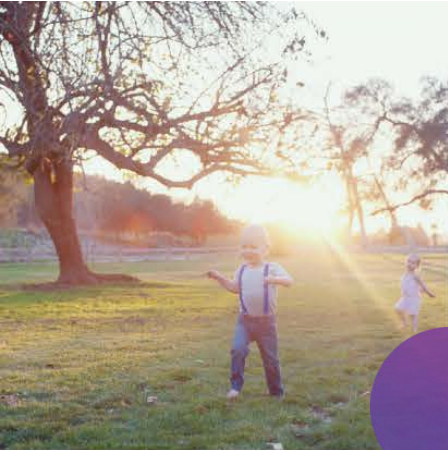




Care@HomeTM

Control Panel Next Generation User Guide

ESUGSC077

Version 1.2

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1. Overview

The Care@Home™ Control Panel (CP) is a connected, emergency-response control device, used for personal emergency applications. The CP is designed to monitor people living at home or in an assisted-living facility. The CP interfaces with the Care@Home™ sensor devices, collects information about the resident's daily activities, and transmits the information to the monitoring station.

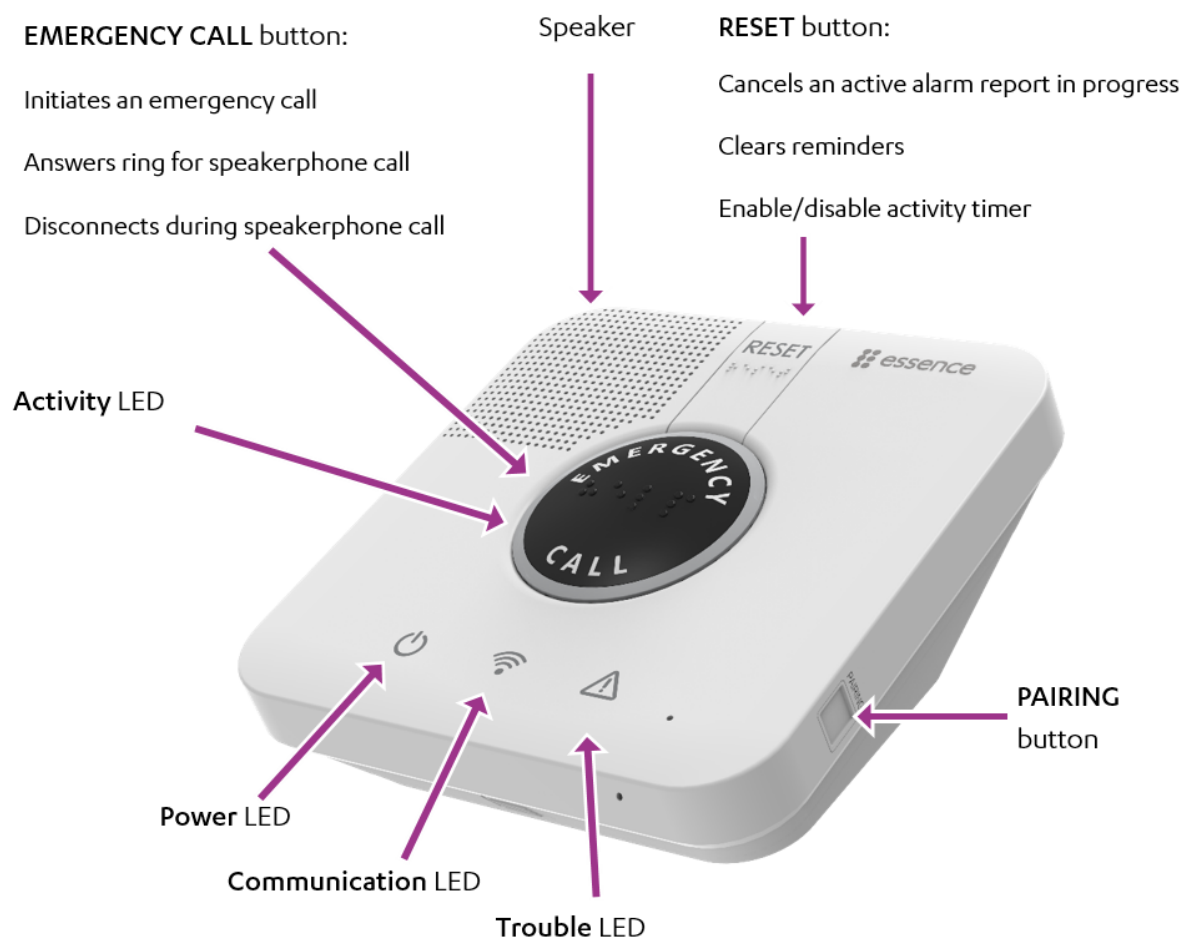


Figure 1: The Care@Home™ Control Panel

The CP includes a high-volume speaker, and a sensitive microphone. The **EMERGENCY CALL** and **RESET** buttons on the CP, include molded and raised braille characters, for ease of recognition by visually impaired residents.

