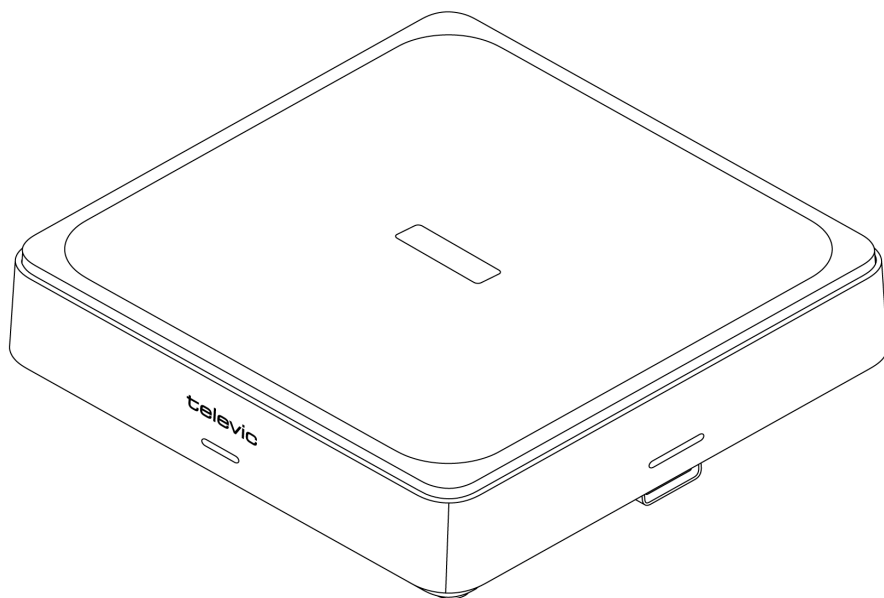


CONFIDEA FLEX G4

USER & INSTALLATION GUIDE



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GETTING STARTED

About this manual

Throughout this guide we use different 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 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
WAP software version	1.00
WAP firmware version	1.00
Confidea FLEX G4	1.00

ABOUT CONFIDEA FLEX G4

The Confidea Wireless G4 uses wireless technology to give you much more flexibility to set up your conference system. The basic system consists of the following elements:

- The **Confidea Wireless Access Point (WAP) (A)**, which acts as a mini central unit.
- Multiple **Wireless Units (WU)(B)**.
- Using the provided audio inputs and outputs (C), connect to different audio systems such as a handheld (wireless) microphone, a room audio system, a video conferencing system, etc.
- The **Access point** has the built-in Confero web server (E), which you can access from any desktop computer or laptop.
- Link the Confidea system to a camera (F) using the LAN connection (D).

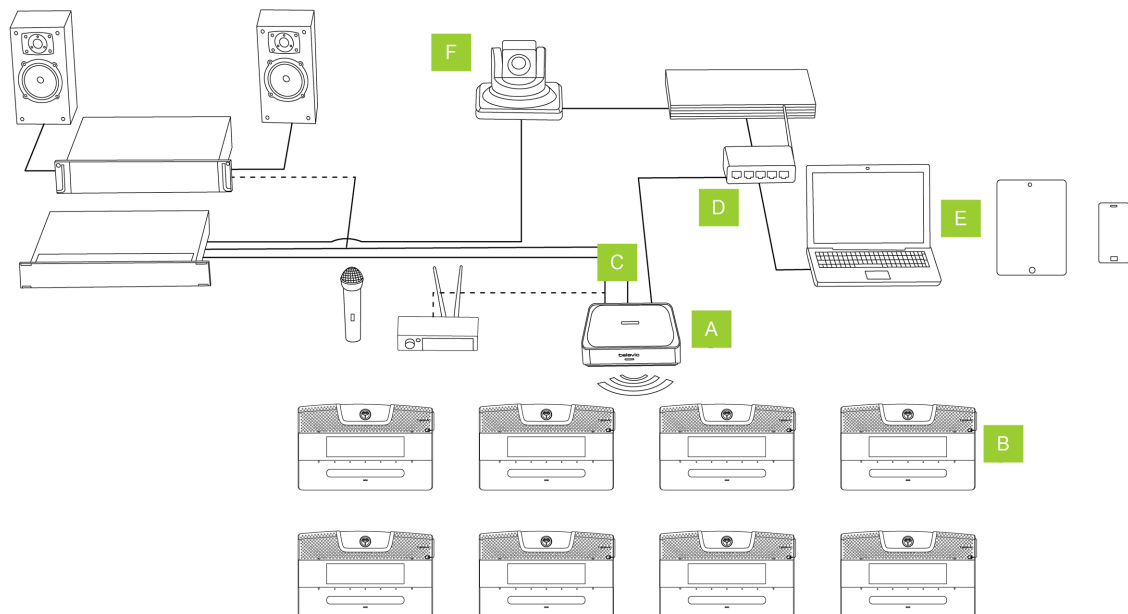


Figure 1-1 Confidea FLEX G4 set-up

SAFETY INSTRUCTIONS

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

Safety

All Televic Conference 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"

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s) and complies with part 15 of the FCC Rules. 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 of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



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

Conformity and Certification Info for Japan

This device has been granted a designation number by the 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.
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 chair, table, 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 humid environment.
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 of your room, 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.

Lithium Batteries



DANGER

ELECTRICAL MISUSE

- Only use the dedicated charging case to charge the battery
- Do not charge the battery by an electric outlet directly or a cigarette lighter charger
- Do not charge the battery reversely

ENVIRONMENTAL MISUSE

- Do not leave the battery near the fire or a heated source.
- Do not throw the battery into the fire.
- Do not leave, charge or use the battery in a place where the inside temperature may be over 60° C or below -20°C.

- › Do not immerse, throw or submerge the battery in water

OTHER

- › Do not store the battery in a pocket or a bag together with metallic objects such as keys, necklaces, hairpins, coins, or screws.
- › Do not short circuit (+) and (-) terminals with metallic objects intentionally.
- › Do not pierce the battery with a sharp object such as a needle or a screw driver.
- › Do not heat parts of the battery with heated objects such as soldering iron.
- › Do not hit the battery with heavy objects such as a hammer.
- › Do not step on the battery and throw or drop the battery on a hard floor to avoid mechanical shock.
- › Do not disassemble the battery or modify the battery design including electric circuit.
- › Do not solder on the battery directly.
- › Do not use seriously damaged or deformed battery.
- › Do not put the battery into a microwave oven, dryer, or high-pressure container.
- › Do not use or assemble the battery with other manufacturers' batteries, different types and/or models of batteries such as dry batteries, nickel-metal hydride batteries, or nickel-cadmium batteries.
- › Do not use or assemble old and new batteries together.



