

User Guide

Mobile Broadband

SCU3 Series Control Unit

SAH3 Series Accessory Hub

VCU Vehicle Control Unit

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About this Guide

The User Guide describes how to set up and use the broadband mobile solution. Practical examples of application uses are also described, and can be used to test and operate the system.



For information about the physical installation of the SCU/SAH3 and VCU, refer to:

- SPR-DOC-04560 Mobile Broadband Control Unit Compact Installation Guide (supplied)
- SPR-DOC-04539 Mobile Broadband Control Unit Full Installation Guide (online)
- SDM Help

To view, download or print the Mobile Broadband Control Unit Full Installation Guide, visit:



<https://ic.sepura.com/login>

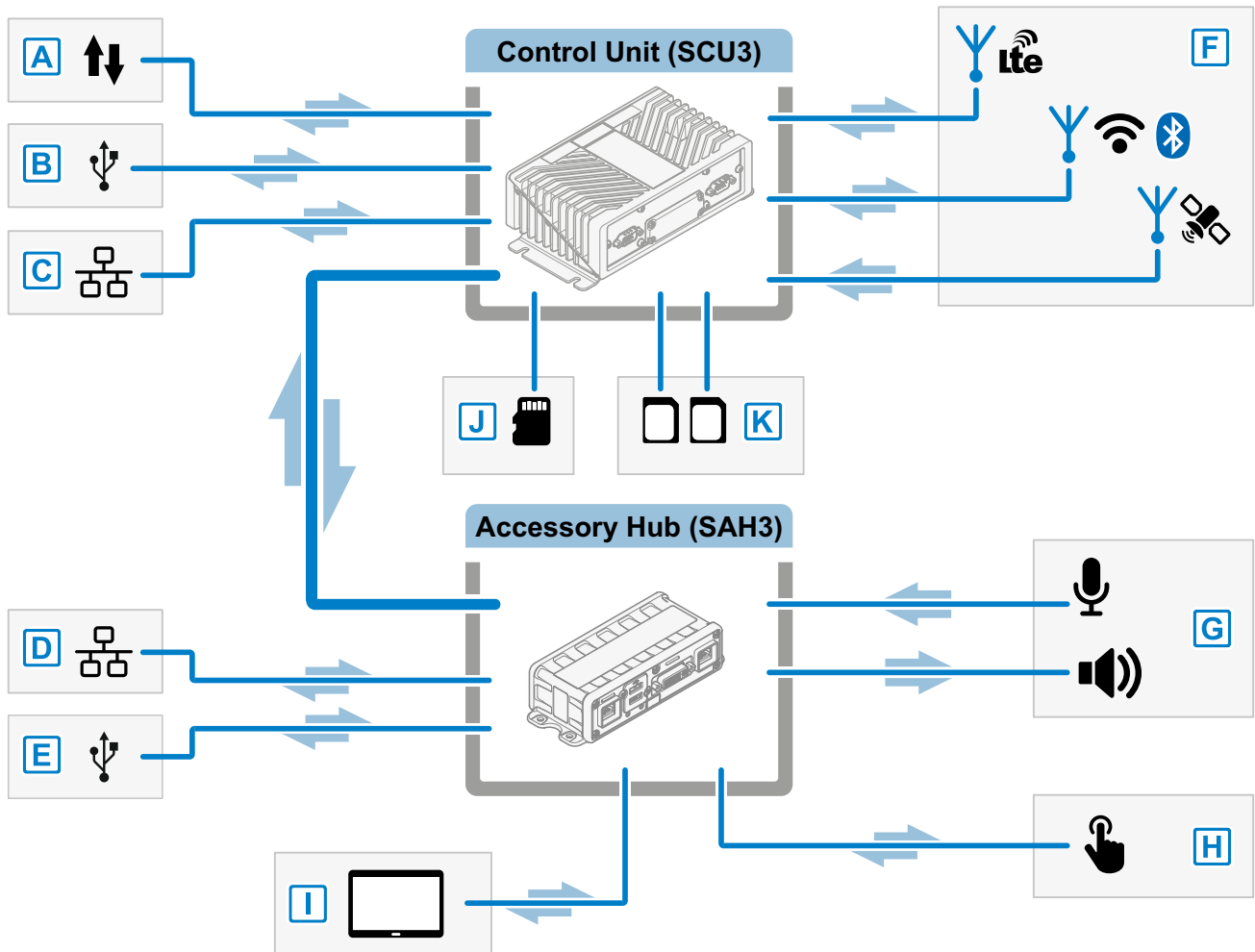
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System Overview

The broadband mobile installation consists of a main control unit (SCU3) connected with an accessory hub (SAH3).



A	Digital I/O	Configurable I/O lines for external control functions
B	USB (SCU3)	USB accessories
C	Ethernet (SCU3)	Ethernet connections - ETH1 and ETH2
D	Ethernet (SAH3)	Ethernet connection - ETH3
E	USB (SAH3)	USB accessories
F	Antennas	LTE, Wi-Fi / Bluetooth and GNSS antennas
G	Audio	Microphone and loudspeaker
H	Control	PTT or VCU accessories
I	Visual Interface	Touchscreen display
J	External Storage Card	Micro SD card
K	SIM Cards	Micro SIM cards - SIM1 and SIM2

The SCU3 User Interface

When the SCU/SAH3 and VCU physical installation is completed, you can start using the SCU3. The following sections assume:

- Appropriate SIM and SD cards have been inserted into the SCU3
- All connections have been made to the SCU3 and SAH3 and the system is powered on
- The touchscreen is on and the Android system has booted up

The Android User Interface

The touchscreen interface of the SCU3 uses the standard Android user interface, making it easily accessible to anyone who is familiar with a smartphone or tablet based on this operating system.

The Android operating system makes accessing relevant information as easy as possible. It also maintains flexibility in the applications and settings available to the end user.

Customisable Homescreen

The Android homescreen provides a number of customisation options to allow placement of commonly used applications and widgets which display key information dynamically.



The user can choose how many applications and widgets are displayed and whether single or multiple homescreen panes are used to separate applications or data.

The user can add and remove any applications installed on the homescreen. Applications are accessible with a single touch screen interaction. It is also possible by default to automatically place applications on the homescreen when they are installed.

To customise the homescreen, long press on free space to access a sub menu to:

- Add widgets
- Change wallpaper
- Access homescreen settings

App Drawer

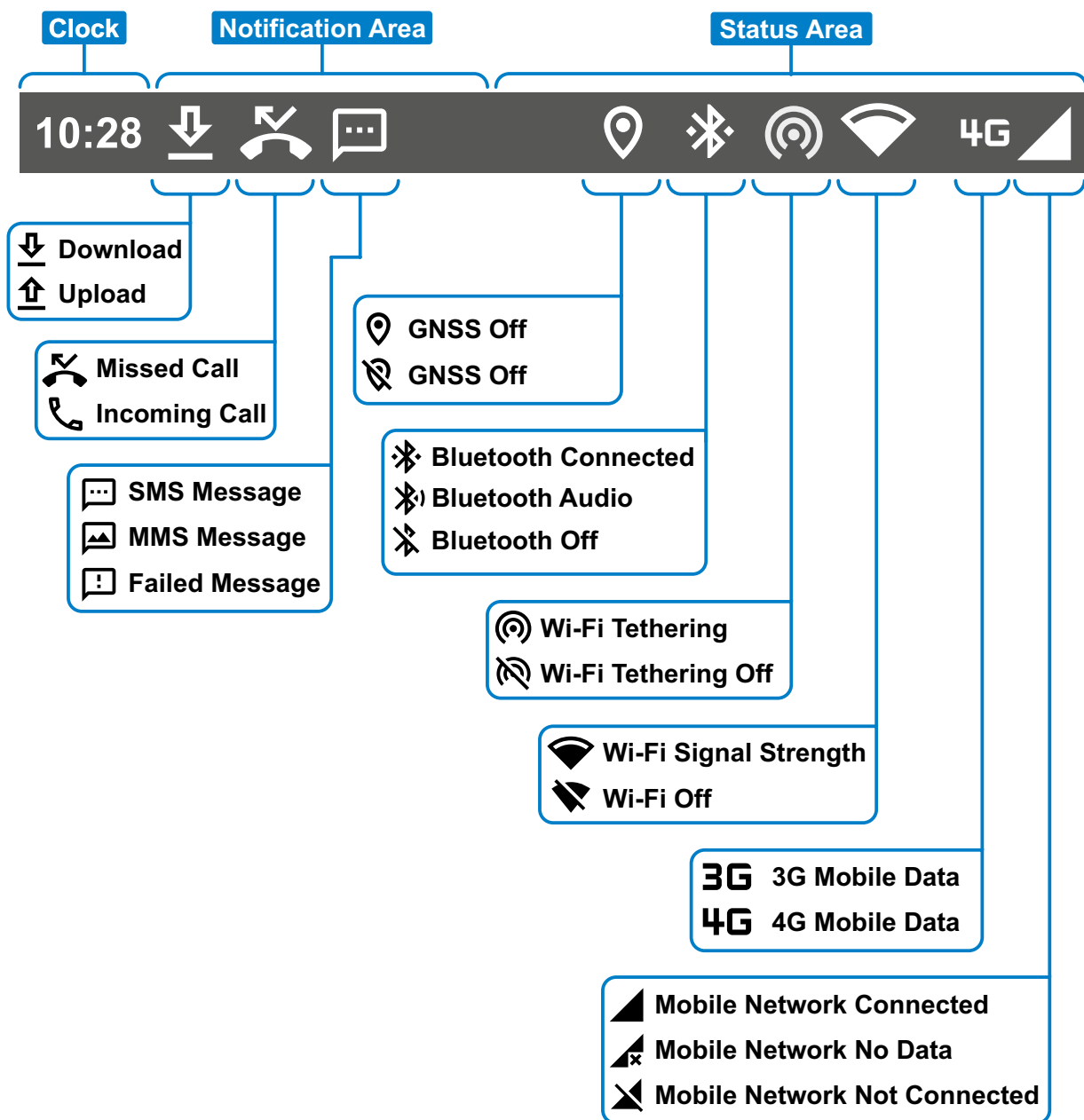
The Android Operating system supports the use of third party applications which provide endless possibilities in terms of functionality.

