

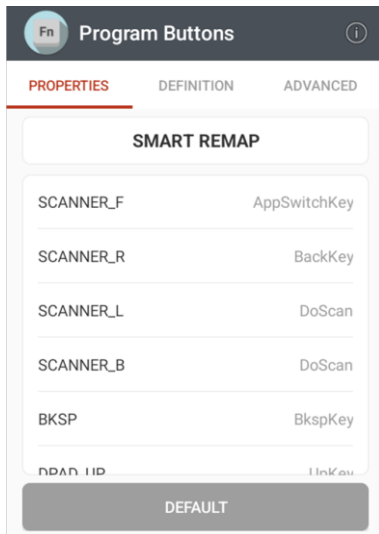
Using the Keyapd

Program Buttons

Most buttons on the PM452 except power button can be optimized as you want. To map the button to other functions from default,

1. Navigate to **EmKit**  > **Program Buttons**.
2. Tap **SMART REMAP**. And press a button you want to remap.

Figure 42 Program Buttons - button list



Note: SCANNER_B indicates the trigger button on the gun handle.

3. Choose a behavior you want to use among the tabs.
4. Tap **APPLY**.

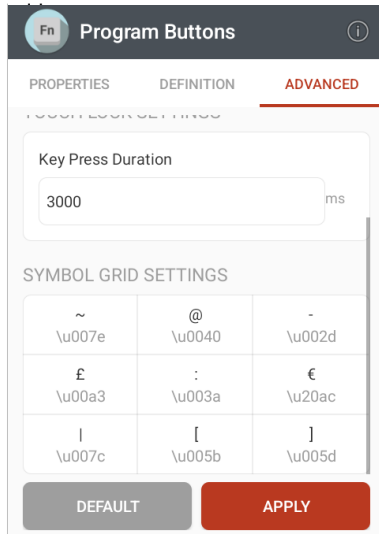
Using the Keyapd

Symbol grid

You can set the grid configuration of Symbols key in keypad with Program Buttons. To set the grid,

1. Navigate to **EmKit**  > **Program Buttons** > **ADVACNED** tab.

Figure 43 Program Buttons - symbol



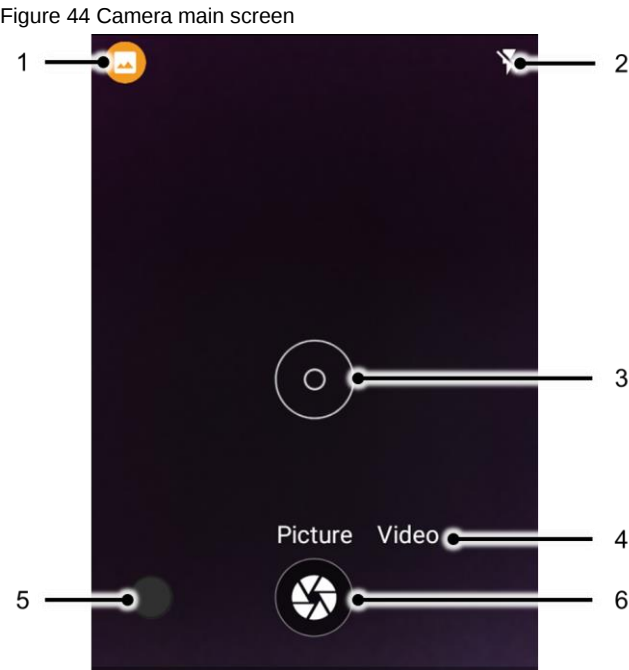
2. Tap a cell of the grid you want to change.
3. Input the Unicode of the desired symbol in the dialog.
4. Tap **OK**.
5. After setting up the symbol grid, tap **Apply** on the bottom to save the changes.



Note: To find the Unicode, see [this page](#) of Wikipedia.

Camera

To use the camera, open App drawer and tap Camera application . Figure 44 is a main screen of Camera application.



No	Name	Description
1	Modes	Select a mode depending on the target (normal / QR code) Or access advanced camera options
2	Advanced camera option	 : Always turn off the flashlight  : Turn on or off the flashlight automatically  : Always turn on the flashlight
3	Focus zone	You can change the focusing area by touching the other area
4	Picture / Video	Swipe or tap to change the mode (Picture / Video)
5	Gallery	Tap to see the recently taken pictures
6	Shutter button	Take a picture or recode a video

Scanner

Scanner is placed on the top of the device. Optimize the scanner settings for working environment and improve the efficiency.

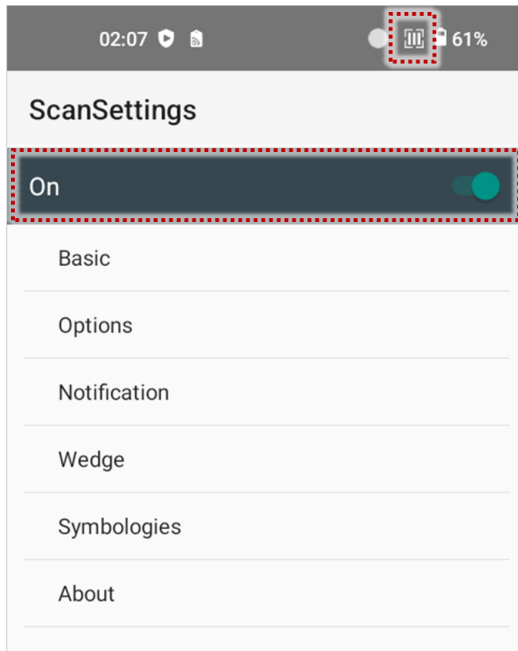
Turn on / off the Scanner

The scanner is turned on by default. You can check the scanner status by the icon  on the status bar. If the icon displays, the scanner is turned on.

If the scanner is turned off, follow the steps turn it on.

1. Go to **EmKit**  or **Settings**  and tap **ScanSettings**.
2. Tap toggle button to turn on/off the barcode scanner.
3. Check if the scanner icon  is placed on Status bar.

Figure 45 Turn on scanner



Scanner

ScanSettings

When the scanner is turned on, scanner setting menus will be displayed. **ScanSettings** consists of

- Basic
- Options
- Notification
- Wedge
- Symbolologies
- About

Basic

Control the scanning options and wedge mode options.

1. Scanning

- Change the scanner's trigger timeout and set scan mode (single / auto / continuous scan).
- Enable or disable the TouchScan, which is a software scanner button. Place a scan icon in any position and tap the icon to read a barcode.

