HYBRID FULLTOUCH HANDHELD COMPUTER

HF550X

USER Manual

BLUEBIRD

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User's Guidance

Device type	User's guidance
Class B Device (Household Information & Communication)	This device has qualified the electromagnetic wave suitable registration and can be used as a household device at a residential area as well as any other areas.
Type Registration	This wireless device may cause propagation interference, and so, it cannot be used for life-saving services.

Revision History

Revised Version	Revised Date	Revised Details
1.0.0	March 2023	First version released.

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User's Guidance

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1 About This Manual

The HF550X provides high quality features as a smart terminal using Bluebird's creative ideas and technological expertise. This user manual is designed to help users effectively operate the device.

- Please read this manual carefully before using the device for safe and proper use.
- This device may only be used in countries where it is sold.
- The components and colors of this device in this manual may differ from the actual product.
- Features and specifications are subject to change without prior notice.
- Content may vary by software version or by service provider.
- Apps and features may vary by country or region.
- Certain features of this device may have performance issues due to user environment, programs in use, or peripheral device usage. Bluebird is not liable for any issues caused by third-party apps or accessories.
- Modifying the device's operating system or installing software from unknown sources may cause device malfunction or data loss. Improper or unauthorized use of the device is a violation of the Bluebird license agreement and void your one-year limited warranty.

2 Safety Information

2.1 Symbols

This manual uses the following symbols to indicate hazards and additional information.

Symbol	Name	Description
	Warning	Indicates situations that could cause injury to yourself or others.
	Caution	Indicates situations that could cause damage to your device or other equipment.
	Note	Indicates additional information that can help you get the most out of the device.

Please read this safety precaution information carefully. Failure to follow the information provided may result in fire, electric shock, or other property damage or bodily injuries.

2.2 Device

- Do not press the Power button on the device if the device is wet or do not touch adapter or power cord with wet hands. There is risk of electric shock.
- Do not use your device in an explosive danger zone.
- If your device becomes wet, do not put your device in heaters, microwaves, etc. to dry it. There is a risk of explosion or malfunction.

- Do not scratch the device's touchscreen. Use only your fingers or a compatible pen. Never use an actual pen, or any other sharp object on the touchscreen.
- Although this device is very sturdy, do not drop, hit, bend, or sit on it on purpose. It can be broken.
- Do not modify, take apart, or repair the device. Contact to your customer service center. Failure to do so will void your warranty.
- Do not attempt to modify your hardware or software. It may cause device malfunction and void your warranty.
- You may not be able to use this wireless device in basements, open fields, skyscrapers, or other places where the signal is weak.
- Backup the data and information from your device. Your data, such as ringtones, texts, and voice messages, may be erased during repairs or upgrades.
- Do not paint your device. It can damage your screen or your device's exterior.
- Avoid using or storing this device at extreme temperatures. This device is designed to work at temperatures between -10°C to 50°C (14°F to 122°F), and humidity levels of 95%.

2.3 Environment

- Do not use the device while driving or operating heavy machinery. Doing so may result in death or serious injury.
- Do not use the device in locations with combustible goods. Doing so may result in an explosion.

- Do not use the device in dusty or hot locations. Doing so may damage the device.
- Do not expose your device to direct sunlight such as on the dashboard of a car for extended periods of time.
- Do not use the device in humid locations. Doing so may damage the device and void the warranty.
- Do not keep the device close to air conditioner vents. Corrosion within the device may occur due to condensation from changes in temperature.
- Do not allow children to play with the device.

2.4 Battery and Charging

- Improper battery use may cause fire, explosion, or other hazard.
- If the battery is removed due to impact, heat, submersion, or other damage, there is a risk of explosion. Keep away from children and animals.
- Do not allow the battery's contacts to touch things like necklaces, coins, or electric conductors. Do not give any impact with sharp objects. There is a risk of explosion.

- Use only the approved battery and charger. Using an incompatible battery or charger may cause device malfunction or other damage, such as fire.
- When you are not using the device for a long period, take out the battery and keep the device and the battery in a dry, cool place. Also, charge the battery at least once a year. If you keep it without charging for a long time, it may cause device malfunction.

2.5 Distraction

In some situations, using your device may distract you and cause serious injuries and damages. For example, avoid talking on the phone or texting while driving or riding a bicycle. It is strictly prohibited by law in some jurisdictions. If you cannot avoid using your device while driving, stop your vehicle or use hand-free kit.

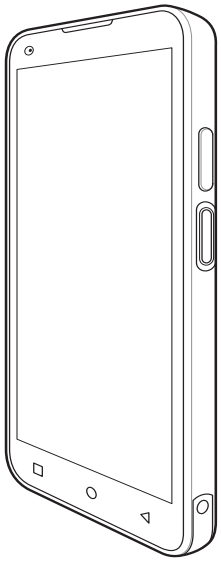
2.6 Frequency Interference

- This wireless device may cause radio frequency interference, so use Airplane mode or turn off the device when prohibited.
- The device emits an electromagnetic fields. It may interfere with your medical devices.
- Do not place credit cards, phone cards, bankbook, and tickets next to the device. The magnetic field of the device can damage their magnetic strips.

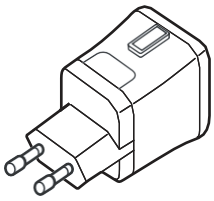
3 Overview

3.1 Package Contents

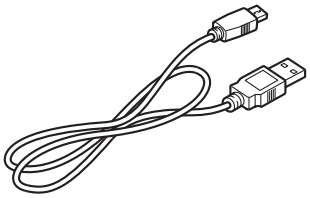
The package includes:



Device



Adapter

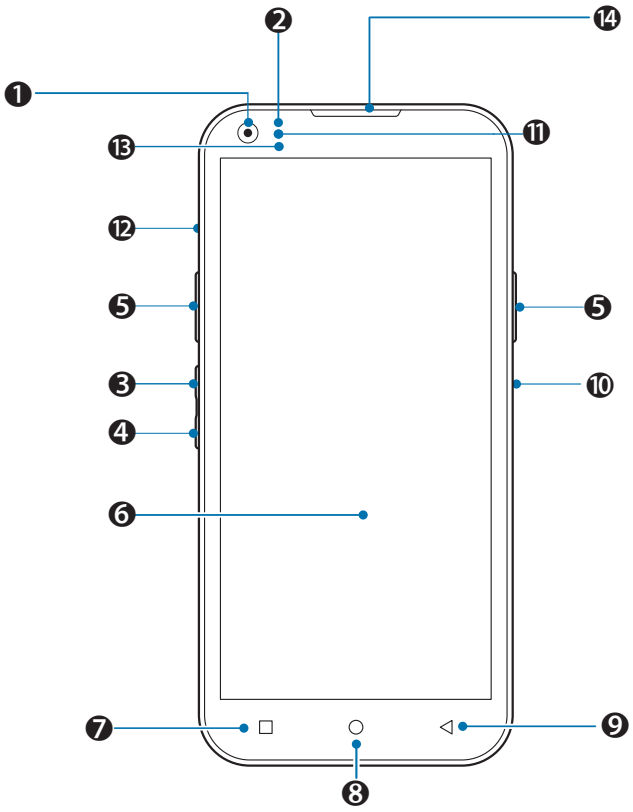


USB cable (C-type)

The illustrations may differ from the actual item.

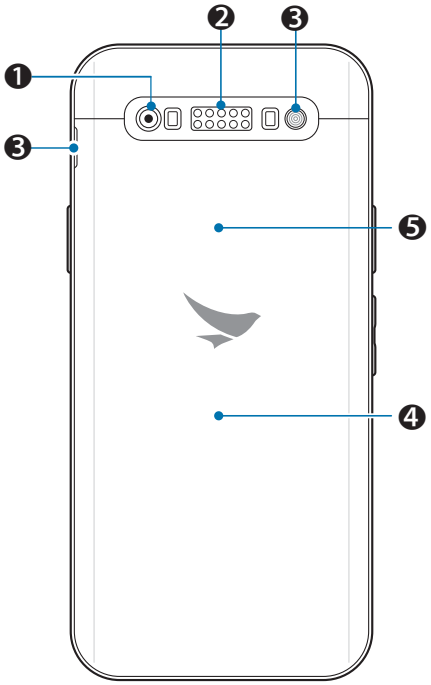
3.2 Your Device

3.2.1 Front



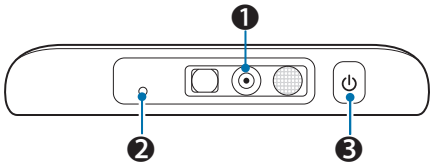
No.	Name	No.	Name
❶	Front Camera	❽	Home button
❷	Proximity sensor	❾	Back button
❸	Volume up button	❿	PTT button
❹	Volume down button	⓫	Light Sensor
❺	Scan button	⓬	SD card slot
❻	Touch screen	⓭	Charging / Notification LED
❼	Menu button	⓮	Receiver

3.2.2 Back

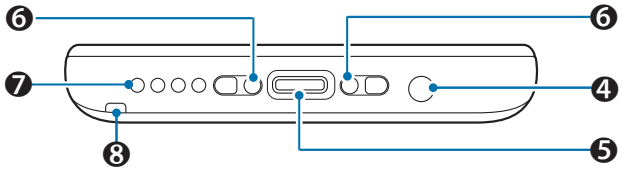


No.	Name	No.	Name
❶	Rear camera	❸	Battery release latch
❷	10 Pin Rear Connector	❹	Battery
❺	RFID Antenna		

3.2.3 Top and Bottom



Top

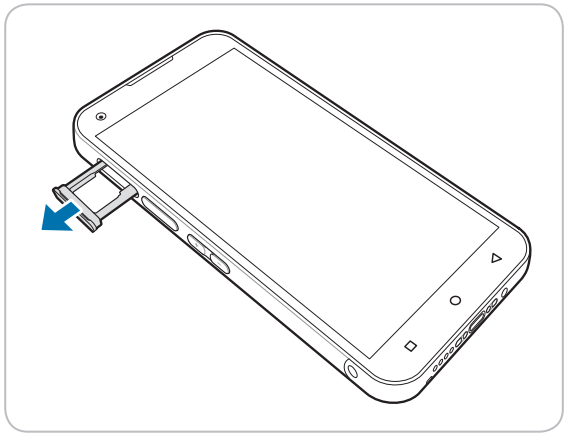


Bottom

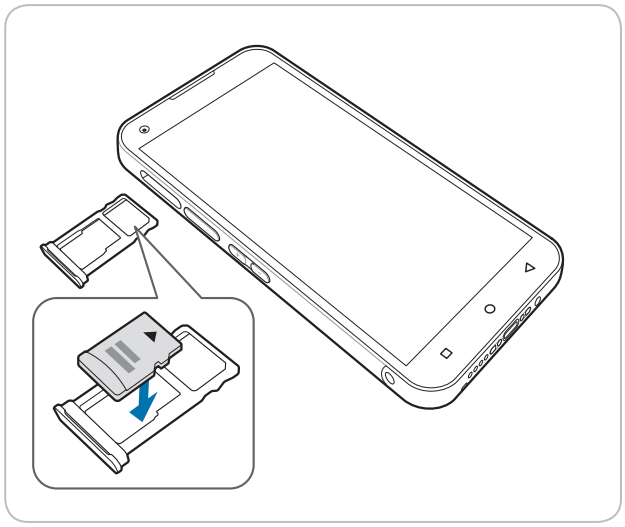
No.	Name	No.	Name
❶	Barcode scanner	❹	Headset jack
❷	Microphone	❺	USB-C connector
❸	Power button	❻	2 pin pogo connector
❼	Speaker	❽	Hand-strap hole

4.1.1 Inserting a Micro SD Card

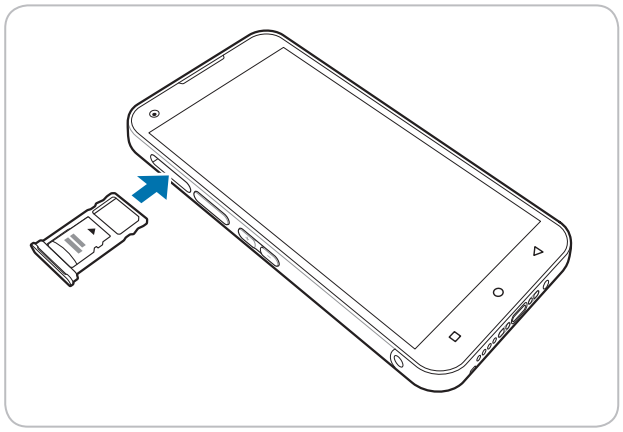
1 Remove the card slot.



2 Insert a Micro SD card into the SIM Tray. Make sure that the gold contacts on the cards are facing down.



3 Insert the card slot on your device.



4.1.3 Removing the Cards

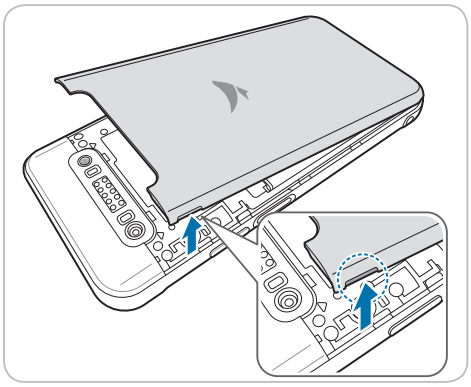
1 Remove the card slot on the right side of your device.

2 Remove SD cards on the card slot.

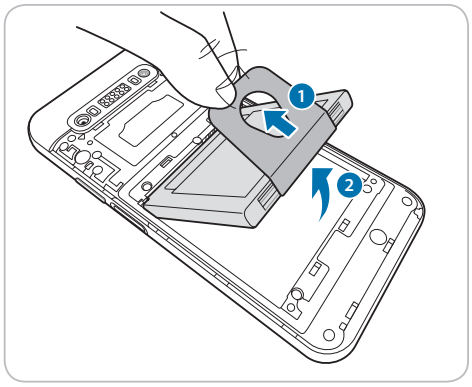
4.2 Battery

4.2.1 Installing the Battery

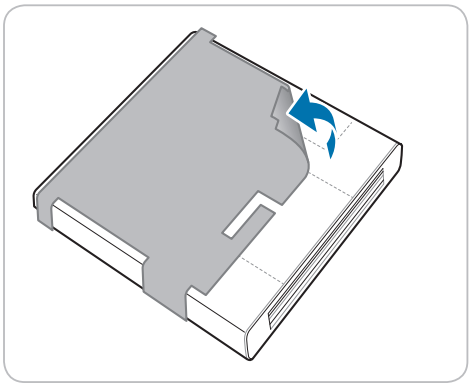
1 Place the back of the device facing up and lift the battery cover in the direction provided by the picture below to remove the battery cover.



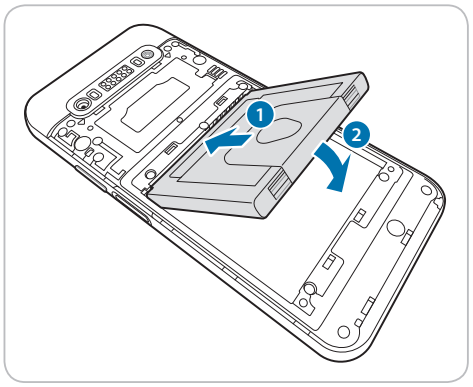
2 Using the pull tab attached on the bottom of the battery, gently pull the tab in the directioninstructed in the picture below.



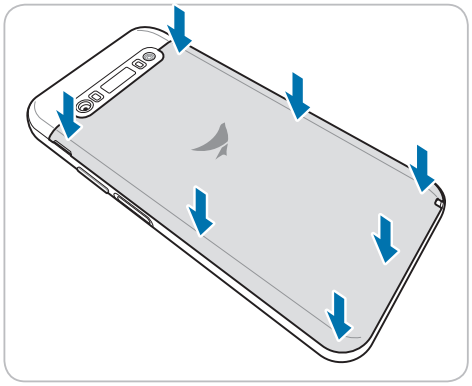
3 With a new battery in hand, gently lift the battery seal as instructed in the picture below.



4 Insert the battery in the order instructed in the picture below.



5 Insert the battery cover and gently press the areas instructed in the picture below



4.2.2 Removing the Battery

Remove the back cover, and use the battery pull-tape to remove the battery.

Before removing the battery, turn off the power. Failure to do so may cause damage to the device.

4.2.3 Using the Hot Swap Function

Battery Hot Swap is a function to replace the battery with a spare battery while using the device without Power.

Battery hot swap operation procedure:

1 Turn off the LCD by pressing the power button.

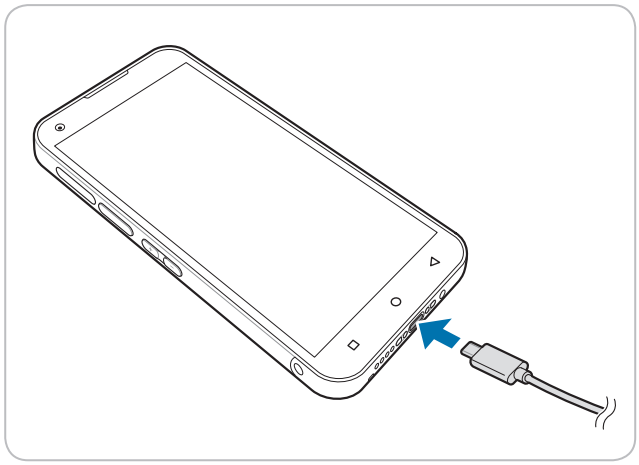
2 After unlocking the battery locker, remove the battery located inside the device.