WARNING

- › Stop charging the battery if the charging isn't completed within the specified time.
- › Stop using the battery if the battery becomes abnormally hot, or if discoloration, deformation, or abnormal conditions are detected during use, charge, or storage.
- › Keep away from fire immediately when leakage or foul odors are detected. If liquid leaks onto your skin or cloths, wash well with fresh water immediately.
- › If liquid leaking from the battery gets into your eyes, don't rub your eyes and wash them with clean water and go see a doctor immediately.
- › If the terminals of the battery become dirty, wipe with a dry cloth before using the battery.

- The battery can be used within the following temperature ranges. Don't exceed these ranges.
 - Charging temperature ranges: 5°C ~ 45°C
 - Discharging temperature ranges: -20°C ~ 60°C
 - Storing temperature ranges: 0°C ~ 60°C
- Cover terminals with proper insulating tape before disposal.



CAUTION

ELECTRICAL MISUSE

- The battery must be charged with constant current-constant voltage (CC/CV).
- The charge current must be controlled by specified value in Cell specification.
- The cut-off voltage of charging must be 4.2 V.
- The charger must stop charging the battery by detecting either the charging time or current specified in Cell's specification.
- The discharge current must be controlled by a specified value in the Cell's specification.
- The cut-off Voltage of discharging must be over 2.5 V.

OTHERS

- Before using the battery or charging case, read the user manual and precaution of its handling.
- Replace the battery when using time of battery becomes much shorter than usual.
- Cover terminals with insulating tape before proper disposal.
- If the battery is needs to be stored for an long period, the battery should be removed from the application and stored in a place where humidity and temperature are low.
- While the battery is charged, used and stored, keep it away from object materials with static electric chargers.

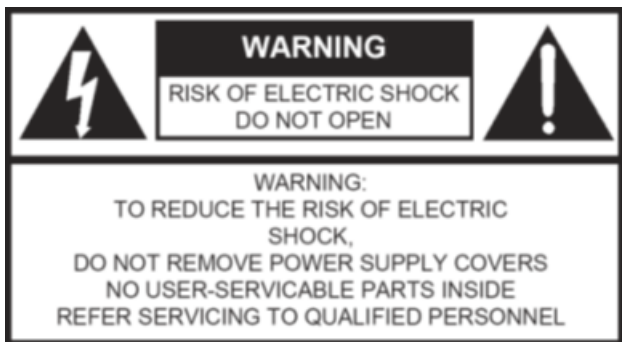
General Conformity Info

The **Confidea Wireless Conference** system complies with following standards:

- ETSI EN 300 328 V.2.2.1 (2019-04)
- EN 301 893 V.2.1.1 (2017-05)
- EN 300 440 V.2.1.1
- IEC 62368-1:2018
- IEC 62368-3:2017
- EN 62311:2008 Council Recommendation 1995/519/IEC
- EN 301 489-1 V.2.1.1
- EN 301 489-17 V.3.1.1(2016-11)
- SO/CD 22259

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.

INTRODUCTION

General System Architecture

COMPONENTS

Confidea FLEX G4 is a wireless conference system offering conferencing capabilities over a robust wireless link. Depending on your licenses and configuration, these facilities include basic discussion, voting and/or language distribution.

The units are table-top units that make a wireless link to a **Wireless Access Point** called **WAP G4**. This **Access Point** has a powerful built-in web server that allows configuring and monitoring of the system from any PC through Chrome or Firefox.

WIRELESS ACCESS POINT (WAP)

Introduction

All communication to and from the **Wireless Units** is controlled by the **WAP**.

Installation

WALL MOUNTING

There are several ways to mount the **WAP** on the wall.

USING THE HANG-UP FIXING HOLES

The **WAP** can be mounted on the wall by means of the 2 curved fixing holes on the bottom of the device. To prevent accidents from happening, attach the device to the wall, taking into account the instructions in "Mount the Confidea WAP" on page 46.

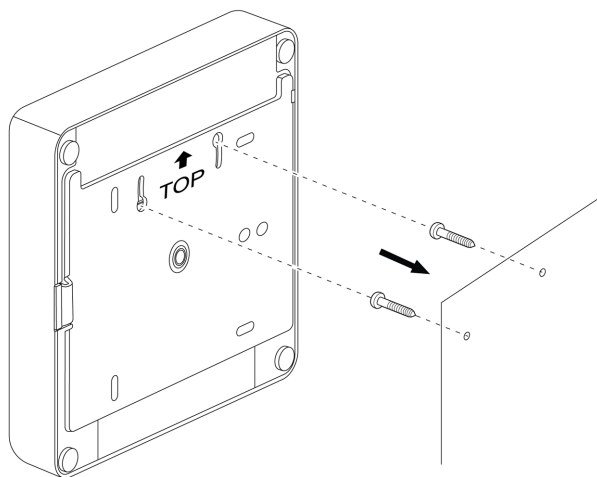


Figure 1-2 How to mount the Confidea FLEX G4 WAP to a wall

FIXING THE BOTTOM PLATE OF THE WAP TO THE WALL

The **WAP** can be mounted on the wall by means of the 4 fixing holes on the bottom of the device. To prevent accidents from happening, attach the device to the wall, taking into account the instructions in "Mount the Confidea WAP" on page 46.

To attach the **WAP**, first slide it in on one side of the bottom plate. The **WAP** can then be clicked in place on the other side

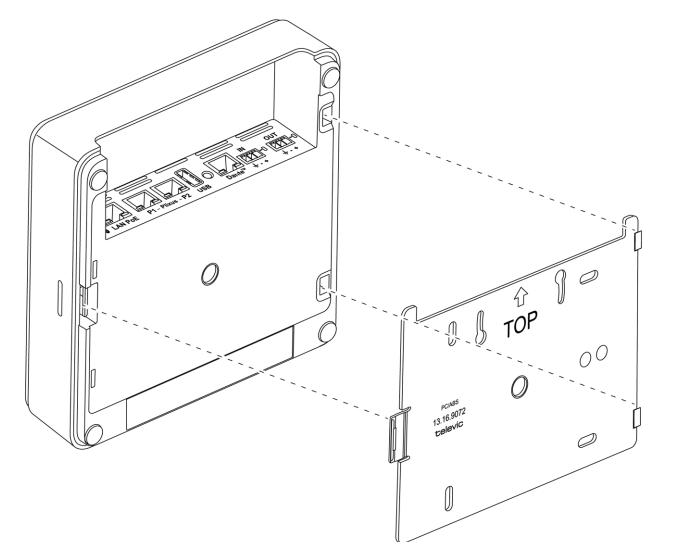


Figure 1-3 How to fix the bottom of the **Confidea FLEX G4 WAP** to a wall.

TRIPOD MOUNTING

The **WAP** can also be mounted on a tripod. The adapter to be inserted in the access point has a UNC 3/8" screw thread. The thread depth shall be 10 mm maximum.

