External storage** to store the files to an external USB device connected to the engine. For the internal storage you can see the remaining disk space, this depends on the audio quality you selected.
2. Select this option to delete the oldest files on the engine or external USB device when there is no more disk space.
3. This option splits up recordings into different files when the recording time is larger than one hour.
4. Select the **channels** you want to record. Per channel a different recording will be created.
5. Define a **prefix** and/or **suffix** to automatically add to your recording file name. By default the date and time are already added to the file name. The filename has the following format: **PREFIX\_DATE(YYYY-MM-DD)\_TIME\_CHANNELNAME\_SUFFIX\_NumberOfRecording.mp3**. The number at the end of the name increments when the recording consists of multiple files.
6. Select the quality of the recording. By default 128 kbit/s is selected which renders medium quality audio files.
7. Click **Apply settings** to save the configuration.
8. Click **Start recording** to start and click **Stop recording** to finish your recording.



# Manage Recorded Files

▼ Internal storage files (5) **1**



Search... **2** 

<input type="checkbox"/>	File ▲	Remove	Download
<b>4</b> <input type="checkbox"/>	2018-02-13_13h26m53s_Floor_00.mp3	 <b>3</b>	
<input type="checkbox"/>	TCS_2018-02-13_14h37m28s_Floor_00.mp3		
<input type="checkbox"/>	TCS_2018-02-13_14h37m56s_Floor_2018_00.mp3		
<input type="checkbox"/>	TCS_2018-02-14_11h36m12s_01-EN_2018_00.mp3		
<input type="checkbox"/>	TCS_2018-02-14_11h36m12s_Floor_2018_00.mp3		

**5**

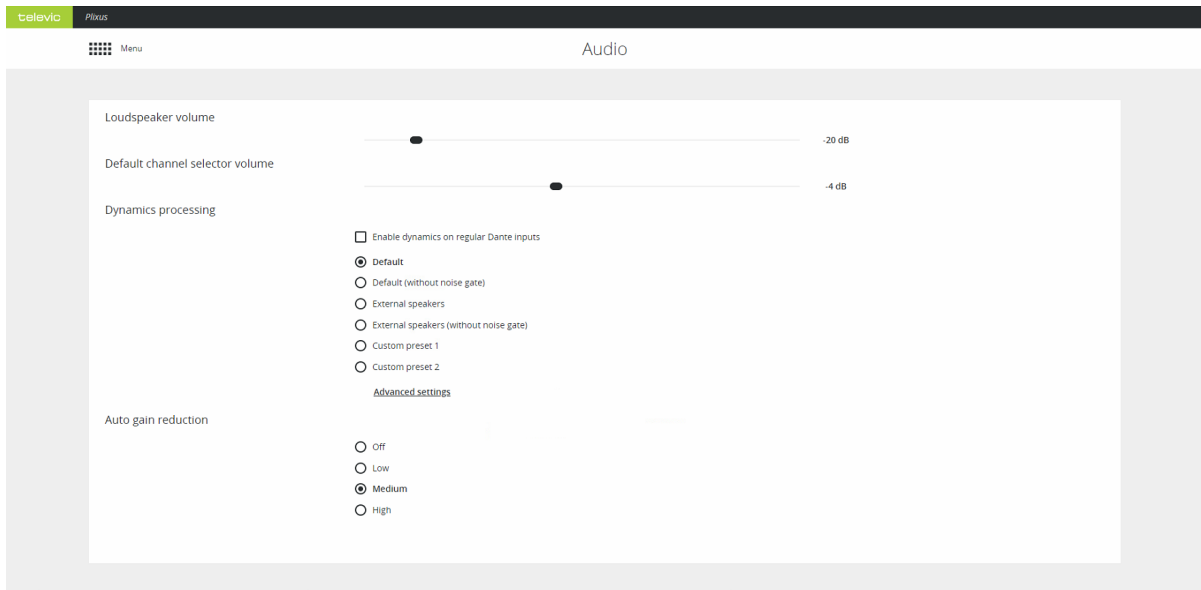
▶ External storage files (0)

Figure 1-65 How do download and remove your recorded files

1. Go to the location where your files were recorded: on the engine itself or on an external USB device.
2. You can search for specific files using the **Search** bar.
3. Download  or remove  single files using the buttons next to the file.
4. Select multiple files using the check boxes next to the file names.
5. Download or remove the selected file by clicking on the **Download** or **Remove** button.

# AUDIO SETTINGS

On the Audio page you can configure all general audio settings for the Plixus system.



## General Volume

This sets the volume for the loudspeakers in the room. The value can range from -96dB to +6dB. You can also change the volume by turning the control dial of the MME or volume dial of the AE-R.

## Dynamics Processing

The dynamics processor settings are global settings that are applied to every microphone unit individually. These settings determine the dynamic range of the audio input.

### DYNAMICS ON DANTE INPUTS

In some cases, dynamics settings might be needed for Dante on an external signal (wireless microphones, lecture, ambience, etc.). Check this box to **enable dynamics on regular Dante inputs**.

### DEFAULT PRESETS

There are four default presets available for the user, for a detailed description of these presets see the table below. Click **Advanced settings** to see these presets and edit them. However, you cannot overwrite predefined options, you can only save changes as Custom preset 1 or 2.

Preset	Description
Default	This preset has been optimized for medium-size conference rooms.
Default (without noise gate)	Removes the noise gate, use when the noise in the room is limited.
External speakers	Shifts the knee-point of the compressor stage to a higher input value resulting in less chance of feedback when external speakers are used.
External speakers (without noise gate)	Same settings as external speakers, but without the noise gate.

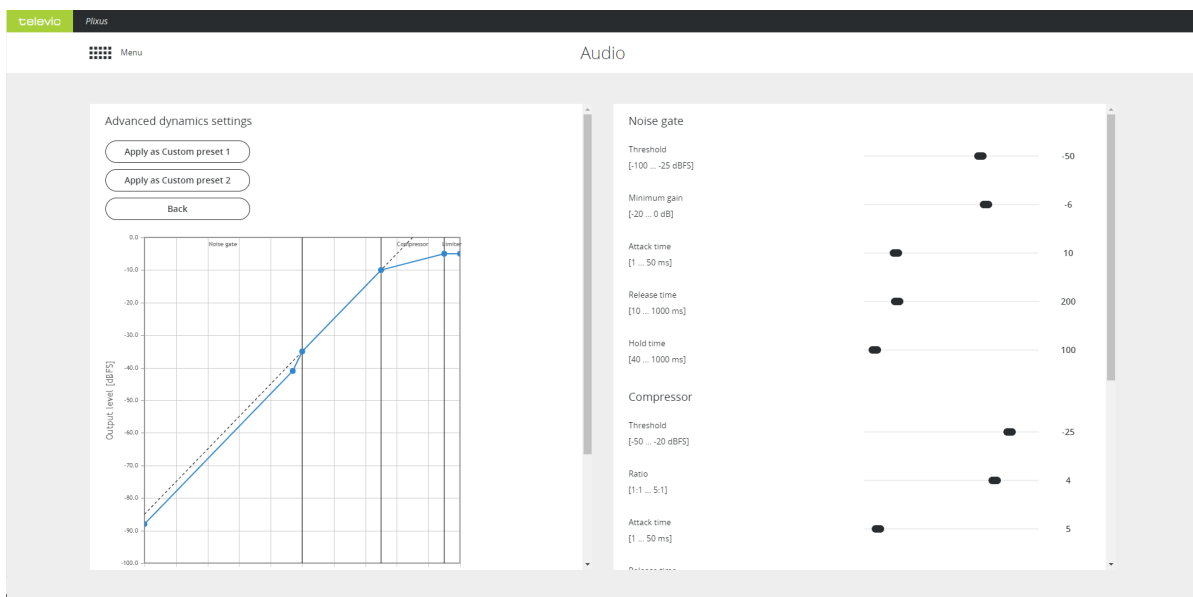
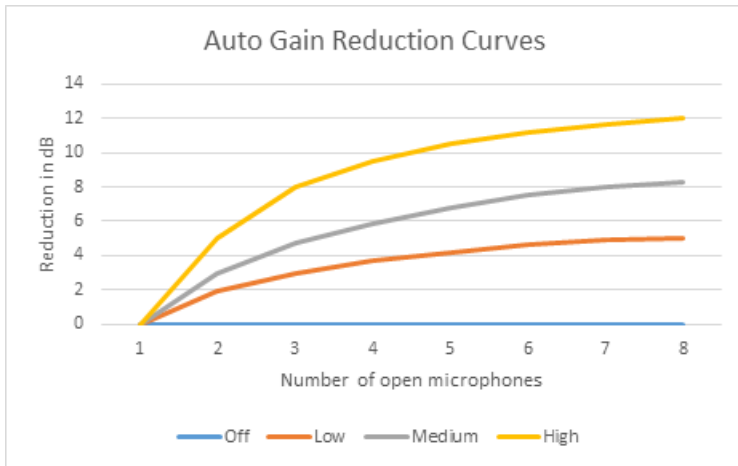


Figure 1-66 Figure 3 13 - Audio - Advanced dynamics settings

## Auto Gain Reduction

Auto gain reduction reduces the amount of gain in signal in function of the amount of open microphones. As the number of open microphones causes the noise to go up, a gain reduction can increase the intelligibility. There are four presets available with different gain curves:



In rooms where the acoustics are very good, the auto gain reduction may be turned off. In smaller rooms or rooms where external speakers are quite close to certain microphones, it can be challenging to have enough intelligibility everywhere without feedback. Therefore a medium or high setting may be required.

# AUDIO ROUTING

With audio routing you can control all routing configurations and the auxiliary levels. You can configure the following settings:

- Audio routing configuration
- Auxiliary input levels
- Auxiliary output levels and selection of the output channel
- Automatically route interpretation channels to Dante

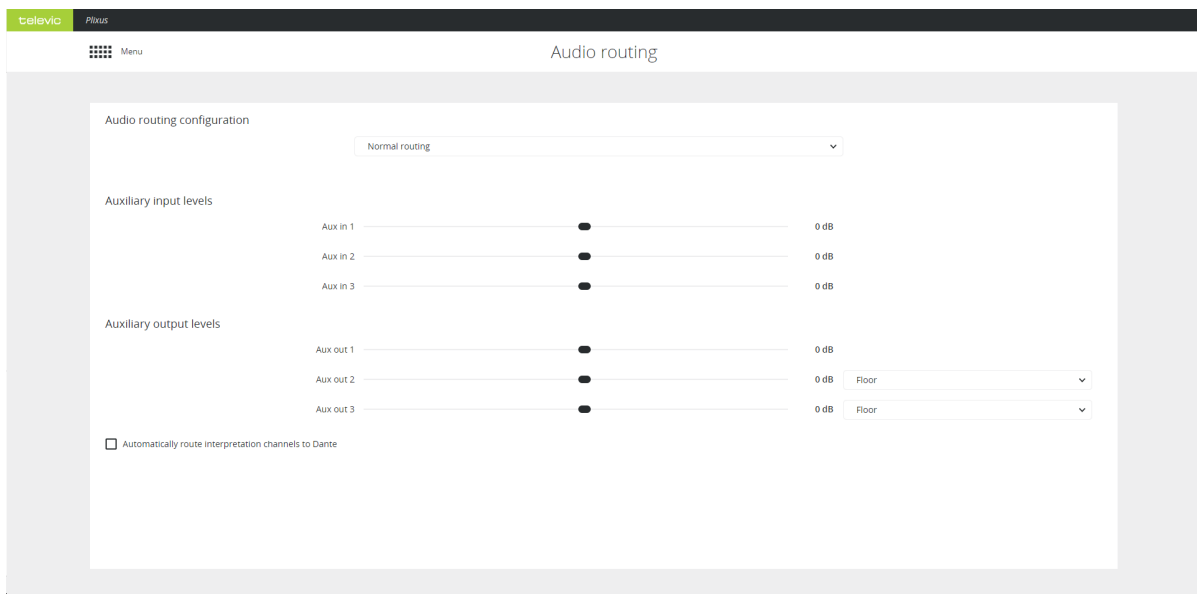


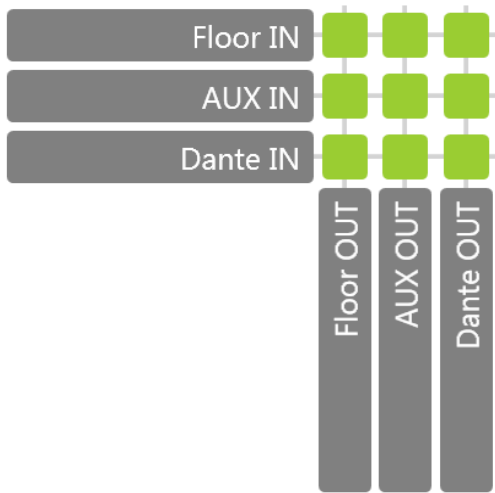
Figure 1-67 Audio routing page

## Audio Routing Configuration

By default there are three preconfigured basic routing options. They are explained here with the picture of the CoCon routing matrix:

### NORMAL ROUTING

No additional audio routing is done.



