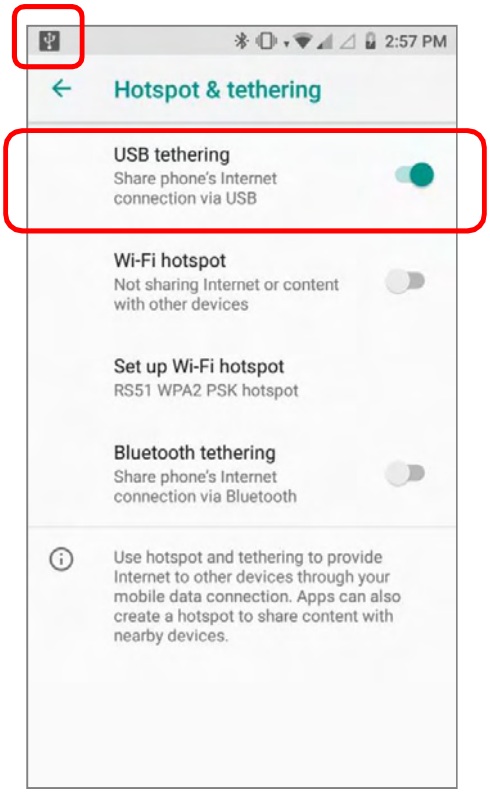
USB TETHERING

To share data connection through USB tethering:

1) Connect the mobile POS with PC by the supplied snap-on cable.

2) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Hotspot & tethering***.

3) Tap to switch on ***USB tethering***, and the icon shows up on the status bar. The mobile POS will share its WWAN network with the connected host computer.

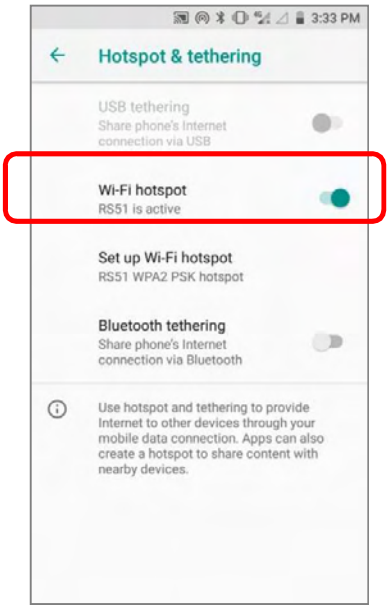


WI-FI HOTSPOT

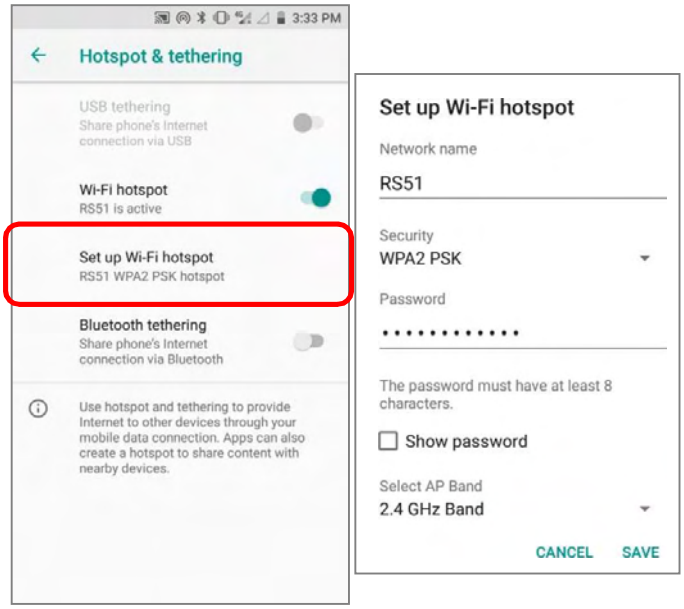
To share data connection in the form of a Wi-Fi hotspot:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Hotspot & tethering***.

2) Tap the ***Wi-Fi hotspot*** switch to enable data sharing through Wi-Fi. The mobile POS will start broadcasting its SSID for other devices to connect.



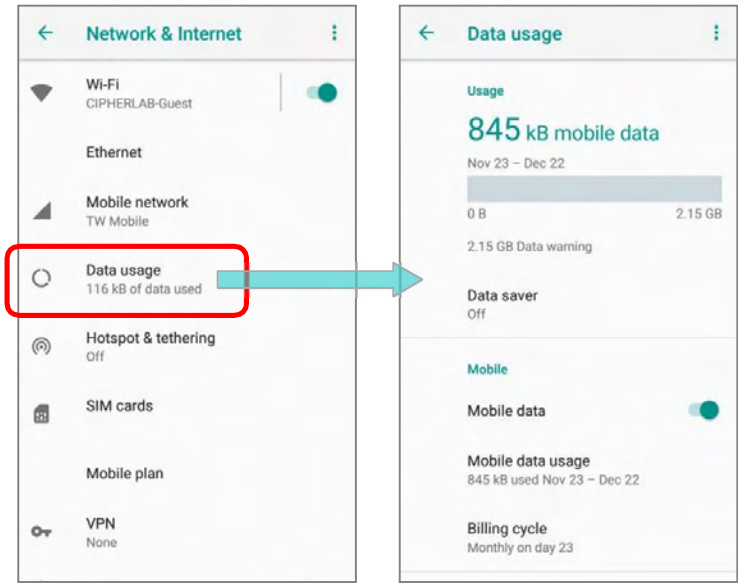
3) Tap ***Set up Wi-Fi hotspot*** to manage Wi-Fi hotspot settings.



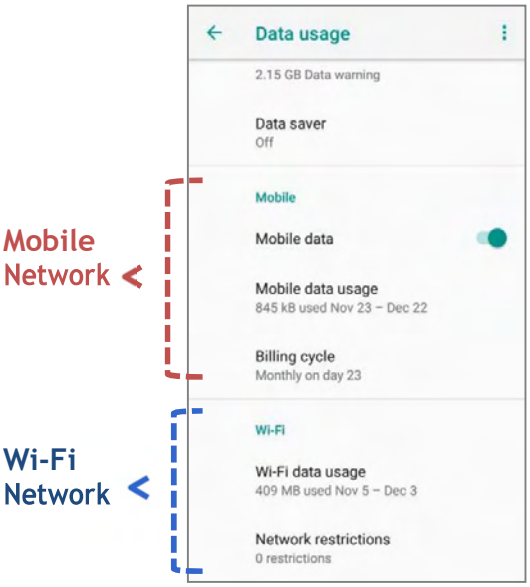
DATA USAGE

Data usage is the amount of data uploaded or downloaded on the mobile POS. Managing the data usage amount within a certain period of time is a recommended task, as an excess amount of data usage might incur additional fees from your service provider.

To check wireless data usage, please go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Data usage***.



Scroll to "***Mobile***" for further settings:

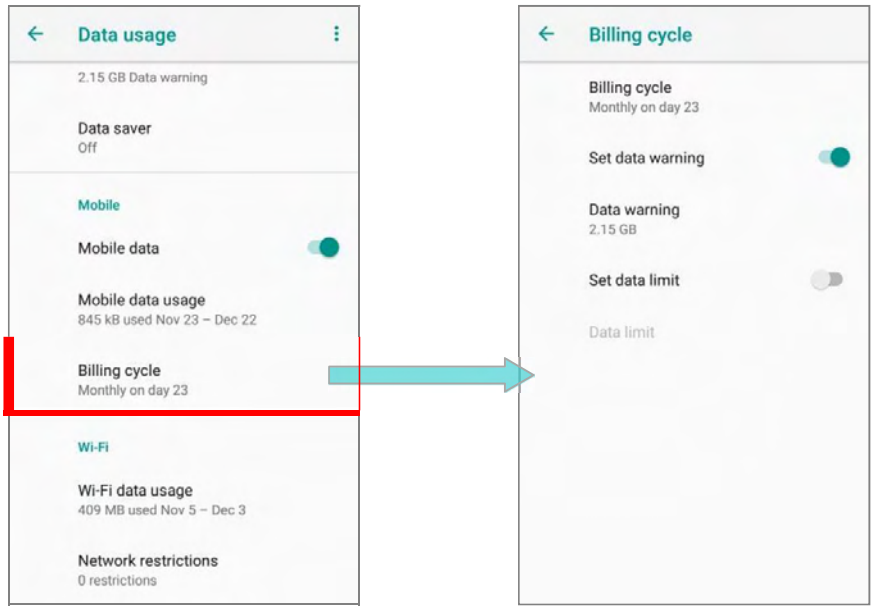


Item	Description
Mobile data	Switch on or off the mobile data.
Mobile data usage	Tap to view a chart of data usage
Billing cycle	Tap to set the billing cycle, data warning, and data limit.

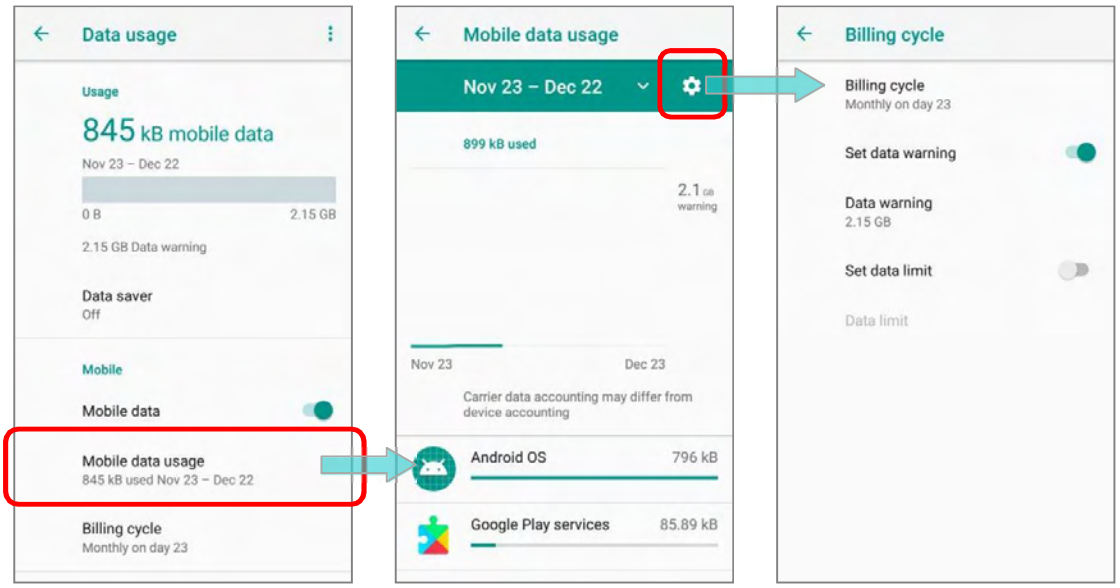
SET DATA USAGE LIMIT

To set the data usage limit, please:

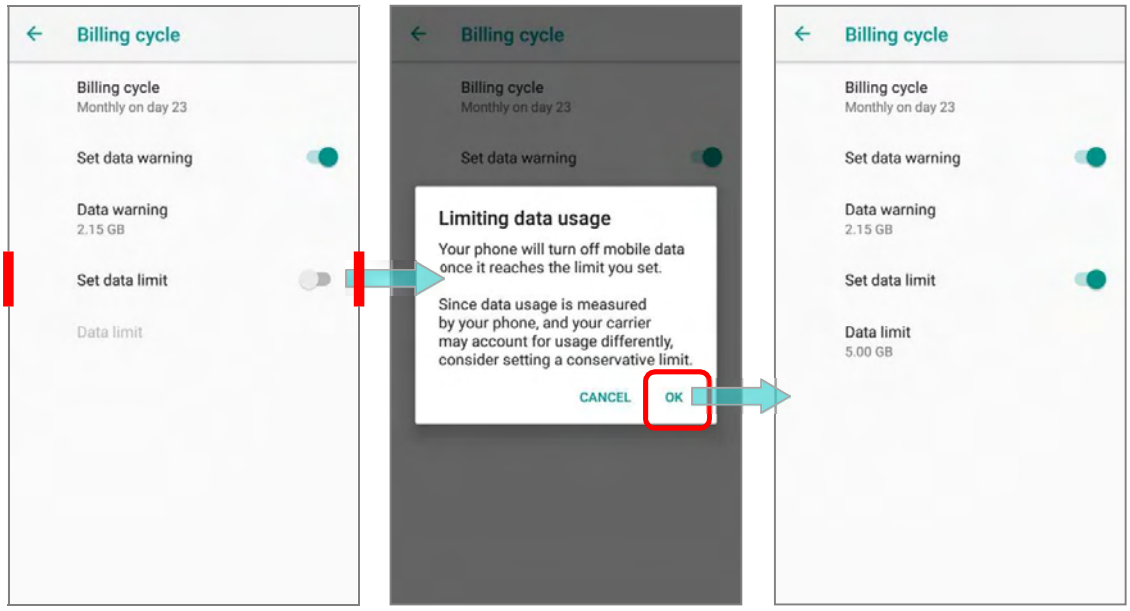
1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Data usage***.
On the ***Data usage*** page, scroll to "***Mobile***" and tap "***Billing cycle***".



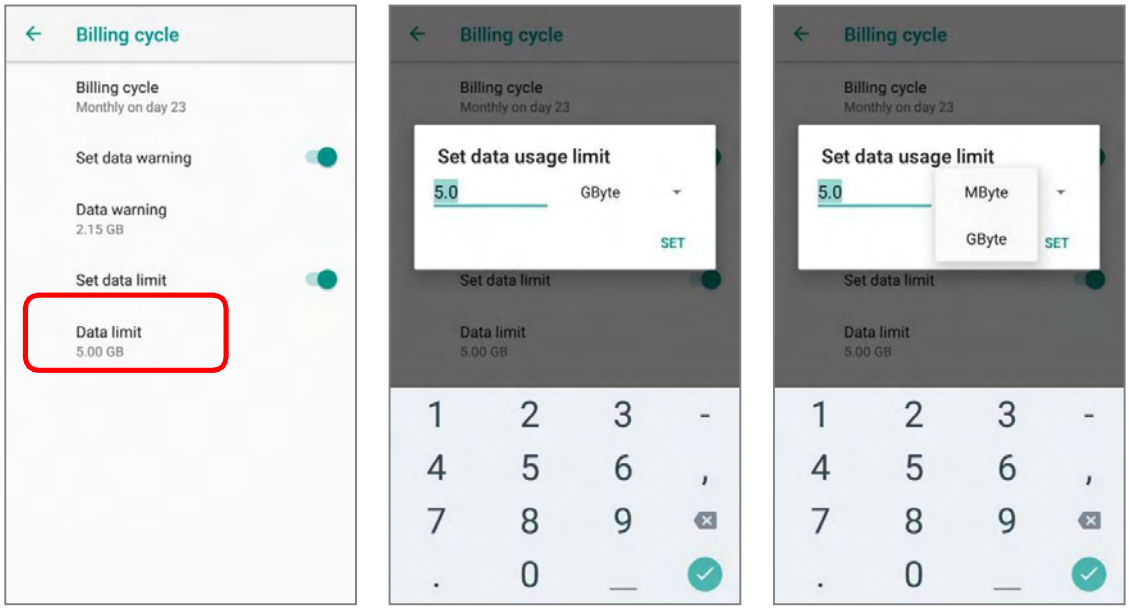
Or tap "***Mobile data usage***" and the setting button to enter "***Billing cycle***" page.



2) Enable ***Set mobile data limit***.

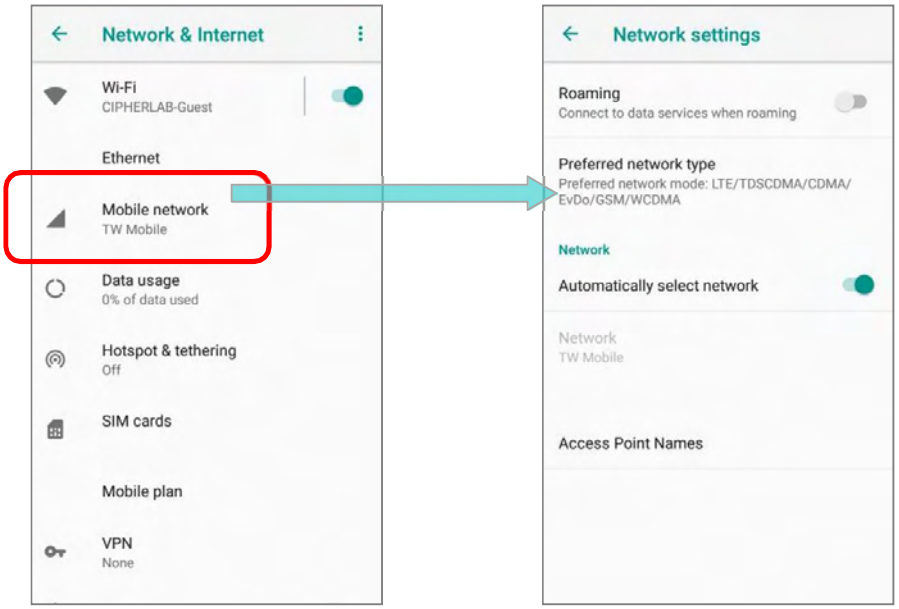


3) Tap "***Data limit***", and input your required limit in "***Set data usage limit***" window, and tap "***SET***". If a limit is set, when the data usage amount reaches the limit, mobile data connection will be automatically disabled.