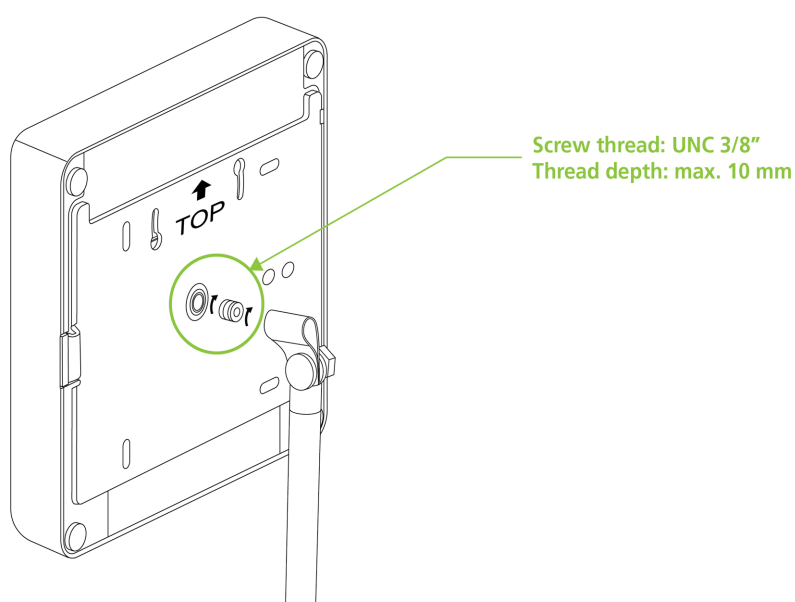


Figure 1-4 How to mount the **WAP** onto a tripod

Connections and Controls

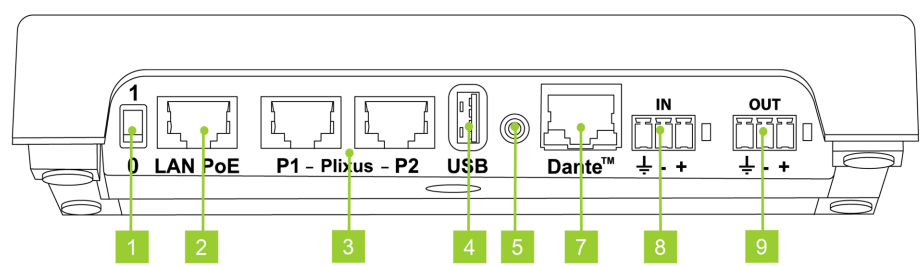


Figure 1-5 **Confidea WAP** connections

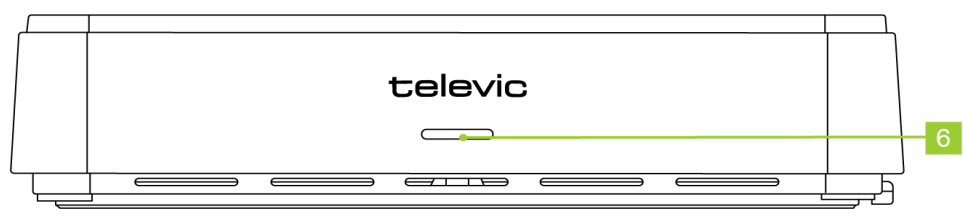


Figure 1-6 **Confidea WAP** LED

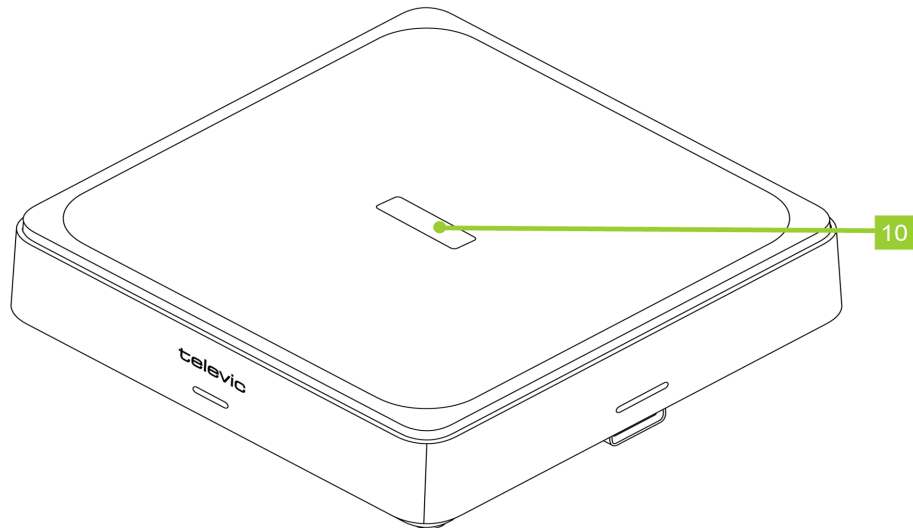


Figure 1-7

Figure 1-8 **Confidea WAP** Discovery mode button

1. **Power Switch:** The **WAP** can be switched on or off with the power switch at the back of the **WAP**.
2. **LAN PoE:** The LAN connection to a PC also serves as the power source of the **WAP** through a PoE+ cable.
3. **Plixus conference network ports:** Connection with the **Plixus conference bus** is done through RJ45 – connectors at the back of the **WAP**.
4. **USB port:** The **WAP**'s storage can be extended by plugging a storage device into the USB port.
5. **Reset button:** There are three modes of resetting the device: resetting the IP address, resetting to factory settings and setting the device to golden mode.
6. **Status LED:** See below for detailed info on LED status.
7. **Dante connection:** The **WAP** can be connected to the Dante network with a LAN cable. Dante is 1 Gbit only and does not support other link speed than 100 Mbit.
8. **Analog in port:** Balanced input where sound is sent into the system. A small LED to the right lights up whenever there is sound going into the system.
9. **Analog out port:** Balanced output where sound is sent from the system. A small LED to the right lights up whenever there is sound coming out of the system.
10. **Discovery mode button:** When pressing the button, the WAP will switch between discovery mode ON/OFF.

LED MEANING

LED	Description
Off	The WAP is switched off or does not have power.
White, blinking	The WAP is booting.
Green, blinking	The WAP is in Standard pairing mode , discovery is on.
Green, steady	The WAP is in Standard pairing mode , discovery is off.
Blue, blinking	The WAP is coupled and in Standard pairing mode , discovery is on.
Blue, steady	The WAP is coupled and in Standard pairing mode , discovery is off.
Red, blinking	The WAP is malfunctioning, contact support .
Red and green, alternately blinking	The WAP is in Golden mode . Try updating the WAP to resolve this. If the issue is not resolved, contact support .

LED	Description
Orange, blinking	The WAP is updating.
Orange, steady	The system is updating.

RF Signal Pattern

Three antennas positioned in the **WAP** generate and receive an RF signal in a specific pattern. They maximize the number of signal paths sent in the air, and provide an omnidirectional radiation pattern, ensuring a range of 40 meter, or 130 feet.