Figure 47 ScanSettings - Basic

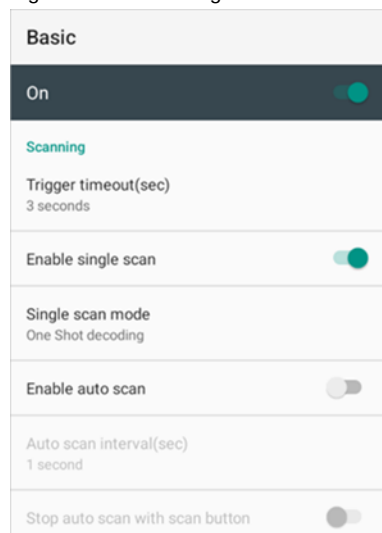
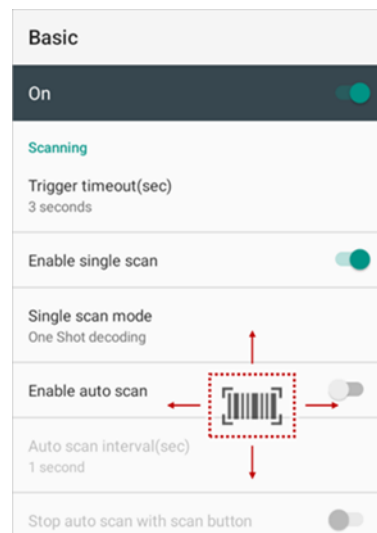


Figure 46 ScanSettings - TouchScan



Scanner

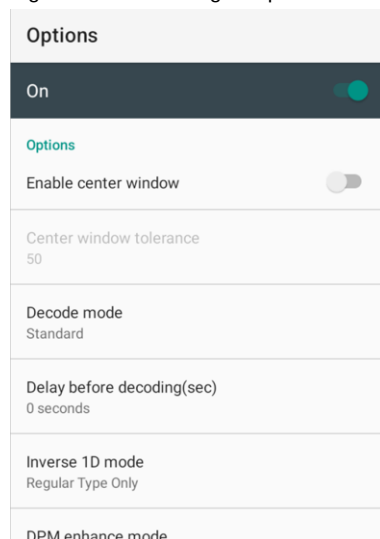
2. Wedge mode

- Change the result type of decoded data among the below list.
 - User Message
 - Keyboard Event (Multiple)
 - Keyboard Event (Single)
 - Clipboard (KEYCODE_PASTE)
 - Clipboard (Ctrl + V)
 - Intent Broadcast
 - Custom Intent
- Set Terminator as,
 - None
 - Space
 - Tab
 - LF
 - Tap & LF

Options

Enable / Disable the center window, Aimer, Illumination. And set scanner decoding settings.

Figure 48 ScanSettings - Options

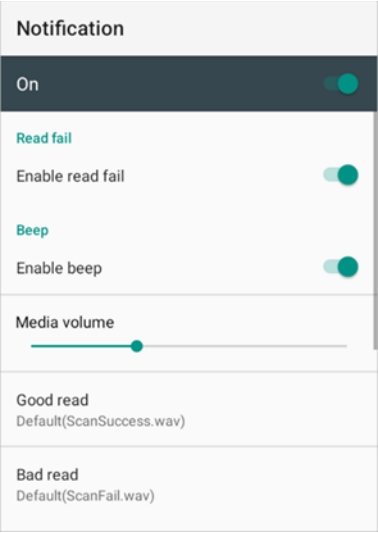


Scanner

Notification

Control the beep sound, LED and vibration option when scanning the barcode.

Figure 49 ScanSettings - Notification



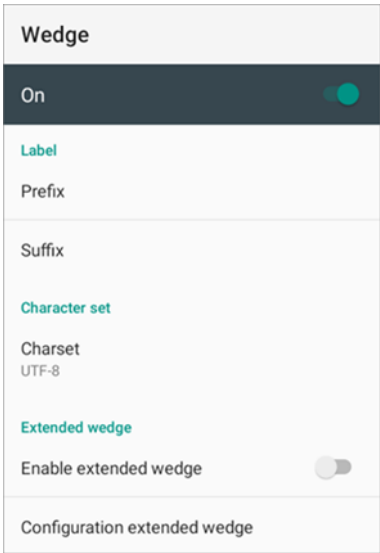
Scanner

Wedge

Set below items in Wedge settings

- Barcode ID
- AIM ID
- Group separator
- Prefix
- Suffix
- Character set
- Extended Wedge

Figure 50 ScanSettings - Wedge

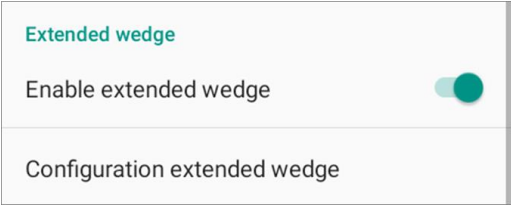


Scanner

Extended wedge

PM452 supports Extended wedge that allows to edit the decoded data. Tap **Enable extended wedge** toggle switch and then set a rule in **Configuration extended wedge**.

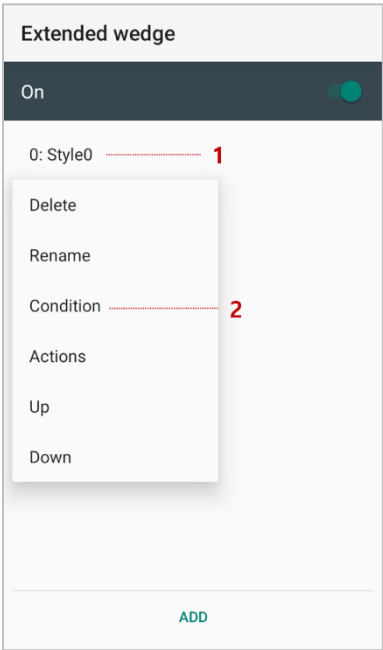
Figure 51 ScanSettings - Extended wedge



For example, make a rule that add a string “*Point Mobile*” at the start of decoded data whenever decoding CODE128.

- 1. Tap **Style** (1) and select **Condition** (2).