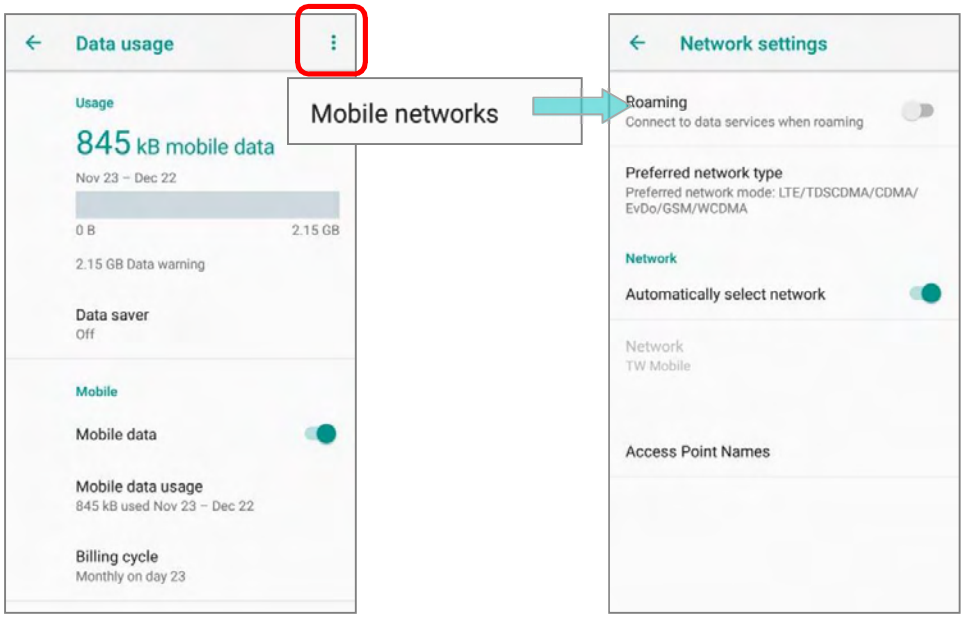


ENABLE DATA USAGE DURING ROAMING

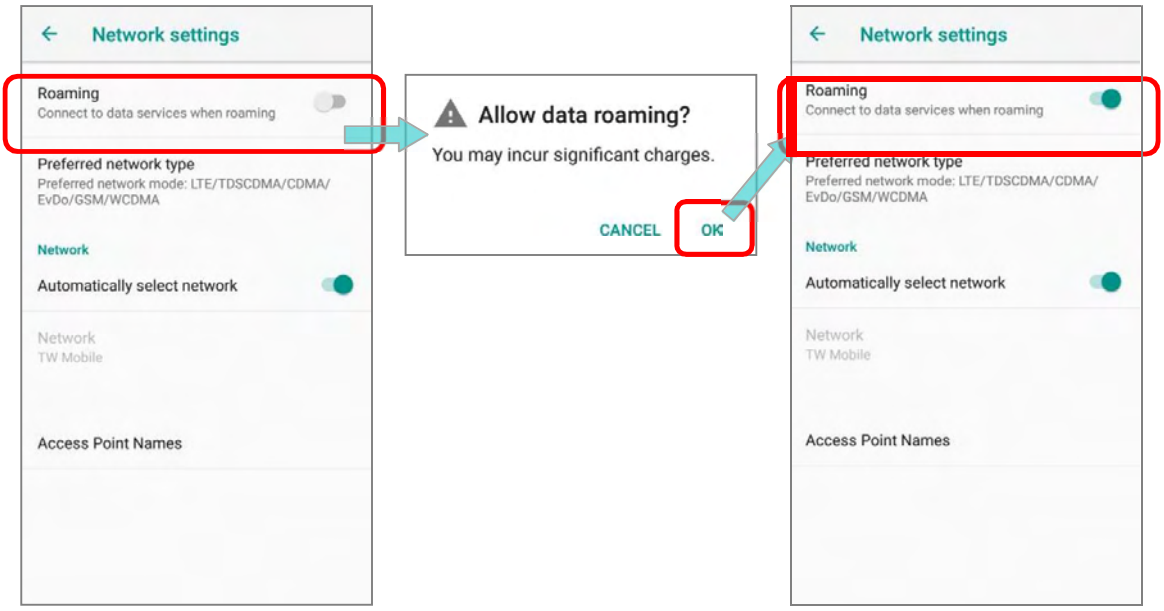
1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Mobile Network*** .



Or go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Data usage*** , and on the ***Data usage*** page, tap ***More*** on the action bar and then "***Mobile network***".

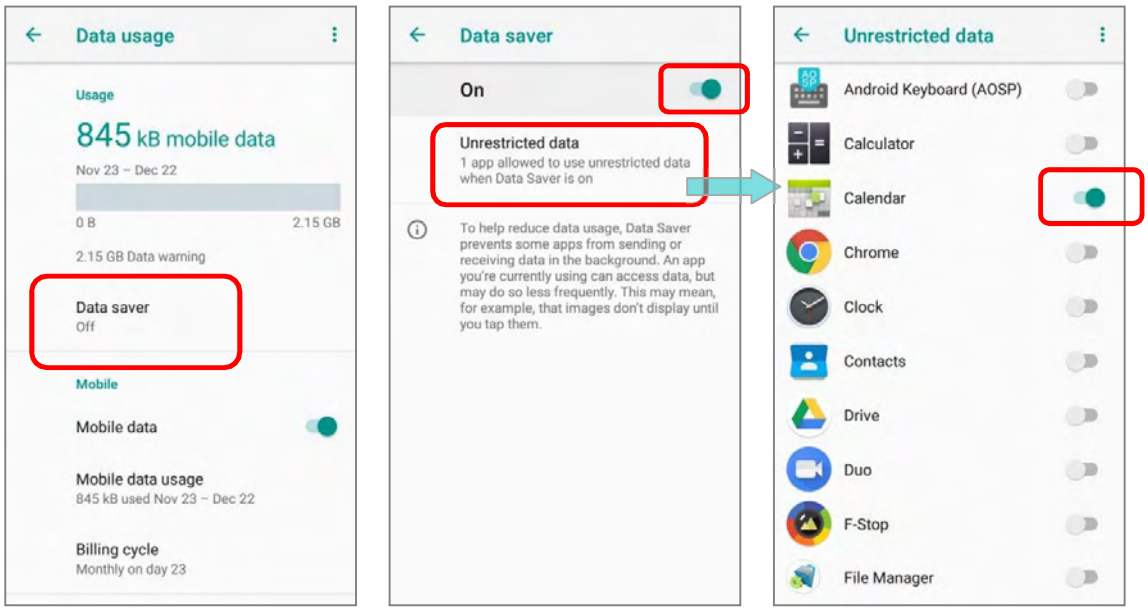


2) Enable "***Roaming***", and a dialog box appears confirming whether you would like to enable data roaming. Tap ***OK*** to confirm.

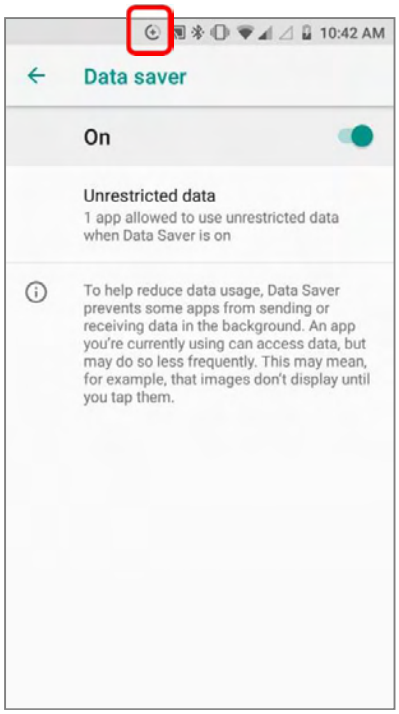


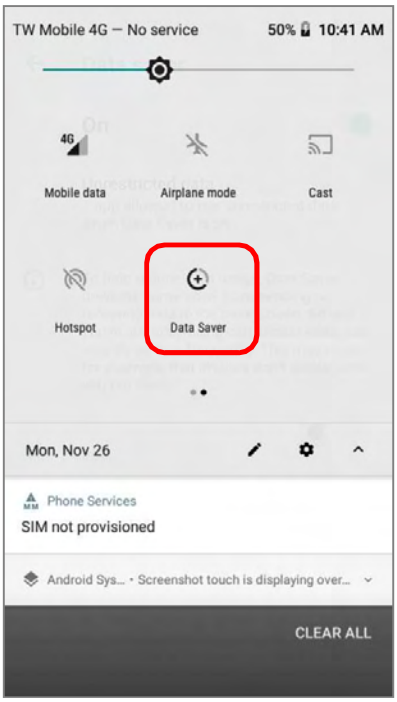
RESTRICT BACKGROUND DATA

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Data usage***.
2) Tap "***Data saver***" and switch data saver to **On**, to restrict background data.
3) If there's any applications you would like to keep them actived on background when "***Data saver***" is on, tap "***Unrestrict data access***" to switch them on.



Once "***Data saver***" is on, an status icon will be shown in the status bar as well as in the Quick Setting menu:





Note:

The mobile POS conserves data usage by restricting background mobile data. Certain applications and services will be disabled unless the mobile POS is connected to a Wi-Fi network.

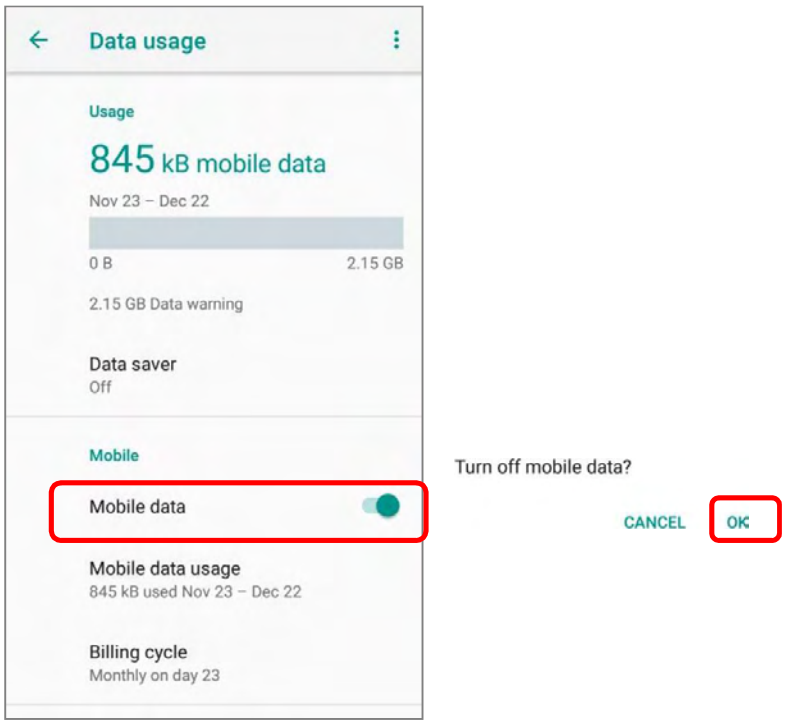
4.1.2. DATA CONNECTION SETTINGS

TURN ON/OFF DATA CONNECTION

To manually turn on/off mobile data connection:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Data usage***.

2) Scroll to "***Mobile***" and tap on "***Mobile data***" to switch it on/off.



SELECT DATA CONNECTIONTYPE

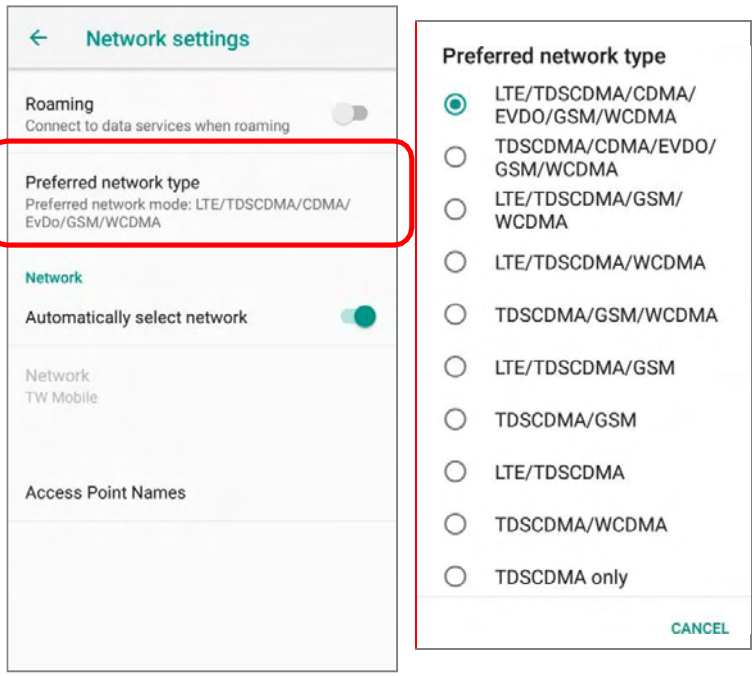
1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** ,

OR

App Drawer (All Apps) | ***Settings*** | ***Network & Internet*** | ***Data usage*** | ***More*** | ***Mobile network***

2) Tap "***Mobile***".

3) Tap Preferred network type to select the setting.



4.1.3. SIM CARD SETTINGS

LOCK SIM CARD

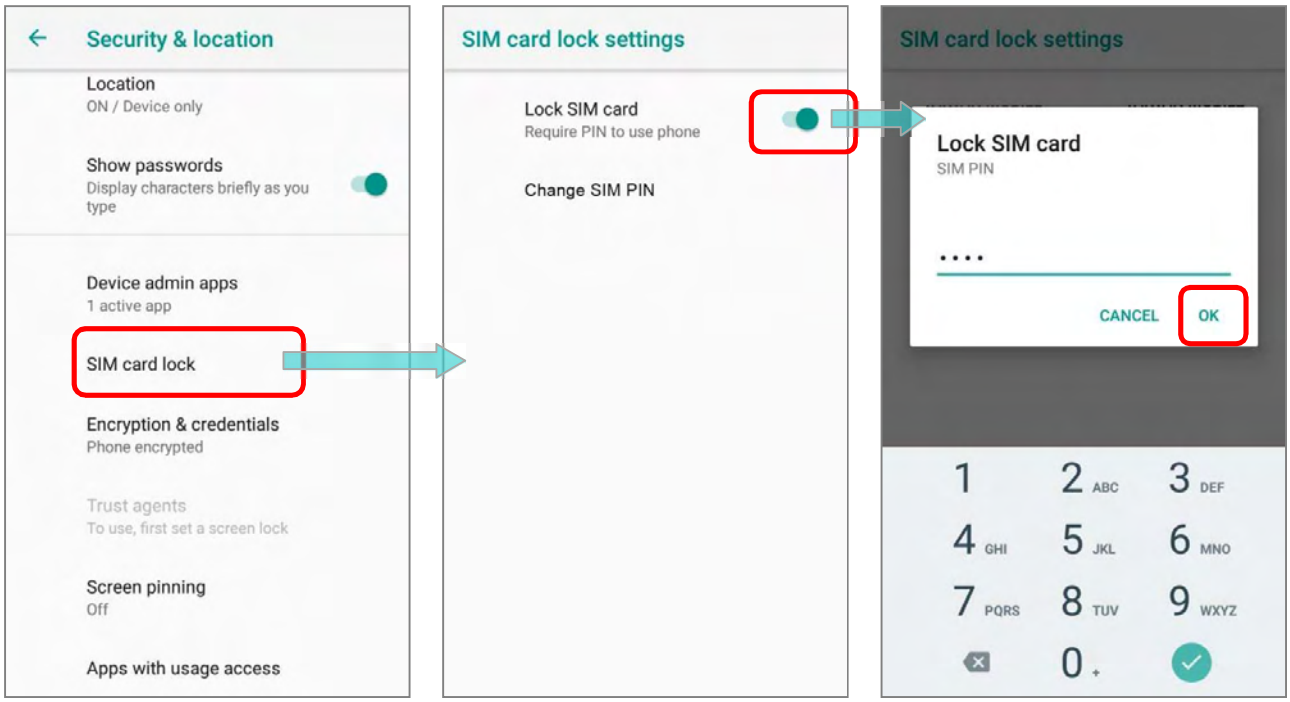
To lock the SIM card:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Security & Location***.

2) Scroll down and tap on "***SIM card lock***".

3) Tap "***Lock SIM card***" to switch it on.

4) Enter the PIN to enable SIM card lock. Once enabled, you are required to enter the PIN code in order to use the phone.



CHANGE PIN CODE

To change the PIN code:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Security & Location***.

2) Scroll down and tap on "***SIM card lock***".

3) Tap on "***Change SIM PIN***".

4) Enter your old PIN code to confirm your identity, and then input a new PIN code.

4.2. USE WIRELESS LOCAL AREA NETWORK (WI-FI)

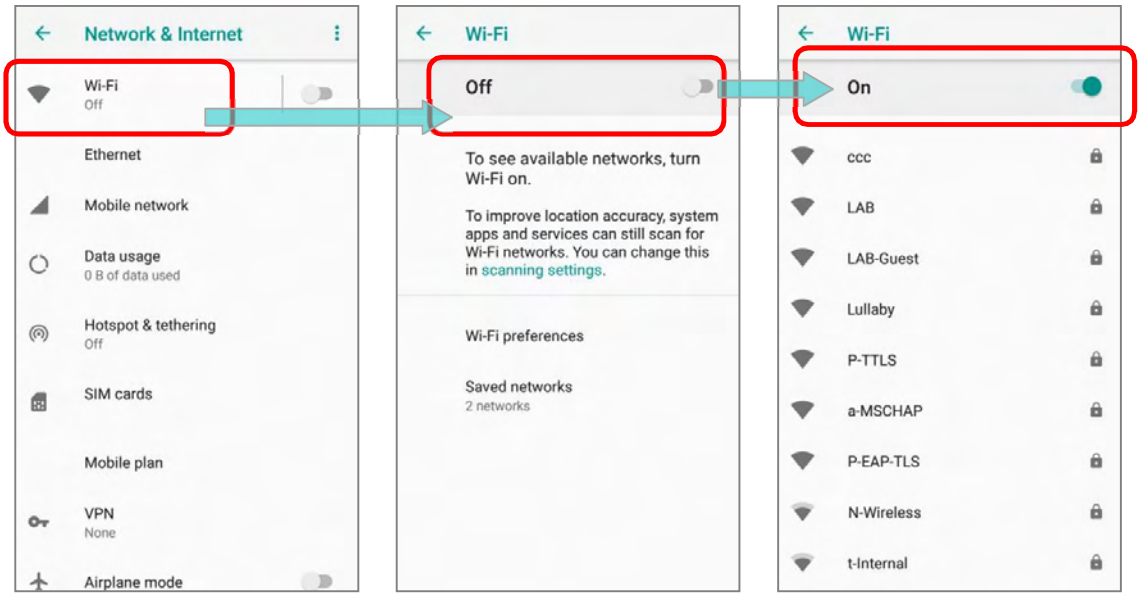
4.2.1. CONNECT TO WI-FI NETWORK

To power on Wi-Fi:

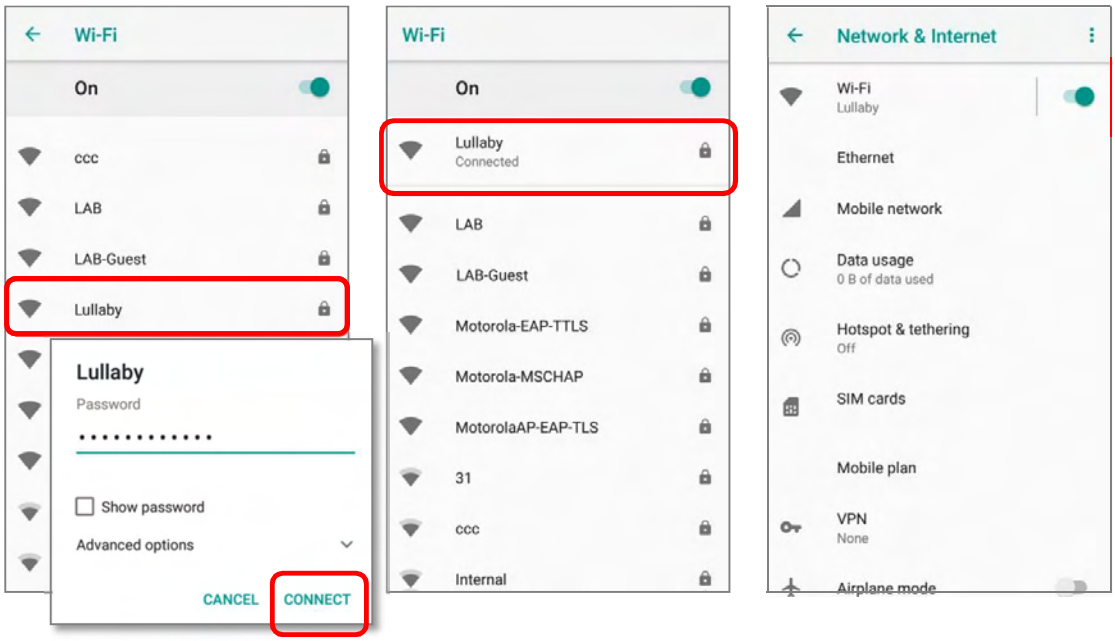
1) Swipe down from the top of the screen to open ***Quick Settings Menu***.
2) Tap ***Wi-Fi*** to scan for available networks. Select a network to connect.