- Before hot swap, turn off the LCD screen using the Power button.
- The hot swap battery required for this function keeps charging while the device is turned on, and it stops when fully charged.
- When you use the device for the first time, it is recommended to use the device after charging it in the power on mode for at least 3 hours.

- Do not use Hot Swap within about 3 minutes after initial booting of the device.
- After removing the battery used for Hot Swap, replace it with a fully charged spare battery within 2 minutes.
- In case that the battery is not replaced for 10 minutes after removing the battery for Hot Swap, the device will automatically power off to prevent discharge of the hot swap battery. At this time, you need to be careful as data loss may occur.
- Do not replace SIM, SAM, or MicroSD Card while Hot Swap is in progress.
- Re-run at least 15 minutes later after running Battery Hot Swap.

4.2.4 Charging the Battery

1 Plug the C-type end of the charger into the multi-purpose jack on the buttom of the device.
   - The battery charging image appears on the screen.



2 Connect the USB cable with the power adapter and then plug the charger into a power outlet.

4.2.5 Extending the Battery Life

You can improve the battery life in various ways. The easiest way is to use battery saver mode. When the device goes into battery saver mode, some background features and app settings may not function normally.

There are some other ways to improve your device's battery life.

- Always fully charge the battery.
- Mute unnecessary sounds, such as keypad sounds.
- Use a wired headset, rather than the loudspeaker.
- Close the Camera app whenever you have finished taking photos.
  - Tap the Back button ◁ on Android™ devices.
- Decrease the length of the screen time-out.
  - On the Home screen, tap ⚙ > **Display** > **Timeout** and set a shorter duration on Android device.
- Lower the screen brightness.
  - On the Home screen, tap ⚙ > **Display**, and turn **Adaptive brightness** off, then tap the **Brightness level** to adjust the brightness level lower on Android device.
- Disable Bluetooth when you are not using it.
- Use a Wi-Fi connection to connect to the Internet, rather than a mobile data connection.
- Prevent your device from scanning for available wireless networks.
  - On the Home screen, tap ⚙ > **Wi-Fi** and switch the Wi-Fi to **Off** on Android device.

4.2.6 Charging Indicators

Charging/Notification LED Charging Indicators

Status	LED	Indication
Off		Device is not charging.
Solid Red		Device is charging.
Solid Green		Charging complete

4.3 Google Account Setup

You must connect the device to the internet in order to set up a Google™ account.
A Google account is only required on devices with GMS software.

The first time the device starts, the Setup Wizard displays. Follow the on-screen instructions to set up a Google account, configure Google Pay ™ for purchasing items from the Google Play ™ store, to enter your personal information, and enable backup or restore features.

4.4 Accessing Device Settings

To access device settings:

1 Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.

2 On the Home screen, swipe up from the bottom of the screen and touch ⚙.

4.4.1 Monitoring Battery Usage

The **Battery** screen provides battery charge details and power management options to extend battery life.

1 Go to **Settings**.

2 Touch **Battery**.

To display battery information and power management options for a specific app:

1 Go to **Settings**.

2 Touch **Apps & notifications**.

3 Touch an app.

4 Touch **Advanced** > **Battery**.

Different apps display different information. Some apps include buttons that open screens with settings to adjust power use. Use the **DISABLE** or **FORCE CLOSE** buttons to turn off apps that consume too much power.

4.4.2 Low Battery Notification

When the battery charge level drops below 18%, the device displays a notice to connect the device to power. The user should charge the battery using one of the charging accessories.

When the battery charge drops below 10%, the device displays a notice to connect the device to power. The user must charge the battery using one of the charging accessories.

When the battery charge drops below 4%, the device turns off. The user must charge the battery using one of the charging accessories.

Battery Optimization

Observe the following battery saving tips:

- Set the screen to turn off after a short period of non-use.
- Reduce screen brightness.
- Turn off all wireless radios when not in use.
- Turn off automatic syncing for Email, Calendar, Contacts, and other apps.
- Minimize use of apps that keep the device from suspending, for example, music and video apps.
- Enable Battery Saver mode. Swipe down from the Status bar and then touch **Battery saver**.

4.4.3 Turning Off the Radios

To turn off all the radios:

1 Swipe down from the Status bar to open the Quick Settings panel.

2 Touch **Airplane mode**. The airplane icon ✈ appears in the Status bar indicating that all the radios are off.

4.4.4 Setting the Date and Time

You are only required to set the time zone or set the date and time if the wireless LAN does not support Network Time Protocol (NTP).

To set the date and time:

1 Go to **Settings**.

2 Touch **System** > **Date & time**.

3 Touch **Automatic date & time** to disable automatic date and time synchronization.

4 Touch **Set date**.

5 In the calendar, set today's date.

6 Touch **OK**.

7 Touch **Set time**.

8 Touch the green circle, drag to the current hour and then release.

9 Touch the green circle, drag to the current minute and then release.

10 Touch **AM** or **PM**.

11 Touch **OK**.

12 Touch **Use 24-hour format**.

13 Touch the home button (O).

4.5 Display Settings

Use Display settings to change the screen brightness, enable night light, Wallpaper to change the background image, Auto-rotate screen to enable screen rotation, Screen timeout to set sleep time, and Font size to change the font size.

4.5.1 Setting the Screen Brightness

To manually set the screen brightness using the touchscreen:

1 Swipe down twice with two fingers from the Status bar to open the Quick Access panel.

2 Slide the icon to adjust the screen brightness level.

To let the device automatically adjust the screen brightness using the built-in light sensor:

1 Go to **Settings**.

2 Touch **Display**.

3 If disabled, touch **Adaptive brightness** to automatically adjust the brightness.
By default, **Adaptive brightness** is enabled. Toggle the switch to disable.

4 Touch the home button (O).

4.5.2 Setting Home Screen Rotation

By default the **Home** screen rotation is disabled.

To enable **Home** screen rotation:

1 Touch and hold anywhere on the **Home** screen until the options appear.

2 Touch **Home settings**.

3 Touch the **Allow Home screen rotation** switch.

4 Touch the home button (O).

5 Rotate the device.

4.5.3 Setting Screen Timeout

To set the screen Timeout time:

1 Go to **Settings**.

2 Touch **Display** > **Advanced** > **Timeout**.

3 Select one of the Screen Timeout values.

- **15 seconds**
- **30 seconds**
- **1 minute (default)**
- **2 minutes**
- **5 minutes**
- **10 minutes**
- **30 minutes**

4 Touch the home button (O).

4.5.4 Lock Screen Display

The Lock Screen Display setting wakes the screen when notifications are received.

To disable Lock Screen display:

1 Go to **Settings**.

2 Touch **Display** > **Advanced**.

3 Touch **Lock Screen Display**.

4 In the **When to show** section, enable or disable an option using the switch.

5 Touch the home button (O).

4.5.5 Setting Font Size

To set the size of the font in system apps:

1 Go to **Settings**.

2 Touch **Display** > **Advanced**.

3 Touch **Font size**.

4 Select one of the font size values.

- Small
- Default
- Large
- Largest.

5 Touch the home button (O).

4.6 Setting Notification LED

The Charging/Notification LED lights flash blue when an application, such as an email and VoIP, generates a programmable notification or to indicate when the device is connected to a Bluetooth device. By default, LED notifications are enabled.

To change the notification setting:

1 Go to **Settings**.

2 Touch **Apps & notifications** > **Notifications**.

3 Touch **advanced**, Touch **Allow notification dots** to toggle the notification on or off.

4 Touch the home button (O).

4.7 General Sound Setting

Use the **Sound** settings to configure media and alarm volumes.

To access sound settings:

1 Go to **Settings**.

2 Touch **Sound**.

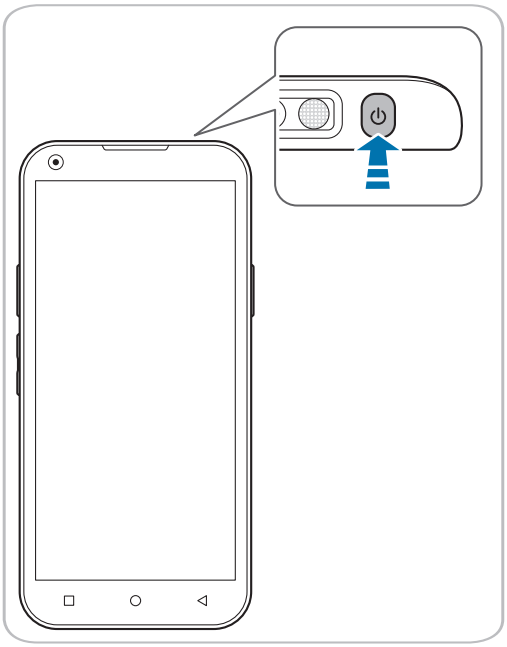
3 To change the volume, slide the volume bar on either the media volume, call volume, ring volume, or alarm volume to change its setting.

5 Using the Device

5.1 Turning the Device On and Off

5.1.1 Turning the Device On

Press and hold the Power button for a few seconds.



5.1.2 Turning the Device Off

1 Press and hold the Power button for a few seconds.

2 Tap **Power off**.

- To turn the screen on or off, press the Power button.
- Registering the accounts without turning on the Wi-Fi may incur extra charges depending on your data plan.

Do not turn off the device by removing the battery, as this may damage the device.

5.2 Using Airplane Mode

On the Home screen, tap ⚙ > **Network & Internet** > **Advanced** and turn **Airplane mode** on. This feature disables all wireless and mobile services. Repeat the step to deactivate Airplane mode.

You can activate Wi-Fi and Airplane mode from the quick action center. Drag down from the top of the screen at any time from any menu or app and tap the **Wi-Fi** button or **Airplane mode** button.

5.3 Resetting the Device

If your device does not work properly or freezes due to unknown errors, you can force the device to restart.

To reset the device's hardware

Press and hold down the power button until the device restarts.

The data on the device will remain saved when you perform the hardware reset.

To reset the device's software

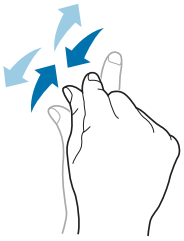
On the Home screen, tap > **Backup & reset** > **Factory data reset**. All settings and data, including apps and personal content, will initialize, and the factory settings will be restored.

- Reset the device whose battery is charged enough not to make the device turn off suddenly during resetting. You can reset the device, charging the battery with USB cable when the device has low battery power.
- Back up any data and settings you want to keep before resetting the device to the factory default settings.

5.4 Using the Touchscreen

Use finger gestures to use the touchscreen effectively.

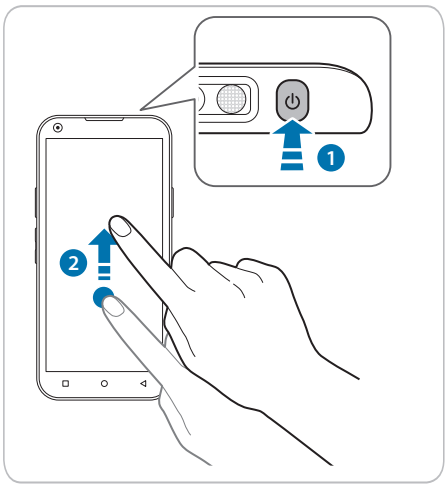
- Do not touch the screen with any sharp objects.
- Do not apply too much pressure to the touchscreen.

Gesture	Name	Description
	Tap	Briefly touch an item to open, launch, or select it.
	Zoom in or out	Place two fingers on the screen and spread them apart to zoom in. Pull the fingers together to zoom out. You can also double-tap the screen quickly to zoom in or out.
	Tap and hold	Touch an item or the screen for a few seconds to access more detailed menus or options.
	Swipe	Touch the screen and quickly flick in any direction to scroll through menus or pages.
	Drag	Touch an item or the screen for a few seconds and move your finger around the screen to move the item or move through screens.

5.5 Locking and Unlocking the Device

Lock the screen to protect your device and its data.

The device locks if it is not in use for a specified period by default. To unlock the device, press the Power button to turn on the screen and drag upward from the bottom of the screen.



You can increase security by creating a screen pattern, a PIN, or password. For more information about how to configure and change screen lock settings.

5.6 Introduction

This chapter explains the buttons, status icons, and controls on the device, and provides basic instructions for using the device including resetting the device and entering data.

5.7 Google Mobile Services

This section applies to Google Mobile Services (GMS) devices only.

Devices with GMS contain apps and services that provide additional functionality.

GMS includes:

- Apps : GMS adds a variety of Google apps and associated widgets including Chrome, Gmail, Drive, and Maps.
- Services:
  - Speech to Text : Allows for free format speech to text in many languages for both connected and disconnected network. Launch by touching the microphone icon on the keyboard.
  - TalkBack Service : Provides spoken feedback on various parts of the user interface. To enable, go to **Settings** > **Accessibility**.
  - Network Location Provider : Adds a location provider which uses mobile network tower information and Wi-Fi access point information to provide a location without using GPS. To enable, go to **Settings** > **Security & location** > **Location**.
  - Widevine DRM : Enables Digital Rights Management (DRM) so that protected streaming video content can be played. Enable DRM Info from the Google Play ™ store.
  - Google Cloud Messaging : Allows the device to receive data from the server and other devices on the same connection.
  - Backup and Restore : Allows the users settings and apps to be backed up to a Google server and subsequently restored from that server after a factory reset.
- Google Accounts : Create and use a Google account to synchronize mail, files, music, photos, contacts and calendar events.

5.8 Home Screen

The Home screen displays when the device turns on. Depending upon the configuration, the Home screen might appear different. Contact your system administrator for more information.

After a suspend or screen time-out, the Home screen displays with the lock sliders. Touch the screen and slide up to unlock.

No.	Item	Description
❶	Menu Button	Displays recently used applications.
❷	Home	Displays the Home screen.
❸	Back	Displays the previous screen.
❹	Shortcut Icons	Opens applications installed on the device.
❺	Status Bar	Displays the time, status icons (right side), and notification icons (left side). For more information see *5.10 Status Bar* on page 24 and *5.11 Managing Notifications* on page 27

The Home screen provides four additional screens for placement of widgets and shortcuts. When available, swipe the screen left or right to view the additional screens. The additional screens are not viewable by default.

5.9 Setting Home Screen Rotation

By default the **Home** screen rotation is disabled.

To enable **Home** screen rotation:

1 Touch and hold anywhere on the **Home** screen until the options appear.

2 Touch **Home settings**.

3 Touch the **Allow Home screen rotation** switch.

4 Touch the home button (O).

5 Rotate the device.

5.10 Status Bar

The Status bar displays the time, notification icons (left side), and status icons (right side).

Some Status icons may not appear in the Status bar if there are too many icons to display.

If there are more notifications than can fit in the Status bar, a dot displays indicating that more notifications exist. Swipe down from the Status bar to open the Notification panel and view all notifications and status.

5.10.1 Status Icons

Icon	Description
	Alarm is active.
	Main battery is fully charged.
	Main battery is partially drained.
	Main battery charge is low.
	Main battery charge is very low.

Icon	Description
	Main battery is charging.
	All sounds, except media and alarms, are silenced and vibrate mode is active.
	Do Not Disturb mode active.
	Airplane Mode is active. All radios are turned off.
	Bluetooth is on.
	The device is connected to a Bluetooth device.
	Connected to a Wi-Fi network.
	Not connected to a Wi-Fi network or no Wi-Fi signal.
	Connected to an Ethernet network.
	Speakerphone enabled.

5.10.2 Notification Icons

Icon	Description
	Main battery is low.
	More notifications are available for viewing.
	Data is syncing.
	Indicates an upcoming event. Non-GMS devices only.
	Indicates an upcoming event. GMS devices only.
	Open Wi-Fi network is available.
	Connected to a Wi-Fi network. Indicates the Wi-Fi version number.

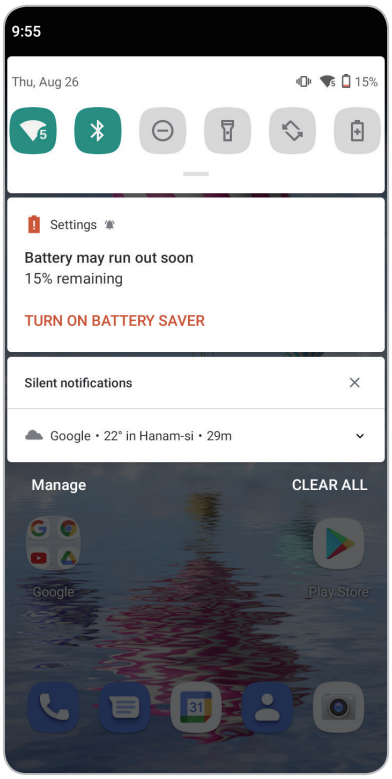
Icon	Description
4G	Connected to a DC-HSPA, HSDPA, HSPA+, HSUPA, LTE/LTE-CA or WCMDMA network (WWAN only)1.
	Song is playing.
	Problem with sign-in or sync has occurred.
	Device is uploading data.
	Device is downloading data when animated and download is complete when static.
	Device is connected via USB cable.
	Device is connected to or disconnected from virtual private network (VPN).
	Preparing internal storage by checking it for errors.
	USB debugging is enabled on the device.
	Headset is connected to the device.

1) Cellular network icon that appears is dependent upon the carrier/network.

5.11 Managing Notifications

Notification icons report the arrival of new messages, calendar events, alarms, and ongoing events. When a notification occurs, an icon appears in the Status bar with a brief description. See Notification Icons for a list of possible notification icons and their description. Open the Notification panel to view a list of all the notifications.