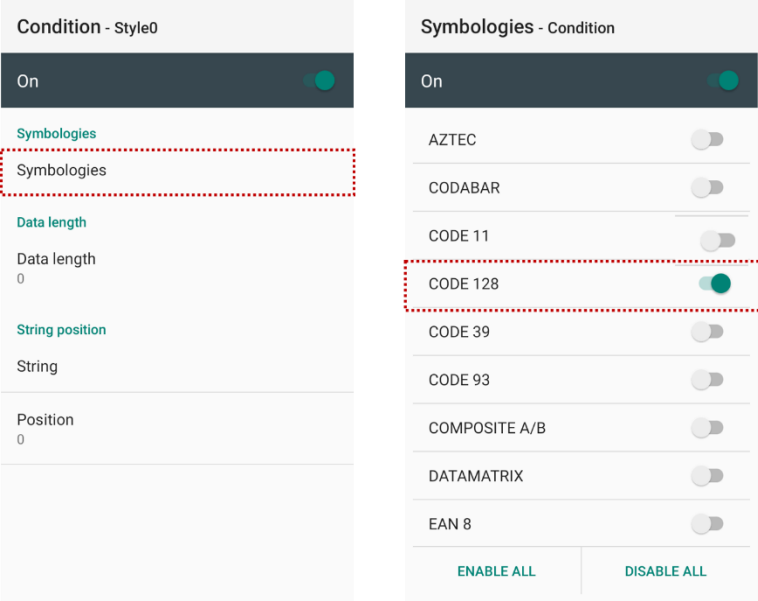
Figure 52 Extended wedge example_1



Scanner

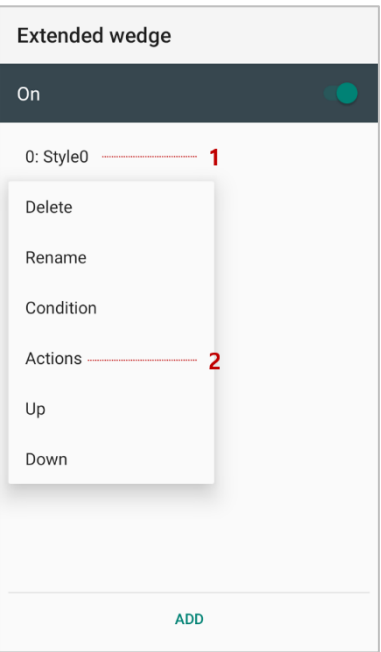
- 2. Tap **Symbologies** and select **CODE128** among the symbologies.

Figure 53 Extended wedge example_2



- 3. Tap **Style (1)** and select **Actions (2)**.

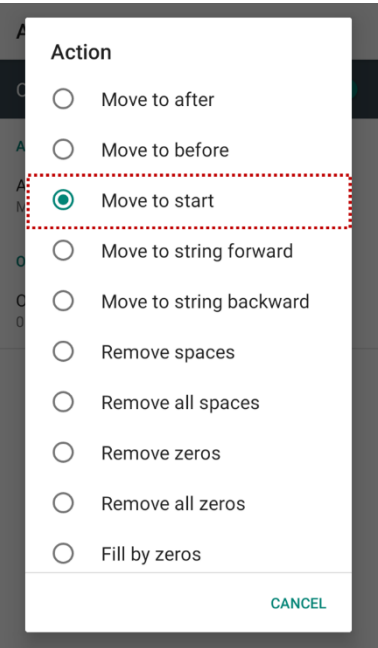
Figure 54 Extended wedge example_3



Scanner

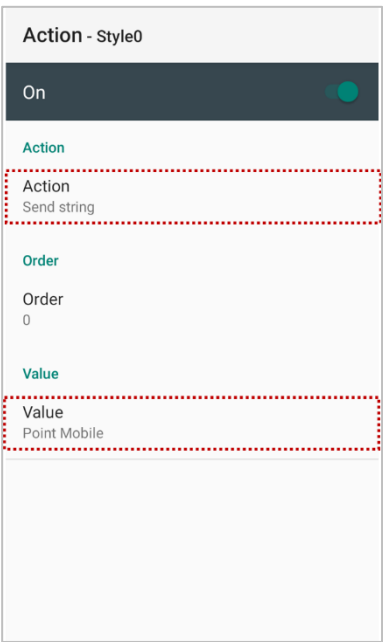
4. Tap **ADD** and select **Move to start** to point the start of the decoded data.

Figure 55 Extended wedge example_4



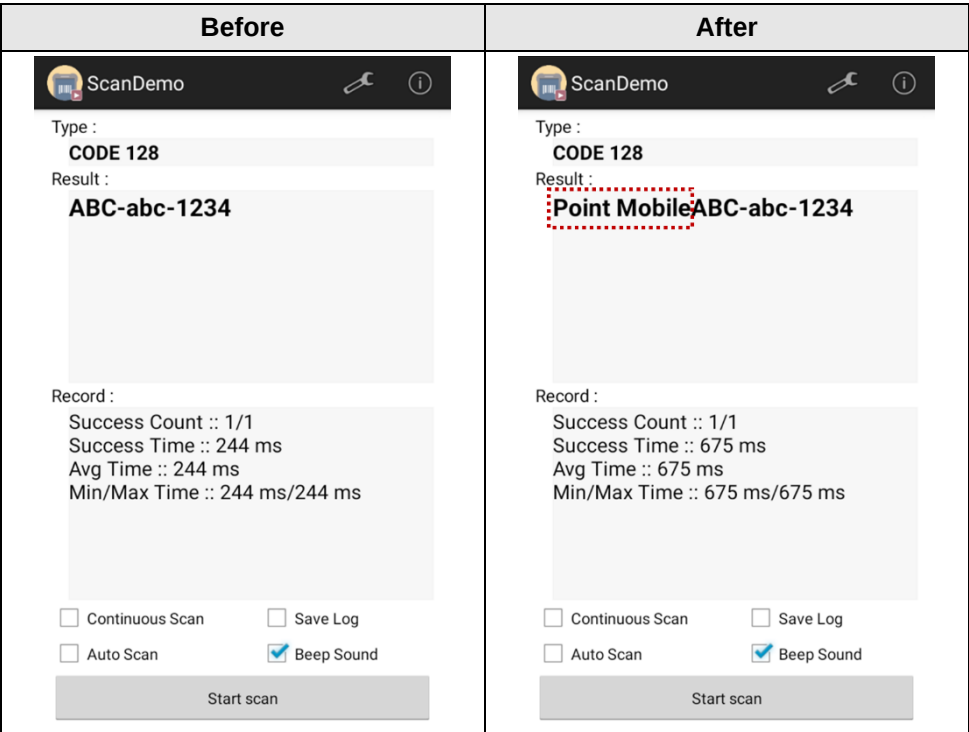
5. Add another action of which action type is Send string. Set value as “*Point Mobile*”.

Figure 56 Extended wedge example_5



Scanner

6. “Point Mobile” string will be added to decoded CODE128 data.

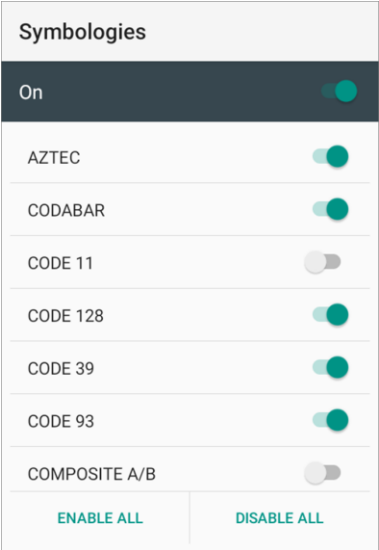


Scanner

Symbologies

Enable or disable the specific symbology or set detail options. By tapping each symbology name to access detail options.