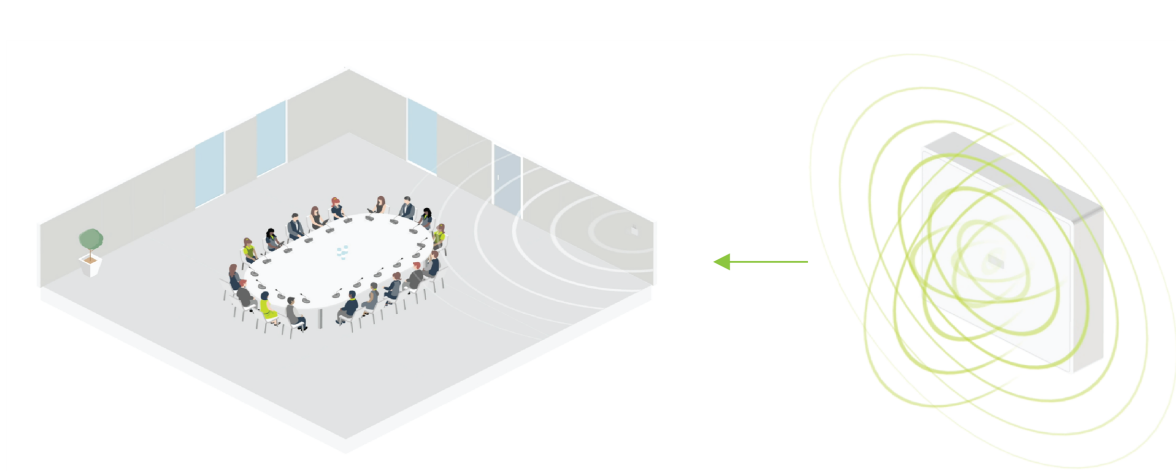


Figure 1-9 Omnidirectional RF signal patterns

WIRELESS UNITS

Introduction

The wireless units can be configured as **Delegate**, **VIP**, or **Chairperson units**. All are used for speech reinforcement in a conference room. The units that are configured as **VIP** are priority units. The units that are configured for **Chairpersons** are also priority units and are used to guide and control an ongoing discussion.

Controls and Indicators

A **Confidea FLEX G4 Wireless Unit** has the following features:

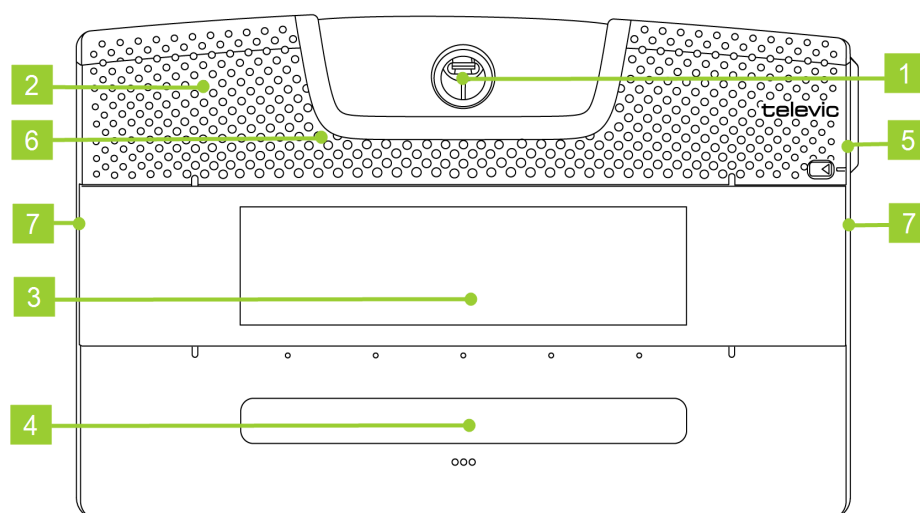


Figure 1-10 The front view of the **Confidea FLEX G4 Wireless Unit** with all possible options

N°	Name	Description
1	Microphone connector	Connection of a microphone to the wireless unit.
2	Loudspeaker	Distributes the floor channel. Mutes in case the microphone is active.
3	User interface	Touch screen that enables use of the wireless unit's functionalities.
4	Microphone button	Controls the microphone. When the device is turned off, push this button to turn it on until LEDs turn on.
5	Key card slot	Card reader for an RFID card.
6	Light sensor	Adapts the touch screen brightness to environmental lighting.

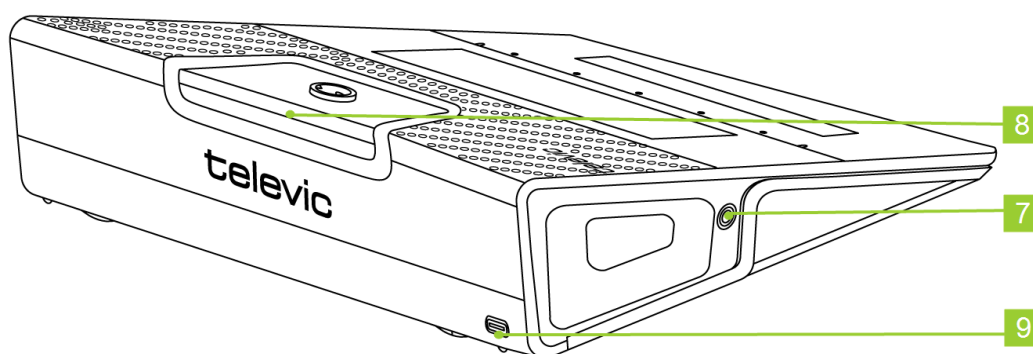


Figure 1-11 Back and left side view of the **Confidea FLEX G4 Wireless Unit** with all possible options

N°	Name	Description
7	Headphones connector	Connection of headphones to the Wireless Unit . Mono- and stereo headphones can be used. On both the left and right sides of the device, there is a headphone connector.
8	Microphone status LEDs	Indication LEDs that show the status of the microphone: red = active, green = request.
9	USB-C connection	Connects the unit to a power source, like a laptop. Recommended cable: 28AWG/1P + 24AWG/2C



Units that are out of range switch off after 5 minutes.