OR

1) Tap ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Wi-Fi***.
Tap the Wi-Fi switch to scan for available networks.



2) Select a network to connect. If the network is an open one, the mobile POS will attempt to connect to it directly. When connected, the status will change to show "**Connected**". If the network is a secured one, the mobile POS prompts a dialog to enter the password for the connection.

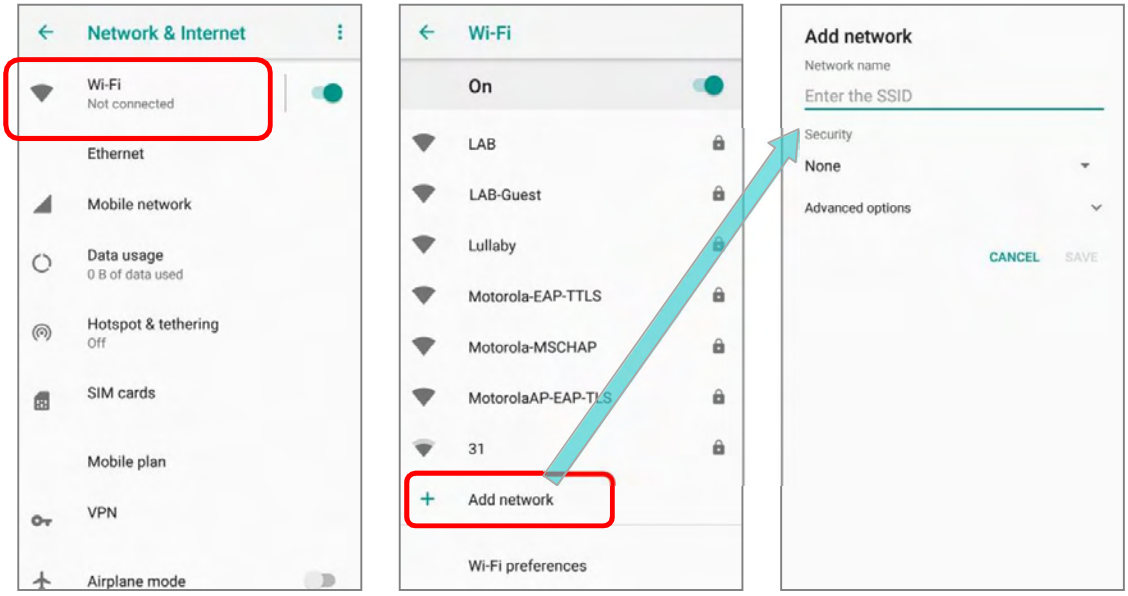


4.2.2. MANUALLY ADD WI-FI NETWORK

If the network you would like to connect to does not broadcast its SSID, or if the network is out of range, you may add it manually.

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Wi-Fi***.
   Tap the Wi-Fi switch to turn it on.

2) Scroll down to the bottom of the page, and select "***Add network***".



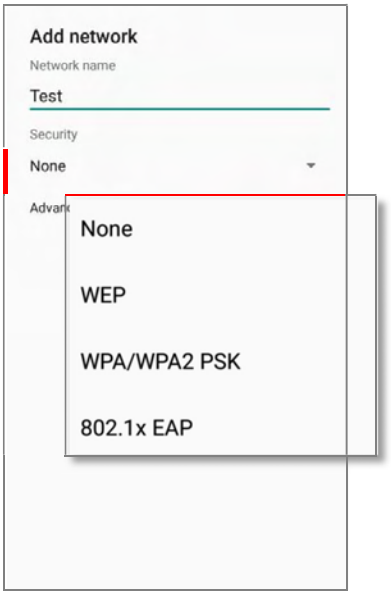
3) On "***Add network***" page, enter the name of the network in the ***Network name*** field, and select a security method (None, WEP, WPA/WPA2 PSK, 802.1x EAP).

   - For ***WEP/WPA/WPA2 PSK*** connections:
     Enter the required password and tap Save.

   - For ***802.1x EAP*** connections:
     Select the ***EAP method*** in the drop-down box (PEAP, TLS, TTLS, PWD, SIM, AKA), and the ***Phase 2 authentication*** in the drop-down box (None, MSCHAPV2, GTC). Select a ***CA certificate*** and User certificate if required.

     (certificates may be installed under:
     App Drawer (All Apps) | ***Settings*** | ***Network & Internet*** | ***Wi-Fi*** | ***Wi-Fi preferences*** | ***Advanced*** | ***Install certificates***.)

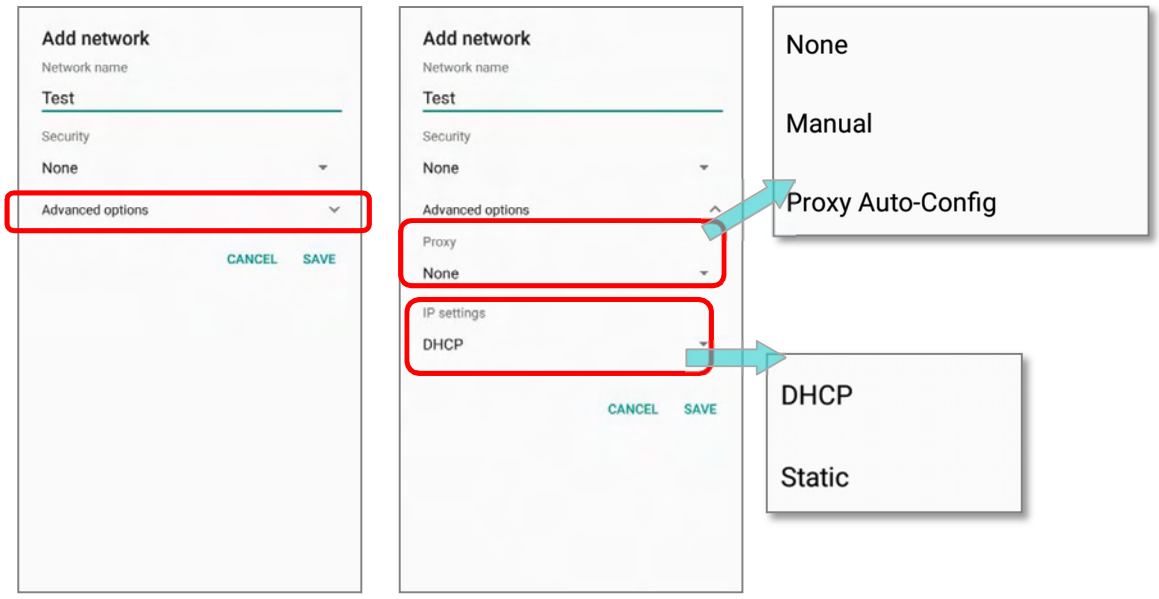
     Enter your username in the Identity box and the password in the Password box if required.



The mobile POS supports the following certificate file extensions:

File Extension Type	Standard Certificate	Key Stored
Description	DER-encoded X.509 certificates saved in .crt or .cer files.	X.509 certificates saved in PKCS#12 key store files with a .p12 or .pfx extension.
How toinstall	change the extension to .crt or .cer.	Change the extension to .p12 or .pfx.

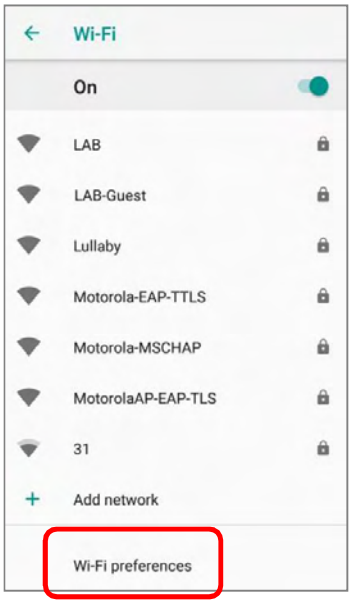
4) If necessary, select the ***Proxy*** server and ***IPv4*** settings. By default, no proxy is set and IP settings are set to ***DHCP***.

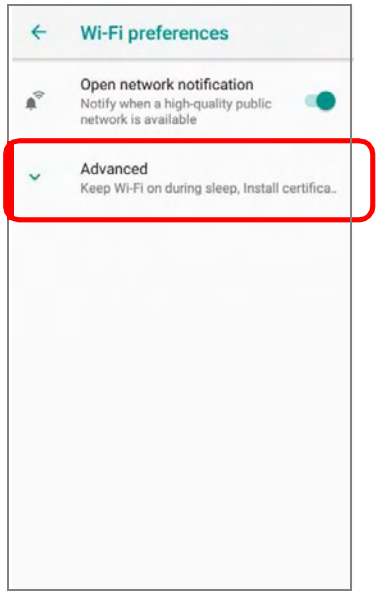


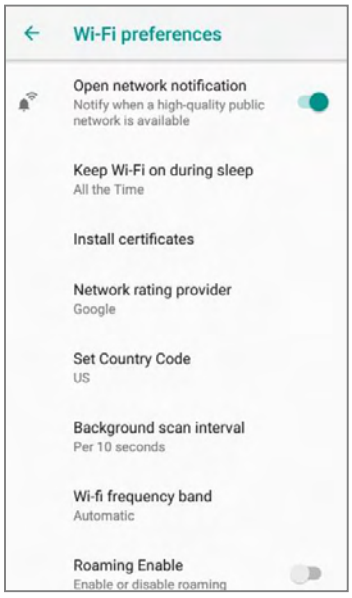
4.2.3. WI-FI PREFERENCES

To access advanced Wi-Fi settings:

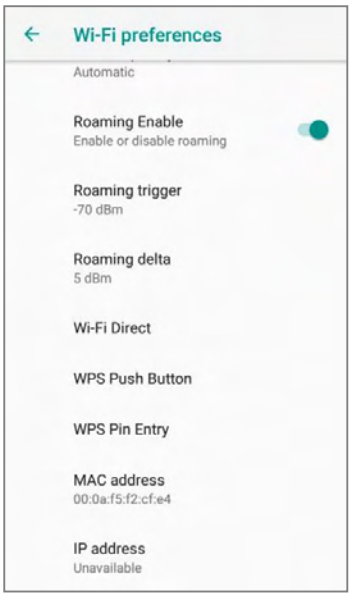
1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Wi-Fi*** |
2) Scroll down to the bottom of the page, and tap on "***Wi-Fi preferences***".
3) Tap "***Advanced***" to expand more settings. Available settings are as below:







Item	Description
Open network notification	Notify when an open network is available.
Keep Wi-Fi on during sleep	Set when to turn Wi-Fi on during sleep.
Install certificates	Installs certificates recently downloaded or placed on the internal storage.
Network rating provider	The selected network scorers will label the the quality of the open Wi-Fi networks you are connecting to between very fast and slow.
Set Country Code	Select the Wi-Fi country code for your device. The default country code setting is set by your SIM card automatically.
Background scan interval	The frequency of background scan when the device does not connect the internet. The shorter time means the scanning frequency is higher.
Wi-Fi frequency band	Select ***Automatic***, ***5 GHz***, or ***2.4 GHz*** for your Wi-Fi frequency band. The default setting is Automatic.



Item	Description
Roaming Enable	Select whether to enable Wi-Fi roaming or not.
Roaming trigger	The signal strength when triggering Wi-Fi roaming. The higher value means the sensitivity of triggering roaming is higher.
Roaming delta	The qualification for roam candidates. The higher value means the signal strength of candidate APs should be higher than the current connected AP.
Wi-Fi Direct	Enables your device to connect with a Wi-Fi Direct-capable device.
WPS Push Button	Initialize the Wi-Fi protected setup (WPS) for a WPS-capable network. You will also have to press down the WPS button on your router.
WPS Pin Entry	Enter the personal identification number (PIN) for Wi-Fi protected setup (WPS) process.
MAC address	Displays the MAC address of the device when connecting to Wi-Fi networks.
IP address	Displays the IP address of the device.

4.2.4. CONFIGURE PROXY SERVER

A proxy server acts as an intermediary between an endpoint device and another server from which the device is requesting a service.

To change the proxy settings for a connection:

1) Long press on a network in the available Wi-Fi hotspot list, and then tap on "***Modify network***".

2) Tap on "***Advanced options***" to expand the detailed settings.

3) Tap ***Proxy*** and select ***Manual***.

4) Enter the address of the proxy server in the ***Proxy hostname*** field. Enter the port number for the proxy server in the ***Proxy port***. Enter the addresses of websites which are allowed to bypass the proxy server in the ***Bypass proxy for*** field. (Use the separator | between addresses.)

5) Tap ***SAVE***.

4.2.5. USE STATIC IP ADDRESS

By default, the device gets an IP address from DHCP when connecting to a wireless network. You may set for the device to connect to a network using a static IP address.

1) Long press on a network in the available Wi-Fi hotspot list, and then tap on "***Modify network***".

2) Tap on "***Advanced options***" to expand the detailed settings.

3) Tap ***IP settings*** and select ***Static***.

4) Enter the IP address, gateway, network prefix length, DNS 1 address and DNS 2 address in the fields provided.

5) Tap ***SAVE***.

4.2.6. CONNECT WITH WI-FI PROTECTED SETUP (WPS)

Wi-Fi Protected Setup (WPS) allows easy establishment of a secure wireless network. The mobile POS supports WPS Push Button configuration.

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Wi-Fi*** | ***Wi-Fi preferences***

2) Tap on ***Advanced*** to expand and then ***WPS Push Button***.

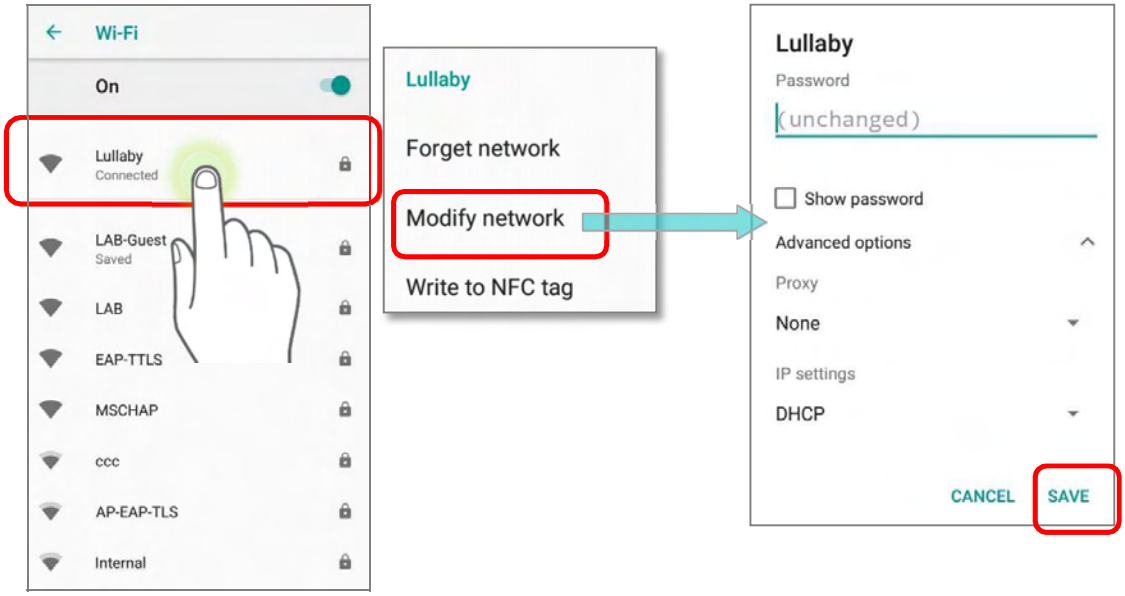
3) A dialog will pop-up on the screen showing the remaining time allowed for pressing the WPS button on the router.

4) On your wireless router, press the WPS button. The device will connect to your router.

4.2.7. MODIFY WI-FINETWORK

To change the settings for a connected network:

1) Tap and hold a connected network in the Wi-Fi hotspot list.
2) Tap ***Modify network*** in the pop-up menu.
3) In the dialog box that opens, modify the network settings, and tap ***Save***.



4.2.8. DISCONNECT WI-FINETWORK

To disconnect a connected network:

1) Tap and hold a connected network in the Wi-Fi hotspot list.
2) Tap ***Forget network*** in the pop-up menu.

4.3. USE BLUETOOTH

You can configure Bluetooth settings and manage Bluetooth services provided on remote devices.

4.3.1. BLUETOOTH PROFILES

Bluetooth Profiles Supported		
Generic Access Profile	(GAP)	For device discovery and authentication.
Service Discovery Access Profile	(SDAP)	Discovers services on remote devices.
Headset Profile	(HSP)	Describes how a Bluetooth enabled headset should communicate with a Bluetooth enabled device
Hands-Free Profile	(HFP 1.6)	Allows using a hands-free device to place and receive calls.
Serial Port Profile	(SPP)	Sets up a virtual serial port to connect two Bluetooth devices.
Generic Object Exchange Profile	(GOEP)	Provides a basis for other data profiles.
Object Push Profile	(OPP)	Pushes and pulls objects to and from a push server.
Hands Free Profile	(HFP)	Connects the Audio Gateway device to the Hands Free device.
Personal Area Networking Profile	(PAN)	Uses Bluetooth Network Encapsulation Protocol for Bluetooth transmission.
Advanced Audio Distribution Profile	(A2DP)	Streams stereo-quality audio to a wireless headset or speaker.
Audio Video Remote Control Profile	(AVRCP)	Allows controlling of television and Hi-Fi equipment.
General Audio/Video Distribution Profile	(GAVDP)	Provides a basis for A2DP and VDP.
Human Interface Device Profile	(HID)	Provides a low latency Bluetooth connection with keyboards, pointing devices, etc.
Phone Book Access profile	(PBAP)	Transfers Phone Book Objects to a car kit to display the information of an incoming call received on the mobile POS, or initiate a call.
Out of band and Near Field Communications	(OOB, NFC)	Manages the pairing process by using NFC.
Symbol Serial Interface Profile	(SSI)	Supports additional scanner.
Human Interface Device Profile	(HID)	Provides a low latency Bluetooth connection with keyboards, pointing devices, etc.
Dial-up Networking Profile	(DUN)	Provides a standard to access the Internet and other dial-up services over Bluetooth.