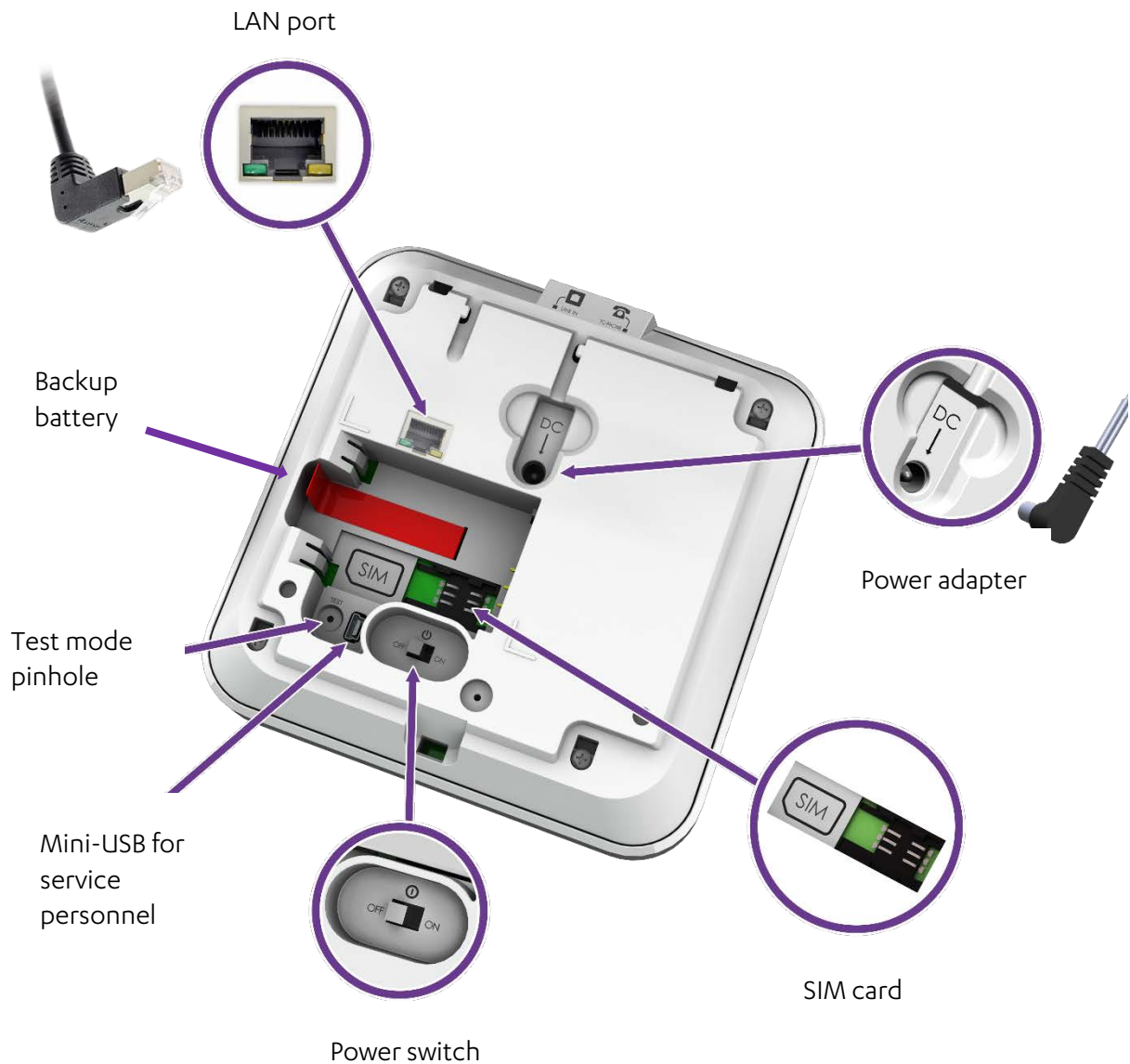


Figure 2: The Back of the CP

The CP has a rechargeable battery as a backup power source. The CP has an ON/OFF switch, allowing the CP to be turned **OFF** for storage, or while the resident is away for long periods of time.

1.1. Communications with the Monitoring Station

The CP communicates with the monitoring station using a cellular network or a standard telephone network Public Switched Telephone Network (PSTN) landline or Ethernet, according to the CP version. Cellular and Ethernet communication are supported by Pro, Family, and PERS. PSTN communication is supported by PERS. If there is a communications failure, the CP saves messages and sends them when communications are restored.

2. Installing the CP

Installing the CP includes the following:

- Determining the best location for the CP
- Setting up the CP
- Wall Mounting the CP
- Configuring the CP parameters

2.1. Determining the Best Location for the CP

Survey the premises to determine the best location for the CP. It is recommended that you install the CP installation in either the **living room** or the **master bedroom**, in a location which is:

- Central within the premises
- Provided with sufficient cellular reception
- For a **PSTN** model, near a telephone jack
- For a **LAN** model, near a LAN connection
- Convenient for the resident to access, yet not where the CP would attract attention from unauthorized users