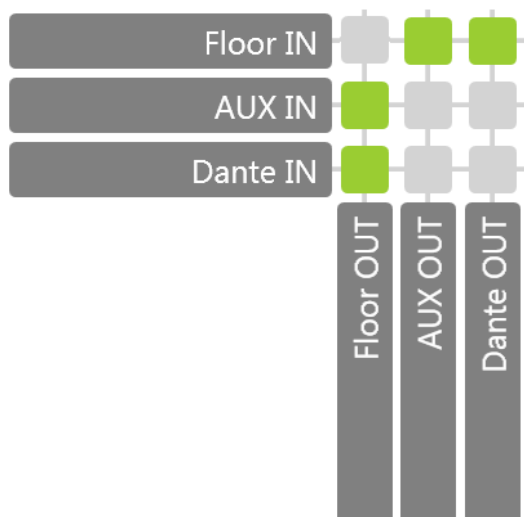
### DISTANCE CONFERENCING

This adds an external signal, using AUX IN, to the local floor signal and sends the local floor signal, using AUX OUT, to a remote party, for example sitting in a different room.



### EXTERNAL EQUALIZER

This option allows you to add an external signal processing equipment or a mixing board.



## PRESETS FROM COCON AUDIO APPLICATION

You can use the CoCon Audio application to create additional audio routing configurations. After creation these are sent to and saved on the Plixus engine. These are then accessible from the web server, even when CoCon is not running. In contrast to the predefined configurations you can still edit these configurations.

## Auxiliary Levels

Auxiliary input levels and output levels are by default referenced on 0 dB. This means there is no amplification or gain reduction. You can adjust the levels manually by using the scroll bar.

## Additional Options

When a predefined audio configuration is selected and you use the web server for the interpreter configuration, there two additional functions are available.

- › You can assign an outgoing language channel to Aux 2 and 3. In the drop-down box select the desired outgoing channel. This is only possible when the languages are configured in the web server.
- › All language channels that you configure in the web server can be automatically routed to Dante when you select the checkbox **Automatically route interpretation channels to Dante**.

This means the following for the Dante channels: The floor is always routed to channel number 1. From then on, with the option activated, the other x language channels follow on channel 2 until x+1

# INTERPRETATION

On the Interpretation page you configure the languages needed for the meeting. You can add up to eleven channels.

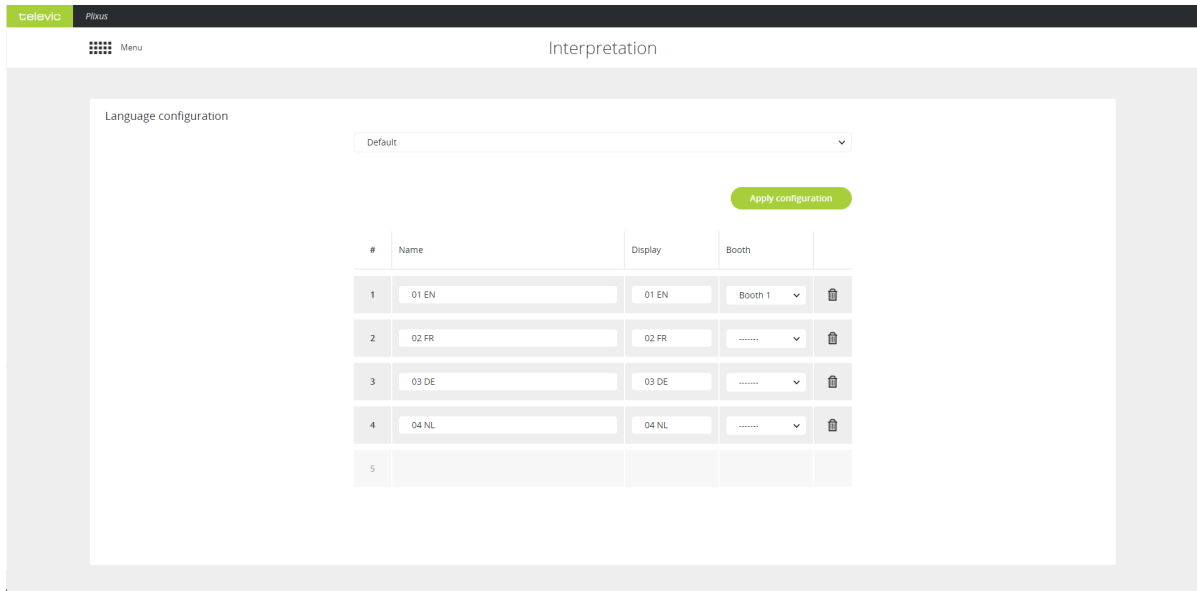



Figure 1-68 Interpretation page

## Add New Language

To add a language configuration, click the bottom empty field in the table in the Column Name. You can define the following parameters:

Parameter	Description
Name	Name the language, not used for display but is used for the API output.
Display	Text to display on relays, channels and channel selectors. Limited to seven characters.
Booth	Select one of the initialized booths from the drop down box. The value "-----" represents a virtual booth. This means that you can use the language by selecting it on B/C channels on the Lingua ID.
	Remove the configured language.

Click **Apply configuration** to activate it.



You can add a maximum of 63 language channels.



## Add Interpretation Configuration From CoCon

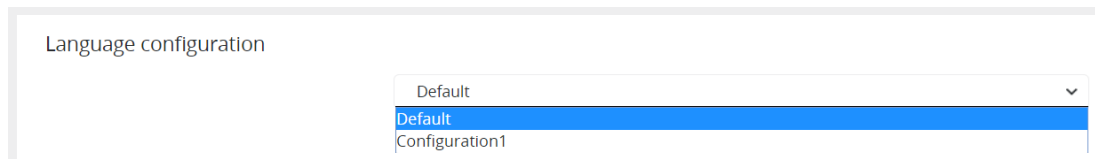



Figure 1-69 How to add language configurations created in CoCon

You can also configure languages in the CoCon Interpretation application. You can find these configurations in the drop down list on top of the page. Select the configuration and click **Apply configuration** to use it. When you open a different configuration, the default configuration will be cleared.

# VIDEO

On the Video page you can select the which video configuration to use in your setup. To access the Video page, click the Video icon  in the main menu. The configurations available originate from CoCon or the API. Select one of the configurations from the drop-down list to activate it.

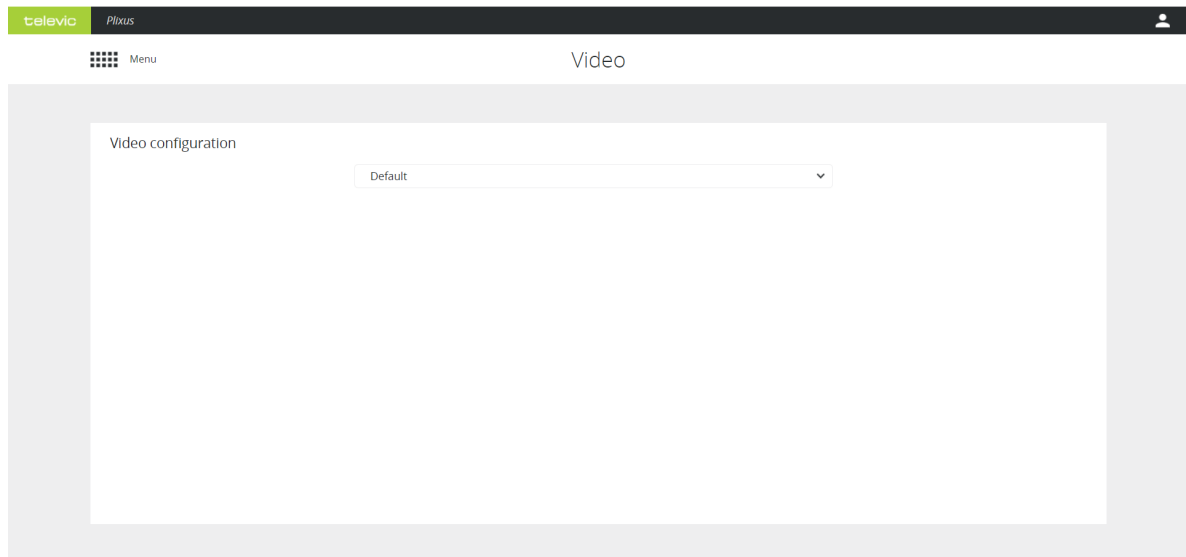


Figure 1-70 *The Video page*

# OPERATOR

On the **Operator** page you can control the microphones in the meeting and see how is speaking or requesting to speak. The Operator page consists out of two parts:

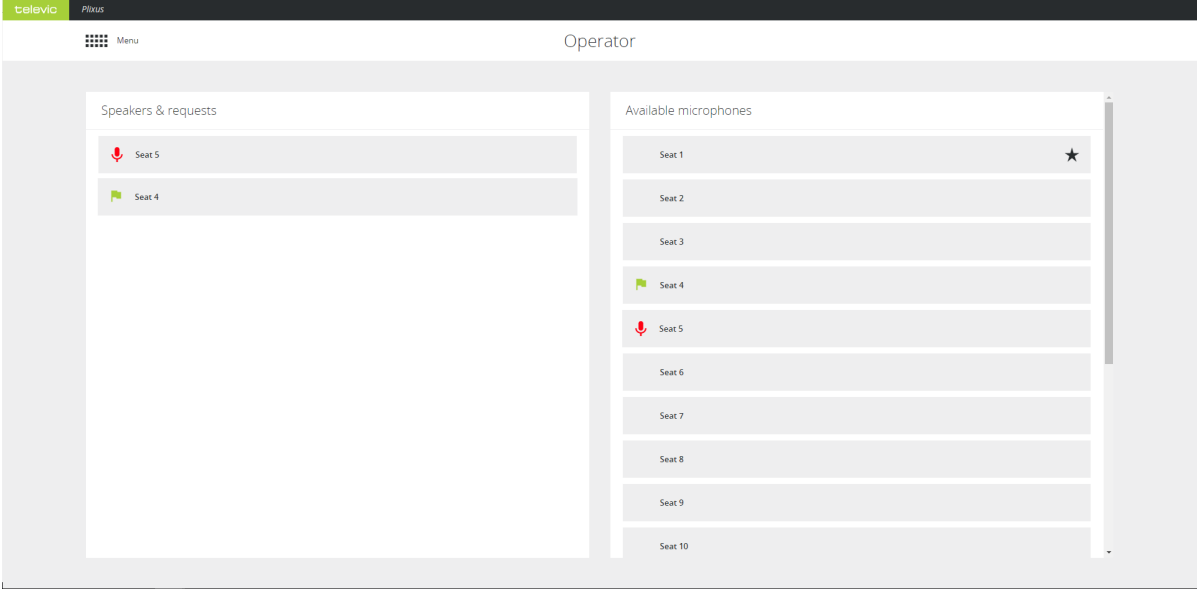





Figure 1-71 The Operator page

List	Description
Speakers & request	Shows all active microphones  , all requests  (only possible with Request microphone mode) and replies  (if configured). Click on an active microphone to switch it off. Click on a microphone in request or reply to turn it on.
Available microphones	This list shows all microphones, sorted on seat number, with an indication of the chairperson priority and the active or request microphones. Clicking on a microphone will change the status from either to active or switch off the microphone.

# REGIONAL SETTINGS

Go to the **Regional settings** page to change the date and time format.

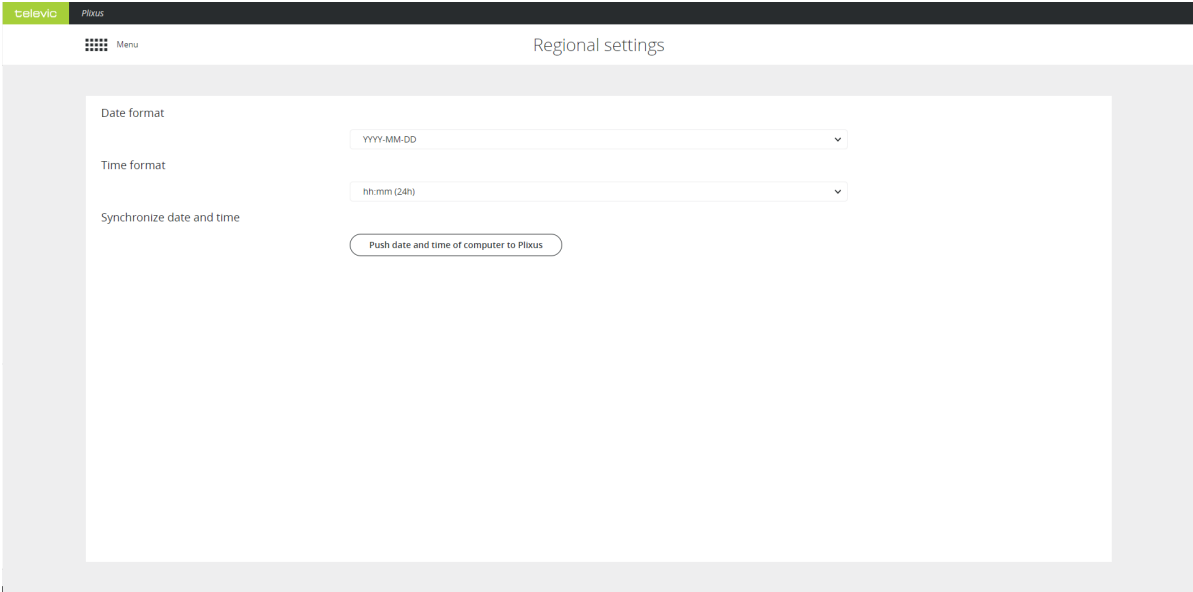


Figure 1-72 The Regional settings page

Click **Push date and time of computer to Plexus** to synchronize to time of your Plexus system with that of your computer.