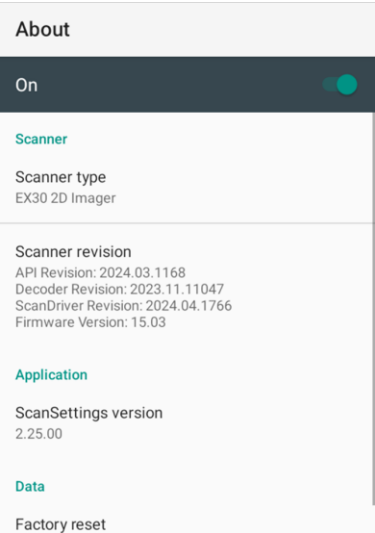
Figure 57 ScanSettings - Symbologies



About

Find the scanner information or restore the scanner settings to default.

Figure 58 ScanSettings - About



Scanner

Scan a Barcode

Point the scanner at the barcode and press the scan button on the device or gun handle. If another button is set as scan trigger using Program buttons (Refer to [Using the Keypad - Program Buttons](#)), it can trigger the scan action, too.



Note:

If you set the single scan mode as Press decoding or Release decoding, it may require another button pressing mechanism to trigger scanning. Refer to [Single Scan Mode article](#) for more detail.

N5703 Scanner SKU

Center the cross-hair laser aimer over the barcode. The barcode must be within the square made by the edge of the aimer. You can tilt the aimer slightly for a comfortable angle to scan.

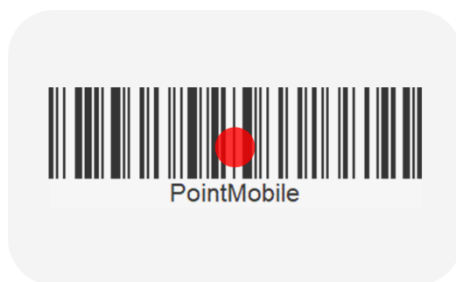
Figure 59 Aiming barcode (N5703)



N6803FR / EX30 Scanner SKU

Center the red dot aimer over the barcode.

Figure 60 Aiming barcode (N6803FR / EX30)



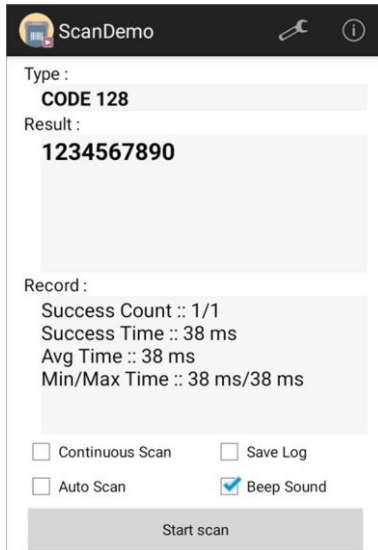
Scanner

ScanDemo

Using ScanDemo app, demonstrate scanning feature.

1. Execute **EmKit**  > **ScanDemo**.
2. Scan a barcode by pressing the scan button on the device or tapping **Start scan** button on the screen.
3. Find scan result

Figure 61 ScanDemo



Wireless

Mobile Network

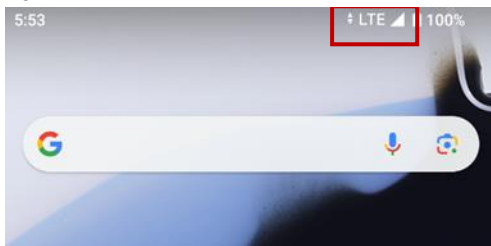


Note: Mobile network is supported on PM452 WWAN (LTE) SKU only.

To connect mobile network, SIM card is required. Insert SIM card first referring [Install SD & SIM cards](#).

After inserting the SIM card, reboot the device. When network is connected, a network icon will be appeared on the status bar.

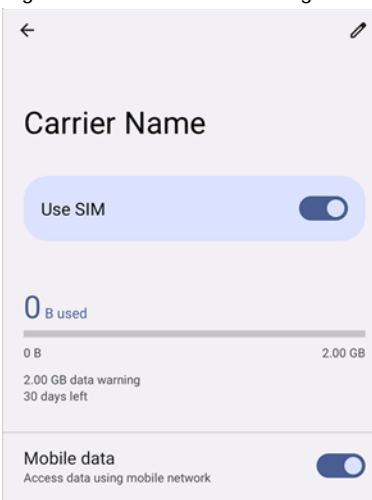
Figure 62 Mobile network icon



- **LTE network icon:** LTE

Find network information and adjust the network settings in **Settings**  > **Network & internet** > **SIMs**.

Figure 63 Mobile network setting



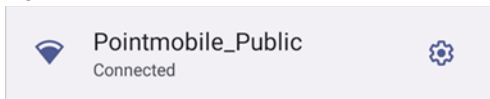
Wireless

Wi-Fi

To turn on and connect a Wi-Fi,

1. Go to **Settings**  > **Network & internet** > **Wi-Fi**.
2. Tap toggle button to enable Wi-Fi.
3. Device searches for nearby Wi-Fi signals and lists them in order of signal strength.
4. Select a Wi-Fi SSID to connect.
5. The message **Connected** under the SSID means the device complete to connect to the Wi-Fi.

Figure 64 Wi-Fi connected



Note: There are Open Wi-Fi network and Secured Wi-Fi network. You can tell those apart by lock icon (🔒) in the nearby Wi-Fi list.

To connect the secured Wi-Fi network, you need to enter the password.

Figure 65 Open Wi-Fi Network

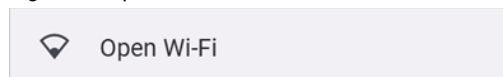
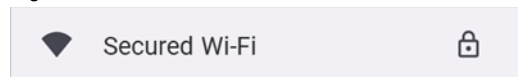
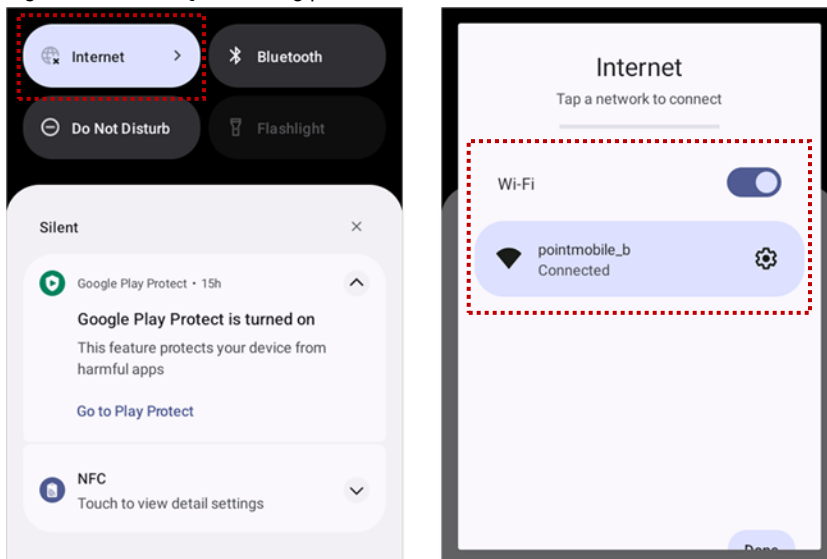


Figure 66 Secured Wi-Fi Network



If there is a saved Wi-Fi network, simply turn on the Wi-Fi through the Quick setting panel. The saved network will be connected automatically.