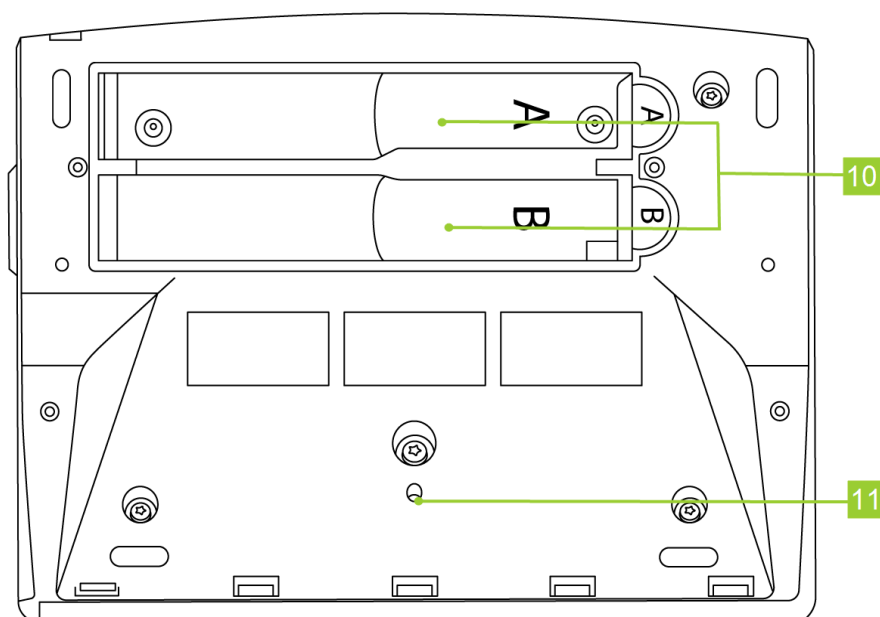


Figure 1-12 Bottom view of the **Confidea FLEX G4 Wireless Unit** with all possible options

N°	Name	Description
10	Batteries	You can use one or two batteries. Using two batteries extends the time that the unit can be used.
11	Reset button	The reset button is used for troubleshooting.

Operating Distance

The operating distance depends on the frequency setting of the **WAP**. The **WDUs** have to be at least 1.5 m from the **WAP**.

Region	Maximum frequency power
North America	
APAC	
JPN	
Africa + ROW	
South America	

IMAGES of maximum signal strength per frequency: show WAP sending out

PENDING: add data from certification (still ongoing) : max strength per frequency / region

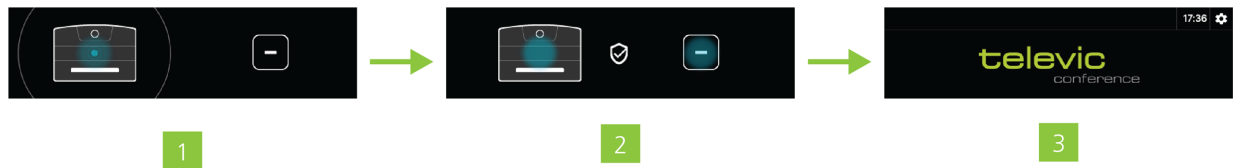
Install Unit

In order to use the **Wireless Unit**, first install the battery and microphone. For instructions, see "Battery pack" on page 30 and "Microphones" on page 35.



Remove the battery to avoid unwanted operation of the unit. Keep the devices in a clean and dry area.

Start-up and Shutdown of Wireless Unit



To start up a **Wireless Unit**, press the microphone button for a second. The three speaker LEDs and the two LEDs on the back of the unit turn green.

During the connection process, the touch screen shows the start-up animation and then the connection animation [1].

The animation changes when the connection with a **WAP** is established [2].

The device now shows the normal screen [3].

When a device loses its connection, it tries to connect to the same **WAP**. If that **WAP** is not available, the device tries to connect to another **WAP**. If no connection is established after 5 minutes, the device turns off automatically to save battery power. Press the microphone button to restart the device.

BATTERY PACK

Introduction

The **battery pack** is used with the **Confidea FLEX G4 Wireless Units**.

Output voltage	7.2V
Capacity	3350 mAh
Charge time	2 hours
Quick charge to 66%	1 hour
Max charge voltage	8.4 V
Charge current	1.7 A
Autonomy	± 12 hours
Charging cycles	500 full charges

Read the safety instructions before using the lithium battery.

Controls and Indicators

The **battery pack** contains:

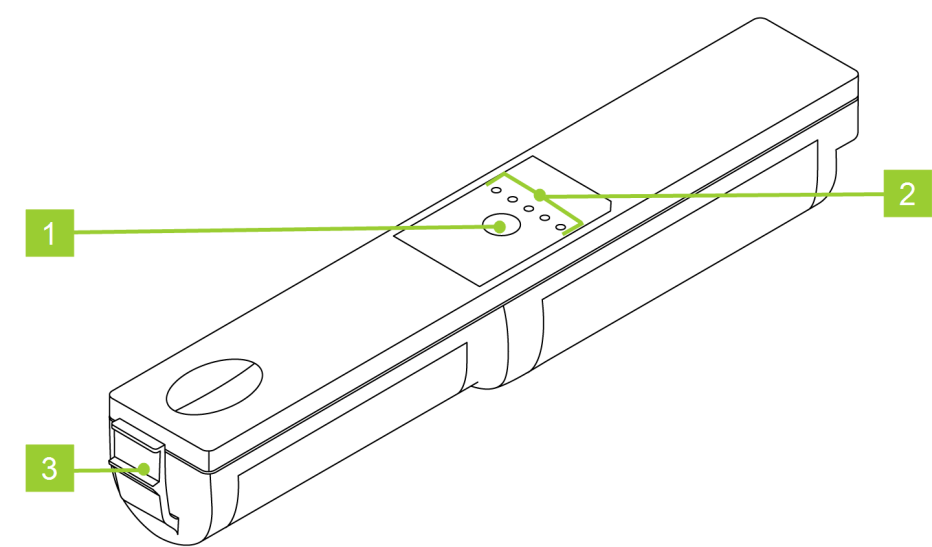


Figure 1-13 **Confidea FLEX G4 battery pack** bottom side up

1. **Test button:** Push to check the capacity of the **battery pack**.
2. **Capacity indicator:** LEDs that show the capacity of the **battery pack**.
3. **Clip:** Locks/unlocks the **battery pack** in the **Wireless Unit**.

Battery Charging and Handling

- Charge the **Confidea battery pack** immediately on receipt.
- Recharge the **battery pack** immediately when the remaining capacity drops below 20%. This is when the LED flashes red on the **battery pack**.
- Empty **battery packs** must be charged within 30 days.
- Do not leave an empty **battery pack** in a **delegate unit**.
- Best practice for maximizing the lithium ion battery life is to keep the batteries in the charging tray between uses and provide proper ventilation.



The lifetime of a **battery pack** can be severely affected if it is completely drained. If a **delegate unit** is put in storage or is not being used for a while, remove the **battery pack** and place it in the charger.

Store the **Confidea FLEX G4 battery pack** correctly: temperature between 0 °C and 60 °C and with a relative humidity between 5% and 75 %.

Capacity Indicator

The indicator is a five-segment LED. The first LED (LED1) is red and indicates a low capacity battery. The higher the charge, the more LEDs that light up.