# NETWORK SETTINGS

On this page you can adjust the network settings of the Plexus engine and configure the camera protocol which to sent from the Plexus engine to the camera tracking system. Here you are also able to enable the API.

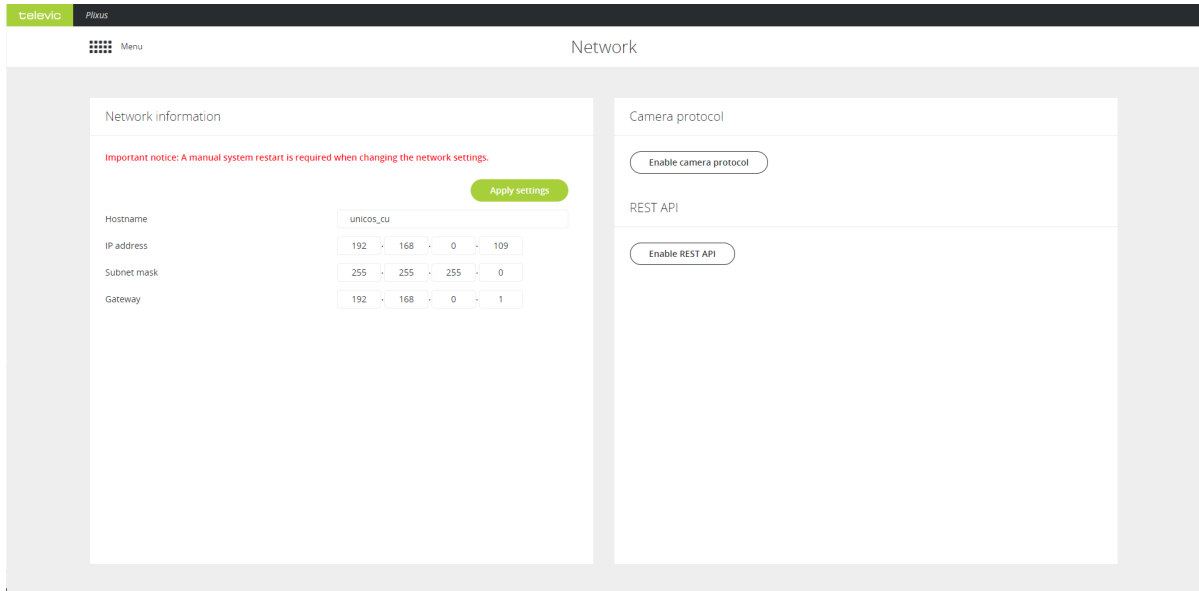


Figure 1-73 Network settings page

## Network Information

You can configure the following network parameters:

Parameter	Description
Hostname	Is the name of the Plexus engine.
IP address	The IP address to access the engine, default value is <b>192.168.0.100</b> . When you change the IP address, you need to restart the engine to complete the action.
Subnet mask	Default subnet is 255.255.0.0
Gateway	The access point to another network.

## Communication Ports

The Plexus Central Unit allows a lot of different connections, using different protocols served by different applications.

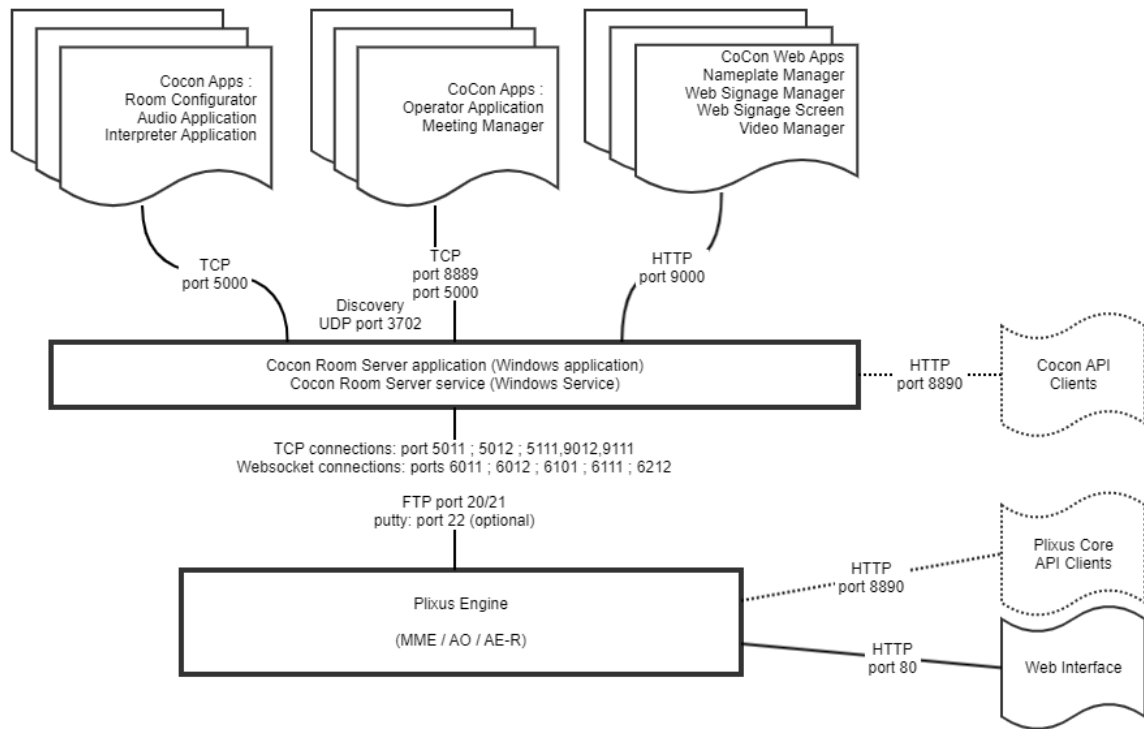


Figure 1-74 Network ports diagram

## PORT STRUCTURE

The ports that are used for these connections are structured as follows:

Port	Description
5000 - 5999	TCP communication
6000 - 6999	WebSocket communication, the first digit of the port is a 6

Port	Description
9000 - 9999	Swagger API communication: <ul style="list-style-type: none"> <li>&gt; If second digit is a 0: communication to the CU application</li> <li>&gt; If second digit is a 1: communication to the ERS</li> <li>&gt; If second digit is a 2: communication to the ECS</li> <li>&gt; If second digit is a 3: communication to the CAM</li> <li>&gt; If third digit is a 0: use of SSL (secured connection)</li> <li>&gt; If third digit is 1: plain connection</li> <li>&gt; If last digit is 1: room connection</li> <li>&gt; If last digit is 2: configuration connection</li> </ul>

## ASSIGNED PORTS

The following ports are currently assigned:

Port	Description
3702 (UDP)	WS discovery (broadcast server to all clients)
5000 (TCP)	Core Cocon applications
5011	Room connection to the Central Unit software
5012 (TCP)	Configuration connection to the Central Unit software
5111 (TCP)	Room connection to Embedded Room Server
6011	WebSocket Room connection to the Central Unit software
6012	WebSocket configuration connection to the Central Unit software
6101	WebSocket (secured) connection to the Embedded Room Server
6111	WebSocket connection to the Embedded Room Server
6212	WebSocket connection to the Embedded Configuration Server
6312	WebSocket connection to the Camera Protocol software
8300 (UDP)	Server connection from the Camera Protocol software
8889 (TCP)	Legacy Cocon applications

Port	Description
8890 (TCP)	REST connection to Embedded Room Server
9000 (HTTP)	Web applications (nameplate , signage, etc.)
9012	Swagger REST API Configuration connection to the Central Unit software
9111	Swagger REST API Room connection to the Embedded Room Server
20/21 (FTP)	Connection from the roomserver to the Central Unit software
22	Putty (optional)
80 (HTTP)	Website

## Camera Protocol

Camera protocol is disabled by default. When you enable the camera protocol you can configure the following parameters:

Parameter	Description
Camera protocol	Select the protocol you want to use. Two protocols are available: TLVCAM 1 and TLVCAM 2. These are the most commonly used camera protocols that are also provided with CoCon. For more information on camera protocols see the appendix.
Network protocol	Both TCP/IP and UDP are provided.
Port	This is the port on the client where the camera protocol is either sent to (UDP) or where the third party client has to listen to on the Plixus engine (TCP)
IP address	When you select UDP you need to specify the IP address of the destination (third-party).

### COMMANDS FOR TLVCAM1 PROTOCOL

All commands sent for this protocol start with a '%' sign. The last character is a character that states the end of the transmission. Just before the end of transmission character, there are four characters within the command sent to the camera control which account for the CRC checksum. The CRC checksum is in uppercase hexadecimal form while all other numbers are in decimal form.

The protocol is described as follows: **STX** '%' data **CRC** **ETX** with:





- › All active microphones are deactivated simultaneously.

{STX}{'V'}{0000}{CRC (4)}{ETX}

## EXAMPLES

- › If the president microphone is activated, and the president microphone has the number '0001' then the following message is sent: %P00010111
- › When the president microphone is deactivated, then the following message is sent: %p00010131
- › If a delegate microphone is activated, and that delegate microphone has the number '0003' then the following message is sent: %M00030110
- › When the delegate microphone is deactivated, then the following message is sent: %m00030130
- › Suppose now that the delegate microphone with number '0003' is active. On a synchronization check the synchronization message will look like this: %S00030116
- › Suppose now that the delegate microphones with number '0002' and '0004' are also active. On a synchronization check the synchronization message will look like this: %000300020004029C
- › When no microphones are active, then the following synchronization will be received: %S00000113
- › When the camera control system should reset itself to its start position, then the following message will be received: %R0052
- › When all microphones are deactivated simultaneously, then the following message is received: %V00000116

## COMMANDS FOR TLVCAM2 PROTOCOL (PHILIPS)

All commands sent by this protocol **start** with a '\$' sign or '&' and commands are **terminated** with a **CR (0xd) and LF(0xa)**.

- › The microphone of a delegate is activated: \$1{Microphone number (4)}<CR><LF>
- › The microphone of a delegate is deactivated: \$2{Microphone number (4)}<CR><LF>
- › All active microphones are deactivated and the camera control should reset itself to a neutral starting position: &30000<CR><LF>
- › All active microphones are deactivated simultaneously: &30000<CR><LF>

## EXAMPLES

- › If the president microphone is activated, and the president microphone has the number '0001' then the following message is sent: \$10001<CR><LF>
- › When the president microphone is deactivated, then the following message is sent: \$20001<CR><LF>
- › If a delegate microphone is activated, and that delegate microphone has the number '0003' then the following message is sent: \$10003<CR><LF>.
- › When the delegate microphone is deactivated, then the following message is sent: \$20003<CR><LF>
- › When the camera control system should reset itself to its start position, then the following message will be received: &30000<CR><LF>
- › When all microphones are deactivated simultaneously, then the following message is received: &30000<CR><LF>

## REST API

The Plixus Core API provides a subset of commands that are available on the CoCon API. The Plixus Core API has the same communication protocol and command structure as the CoCon API which allows third-party programmers to simply change the IP address from the CoCon Room Server PC to the Plixus Engine. By default the API is disabled.

Default TCP port for API connection is port 8890



The following TCP ports are reserved for the Plixus system, do **NOT** use for camera control: 5011, 5012, 5111, 6011, 6012, 6101, 6111, 6212, 6312 and 8890.

# USERS

On the **Users** page, you can enable user login. Click on **Enable login system** to activate this option.

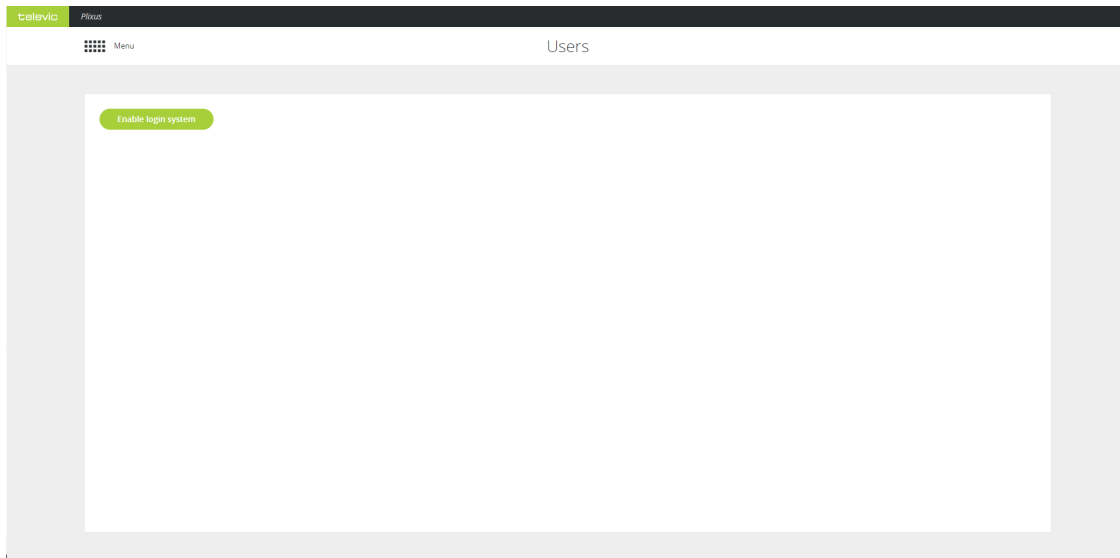


Figure 1-75 Users page: Enable login system

Three types of users then become available: **Administrator**, **Operator** and **Custom**.