- Where the CP speakerphone can be heard throughout the premises
- Away from concrete walls to eliminate radio frequency (RF) interference
- Away from metal obstructions
- At least 2 m (6 ft.) from the peripheral devices

2.2. Necessary Items

Ensure you have the following:

Cellular Model	PSTN Model	LAN Model
■ Rechargeable backup battery ■ Power adapter ■ SIM card – from the cellular service provider	■ Rechargeable backup battery ■ Power adapter ■ PSTN telephone jack dedicated to the CP	■ Rechargeable backup battery ■ Power adapter ■ LAN port dedicated to the CP ■ LAN cable

- | | | |
|--|-----------------------------------|--|
| | ■ PSTN telephone cable for the CP | |
|--|-----------------------------------|--|

2.3. Setting Up the CP

To set up the CP:

1. Ensure the power switch is in the **OFF** position.
2. Push the ribbed tab at the bottom of the back cover, and lift the cover off.



Figure 3: Removal of the Back Cover

3. For the cellular model, insert the SIM card, with its contacts facing downward.

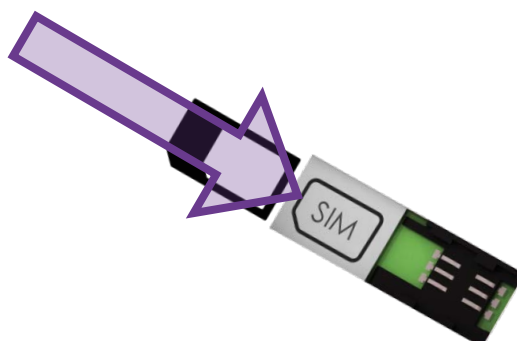


Figure 4: Insertion of the SIM Card

4. **For European product versions only**, attach the adhesive pad included in the kit, to the backup battery, such that the pad is on the side closest to the contacts. Make sure to leave space between the pad and the edge of the battery.