Swiping up on the homescreen provides access to the App drawer where all applications are stored.

The App drawer contains a thumbnail list of all the available installed applications on the SCU3. A long press on an App in the drawer will allow it to be added to the available homescreen pane or panes.

Notification and Status Bar

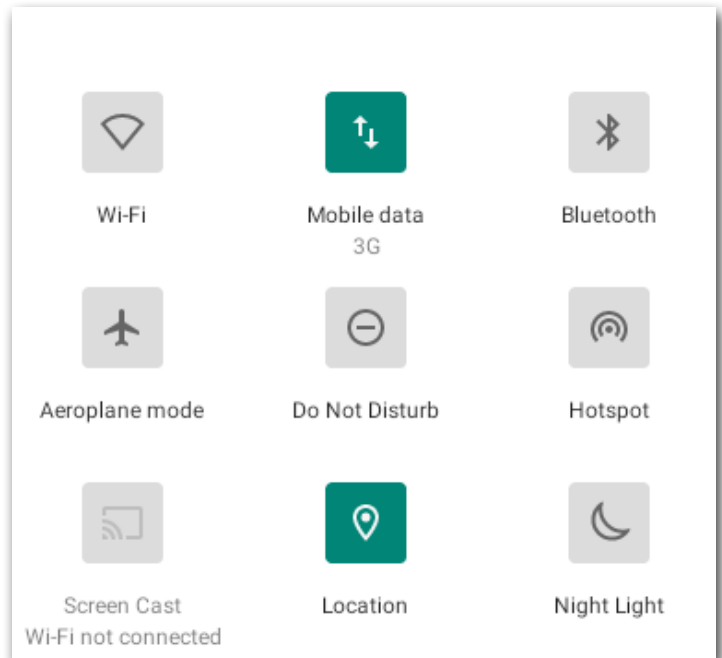
The android notification and status bar is a dynamic real time representation of the current status of the device. The bar is divided into key areas to clearly display information using icons. The diagram below describes the function of commonly displayed icons when using the SCU3:



Android Quick Settings

Android quick settings allow key functions of the platform to be accessed using a single swipe. Swiping down from the top of the homescreen allows access to the Quick Settings pane. This pane can be configured by the SCU3 user to show a number of shortcuts which control key Android functionality.

The Android Quick Settings menu also shows status messages received by the device, which allows access to notifications.



Multi-Language Support

Android offers Multi language and local support. The SCU3 currently supports:

- Arabic
- Danish
- Dutch
- English (American & UK)
- French
- Finnish
- German
- Greek
- Italian
- Norwegian
- Spanish (including Catalan)
- Swedish

User-Selected Languages

The SCU3 can be configured with a selection of multiple languages in a priority list from which the user can choose to work with. This is particularly useful for organisations with multiple language requirements, where for example the end user requires the UI to display Arabic text, whilst programming technicians require English text.

Installing Applications

The SCU3 does not have Google approval, meaning there is no access to Google Mobile Services (GMS) and the Google Play Store. Therefore, any applications which need to be installed must be uploaded via a device management solution such as the Sepura Device Manager and applied through a device profile.

For more information see the section "Sepura Device Manager" on page 31.

Control Accessories

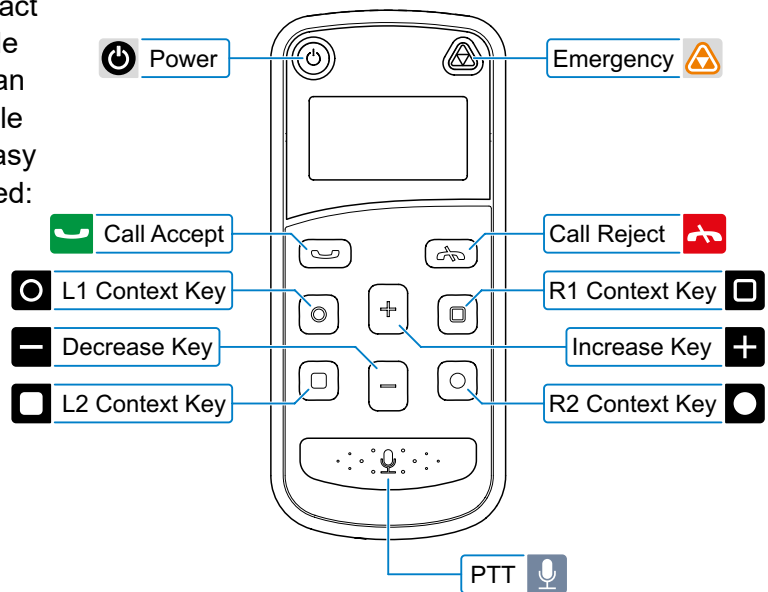
Control accessories are available to connect to the system, via the Accessory Hub (SAH3). Depending on the accessory and configuration applied, key functions such as answering calls and adjusting audio volume can be performed. Power and PTT functionality are also available.











Vehicle Control Unit (VCU)

The VCU is typically installed within easy reach of the user. It provides access to critical functionality via illuminated keys and a visual display. It can be used in conjunction with the main touchscreen interface or completely independently.

Key Functions


The VCU is equipped with 11 keys to interact and control various system functions. While some keys have a fixed function, others can be configured to perform specific or multiple functions. All the keys have symbols for easy identification, with critical ones colour coded:



	Power	Press to power on/off the SCU3
	Emergency	Press to make an emergency call
	Call Accept	Press to accept an incoming call (VoLTE or VOIP)
	Call Reject	<ul style="list-style-type: none"> • Short-press to reject an incoming call or end the current call (VoLTE or VOIP) • Short-press to return to a previous screen • Long-press to the top level screen
	Increase / Decrease	Press to perform functions such as: <ul style="list-style-type: none"> • Adjust audio volume • Adjust the display brightness • Change the Talkgroup
	L1 Context	Configurable function key
	R1 Context	Configurable function key
	L2 Context	Configurable function key
	R2 Context	Configurable function key
	PTT	Press (and hold) To Talk - For use with apps such as Zello

Powering the System On and Off using the VCU

Powering On

1. To power on the system (SCU3 and connected SAH3), press the Power key. 
2. The Sepura logo is displayed on the screen until the SCU3 has fully booted up.



Powering Off

1. Press and hold the Power button until the on-screen message is displayed:
2. Either:
 - (a) Press the red Reject button to cancel the power off.
 - (b) Press the green Accept button to confirm the power off and shutdown the SCU3.



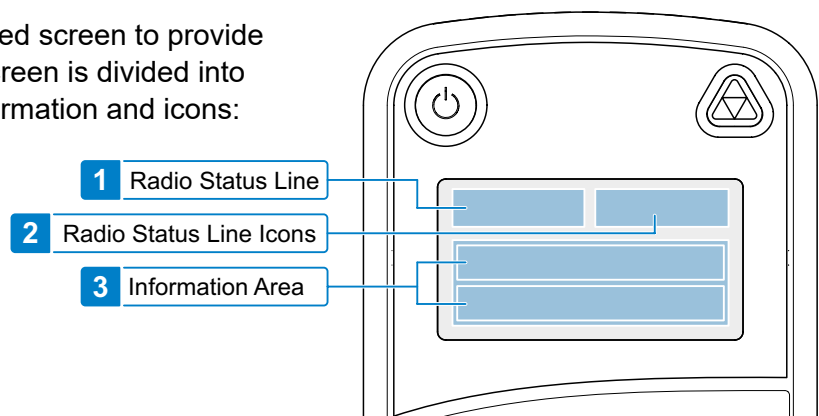
SCU3 Power
Shutdown SCU3?









SCU3 Power
Shutting down...

Visual Display Screen

The VCU is equipped with an illuminated screen to provide the user with a visual interface. The screen is divided into three areas for displaying different information and icons:



Display Area	Use
1 Radio Status Line	Shows the current system status or indication of the menu being displayed.
2 Radio Status Line Icons	Icons indicating the current system operating status: <ul style="list-style-type: none">  Cellular network signal strength indicator  Current network type  Wi-Fi network signal strength indicator  Bluetooth  Incoming call  Outgoing call
3 Information Area	Displays currently selected talkgroup or menu information (volume, brightness, talkgroup change, etc).

VCU Illumination Modes

The VCU has pre-set modes to either dim or switch off the screen and illuminated keys. This can be useful to avoid the bright illumination of the VCU being a distraction when it is not in use. There are two modes:

Mode	Mode entered when:	Screen illumination	Keypad illumination
Idle	The currently configured idle time has been reached	Dims to 1%	Illuminates to the currently configured keypad idle brightness
Dark	The Power key is short-pressed	Off	Off



Note: In both Idle and Dark modes, the VCU remains fully operational. The modes are exited when any key is pressed.



Note: Idle time and brightness is configured in the Sepura Settings app. For more information see "VCU Settings" on page 13.

Adjusting the VCU Screen Brightness

The VCU screen brightness level can be adjusted if a context key has been configured to perform the function.

1. Press the context key configured to adjust the brightness.
2. A screen is displayed representing the current brightness level.
3. Use the Increase/Decrease keys to adjust the brightness level.



After adjustment, the screen either times-out or is cleared by pressing the red Reject key.



Note: Keypad brightness can only be adjusted in the Sepura Settings app. For more information see "VCU Settings" on page 13.

Adjusting the System Audio Levels using the VCU

The Increase/Decrease keys are used to adjust audio levels. The current operating mode dictates which Audio setting is adjusted:

Current Operating Mode	Plus/Minus Keys Function
Top level screen (idle)	Adjusts the ring volume
In a call	Adjusts the voice call volume
In a call with a Bluetooth audio accessory connected	Adjusts the Bluetooth audio volume

When the Increase/Decrease keys are pressed to adjust the volume. A screen is displayed representing the current volume level, and audio feedback is also provided.