To open the Notification panel, drag the Status bar down from the top of the screen.



To respond to a notification, open the Notification panel and then touch a notification. The Notification panel closes and the corresponding app opens.

To manage recent or frequently used notifications, open the Notification panel and then Touch the text titled, "**Manage**". Touch the toggle switch next to an app to turn off all notifications, or touch an app for more notification options.

To clear all notifications, open the Notification panel and then touch **CLEAR ALL**. All event-based notifications are removed. Ongoing notifications remain in the list.

To close the Notification panel, swipe the Notification panel up.

5.12 Viewing Notification Settings for All Apps

To view the notification settings for all apps:

1 Swipe down twice from the status bar to open the Quick Settings bar and then touch ⚙.

2 Touch **Apps & Notifications**.

3 Scroll down to **Notifications** to view how many apps have notifications turned off.

4 To set or view notifications settings for a specific app, see Setting App Notifications.

5.13 Controlling Lock Screen Notifications

To control whether notifications can be seen when the device is locked:

1 Swipe down twice from the status bar to open the Quick Settings bar and then touch ⚙.

2 Touch **Apps & notifications** > **Notifications**.

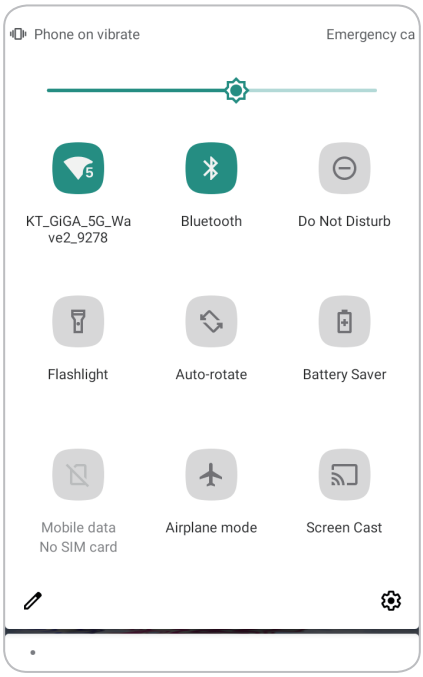
3 Touch **Notifications on lockscreen** and select one of the following:

- **Show all notification content** (default)
- **Don't show notifications at all**.

5.14 Quick Access Panel

Use the Quick Access panel to access frequently used settings (for example, Airplane mode).
To see the full Quick Access panel:

- If the device is locked, swipe down once.
- If the device is unlocked, swipe down once with two fingers, or twice with one finger.
- If the Notification panel is open, swipe down from the Quick Settings bar.



Not all icons are pictured. Icons may vary.

To change a setting, touch the icon:

- Display brightness : Use the slider to decrease or increase the brightness of the screen.
- Wi-Fi network : Turn Wi-Fi on or off. To open Wi-Fi settings, touch the Wi-Fi network name.
- Bluetooth settings : Turn Bluetooth on or off. To open Bluetooth settings, touch **Bluetooth**.
- Battery saver : Turn Battery saver mode on or off. When Battery saver mode is on the performance of the device is reduced to preserve battery power.
- Invert colors : Invert the display colors.
- Do not disturb : Control how and when to receive notifications.
- Airplane mode : Turn Airplane mode on or off. When Airplane mode is on the device does not connect to Wi-Fi or Bluetooth.
- Auto-rotate : Lock the device's orientation in portrait or landscape mode or set to automatically rotate.
- Flashlight : Turn flashlight on or off. Turn camera flash on or off.
- Night Light : Tint the screen amber to make it easier to look at the screen in dim light. Set Night Light to turn on automatically from sunset to sunrise, or at other times.

- Cast : Share phone content on Chromecast or a television with Google Cast built-in. Touch cast screen to display a list of devices, then touch a device to begin casting.

5.15 Editing Icons on Quick Settings

The first several setting tiles from the Quick Access panel become the Quick Settings bar. Open the Quick Access panel and touch ✎ to edit, add, or remove settings tiles.

5.16 App Shortcuts and Widgets

App shortcuts placed on the Home screen allow quick and easy access to apps. Widgets are self-contained apps placed on the Home screen to access frequently used features.

5.16.1 Adding an App Shortcut to the Home Screen

To add an app shortcut to the Home screen:

1. Go to the desired Home screen.
2. Swipe up from the bottom of the screen.
3. Scroll through the list to find the app icon.
4. Touch and hold the icon until the Home screen appears.
5. Position the icon on the screen and then release.

5.16.2 Adding a Widget to the Home Screen

To add a widget to the Home screen:

1. Go to the desired Home screen.
2. Touch and hold until the menu appears.
3. Touch **WIDGETS**.
4. Scroll through the list to find the widget.
5. Touch and hold the widget until the Home screen appears.
6. Position the widget on the screen and then release.

5.16.3 Moving Items on the Home Screen

To move app shortcuts or widgets on the Home screen:

1 Touch and hold the item until it floats on the screen.

2 Drag the item to a new location. Pause at the edge of the screen to drag the item onto an adjacent Home screen.

3 Lift finger to place the item on the Home screen.

5.16.4 Removing an App Shortcut or Widget from the Home Screen

To remove an app shortcut or widget from the Home screen:

1 Go to the desired Home screen.

2 Touch and hold the app shortcut or widget icon until it floats on the screen.

3 Drag the icon to **X Remove** at the top of the screen and then release.

5.17 Folders

Use **Folders** to organize similar applications together. Tap the folder to open and display items in the folder.

5.17.1 Creating a Folder

There must be at least two app icons on the Home screen.

To create a folder:

1 Go to the desired Home screen.

2 Touch and hold one app icon.

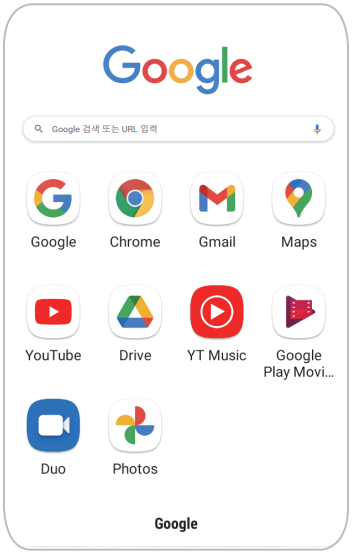
3 Drag the icon and stack on top of another icon.

4 Lift and release.

5.17.2 Naming Folders

To name a folder:

1 Touch the folder.



2 Touch the title area and enter a folder name using the keyboard.

3 Touch ✓ on the keyboard.

4 Touch anywhere on the Home screen to close the folder. The folder name appears under the folder.

Removing a Folder

To remove a folder:

1 Touch and hold the folder icon until it enlarges.

2 Drag the folder to **X Remove** and release.

5.17.3 Home Screen Wallpaper

To change the Home screen wallpaper:

1 Touch and hold the screen until the menu appears.

2 Touch **WALLPAPERS**.

3 Touch **Photos** or **Gallery** to select a photo or select one of the pre-installed wallpapers.

4 Touch **Set wallpaper**.

5.18 Using the Touchscreen

Use the multi-tap sensitive screen to operate the device.

- Tap : Tap to:
  - Select items on the screen.
  - Type letters and symbols using the on-screen keyboard.
  - Press on-screen buttons.
- Tap and Hold : Tap and hold:
  - An item on the Home screen to move it to a new location or to the trash.
  - An item in Apps to create a shortcut on the Home screen.
  - The Home screen to open a menu for customizing the Home screen.
  - An empty area on the Home screen until the menu appears.
- Drag : Tap and hold an item for a moment and then move finger on the screen until reaching the new position.

5.19 Keyboards

The device provides the following types of keyboards:

- Android Keyboard : Non-GMS devices only
- Gboard : GMS devices only

5.19.1 Editing Text

Edit entered text and use menu commands to cut, copy, and paste text within or across apps. Some apps do not support editing some or all of the text they display; others may offer their own way to select text.

5.19.2 Entering Numbers, Symbols, and Special Characters

To enter numbers and symbols:

- Touch and hold one of the top-row keys until a menu appears then select a number or special character.
- Touch the Shift key once for a single capital letter. Touch the Shift key twice to lock in uppercase. Touch the Shift key a third time to unlock Capslock.
- Touch **?123** to switch to the numbers and symbols keyboard.
- Touch the **=\<** key on the numbers and symbols keyboard to view additional symbols.

To enter special characters, touch and hold a number or symbol key to open a menu of additional symbols. A larger version of the key displays briefly over the keyboard.

5.19.3 Keyboard Configuration

Enabling Keyboards

To enable keyboards:

1 Go to **Settings**.

2 Touch **System** > **Languages & input** > **Virtual keyboard** > **Manage keyboards**.

3 Touch a keyboard to enable.

Switching Between Keyboards

To switch between keyboards, touch in a text box to display the current keyboard.

- On the Android or Gboard keyboards, touch and hold ⊕.

5.20 Language Usage

Use the **Language & input** settings to change the device's language, including words added to the dictionary.

5.20.1 Changing the Language Setting

1 Go to **Settings**.

2 Touch **System** > **Languages & input**.

3 Touch **Languages**. A list of available languages displays.

4 If the desired language is not listed, touch **Add a language** and select a language from the list.

5 Touch and hold ☰ to the right of the desired language, then drag it to the top of the list.

6 The operating system text changes to the selected language.

5.20.2 Adding Words to the Dictionary

1 Go to **Settings**.

2 Touch **System** > **Languages & input** > **Advanced** > **Personal dictionary**.

3 If prompted, select the language where this word or phase is stored.

4 Touch **+** to add a new word or phrase to the dictionary.

5 Enter the word or phrase.

6 In the **Shortcut** text box, enter a shortcut for the word or phrase.

7 Touch the home button (○).

5.20.3 Keyboard Settings

Use the **Languages & input** settings to configure the on-screen keyboards. The device contains the following keyboard settings:

- Android Keyboard : AOSP devices only
- Gboard : GMS devices only.

5.21 Do Not Disturb Feature

This mode mutes the device so that it does not make sounds or vibrate.

For example, use Do Not Disturb to:

- Automatically limit sounds at night or during events
- Mute interruptions other than alarms
- Get alerted to messages only from favorite contacts.

5.21.1 Limit Sounds and Vibrations

Mute the device completely, or allow only important alarms or calls to come through.

Automatically Block Sounds and Vibrations

Automatically silence the device during certain times or events, turn sounds back on, and override Do Not Disturb mode.

5.22 Turn Sounds Back On

When the device is in Do Not Disturb mode display as ⊖.

To turn off Do Not Disturb, either:

- In the Quick Access panel, touch ⊖.

5.22.1 Override Do Not Disturb for Specific Apps

To let through notifications from specific apps:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.
2. Touch **Apps & notifications** > **Notifications** > **App notifications**.
3. Touch an app.
4. Touch the home button (○).

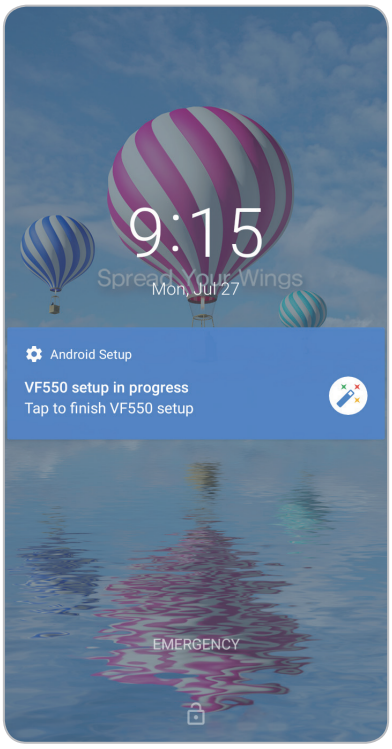
5.23 Un-Locking the Screen

Use the Lock screen to protect access to data on the device. Some email accounts require locking the screen. Refer to the device Integrator Guide for information on setting up the locking feature.

When locked, a pattern, PIN, or password is required to unlock the device. Press the Power button to lock the screen. The device also locks after a pre-defined time-out.

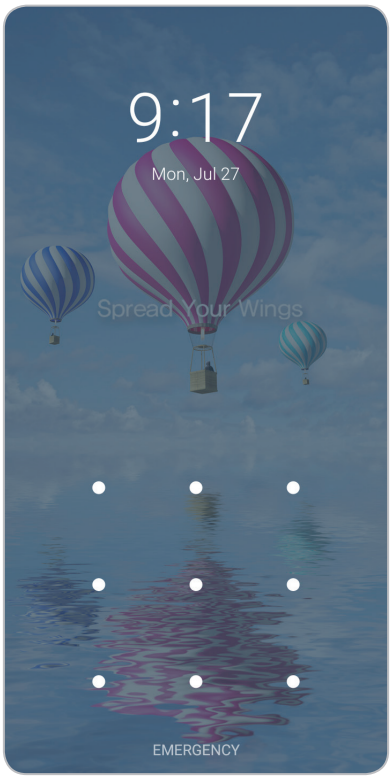
Press and release the Power button to wake the device. The Lock screen displays. Swipe the screen up to unlock. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen. If the PIN or Password screen unlock feature is enabled, enter the PIN or password after unlocking the screen.

Lock Screen



PIN Screen

Pattern Screen



Password Screen

5.23.1 Smart Lock

Keep the device unlocked in some situations, like when the device is in your pocket or near a specific location. With Smart Lock, the user will not need to unlock the device with a PIN, pattern, or password.

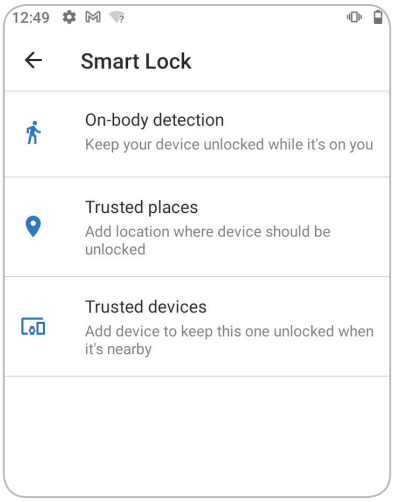
To enable Smart Lock:

1 Ensure that a screen lock feature (PIN, pattern, or password) is enabled.

2 Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.

3 Touch **Security** > **Smart Lock**.

4 Enter the PIN, pattern, or password to continue.



5 Select one of the options:

- **On-body detection**
- **Trusted places**
- **Trusted devices**

6 Follow the on-screen instructions for setting up each option.

5.24 Resetting the Device

There are two reset functions, soft reset and hard reset.

5.24.1 Performing a Soft Reset

Perform a soft reset if applications stop responding.

1 Press and hold the Power button until the menu appears.

2 Touch Reset.

3 The device reboots.

5.24.2 Performing a Hard Reset

Performing a hard reset with a microSD card installed in the device may cause damage or data corruption to the microSD card. All un-saved data is lost after performing a hard reset.

Perform a hard reset if the device stops responding.

1 Simultaneously press and hold the Power button for at least ten seconds.

2 When the screen turns off, release the button.

3 The device reboots.

5.25 Suspend Mode

The device goes into suspend mode when you press the Power button or after a period of inactivity (set in the Display settings window).

To wake the device from Suspend mode, press the Power button. The Lock screen displays. Swipe the screen up to unlock. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen. If the PIN or Password screen unlock feature is enabled, enter the PIN or password after unlocking the screen.

- If you enter the PIN, password, or pattern incorrectly five times, you must wait 30 seconds before trying again.
- If you forget the PIN, password, or pattern contact your system administrator.

5.26 Transferring Files with a Host Computer via USB

Connect the device to a host computer using a USB cable or a USB cradle to transfer files between the device and the host computer.

When connecting the device to a host computer, follow the host computer's instructions for connecting and disconnecting USB devices, to avoid damaging or corrupting files.

5.26.1 Transferring Files

Use Transfer files to copy files between the device (internal memory or microSD card) and the host computer.

1 Connect a USB cable to the device or place the device into a USB cradle.

2 Pull down the Notification panel and touch **Charging this device via USB**.

By default, **No data transfer** is selected.

3 Touch **File Transfer**.

After you change the setting to **File Transfer**, and then disconnect the USB cable, the setting reverts back to **No data transfer**. If the USB cable is reconnected, select **File Transfer** again.

4 On the host computer, open a file explorer application.

5 Locate the **device** as a portable device.

6 Open the **SD card** or the **Internal storage** folder.

7 Copy files to and from the device or delete files as required.

5.27 Transferring Photos

To transfer photos using Photo Transfer Protocol (PTP):

Use PTP to copy photos from either the microSD card or internal memory to the host computer.

1 Connect USB cable to the device or place the device into a USB cradle. See Accessories for setup information.

2 Pull down the Notification panel and touch **Charging this device via USB**.

3 Touch **PTP**.

4 On the host computer, open a file explorer application.

5 Open the **SD card** or the **Internal storage** folder.

6 Copy or delete photos as required.

5.28 Disconnect from the Host Computer

To disconnect the device from the host computer:

Carefully follow the host computer's instructions to unmount the microSD card and disconnect USB devices correctly to avoid losing information.

1 On the host computer, unmount the device.

2 Remove the USB from the device or remove the device from the cradle.

5.29 Reading Tags

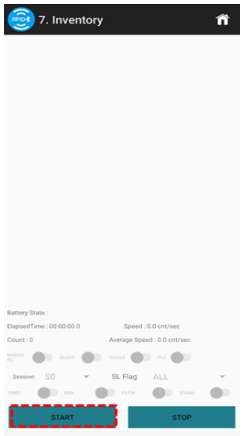
When you turn on the HF550X, it is in RFID mode by default.