Figure 67 Wi-Fi in Quick setting panel



Wireless

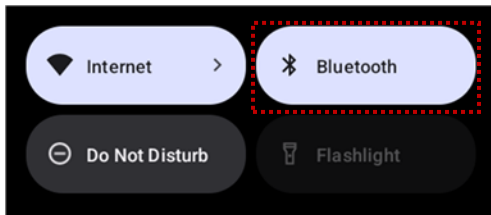
Bluetooth

Turn on / off

Bluetooth is turned off as default. There are two ways to turn on the Bluetooth,

- Open quick setting panel and enable Bluetooth 

Figure 68 Bluetooth in Quick setting panel



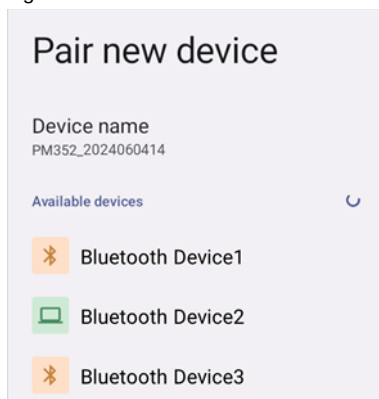
- Go to **Settings**  > **Connected devices** > **Pair new device**

Pair and Connect

To connect with a new device,

1. Go to **Settings**  > **Connected devices**.
2. Tap **Pair new device**.
(Bluetooth will be turned on automatically)
3. Select the device you want to pair among **Available devices** list.

Figure 69 Bluetooth available devices

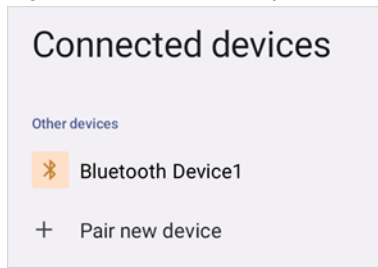


4. Follow instructions on the screen (Pairing code or pairing confirmation dialog) and tap **PAIR**.

Wireless

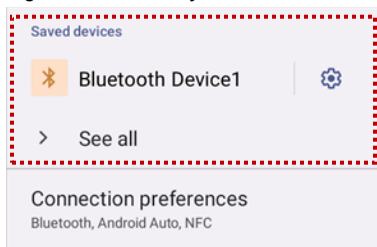
- When the connection is succeeded, the connected device name is listed under the **Other devices** list.

Figure 70 Bluetooth currently connected



To connect a device previously connected, select the device name from the **Saved devices** list.

Figure 71 Previously connected devices

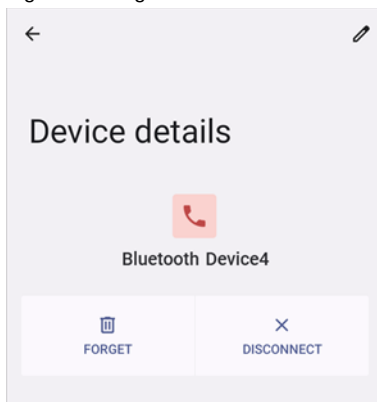


Unpair and Disconnect

To unpair the device, select the name of the device you want to unpair from the **Other devices** list and tap **FORGET** .

Or tap **DISCONNECT**  to disconnect only and not unpair.

Figure 72 Forget device



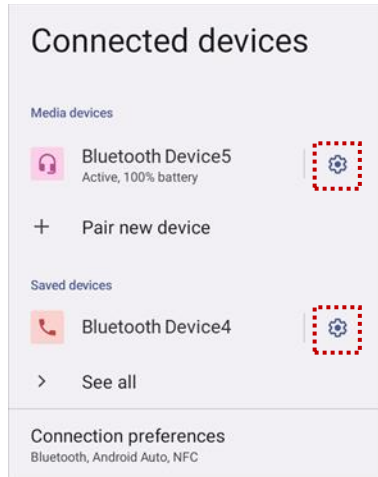
Wireless

Change the Bluetooth device details

Tap the  icon next to the device name to see device details.

If the device you want is not listed under the **Saved devices**, tap **See all**.

Figure 73 Bluetooth device detail



- To change the device's name, tap  on the top of the screen
- Turn other settings on or off (Available on some devices)

Wireless

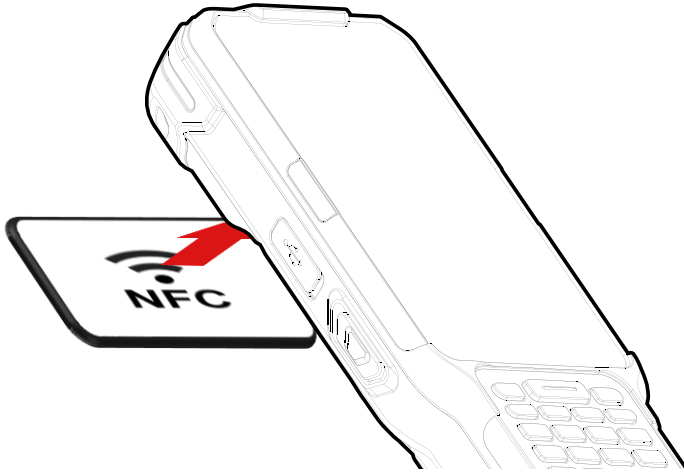
NFC

PM452's NFC antenna is located on the rear-top side of the device. Bring the NFC tag close to the antenna location as Figure 74.

NFC feature is enabled by default. But if NFC does not work, make sure the NFC is enabled from the **Settings**

 > **Connected devices** > **Connection preferences** > **NFC**.

Figure 74 PM452 NFC tapping



System Maintenance

System Information

There are two ways for checking system information, on **settings** and on **EmKit**.

On Settings

Go to **Settings**  > **About phone**. Following information can be found.