After adjustment, the screen either times-out or is cleared by pressing the red Reject key.



Making a Group Call with the VCU



Note: For more information about using an example PTT application, see the section "Using Zello PTT" on page 20.

When a PTT application is installed, the user can transmit audio messages to the current Talkgroup users.

Use the PTT button on the VCU to:

- Initiate a group call by pressing the PTT button when a talkgroup is already selected in the application*
- Participate in an existing group call by pressing and holding the PTT button while talking when the floor is free and releasing the PTT when complete

*Talkgroup selection can be performed on the touch screen connected to the SCU3 or by using the talkgroup selection menu.

When in a call or while making a call, the screen indicates the currently selected talkgroup in the Information area.

The current call status is indicated on the radio status line:



Incoming Call

Indicates the user has received a call



Outgoing Call

Indicates the user has initiated a call

Making and Handling Phone Calls using the VCU



Note: For more information about making phone calls using the main touch screen and using the Contacts app, see the section "Making a Phone Call" on page 19.

The VCU can be used to handle incoming and outgoing phone calls on the connected SCU3.

The Call Accept green key can be used to:



Answer an incoming call

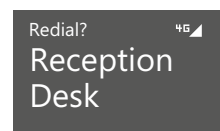
When receiving an incoming call, the user can decide to accept the call based on the caller ID or number of the incoming call.



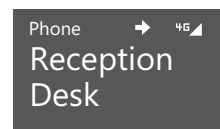
**Redial the last received/
called number**

This function only applies if a call has previously been made or received:

1. Press the key to retrieve the last number or contact (see note below).



2. Press the key again to make the call.



Note: If there is no previous number or contact available to redial, the VCU displays "No Caller Id" on the screen.

A short press on the Call Reject red key can be used to:



End the current call

Ends the call and clears the VCU screen.



Reject an incoming call

Reject a call based on the caller ID or if it is currently inconvenient to accept the call.



Note: When initiating or participating in a telephone call, the VCU screen shows “Phone” on the radio status line.

Making an Alarm Call using the VCU

An alarm or emergency call can be made using the VCU if:

- An application is installed with an alarm call function capability and is configured correctly
- The application is currently active and in use on the SCU3

To make an alarm call, press and hold the Emergency key to trigger the call.

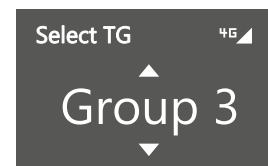


While in the alarm call, the screen shows the other party caller ID or number configured as the emergency contact.

Selecting a Talkgroup using the VCU

The VCU can be used to select a Talkgroup if an application capable of this function is installed and active. A context key must be configured to perform the function.

1. Press the context key configured to select a Talkgroup.
2. A screen is displayed with the current Talkgroup.
3. Use the Increase/Decrease keys to scroll to a different Talkgroup in the list.



4. Press the green Accept key to select the new Talkgroup or the red Reject key to return to the previously selected Talkgroup.

Screen Stacking and Navigation

As the VCU is operated, many feature screens which have been opened by the user remain available in a stack. The user can navigate back through the stack to a previous feature screen, using a short press on the Call Reject red key. The feature screens also close if there is no activity within the set time-out period:

Screen	Added to the stack?	Screen time-out in?	Returns to the previous screen with short press of the Red key?
Top Level	N/A	N/A	N/A
Talkgroup	✓	5 Secs	✓
Cellular Call	✓	N/A	✗
Volume Control	✗	1.5 Secs	✗
Brightness Control	✗	5 Secs	✗
SCU3 Power Off	✓	5 Secs	✓



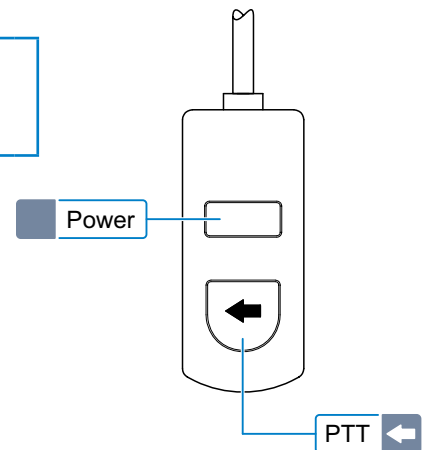
Note: Return to the top level screen at any time using a long press on the Call Reject red key.

PTT Switch

The PTT Switch is typically installed within easy reach of the user. The unit is equipped with two keys for PTT and power control.



Note: The PTT button on the PTT Switch may need to be mapped as a PTT button in some applications, such as Zello.



Basic System Configuration

Basic system configuration and checks can be performed directly using the SCU3 to set up the display, audio and basic data connections to networks and other devices.

Displays

The SCU3 can be used with either one display or two connected displays with the same display specifications. The content and controls (if touchscreens are used) on one display is mirrored on the second. The displays can be connected to:

- DVI1 and DVI2 ports directly
- DVI1 port via the Accessory Hub and DVI2 port directly



Important: The behaviour of the second display cannot be guaranteed when Display 1 is not connected.

The two displays must be set to the same aspect ratio.

The display connected to DVI1, either directly or via the SAH3 is the primary display (Display 1) which displays the Splash screen when the SCU3 is booting up. The secondary display (Display 2) does not display the Splash screen.



Important: The primary display (Display 1) must be connected before powering on the SCU3. Display 1 will not function if it is connected after the SCU3 is powered on.

The secondary display (Display 2) can be connected or disconnected at any time without affecting the operation of the SCU3.



Important: When two touch screens are connected, touch screen capabilities for both screens may not respond or cause potential confusion if the screens are operated in two separate locations (such as the front and back of a vehicle).

Display Settings

The SCU3 supports the following display standards:

Standard	Display Resolution	Aspect Ratio
720p	1280x720	16:9
800p	1280x800	16:10
XGA	1024x768	4:3

The orientation of the display can be changed as required to:

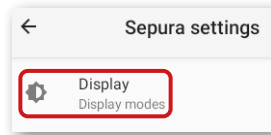
- Landscape
- Portrait
- Reverse-landscape
- Reverse-portrait

To change the display setting:

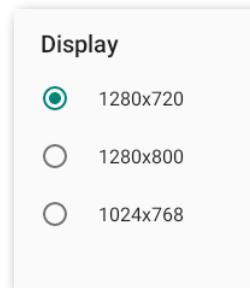
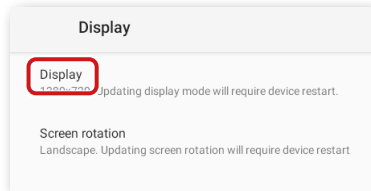
1. Tap to select **Settings** from the Android main menu screen.
2. Tap to select **Sapura Settings**.



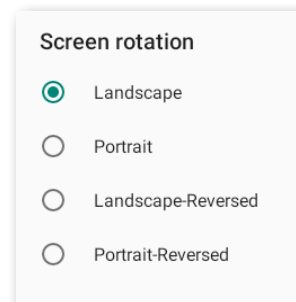
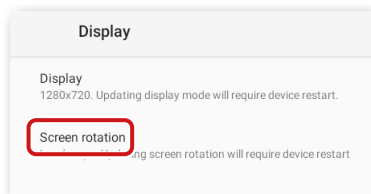
3. Tap to select **Display**.



4. To change the screen resolution, tap to select **Display** and select the required option from the list.



5. To change the screen orientation tap to select **Screen rotation** and select the required option from the list.



Note: The currently selected background wallpaper image will not display correctly if the current orientation is changed. An appropriately orientated and sized image should be selected to suit the change in orientation.

Configuration of the Display(s) in Standby Mode

When the SCU3 is in Standby Mode (power applied but not switched on), the display(s) connected can be configured to either:

- Power off
- Remain powered on



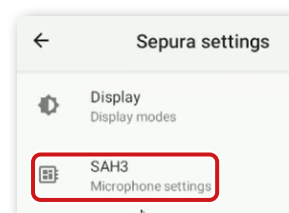
Note: If the display(s) have been configured to remain powered on, they may display an on-screen notification that no device is connected.

Microphone Gain

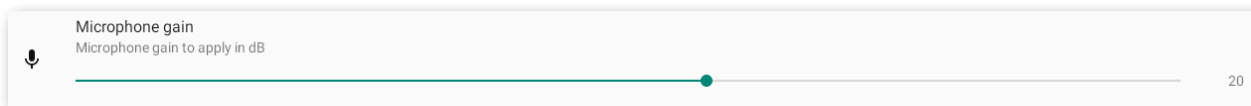
The Accessory Hub (SAH3) has an internal audio codec which can be configured to adjust the gain in dB for the microphone. This has been designed to help in environments where noise may be an issue. For a vehicle installation where background noise may be an issue, the gain can be adjusted as required within the ranges specified.

To change the display setting:

1. Tap to select **Settings** from the Android main menu screen.
2. Tap to select **Sepura Settings**.
3. Tap to select SAH3.



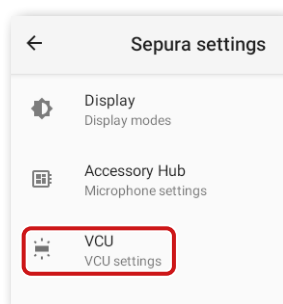
- Adjust the microphone gain as required. The range of gain adjustment is 0 to 35dB with a default of 20dB.