LED on	Remaining charge
LED 1 (red)	0-20%
LED 2 (orange)	20-40%
LED 3 (orange)	40-60%
LED 4 (green)	60-80%
LED 5 (green)	80-100%

Installation

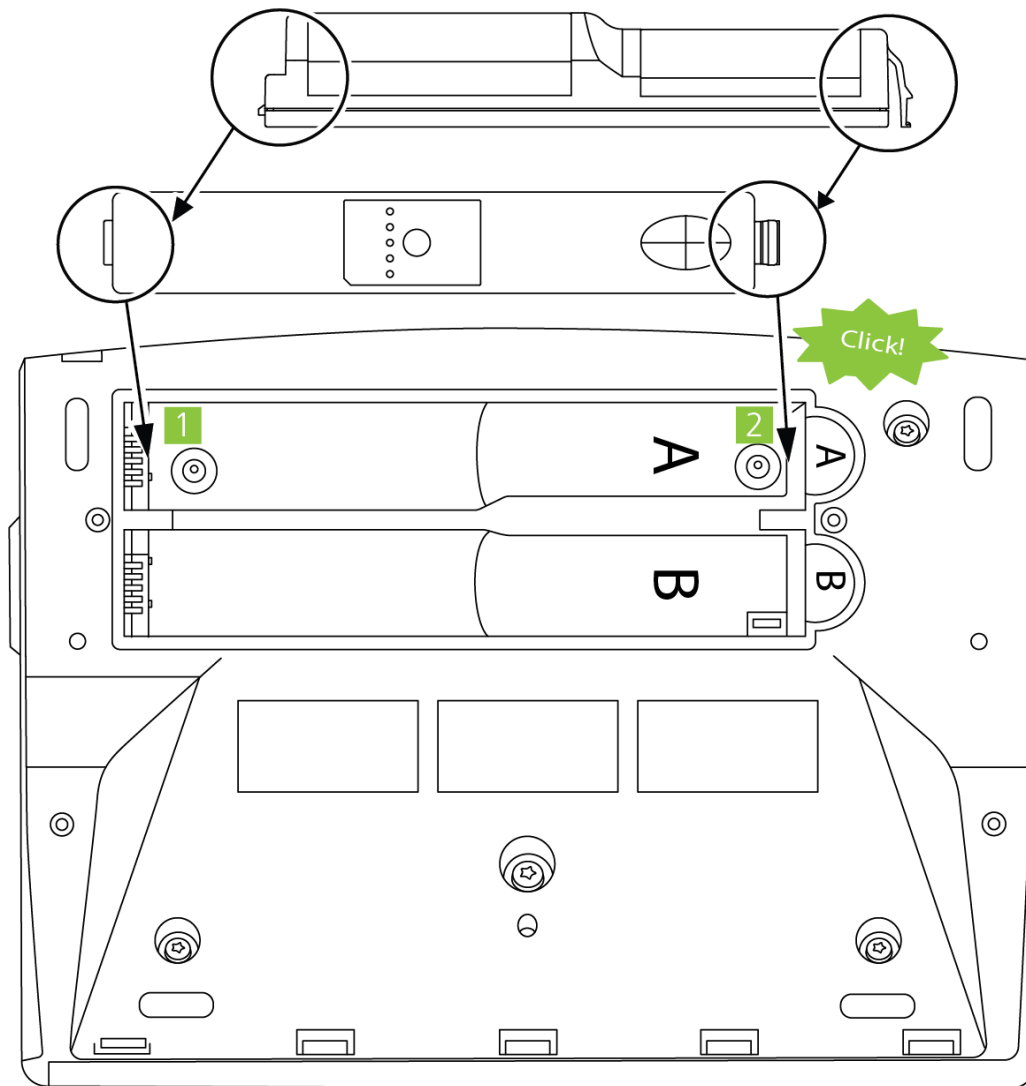


Figure 1-14 How to place the **battery pack** in the wireless unit.

1. Insert the part that has the contact metals first.
2. Then insert the clipping side of the battery until it clicks in place.



Make sure the inserted battery is properly oriented. The capacity LEDs are visible when the battery is inserted correctly. The clip on the end of the battery is at the battery slot indication A/B.

BATTERY CHARGER

The **battery charger** is used to charge the **battery packs** for the **Confidea FLEX G4 Wireless Units**.

Controls and Indicators

The **battery charger** contains:

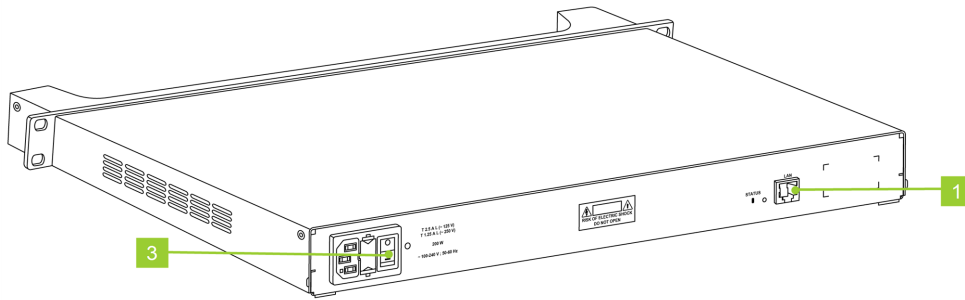


Figure 1-15 Back of the **battery charger**

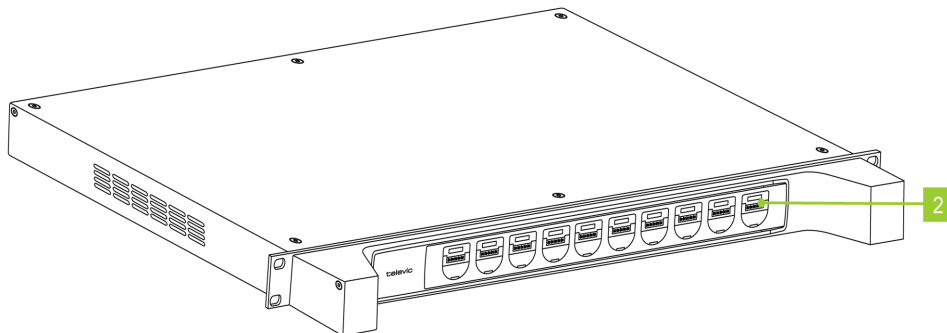


Figure 1-16 Front of the **battery charger**

1. **LAN:** The LAN connection to a PC also serves as the power source of the **battery charger**.
2. **Charging slot + charging LEDs:** The charging slots are where the **battery packs** are stored to charge them, and the charging LEDs indicate the charging process of the battery.
3. **Power switch:** The battery charger can be switched on or off with the power switch at the back of the **battery charger**.


Charging LEDs

Every charging slot has its own dedicated charging LED which indicates the charging process of the battery.

Charging LED	Battery status
Green fixed	Battery is fully charged.
Red fixed	Battery is faulty.
Green blinking (low intensity light)	Battery is charging but battery level is below 75%.
Green blinking (high intensity light)	Battery is charging and battery level is higher than 75%.
Orange blinking (all LEDs)	Update process of charger is ongoing.
White fixed	Charging is turned on, but no battery is inserted.