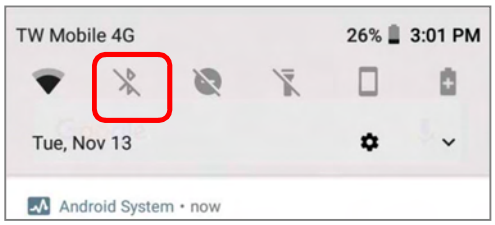
4.3.2. TURN ON BLUETOOTH

By default, Bluetooth is turned off, to turn it on:

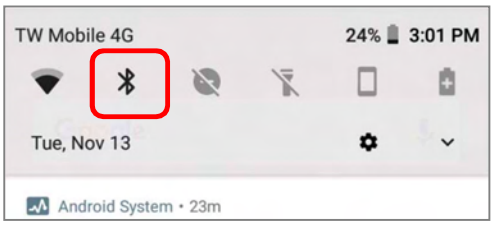
Via Quick Settings Panel:

1) Swipe down from the top of the screen to open ***Quick Settings Panel***.
2) Tap on ***Bluetooth*** icon to turn it on or off.

OFF

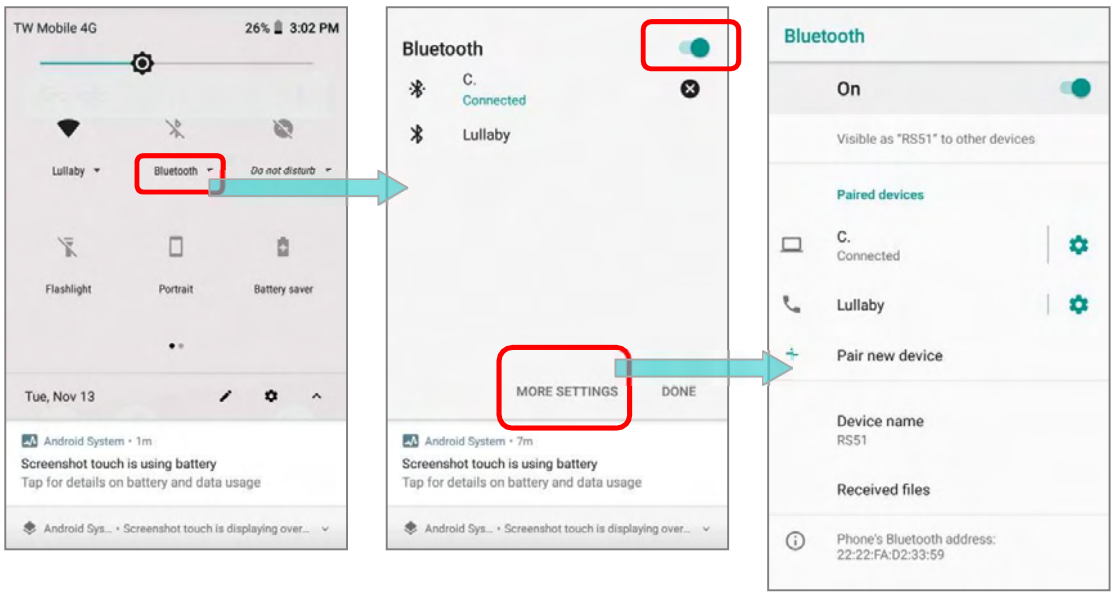


ON



Via Quick Settings Menu:

1) Swipe down to open ***Quick Settings Menu***.
2) Tap ***Bluetooth*** icon to turn it on while enabling the Bluetooth visibility of this device.

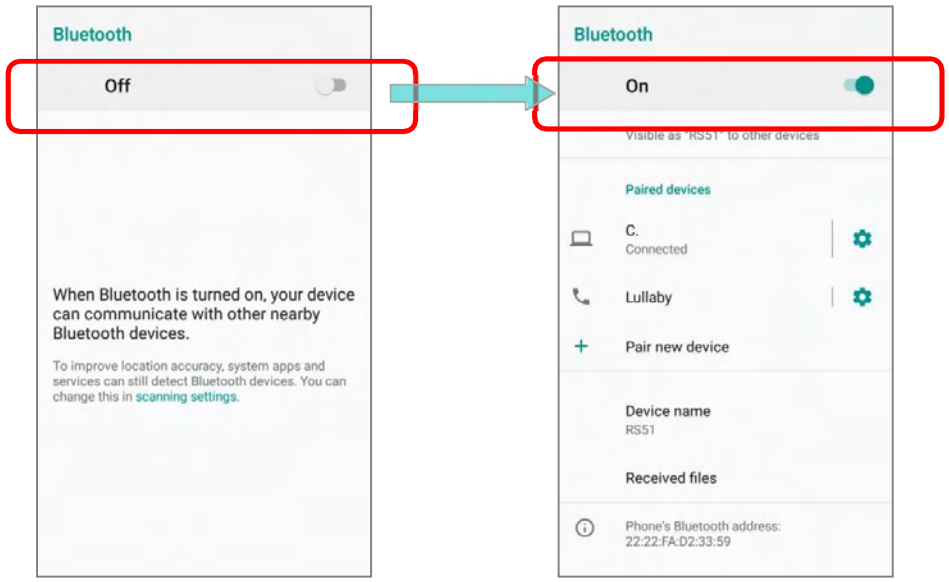


OR

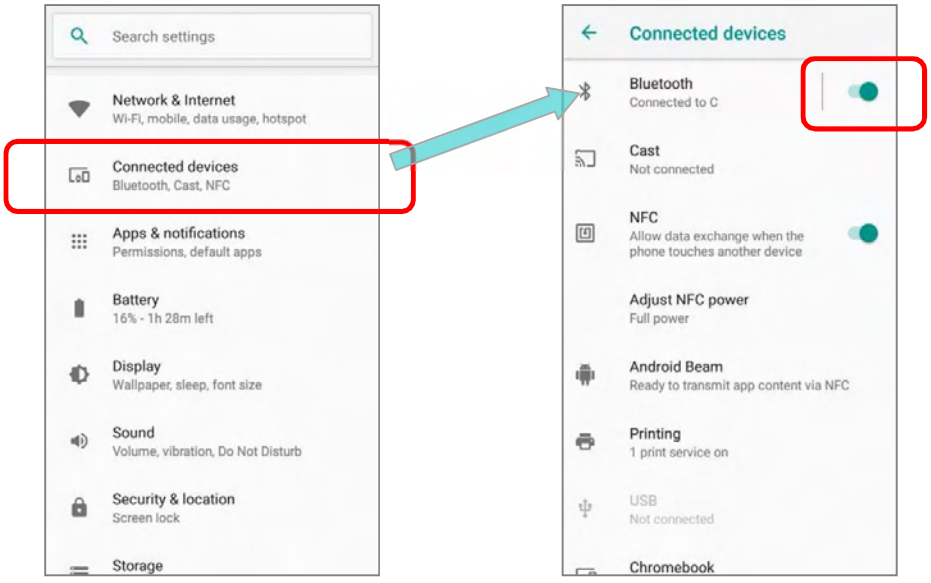
Tap "***Bluetooth*** ▼" under to enter "***Bluetooth***" page to switch this function on/off.
Tap "***More Settings***" for detailed settings.

Via Settings page:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Connected devices*** | ***Bluetooth***.
2) Tap the switch to turn on this function while enabling the Bluetooth visibility of this device.



OR simply switch ***Bluetooth*** on/off in ***App Drawer (All Apps)*** | ***Settings*** | ***Connected devices***.

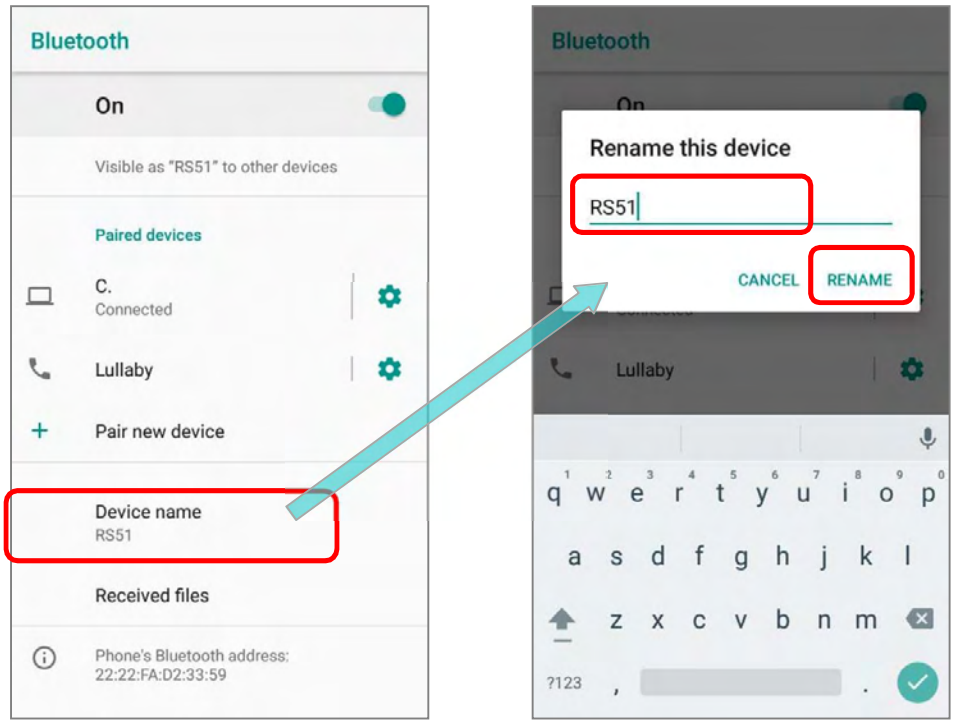


Note: Having been turned on, Bluetooth is active even when the mobile POS is suspended. However, if the power mode is switched to Airplane Mode, Bluetooth power will be turned off regardless of the settings.

4.3.3. CHANGE BLUETOOTH NAME

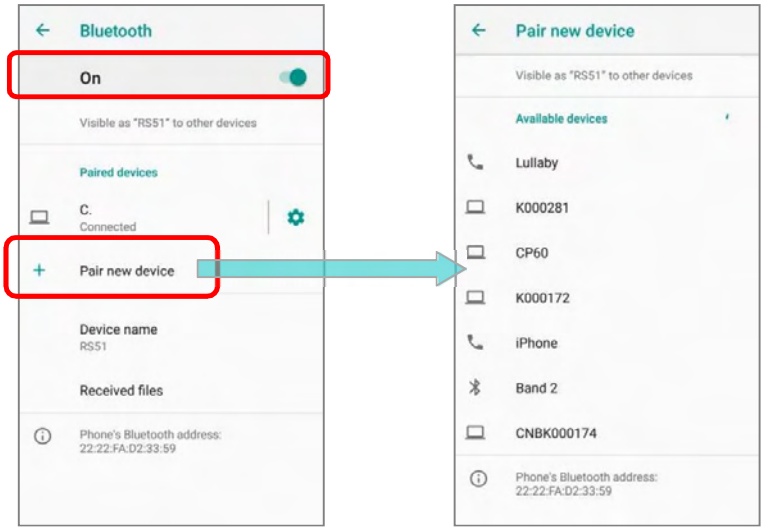
To change the Bluetooth name of this mobile POS:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Connected devices*** | ***Bluetooth***.
2) Turn ***Bluetooth*** on and tap on "***Device name***".
3) On the pop-up dialog "***Rename this device***", type a new name in the field and tap ***RENAME***.

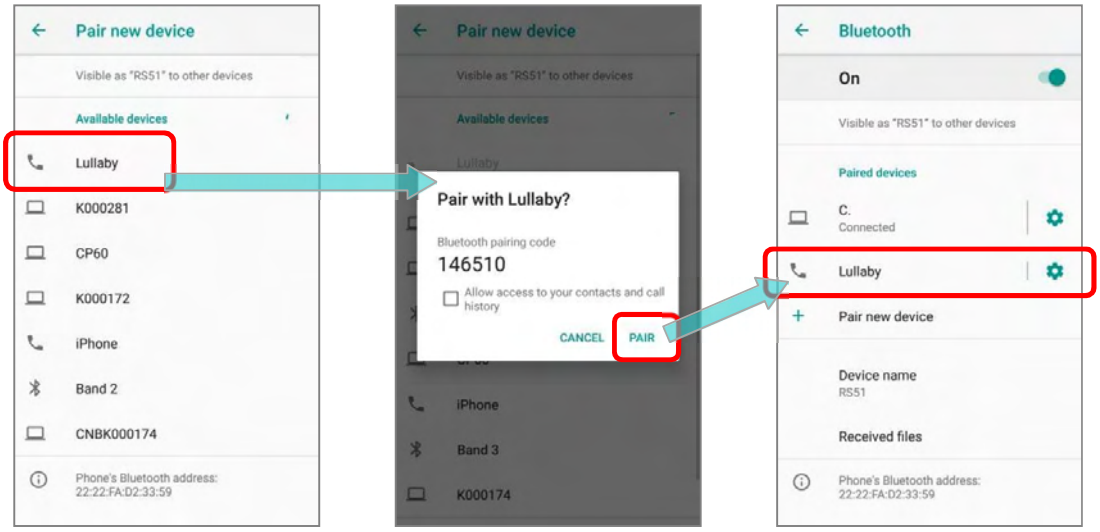


4.3.4. PAIR BLUETOOTH DEVICES

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Connected devices*** | ***Bluetooth***.
2) Switch ***Bluetooth*** to **On** and tap "***Pair new device***" to scan for available Bluetooth devices nearby. Scroll through the list and tap the device you would like to pair.



3) The ***Bluetooth pairing request window*** opens. Depending on the pairing settings of the Bluetooth device, you may need to enter a passkey, or confirm the assigned passkey on the device to pair if a smart pairing method is applied. Enter/confirm the passkey on the device to pair.



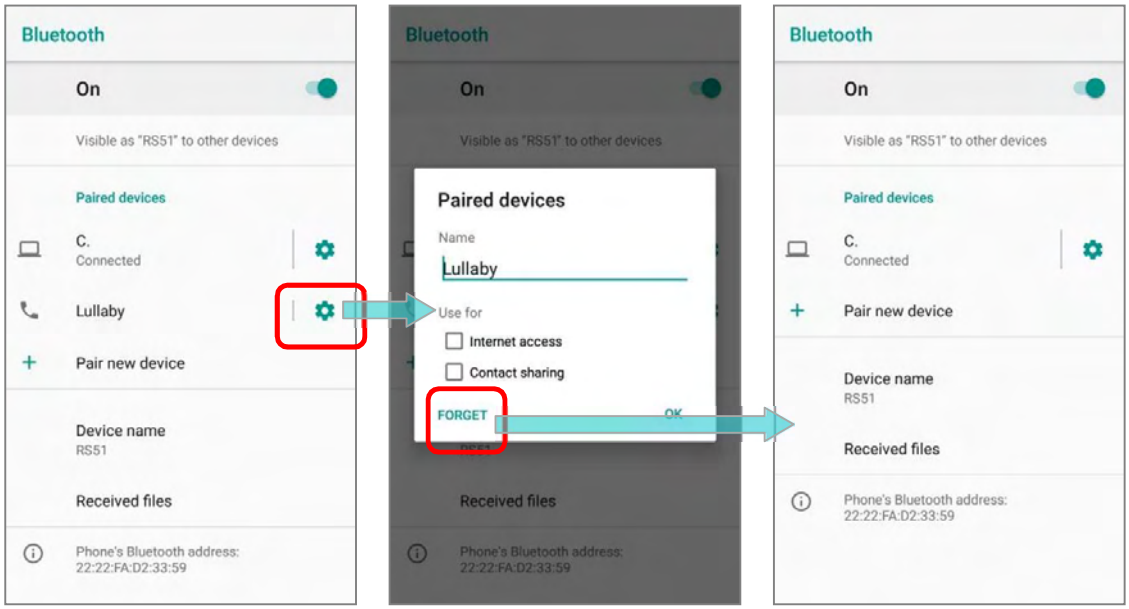
4) Once pairing is done, the Bluetooth device will be listed in the Paired Devices list.

Note: If the device you would like to pair with is not listed, make sure Bluetooth visibility is enabled on the device.

4.3.5. UNPAIR BLUETOOTH DEVICE

To unpair a paired device:

1) In the ***Paired Devices*** list, tap the settings button next to the paired device.
2) On the ***Paired device*** screen, tap ***FORGET***.



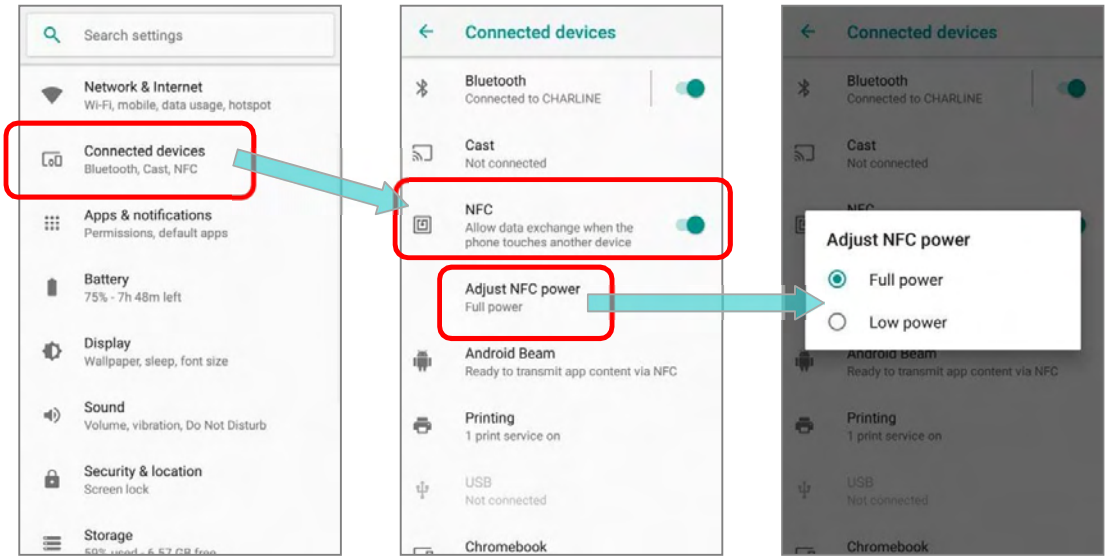
4.4. USE NEAR FIELD COMMUNICATIONS

Near field communications (NFC) uses close proximity (4 cm or less) to establish radio communication through electromagnetic fields. With NFC enabled, the mobile POS can collect information from NFC tags, exchange information with other NFC supported devices, and even change information on the NFC tag if authorized.