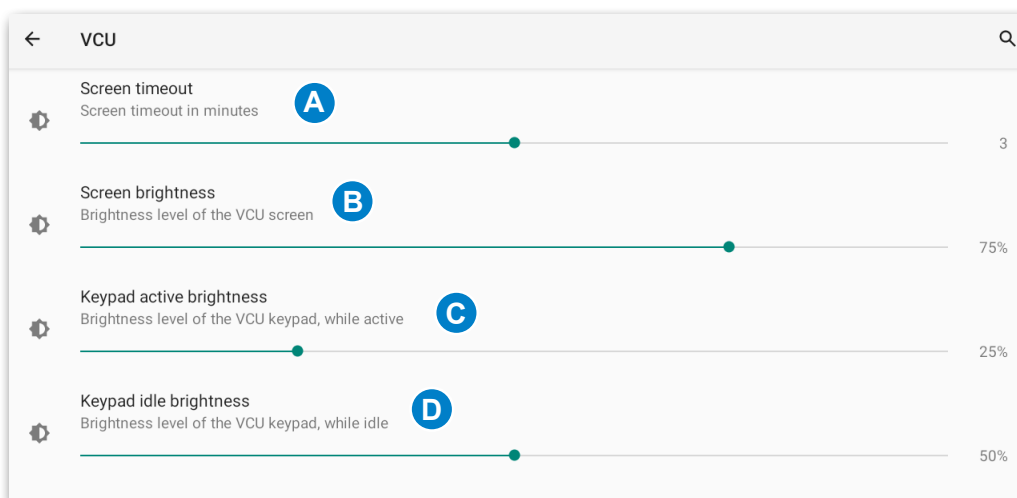
VCU Settings

Basic VCU settings such as screen and keypad brightness can be adjusted from the default values via the SCU3 interface.

- Tap to select **Settings** from the Android main menu screen.
- Tap to select **Sepura Settings**.
- Tap to select **VCU**.



- Use the slider bars to adjust specific VCU settings:

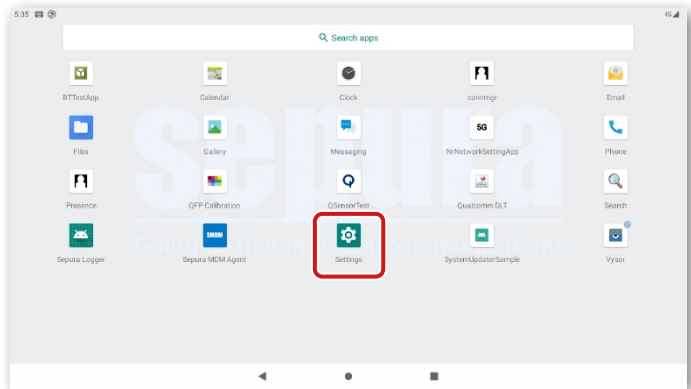


Setting	Description	Default	Range
A Screen timeout	Sets the inactive time period before the VCU screen switches off and the keypad illuminates at the idle brightness setting.	1 min	1 to 5 mins
B Screen brightness	Sets the VCU screen brightness level when the VCU is active.	50 %	1 to 100 %
C Keypad active brightness	Sets the keypad brightness level when the VCU is active.	80 %	0 to 100 %
D Keypad idle brightness	Sets the keypad brightness level when the VCU is inactive and the screen is switched off.	10 %	0 to 100 %

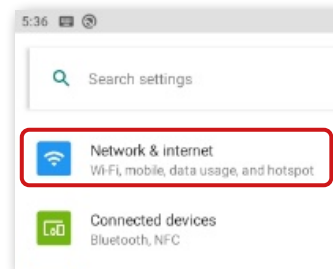
LTE Connection Checks

The user can check that the SCU3 is connected to an LTE network:

1. Tap to select **Settings** from the Android main menu screen.



2. Tap to select **Network and internet**.



3. Tap **SIM cards** and ensure any SIM card(s) inserted are active. The network mode and signal strength are also shown in the top right-hand corner of the top menu bar.



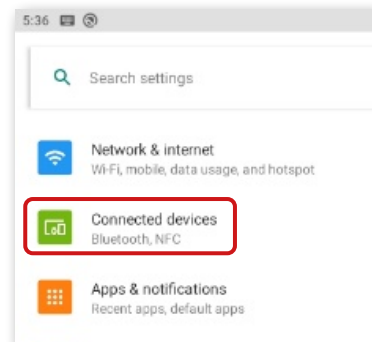
Pairing a Bluetooth Device

Bluetooth devices, such as a headset, mouse or keyboard can be connected and paired for use with the SCU3. Up to 10 paired devices are supported.

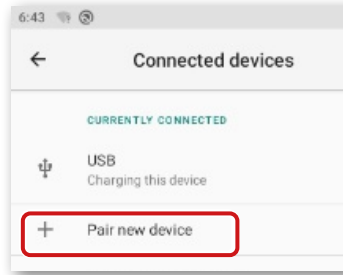
1. Tap to select **Settings** from the Android main menu screen.



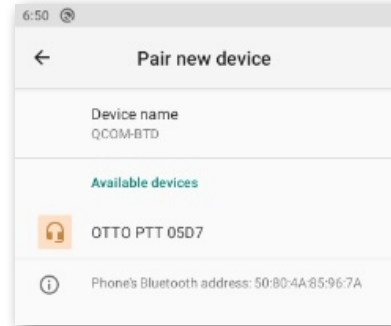
2. Tap to select **Connected devices**.



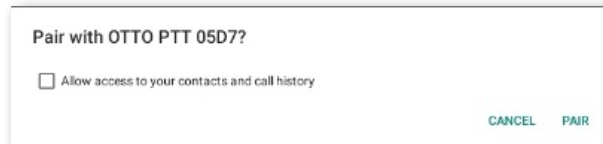
3. Tap to select **Pair new device**.



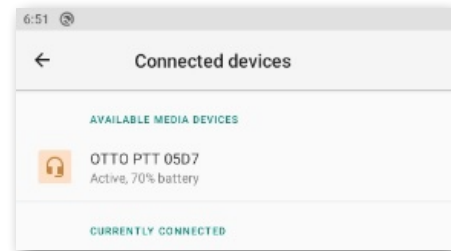
4. A list of available Bluetooth devices is displayed.



5. Select the required device from the list and follow the pairing procedure. It may be necessary to enter a PIN code.



6. The device should now be paired and ready to use.



Connecting to a Wi-Fi Network

The following section describes how to connect the SCU3 to Wi-Fi networks or access points, when they are within receiving range.

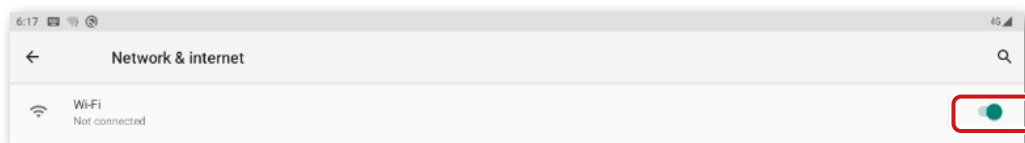
1. Tap to select **Settings** from the Android main menu screen.



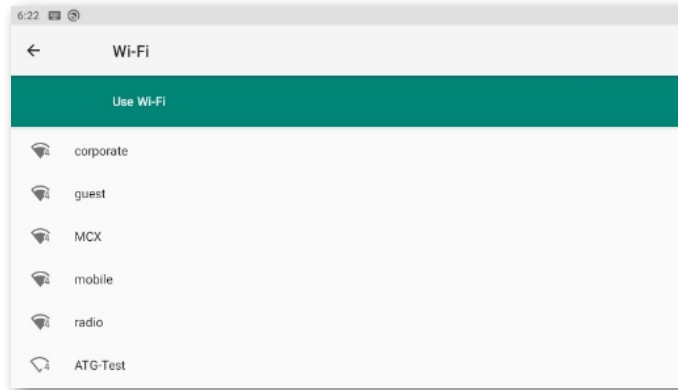
2. Tap to select **Network and internet**.



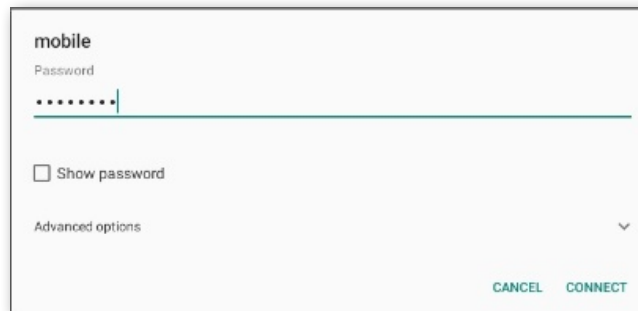
3. Tap to enable the **Wi-Fi** toggle switch.




4. Tap to select the required network from the list of available Wi-Fi networks displayed.



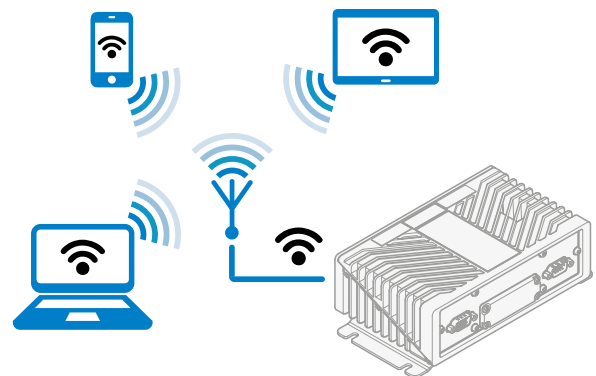
5. Enter the password for the network and tap **CONNECT**.



Tethering Third Party Devices Using Wi-Fi

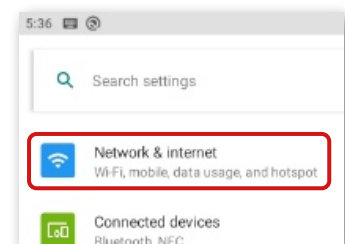
 **Important:** The SCU3 operates by default in Wi-Fi tethering mode on the 2.4GHz band.

In third party device Wi-Fi tethering mode, the SCU3 acts as a Wi-Fi hotspot, so devices such as smart phones, laptops and tablets can connect to the SCU3 remotely and use the LTE connection as an internet bearer. In this mode, the available LTE bandwidth is shared equally between devices. Android supports up to 10 devices connected simultaneously.