RFID functions are only available on HF550X RFID specific SKUS. Please contact a Bluebird representative for additional information.

1 To test RFID Tag reading functions, open the Bluebird RFID demo application.

2 After opening the app, press Inventory

3 Touch Start to read RFID tags.



6 Calls

6.1 Introduction

- Optional.
- Make a phone call from the **Phone** app, the **Contacts** app, or other apps or widgets that display contact information. This section applies to WWAN devices only.

6.2 Emergency Calling

The service provider programs one or more emergency phone numbers, such as 911 or 999, that the user can call under any circumstances, even when the phone is locked or the phone is not activated. See the service provider for additional information.

Emergency numbers vary by country. The phone's pre-programmed emergency number(s) may not work in all loca-tions, and sometimes an emergency call cannot be placed due to network, environmental, or interference issues.

6.3 Audio Modes

The device offers three audio modes for use during phone calls:

- Handset Mode : Switch audio to the receiver at the top front of the device to use the device as a handset. This is the default mode.
- Speaker Mode : Use the device as a speakerphone.
- Headset Mode : Connect a Bluetooth or wired headset to automatically switch audio to the headset.

6.4 Using a Bluetooth Headset

Use a Bluetooth headset for audio communication when using an audio-enabled app. Set the volume appropriately before putting on the headset. When a Bluetooth headset is connected, the speakerphone is muted.

6.5 Using a Wired Headset

Use a wired headset and audio adapter for audio communication when using an audio-enabled app. Set the volume appropriately before putting on the headset. When a wired headset is connected, the speakerphone is muted.

To end a call using the wired headset, press and hold the headset button until the call ends.

6.6 Adjusting Audio Volume

Use the volume buttons to adjust the phone volume in the following ways:

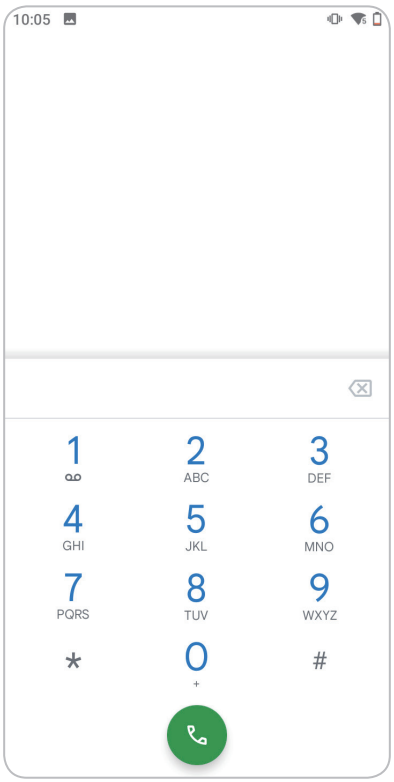
- Ring and notification volumes when not in a call
- Conversation volume during a call.

6.7 Making a Call Using the Dialer

Use the dialer tab to dial phone numbers.

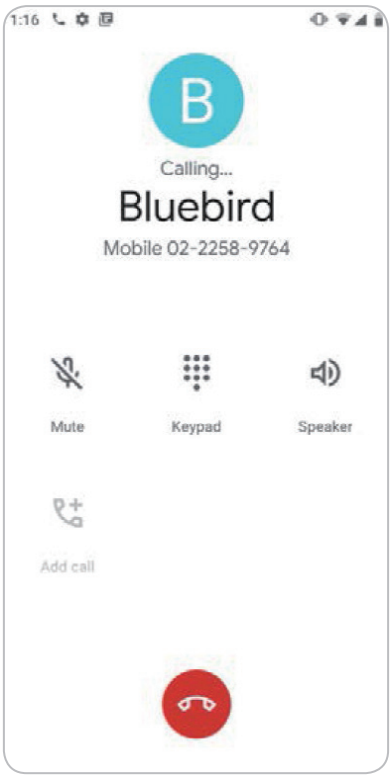
1 On the Home screen touch .

2 Touch .



3 Touch the keys to enter the phone number.

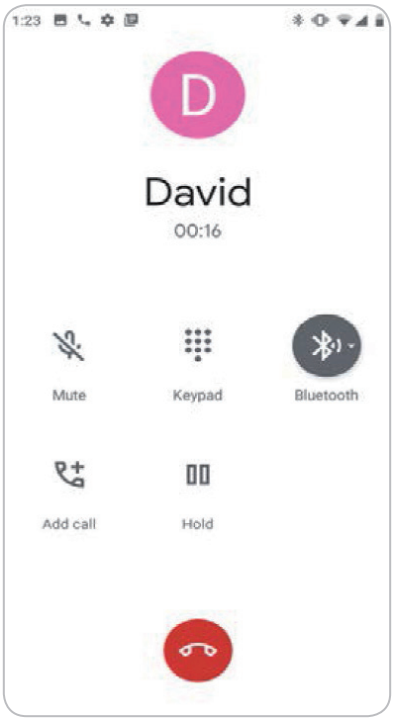
4 Touch below the dialer to initiate the call.



- : Send audio to the speakerphone.
- : Mute the call.
- : Display the dial pad.
- : Place the call on hold (not available on all services).
- : Create a conference call.
- : Increase audio level.

5 Touch to end the call.

If using a Bluetooth headset, additional audio options are available. Touch the audio icon to open the audio menu.



- : Audio is routed to the Bluetooth headset.
- : Audio is routed to the speakerphone.
- : Audio is routed to the earpiece.

6.7.1 Dialer Dialing Options

The dialer provides options to save the dialed number to contacts, send an SMS, or insert pauses and wait into the dial string.

Enter at least one digit to access these options. Touch ⋮ to access the following.

- **Add 2–sec pause** : Pause the dialing of the next number for two seconds. Multiple pauses are added sequentially.
- **Add wait** : Wait for confirmation to send the rest of the digits.

6.8 Making a Call Using Contacts

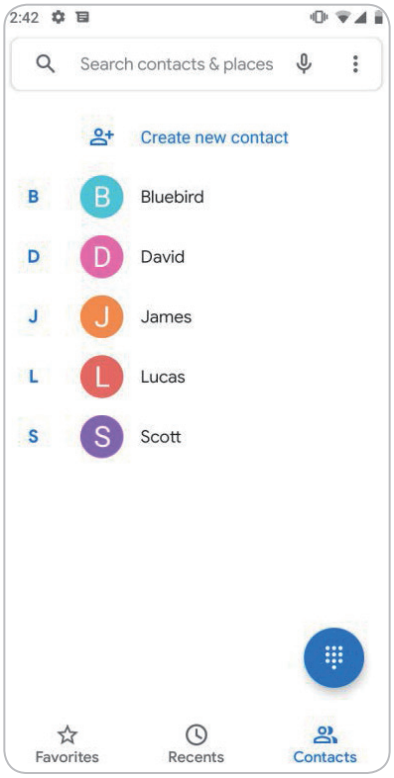
There are two ways to make a call using contacts:

- Using the Dialer
- Using the Contacts app.

6.8.1 Using the Dialer

1 On the Home screen touch .

2 Touch the tab.



3 Touch the contact.

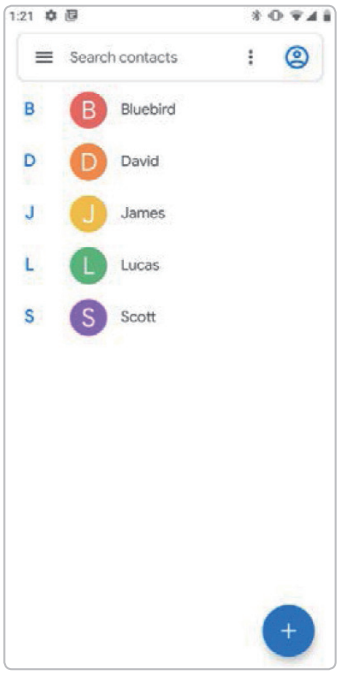
4 Touch to initiate the call.

5 Touch to end the call.

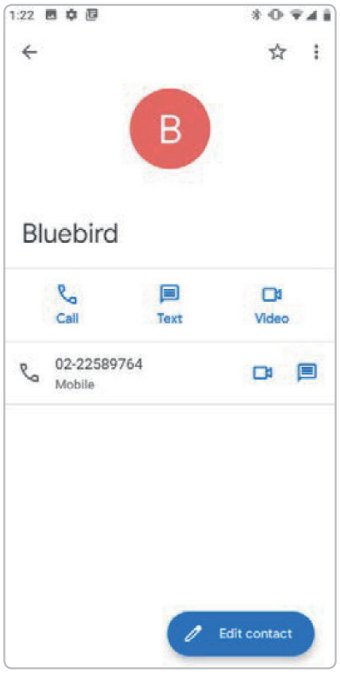
6.8.2 Using the Contacts App

To make a call from the Contacts app:

1 Touch .



2 Touch a contact name.



3 Touch to initiate a call.

6.9 Making a Call Using a Bluetooth Headset

To make a call using a Bluetooth headset:

1 Pair the Bluetooth headset with the device.

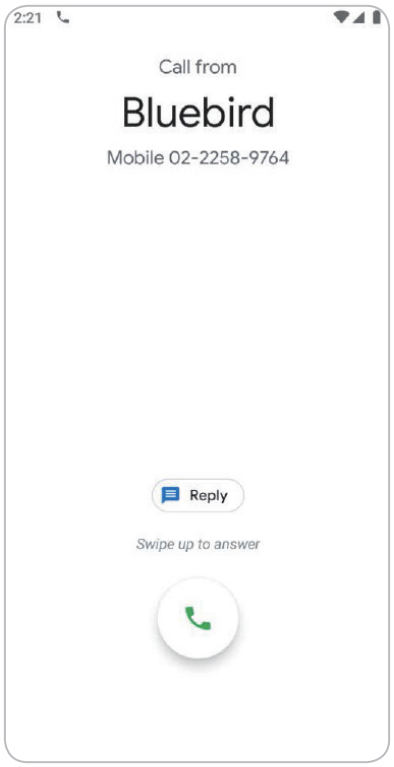
2 Press the Call button on the Bluetooth headset.

3 Press the Call button on the Bluetooth headset to end the call.

6.10 Answering Calls

When receiving a phone call, the **Incoming Call** screen displays the caller ID and any additional information about the caller that is in the **Contacts** app.

Touch **ANSWER** to answer the call or **DECLINE** to send the caller to voice mail.
If the screen lock is enabled, the user can answer the call without unlocking the device.



When a call arrives:

- Touch and slide up to answer the call.
- Touch and slide down to send the call to voice mail.
- Touch to open a list of quick text responses. Touch one to send it to the caller immediately.

When the calls ends, the device remains locked.

If using a Bluetooth headset when a call arrives, touch the Call button on the Bluetooth headset to answer the call. To end the call press the headset Call button.

All incoming calls are recorded in the Phone app Call log tab. If you miss a call, you receive a notification. To silence the ringer before answering the call, press the volume down button on the side of device.

6.11 Call Settings

Not all options are available for all configurations

To modify phone call settings, on the Home screen touch > > **Settings**.

- **Display options**
  - **Sort by** : Set to **First name** or **Last name**.
  - **Name format** : Set to **First name first** or **Last name first**.
  - **Dark theme** : Set **phone theme** to **Dark** or **not**
- **Sounds and vibrations** : Set **sound environment**
- **Quick responses** : Touch to edit quick responses to use instead of answering a call.
- **Speed dial settings** : Set speed dial contact shortcuts.
- **Calls**
  - **Calling accounts**
    - **SIP accounts** : Choose to receive Internet calls for accounts added to the device, view or change SIP accounts, or add an Internet calling account.
    - **Use SIP calling** : Set to **For all calls** or **Only for SIP calls** (default).
    - **Receive incoming calls** : Enable to allow incoming calls (default : disabled).
    - **Call forwarding** : Set to forward incoming calls to a different phone number.

Call Forwarding may not be available on all networks. Check with the service provider for availability.

  - **Additional settings**
    - **Caller ID** : Set caller ID to reveal the identity of the person making an outgoing call.
    - **Options**: **Network default** (default), **Hide number**, **Show number**.
    - **Call waiting** : Set to be notified of an incoming call while on a call.
- **Call blocking** : Set to block calls and texts from certain phone numbers. Touch **ADD A NUMBER** to block a phone number.

- **Voicemail** : Configure voicemail settings.
  - **Notifications**
  - **Importance** : Set the notification importance to **Urgent**, **High** (default), **Medium**, or **Low**.
  - **Sound** : Select a sound to play when a voicemail is received.
  - **Vibrate** : Set vibrate to **On** (default) or **Off**.
  - **Advanced** : Use toggle switches to enable or disable **Blink link**, **Show notification**, or **Override Do Not Disturb.** Available options vary depending on the Importance setting.
- **Advanced Settings**
  - **Service** : Set the service provider or other provider for voicemail service.
  - **Setup** : Select to update the phone number used to access voicemail.
  - **Accessibility**
- **TTY mode** : Touch to set the TTY setting. Use an optional teletypewriter (TTY) with the device to send and receive calls. Plug the TTY into the device headset jack and set the device to operate in one of theTTY modes.

Use a TSB-121 compliant cable (provided by the TTY manufacturer) to connect the TTY to the device.

Set the device volume to a middle level setting for proper operation. If you experience a high number of incorrect characters, adjust the volume as needed to minimize the error rate.

For optimal performance, the device should be at least 30 cm (12 inches) from the TTY. Placing the device too close to the TTY may cause high error rates.

- **TTY off** : TTY is off (default)
- **TTY Full** : Transmit and receive TTY characters
- **TTY HCO** : Transmit TTY characters, but receive by listening to earpiece
- **TTY VCO** : Receive TTY characters, but transmit by speaking into microphone.
- **Hearing aids** : Select to enable hearing air compatibility.
- **RTT settings** : Configure Real-time text (RTT) settings.
  - **Real-time text (RTT) call** : Select to allow messaging during a call.
  - **Set RTT visibility** : Set to **Visible during calls** (default) or **Always visible**.

7 Applications

7.1 Overview of Apps

The **APPS** displays icon for all installed apps. The table below lists the apps installed on the device. For information on standard Android apps, go to the Google Play Apps store

Icon	Description
	Barcode Test : Use to test barcode functions
	Displays battery information : Including charge level, status, health and wear level.
	BBSettings : Use to set configuration of barcode settings.
	BOS Provisioning CBR : Use to read QR code to set-up BosProvisioning.
	BOS™EMM : Use to support a variety of device control functions, including the ability to set up the device profile and apply profiles to multiple devices.
	BOS™EMM Provisioning : Use to stage BOS™EMM.
	Calculator : Provides basic and scientific arithmetic functions.
	Calendar : Use to manage events and appointments. GMS/GMS-Restricted only.
	Camera : Take photos or record videos. For more information see Camera.
	Chrome : Use to access the Internet or intranet. GMS/GMS-Restricted only
	Clock : Use to schedule alarms for appointments or as a wake-up.
	Contacts : Use to manage contact information. See Contacts for more information.
	DevCheck : Use to display device information and test basic device functions.
	Drive : Upload photos, videos, documents, and other files to personal storage site. GMS/GMS-Restricted only.

7 Applications

Icon	Description
	Duo : A one-to-one video calling app. GMS/GMS-Restricted only.
	FileManager : Use to browse files.
	Files : Organize and manage files on the device. See Files for more information.
	Gmail : Use to send and receive email using a Google email account. GMS/GMS-Restricted only
	Google : Launches Google ™ search app. GMS/GMS-Restricted only
	Keep Notes : Use to create, edit, and share notes. GMS/GMS-Restricted only.
	Maps : Use to see your location on a map (with public transit, traffic, or satellite overlays). Search for any business or place of interest. Provides turn-by-turn navigation with voice guidance, traffic-avoidance, and alternate routes, for drivers, cyclists, walkers, and users of public transportation. GMS/GMS-Restricted only.
	Messages : Send SMS and MMS messages. WAN devices only. GMS/GMS-Restricted only.
	OSUpdate : Use to OS update by OTA.
	Phone : Use to dial a phone number when used with some Voice over IP (VoIP) clients (VoIP telephony ready only).
	Photos : Use to sync photos with Google account. For more information, see Photo Settings. GMS/GMS-Restricted only.
	Play Movies & TV : View movies and video on your device. GMS/GMS-Restricted only.
	Play Store : Download music, movies, books, and Android apps and games from the Google Play Store. GMS/GMS-Restricted only.
	Settings : Use to configure the device.
	Sound Recorder : Use to record audio.

Icon	Description
	YouTube : Use to view videos on the YouTube ™ web site. GMS/GMS-Restricted only.
	YT Music : Use to listen to music. GMS/GMS-Restricted only.

7.2 Barcode

The HF550X includes a 2D barcode scanner. To use the barcode scanning function,

1 On the Home screen, tap > .

2 Tap **Open** to start scanning the barcode.

3 Press the Right or Left button. A red laser will come from the top of your device.

4 Aim the red beam across the barcode you want to scan.

When scanning, maintain a distance of about 10 cm or 4 in. for the best result and aim it at an appropriate angle as shown the following image.

Do not stare into the LED aimer of the barcode scanner. It may injure your eyes.

RISK GROUP 2
CAUTION Possibly hazardous optical radiation emitted from this product

When the barcode is scanned successfully, you can hear a beep sound and the results will appear on the screen.