- Device name
- Phone number
- Emergency information
- Legal information & Certificates
- Model & SIM status
- Hostname
- IMEI
- Android version
- IP address
- Wi-Fi MAC address
- Bluetooth address
- Build number

On EmKit

Go to **EmKit**  > **System Information** . Following information can be found.

- Processor information
- Version information (Android version, OS image version, SDK version, etc.)
- Manufacturer information (Serial number, Part number, etc.)
- Device information (Scanner, Audio, Display, etc.)
- Battery information (Battery charging status, etc.)
- App version information (Version of EmKit apps)

System Maintenance

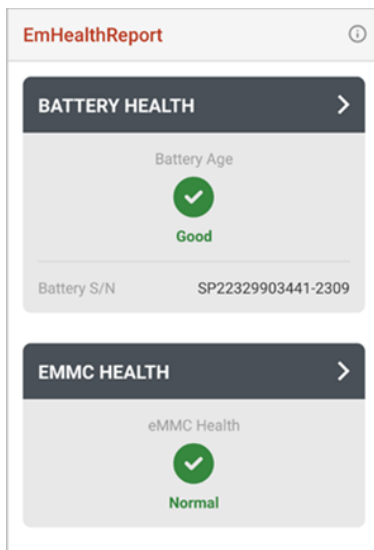
Check Device Health

EmHealthReport is a solution that provides the device's battery and eMMC health.

Monitor the battery and eMMC status to foresight their lifetime or find the cause when there is a battery problem such as cannot charge the device or rapid battery discharge.

To use, open **EmKit**  and launch **EmHealthReport**. You can see the simple device health information on the main screen. To find detailed information, tap each blue arrow on the right side of the screen.

Figure 75 EmHealthReport



- **Battery Health**
 - Battery Serial Number
 - Battery Age
 - Battery Level
 - Battery First Use Date
 - Battery Voltage
 - Battery Temperature
 - System Temperature
 - Battery Manufacture Date
 - Smart Charging Mode

(Refer to [Smart Charging](#))
- **eMMC Health**
 - Pre-EOL Information
 - Device life time estimation type A
 - Device life time estimation type B

System Maintenance

OS Update

Periodic update improves the performance of the device. Point Mobile provides up-to-date OS version via Service Portal and FOTA. Update the device via storage, OTG port, and FOTA server. Depending on the workspace environment, choose more suitable method.



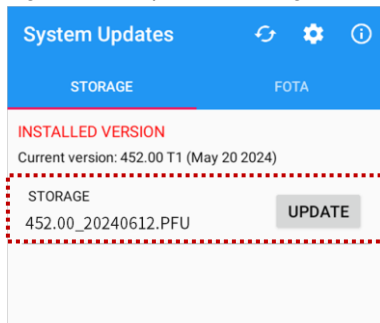
Notice: Please backup your data before starting the update process.

OS update via storage

To update the OS using storage,

1. Download an OS image file into the root folder of microSD card or device internal storage.
2. (In case of using SD card) Insert SD card to the device and then turn the device on.
3. Go to **Settings**  > **System** > **System Update**.
4. Check if the OS image file shows up under **AVAILABLE VERSIONS**.

Figure 76 OS update via storage



5. Tap **UPDATE** to start the update process



Note: If the OS image file doesn't show up in **AVAILABLE VERSIONS**, check the file is placed in the root folder of storage. System only can recognize the file in the root folder.

System Maintenance

OS update via OTG port

PM452 supports the USB OTG feature.

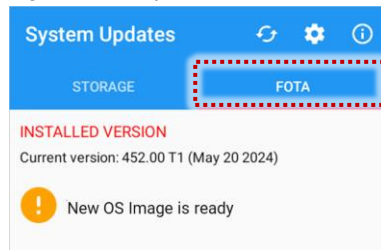
1. Prepare a formatted USB flash drive for OS update.
2. Copy an OS image file to the root folder of the flash drive.
3. Connect the flash driver to the PM452.
4. Go to **Settings**  > **System** > **System Update**.
5. Check if the OS image file shows up under **AVAILABLE VERSIONS**.
6. Tap **UPDATE** to start the update process.

OS update via FOTA

If PM452 can connect to a network, use the FOTA server for the update.

1. Connect the device with a network.
2. Go to **Settings**  > **System** > **System Update**.
3. Tap **FOTA** tab or Swipe left to move to **FOTA** tab.
4. If there is an OS version newer than device's one, the server shows the new OS information.

Figure 77 OS update via FOTA

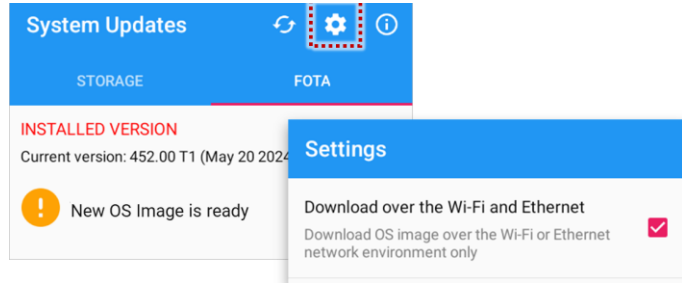


System Maintenance

5. Tap **Download**.
6. Tap **OK** on the **OS Update** dialog to start to download the OS image file.
7. To complete the update, rebooting is required.
Tap **OK** on the **Restart required** dialog to restart the device.

Note: Basically, OS update via FOTA works over Wi-Fi or Ethernet only. To enable the OS update over Mobile Network too, uncheck the setting value in FOTA Settings. Downloading over the Mobile network may result in additional charges.

Figure 78 FOTA Settings



System Maintenance

Factory Data Reset

When PM452 work abnormal or there is a need to reset the device, follow the steps below to perform a factory data reset.



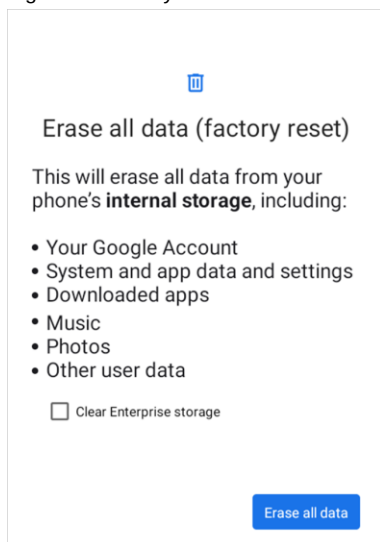
Caution: Factory data reset will erase all personalized settings and data saved in the device, such as Google account, apps, user data, etc. And factory data reset cannot undo.

Factory data reset via Settings app

If the device can be turned on and access **Settings**,

1. Navigate to **Settings**  > **System** > **Reset options**.
2. Tap **Erase all data (factory reset)**.
3. After being aware that factory reset will erase all data from the internal storage, tap **Erase all data**.