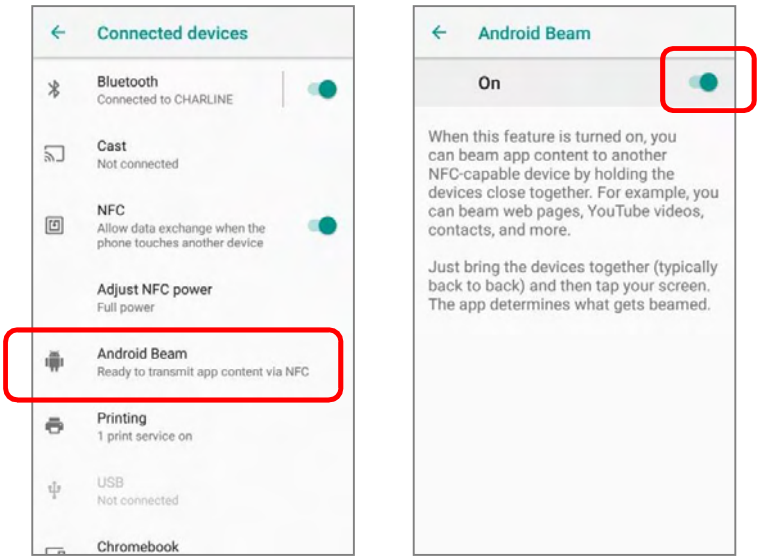
Before starting to communicate through NFC, perform the following:

1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Connected devices***.

2) On "***Connected devices***" page, tap to switch on "***NFC***". NFC power is adjustable by tapping on "***Adjust NFC power***".



3) On "***Connected devices***" page, tap ***Android Beam*** and enable it.



4.4.1. PAIR WITH NFC ENABLED BLUETOOTH DEVICES

1) On the device you would like to pair with, make sure NFC is enabled and Bluetooth discovery is enabled.
2) Hold the mobile POS without covering the antenna area at the lower end of the battery.

3) Move the mobile POS in proximity with the device. A screen notification will appear to indicate that pairing is successful.

4.4.2. SHARE INFORMATION

1) Open the web page, video, photo or contact info page you would like to transfer.
2) Place the back of the mobile POS in close proximity with the other device you would like to share data with.
3) When the two devices connect, a "***Touch to beam***" notification will appear on the screen.
4) Touch the screen to initiate data transfer.

Note:

Once the data begins to transfer, just keep the two devices in the distance within 10 m (32.8 ft.); they no longer have to be held within close range in order to transfer successfully.

4.4.3. COMMUNICATION WITHNFC

1) On the mobile POS, launch an NFC enabled application.
2) Hold the mobile POS without covering the antenna area at the lower end of the battery.
3) Place the mobile POS close to the NFC tag or device until the application indicates data transfer is complete.

Chapter 5

USING THE PHONE

The HERA51 mobile POS allows making phone calls and connecting to the network over Wideband Code Division Multiple Access (WCDMA). Insert the SIM card before turning on the power. Refer to Installing SIM Card, SAM Card and Memory Card.

Note:

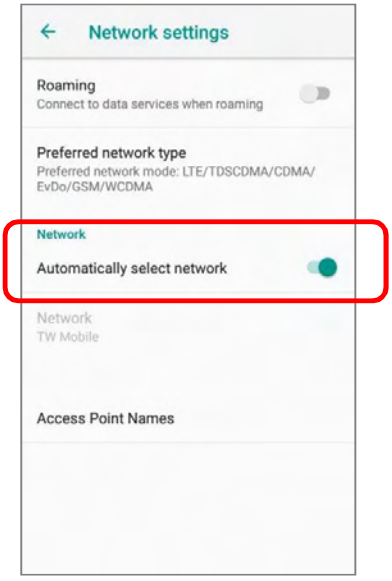
If the SIM card is not in position, you may make emergency calls if the service is supported.

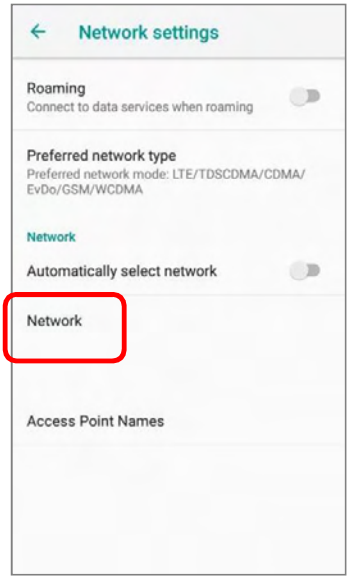
IN THIS CHAPTER

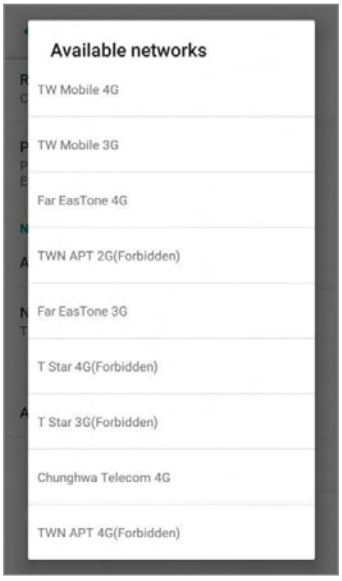
5.1. SIM CARD MANAGEMENT

The default setting for celluar networks is "***Automatically select network***". To manually select the cellular network, please:

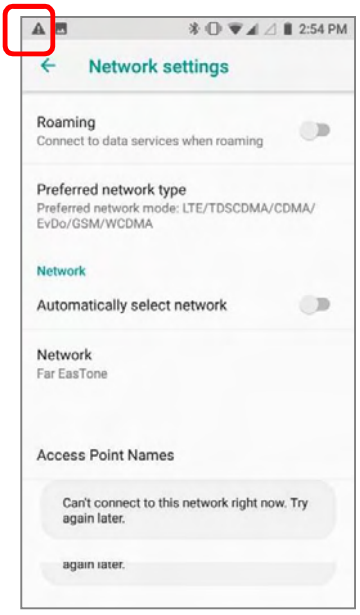
1) Go to ***App Drawer (All Apps)*** | ***Settings*** | ***Network & Internet*** | ***Mobile Network***.
2) Disable "***Automatically select network***", and tap on "***Network***". Available networks will be listed after searching.
3) Select your preferred network from the list.

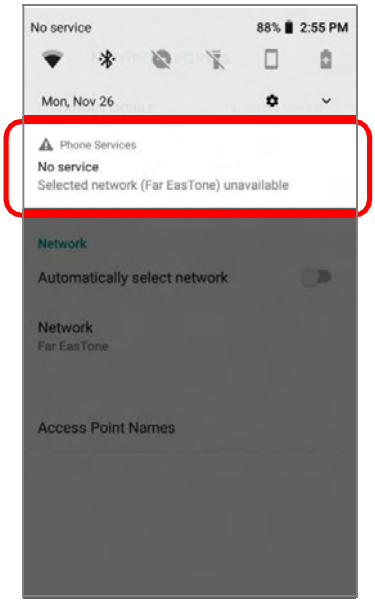






4) A notification appears if the selected network is unavailable. Please repeat the aforesaid steps to select the network again.





EMERGENCY CALLS

Depending on your service provider, the mobile POS might support making emergency phone call when the SIM card is locked, or even when no SIM card is inserted. Emergency phone numbers will vary by country.

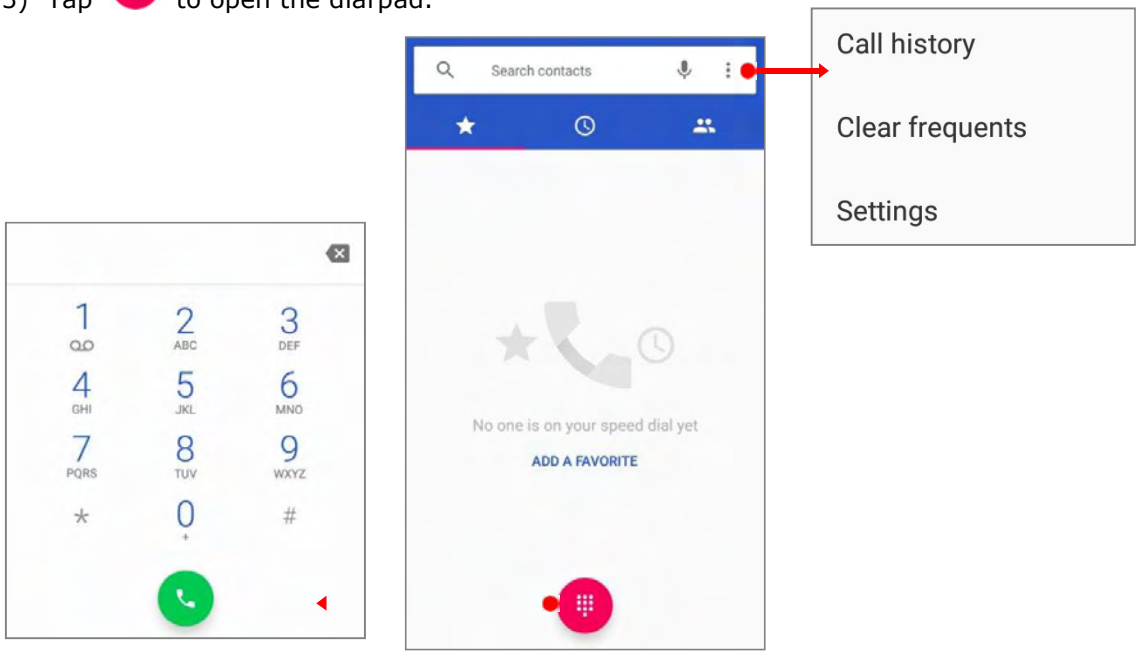
5.2. PHONE APPLICATION

5.2.1. PHONE INTERFACE

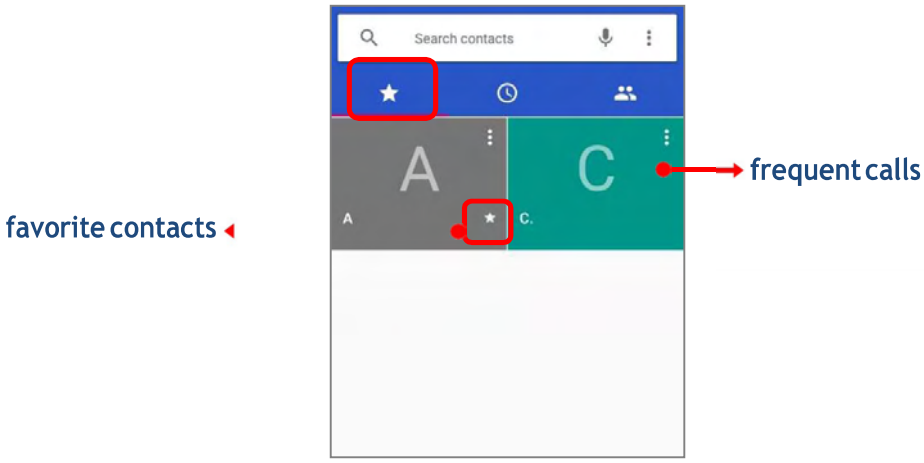
When a SIM card is installed on the mobile POS, a signal icon appears on the status bar. The filled part of the signal icon indicates the strength of the connection.

To make phone calls:

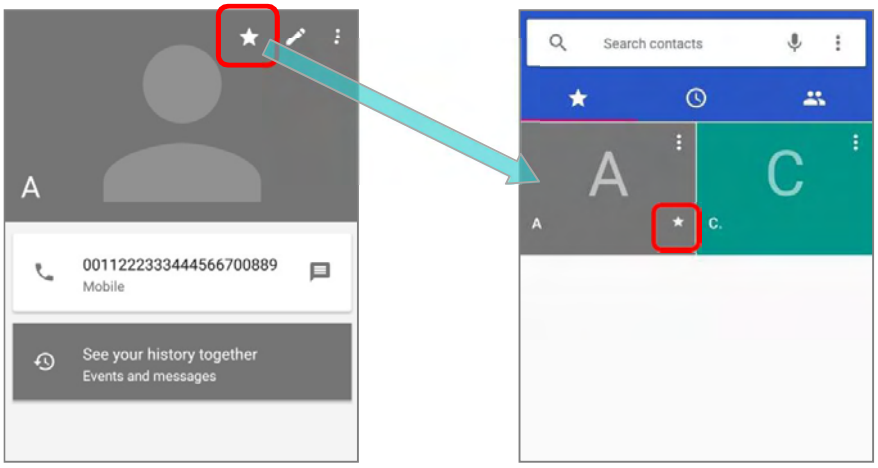
1) Go to ***App Drawer (All Apps)*** | ***Phone*** . The Phone application opens.
2) Tap the settings button to open the phone settings menu for more setting options.
3) Tap to open the dial pad.



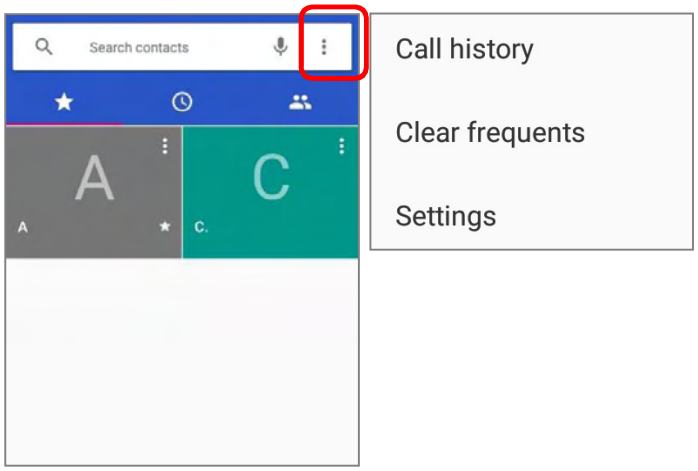
In  tab page, it displays your favorite contacts & your frequent calls:



To add a favorite contact, please tap the contact in  tab page and tap the star mark to add.

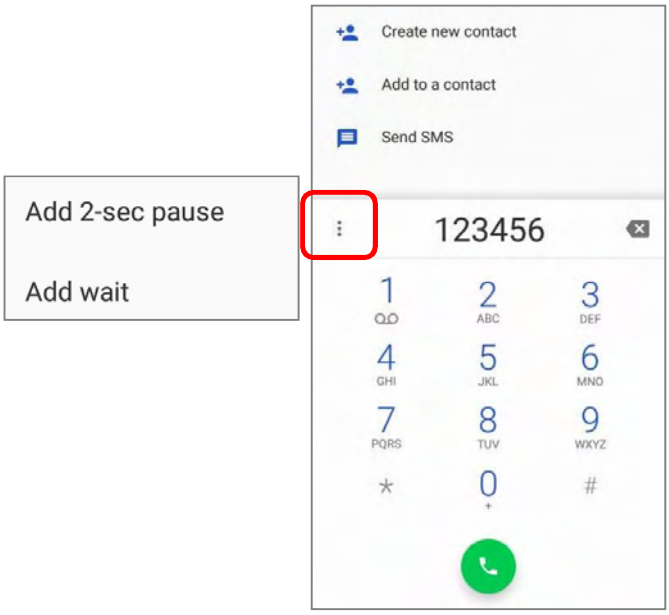


To clear the frequent calls, please tap and select "***Clear frequents***".



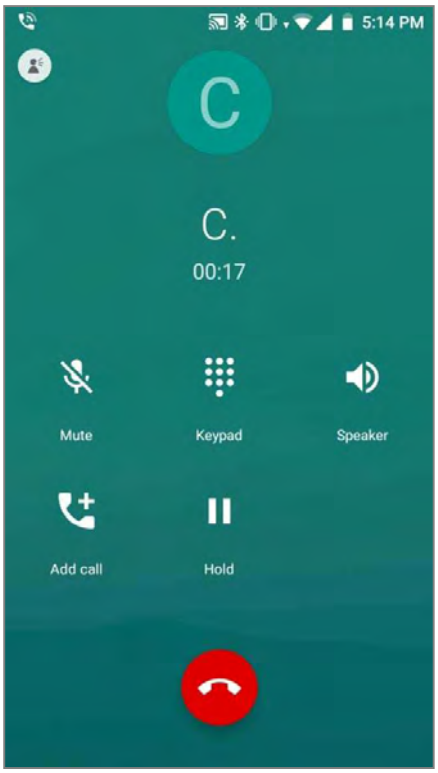
5.2.2. PLACE CALL

Tap  to expand the dial pad, and enter the phone number in the dial pad and tap  to initiate the call. If you need to frequently make calls to an interactive voice system, you may tap next to the number and select ***Add 2-sec pause*** for soft pause (a pause of 2 seconds to the buttons) or a hard pause (a pause that will wait for your confirmation to send the following digits).



5.2.3. DURING A CALL

When a call is connected, the phone keypad features the following buttons:



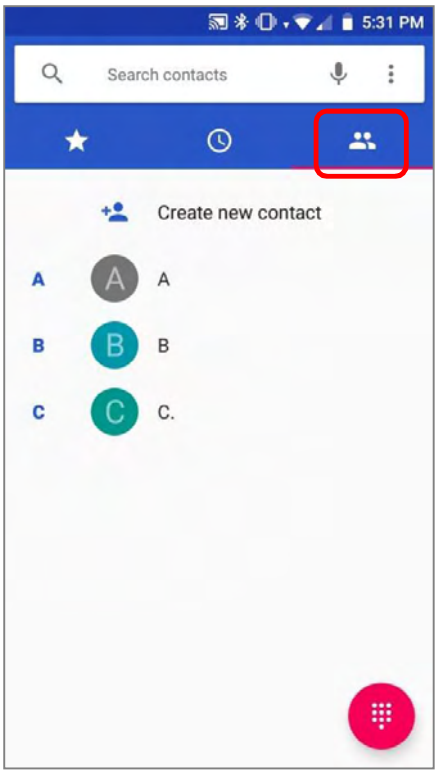
Button	Description
	**Mute**: Mutes the call.
	**Keypad**: Opens the keypad.
	**Speaker**: Turns on the speaker.
	**Add call**: Adds another person to the call.
	**Hold**: Places the call on hold.

PLACE CALL USING CONTACTS

To make a call using contacts:

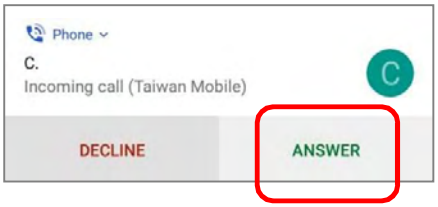
1) In the phone application page, tap  .

2) Tap a contact to initiate a call.



5.2.4. RECEIVE INCOMING CALL

When a call is incoming on the mobile POS, tap ANSWER to pick it up.



Incoming calls will be logged in the Phone application; in the case of a missed call, a notification will be displayed. See Check Miss Calls.