Charging the Battery Pack

To charge the **battery pack**, first switch the charger on and then insert the **battery pack** into one of the charging slots. The charging LED will indicate the charging process. When the charging LED is fixed green, the **battery pack** has finished charging. You can then remove the **battery pack** from the charging slot.



The fully charged battery may remain in the **battery charger** without damaging either component.

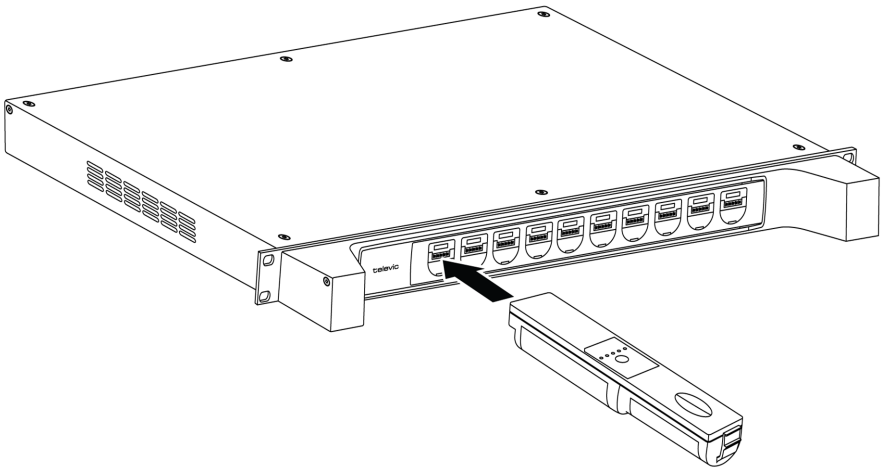


Figure 1-17 *Battery pack being inserted in the battery charger*

MICROPHONES

Introduction

Use the Confidea PLM401F (40 cm) removable microphone (Mike) with the **Wireless Units**. This microphone has a unidirectional response for optimum performance, even in noisy conditions, and has a very low susceptibility to RF-interference from mobile phones.

Electrical and Acoustic Properties

Parameter	Value
Transducer type	Back electret (condenser)
Operating principle	Pressure gradient
Polar pattern	Uni-directional, cardioïd
Nominal impedance	Bias resistor = 1k2 Vdd = 3.3 V DC, SPL = 1 Pa
Max.SPL at 1 kHz	110 DB SPL (1 % THD+N)
Signal to noise ratio	>67 dB(A)
Free field sensitivity	9.4 mV/Pa, ± 3 dB @ 1 kHz or (-40.5 dB, 0 dB = 1 V/Pa @ 1 kHz)
Power supply	3.3 V DC, 0.5 mA
Consumption	0.5 mA (without LED ring); max. 25 mA (with illuminated ring)

Microphone Connector

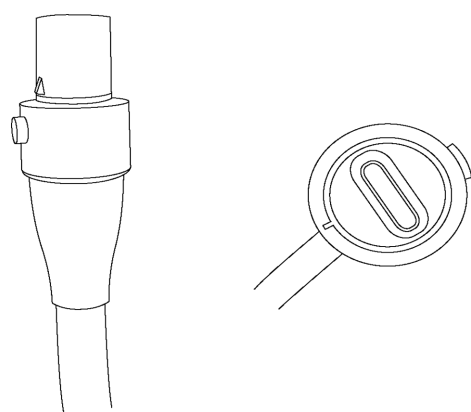
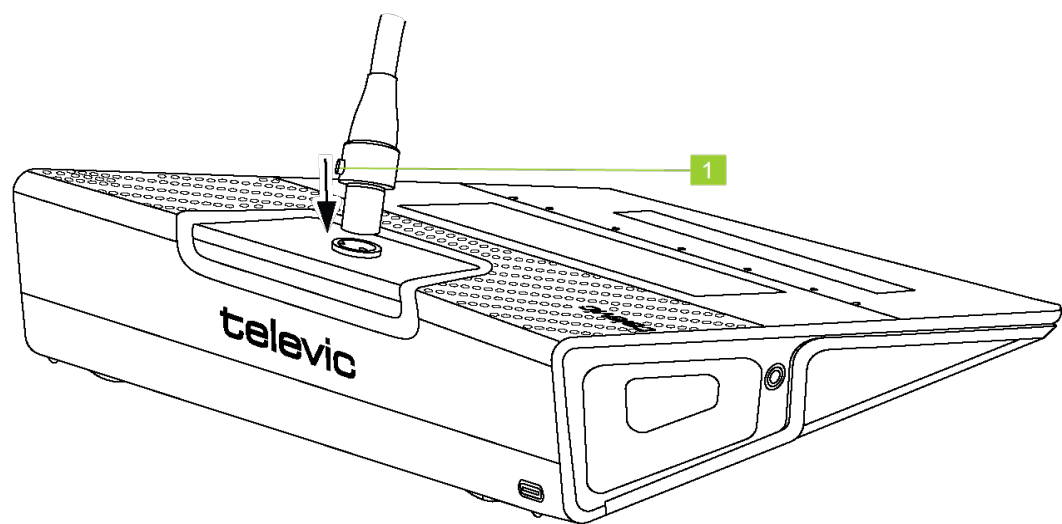


Figure 1-18 Microphone connector

Installation



Microphone connecting to the unit.

Make sure that the release button of the microphone (1) is positioned backwards, then insert the microphone into the Mike connector. The microphone can be removed by pressing the release button.

N°	Name	Description
1	Release button	When you press this button, the microphone can be removed from the unit.

Operation

The microphone contains the following elements:


- **Indicator ring:** shows the status of the microphone
- **Plug:** attaches the removable microphone to the unit
- **Release button:** releases the microphone from the unit

The color of the microphone indicator ring shows the status of the microphone. Below colors are the default. Depending on your settings, the information in the table may change. For more information on how to change these settings, please refer to the Confero manual.

Color	Condition
Red fixed	Microphone is active.
Green fixed	Microphone is in request.
Green blinking	Microphone is in request and is the first in the list of next speakers.

OTHER EQUIPMENT

Cables

Network cables	Shielded Cat5e Ethernet  Limit the cable lengths to maximum 100 m.
WAP powering cable*	PoE+ or PoE passive

*Contact Televic Conference to purchase the cable: conference@televic.com / +32 51 30 30 45

Device to Interact with WAP

Use a laptop or PC to interact with and configure the **WAPs** and the **Wireless Units**. Go to the webserver and use the default IP 192.168.0.110 and the subnetmask 255.255.255.0.

WIRELESS NETWORK AND FREQUENCY BANDS

Wireless LAN

The wireless local area computer network is based on the IEEE 802.11 ac standard. This standard was developed by the IEEE (Institute of Electrical and Electronics Engineers) in order to insure inter-operability between different WLAN vendors.

802.11 Standard	Release date	Frequency (GHz)	Maximum bit rate (Mbits/sec)	Modulation type
Wi-Fi 5 (ac)	2013	2.4/5	1300	OFDM

Table 1-1 Wireless LAN standards



The 2.4GHz and 5GHz frequency bands are license free world wide.