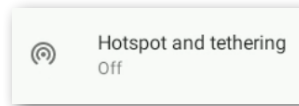


To enable Wi-Fi Tethering:

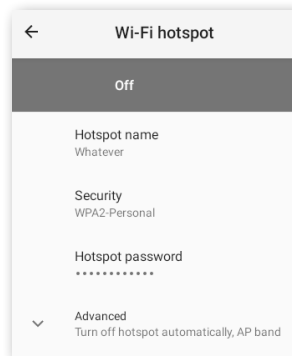
1. Open the **Settings** app from the Android main menu screen and tap to select **Network and internet**.



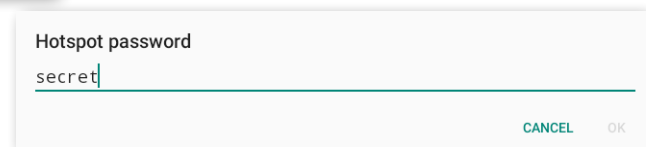
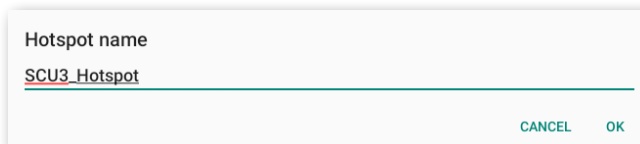
2. Tap to select **Hotspot and tethering**.



3. Tap to select **Wi-Fi hotspot**.



4. Enter a name for the access point and an optional password.



Note: The SCU3 cannot connect to Wi-Fi networks when Wi-Fi tethering mode is enabled.



Note: If other parameters are changed such as security, ensure any devices to be connected can support the chosen security method.

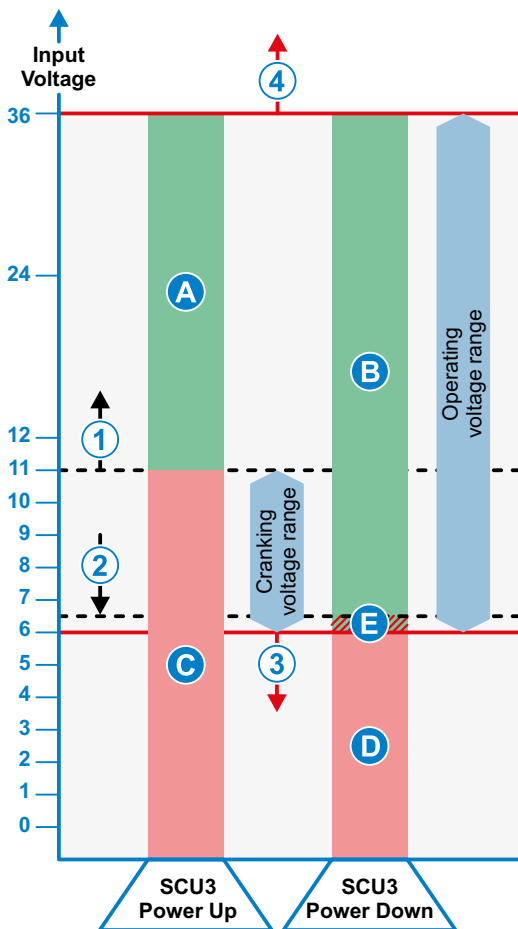


Note: Android notifies users when the access point has no internet connectivity. Users can either choose to stay connected to the access point or disconnect.

Power Management

The graphic below represents the operational behaviour of the SCU3 (and connected accessories) depending on the current status of the DC power supply.

- The SCU3 will not operate if the DC supply is currently in the **Under** or **Over** voltage ranges:
 - > **Under-voltage** - Insufficient to reliably power the system
 - > **Over-voltage** - Potential risk of damage to the system
- The Power-up and Low voltage thresholds can be configured using SDM



Voltage Ranges

- A** SCU3 powers up in this range
- B** SCU3 full power operating range
- C** SCU3 will not power up in this range
- D** SCU3 is powered off
- E** The SCU3 will power down below the Power Management Voltage Threshold, unless cranking

Voltage Thresholds

- 1** SCU3 Power-up voltage threshold*
- 2** SCU3 Low voltage threshold*
- 3** <6V Under-voltage
- 4** >36V Over-voltage

*Threshold values are configurable in SDM.



Note: The low voltage detection only applies when the system is running in Normal Mode and cranking is not detected.

Using the SCU3 and Applications

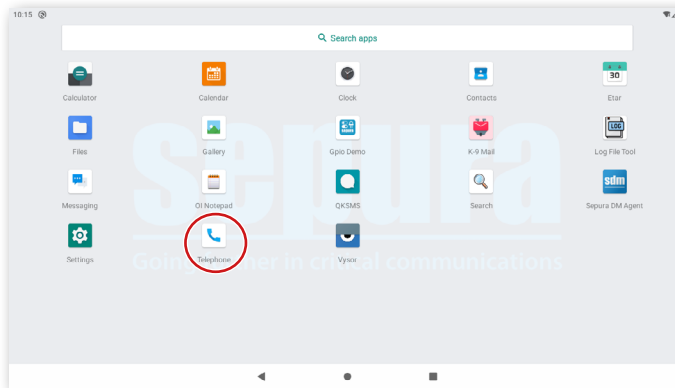
Making a Phone Call

The SCU3 supports 2G, 3G and 4G VoLTE voice calling in the same way as an Android Smartphone device.

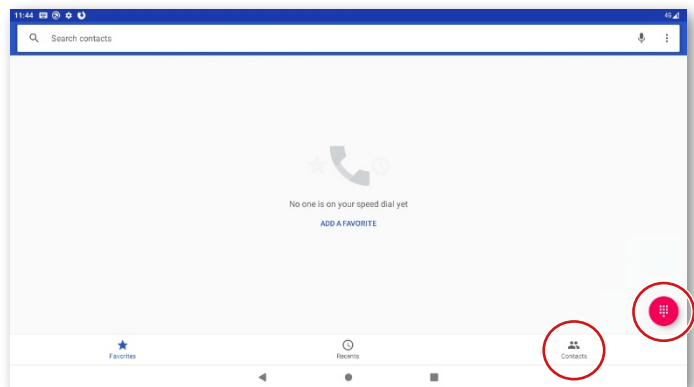
The user can launch a call either via the Contacts application or via the Phone Dialler application.

Making a Phone Call using the Dial Pad

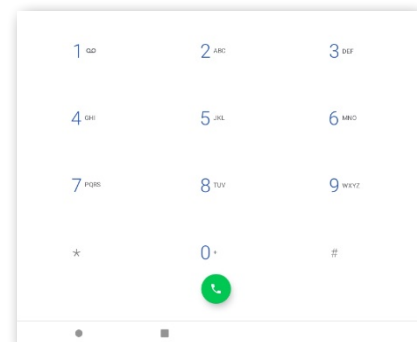
1. Open the **Phone** application from the App Drawer or homescreen main page.



2. Tap to select the **Dial Pad**.



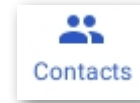
3. Dial the required number using the dial pad.
4. Press the green Phone icon to make the call.



Making a Phone Call Using Contacts

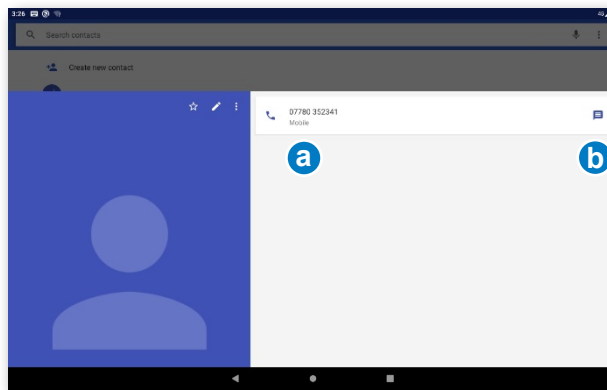
The user can access contacts stored on the device direct from the phone application.

1. Tap to select the contacts button at the bottom right of the screen.



Note: If there are already contacts stored on the device, the user can type a specific name in the top search bar.

2. A list of available contacts is displayed. Tap to select the contact to view their details.
3. Tap to select either:
 - (a) The number displayed to dial the contact.
 - (b) The speech bubble to send a text to the contact.



Using Zello PTT

Zello PTT is an application for group voice chat. It is likely that this application or similar Mission-critical push-to-talk over LTE (MCPTT) applications will be installed and used in the SCU3.

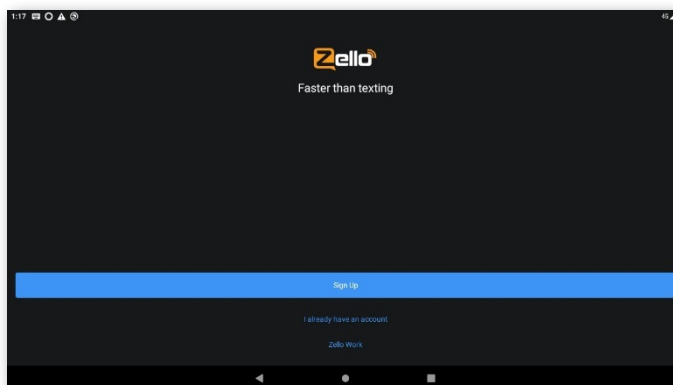


Important: Zello is a publicly available service and offers no guaranteed Quality of Service in its freely available version.