To mute the ringtone of an incoming call, press the volume down button

5.2.5. CHECK MISSED CALLS

If you have a missed call, a notification icon will appear on the status bar. The missed calls notification will also be displayed on:

1) The Phone app icon

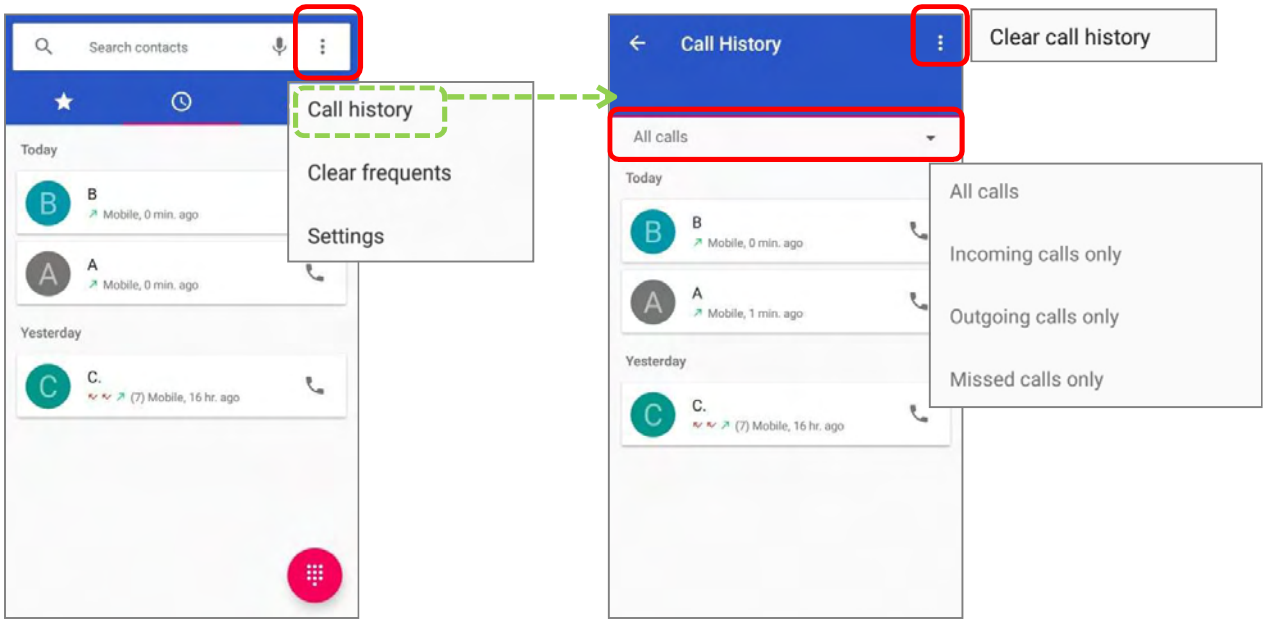
2) The Lock Screen

(Turning on/off this function on:
App Drawer (All Apps) | ***Settings*** | ***Apps & notifications*** | ***Notification*** | ***On the lock screen***)

Unlock the screen and use the Notification Drawer to manage the missed call.

5.2.6. CALL HISTORY

1) On the Phone application page, tap the ***History*** button to open a list of history calls. Or you can tap the settings button and then ***Call History***.

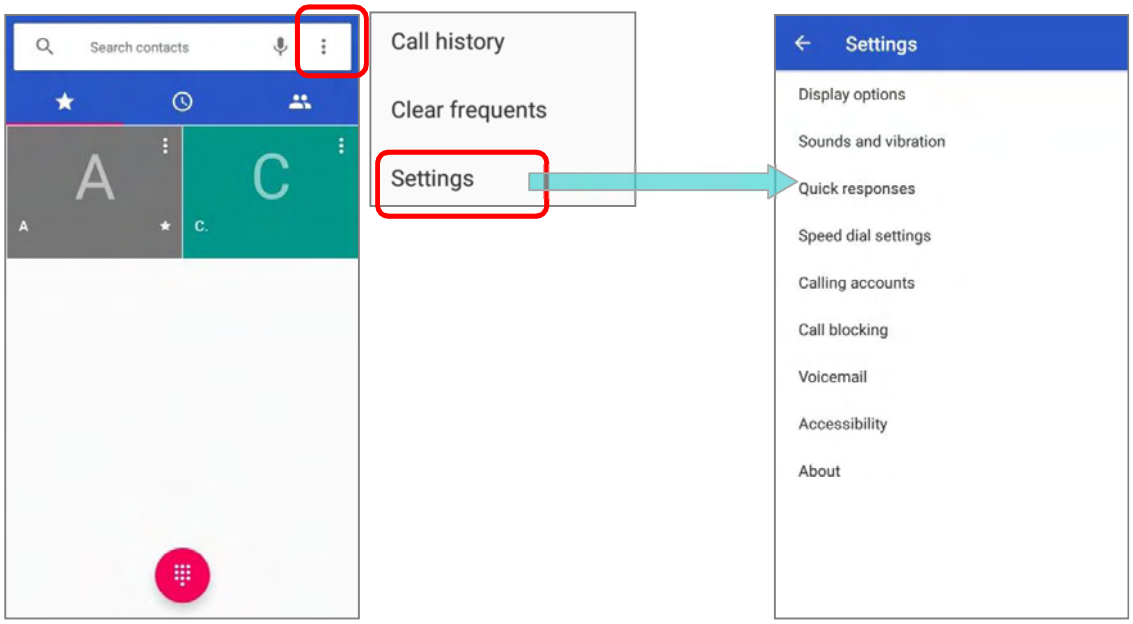


Button	Description
	Connected calls.
	Missed calls.

2) Tap the phone icon next to a call record to place back the call.

5.2.7. CALL SETTINGS

Tap ⋮ and select "***Settings***" to enter the settings page:



Tap each setting for more setting options.

5.2.8. MAKE MULTI-PARTYCALLS

To make multi-party conference calls:

1) On the Phone application page, enter the first number to call and tap to initiate the call.
2) After the call has begun, tap and then **Add call** to add another member. The first call will be put on hold.
3) Enter the second number to call and tap to initiate the call.
4) When the second call is connected, the first call will continue to be on hold. Tap the merge call button to add the first call to the conversation. A three-party conference call is initiated.

- To add a fourth member, tap . The three-party call will be put on hold. Enter another number to call and tap to initiate the call. When the call is connected, the three-party call will continue to be on hold. Tap the merge call button to add the three-party call to the conversation. A four-party conference call is then initiated.
- Tap **Manage Conference** to view all members of the call.
- To remove a member, tap next to the member.
- To speak with a member in private, tap the member, and the conference call will be put on hold. Tap to return back to the conference call.

5.3. AUDIO MODES

The mobile POS offers three different audio modes for phone calls:

HANDSET MODE

This is the default audio mode which uses the receiver above the touchscreen for audio output during calls.

SPEAKER MODE

This mode uses the built-in speaker for audio output during calls.

HEADSET MODE

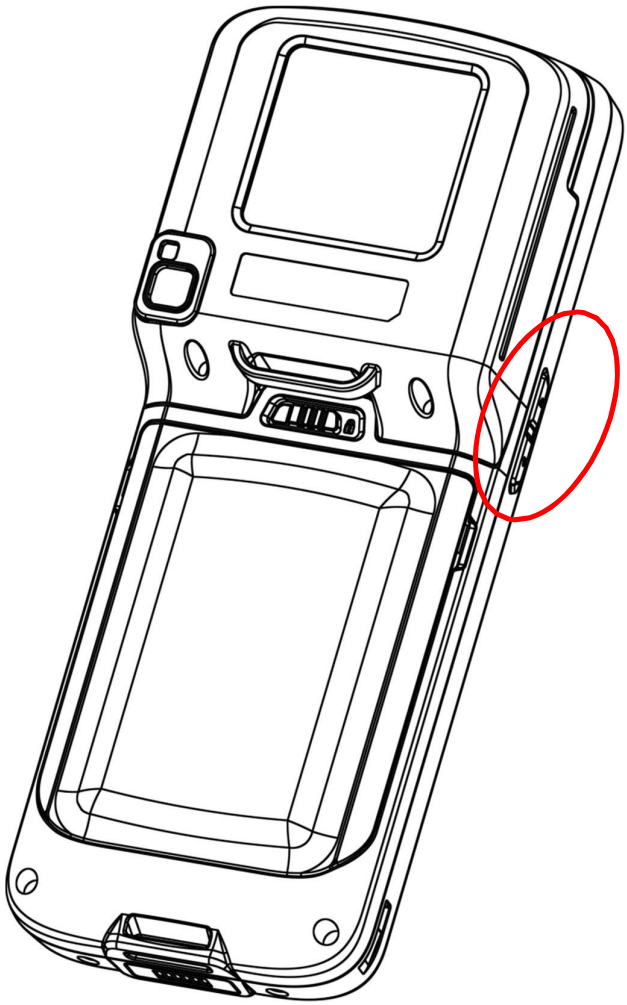
Connect a Bluetooth headset the mobile POS for audio output during calls.

USE BLUETOOTH HEADSET

See Pair Bluetooth Devices to connect the mobile POS to a Bluetooth device. The speaker phone becomes muted when a Bluetooth headset is connected.

5.4. IN-CALL VOLUME

Use the volume buttons to adjust the ringer volume and system sound level. When in the middle of a call, use the volume buttons to adjust in-call conversation volume.



Chapter 6

USING READER CONFIGURATION UTILITY

The **Reader Configuration** utility allows you to manage the barcode reader integrated on the mobile POS.

IN THIS CHAPTER

6.1. CONFIGURING READER

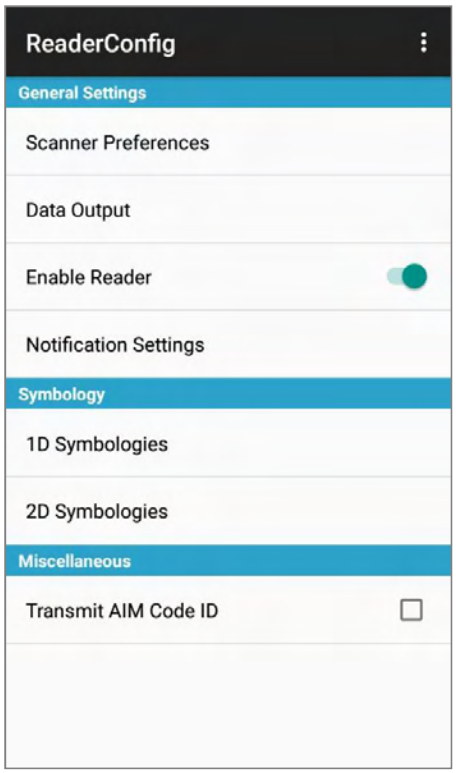
The mobile POS is capable of reading printed barcodes. The reader module can be either a (laser) 1D reader or a 2D imager. The mobile POS is installed with a Reader Config to configure the scan engine built inside. Use it to create a profile of settings that best suits your needs.

LAUNCH READERCONFIG

To launch ReaderConfig:

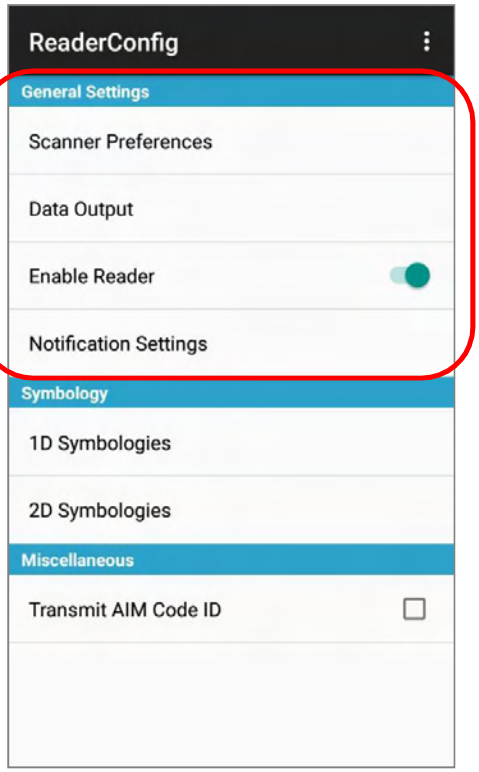
1) Go to ***App Drawer (All Apps)*** | ***ReaderConfig*** to open the reader configuration utility.

2) ***ReaderConfig*** launches in context with the reader module(s) on board the mobile POS. On the main settings page are three sections: ***General Settings***, ***Symbology*** and ***Miscellaneous***.



6.1.1. GENERAL SETTINGS

General Settings is where all reader settings are accessed from. Tap each item to enter its sub-menu.



The functions under **General Settings** include:

- Scanner Preferences
- Data Output
- Enable Reader (enabled by default)
- Notification Settings

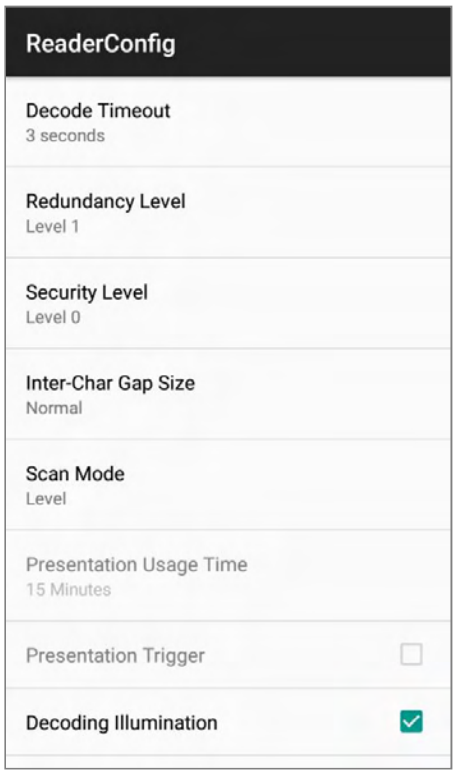
SCANNER PREFERENCES

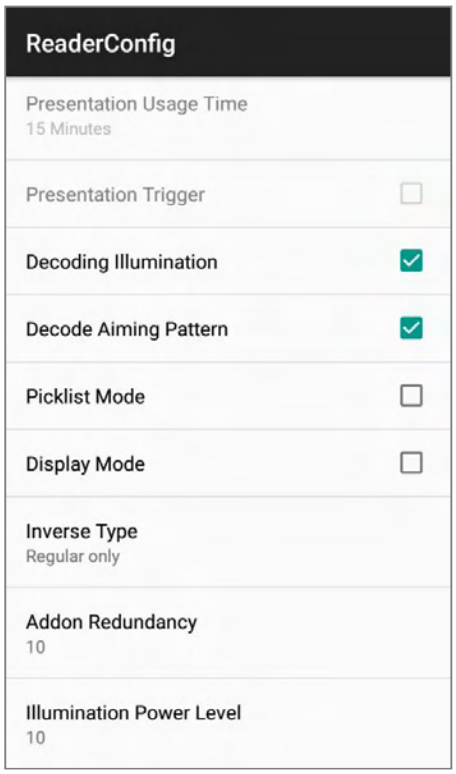
Options on the ***Scanner Preferences*** page differ according to the type of scan engine built within the mobile POS.

To open ***Scanner Preferences*** page:

1) Open Reader Config as described in Launch Reader Config.

2) Tap ***Scanner Preferences***.





2D IMAGER SETTINGS

<table>
<tr><th>Setting</th><th>Description</th><th>Default</th></tr>
<tr><td>Decode Timeout</td><td>Sets the maximum time for the decoding process during a scan. Configurable between 1 sec to 9 sec.</td><td>3 sec.</td></tr>
<tr><td>Redundancy Level</td><td>Sets how many successful readings should be done before linear barcodes such as Codabar, MSI, and Interleaved 2 of 5 can be decoded. Levels 1 to 4 available.</td><td>Level 1</td></tr>
<tr><td>Security Level</td><td>Sets the security level to ensure decoding accuracy considering the printed quality of barcodes such as Code 128, Code 93, and UPC/EAN. The higher the level is, the more security is ensured. Options are:
<table>
<tr><th>Level</th><th>Description</th></tr>
<tr><td>0</td><td>With this default, the scan engine is aggressive enough to decode most “in-spec” barcodes.</td></tr>
<tr><td>1</td><td>Select this level if misdecodes have occurred. It fixes most misdecodes.</td></tr>
<tr><td>2</td><td>Select this level if Level 1 should fail to eliminate misdecodes.</td></tr>
<tr><td>3</td><td>Select this level if Security Level 2 should fail to prevent misdecodes. However, as this level actually impairs the decoding ability of the decoder, a safer solution would be to improve the quality of the bar codes to read.</td></tr>
</table></td><td>Level 0</td></tr>
<tr><td>Inter-Char Gap Size</td><td>Sets the intercharacter gap size for Code 39 and Codabar. This option is to allow the digital scanner to adjust its decoding standard so as to tolerate out-of-specification bar codes that are improperly printed out (which may cause the intercharacter size to become larger). Switch between Normal and Large.</td><td>Normal</td></tr>
<tr><td>Scan Mode</td><td>Sets the reader’s scanning behavior.
Level: The decoding process is activated by a trigger event, and continues until the trigger event ends, a valid decode happens or decode session time-out is reached.
Presentation Mode: When this device is executing Barcode reader service under this mode, the reader module will stay active and automatically turn off after the user-defined period of time (Presentation Usage Time).</td><td>Level</td></tr>
<tr><td>Presentation Usage Time</td><td>This option is available when Presentation is selected as the scan mode. This defines the duration of how long Presentation mode stays active, after which the laser light beam will automatically be disabled.</td><td>15 Minutes</td></tr>
<tr><td>Decoding Illumination</td><td>Enables an LED light beam to aid barcode reading.</td><td>Selected (Enabled)</td></tr>
<tr><td>Decode Aiming Pattern</td><td>Projects a crosshair at the center of the laser light beam to facilitate barcode reading.</td><td>Selected (Enabled)</td></tr>
<tr><td>Picklist Mode</td><td>When selected, only barcodes aligned at the crosshair of the laser light beam will be decoded.</td><td>Deselected (Disabled)</td></tr>
<tr><td>Display Mode</td><td>Enable improved performance for reading barcodes on electronic displays and mobile phones.</td><td>Deselected (Disabled)</td></tr>
<tr><td>Inverse Type</td><td>Decide whether to disable or enable decoding inverse barcodes, or set as auto.</td><td>Regular only</td></tr>
<tr><td>Addon Redundancy</td><td>Functions when “auto-discriminate” is applied for UPC/EAN addons. Decides the number of times of supplemental decoding of the same barcode in order to count as a valid read. Configurable between 2 and 30.</td><td>10</td></tr>
</table>

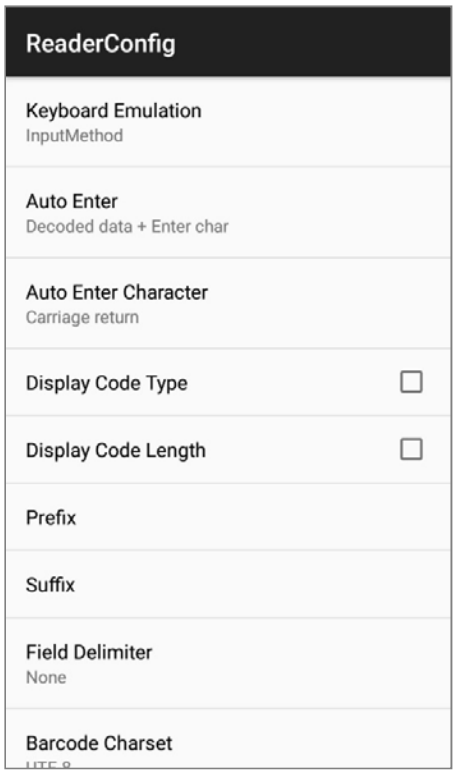
Illumination Power Level	Users can adjust the illumination brightness of the LED light source. Move the slider to specify a value ranging from 1 to 10 to set the brightness level which is set to 10 by default meaning 100% illuminated.	10

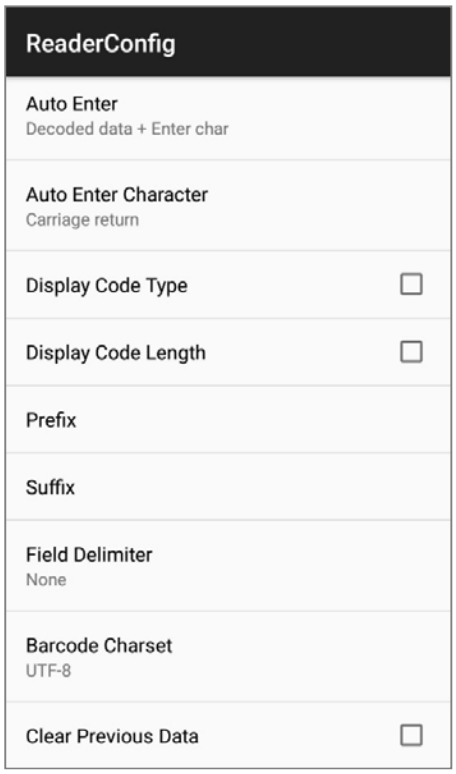
DATA OUTPUT

Data Output allows users to set the way to output decoded data.