Leave space between the pad and the edge of the battery

Figure 5: Space Between the Pad and the Battery Edge

5. Insert the backup battery over the battery pull strip, such that:
 - The printed side of the battery is facing upward
 - The battery contacts are pointing towards the CP contacts

Ensure that the end of the battery pull strip is showing, and that the strip itself is not blocking the contacts.



Figure 6: Inserting Backup Battery



Figure 7: Inserting European Backup Battery



Caution: A new battery can cause damage if it is incorrectly installed.

6. Plug-in the power adapter connector into the CP power socket, securing the cable under the tab.



Figure 8: Connecting the Power Adapter's Cable

7. Connect the cable to power.



Caution: Do not connect to a receptacle controlled by a switch.

For USA product versions only, you should secure the power adapter cube.

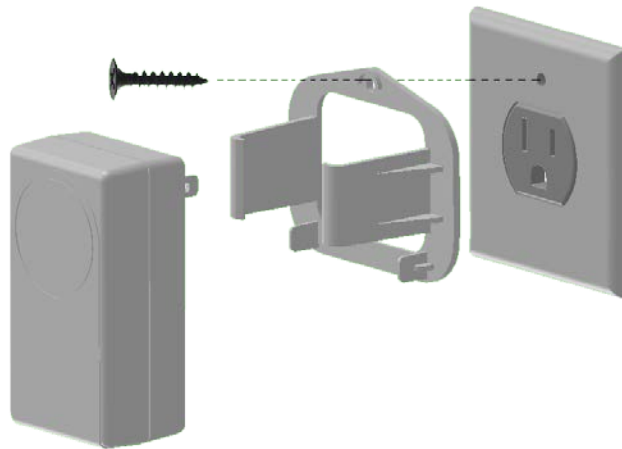


Figure 9: Securing the Power Adapter Cube



NOTE: Install in accordance with the requirements of: The National Electrical Code, NFPA 70

8. For **LAN** models, plug the 90° LAN connector into the CP's LAN port, securing the cable under the tab. Plug the other end of the LAN cable into your location's nearest LAN port.

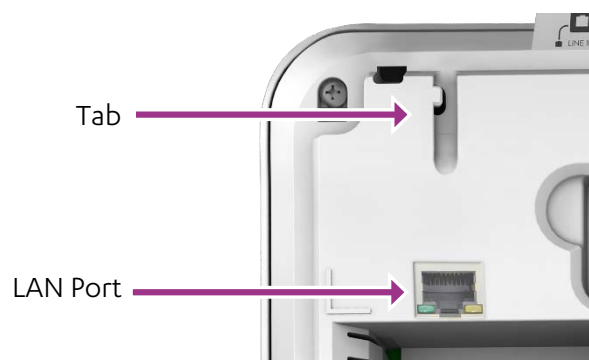


Figure 10: LAN Port and Tab

9. Replace the back cover.

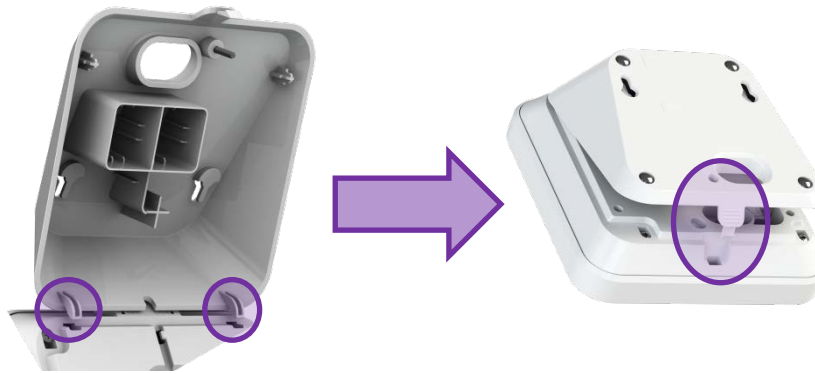


Figure 11: Replace the CP Back Cover

10. For the **PSTN** model, connect the CP to the landline.

Two PSTN phone sockets (RJ-11) are provided on the back of the CP PSTN model:



Figure 12: The PSTN Phone Sockets

- i. Connect the phone cable between the **LINE IN** socket and the home phone jack. The telephone cable used should be at least of 26 AWG.
 - ii. Optionally, you can connect a telephone to the **TO PHONE** socket, using the cable included in the Care@Home™ PERS kit.
11. Move the power switch to **ON**. The CP switches to **Stand By** mode. In this mode:



The **Power** LED is green.



The **Communication** LED is red.

In some cases, such as when the CP is pre-configured, the ring around the **EMERGENCY CALL** button is blue.

2.4. Wall Mounting the CP

The CP can be placed on a tabletop or mounted on a wall with screws.

To mount the CP on a wall:

1. Prepare the following equipment:
 - A drill with a standard bit
 - Two 3 X 35 DIN 7982 C screws and wall anchors:
 - A standard Philips screwdriver
2. Choose a flat, smooth, non-concrete wall.
3. Determine the height at which you want to mount the CP. This is usually the eye level of the resident when seated.
4. At the desired height, drill two holes 7.5 cm (2.95 inches) away from each other horizontally. Ensure that they are level.
5. Screw the screws into the holes, leaving a space of a few millimeters between the wall and the screw heads.
6. Remove the back cover of the CP.
7. Align the screw mount holes on the back cover of the CP over the screw heads.
8. Slide the back cover down gently until the screws lock in place.
9. Reattach the CP to the back cover.

2.5. Configuring the CP Parameters

CP parameters are pre-configured to manage and control the CP and the peripherals associated with the CP. If required, use the Care@Home™ CMS application to adjust the configuration for the requirements of the resident and the resident's family.

Refer to the CMS documentation for the version of Care@Home™ installed in the resident's premises:

- **PERS:** ESUG05071 Care@Home PERS CMS User Guide
- **Pro or Family:** ESUG05074 Care@Home CMS Reference



NOTE: To receive power fail notification, the CMS **Mains Failure** CP parameter must be enabled.

3. Operating the CP

The CP is the core of Care@Home™, communicating with the various peripherals to monitor a resident's activity, triggering emergency and safety alarms, acting as a speakerphone, and enabling emergency conversations and remote call-in. In addition, the LEDs on the CP light up to display helpful information.

3.1. Monitoring a Resident – PRO and Family

The **PRO** and **Family** solutions allow the monitoring of a resident's activities with a variety of detailed reports based on an analysis of the information collected by the peripherals. For information, refer to ESUG05050 Care@Home Caregiver User Guide.

3.2. Monitoring a Resident - PERS

The **PERS** solution allows the monitoring of residents with the following features:

- Activity Timer
- Inactivity Timer

3.2.1 Activity Timer

The activity timer feature is configured with the CMS application, creating time slots during which resident activity is checked by asking the resident to press the **RESET** button.

- When the activity timer is enabled, the **Activity** LED is a steady blue
- Fifteen minutes before the end of the session, the CP reminds the resident to press the **RESET** button, and the **Activity** LED is a blinking blue

If no activity is confirmed during the session, the CP sounds an announcement that the activity timer has expired and an activity event is reported to the monitoring station.

3.2.2 Inactivity Timer

The inactivity timer feature is configured with the CMS application, creating time slots during which resident activity is checked using the sensors on the premises. The CP provides no visual or audible indications to the resident of an inactivity timer operation.

The CP communicates with the monitoring station when no activity is detected.

3.3. Emergency Alarms

Emergency alarms are triggered by pressing the **EMERGENCY** button on the CP.