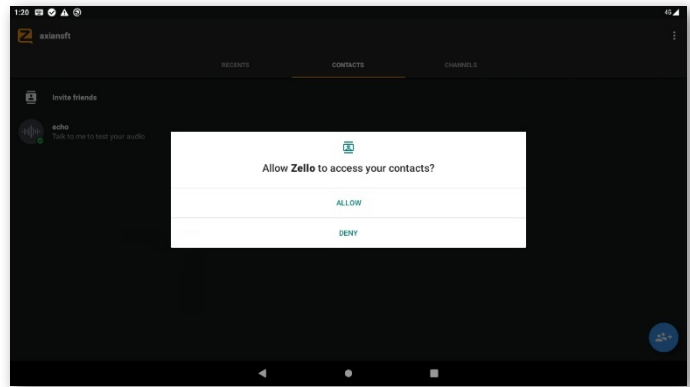
Configuring Zello

When Zello has been installed, complete the following steps:

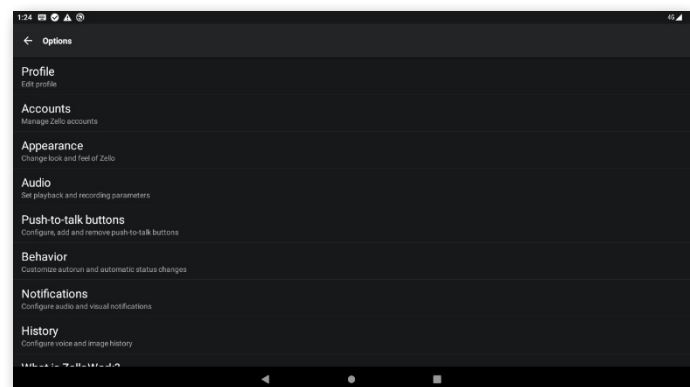
1. Open Zello from the main menu and tap to select **Signup** and create an account.



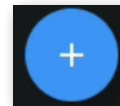
2. Accept the privacy requests from Zello to access Contacts, allow calls and have access to media and audio.
3. Enter your username, password and email address details.



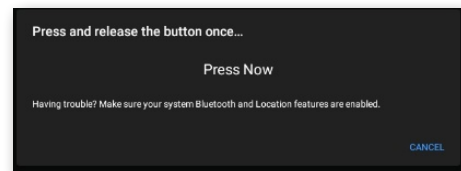
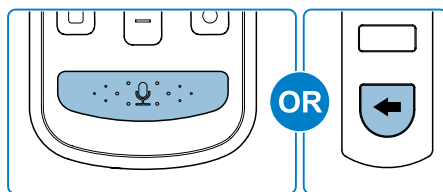
4. Open settings by tapping the three circles icon in the top right of the screen. Then select **Options** from the drop-down menu.
5. Select the **Push-to-talk** buttons menu option.



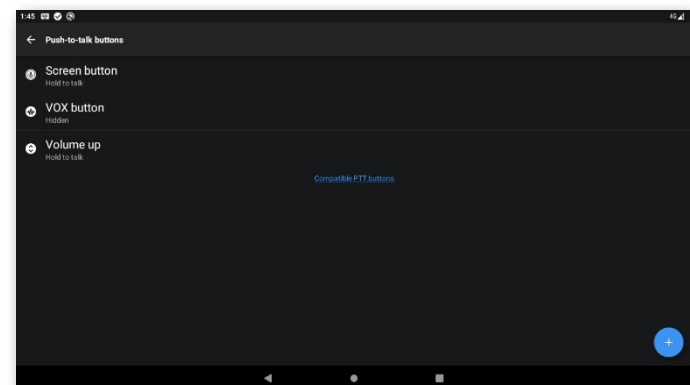
6. Tap to select the blue + icon to map a new PTT button.



7. Depending on the control accessory connected, press the PTT button on the VCU or the PTT Switch.



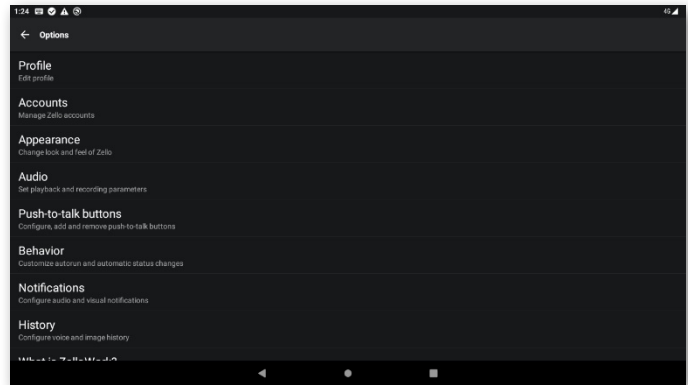
8. The PTT button will be mapped against the screen button.



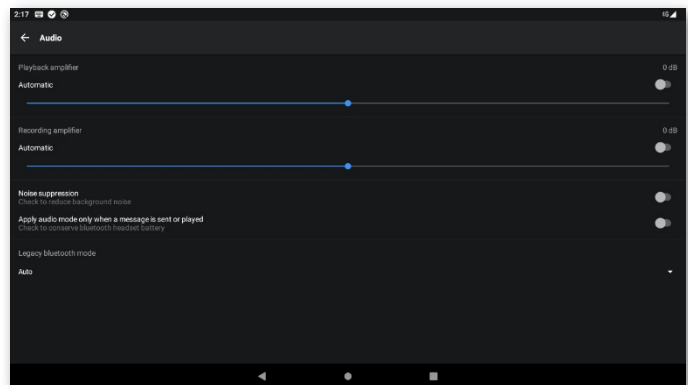
Configuring Audio Gain and Noise Suppression (Optional)

The Zello app can control microphone gain and noise suppression within the application.

1. Go to the main Zello options screen and select Audio.



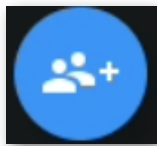
2. Adjust Recording and Playback amplifier gain in dB as required and turn noise suppression on or off as required.



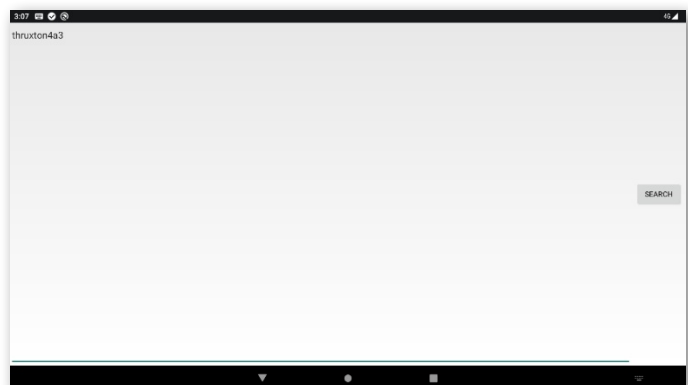
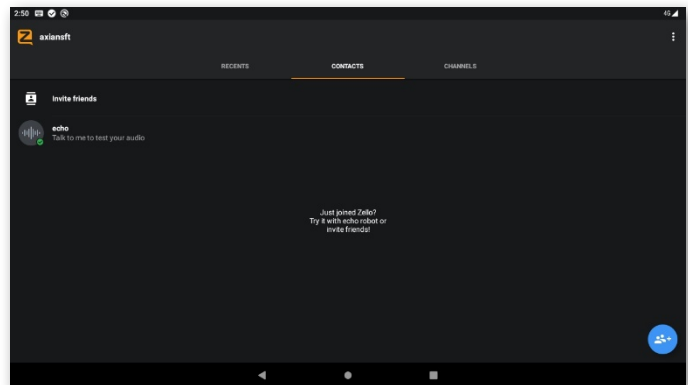
Adding a Contact and Making a Call

To use Zello, a contact must be added:

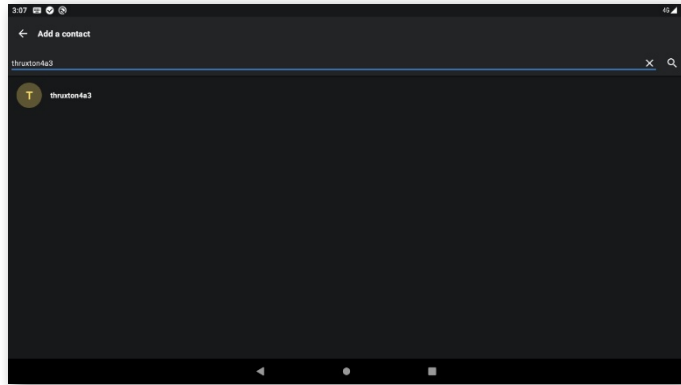
1. Click the add contact icon in the main Zello screen.



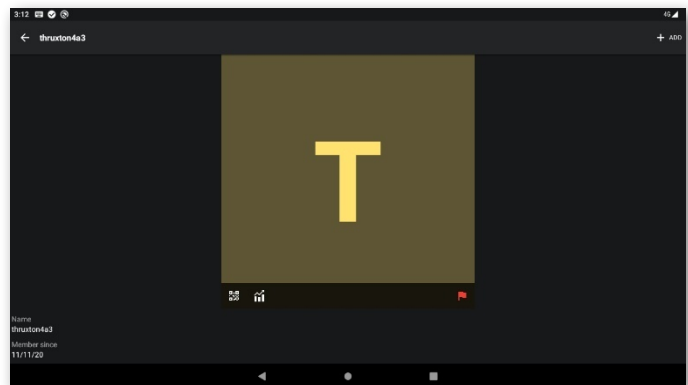
2. Enter the Zello contact username and select **SEARCH**.



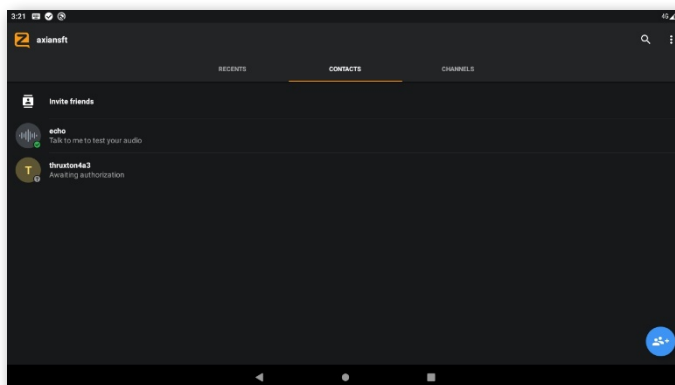
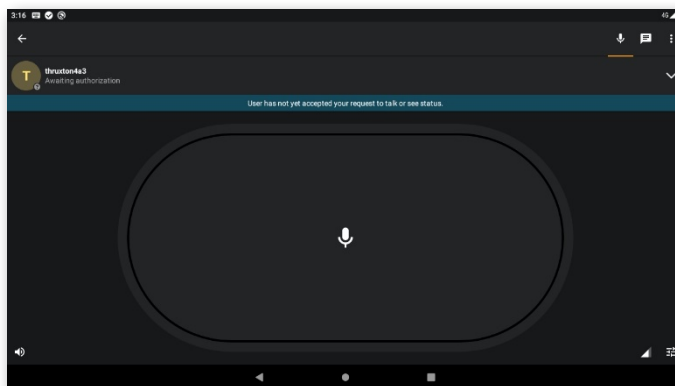
3. If the user exists, their details are displayed.