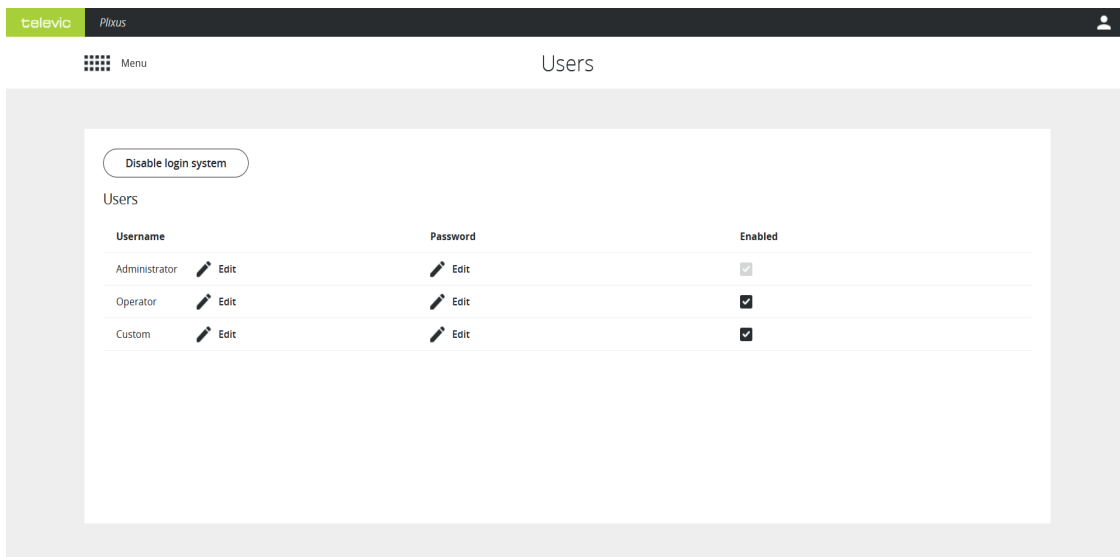



Figure 1-76 Users page: types of users

For each user, you can edit the name and password: click on the Edit icon  to change the username and/or password of a user. There is also an option to disable one or more users.

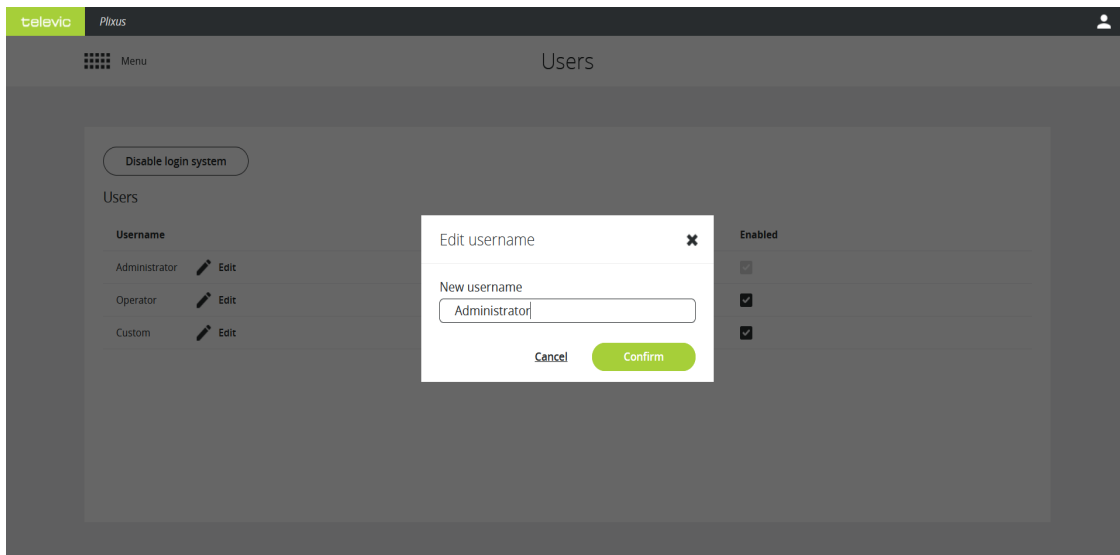


Figure 1-77 Edit username

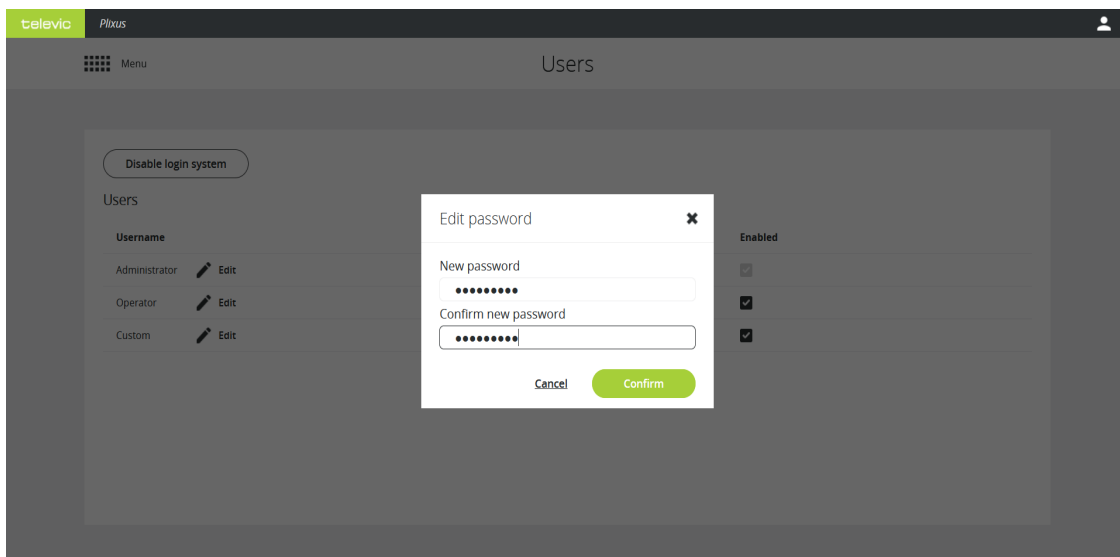



Figure 1-78 Edit password

Once you've configured these settings, the User icon  becomes available in the upper right corner of the screen. Click the User icon to log out and sign in with a different user, with or without a password depending on how you configured the users.

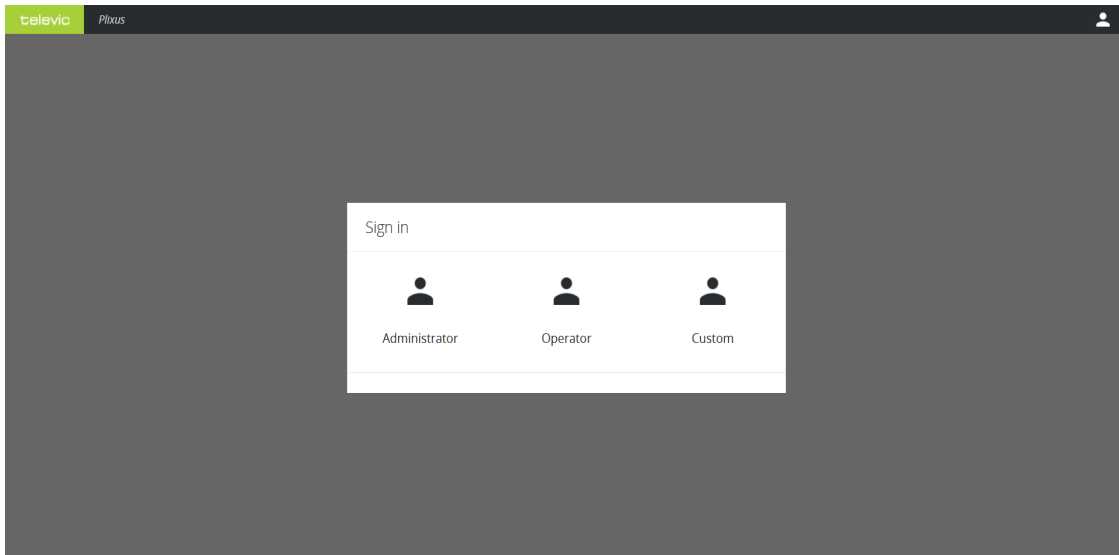


Figure 1-79 Sign is as a different user: select the user type

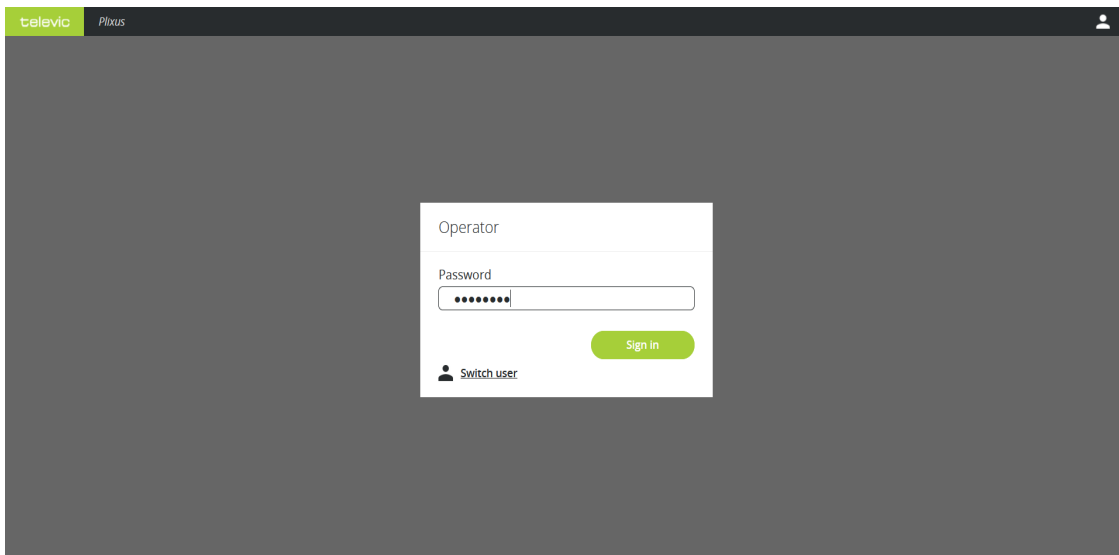


Figure 1-80 Sign is as a different user: enter the password and log in

# UPDATE VERSIONS

Use the **Update version** page to see the update history of your system and update to a different version.

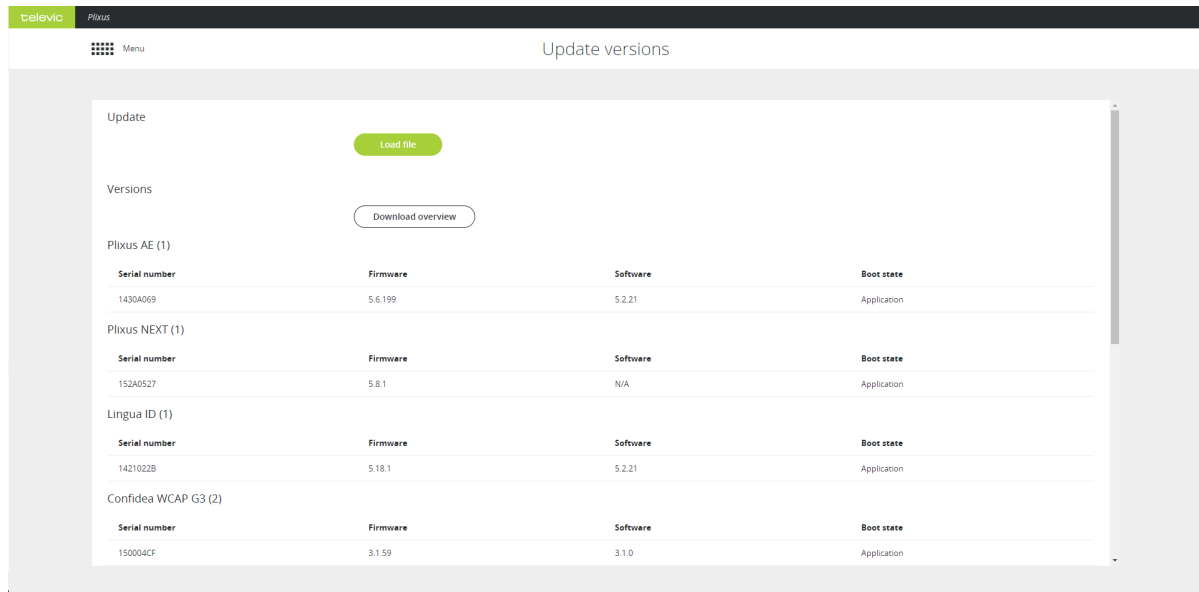


Figure 1-81 The Update page

## Update Plixus System

To update the Plixus system, click **Load file**. Open the correct **.tuf** file. Uploading a file can take some time. Do **not refresh** the page during this process.