To open ***Data Output*** settings page:

1) Open ***Reader Config*** as described in Launch Reader Config.
2) Tap ***Data Output***.





WHERE TO OUTPUT

Keyboard Emulation setting controls where the decoded data is to be output.

Setting	Descriptions	Default
Keyboard Emulation	Tap the switch to enable. When enabled, the reader module treats decoded data as typed text and outputs it to the active application on the mobile POS. Options are: ▸ None ▸ InputMethod ▸ KeyEvent	InputMethod

HOW TO OUTPUT

After the output destination is set, configure how to output decoded data, i.e. the "format" to present decoded data.

Setting	Description	Default
Auto Enter	Adds an ENTER character before or after each string of decoded data. The ENTER character can be defined in the "Auto Enter character" field below. This function saves the trouble of pressing a confirmation key to accept each string of decoded data. Options are: ▸ Disable ▸ Decoded data + Enter char ▸ Enter char + Decoded data	Decoded data + Enter char
Auto Enter character	Adds a key code before or after the decoded data. If [Auto Enter] is enabled, select the ENTER character to send. Options are: ▸ None ▸ Carriage Return ▸ Tab ▸ Space ▸ Comma ▸ Semicolon	Carriage Return
Display Code Type	Prefixes the output data with code type information.	Deselected (Disabled)
Display Code Length	Suffixes the output data with code length information.	Deselected (Disabled)
Prefix	Affixes 0 to 10 characters to the left of the output data. Tap the label to open a character table for entering the prefix. ▸ Prefixes containing invisible characters are supported.	--
Suffix	Affixes 0 to 10 characters to the right of the output data. Tap the label to open a character table for entering the suffix. ▸ Suffixes containing invisible characters are supported.	--
Field Delimiter	Sets the delimiter to separate the output barcode data to the following pieces: code type, decoded barcode data, and code length (if applicable). Options are: ▸ None ▸ Comma ▸ Semicolon ▸ Full stop	None
Barcode charset	Specifies the current decoding for barcode data.	Windows-1252:Western European
Clear Previous Data	By enabling this option, only the last scanned data entry will be output.	Deselected (Disabled)

ENABLE READER

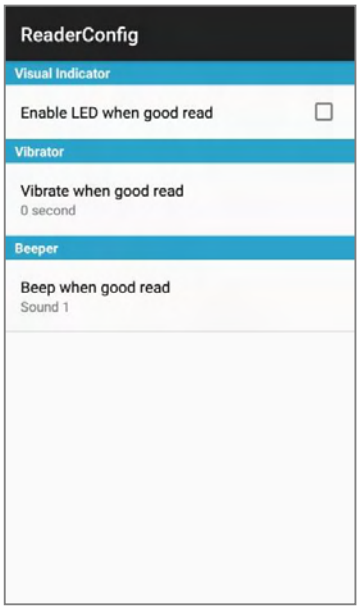
Features a switch to enable or disable reader scanning ability. When enabled, a light beam will be sent out from the scanning window each time the trigger (scan key) is pressed.

NOTIFICATION SETTINGS

Notification Settings enables audible, visible and tactile feedback for scanning good read, which helps notify the user of a successful decoding.

To open ***Notification Settings*** page:

1) Open Reader Config as described in Launch Reader Config.
2) Tap ***Notification Settings***.

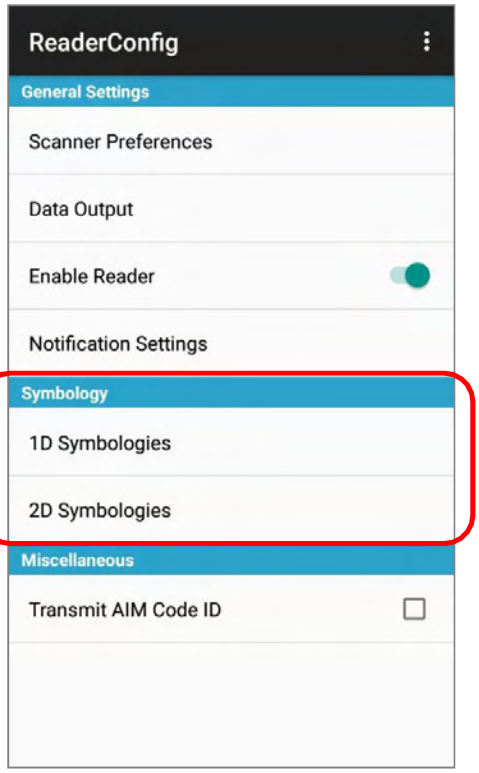


Setting		Description	Default
LED	Enable LED when good read	Selects to enable/disable LED light (left) for scanning good read. See Status LED for details.	Deselected (Disabled)
Vibrator	Vibrate when good read	Enables/disables tactile feedback (vibration) for good read and sets the duration to vibrate.	0 second (Disabled)
Beeper	Beep when good read	Sets the beeper sound for scanning good read. Users can choose to mute the beeper sound, or configure the beeper between sounds 1 to 9.	Sound 1

6.1.2. SYMBOLOGY

The **Symbology** page sets the symbologies to read, and also enables/disables some feature(s) for a symbology to read, such as:

- Customize and transmit start/stop characters
- Verify/transmit check digits
- Enable/disable addon digits
- Convert to another symbology
- Transmit symbology ID

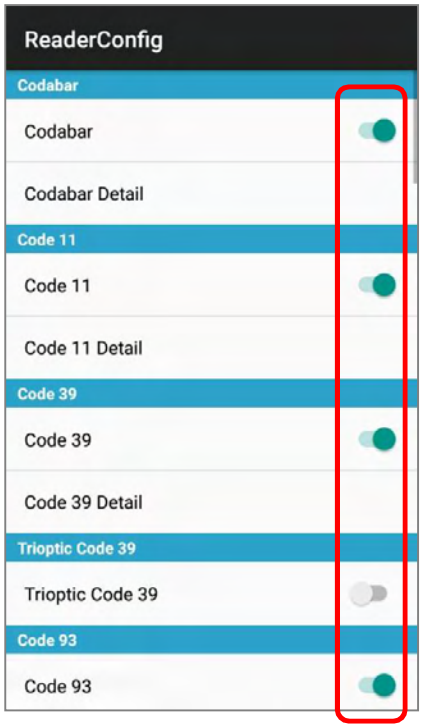


To open ***Symbology*** settings page:

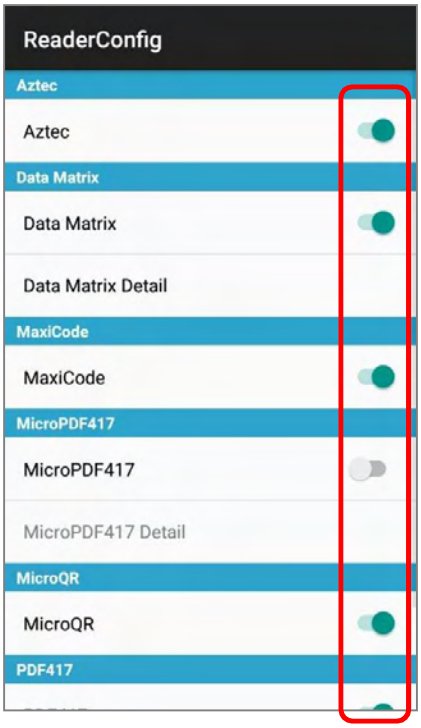
1) Open Reader Config as described in Launch Reader Config.

2) Tap ***1D Symbologies*** or ***2D Symbologies*** (in case of a 2D imager) to list all symbologies which can be decoded.

1D Symbologies



2D Symbologies

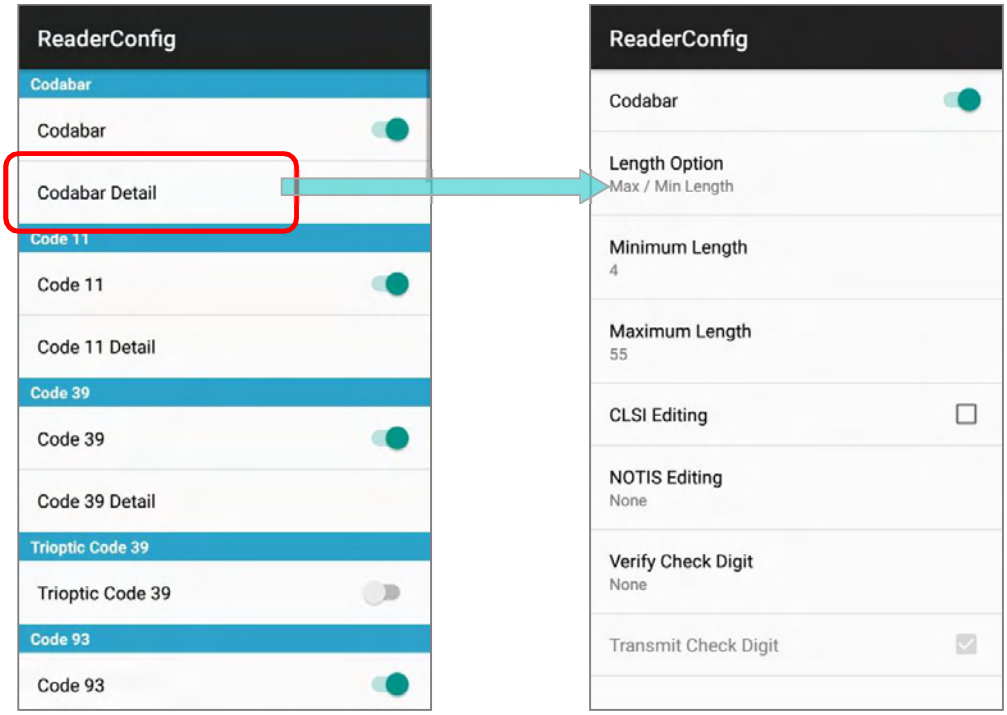


ENABLE/DISABLE SYMBOLOGY

Tap the label of each symbology to enable or disable it.

SYMBOLOGY SETTINGS

Tap the ***Detail*** label below each symbology to access detailed settings for the specific symbology.

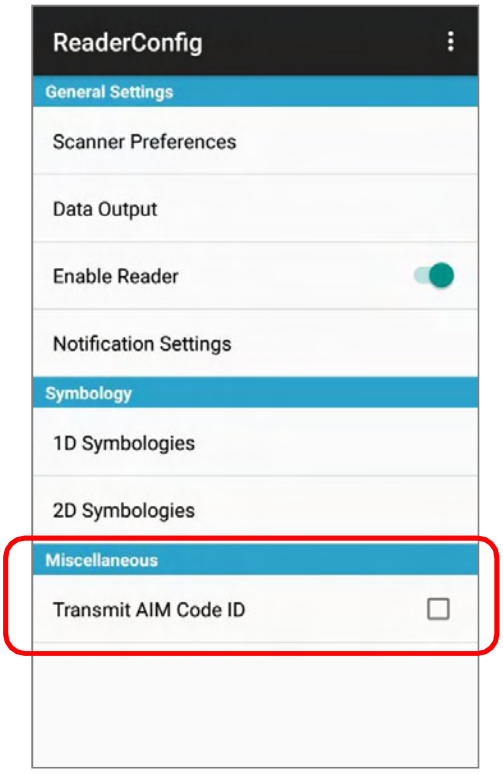


For details about the featured settings:

- See 2D Imager Symbology Settings.

6.1.3. MISCELLANEOUS

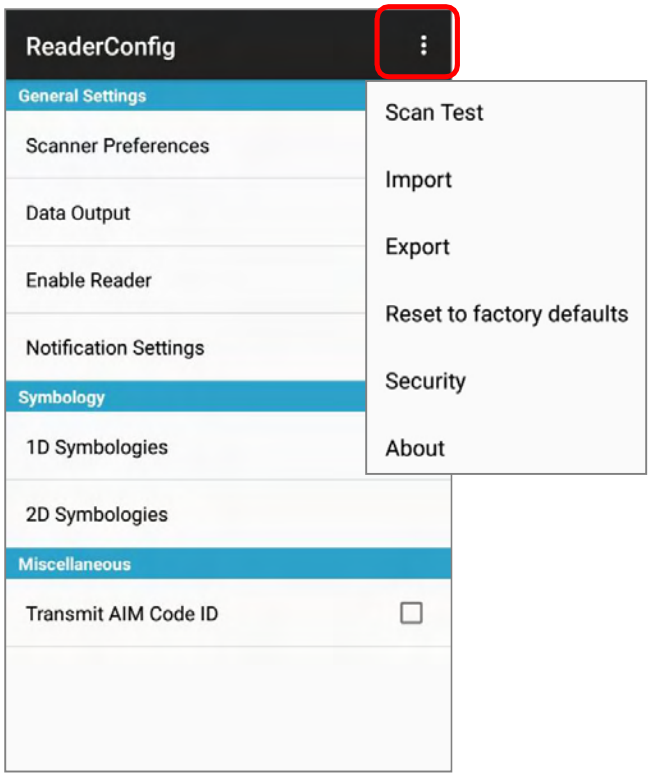
This section allows enabling code ID transmission for easy identification of the scanned barcode.



Setting	Description	Default
Transmit AIM Code ID	Sets whether to include AIM code ID character in the decoded data. For AIM code ID, see the following: 2D Imager Symbology Settings.	Deselected (Disabled)

6.1.4. READER CONFIG OPTION MENU

Reader Config provides an option menu which is accessible on the menu bar of the main settings page. This menu allows you to test scan barcodes, import/export all settings (except of the setting of "***Enable Reader"***) in a re-usable format, reset all settings back to factory default, and view copyright and version information.



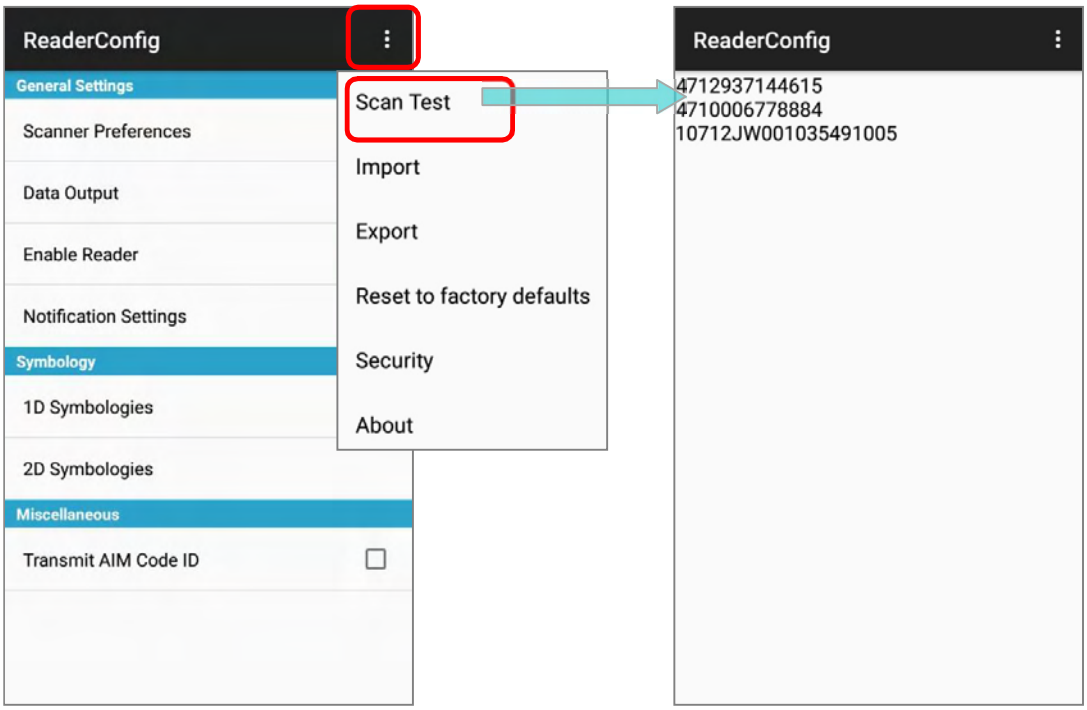
SCAN TEST

To test scan a barcode:

1) Open Reader Config as described in Launch Reader Config.

2) Tap the settings button ⋮ on the menu bar to open the option menu.

3) Tap Scan Test in the option menu. A page opens for test scanning.



IMPORT AND EXPORT

Reader Config supports saving the settings (except of the setting of "***Enable Reader***") and exporting them as a ***.json*** file.

Previously exported symbology and scanner settings can be imported again on the mobile POS. This can also be used to implement identical Reader Config settings on multiple devices.