4. Select the user and view the details. If they are the correct user then tap **ADD** on the top right of the screen.



5. The contact will have to approve the invite request, but should now appear under the contacts tab on the main screen.

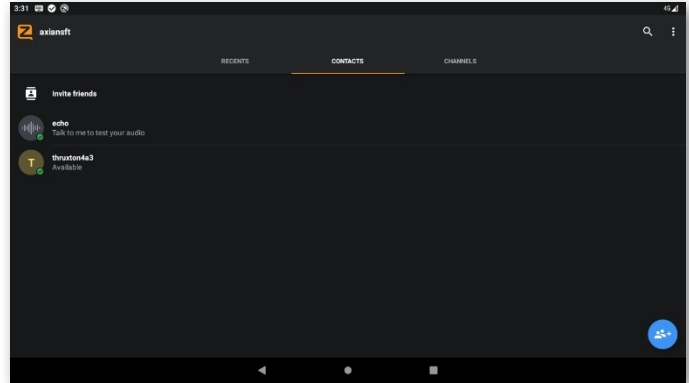


Making a Zello Call

When a single or a number of Zello contacts have been created who have accepted the invite request(s), either a call or instant message conversation can be initiated.

To make a Zello call:

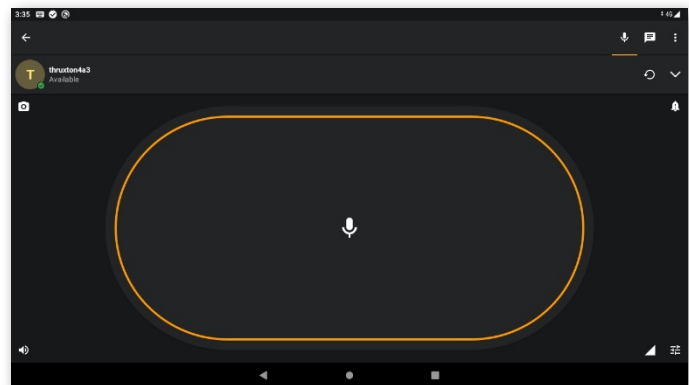
1. From the main screen tap to select a contact or group.



Note: For further details on how to add channels please refer to the Zello Android user guide:

<https://support.zello.com/hc/en-us/articles/230749047-Zello-Android-User-s-Guide->

2. When a contact is selected, the main call screen is displayed.
3. From the call screen you can initiate a PTT voice message via two methods:
 - (a) Tap and hold the touch screen on the oval where the microphone is displayed.
 - (b) Press and hold the PTT button on the VCU or PTT.



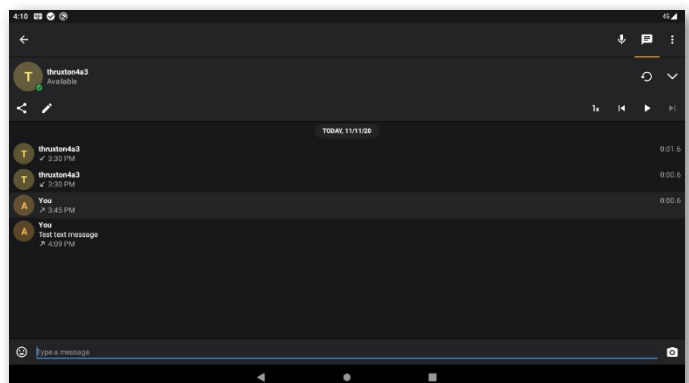
4. If the Audio output is too low, the user can modify the gain directly from this screen by tapping the settings icon in the bottom right of the screen.



5. To send an instant text message instead of a voice message tap the envelope icon on the top right of the screen:



6. Compose and send the text message.



Using Applications to Check GNSS

Applications can be installed for checking and using of GNSS on the SCU3, for example:

- GPSTest - Displays real-time information for satellites in view of your device. It is a test tool for platform engineers, developers, and power users. GPSTest can also assist users in understanding why their GPS/GNSS is not working.

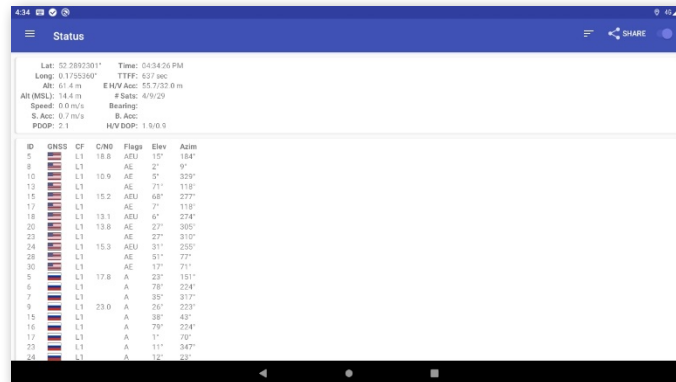


Important: To ensure that these applications work correctly, a suitable GNSS antenna must be connected to the correct SMA connector on the SCU3.

Using GPSTest

When GPSTest is installed on the SCU3 it can be used for checking connections to GNSS satellites. There are a number of features such as the mapping view, which rely on Google Play services APIs and associated Apps which aren't included on the SCU3 at the current time.

The main display on GPSTest gives a list of the currently available GNSS satellites



For more detailed information visit the Application providers website:

<https://github.com/barbeau/gptest/blob/master/FAQ.md>

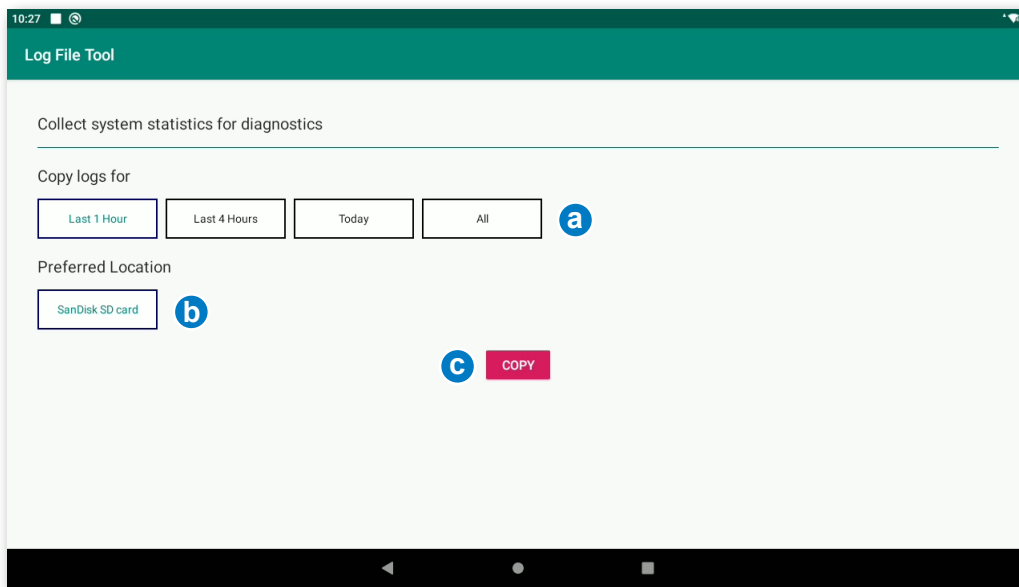
The Log File Tool

The Log file tool application is available without installation from the SDM. In the event of a crash or bug being detected, the internal logs of the SCU3 can be transferred to a MicroSD card or a USB stick, so they can be sent via email from another computer or smart device.

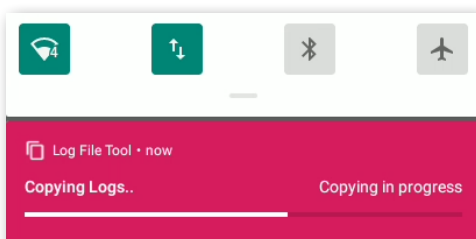
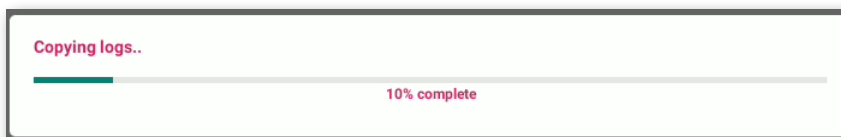


Important: An SD card must be installed and formatted as portable storage. If the SD card is formatted or encrypted as internal storage, any data written to it will not be accessible by another device. See the section "SD Cards" on page 29 for more information.

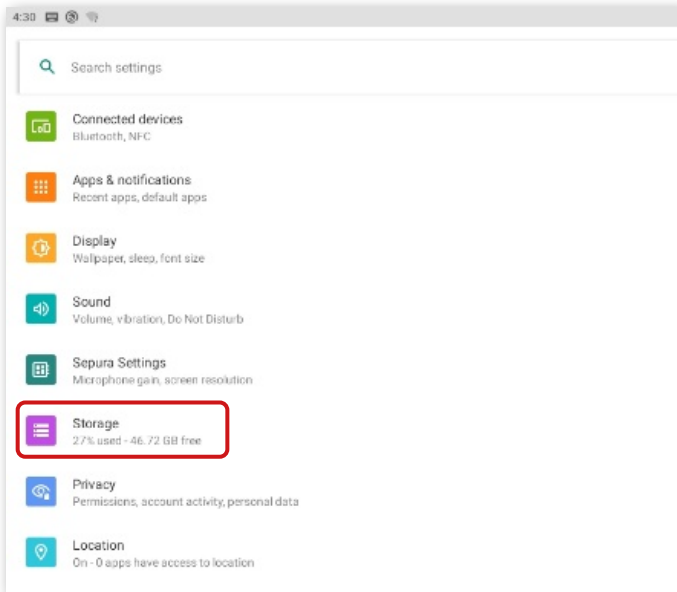
1. Open the Log File Tool app from the main menu.