In addition, an emergency alarm can be triggered by the following devices:

Device	Description
Emergency Pendant Advanced (ES700EPA)	An emergency panic button with fall detection capability, worn by the resident. Alarm triggered by pressing the panic button, or when a fall is detected.
Emergency Pendant (ES700EP) Emergency Pendant Plus (ES7000EPP) Emergency Pendant Advanced - BC (ES7000EPA – BC)	An emergency panic button, carried or worn by the resident. Alarm triggered by pressing the panic button.
Voice Panic Detector (ES700VPD)	Stationary emergency panic button with active voice detection. Alarm triggered by pressing the panic button, pulling out the cord, or calling out the trigger phrase.

In response to an emergency alarm, the CP communicates with the monitoring station.

3.4. Safety Alarms

Environmental situations, detected by the peripherals, can trigger the CP to sound the following alarms:

- **Water leakage** – triggered by a flood detector
- **Extreme temperature** – triggered by any of the peripheral devices
- **Fire** – triggered by a smoke detector

The ES700SK2 smoke detector features an internal siren which sounds in addition to the CP alarm if smoke is detected.



NOTE: For compliance with the UL 985 and ULC-S545 standards, the ES700SK2 smoke detector must be part of Care@Home™.

3.5. Speakerphone

The CP can be configured to function as a speakerphone only for incoming calls. The speakerphone does not function if the CP is running on a backup battery. The speakerphone feature can be disabled by the monitoring station.

When the CP rings, the resident can:

- Press the **EMERGENCY** button to initiate a full-duplex conversation
- End the call by pressing the **EMERGENCY** button again



NOTE: The Care@Home™ Voice Panic Detector (VPD) has a voice extender capability which also allows the call center of the monitoring station or caregiver to communicate with the resident. Refer to ESUGSC018 Care@Home VPD User Guide.

3.6. Emergency Conversation Flow with the CP

The CP supports the following types of conversation flow:

- **Half-Duplex:** only one party can speak at a time. In this mode, DTMF control is supported. Refer to 3.6.1 Half-Duplex Conversation Flow on page 16.
- **Full-Duplex:** both parties can hear and speak at the same time. The call center operator can use telephone keypad numbers **1** or **3** (or as otherwise configured) to switch to half-duplex.



NOTE: To configure the keypad assignments, or the **Conversation Mode** parameter, refer to the Care@Home™ CMS documentation for the version of the Care@Home™ system installed on the resident's premises.

3.6.1 Half-Duplex Conversation Flow

When a resident presses the **EMERGENCY** button on their CP, the CP connects to the call center of the monitoring station. A call center operator responds by managing the half-duplex conversation flow with the CP, using the telephone keypad. The conversation flow begins with the operator speaking to the resident.

The following table describes the half-duplex conversation flow triggered when the call center operator presses the telephone keypad.

Table 1: Half-Duplex Conversation Flow

Keypad Number	Action	CP Action
1	The operator speaks to the resident	Disables the CP microphone and enables the CP speaker. ■ The Power LED is green (On) ■ The other LEDs are off 
3	The operator listens to the resident.	Enables the CP microphone and disables the CP speaker. ■ The Power LED is green (On) ■ The Communication and RESET LEDs are orange ■ The Trouble LED is red ■ The Activity Timer ring is blue (On) 
2	Increases the speaker volume.	Increases the speaker volume one level. There are five volume levels.

Keypad Number	Action	CP Action
0	Lowest the speaker volume.	Lowest the speaker volume one level. There are five volume levels.
9	Disconnects the operator's call to the resident's CP.	Disconnects call.

The following table shows the additional default DTMF codes which apply if Care@Home™ has a VPD with voice extender capability. Refer to ESUGSC018 Care@Home VPD User Guide.