However, you must be aware of country specific limitations and follow them.

TELEVIC CONFIDEA WIRELESS SYSTEM

The wireless network of the **Televic Confidea wireless system** is based on the 802.11 a/g standards.

Additional protocols have been added on top of the 802.11 a/g standards to provide high robustness against interference from other wireless devices. These additional protocols also ensure a guaranteed quality of service for the audio streams on the wireless network.

Frequency bands

When buying a device, you have to do so for a specific region. It is neither possible nor allowed to buy a device from another region, which also means that you cannot change the region of the device you have bought. Every region has rules on which specific frequencies the device can broadcast. You can select your country within a region to optimize the available frequencies for your country. The exception to this rule are the regions North America and JPN. By selecting a specific country, the device is also in rule with legal requirements of that country.

There are six regions in total. The **Confidea wireless system** includes the following regions and countries:

- **Region 1 (EME):**
 - Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lichtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK, Oman, Qatar, Turkey, UAE, Saudi Arabia, Kazakhstan, Russia, Belarus, Kosovo, Ukraine, Albania, Serbia, Montenegro, Bahrain, Armenia, Georgia.
- **Region 2 (North America):** This region is fixed. Country specification is not allowed.
 - USA, Canada
- **Region 3 (APAC):**
 - Australia, China, Hong Kong, India, Indonesia, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan, Thailand, Vietnam, Pakistan, Bangladesh
- **Region 4 (JPN):** This region is fixed. Country specification is not allowed.
 - Japan

➤ **Region 5 (Africa + ROW):**

➤ Egypt, Ethiopia, Kenya, Morocco, Nigeria, South Africa, Tunisia, Algeria, Ivory Coast, Mauritius, Uganda, Senegal, Tanzania, Azerbaijan, Iran, Jordan

➤ **Region 6 (South America):**

➤ Mexico, Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Jamaica, Panama, Peru, Puerto Rico, Uruguay, Venezuela, French Guiana, Honduras, Paraguay, Nicaragua

The **Confidea wireless system** supports the following frequency bands for each region:

Channel	Frequency	EME	North America	APAC	JPN	Africa + ROW	South America
1	2412 MHz	√	√	√	√	√	√
6	2437 MHz	√	√	√	√	√	√
11	2462 MHz	√	√	√	√	√	√
36	5180 MHz	√	√	×	√	√	√
40	5200 MHz	√	√	×	√	√	√
44	5220 MHz	√	√	×	√	√	√
48	5240 MHz	√	√	×	√	√	√
52*	5260 MHz	√	√	×	√	×	√
56*	5280 MHz	√	√	×	√	×	√
60*	5300 MHz	√	√	×	√	×	√
64*	5320 MHz	√	√	×	√	×	√
100*	5500 MHz	√	√	×	√	×	×
104*	5520 MHz	√	√	×	√	×	×
108*	5540 MHz	√	√	×	√	×	×
112*	5560 MHz	√	√	×	√	×	×
116*	5580 MHz	√	√	×	√	×	×
120*	5600 MHz	×	×	×	√	×	×
124*	5620 MHz	×	×	×	√	×	×

Channel	Frequency	EME	North America	APAC	JPN	Africa + ROW	South America
128*	5640 MHz	X	X	X	√	X	X
132*	5660 MHz	√	√	X	√	X	X
136*	5680 MHz	√	√	X	√	X	X
140*	5700 MHz	√	√	X	√	X	X
144*	5720 MHz	X	√	X	X	X	X
149	5745 MHz	√	√	√	X	X	√
153	5765 MHz	√	√	√	X	X	√
157	5785 MHz	√	√	√	X	X	√
165	5825 MHz	√	√	X	X	X	√
169	5845 MHz	√	√	X	X	X	X
173	5865 MHz	√	√	X	X	X	X

*These channels are DFS channels. DFS (Dynamic Frequency Selection) channels can be used by radar. When a DFS channel is in use by radar, it is forbidden to broadcast on it, but when the DFS channel is not in use, you are allowed to broadcast on it. Because they can sometimes not be used, at least one non-DFS channel should be available at all times.

CONNECTING WIRELESS UNITS TO THE WAP

By default, the WAP automatically allows all units to make a connection. This is indicated with a blinking green LED. Just start the unit by pressing on the microphone button and it automatically connects to the WAP.

If you do not want other units to connect to the WAP, push on the button on top of the WAP. This will only allow the known connected units to connect. This is indicated with a fixed green LED.

Adding a new unit requires you to push on the button again, which will allow for all new units to connect to the WAP. This is indicated with a blinking green LED.

When pressing the button on top of the WAP for more than three seconds, the list of units is erased and the system will allow all units to connect.

LED Indications

LED on WAP	LED meaning
Green fixed	Only Confidea G4 units that were connected before are allowed to make a connection with the WAP.
Green blinking	All Confidea G4 units are allowed to make a connection

INSTALLATION PROCESS

This chapter describes how to physically set up and install the Confidea FLEX G4 system. Here you can find all technical details needed to correctly install all Confidea FLEX G4 components.

MOUNT THE CONFIDEA WAP

Location and Position of the Confidea WAP

- Attach the **WAP** to a wall or mount it on a tripod near the wireless units.
- Ensure a clear line of sight between the **WAP** and the **Wireless Units**. Obstructions can significantly reduce the RF signal strength and quality.
- Make sure that the reset button is accessible for troubleshooting.
- Keep the **WAP** away from power cables, cable trays and electric machinery.
- Keep the **WAP** away from metal objects, as this significantly reduces the signal quality.
- Keep the **WAP** away from microwave ovens and reduce Bluetooth signals, as they may cause intermittent interference in the 2.4 GHz range, which is why we recommend the 5 GHz range.
- Avoid mounting the **WAP** on a pillar. This causes signal “shadows” or areas with reduced or no signal reception.



The **WAP** can be placed close to a ceiling. Ideally the **WAP** is at least 2 meters above the floor. Units should be at least 1 meter away from the **WAP**.

Maximum Range Of The WAP

A single **WAP** has a range of 40 m in an open area. The **frequency** that is used also has an effect on the range of the **WAP**. The range decreases gradually for the 5 highest RF bands, with a minimal range of 25 m (in optimal conditions).



Certain construction materials, such as concrete or metal, may absorb part of the RF signals, resulting in a reduction of the maximum distance between the access point and the units.

Installing the Confidea G4 WAP

1. Plug in the PoE+ cable.
2. Connect the PoE+ cable to a power source that is connected to a PC or your network.

3. Switch on the **WAP**. The white LED starts blinking, meaning that the system is booting.
4. When the LED turns green/blue, shining steadily or blinking, the device is active.
5. You can now turn on the devices by pressing the microphone button.



When the LED does not turn green/blue or turns red, please [contact your local support team](#).

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GET IN TOUCH