7.3 Accessing Apps

All apps installed on the device are accessed using the **APPS** window.

1 On the Home screen, swipe up from the bottom of the screen.

2 Slide the **APPS** window up or down to view more app icons.

3 Touch an icon to open the app.

7.3.1 Switching Between Recent Apps

To switch between recent apps:

1 Touch ▢. A window appears on the screen with icons of recently used apps.

2 Slide the apps displayed up and down to view all recently used apps.

3 Swipe left or right to remove app from the list and force close the app.

4 Touch an icon to open an app or touch ◁ to return to the current screen.

7.4 Battery Manager

The **Battery Manager** provides detailed information about the battery.

To open Battery Manager, swipe up from the bottom of the Home screen and touch .

- **Battery Present Status** : Indicates that the battery is present.
- **Status** : Battery status
- **Battery Level** : The battery charge level as a percentage of scale
- **Time to empty** : The amount of time until the battery is empty.
- **Battery Health** : The health of the battery.
- **Battery Health percentage** : With a range from 0 to 100, this is the ratio of “present_capacity” to “design_capacity” at a discharge rate of “design_capacity”.
- **Battery Voltage** : The current battery voltage in millivolts
- **Battery Temperature** : The current battery temperature in degrees Centigrade.
- **Battery Technology** : The type of battery.
- **Battery Manufacture Date** : The date of manufacture
- **Battery Serial Number** : The battery serial number. The number matches the serial number printed on the battery label.
- **Battery Capacity** : The rated capacity of the battery in mAh.
- **Base Cumulative Charge** : The total accumulated charge in all chargers.

7.5 Camera

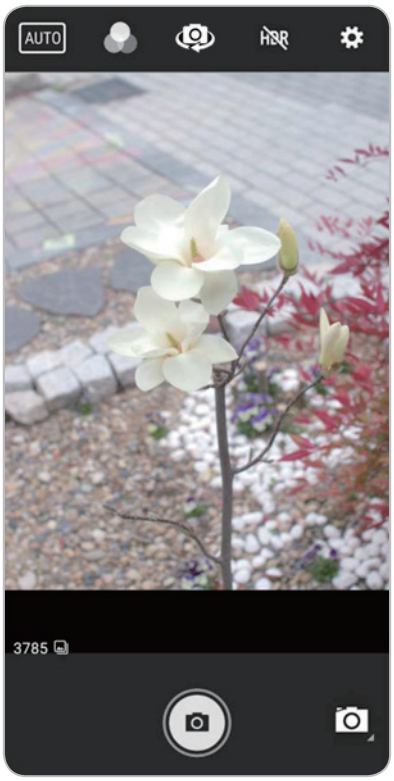
This section provides information for taking photos and recording videos using the integrated digital cameras.

The device saves photos and videos on the microSD card, if installed and the storage path is changed manually. By default, or if a microSD card is not installed, the device saves photos and videos on the internal storage.

7.5.1 Taking Photos

See Photo Settings for camera setting descriptions.

1 Swipe up from the bottom of the Home screen and touch **Camera**.



2 Touch the Camera Mode icon and touch .

3 To switch between the rear camera and front camera, touch .

4 Frame the subject on the screen.

5 To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.

6 Touch an area on the screen to focus. The focus circle appears. The two bars turn green when in focus.

7 Touch .

The camera takes a photo and a shutter sound plays.

The photo momentarily displays as a thumbnail in the lower left corner.

7.5.2 Taking a Panoramic Photo

Panorama mode creates a single wide image by panning slowly across a scene.

1 Swipe up from the bottom of the Home screen and touch **Camera**.

2 Touch the Camera Mode icon and touch .

3 Frame one side of the scene to capture.

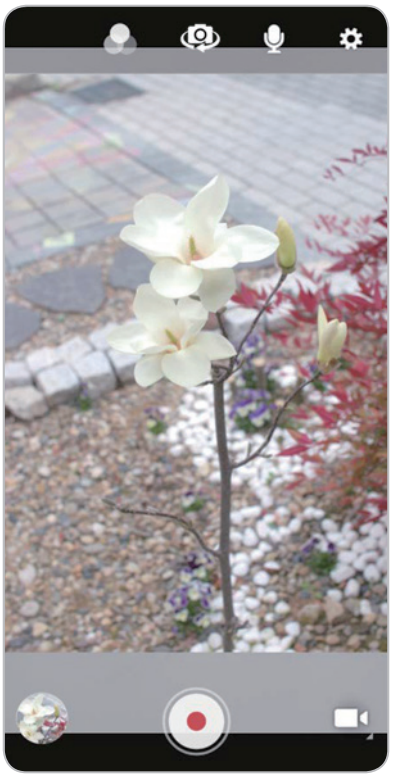
4 Touch and slowly pan across the area to capture. A small white square appears inside the button indicating the capture is in progress.
If you are panning too quickly, the message Too fast appears.

5 Touch to end the shot. The panorama appears immediately and a progress indicator displays while it saves the image.

7.5.3 Recording Videos

1 Swipe up from the bottom of the Home screen and touch **Camera**.

2 Touch the camera mode menu and touch .



3 To switch between the rear camera and front camera (if available), touch .

4 Point the camera and frame the scene.

5 To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.

6 Touch to start recording.

The video time remaining appears in the top left of the screen.

7 Touch to the end recording.

The video momentarily displays as a thumbnail in the lower left corner.

7.6 Photo Settings

In Photo mode, photo settings appear on screen. Touch to display the photo settings options.

7.6.1 Front Camera

- **Selfie Flash** : Turns screen white to help produce a little extra light in dimmer settings. Options: **Off** (default) or **On**.
- **GPS Location** : **OFF** (default) or **On**.
- **Picture size** : Set the size (in pixels) of the photo to: **5M pixels**, **3M pixels**, **2M pixels**, **1.5M pixels**, **1.3M pixels**, **1M pixels**, **HD1080**, **HD720**, **720x480m**, **WVGA**, **QVGA**, **SVGA**, **WXGA**, **VGA**, or **CIF**.
- **Picture quality** : Set picture quality setting to: **Low**, **Standard** (default) or **High**.
- **Countdown timer** : Set to: **Off** (default), **2 seconds**, **5 seconds** or **10 seconds**.
- **Storage** – Set location to store the photo to: **Phone** or **SD Card**.
- **Face Detection** : Select to turn face detection **Off** (default) or **On**.
- **ISO** : Set how sensitive the camera is to light. Options: **Auto** (default), **ISO Auto (HJR)**, **ISO100**, **ISO200**, **ISO400**, **ISO800** or **ISO1600**.
- **White balance** : Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors:
  - **Incandescent** : Adjust the white balance for incandescent lighting.
  - **Fluorescent** : Adjust the white balance for florescent lighting.
  - **Auto** : Adjust the white balance automatically (default).
  - **Daylight** : Adjust the white balance for daylight.
  - **Cloudy** : Adjust the white balance for a cloudy environment.
- **Redeye reduction** : Helps eliminate redeye effect. Options: **Disabled** (default), or **Enable**.
- **Selfie Mirror** : Options: **Disable** (default), or **Enable**.

7.6.2 Rear Camera

- **Flash** : Select whether the camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** : Disable flash.
  - **Auto** : Adjust flash automatically depending upon light meter (default).
  - **On** : Enable flash upon taking a photo.
- **GPS Location** : Set to: **OFF** (default) or **On**.
- **Picture size** : The size (in pixels) of the photo to: **13M pixels** (default), **12M pixels**, **8M pixels**, **Square (1:1)**, **5M pixels**, **4M pixels**, **3M pixels**, **HD 1080**, **2M pixels**, **1.5M pixels**, **1.3M pixels**, **WXGA**, **HD720**, **1M pixels**, **SVGA**, **WVGA**, **720x480**, **VGA**, **CIF** or **QVGA**.
- **Picture quality** : Set the picture quality setting to: **Low**, **Standard** (default) or **High**.
- **Countdown timer** : Select **Off** (default), **2 seconds**, **5 seconds** or **10 seconds**.
- **Storage** : Set the location to store the photo to: **Phone** or **SD Card**.
- **Face Detection** : Select to turn face detection **Off** (default) or **On**.
- **ISO** : Set camera sensitivity to light to: **Auto** (default), **ISO Auto (HJR)**, **ISO100**, **ISO200**, **ISO400**, **ISO800** or **ISO1600**.
- **White balance** : Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors:
  - **Incandescent** : Adjust the white balance for incandescent lighting.
  - **Fluorescent** : Adjust the white balance for florescent lighting.
  - **Auto** : Adjust the white balance automatically (default).
  - **Daylight** : Adjust the white balance for daylight.
  - **Cloudy** : Adjust the white balance for a cloudy environment.
- **Redeye reduction** : Helps eliminate redeye effect. Options: **Disabled** (default), or **Enable**.

7.7 Video Settings

In Video mode, video settings appear on screen. Touch ⚙ to display the video settings options.

7.7.1 Front Camera

- **Video quality** : Set video quality to: **HD1080** (default), **HD 720p**, **SD 480p**, **VGA**, **CIF** or **QVGA**.
- **Video duration** : Set to: **30 seconds (MMS)**, **10 minutes(default)**, **30 minutes** or **no limit**.
- **GPS Location** : **OFF** (default) or **On**.
- **Storage** – Set the location to store the photo to: **Phone** (default) or **SD Card**.
- **White balance** : Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors.
  - **Incandescent** : Adjust the white balance for incandescent lighting.
  - **Fluorescent** : Adjust the white balance for florescent lighting.
  - **Auto** : Adjust the white balance automatically (default).
  - **Daylight** : Adjust the white balance for daylight.
  - **Cloudy** : Adjust the white balance for a cloudy environment.
- **Image Stabilization** : Set to reduce blurry videos due to device movement. Options: **On** or **Off** (default).

7.7.2 Rear Camera

- **Flash** : Select whether Rear-facing Camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** : Disable flash (default).
  - **On** : Enable flash.
- **Video quality** : Set video quality to: **4k DCI**, **4k UHD**, **HD 1080p** (default), **HD 720p**, **SD 480p**, **VGA**, **CIF** or **QVGA**.
- **Video duration** : **30 seconds (MMS)**, **10 minutes(default)**, **30 minutes** or **no limit**.
- **GPS Location** : **OFF** (default) or **On**.
- **Storage** : Set the location to store the photo to: **Phone** (default) or **SD Card**.
- **White balance** : Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors.
  - **Incandescent** : Adjust the white balance for incandescent lighting.
  - **Fluorescent** : Adjust the white balance for florescent lighting.
  - **Auto** : Adjust the white balance automatically (default).
  - **Daylight** : Adjust the white balance for daylight.
  - **Cloudy** : Adjust the white balance for a cloudy environment.
- **Image Stabilization** : Set to reduce blurry videos due to device movement. Options: **On** or **Off** (default).

7.8 Contacts

Use the **Contacts** app to manage contacts.

From a Home or Apps screen, touch **Contacts** to open to the main list of contacts. Contacts are listed in alphabetical order. Swipe up or down to scroll through the list.

7.8.1 Adding a Contact

1 In the Contacts app, touch +.

2 If there is more than one account with contacts, touch the one you want to use.

3 Type the contact's name and other information. Touch a field to start typing, and swipe down to view all categories.

4 To open a menu with preset labels, such as Home or Work for an email address, touch the label to the right of the item of contact information. Or, to create your own label, touch **Custom** in the menu.

5 Touch the check mark next to **Add New Contact**.

7.8.2 Editing Contacts

1 In the Contacts app, touch a contact name to edit.

2 Touch ✎.

3 Edit the contact information.

4 Touch **SAVE**.

7.8.3 Deleting Contacts

1 In the **Contacts** app, touch a contact name to delete.

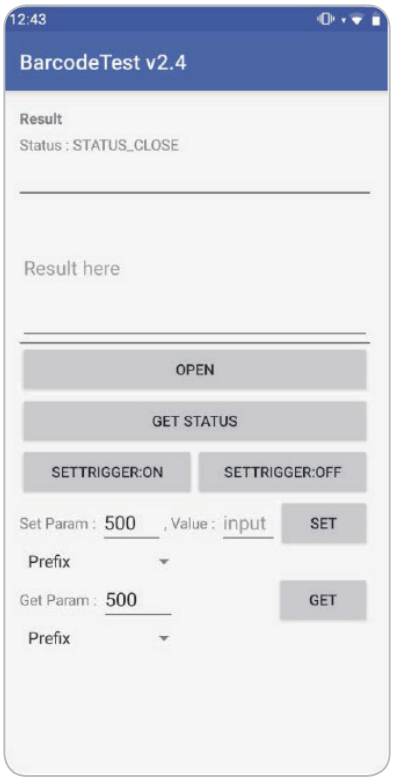
2 Touch ⋮.

3 Touch **Delete**.

4 Touch **DELETE** to confirm.

7.9 BarcodeTest

This program can check barcode status and barcode information.



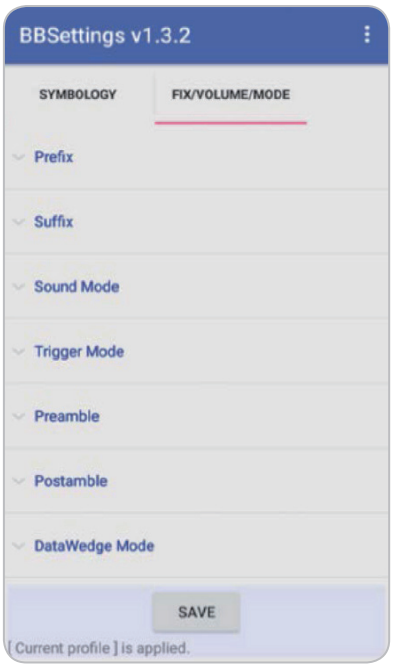
- **Count** : number of scanning
- **Symbology** : barcode type
- **Data** : barcode data (refer to next pages)
- **OPEN** : To open the barcode module.
- **GET STATUS** : To get barcode module status.
- **SET TRIGGER ON** : Press trigger button by software
- **SET TRIGGER OFF** : Press trigger button by software
- **SET Param** : To set barcode scan environment.

7.10 BBSettings

BBSettings is an Android application that helps set the settings for Barcode scanning.

Tab1
SYMBOLOGY

Tab2
FIX/VOLUME/MODE



1 Click an item

2 Detail set will be shown

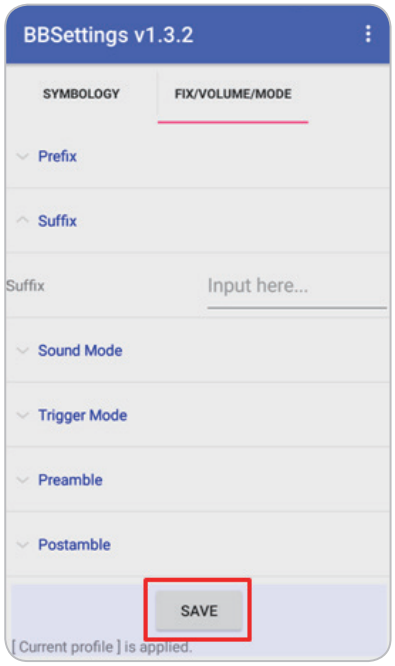
3 Click the spinner and re-select the item in the Select Spinner Type

4 Input desired value in Input text type

5 Able to scroll when detail set is shown.

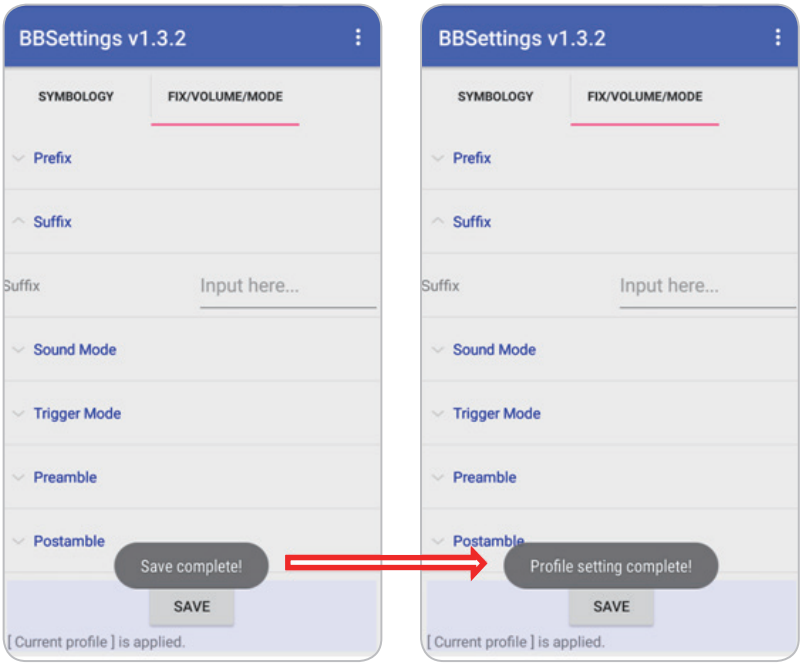
Save

Click Save & Initialize



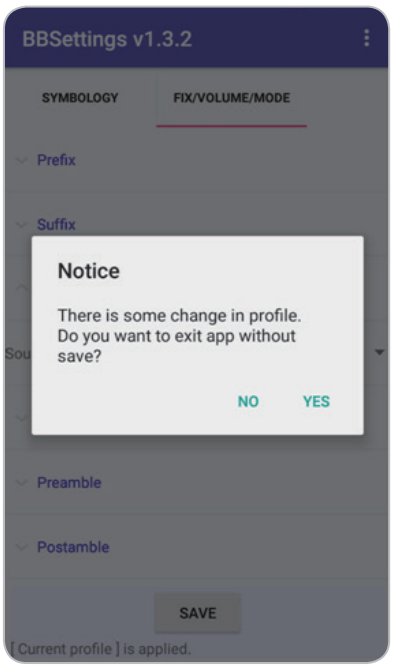
Save Completed

Press the SAVE button to save the applied settings. The settings will remain saved even if the device undergoes a hard reset.