Table 2: Half-Duplex Conversation Flow with VPD Voice Extender Capability

Keypad Number	Action	CP Action
6	Transfers the call to the next device in the loop of VPD and CP devices.	CP announces: ■ When talking to CP: "Now talking to Control Panel" ■ When using VPD and device location is known: "Now talking to <location>" ■ When using VPD and device location is unknown: "Now talking to VPD <device ID>"
5	Transfers a call that had previously been to a VPD to the CP.	CP announces: ■ "Now talking to Control Panel"



NOTE: DTMF keypad assignments can be configured in the CMS application. Refer to the Care@Home™ CMS documentation for the version of Care@Home™ installed on the resident's premises.

3.7. Making a Remote Call-In

The **Remote Call-In** feature is configured with the CMS application and enables the operator or the caregiver to call into the resident's home via the CP, without the CP sounding or otherwise alerting the resident.

The operator or the caregiver can use the **Remote Call-In** feature to try and verify a resident's status when, for example, no activity is detected in the resident's home, or there is some concern about the resident.

The emergency conversation flow is always half-duplex. Refer to 3.6.1 Half-Duplex Conversation Flow on page 16.

Refer to the Care@Home™ CMS documentation for the version of Care@Home™ installed on the resident's premises.

To make a remote call-in:

1. Call the resident's CP, using either the CP landline or the CP cell phone number. Wait for the configured number of rings. The CP answers automatically.
2. Press "*" and enter the four-digit DTMF code.



NOTE: The default DTMF code is 1234. It is recommended to check if the code has been changed.

3. Manage the half-duplex conversation. Refer to 3.6.1 Half-Duplex Conversation Flow on page 16.

3.8. CP LEDs

The LEDs on the CP display important information about the CP operation.

Table 3: CP LEDs

LED	Display	Description
Power	 Green	■ ON – AC power connected ■ Blinking – Battery operation ■ OFF – No power or in sleep mode

LED	Display	Description
Communication	 Green	■ ON – Communication available ■ Blinking – Active transmission
	 Red	■ ON – Communications failure: ● Cellular version: no SIM card, loss of cellular network, or GSM connectivity test failed ● Ethernet version: Ethernet unavailable ● PSTN version: PSTN line unavailable ■ Blinking – Blocked transmission
	 Orange	■ ON – An active voice window following an emergency call ■ ON – GSM connectivity test is running
RESET	RESET Orange	■ ON (for three seconds) – Button pressed
Trouble	 Red	■ ON and CP beeps – CP or peripheral malfunction, or lost communications with the monitoring station ■ Blinking and CP beeps – Peripheral supervision lost or low battery power NOTE: To stop the beeps, press RESET
Activity Timer	 Blue ring	■ ON – Activity timer is on ■ OFF – Activity timer is off ■ Blinking – Activity timer expires in less than 15 minutes
EMERGENCY CALL	 Red	■ ON – Message acknowledged ■ Blinking – Alert in progress

4. Removing Peripherals -PERS Only

When a peripheral paired with the CP, such as an EP, is lost, the monitoring station continues to receive messages from the CP about the peripheral until the peripheral is removed from the CP. In such a case, it is recommended to remove the peripherals from the CP.



NOTE: All peripherals are removed. Therefore, you must again pair all the peripherals with the CP.

To remove the peripherals from the CP:

1. Press the **PAIRING** button, and hold for five seconds.
2. Press the **RESET** button, and hold for five seconds. A vocal message from the CP instructs you to press the **PAIRING** button to remove all peripherals.
3. Press the **PAIRING** button. A vocal message from the CP confirms that all devices were removed from the CP.

5. Maintaining the CP

CP maintenance includes:

- Testing the CP
- Software updates
- Communications maintenance
- Backup battery replacement

5.1. Testing the CP

Test the CP at least once a week.

To test the CP:

1. Turn the power switch **OFF**.
2. Wait 20 seconds.
3. Turn the power switch **ON**.
4. Wait 20 seconds and check that:



The **Power** LED is green.



The **Communication** LED is red.

If both LEDs do not display properly, contact your service provider.