You can find all Plixus related software updates on the Televic Conference website (<https://www.televic-conference.com/en/plixus-software-updates>).

After upload, click **Start update**. This will start the update process.



Do not switch off, change configurations on the system or refresh the update page while the update is ongoing.

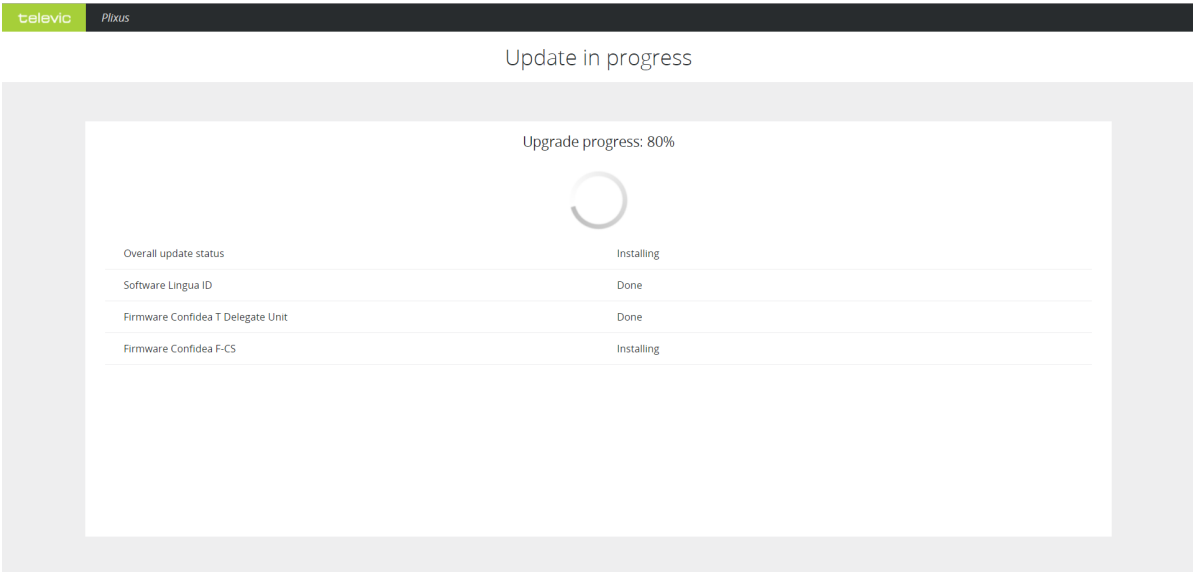


Figure 1-82 Upgrade in process

It can take some time before the update is complete, the duration depends on the number of units and the amount of different units connected to the system.

When the update is complete click **Reboot system** to restart this the system. This is required for the update to be successful.

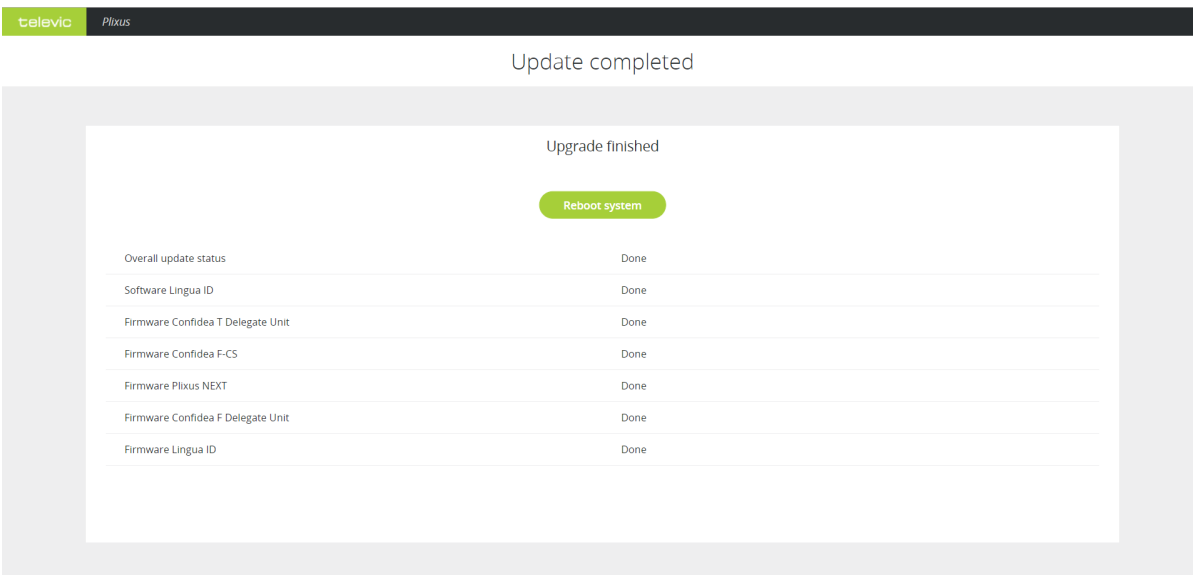


Figure 1-83 Reboot system after update





Fallback firmware (socalled "Golden" version, version programmed during production process) will not be impacted by a CRP update. This firmware is used as a bootloader and used as fallback in case a failure occurs and unit doesn't boot to application software.

Different fallback firmware versions have no influence on the functional performance of the system.



To be able to update the Confidea G3 WCAP and units, you need to uncouple these from the Plixus system and perform the update using the Confidea G3 web server. See the Confidea G3 user guide for more information.

## Update Versions

Under **Version** you can find a list with all devices in the network (also units that are not yet initialized). Click **Download overview** to get a .txt file that contains all devices together with their serial numbers and firmware versions. You can use this as reference before the update.

If the system discovers a version mismatch, you will get an error message showing which devices are affected.

# SYSTEM INFO

On the **System info** page, you can find all general system information.

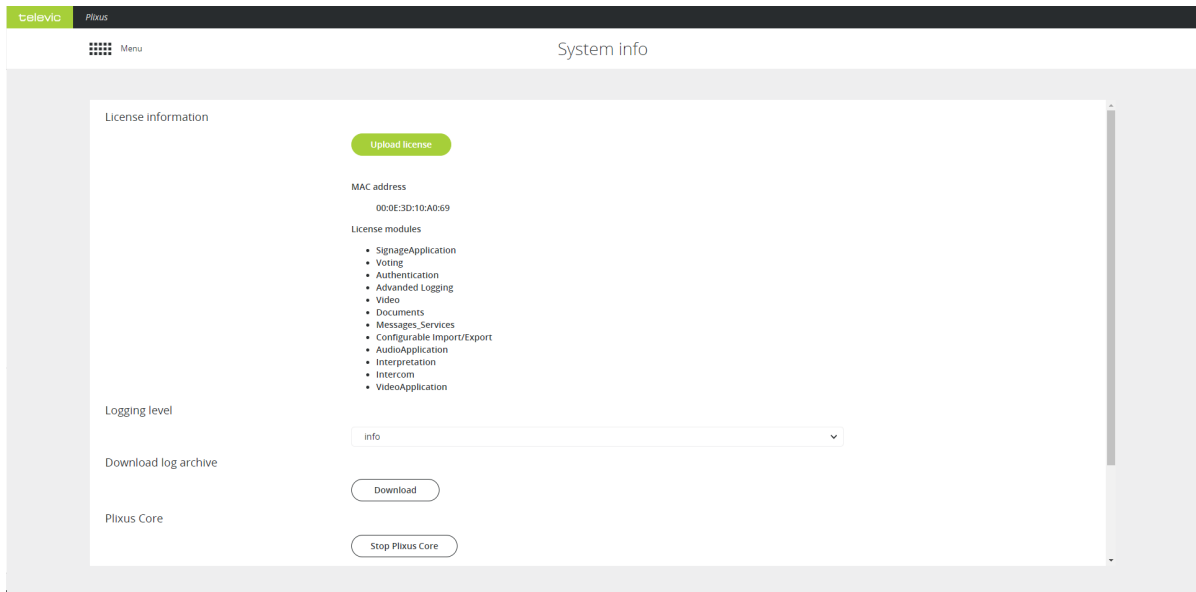



Figure 1-84 The System info page

Parameter	Description
License information	Click <b>Upload license</b> to upload your CoCon license. Only license file with the correct MAC address (of the engine) will work. After upload this page shows all license details such as the licensed CoCon applications.  The MAC-address is the address of the Plixus engine and corresponds to the one shown on the label of engine.
Logging level	Two log levels are available: advanced (debug) and standard (info)  Default value is <b>Standard</b> .
Download log archive	Click the button to download all log entries.

Parameter	Description
Plixus Core	<p>Click the button to activate or deactivate Plixus Core.</p> <p>Use this for functions that are not possible in Plixus Core and require CoCon. The web server will switch back to the old web server and you need CoCon Room Server for all functionality.</p> <p>It can take some time before the web server switches over.</p> <p> From CRP 6.0 onwards, this option is no longer available.</p>
Import configuration	<p>When you install a new engine you can import configurations. This can be interesting in case your previous system is defective or you have multiple comparable rooms.</p>
Export configuration	<p>Export your current configuration containing the following settings:</p> <ul style="list-style-type: none"> <li>&gt; Initialization</li> <li>&gt; Dynamics processing settings</li> <li>&gt; Audio routing settings</li> <li>&gt; Interpretation settings</li> </ul>



Below you can find more information on the different log levels:

**Fatal:** are very severe errors that prevents the system from running.

**Error:** logs all unhandled exceptions; the system is still running.

**Warning:** designates potentially harmful situations that can effect the end user, but probably does not require immediate intervention.

**Info:** information that is useful to the running and management of your system.


**Debug:** designates fine-grained informational events that are most useful to debug an application.

**Trace:** provides even more details than debug. Selecting this option increases memory usage drastically.



Do not use the **trace** log level except when explicitly demanded by Televic Conference for debugging purposes, and for a short period of time. Due to increased usage of the internal processor as consequence of the large amount of data generated, the system may malfunction.

# DIAGNOSTICS

On the Diagnostics page you can find the tools to check the overall status of your system. It allows you to monitor and test your setup to identify faulty units and help you solve issues. To access **Diagnostics** click the icon  in Main menu.

## Overview

On the Diagnostics page you can perform different actions. The image below gives an overview of all possible actions. The sections that follow give a detailed description how to use all these features.

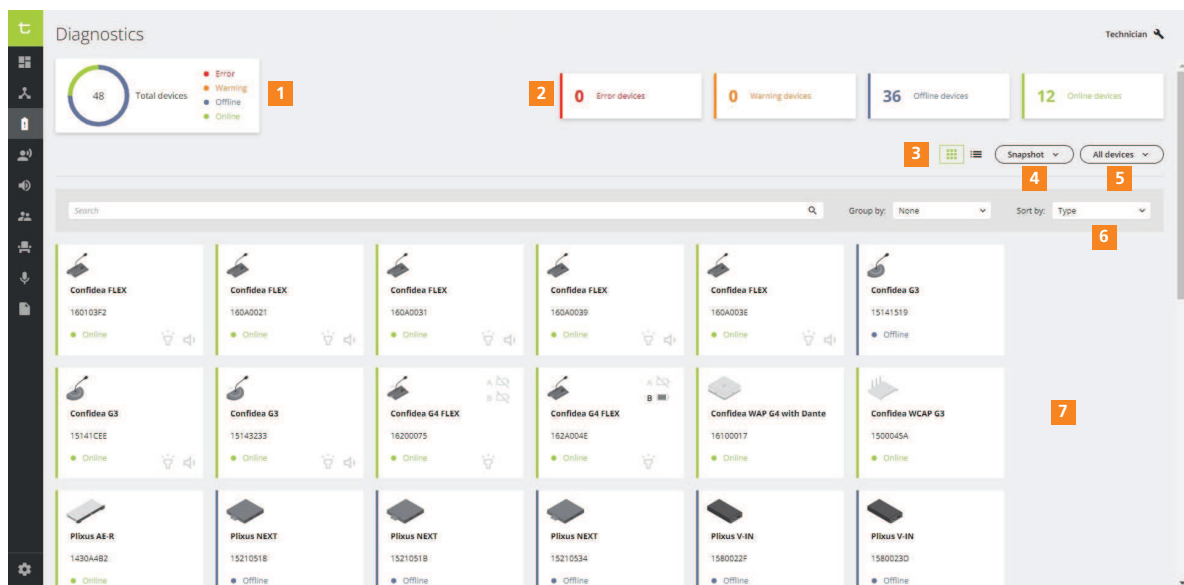


Figure 1-85 An overview of the Diagnostics page of the Plexus web server

1. **Quick view of system status:** shows a pie chart with the total amount of devices including all central equipment such as the engine and the network extenders, and the amount of devices per device status.
2. **Quick filters:** click one or more of the filter buttons to show the devices with a specific status.
3. **Change view:** show devices as tiles or as a list
4. **Create Snapshot** of your system: creates a JSON file containing all system information on the moment you create the snapshot.
5. **Highlight all devices:** click this button to highlight all devices (those that support this feature). This lights up the LED ring of the microphone and the LEDs next to the microphone button.
6. **Search bar:** use the functions to search for devices, group by Loop/Brach or sort the devices.