- (a) Select the duration for which to copy the logs for.
 - (b) Select the preferred location to copy the logs to.
 - (c) Select the **Copy** button.
2. The logs will then be copied. Progress is displayed in the app window and in the Notification Drawer.



3. When the logs have been copied, exit the Log File Tool app and open Android settings. Tap to select **Storage**.



4. Eject the SD card or USB stick from the Storage sub menu.



Using the Eject icon. 

5. When the card or USB stick has been unmounted, remove it from the SCU3 and email the text files either using an SD card adaptor or a mobile device.



Note: If an email account is setup on the SCU3, the logs can be emailed directly from the device.

Applications Summary

The following basic applications are available for the SCU3, these are either installed natively within the Android 10 operating system or can be installed using the SDM service.

Application	Purpose	Native	SDM
Calendar	Calendar application.		✓
Contacts	Contacts application.	✓	
Email	Email provides the ability to setup an email account on the control unit, the FTU will need to provide their Email server and account details to set this up.		✓
File Manager	File manager is a local Android file manager, it can be used for locating configuration or log files on the device.	✓	
Messaging	Messaging is the standard short messaging service. For this feature to be usable the SIM card or FTU will need to provision the SMSC settings within Android.	✓	
Phone	The phone application is the standard Android dialler, and requires voice services to be available on the network to be able to use the functionality.	✓	
Search	On-device search.	✓	
Log File Tool	Allows device logs to be downloaded to a USB stick.	✓	
Firefox	Web browser.		✓
Calculator	Calculator application	✓	

Security

SD Cards

When an SD card is inserted into the SCU3 for the first time, the user is prompted to select if the card will be used for Internal or Portable storage use. These options affect the security protection applied to the SD card and subsequently its use on other devices:

Storage Option	Result	SD Card Usage
Internal Storage	The SD card is formatted and key encrypted.	Can only be used as internal storage on this SCU3 and stored data cannot be accessed on other devices.
Portable Storage	The SD card is formatted but remains unencrypted.	Can be used on other devices. This type of storage is used for applications (such as the Log File Tool).

Resetting the SCU3 to Factory Default

If the SCU3 is reset to factory default, the storage data on the SD card is not erased. However, if the SD card was encrypted as Internal storage, the data is no longer accessible because the SCU3 key is no longer valid. If the SD card was used as Portable storage, the data remains and can still be used in any device.



Note: When restoring to factory default, the latest applied software version remains and only the data partition is reset.

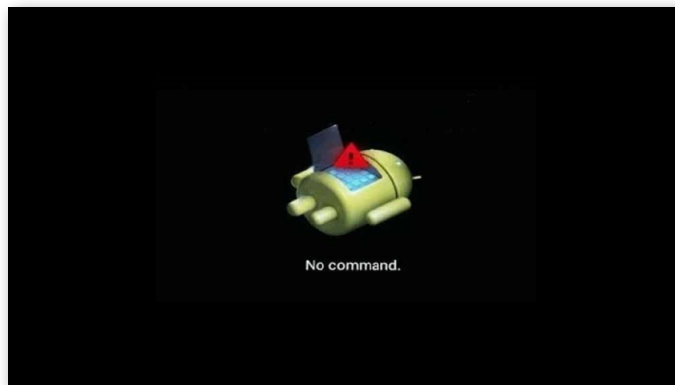
Wi-Fi Security

When the SCU3 is connected in Wi-Fi mode, the following security types are supported:

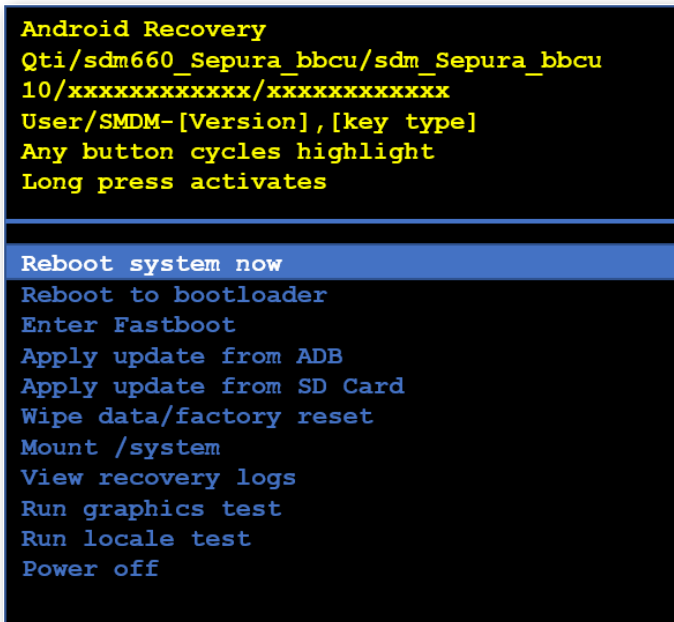
- None
- Enhanced Open
- WEP (64 or 128 bit)
- WPA/WPA2-Personal
- WPA3-Personal
- WPA/WPA2/WPA3-Enterprise
- WPA3-Enterprise 192-Bit

Exiting Recovery Mode

If the SCU3 has entered or booted into Recovery Mode, the user can recover the device using the touchscreen. In Recovery Mode, the following screen is displayed:



1. Tap once toward the bottom of the touchscreen.
2. The Android Recovery screen is displayed. Tap on the touchscreen to scroll through the list to highlight **Reboot system now**.



3. Tap and hold on the touchscreen to confirm the selection and initiate a system reboot.
4. The SCU3 should reboot into normal operating mode.



Note: If the SCU3 continues to reboot in Recovery Mode, contact Sepura or your local Service Partner.

Sepura Device Manager

Sepura Device Manager (SDM) is a browser-based online tool which has been developed for Sepura's broadband range of devices. It provides a mechanism for managing device configuration and updating device software.

When devices such as the SCU3 are connected at broadband data speeds, devices can be managed in near real time. Also, as all management functions are performed over the air (OTA), it avoids the need for devices to be brought into base for updates.



Note: SDM is a subscription based service and requires an account to be setup before it can be used.



For more information on using Sepura Device Manager, refer to the SDM embedded help guides.

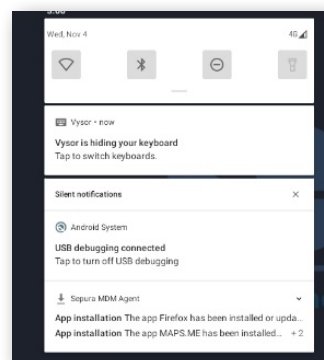
Installation Updates on the Device

There are visual indicators to notify the user that the SCU3 has been updated.

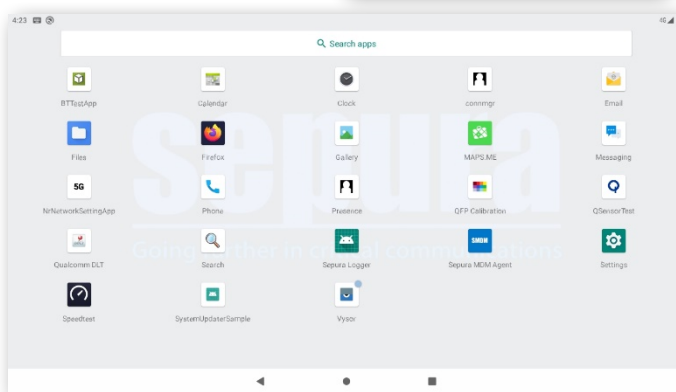
Some of these notifications are shown using Android System notifications while others might not be as immediately apparent.

The user can see notifications from the Android homescreen by dragging down the system dialog to display notifications from the SDM agent.

The messages give notifications of application installations and platform configuration changes. If your policy consists of a software update, the process is different because this is automatic and the notification will be shown in the middle of the homescreen.

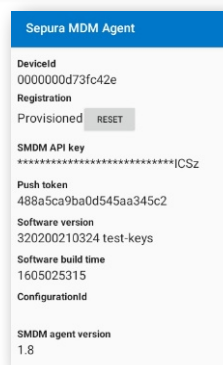


Newly installed applications will also appear in the App Drawer, accessed by swiping up from the bottom of the homescreen.



To view the configuration being used by the SCU3, open the SDM agent.

The device configuration in use is shown under Configuration ID.



Troubleshooting

Fault	Check	Comments
The SCU3 will not power on	<ul style="list-style-type: none"> • The power supply is attached • Suitable fuses are fitted 	Refer to the Full Installation Guide (SPR-DOC-04539).
	<ul style="list-style-type: none"> • The power supply is within the specified operating range 	See "Power Management" on page 18.
The touchscreen is not responding	<ul style="list-style-type: none"> • The separate touchscreen USB cable is attached (if applicable) 	For more information, refer to the Mobile Broadband Control Unit Full Installation Guide (SPR-DOC-04539).
	<ul style="list-style-type: none"> • The micro USB socket is not being used which disables the touchscreen 	
Control of the touchscreen is erratic	<ul style="list-style-type: none"> • A second connected touchscreen is not being used 	See "Displays" on page 11.
The SCU3 is powered on, however the touchscreen is blank	<ul style="list-style-type: none"> • Display 1 is connected before the SCU3 was powered on 	Power cycle the SCU3.
The SCU3 is in Recovery Mode	<ul style="list-style-type: none"> • Navigate to the recovery option menu using the touchscreen 	See "Exiting Recovery Mode" on page 30.

www.linkedin.com/sepura



www.facebook.com/sepurapl



[@sepurapl](https://twitter.com/sepurapl)



www.instagram.com/sepurapl



www.youtube.com/sepurapl



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