Exit

Click Back button



1 If some values are changed and Exit program without press ‘**Save**” button , notice dialog will be popped up.

2 Click **Yes**, App is closed.

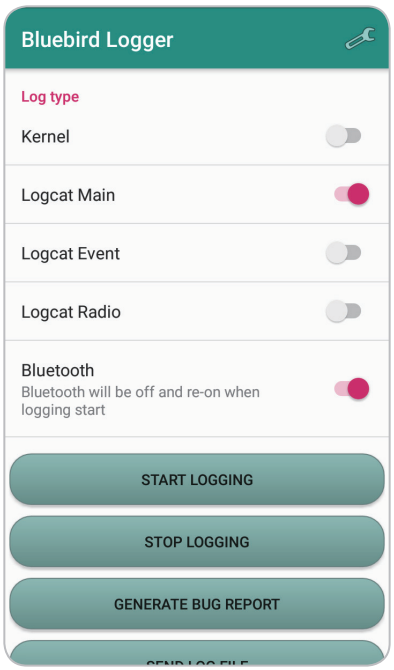
3 Click **No**, remain in App.

7.10.1 Function

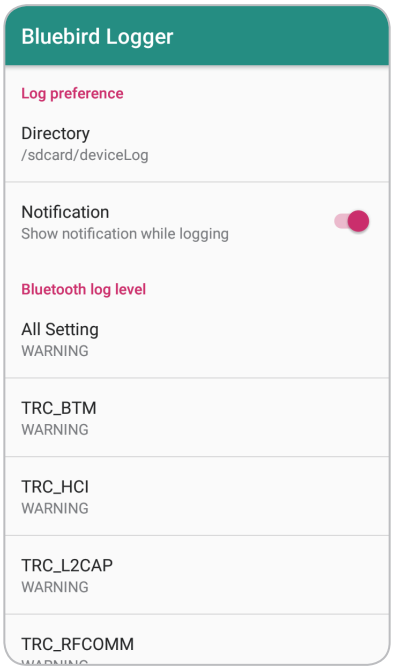
Name	Type	Description
Prefix	Input text	Value added to the beginning of read data (e.g. 12345678). Ex) if set text of abc, output would be – {}, {abc12345678}, {}.
Suffix	Input text	Value added to the end of read data. Ex) if set text of def, output would be – {}, {12345678def}, {}.
Sound Mode	Select spinner	on/off On/Off barcode beep sound.
Trigger Mode	Select spinner	Beam Mode Option • Level : Beam is on while scan button is pushed and held. • Pulse : Beam is on till decoding Timeout time once scan button is pushed. • Edge : Pushing the button once, beam turns on. Pushing once again, beam turns off. • Autostand : The same as Edge, but beam is not off after data is read. (keep reading data till trigger off is transmitted.) • Streaming : Similar to Autostand, but works while the scan key is pressed and stops when the key is released.
Aimer Mode	Select spinner	On/off the Aimer (+ shape laser).
Illumination Mode	Select spinner	On/off the Illumination (white light).
Decode Timeout	Input text	Time set to stop reading after trigger on. Min : 500ms / Max : 10000ms / default : 3000
Preamble	Input text	Value added to the front buffer. Ex) if set text of abc, output would be - {abc}, {12345678}, {}.
Post amble	Input text	Value added to the back buffer. Ex) if set text of def, output would be – {}, {12345678}, {def}.
Data wedge Mode	Select spinner	On/Off the Data Wedge Mode.

Name	Type	Description
Data wedge Type	Select spinner	Data transferring type • Clipboard : barcode data transfer to cursor using clipboard (memory buffer). • Keyboard : barcode data transfer to cursor one by one. Usage • Clipboard : To input barcode data to edit box in application (note pad, web browser URL bar). • Keyboard : To input barcode data to specific application (e.g. telnet, RDP, OneNote or in the data field of our web form).
Data wedge Type	Select spinner	• Clipboard : Features that are available where you inherit the Google base class TextView. • Keyboard : Available regardless of TextView class or specific Web form.
Keyboard Type	Select spinner	Features used when Data wedge type is keyboard • Cursor : Pass key event to selected view. • Injection : Pass key values by ACTION_UP / ACTION_DOWN.
Pick list Mode	Select spinner	Scan barcode in center if there are many barcodes in aimer area
Intent Action	Input text	Intent information entered allows decode data to be received from the application. • Intent action : Specifies the action to handle the intent. • Intent action category : Specifies the category of intent to be handled. • Intent action extra name : Specifies the extra name of intent to be handled.
Barcode To Read	Input text	Sets the number of barcode to read when Multi Decode Mode is enabled.
Full Read Mode	Select spinner	• Enable : Generate a decode event after one or more barcodes are decoded. • Disable : Only generate the callback when at least the number of barcodes set in Barcode To Read are decoded.
FNC1	Input text	Replace FNC1 value with entered value.
Transmit Code ID Character	Select spinner	Code ID character identifies the code type of a scanned barcode. • Enable : Inserted Code ID character before decoding data. • Disable : Normal decode.

7.11 Bluebird Logger



- To execute, use calculator
- **Hidden menu code** : .77305673!
- Log type
  - **Kernel** : Kernel log (kmsg)
  - **Logcat Main** : logcat main buffer
  - **Logcat Event** : logcat event buffer
  - **Logcat Radio** : logcat radio buffer
  - **Bluetooth** : btsnoop_hci
- **Start Logging** : To start logging.
  - Log files will be stored under log directory (Default: '/sdcard/deviceLog/')
- **Stop Logging** : To stop logging.
- **Generate Bug report** : To generate bug report.
- Send Log File : Zip the log files and bug report, and Send zipped file.
  - Zipping all captured log file.
  - Can forward the zipped file through email, onto Gdrive, or google beam.
  - Forwarding file through email needs email client and account.
  - Forwarding file onto Gdrive needs google account.
- Or you can download zipped file by adb command (through USB cable)
  - adb pull/sdcard/deviceLog/DeviceLog.zip



- **Directory** : Directory that log files will be saved.
- **Notification** : Whether notification is showing while logging or not.
- **Bluetooth log level** (Support from Marshmallow) : Set bluetooth stack log level.

7.12 Sound Recorder

Use **Sound Recorder** to record audio messages.

Recordings are saved on the microSD card (if installed) or the internal storage and are available in the Music application (non-GMS devices) or the Play Music application (GMS devices).

Touch ⋮ to open options menu.

- **File type** : Select the file type for the recording file.
  - **AMR**
  - **3GPP**
  - **AAC**
  - **WAV**
  - **AMR-WB**
  - **AMR-WB-3GPP.**
- **Storage location** : Select the location for the recording file.
  - **Phone storage**
  - **SD card.**

8 Data Capture

8.1 Introduction

The device supports data capture using:

- Integrated imager
- Integrated camera

8.2 Imaging

The imager uses imaging technology to take a picture of a bar code, stores the resulting image in its memory, and executes state-of-the-art software decoding algorithms to extract the bar code data from the image. With a 2D imager, the device has the following features:

- Omnidirectional reading of a variety of bar code symbologies, including the most popular linear, postal, PDF417, and 2D matrix code types.
- Advanced intuitive laser aiming cross-hair and dot aiming for easy point-and-shoot operation.

8.3 Digital Camera

The device with an integrated camera based barcode scanning solution has the following features:

- Omnidirectional reading of a variety of barcode symbologies, including the most popular linear, postal, QR, PDF417, and 2D matrix code types.
- Cross-hair reticle for easy point-and-shoot operation.
- Picklist mode to decode a particular barcode from many in the field of view.

The solution uses the advanced camera technology to take a digital picture of a barcode, and executes state-of-the-art software decoding algorithms to extract the data from the image.

8.4 Scanning Considerations

Typically, scanning is a simple matter of aim, scan, and decode, with a few quick trial efforts to master it. However, consider the following to optimize scanning performance:

- **Range**: Scanners decode best over a particular working range — minimum and maximum distances from the barcode. This range varies according to barcode density and scanning device optics. Scan within range for quick and constant decodes; scanning too close or too far away prevents decodes. Move the scanner closer and further away to find the right working range for the barcodes being scanned.
- **Angle**: Scanning angle is important for quick decodes. When the illumination/flash reflects directly back into the imager, the specular reflection can blind/saturate the imager. To avoid this, scan the barcode so that the beam does not bounce directly back. Do not scan at too sharp an angle; the scanner needs to collect scattered reflections from the scan to make a successful decode. Practice quickly shows what tolerances to work within.
- Hold the device farther away for larger symbols.
- Move the device closer for symbols with bars that are close together.

Scanning procedures depend on the app and device configuration. An app may use different scanning procedures from the one listed above.

8.5 Scanning with Internal Imager

To read a barcode, a scan-enabled app is required. The device contains the BarcodeTest app that allows the user to enable the imager, decode the barcode data, and display the barcode content.

To scan with the internal imager:

1 Ensure that an app is open on the device and a text field is in focus (text cursor in text field).

2 Point the exit window on the top of the device at a barcode.

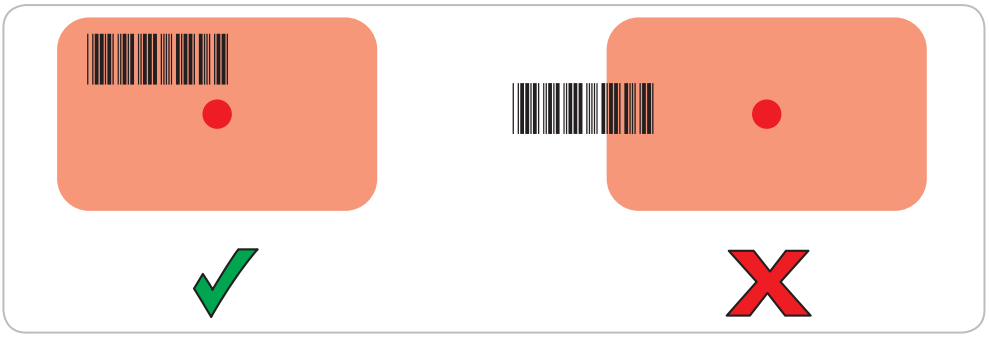
3 Press and hold the scan button.

The red laser aiming pattern turns on to assist in aiming.

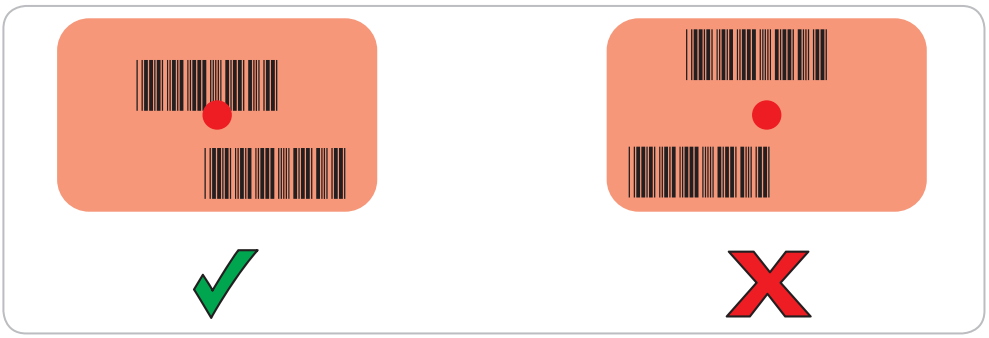
When the device is in Picklist mode, the imager does not decode the barcode until the crosshair or aiming dot touch-es the barcode.

4 Ensure the barcode is within the area formed by the crosshairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

Aiming Pattern



Pick List Mode with Multiple Barcodes



5 Release the scan button.

Imager decoding usually occurs instantaneously. The device repeats the steps required to take a digital picture (im-age) of a poor or difficult barcode as long as the scan button remains pressed.

6 The barcode content data displays in the text field.

8.6 Scanning with Internal Camera

To read a barcode, a scan-enabled app is required. The device contains the CameraBarcodeTest app that allows the user to enable the imager, decode the barcode data, and display the barcode content.

The camera barcode function requires separate license authentication and it is only available on authenticated terminal.

To scan with the internal camera:

1 Ensure that an app is open on the device and a text field is in focus (text cursor in text field).

2 Point the camera exit window on the back of the device at a barcode.

When Picklist mode is enabled, move the device until the bar code is centered.

3 Move the device until the barcode is visible on the screen.

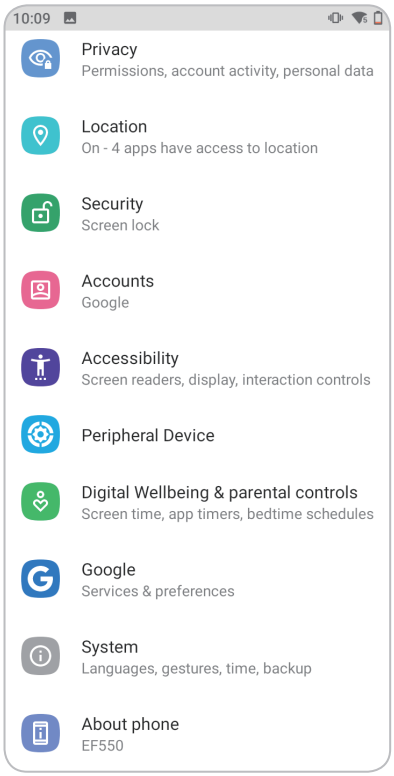
4 The captured data appears in the text field.

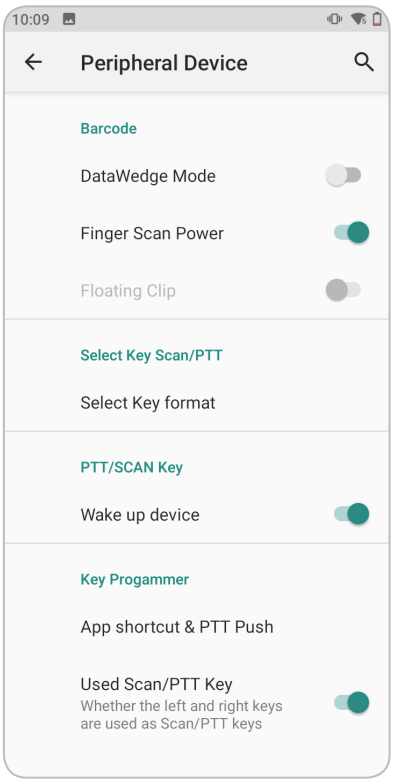
8.7 DataWedge

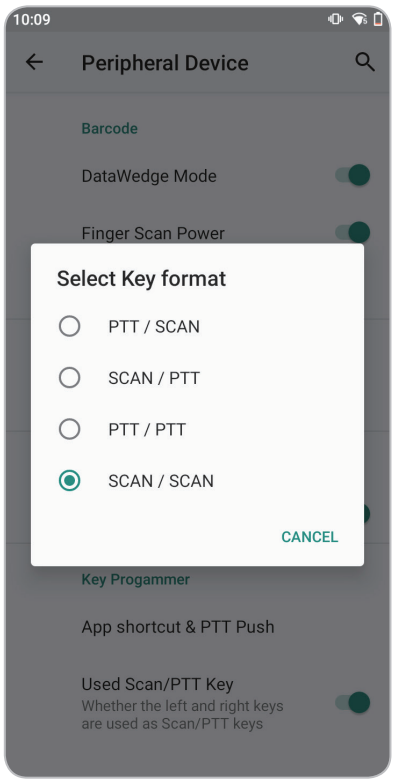
DataWedge is a utility that adds advanced barcode scanning capability to any application without writing code.

It runs in the background and handles the interface to built in barcode scanners.

The captured barcode data is converted to keystrokes and sent to the target application as if it was typed on the keypad.







- **Disable** : Application can control but User cannot control barcode operation.
- **Enable** : The barcode beam will activate when the user pushes the barcode scan button.

9 Wireless

9.1 Introduction

This section provides information on the wireless features:

- Wireless Local Area Network (WLAN)
- Bluetooth
- Near Field Communications (NFC).

9.2 Accessing Settings

Access Settings in any of the following ways:

- Swipe down with two fingers from the top of the Home screen to open the Quick Access panel and touch ⚙.
- Double-swipe down from the top of the Home screen to open the Quick Access panel and touch ⚙.
- Swipe up from the bottom of the Home screen to open APPS and touch **Settings**.

9.3.1 Sharing the Mobile Data Connection

The **Tethering & Portable Hotspot** settings allows sharing the mobile data connection with a single computer via USB tethering or Bluetooth tethering. Share the data connection with up to eight devices at once, by turning it into a portable Wi-Fi hotspot. While the device is sharing its data connection, an icon displays at the top of the screen and a corresponding message appears in the notification list.

9.3.2 Enabling Bluetooth Tethering

Use Bluetooth tethering to share the data connection with a host computer.
Configure the host computer to obtain its network connection using Bluetooth.

For more information, see the host computer's documentation.