7. **Device list:** shows all devices of the setup as or list or as tiles (depending on the view you selected). For every device you can see:

- a. Type of device
- b. Serial number
- c. Status
- d. Different actions such as Highlight and Test

## Filter

The Diagnostics application has different options to filter out specific devices.

### USING THE FILTER BUTTONS

On top of the application there are four filter buttons available:

- › **Error devices:** device is not functioning properly, for example device is stuck in golden mode
- › **Warning devices:** device has a warning, typically this is a low battery. Mostly seen in wireless units.
- › **Offline devices:** device lost connection to the central unit
- › **Online devices:** fully operational device

Select one or more of the buttons to add the devices to your selection in the device overview section. Once you **click a button**, it becomes highlighted. Click the button again to **remove** the devices **from the selection**.

The screenshot displays the 'Diagnostics' application interface. At the top, there is a summary section with a circular progress indicator showing 48 total devices. Below this, four filter buttons are visible: 'Error devices' (0), 'Warning devices' (0), 'Offline devices' (36), and 'Online devices' (12). The 'Online devices' button is highlighted with a green border. Below the filters, there is a search bar and dropdown menus for 'Group by' (set to 'None') and 'Sort by' (set to 'Type'). The main area contains a grid of device tiles, each representing a device with its name, model, serial number, and status (Online). The tiles are arranged in two rows. The first row contains seven tiles for 'Confidea FLEX' and 'Confidea G3' models. The second row contains five tiles for 'Confidea G4 FLEX', 'Confidea WAP G4 with Dante', 'Confidea WCAP G3', and 'Plixus AE-R' models. Each tile includes a status indicator (a green dot) and a speaker icon.

Figure 1-86 How to use the filters in the Diagnostics application. One filter is active: online devices.

## USING THE SEARCH FUNCTION

You can use the search bar to find specific devices. You can use the device type or serial number to find specific devices. The search function works dynamically and the search result updates in real-time while you type.

## Visualize Loops And Branches

In the Diagnostics application, you can **group devices** based on the **loop/branch** they belong to. With this option, you can see when a loop is broken because then the loop becomes a branch. To see the loops/branches select **Loop/Branch** under **Group by** next to the search bar.

For every loop/branch, you can see the **serial number** of the device the **loop/branch starts/ends** in the **header** of the group. The **order** of the devices in the overview is the same as in the actual loop/branch present in the room. For a loop, this means that the first device in the list, is directly connected to the first device in the group header and the last device in the list is connected to the second device in the group header, as shown by the orange line in the image below.

All wireless devices, whether Confidea G3 or Confidea G4, will be added in the same group.

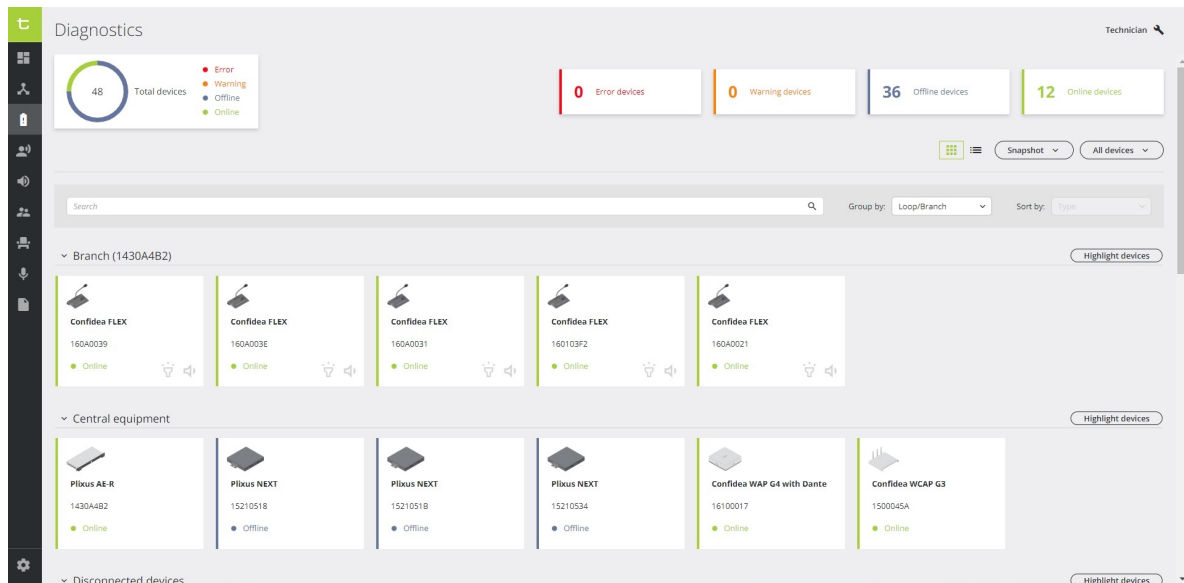


Figure 1-87 The order of the devices in the loop/branch group corresponds to the actual order of the units in the setup, meaning the first device is connected directly to the device next to in the visual representation

## View Device Details

When you click a device in the overview with all devices, a window pane appears on the right. This pane shows the following device information:

- › Firmware version (golden)
- › Firmware version
- › Software version
- › Boot status
- › Battery status (wireless devices)
- › Device status
- › Option to highlight and test device (only for devices that support this feature)

The screenshot displays the 'Diagnostics' application interface. On the left, a sidebar contains navigation icons. The main area features a summary card with a donut chart showing 48 total devices, categorized by status: Error (0), Warning (0), Offline (36), and Online (12). Below this is a search bar and a 'Group by: None' dropdown. A grid of device cards is shown, each with a device icon, name, ID, and status. The selected device, 'Confidea FLEX 160103F2', is highlighted. On the right, a detailed view pane for this device is open, showing its status as 'Online' and providing details for Firmware version (golden) 6.6.1, Firmware version 7.9.1, Software version 7.6.9, Boot status, and Application. At the bottom of this pane are two buttons: 'Highlight device' and 'Test device'.

Figure 1-88 Device details pane of wired device Confidea FLEX in the Diagnostics application

Figure 1-89

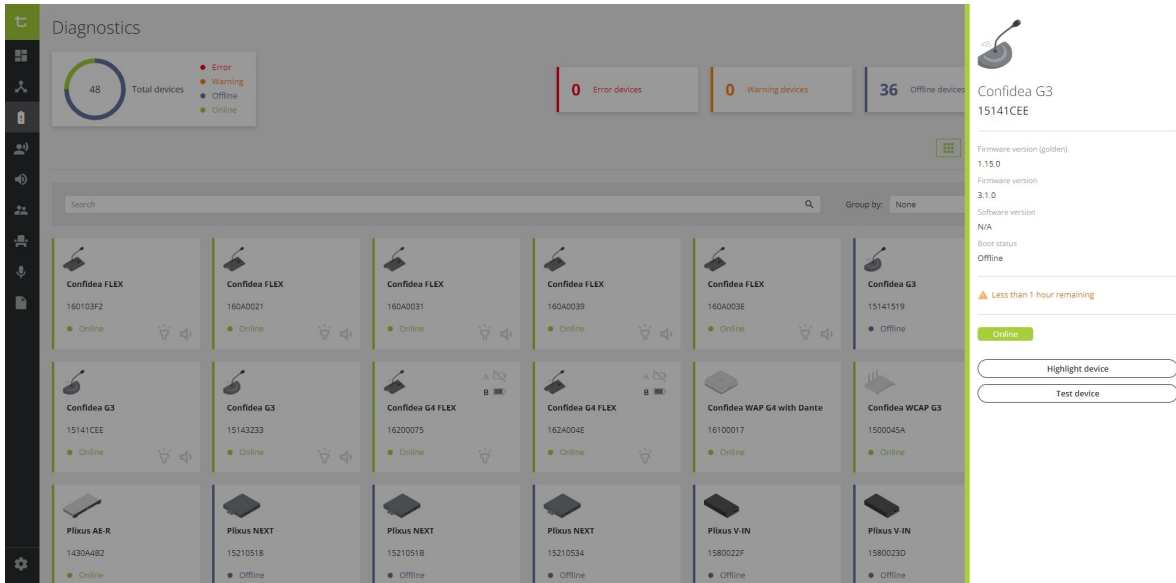


Figure 1-90 Device details pane of wireless device Confidea G3 in the Diagnostics application

Figure 1-91

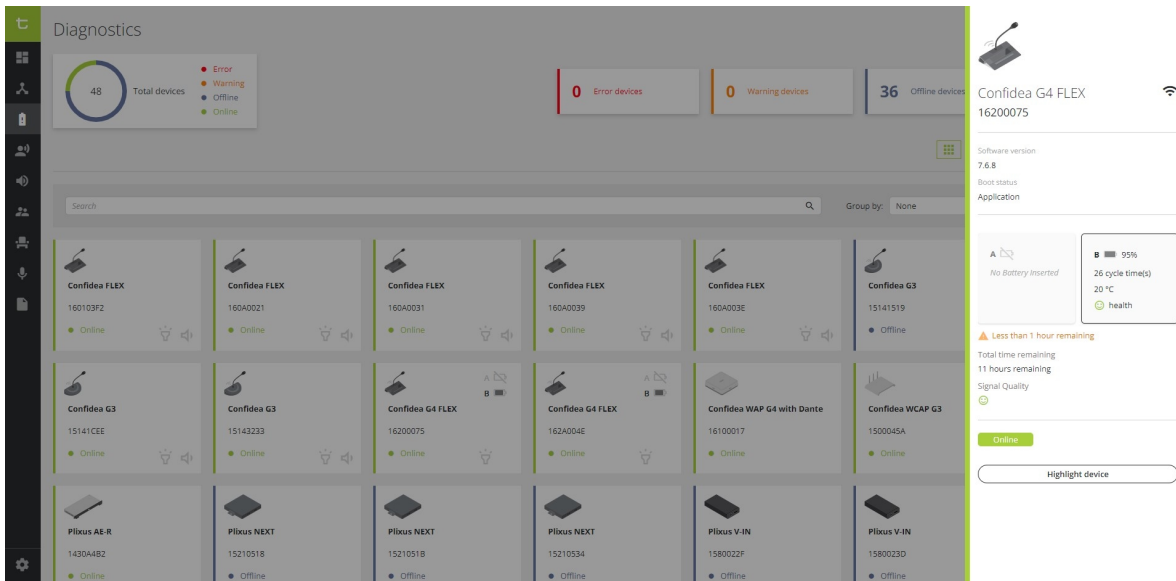


Figure 1-92 Device details pane of wireless device Confidea FLEX G4 in the Diagnostics application

## Highlight Devices

Plixus offers a useful option to **highlight one or more devices in your system**. Highlighting devices allows you to identify specific devices in your setup and see where they are located in a loop or branch.




When you highlight a device the **LED ring of the microphone** and the **LEDs** next to the **microphone button** light up.



Not all devices support the highlighting feature, only those devices with LEDs. Currently it is only possible to highlight discussion units with a microphone and a uniBOX setup, that are online with or without warnings.

## HIGHLIGHT A SINGLE DEVICE

There are two options to highlight a single device:

- In the **tile or list view**: click the highlight icon  to activate or deactivate the highlighting
- In the **device overview**, click the device to see the device details. On the bottom of the window pane that appears on the right, click **Highlight device**.

## HIGHLIGHT ALL DEVICES

To highlight all devices at once, click the button **All devices** in the upper right corner and select **Highlight all devices**. This highlights **all online devices without errors** that support this feature. To stop highlighting, click the button **All devices** again and select **Stop highlighting all devices**.

## HIGHLIGHT ALL DEVICES IN A BRANCH/LOOP


In Diagnostics it is possible to visualize devices as branches and loops. For more information on how to do this see "Visualize loops and branches"


Next to every loop or branch, you can find the button **Highlight devices**. Click this button to highlight all devices in this loop/branch. In the loop/branch you can stop highlighting individual devices to see which device is which in your setup.

## Test Device

Using the Diagnostics application, you can test devices. In Test mode, you send a sinus test tone to the device you want to test. The speakers of the device you are testing should then play this tone. You can also test the microphone of the unit, the loudspeaker of the other units then play the audio captured by the microphone of the tested device.

There are two options to test a device:

- In the **tile or list view**: click the test icon  to activate test mode
- In the **device overview**, click the device to see the device details. On the bottom of the window pane that appears in the right, click **Test device**.

In test mode, you disconnect from CoCon. Therefore a popup appears to confirm you want to go into test mode. When you are in test mode, the browser displays an orange header indicating the system is in test mode. In this header, there is also an option to **disable** the test mode. You can also disable the test mode by clicking the test icon  again.