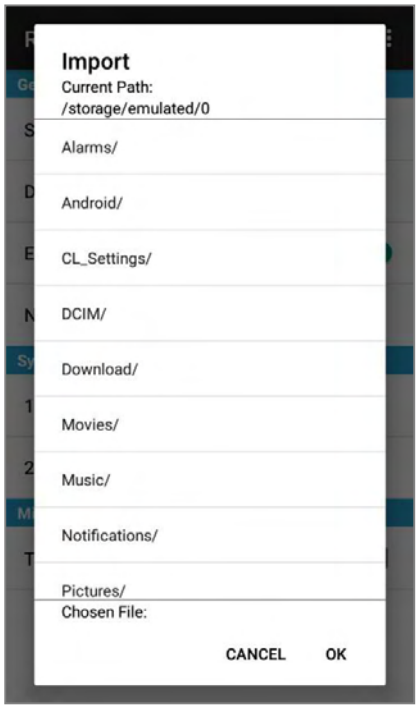
To import settings:

1) Open ***Reader Config*** as described in Launch ReaderConfig.

2) Tap the settings button  on the menu bar to open the option menu.

3) Tap ***Import*** in the option menu.

   A page opens allowing you to select a previously saved profile.



4) Tap ***OK***. In a few seconds a prompt will appear on the mobile POS to indicate settings have been imported successfully.

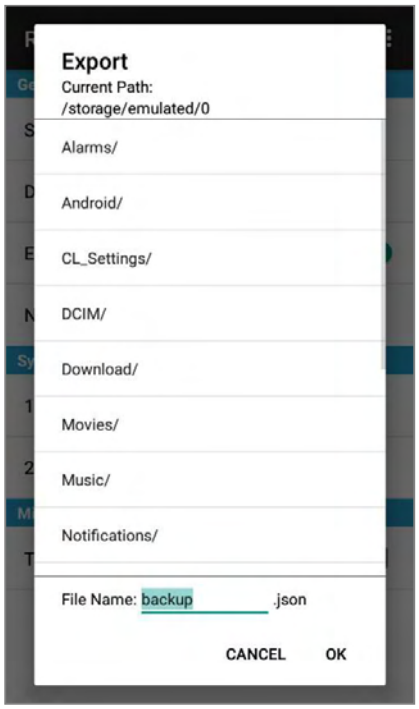
To export settings:

1) Open ***Reader Config*** as described in Launch Reader Config.

2) Tap the settings button on the menu bar to open the option menu.

3) Tap ***Export***.

4) An export page opens allowing you to enter the name and location of the profile to save.



5) Tap ***OK*** to export. A prompt will appear on-screen to notify that settings have been exported.

RESET TO FACTORY DEFAULTS

This function restores all settings in the ***Reader Config*** application to default.

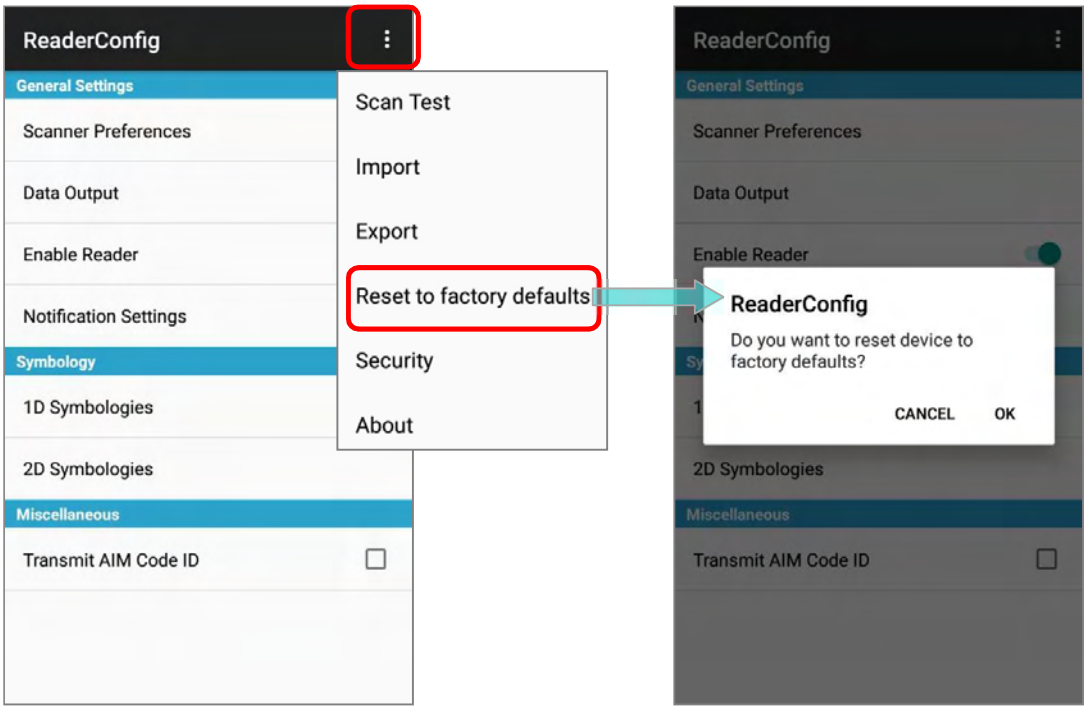
To enable ***Factory Reset***:

1) Open ***Reader Config*** as described in Launch Reader Config.

2) Tap the settings button ⋮ on the menu bar to open the option menu.

3) Tap ***Reset to Factory defaults***.

4) A warning dialog appears confirming whether to restore all application settings back to default. Tap ***OK*** to reset or ***Cancel*** to close the dialog.



SECURITY

You can set a password to restrict other users of this mobile POS from changing certain configurations or accessing certain functions in Reader Config.

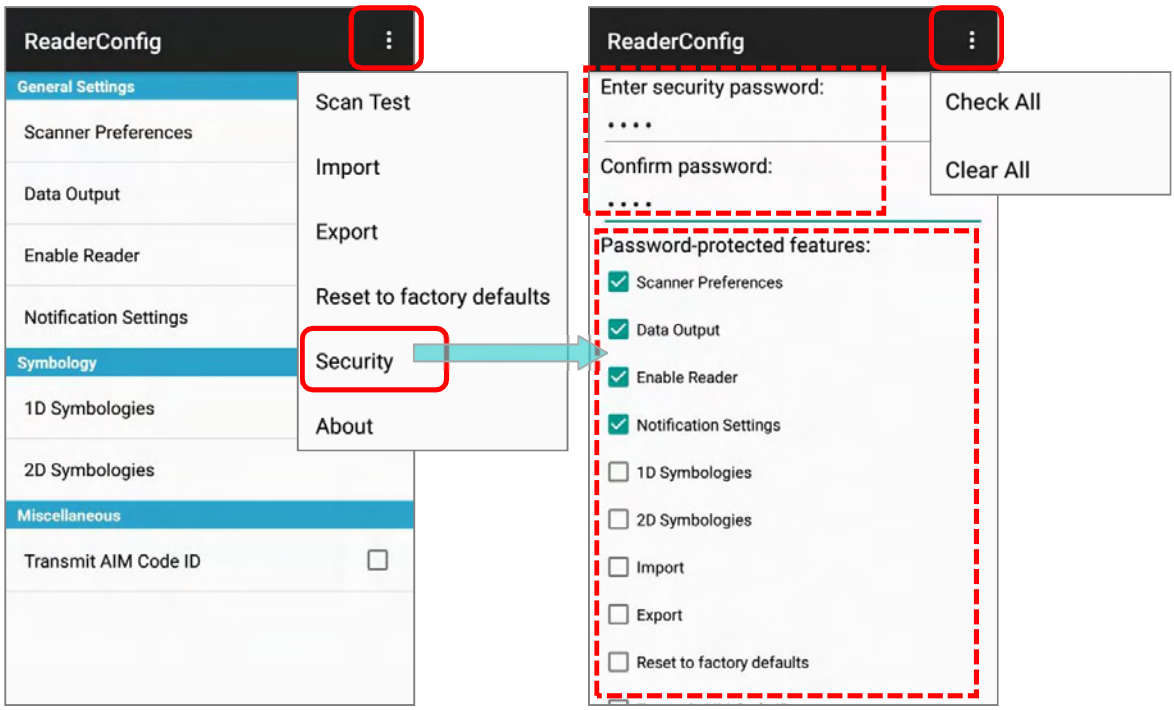
1) Open ***Reader Config*** as described in Launch Reader Config.

2) Tap the settings button ⋮ on the menu bar to open the option menu.

3) Tap ***Security***.

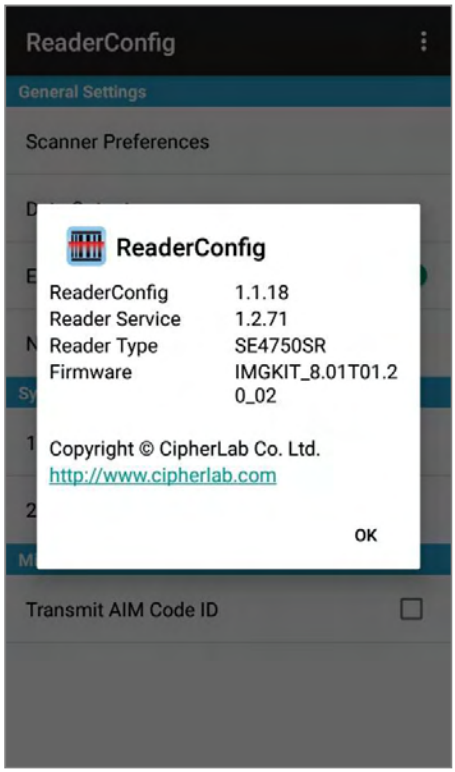
4) Enter and confirm a password (up to 32 characters, containing at least 1 digit or 1 alphabetic letter).

5) Check the items that will be protected by this password.



ABOUT

Tap ***About*** in the Reader Config option menu to display software version and copyright information.



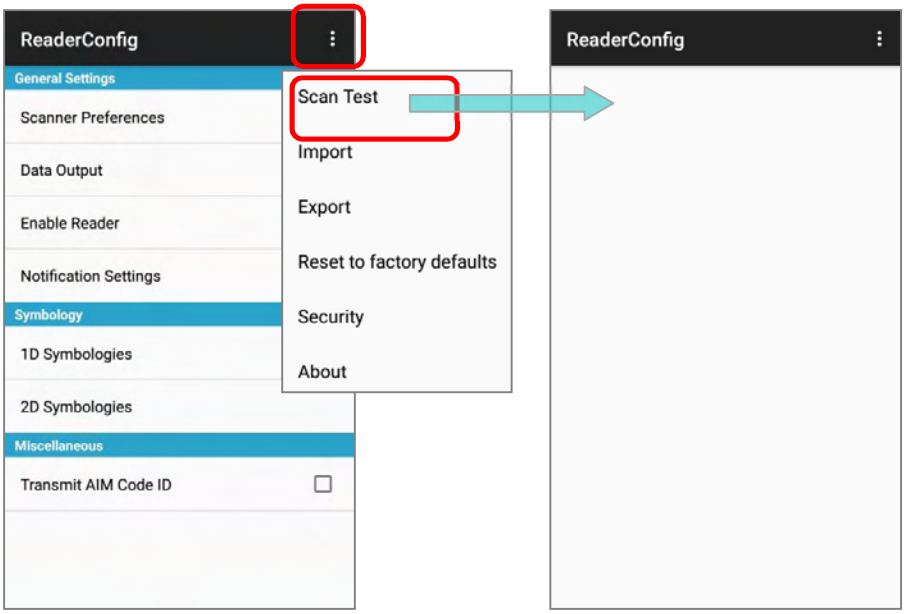
6.2. READ PRINTED BARCODES

Aside from output to destinations as per Keyboard Emulation settings, Reader Config provides a ***Scan Test*** feature for quick viewing of decoded data.

To perform test scanning of barcodes:

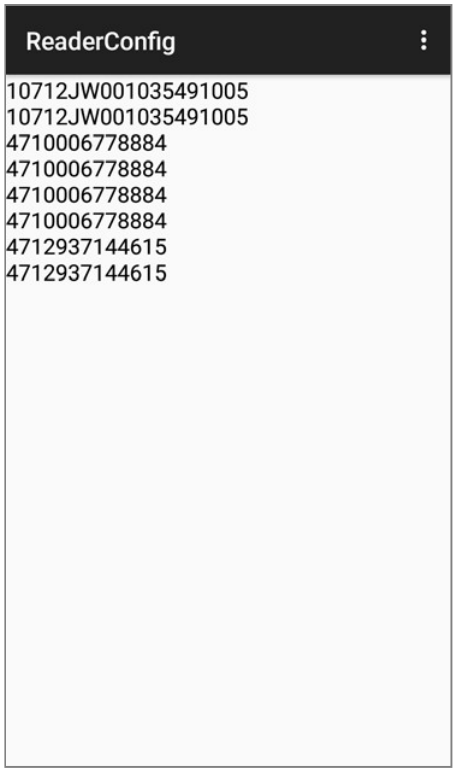
1) Open ***Reader Config*** as described in Launch ReaderConfig.
2) Tap the settings button ⋮ on the menu bar to open the option menu.
3) Tap ***Scan Test*** on the menu bar.

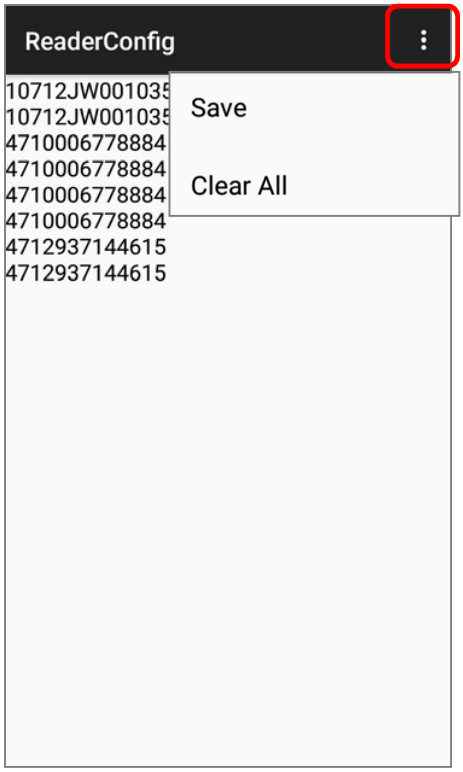
   A Test Scan Form opens for displaying the scanned data.



4) Aim the scanning window at the barcode to read and press any of the two side triggers. The scanning light beams to read the printed barcodes. The scanning light goes off once the data is decoded, or when the decode timeout period has passed

The decoded data will appear on the page. When finished viewing, tap ⮌ to leave the test scan page; or tap the settings button ⋮ and then "***Save***" to save the decoded data as a .txt file, or "***Clear All***" to clear all data on the screen.





SPECIFICATIONS

PLATFORM, PROCESSOR & MEMORY

Operating System & CPU

OS Version	Android 8.1 Oreo with GMS Certified
CPU	Qualcomm SDM450

Memory

ROM	16GB
RAM	2GB
Expansion Slot	One Micro SD card slot (up to 32GB for SDHC; up to 64GB for SDXC)

COMMUNICATION & DATA CAPTURE

Communication

USB Client	USB 2.0 OTG
WPAN	Bluetooth 2.1EDR/4.0 BLE/V4.1
WLAN	802.11 b/g/n and 802.11 a/ac/n networking (2412~2472 MHz: 18.34dBm 5180~5240MHz: 17.04dBm, 5260~5320MHz: 17.04dBm, 5500~5700MHz: 17.01dBm)
WWAN	Built-in WWAN modem for Quadband GSM, UMTS, LTE functions: GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE Worldwide Frequency bands: GSM/GPRS/EDGE 880~915, 925~960MHz: 33dBm 1710~1785, 1805~1880MHz: 30dBm WCDMA/UMTS/HSDPA/HSUPA:B1(2100),B8(900) 1920~1980, 2110~2170: 24dBm 880~915, 925~960: 24dBm LTE FDD:B1(2100),B3(1800),B7(2600),B8(900),B20(800),B38(2600) 1920~1980, 2110~2170MHz: 23dBm 1710~1785, 1805~1880MHz: 23dBm 2500~2570, 2620~2690MHz: 23dBm 880~915, 925~960MHz: 23dBm 832~862, 791~821MHz: 23dBm 2570~2620MHz: 23dBm Americas GSM : 850/900/1800/1900 UMTS : 850/900/AWS(1700)/1900/2100 FDD LTE : 700/850/1700/1900/2600 (FDD 13,17,5,4,2,7)
GPS	GPS, GLONASS, BeiDou, AGPS

Data & Image Capture

Digital Camera	Autofocus 13 megapixels with user-controllable LED flash
Barcode Reader	2D Imager
HF RFID Reader	Supports NFC (Peer-to-Peer, Card Reader, Card Emulation)

ELECTRICAL CHARACTERISTICS

Batteries

Main Battery Pack	Replaceable and rechargeable 3.8V 4000mAh, full charging 4.35V Minimum charging time: 4 hours @25°C For the first time charging the main battery, please charge it for at least 8 to 12 hours. The allowed battery charging ambient temperature is between 0°C to 40°C. It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance. Please note that battery charging stops when ambient temperature drops below 0°C or exceeds 40°C.
Backup Battery	Rechargeable Li-ion battery: 3.7V, 60 mAh, full charging 4.2V. Capable of Data retention for 30 minutes Charging time: 4 hours

Power Adaptor

Power Supply Cord with Universal Power Adaptor	Input	AC 100~240 V, 50/60 Hz
	Output	DC 5V, 2A CE, CB, BSMI, FCC, CCC, PSE, KC, CU, INMETRO (AC plug only), BIS

Working Time

Supports working time for up to 12 hours at 25 degrees

PHYSICAL CHARACTERISTICS

Color Touch Screen Display

Display	4.7” LCD, Corning Gorilla Glass 3, touch supports bare/wet/gloved finger and stylus inputs
Resolution	HD (720x 1280 pixels)

Notifications

Status LED	A Ttri-color (white, green, & red) LED indicators signaling charging and data capturing status
Audio	Integrated with one speaker playing sounds for events
Vibrator	Integrated with one vibrator for tactile feedback

Dimensions & Weight

Dimensions	162 mm (L) x 80mm (W) x 26mm-40mm (H)
Weight	440g (equipped with 4000mAh battery)

ENVIRONMENTAL CHARACTERISTICS

Temperature

Operating	0°C to 50°C (32°F to 122°F)
Storage	-20°C to 60°C (-4°F to 140°F)
Charging	0°C to 40°C (32°F to 104°F)

Humidity

Relative humidity	5% to 95% (Sharp temperature change, dewing, or freezing not allowed)

Resistance

Impact Resistance	Multiple drops onto concrete at 1.2 m (3.9 ft.) on all six sides Multiple drops onto concrete at 1.5 m (4.9 ft.) on all six sides for HERA51 mobile POS with rubber boot
Electrostatic Discharge	±12 kV air discharge, ±8 kV contact discharge

PROGRAMMING SUPPORT

Development Environment & Tools

JAVA	Environment Android studio Software Development Kit: JAR
C#	Environment: Visual Studio Software Development Kit: DLL (Xamarin Library)

Software & Utilities

Software Package	Reader Config Software Trigger Mobile Deployment Suite for Android App Lock Xamarin Binding HF RFID Configuration Signature Capture Terminal Emulation