1 Pair the device with the host computer.

2 Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

3 Touch **Networking & Internet**.

4 Touch **Hotspot & tethering**.

5 Touch the **Bluetooth tethering** switch to enable.
The host computer is now sharing the device's data connection.

To stop sharing the data connection, touch the **Bluetooth tethering switch** again.

9.3.3 Enabling Wi-Fi Hotspot

To enable the Wi-Fi Hotspot:

1 Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

2 Touch **Network & Internet**.

3 Touch **Hotspot & tethering**.

4 Touch the **Wi-Fi hotspot** switch to enable.
After a moment, the device starts broadcasting its Wi-Fi network name (SSID). Connect to it with up to eight computers or other devices. The Hotspot icon appears in the Status bar.

To stop sharing the data connection, touch the **Portable Wi-Fi hotspot** switch again.

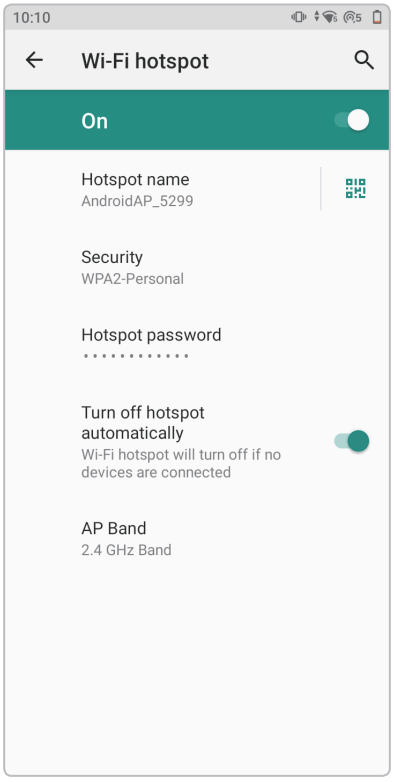
9.3.4 Configuring the Wi-Fi Hotspot

1 Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

2 Touch **Network & Internet**.

3 Touch **Hotspot & tethering**.

4 Touch **Set up Wi-Fi hotspot**.



5 In the **Network name** text field, edit the name for the hotspot.

6 Touch the **Security** option and select a security method from the drop-down list.

- **None**
- **WPA2 PSK.**

If **None** is selected in the **Security** option, a password is not required.

7 In the **Password** text field, enter a password, if required.

8 In the **Select AP Band** drop-down list, select **2.4 GHz Band** or **5 GHz Band**.

9.5 Wireless Local Area Networks

Wireless local area networks (WLANs) allow the device to communicate wirelessly inside a building. Before using the device on a WLAN, the facility must be set up with the required hardware to run the WLAN (sometimes known as infrastructure). The infrastructure and the device must both be properly configured to enable this communication.

Refer to the documentation provided with the infrastructure (access points (APs), access ports, switches, Radius servers, etc.) for instructions on how to set up the infrastructure.

Once the infrastructure is set up to enforce the chosen WLAN security scheme, use the **Wireless & networks** settings configure the device to match the security scheme.

The device supports the following WLAN security options:

- Open
- Wireless Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)/WPA2 Personal (PSK)
- Extensible Authentication Protocol (EAP).
  - LEAP
  - Protected Extensible Authentication Protocol (PEAP) : with MSCHAPV2 and GTC authentication
  - Transport Layer Security (TLS)
  - TTLS : with Password Authentication Protocol (PAP), MSCHAP and MSCHAPv2 authentication.
  - EAP-FAST : with MSCHAPV2 and GTC authentication.

The **Status** bar displays icons that indicate Wi-Fi network availability and Wi-Fi status.

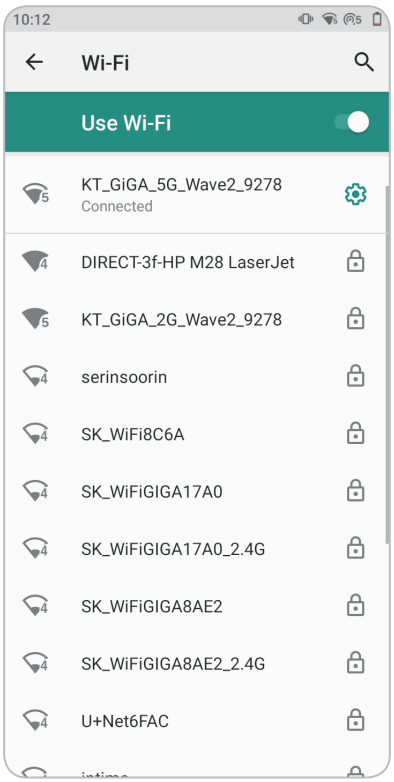
To extend the life of the battery, turn off Wi-Fi when not in use.

9.5.1 Connecting to a Wi-Fi Network

To connect to a Wi-Fi network:

1 Go to **Settings**.

2 Touch **Wi-Fi** to open the **Wi-Fi** screen. The device searches for WLANs in the area and lists them.



3 Scroll through the list and select the desired WLAN network.

4 For open networks, touch profile once or press and hold and then select **Connect to network** or for secure networks enter the required password or other credentials then touch **Connect**. See the system administrator for more information.
The device obtains a network address and other required information from the network using the dynamic host configuration protocol (DHCP) protocol. To configure the device with a fixed internet protocol (IP) address, Refer to the device Integrator Guide for more information.

5 In the Wi-Fi setting field, **Connected** appears indicating that the device is connected to the WLAN.

9.5.2 Removing a Wi-Fi Network

To remove a remembered or connected network:

1 Go to **Settings**.

2 Touch **Network & Internet** > **W-Fi**.

3 Scroll down to the bottom of the list and touch **Saved networks**.

4 Touch the name of the network.

5 In the dialog box, touch **FORGET**.

6 Touch the home button (O).

9.6 WLAN Configuration

This section provides information on configuring Wi-Fi settings.

9.6.1 Configuring a Secure Wi-Fi Network

To set up a Wi-Fi network:

1 Go to **Settings**.

2 Touch **Network & Internet** > **Wi-Fi**.

3 Slide the switch to the **ON** position.

4 The device searches for WLANs in the area and lists them on the screen.

5 Scroll through the list and select the desired WLAN network.

6 Touch the desired network. If the network security is **Open**, the device automatically connects to the network. For all other network security a dialog box appears.

7 If the network security is **WEP** or **WPA/WPS2 PSK**, enter the required password and then touch **Connect**.

8 If the network security is 802.1x EAP:

- Touch the **EAP method** drop-down list and select **PEAP**, **TLS**, **TTLS**, **PWD**, or **LEAP**.
- Touch the **Phase 2 authentication** drop-down list and select an authentication method.
- If required, touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
- If required, touch **User certificate** and select a user certificate. Note: User certificates are installed using the Location & security settings.
- If required, in the **Identity** text box, enter the username credentials.
- If desired, in the **Anonymous identity** text box, enter an anonymous identity username.
- If required, in the **Password** text box, enter the password for then given identity.

By default, the network Proxy is set to **None** and the IP settings is set to **DHCP**. See Configuring for a Proxy Server for setting connection to a proxy server and see Configuring the Device to Use a Static IP Address for setting the device to use a static IP address.

9 Touch **Connect**.

10 Touch the home button (O).

9.5.2 Manually Adding a Wi-Fi Network

Manually add a Wi-Fi network if the network does not broadcast its name (SSID) or to add a Wi-Fi network when out of range.

1 Go to **Settings**.

2 Touch **Network & Internet** > **Wi-Fi**.

3 Slide the Wi-Fi switch to the **On** position.

4 Scroll to the bottom of the list and select **Add network**.

5 In the **Network** name text box, enter the name of the Wi-Fi network.

6 In the **Security** drop-down list, set the type of security to:

- **None**
- **WEP**
- **WPA/WPA2 PSK**
- **802.1x EAP.**

7 If the network security is **None**, touch **Save**.

8 If the network security is **WEP** or **WPA/WPA2 PSK,** enter the required password and then touch **Save**.

9 If the network security is **802.1x EAP**:

- Touch the **EAP method** drop-down list and select **PEAP**, **TLS**, **TTLS**, **PWD**, or **LEAP**.
- Touch the **Phase 2 authentication** drop-down list and select an authentication method.
- If required, touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
- If required, touch **User certificate** and select a user certificate. Note: User certificates are installed using the **Security** settings.
- If required, in the **Identity** text box, enter the username credentials.
- If desired, in the **Anonymous** identity text box, enter an anonymous identity username.
- If required, in the **Password** text box, enter the password for the given identity.

By default, the network Proxy is set to **None** and the IP settings is set to **DHCP**. See Configuring for a Proxy Server for setting connection to a proxy server and see Configuring the Device to Use a Static IP Address for setting the device to use a static IP address.

10 Touch **Save**. To connect to the saved network, touch and hold on the saved network and select **Connect to network**.

11 Touch the home button (O).

9.5.3 Configuring for a Proxy Server

A proxy server is a server that acts as an intermediary for requests from clients seeking resources from other servers. A client connects to the proxy server and requests some service, such as a file, connection, web page, or other resource, available from a different server. The proxy server evaluates the request according to its filtering rules. For example, it may filter traffic by IP address or protocol. If the request is validated by the filter, the proxy provides the resource by connecting to the relevant server and requesting the service on behalf of the client.

It is important for enterprise customers to be able to set up secure computing environments within their companies, making proxy configuration essential. Proxy configuration acts as a security barrier ensuring that the proxy server monitors all traffic between the Internet and the intranet. This is normally an integral part of security enforcement in corporate firewalls within intranets.

To configure the device for a proxy server:

1 Go to **Settings**.

2 Touch **Network & Internet** > **Wi-Fi**.

3 Slide the Wi-Fi switch to the **On** position.

4 In the network dialog box, select and touch a network.

5 Touch **Advanced options**.

6 Touch **Proxy** and select **Manual**.

7 In the **Proxy hostname** text box, enter the address of the proxy server.

8 In the **Proxy port** text box, enter the port number for the proxy server.

9 In the **Bypass proxy for** text box, enter addresses for web sites that are not required to go through the proxy server. Use a comma “,” between addresses. Do not use spaces or carriage returns between addresses.

10 Touch **Connect**.

11 Touch the home button (O).

9.5.4 Configuring the Device to Use a Static IP Address

By default, the device is configured to use Dynamic Host Configuration Protocol (DHCP) to assign an Internet protocol (IP) address when connecting to a wireless network.

To configure the device to connect to a network using a static IP address:

1 Go to **Settings**.

2 Touch **Network & Internet** > **Wi-Fi**.

3 Slide the Wi-Fi switch to the **On** position.

4 In the network dialog box, select and touch a network.

5 Touch **Advanced options**.

6 Touch **IP settings** and select **Static**.

7 In the **IP address** text box, enter an IP address for the device.

8 If required, in the **Gateway** text box, enter a gateway address for the device.

9 If required, in the **Network prefix length** text box, enter the prefix length.

10 If required, in the **DNS 1** text box, enter a Domain Name System (DNS) address.

11 If required, in the **DNS 2** text box, enter a DNS address.

12 Touch **Connect**.

13 Touch the home button (O).

9.5.5 Wi-Fi Preferences

Use the **Wi-Fi preferences** to configure advanced Wi-Fi settings. From the Wi-Fi screen scroll down to the bottom of the screen and touch **Wi-Fi preferences**.

- **Turn on W-Fi automatically** : When enabled, Wi-Fi automatically turns back on when near high quality saved networks.
- **Open network notification** : When enabled, notifies the user when an open network is available.
- **Advanced : Touch to expand options.**
  - **Additional settings** : See Additional Settings.
  - **Install Certificates** – Touch to install certificates.
  - **Network rating provider** : Disabled (AOSP devices). To help determine what constitutes a good Wi-Fi network, Android supports external Network rating providers that provide information about the quality of open Wi-Fi networks. Select one of the providers listed or **None**. If none are available or selected, the Connect to open networks feature is disabled.
  - **Wi-Fi Direct** : Displays a list of devices available for a direct Wi-Fi connection.
  - **MAC address** : Displays the Media Access Control (MAC) address of the device when connecting to Wi-Fi networks.
  - **IP address** : Displays the IP address of the device when connecting to Wi-Fi networks.

9.5.6 Wi-Fi Direct

Wi-Fi Direct devices can connect to each other without having to go through an access point. Wi-Fi Direct devices establish their own ad-hoc network when required, letting you see which devices are available and choose which one you want to connect to.

1 Go to **Settings**.

2 Touch **Wi-Fi** > **Wi-Fi preferences** > **Advanced** > **Wi-Fi Direct**. The device begins searching for another Wi-Fi Direct device.

3 Under **Peer devices**, touch the other device name.

4 On the other device, select **Accept**.

5 **Connected** appears on the device. On both devices, in their respective Wi-Fi Direct screens, the other device name appears in the list.

9.6 Bluetooth

Bluetooth devices can communicate without wires, using frequency-hopping spread spectrum (FHSS) radio frequency (RF) to transmit and receive data in the 2.4 GHz Industry Scientific and Medical (ISM) band (802.15.1). Bluetooth wireless technology is specifically designed for short-range (10 m (32.8 ft)) communication and low power consumption.

Devices with Bluetooth capabilities can exchange information (for example, files, appointments, and tasks) with other Bluetooth enabled devices such as printers, access points, and other mobile devices.

The device supports Bluetooth Low Energy. Bluetooth Low Energy is targeted at applications in the healthcare, fitness, security, and home entertainment industries. It provides reduced power consumption and cost while maintaining standard Bluetooth range.

9.6.1 Adaptive Frequency Hopping

Adaptive Frequency Hopping (AFH) is a method of avoiding fixed frequency interferers, and can be used with Bluetooth voice. All devices in the piconet (Bluetooth network) must be AFH-capable in order for AFH to work. There is no AFH when connecting and discovering devices. Avoid making Bluetooth connections and discoveries during critical 802.11b communications. AFH for Bluetooth consists of four main sections:

- Channel Classification : A method of detecting an interference on a channel-by-channel basis, or pre-defined channel mask.
- Link Management : Coordinates and distributes the AFH information to the rest of the Bluetooth network.
- Hop Sequence Modification : Avoids interference by selectively reducing the number of hopping channels.
- Channel Maintenance : A method for periodically re-evaluating the channels.

When AFH is enabled, the Bluetooth radio “hops around” (instead of through) the 802.11b high-rate channels. AFH coexistence allows enterprise devices to operate in any infrastructure.

The Bluetooth radio in this device operates as a Class 2 device power class. The maximum output power is 2.5 mW and the expected range is 10 m (32.8 ft). A definition of ranges based on power class is difficult to obtain due to power and device differences, and whether in open space or closed office space.

It is not recommended to perform Bluetooth wireless technology inquiry when high rate 802.11b operation is required.

9.6.2 Security

The current Bluetooth specification defines security at the link level. Application-level security is not specified. This allows application developers to define security mechanisms tailored to their specific need. Link-level security occurs between devices, not users, while application-level security can be implemented on a per-user basis. The Bluetooth specification defines security algorithms and procedures required to authenticate devices, and if needed, encrypt the data flowing on the link between the devices. Device authentication is a mandatory feature of Bluetooth while link encryption is optional.

Pairing of Bluetooth devices is accomplished by creating an initialization key used to authenticate the devices and create a link key for them. Entering a common personal identification number (PIN) in the devices being paired generates the initialization key. The PIN is never sent over the air. By default, the Bluetooth stack responds with no key when a key is requested (it is up to user to respond to the key request event).

Authentication of Bluetooth devices is based-upon a challenge-response transaction. Bluetooth allows for a PIN or passkey used to create other 128-bit keys used for security and encryption. The encryption key is derived from the link key used to authenticate the pairing devices. Also worthy of note is the limited range and fast frequency hopping of the Bluetooth radios that makes long-distance eavesdropping difficult.

Recommendations are:

- Perform pairing in a secure environment
- Keep PIN codes private and do not store the PIN codes in the device
- Implement application-level security.

9.6.3 Bluetooth Profiles

The device supports the Bluetooth services listed in the table below:

Profile	Description
Service Discovery Protocol (SDP)	Handles the search for known and specific services as well as general services.
Serial Port Profile (SPP)	Allows use of RFCOMM protocol to emulate serial cable connection between two Bluetooth peer devices. For example, connecting the device to a printer.
Object Push Profile (OPP)	Allows the device to push and pull objects to and from a push server.
Advanced Audio Distribution Profile (A2DP)	Allows the device to stream stereo-quality audio to a wireless headset or wireless stereo speakers.
Audio/Video Remote Control Profile (AVRCP)	Allows the device to control A/V equipment to which a user has access. It may be used in concert with A2DP.
Personal Area Network (PAN)	Allows the use of Bluetooth Network Encapsulation Protocol to provide L3 networking capabilities over a Bluetooth link. Only PANU role is supported.
Human Interface Device Profile (HID)	Allows Bluetooth keyboards, pointing devices, gaming devices and remote monitoring devices to connect to the device.

Profile	Description
Headset Profile (HSP)	Allows a hands-free device, such as a Bluetooth headset, to place and receive calls on the device.
Hands-Free Profile (HFP)	Allows car hands-free kits to communicate with the device in the car.
Phone Book Access Profile (PBAP)	Allows exchange of Phone Book Objects between a car kit and a mobile device to allow the car kit to display the name of the incoming caller; allow the car kit to download the phone book so you can initiate a call from the car display.
Out of Band (OOB)	Allows exchange of information used in the pairing process. Pairing is completed using the Bluetooth radio, but requires information from the OOB mechanism. Using OOB with NFC enables pairing when devices simply get close, rather than requiring a lengthy discovery process.
Symbol Serial Interface (SSI)	Allows for communication with Bluetooth Imager.
Generic Attribute Profile (GATT)	Provides profile discovery and description services for Bluetooth Low Energy protocol. It defines how attributes are grouped together into sets to form services.
Dial Up Networking (DUN)	Provides a standard to access the Internet and other dial-up services over Bluetooth.
Generic Access Profile (GAP)	Use for device discovery and authentication.
OBject EXchange (OBEX)	Facilitates the exchange of binary objects between devices.