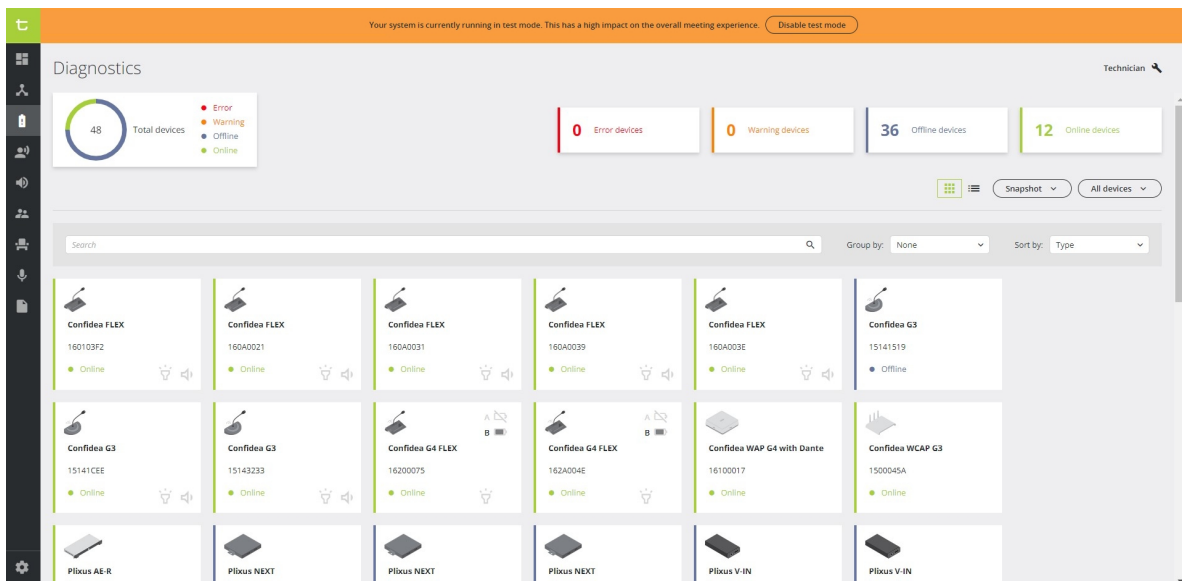


Figure 1-93 The Diagnostics application in test mode. The orange header on top indicates that the system is in test mode.



Not all devices support the test feature. Currently it is only possible to test online devices without errors with a microphone and/or speaker.

# USE INTERCOM ON DELEGATE UNITS

The intercom feature allows delegates and operators to call each other. You need to **activate** the Intercom functionality of the unit in the **Plixus web server**. You can find the intercom settings on the **Initialization** page, see "Manual initialization" on page 117 for more information. Different unit types support the intercom function:

- > **Multimedia units** such as the uniCOS units
- > **Lingua ID** units
- > **Confidea** units

Below you can find a description of how the intercom feature works and looks like on these devices.



You can also initiate an intercom call via API.

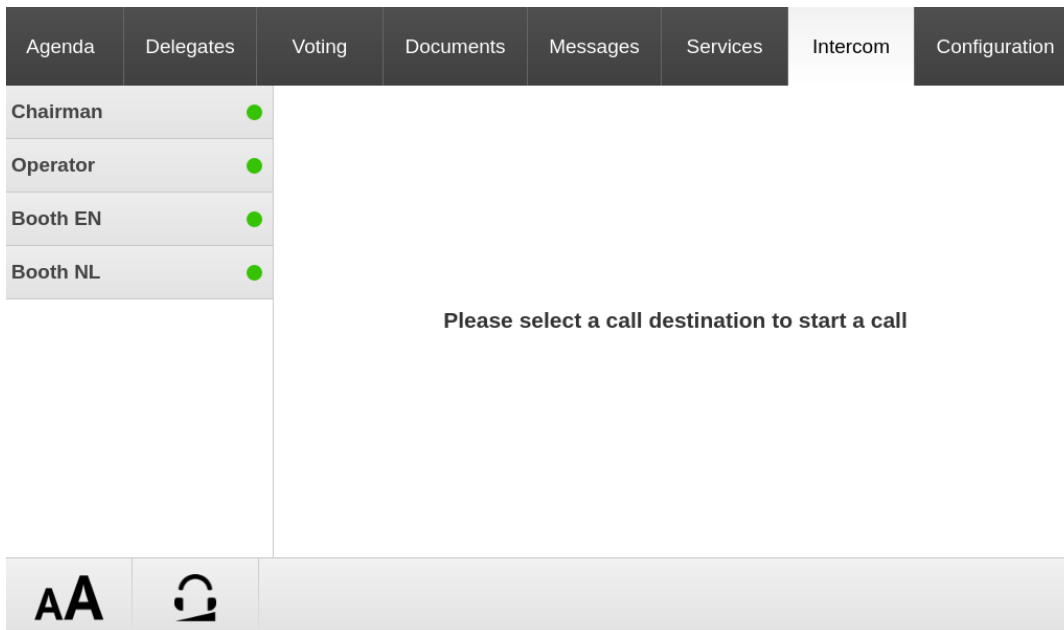
## UniCOS Units

When Intercom is active, the uniCOS unit has an additional tab available in the uniCOS interface: **Intercom**. On the left side you see a list of all possible recipients. The names of Lingua ID are the A channel names and the names of the uniCOS units are the label of the unit (you can change this in the Plixus web server in **Initialization**). When you didn't use labels or set the language the name show Seat x or Booth x (x being the seat or booth number). The dot next to the name of the recipient indicates whether you can call that person, this depends on:

- > The microphone status of that unit
- > The amount of audio channels in use. When all audio channels are occupied, it is not possible to make an intercom call (a maximum of 5 simultaneous intercom calls is allowed)

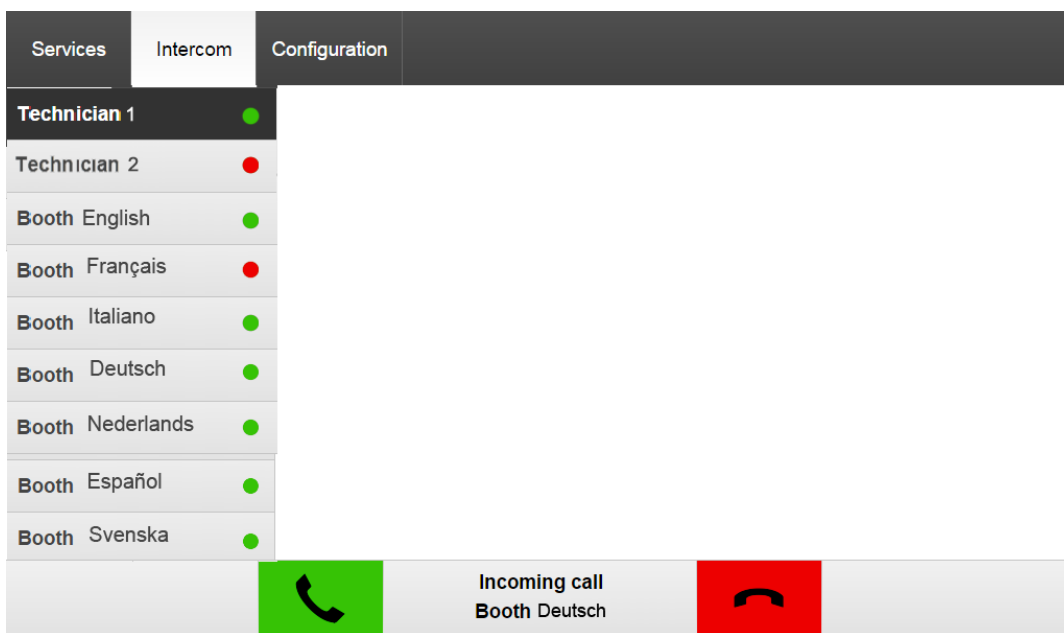
## HOW TO INITIATE A CALL

Select a recipient from the list on the left and press the green **call button** on your screen.



## HOW TO ACCEPT/DECLINE A CALL

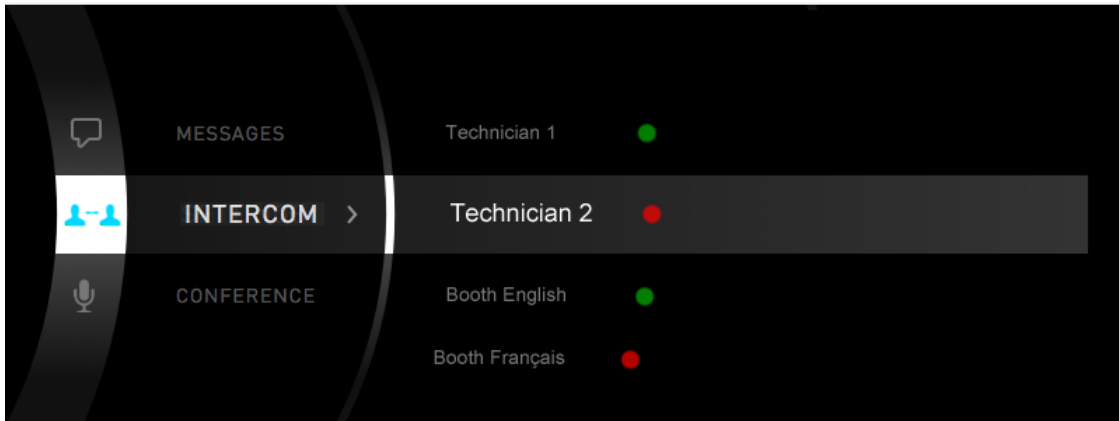
When a uniCOS unit **receives** a call, the bottom of the screen you are viewing at that time shows who is calling with a button to **accept** and **decline** the call. When the call is ongoing the bottom of the screen shows the duration of the call and a button to end the call.



# Lingua ID Units

## HOW TO INITIATE A CALL

To start a call use the **Menu navigation button** on the unit to navigate through the menu and select **Intercom**. Here you can see all possible recipients and if their are available to receive a call (indicated by a dot next to their name). Press the Menu button to select the recipient and start the call.

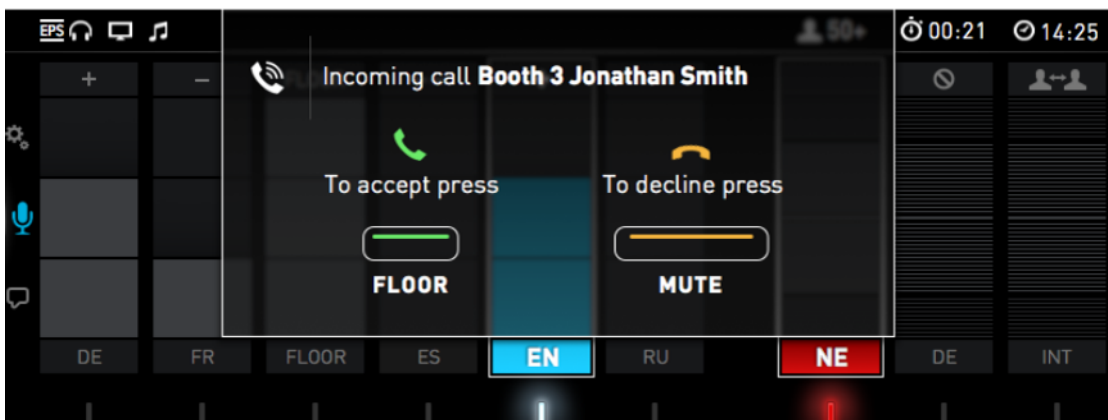


## HOW TO ACCEPT/DECLINE A CALL

When a interpreter receives a call on the Lingua ID:

- > Desks that are not active get a **popup** showing the caller ID and which buttons to press to accept or decline the call.
- > The interpreters who are speaking (microphone active) just get a small **phone icon** in the top **ribbon** of the interface.


If somebody calls an interpreter booth, they call every desk in that booth. When someone in that booths answers the call, all notifications disappear. When someone declines the call, the call ends completely.



## Confidea Units

Confidea units can only receive intercom calls. Depending on the type of unit more or less options are available.

### HOW TO ACCEPT/DECLINE A CALL

When someone initiates a call with a Confidea unit, the LED ring of the microphone and the LEDs next to the microphone button start to **blink green**. To accept the call, **press the microphone button**. Only chairperson units can **decline** a call by pressing the **Prior** button . During the call the LED ring of the microphone is inactive and the LEDs next to the microphone button blink blue (Confidea F) or green (Confidea T and G3). To **terminate** the call press the microphone button.


# COUPLE WITH CONFIDEA G3 OR G4

With Plixus it is possible to combine wired units with wireless ones. You can add one or more Confidea G3 WCAPs (*discontinued*) and Confidea G4 WAPs to your Plixus network simply by connecting them to one of the conference ports.



We advise to first couple wireless units with the WCAPs/WAPs in standalone mode and upgrade units and WCAP/WAP to the latest version. When the devices need a new upgrade, you can simply uncouple and update the units in standalone mode using the Confidea G3 or G4 web server.

## Couple WCAP/WAP With Engine

1. Select **Confidea wireless coupling**  in the main menu. This screen will show you all available WCAPs/WAPs.
2. Click **Enable coupling** to connect with the Plixus system. After coupling you are able to see which frequencies the WCAPs/WAPs are using together with their MAC address.