5. Turn the power switch **OFF**.
6. Wait 20 seconds.
7. Remove the back cover.
8. Unplug the power adapter connector from the CP power socket.
9. Turn the power switch **ON**.
10. Wait 20 seconds and check that:



The **Power** LED is green.



The **Communication** LED is red.

If both LEDs do not display properly, contact your service provider.

11. Plug-in the power adapter connector into the CP power socket.
12. Replace the back cover.

5.2. Software Updates

When there are CP software updates, you must install the updates to your Care@Home™.

See the section on the **Remote Boot** feature in the Care@Home™ CMS documentation for the version of Care@Home™ installed on the resident's premises.

5.3. Communications Maintenance

If the CP uses cellular communications and the quality of the connection becomes unreliable, consult the cellular service provider to replace your SIM card or repair the connection.

If the CP uses Ethernet communications and the quality of the Ethernet connection becomes unreliable contact your network service provider.

If the CP uses landline (PSTN) communications and the quality of the landline becomes unreliable, consult the landline service provider.

5.4. Replacing the Backup Battery

The backup battery recharges automatically when installed in the CP and the CP is connected to AC power. The battery can continue to be recharged for up to three years.

When the CP reports **Low Battery** for the CP, the battery is not recharging. Replace the CP battery.



Caution: A new battery can cause damage if it is incorrectly installed. Be careful to replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries responsibly.

6. Specifications

The following table lists the CP technical specifications.

Table 4: Technical Specifications

Item	Data
Part Number	ES7502HC
Weight	1.23 lb. (0.56 kg), including adapter and battery
Dimensions (H x W x D)	152 x 152 x 71 mm - 6 x 6 x 2.8 in.
Main Power	100-240 VAC, 50/60 Hz, 500 mA
Backup Battery	One Li-Po, 3.7 V, 1400 mAh (North America) or one 2800 mAh (Europe) 24-hour backup Rechargeable with three-year battery life
Reporting Modes	Cellular model: ■ SIA IP ■ DC – 09 ■ SCAIP ■ Voice Signaling ■ Debug Printing Ethernet model: ■ SIA IP ■ DC – 09 ■ SCAIP ■ Voice Signaling ■ Debug Printing PSTN model: ■ SIA ■ Contact ID ■ CPC

Item	Data
	■ Voice Signaling ■ Debug Printing ■ 4x2 ■ BS 8521:2009
Frequency	FSK modulation: ■ 869.225 MHz, 868.3 MHz (Europe and China) ■ 916.5 MHz (North America and Australia) ■ 800 MHz (Israel)
Communication Channels	Three different models: PSTN, cellular or Ethernet
Color	White and gray
Backup Battery	One Li-Po, 3.7 V, 1400 mAh (North America) or one 2800 mAh (Europe) 24-hour backup Rechargeable with three-year battery life
Peripheral Devices	Up to 64 peripheral devices can be assigned.
Operating temperature	32°F to 120°F (0°C to 49°C)

Item	Data
Compliance	CE, FCC, IC, UL, cUL EN 60950-1 EN 301 489-1 & EN 301 489-3 EN 300 220-1 & EN 300 220-2; Receiver sensitivity: -108 dBm EN 50130-4 EN 50130-5 Environmental Class I EN 50134-2, EN 50134-3, and 50134-5 EN 50136-2:2013 Category C (D3,M3,T1,A1,S0,I0) Operation Mode-Pass-Through PSTN model: ANSI/TIA-968-B - Terminal equipment standard Cellular model: AT&T and PTCRB compliance EN910-EUR – Compliant with Global Connection (GCF) requirements, as well as the Global System for mobile communications standard EN 301 511.

NOTE: 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.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Essence Security International Ltd.) could void the user's authority to operate the equipment.

WARNING! To comply with FCC RF exposure compliance requirements, the device should be located at a distance of at least 20 cm from all persons during normal operation. The antennas used for this product must not be co-located or operated in conjunction with any other antenna or transmitter.

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

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

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