Figure 79 Factory data reset



4. Tap **Erase all data** again to start the factory reset process.

Accessories

PM452 supports below accessories and they can be used in common with PM451. All accessories except hand strap are sold separately.

Category	Accessory Name	Usage
Handy carry	Hand strap	Carries PM452 easily
	Gun handle	Provides an ergonomic trigger button (Programmable button)
Charging cradle	SSC (Single Slot Cradle) / SEC (Single Slot Ethernet Cradle)	Charges one PM452 and one PM452 battery Provide USB type C port or ethernet port
	4SC (4 Slot Cradle)	Charges four units of PM452
	4SBC (4 Slot Battery Cradle)	Charges up to four pieces of PM452's batteries

Hand Strap

The hand strap is enclosed in the PM452 standard package. Attach the strap and you can grab the device more firmly.

Attach hand strap

1. Attach the hook of the hand strap to the pole on the rear side of the PM452 firmly.
2. Thread the other side of the strap through the hand strap bottom hole.
3. Pull the strap and set the buckle at the desired length.

Accessories

Gun Handle

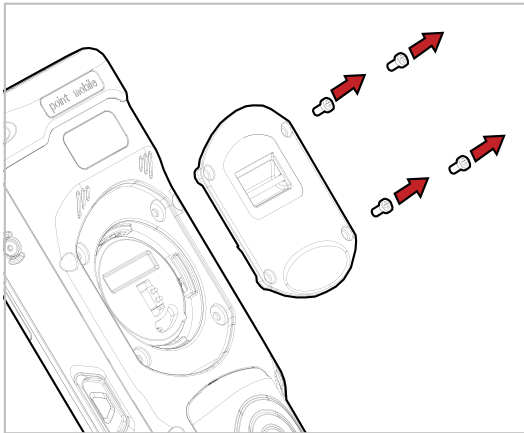
With gun handle, you can use additional programmable button. The button is used for triggering scanner usually.

If you want to change the function mapped to the trigger button, access [Program Buttons](#) and set **SCANNER_B** to the desired function.

Attach gun handle

1. Using a screwdriver, remove the four latch screws on the rear side of the PM452.
2. Open the gun handle connector cap.

Figure 80 Attaching gun handle - 1



3. Put the gun handle on the connector part with rotating it counter-clockwise 45°.

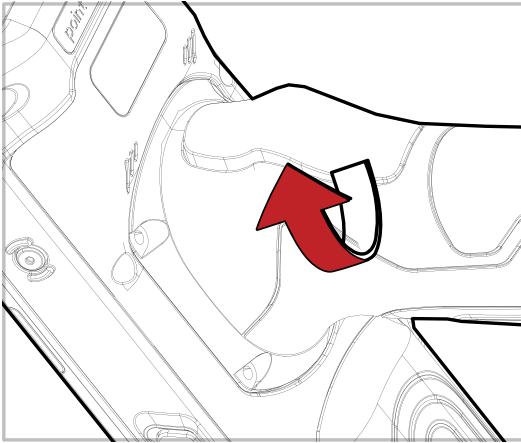
Figure 81 Attaching gun handle - 2



Accessories

4. Rotate the gun handle clockwise to engage with the device.

Figure 82 Attaching gun handle - 3



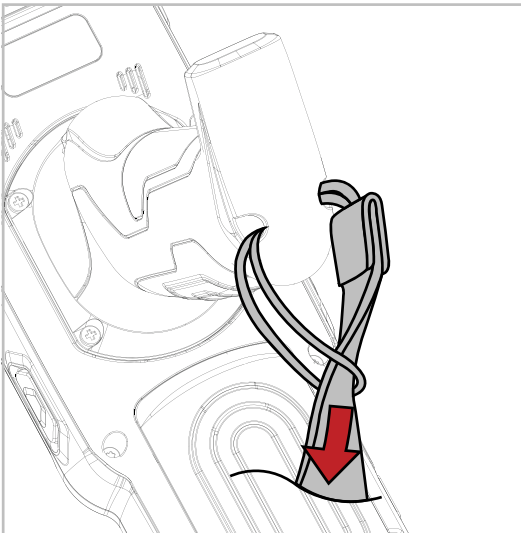
5. Fasten the four latch screws again.

Attach hand strap

A hand strap is enclosed in the gun handle package. Attach the strap and carry the device more comfortably.

1. Thread the thin strap through the hole on the bottom side of gun handle.
2. Pass the other parts through the loop of the strap, and pull it tight.

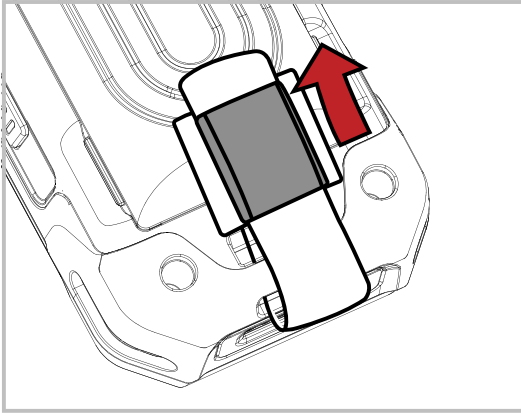
Figure 83 Attaching gun handle hand strap - 1



Accessories

3. Thread wide strap through the hand strap bottom hole on the PM452.
4. Pull the strap and set the buckle at the desired length.

Figure 84 Attaching gun handle hand strap - 2



Accessories

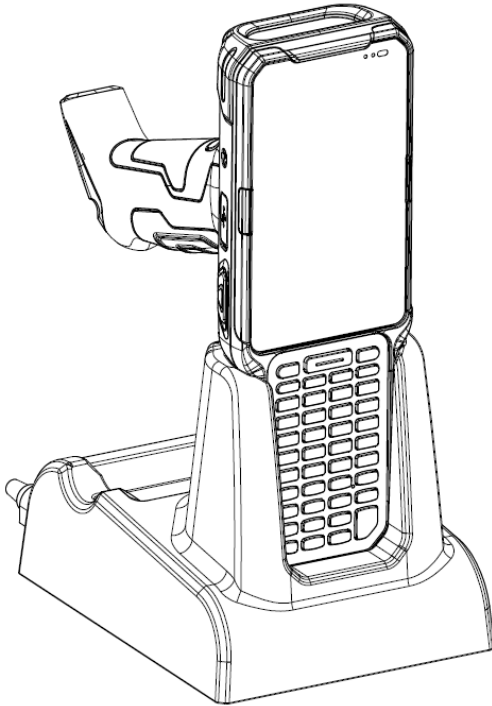
Charging cradle



Note: All charging cradles can be used in common with PM451.

Single Slot Cradle / Single Slot Ethernet Cradle (SSC/SEC)

Figure 85 PM452 SSC, SEC



SSC can charge the followings.