It is best to only enable or disable Confidea G3/G4 coupling when no microphones are active, because this can lead to audio distortion.

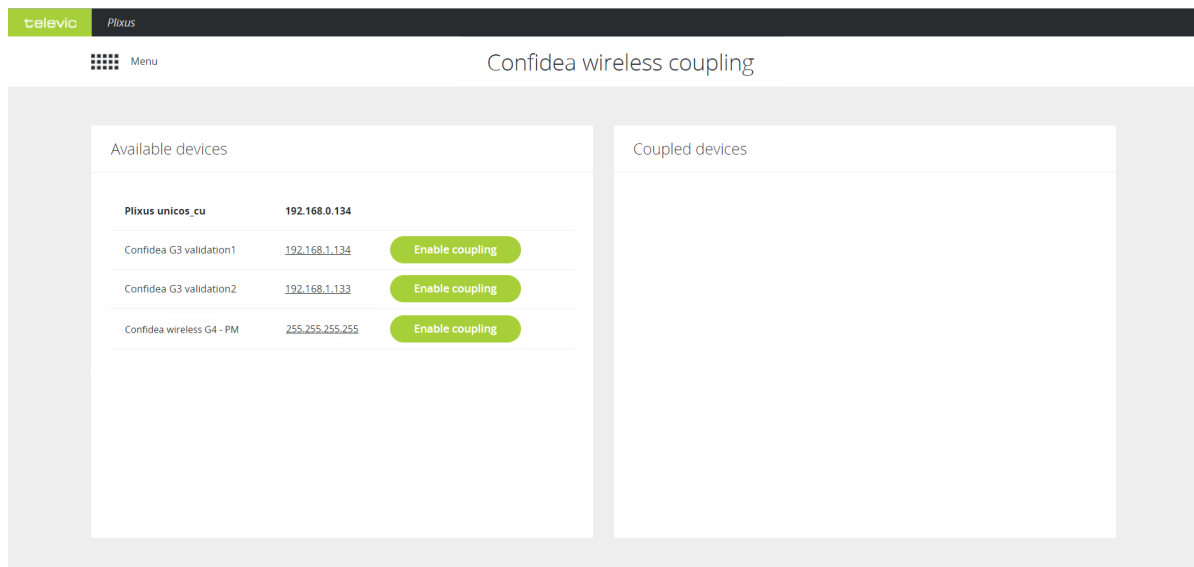


Figure 1-94 Couple Confidea G3 WCAP or Confidea G4 WAP with Plixus

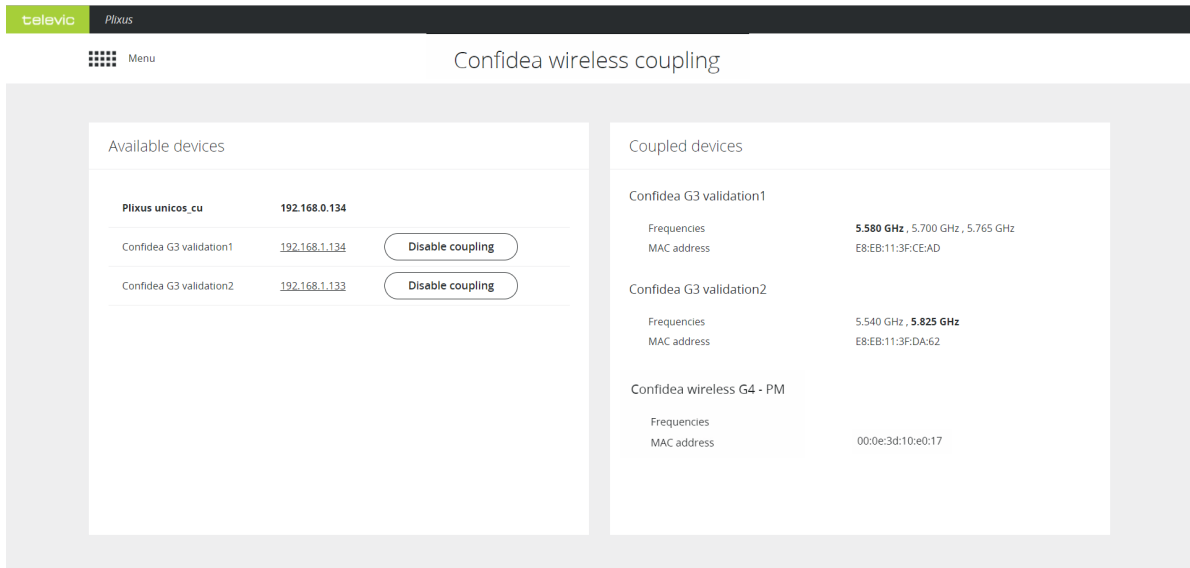
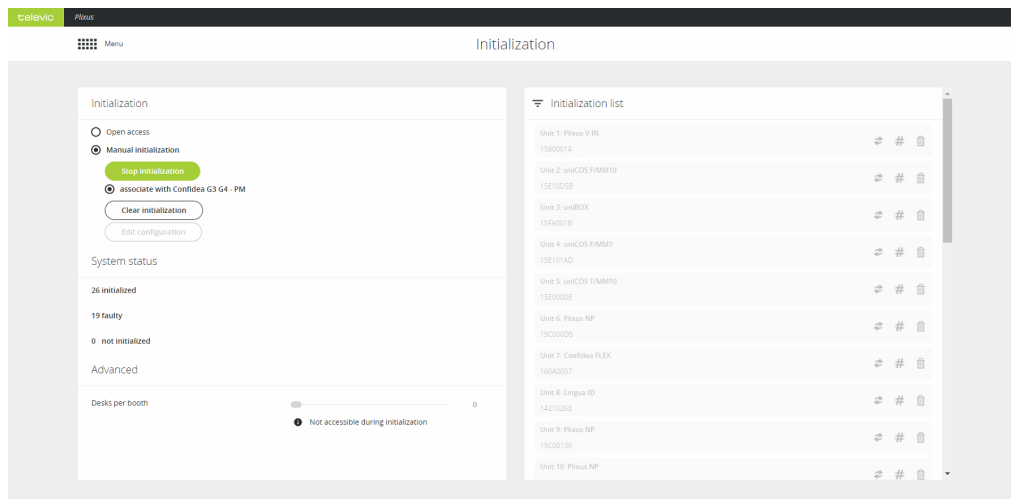


Figure 1-95 View coupled Confidea G3 WCAPs and G4 WAPs and their details

## Associate Units With WCAP/WAP

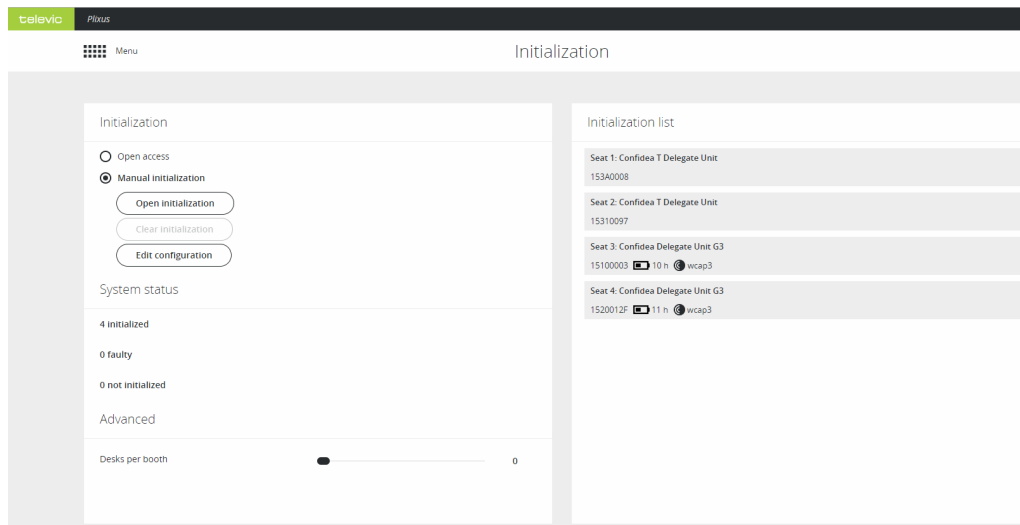
1. Select **Initialization** from the main menu. Make sure that **Manual initialization** has been checked. **Open access cannot be used with G3 and G4!**
2. Click **Open initialization** to associate wireless units with the WCAPs/WAPs.
3. Select the radio button of the WCAP/WAP you want associate the units with.



4. Press the microphone button from the units (red blinking LED) you want to associate with the WCAP/WAP. The LEDs of the units turn green when there initialized.
5. Select the radio button from the other WCAP(s)/WAP(s) to associate units.



6. Click **Stop initialization**. For every wireless unit you can see the name of the WCAP/WAP they are associated with.



## Takeover WCAP



To be able to transfer units from one WCAP to another, the WCAP you want to transfer units to can have **no units already associated** in Plixus. However, they can have units associated in standalone mode.

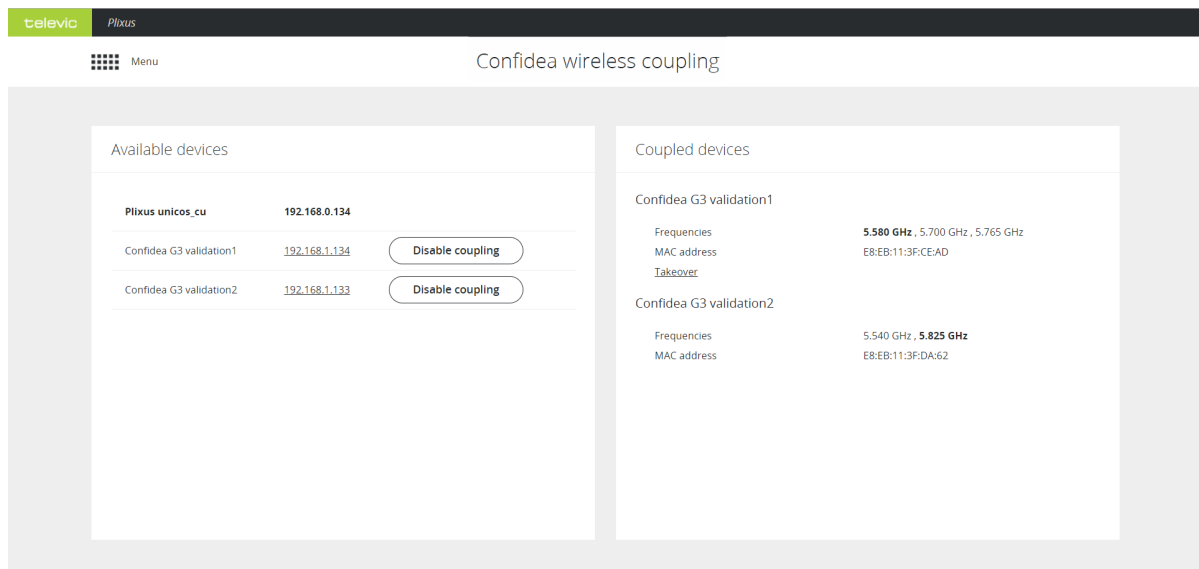
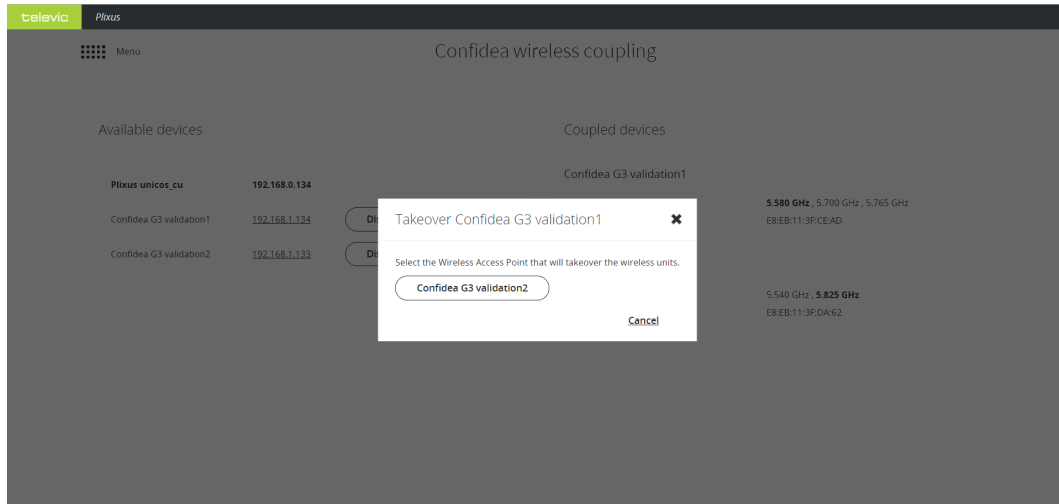


Figure 1-96 The Confidea G3 coupling page

1. Select **Confidea wireless coupling**  in the main menu.

2. When there is a WCAP available to transfer units to (i.e. with no units associated in the Plixus network) you will see the button **Takeover** under the WCAP that can transfer units. Click the button.

3. Select the WCAP to transfer the units to.



4. All units are now transferred to the selected WCAP.

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**GET IN TOUCH**