9.6.4 Bluetooth Power States

The Bluetooth radio is off by default:

- Suspend : When the device goes into suspend mode, the Bluetooth radio stays on.
- Airplane Mode : When the device is placed in Airplane Mode, the Bluetooth radio turns off. When Airplane mode is disabled, the Bluetooth radio returns to the prior state. When in Airplane Mode, the Bluetooth radio can be turned back on if desired.

9.6.5 Bluetooth Radio Power

Turn off the Bluetooth radio to save power or if entering an area with radio restrictions (for example, an airplane). When the radio is off, other Bluetooth devices cannot see or connect to the device. Turn on the Bluetooth radio to exchange information with other Bluetooth devices (within range). Communicate only with Bluetooth radios in close proximity.

To achieve the best battery life, turn off radios when not in use.

9.6.6 Discovering Bluetooth Device(s)

The device can receive information from discovered devices without pairing. However, once paired, the device and a paired device exchange information automatically when the Bluetooth radio is on.

1 Ensure that Bluetooth is enabled on both devices.

2 Ensure that the Bluetooth device to discover is in discoverable mode.

3 Ensure that the two devices are within 10 meters (32.8 feet) of one another.

4 Swipe down from the Status bar to open the Quick Access panel.

5 Touch and hold **Bluetooth**.

6 Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.

7 Scroll through the list and select a device. The Bluetooth pairing request dialog box appears.

8 Touch **Pair** on both devices.

9 The Bluetooth device is added to the **Paired devices** list and a trusted ("paired") connection is established.

9.6.7 Changing the Bluetooth Name

By default, the device has a generic Bluetooth name that is visible to other devices when connected.

1 Go to **Settings**.

2 Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3 If Bluetooth is not on, move the switch to turn Bluetooth on.

4 Touch **Device name**.

5 Enter a name and touch **RENAME**.

6 Touch the home button (O).

9.6.8 Connecting to a Bluetooth Device

Once paired, connect to a Bluetooth device.

1 Go to **Settings**.

2 Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3 In the list, touch the unconnected Bluetooth device. When connected, **Connected** appears below the device name.

9.6.9 Unpairing a Bluetooth Device

Unpairing a Bluetooth device erases all pairing information.

1 Go to **Settings**.

2 Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3 In the **Paired Devices** list, touch ⚙ next to the device name.

4 Turn on or off a profile to allow the device to use that profile.

5 Touch the home button (○).

9.7 Near Field Communications

NFC/HF RFID is a short-range wireless connectivity technology standard that enables secure transaction between a reader and a contactless smartcard. The technology is based on ISO/IEC 14443 type A and B (proximity) and ISO/IEC 15693 (vicinity)standards, using the HF 13.56 MHz unlicensed band. The device supports the following operating modes:

- Reader mode
- Peer-to-Peer communication
- Card Emulation mode.

Using NFC, the device can:

- Read contactless cards such as contactless tickets, ID cards and ePassport.
- Read and write information to contactless cards such as SmartPosters and tickets, as well as devices with NFC interface such as vending machines.
- Read information from supported medical sensors.
- Pair with supported Bluetooth devices such as printers , ring scanners, and headsets.
- Exchange data with another NFC device.
- Emulate contactless card such as payment, ticket, or SmartPoster.

The device NFC antenna is positioned to read NFC cards from the top of the device while the device is being held.

⚠ if RFID feature is continuously used with high power for long period of time, device temperature may increase,

9.7.1 Reading NFC Cards

To read NFC cards:

1 Launch an NFC enabled application.

2 Move the device close to the NFC card until it detects the card.

3 Hold the card steadily until the transaction is complete (usually indicated by the application).

9.7.2 Sharing Information Using NFC

You can beam content like a web page, contact cards, pictures, YouTube links or location information from your screen to another device by bringing the devices together back to back.

Make sure both devices are unlocked, support NFC, and have both NFC and Android Beam turned on.

1 Open a screen that contains a web page, video, photo or contact.

2 Move the back of the device toward the back of the other device.
When the devices connect, a sound emits, the image on the screen reduces in size, the message **Touch to beam** displays.

3 Touch anywhere on the screen.
The transfer begins.

9.8 Cast

Use **Cast** to mirror the device screen on a Miracast enabled wireless display.

1 Go to **Settings**.

2 Touch **Connected devices** > **Connection preferences** > **Cast**.

3 Touch ⋮ > **Enable wireless display**. The device searches for nearby Miracast devices and lists them.

4 Touch a device to begin casting.

5 Touch the home button (○).

Appendix A Device Specification

Physical Characteristics

Dimensions (W x H x D)	154.4 x 74.8 x 11.65mm
Weight	205g
Display	5.45” HD+ (1440 x 720), TFT-IPS
Imager Window	Corning® Gorilla® Glass
Touchpanel	Capacitive multi-touch / Stylus Glove, Wet
Backlight	LED backlight
Power	User replaceable Battery 3.8V / 4,000mAh BOS™ Power Manager Station
Hot swap	N/A
Expansion Slot	MicroSD 32GB SDHC, up to 128GB SDXC
SAM	Hybrid Slot (1 Micro SD) - supported by Micro SD Card Slot Single SAM(Optional)
Notification	Audible tone; multi-color LEDs; (charging, events indicator) vibration
PTT Hot Key	Supported - available dual-action side scan trigger
Keypad	On-screen keypad and Enterprise keyboard 1 Power Key; Volume Up/Down; dual-action side scan triggers
Voice and Audio	Dual noise-cancelling microphones; High-quality speaker phone; 3.5mm headset jack
Interface	USB Type C Connector (USB 2.0) Docking Connector (Charging) Rear 10-pin Connector
NFC	ISO 14443 Type A and B; F; Felica, and ISO 15693 cards, MiFare
Scanning	1D & 2D Imager Barcode

Appendix A Device Specification

Performance Characteristics

CPU	2.2 GHz Octa Core Processor
Operating System	Android 10; upgradeable to Android 14
Memory	4GB RAM/ 32GB Flash 4GB RAM/ 64GB Flash (Optional)

User Environment Characteristics

Operating Temp	-10°C to 50°C / 14°F to 122°F
Storage Temp	-40°C to +70°C / -40°F to +158°F
Humidity	95% non-condensing
Drop Spec	1.2 m/ 4 ft. drop per MIL-STD 810G
Tumble Spec	300 1.6 ft./0.5 meter tumbles at room temperature. 500 1.6 ft./0.5 meter tumbles at room temperature with protective boot
Sealing	Wifi SKU: IP54 WWAN SKU : IP67
Vibration	4G peak, 5 Hz to 2 kHz, 1 hour duration per axis
Thermal Shock	-40° C to 70° C / -40° F to 158° F rapid transition 10 cycles (1 cycle = 1.25 hours at -40°C and 1.25 hours at 70°C)
Electrostatic Discharge (ESD)	+/-15kVdc air discharge +/-8kVdc direct discharge +/-8kVdc indirect discharge

Communication Options

WLAN Radio	• 802.11 a/b/g/n/ac/mc
WLAN Data Rates	• 5GHz: 802.11 a/n/ac – up to 866.7 Mbps; • 2.4GHz: 802.11 b/g/n – up to 300 Mbps
WPAN Radio	Bluetooth V5.0 BLE, Class 2

Please ask your sales representative for the specifications not listed above or for the future upgradeable specifications.

Appendix B Accessories

Cradles

- 1-slot charging cradle: One charging slot for a handset, one charging slot for a spare battery, one USB port (Type C)

The power adapter, AC power plug and AC power cable require the use of charging cradles.

Batteries/Battery Covers

- Standard battery: 4,000 mAh

Vehicle Accessories

- Vehicle charger
- Vehicle mounting cradle

Scanning Accessories

- RFID sled (Compatible with the following RFID Handheld Readers: RFR900 and RFR901)

Carrying Accessories

- Handstrap
- Shared Holster
- Shoulder Strap

If you want to purchase a handstrap, please ask a sales representative.

Other Accessories

- Stylus pen
- Protective film
- Adapter plug or cord
- Power adapter for direct or Cradle charging
- User manual
- Quick guide

Appendix C Troubleshooting

The battery does not charge properly.

- Ensure that your device and the charging cable are connected and the charging LED is functioning correctly.
- If the battery does not charge completely, it may be dead or defective. Contact our service center. (The warranty period for battery replacement is six months.)

The battery life got shorter.

When you use network data or peripheral device such as wireless LAN or Bluetooth that require more power, your device may use more battery than usual. If it happens for an extended period of time, your battery may be dead. Then replace it with a new battery.

I dropped the device in the water.

Turn off the device. Place the device in a dry place. Let it dry completely for a considerable period of time, and then turn the device back on. If it does not turn back on, contact our service center.

My device gets too hot to touch.

It is normal for the device to warm up while it is receiving a poor signal, performing an intense workload, or charging. It should cool down if you stop using the device for a certain amount of time. If the problem continues, contact the manufacturer. It may result in a burst battery or fire.

It may also occurs, if RFID been used with high Power for longtime

How do I get the repair service?

You can contact your local sales representative or you can send the device via a delivery service to Bluebird's Korean headquarters. When sending the package, make sure you pay for the shipping fee in advance. When the repair is finished, Bluebird will cover the shipping cost.

Appendix D Safety Regulatory

FCC Caution

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.

FCC Part 15.21

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Part 15.105

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

FCC Part 15.27

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

FCC Part 15.407

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Specific Absorption Rate (SAR) information

Specific Absorption Rate (SAR) information: The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. This model (FCC ID: SS4HF550XR) has also been tested against this SAR limited. The highest SAR value reported under this standard during product certification for use at the 1.165W/kg@1g (10 mm Separation Distance), head is 1.369 W/kg@1g.

ISED Compliance Information

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
1) L'appareil ne doit pas produire de brouillage;
2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device for operation in the band 5150–5350 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems

les dispositifs fonctionnant dans la bande de 5 150 - 5 350 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux

The device shall automatically discontinue transmission in cases of absence of information to transmit, or operational failure. Then it will scan the available radio signals. If this signal is connected before, it will be automatically connected, otherwise manual connections will be necessary.

Le dispositif doit interrompre automatiquement l'émission en cas d'absence d'information à transmettre ou en cas de panne. Ensuite, il va scanner les signaux radio disponibles. Si ce signal est connecté auparavant, il sera automatiquement connecté, sinon des connexions manuelles seront nécessaires.

Specific Absorption Rate (SAR) information: The SAR limit of Canada (ISED) is 1.6 W/kg averaged over one gram of tissue. This model HF550X (IC: 22515-HF550XR) has also been tested against this SAR limited. The highest SAR value reported under this standard during product certification for use at the 1.165 W/kg@1g (10 mm Separation Distance), head is 1.369 W/kg@1g.

Appendix D Safety Regulatory

EU/UK Caution

5G / Wi-Fi Restrictions

!	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU
	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	NO	IS	LI	CH	TR	

Maximum Power of RF

This Enterprise Key-Based Touch Mobile Computer offers the following frequency bands in EU areas only and with the following maximum radio-frequency power:

- Wi-Fi 2.4GHz: < 20 dBm
- Wi-Fi Band 1/2/3: < 20 dBm
- Wi-Fi Band 4: < 14 dBm (Receiver Category 2)
- Bluetooth V5.1: < 10 dBm
- NFC 13.56MHz: < 42 dBμV/m at 10m Distance

SAR

The body SAR limit of EU/UK is 2 W/kg@10g averaged over one gram of tissue. This model HF550X has also been tested against this SAR limited. The highest SAR value reported under this standard during product certification for use at the body is 0.490 W/kg@10g (5 mm Separation Distance), head is 0.144 W/kg@10g and limbs is 0.604 W/kg@10g

Hearing Damage

High sound pressure

Hearing damage risk

Do not listen at high volume levels for long periods.

Rechargeable Batteries

CAUTION

Risk of explosion if battery is replaced by an incorrect type, Dispose of used batteries according to the instructions

SIMPLIFIED EU DECLARATION OF CONFORMITY

The simplified EU declaration of conformity referred to in Article 10(9) shall be provided as follows: Hereby, Bluebird Inc. declares that the radio equipment type Enterprise Key-Based Touch Mobile Computer is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address: https://www.bluebirdcorp.com/

Appendix E Warranty and Support

Customer support

Before asking for after-sales service, please back up the data on the device. We do not back up data from the products sent to the Customer Service Center. Therefore, we assume no responsibility for loss/deletion of data.

Customer Service Center

#1103, Gplus Kolon Digital Tower 11F,
Digital-ro 26-gil 123, Guro-gu, Seoul,
Republic of Korea(08390)

- Fax: +82-2-6499-2242
- Email: rma@bluebirdcorp.com
- Hours: 9:30 a.m. - 6:30 p.m. (GMT Time: +9 Hours)

The center is closed on Saturdays, Sundays, and Korean national holidays

Registering for After-Sales Service

- We receive the products for our after-sales service through mail, delivery services and hand delivery only in principle.
- If you bought the product from a party other than Bluebird or an authorized Bluebird reseller, you need to register the product before using our after-sales service.
- Please enclose an evidence of purchase or the product receipt for our after-sales service.
- Please enclose your name, telephone number, address and details of the problem for a prompt service.
- You can ask for our after-sales service by contacting your authorized Bluebird dealer or the Customer Service Center in the head office.
- Do not intentionally damage the label on the product.
- A damaged label may result in a disadvantage to the customer.
- When you return the product to Bluebird for service, please put the product in a protective box.
- The warranty will not cover any damage which occurs during delivery. We advise you to use the box and protective cover supplied with the product.
- Make sure to deliver the product in a safe way. Bluebird assumes no responsibility for the loss of the product during delivery.

Charged services

- In the following cases, it will be charged when requesting for after-sales service.
  - Service request due to inappropriate use of the device by the customer
  - Loss of PIN number
  - Use of programs that might affect the program (over-clock, forceful changes in the input of the system, personal developments)
- Faults caused by the customer.
  - Defect due to inappropriate or careless use of the product (dropping, submersion under water, shock, damage, unreasonable operations, etc.)
  - Defect due to a repair or unauthorized technician
  - Defect caused intentionally or by the carelessness of the customer
  - Defect due to the use of fraudulent parts or components
- Other cases
  - Defect due to nature (damage caused by fire, wind, flooding, etc.)
  - Accessories are out of warranty (accessories like battery/charger/cable/adapter, etc. have a warranty of 6 months)
- Regulations for repairs after charged services
  - If the same fault occurs in the part that has been repaired within a 1 month (30 days), the part will be repaired free of charge.

No refunds will be offered in the following situations:

- The product seal has been removed (if applicable).
- The product has been damaged due to careless use by the customer or due to a natural disaster (floods, rain, fire, etc.).
- Loss of product or other components (manual, connecting cables, etc).
- DOA (Dead on Arrival) policy
  If your product is DOA (Dead on Arrival), or has malfunction within 30 days of purchase (DOA period), the product will either be exchanged or provided with after-sales service.

Appendix E Warranty and Support

Warranty certificate

Thank you for purchasing a product from Bluebird Inc.

- In case of accessories such as batteries, only those that match the sales list managed by the Customer Service Center will be eligible for customer service.
- A repair or an exchange of batteries that does not match the sales list of the Customer Service Center due to the carelessness of the customer will be fully charged.

Name of Product	Hybrid Full Touch Handheld Computer
Name of Model	HF550X
Date of Purchase	
Manufacture Number	
Place of Purchase	
Term of Guarantee	1 year from purchase

Warranty information

- Bluebird Inc. (hereinafter referred to as Bluebird) provides the warranty service for its products in compliance with the Bluebird's warranty program.
- Upon receiving a notification on a defect of its product within the range of warranty during the warranty period, Bluebird will repair or replace the defective product according to its warranty policy.
- If the defective product within the range of warranty is not repairable or replaceable, Bluebird shall refund the purchasing price within a designated period from the date of receiving a notice of defect.
- Bluebird assumes no responsibility for repairing, replacement or refund until it receives the defective product from the customer. The replacement shall be equivalent to a new product in the aspect of performance.
- Bluebird products may contain the recycled products, components or materials equivalent to new products in the aspect of performance.
- This warranty is applied to software products only when the programming commands are not executed. Bluebird does not guarantee interruption-free or error-free performance.

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  - If the same fault occurs in the part that has been repaired within a 1 month (30 days), the part will be repaired free of charge.

No refunds will be offered in the following situations:

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- Loss of product or other components (manual, connecting cables, etc).
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- This warranty is applied to software products only when the programming commands are not executed. Bluebird does not guarantee interruption-free or error-free performance.

BLUEBIRD CUSTOMER SERVICE

Operating Hours

Monday to Friday 9:30 A.M. - 6:30 P.M.
(GMT Time: +9 Hours)
The center is closed on Saturdays,
Sundays, and Korean national holidays.

Customers Service Center

#1103, Gplus Kolon Digital Tower 11F,
Digital-ro 26-gil 123, Guro-gu, Seoul,
Republic of Korea(08390)

Bluebird constantly strives to bring utmost satisfaction to all our customers.