- PM452 only
- PM452 + Gun handle mounted
- PM452 battery

For more detail, find SSC Quick start guide.

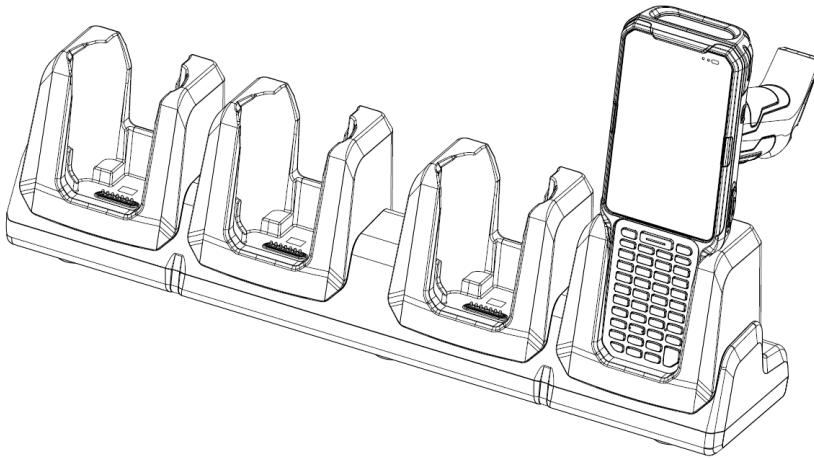
Accessories

4SC (4 Slot Cradle)

4SC has 4 device slots so it can charge up to two units of PM452 simultaneously. PM452 with a gun handle mounted also can be charged with 4SC.

For more detail, find 4SC Quick start guide.

Figure 86 PM452 4SC

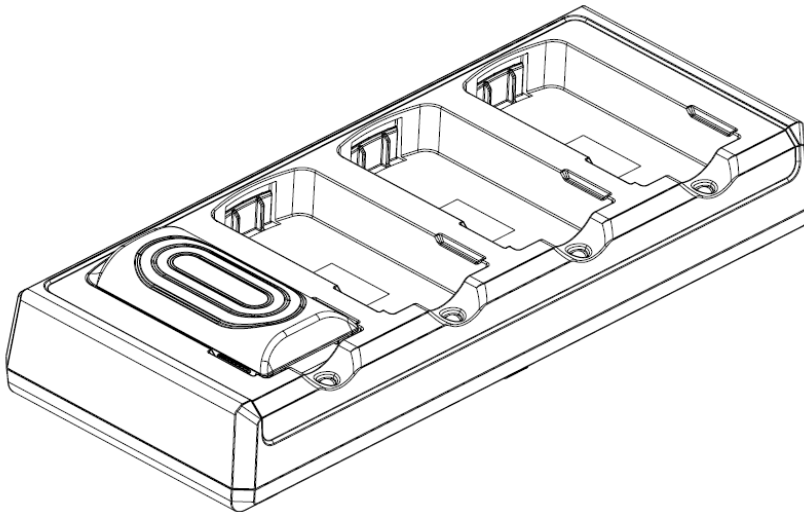


4SBC (4 Slot Battery Cradle)

4SBC has 4 battery slots so it can charge up to four pieces of PM452's battery simultaneously.

For more detail, find 4SBC Quick Start Guide.

Figure 87 PM452 4SBC



Safety Information

Battery Safety Information

Follow the battery safety guidelines for safe usage, storage, and disposal of Li-ion batteries. Improper battery use may result in a fire, explosion, or other critical hazards.

Battery Safety Guidelines

- Use only Point Mobile approved batteries and charging accessories. Other batteries and chargers may damage the device or result in a fire, leakage, or other hazards.
- Do not expose the battery to excessive heat or cold.
- Do not use or store the battery in or near areas that might get very hot, such as in a parked vehicle, near a heat duct or close to other heat sources.
- Do not allow objects that may cause a short circuit, such as metal objects, corrosive substances, or liquids like water, to contact the battery.
- Do not disassemble, crush, bend, shred, press, or other actions that may damage or deform the battery.
- Do not use or replace the battery on the go or from a high location. Dropping may result in an explosion or fire.
- Do not put any labels, stickers, tags, etc. on the device or battery. Performance of the device or battery, such as sealing, drop, or tumble, could be affected.
- Close supervision is necessary when used near children to avoid the risk of injury.
- If battery leakage is observed, avoid any contact with the skin or eyes and properly dispose of the battery. If contact has been made, wash the affected area with water for 15 minutes and seek medical advice.
- If you notice any type of damage to the battery, such as swelling, dents, and leaks, stop using it immediately and contact Point Mobile.

Battery Charging Guidelines

- Charge the battery in a clean, cool, dry, and ventilated environment.
- Separate the charger from the battery as soon as possible when the battery is fully charged.
- Battery performance can degrade due to the stress of daily charging and discharging. Batteries typically need to be replaced after 300 to 500 charging cycles (full charge-discharge cycles) or when the battery capacity has been reduced to 70 ~ 80% of its original capacity. The actual number of charging cycles varies based on usage patterns, temperature, age, and other factors.

Safety Information

Battery Storage / Disposal Guidelines

- Store the batteries in a clean, dry and ventilated environment within ambient temperature ranges of $20\pm5^{\circ}\text{C}$.
- For safety regulations, batteries are charged to below 20~30% of full capacity during production.
- When not using batteries for a long period, charge the battery for 30 minutes to 1 hour at least once every 6 months to prevent full discharge and keep the performance.
- Batteries should be stored separately when storing for long periods. Disconnect from any device, charger, or cradle.
- Dispose of used batteries promptly according to local disposal regulations.
- Do not dispose of the battery in fire. It may cause explosion.



Notice: The battery is consumable. Point Mobile provides a warranty for the battery for 12 months after purchase. If you suspect the battery swelling, change the battery immediately and contact Point Mobile.

Safety Information



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Body-worn Operation

This device was tested for typical use with the back of the device kept 0.59 inches (1.5 cm) from the body.

To comply with FCC RF exposure requirements, a minimum separation distance of 0.59 inches (1.5 cm) must be maintained between the user's body and the back of the device.

Any belt-clips, holsters, and similar accessories containing metallic components may not be used.

Avoid the use of accessories that cannot maintain 0.59 inches (1.5 cm) distance between the user's body and the back of the device and have not been tested for compliance with FCC RF exposure limits



PROTECT YOUR HEARING

To prevent possible hearing damage, do not listen at high volume levels for long periods. Exercise caution when holding your device near your ear while the loudspeaker is in use.

Safety Information

FCC Warning

FCC part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

CE Warning

This device can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum.

E-Label

Users can able to access the FCC/IC information in 3 steps in device's menu. The actual steps are : → **Settings**
-> **About phone** -> **Certificates**



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