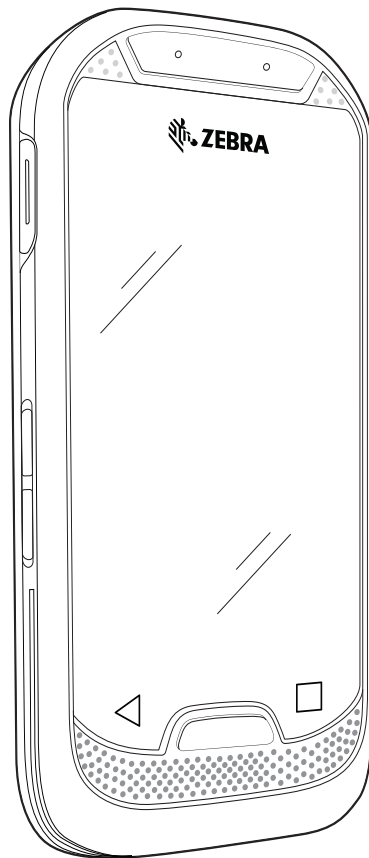


# EC30

## Enterprise Companion



## User Guide for Android™ 8.1.0 Oreo



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## Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	7/2019	Initial release.
-02 Rev A	11/2019	Added information to Troubleshooting.

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# About This Guide

## Introduction

This guide provides information about using the EC30 enterprise companion and accessories.



**NOTE:** Screens and windows pictured in this guide are samples and can differ from actual screens.

## Documentation Set

The documentation set provides information for specific user needs, and includes:

- EC30 Enterprise Companion Quick Start Guide - describes how to get the device up and running.
- EC30 Enterprise Companion User Guide for Android 8.1 Oreo - describes how to use the device.
- EC30 Enterprise Companion Integrator Guide for Android 8.1 Oreo - describes how to set up the device and accessories.


## Configurations

This guide covers the following configuration:

Configuration	Radios	Display	Memory	Data Capture Options	Operating System
EC30	WLAN: 802.11 a/b/g/n/ac/d/h /i/k/r/w WPAN: Bluetooth v5.0 Low Energy	3.0" Full Wide Video Graphics Array (854 x 480)	4 GB RAM / 32 GB Flash	2D imager (SE-2100)	Android-based, Google™ Mobile Services (GMS) 8.1. Android-based AOSP 8.1.

## Software Versions

To determine the current software versions:

1. Swipe down from the Status bar to open the Quick Settings bar.
2. Touch  > **System**.

3. Touch **About phone**.
4. Scroll to view the following information:
  - **Model**
  - **Android version**
  - **Android security patch version**
  - **Kernel version**
  - **Build number**.

To determine the device serial number, touch **About phone > Status**.

- **Serial number**

## Chapter Descriptions

Topics covered in this guide are as follows:

- [Getting Started](#) provides information on getting the device up and running for the first time.
- [Using the Device](#) provides information for operating the device.
- [Applications](#) provides information on using applications installed on the device.
- [Data Capture](#) provides information for capturing bar code data using the imager.
- [Wireless](#) provides information on the various wireless options.
- [Accessories](#) provides information for using the accessories for the device.
- [Maintenance and Troubleshooting](#) includes instructions on cleaning and provides troubleshooting solutions for potential problems during device operation.

## Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

## Related Documents

- EC30 Enterprise Companion Quick Start Guide, p/n MN-003607-xx.
- EC30 Enterprise Companion Regulatory Guide, p/n MN-003604-xx.

- EC30 Enterprise Companion Accessory Regulatory Guide, p/n MN-003609-xx.
- EC30 Enterprise Companion Integrator Guide for Android 8.1 Oreo, p/n MN-003654-xx.
- RS507 Hands-free Imager Product Reference Guide, p/n 72E-12082-xx.
- DS36X8 Product Reference Guide, p/n MN-002689-xx.
- RS6000 User Guide, MN-002704-xx.

For the latest version of this guide and all guides, go to: [zebra.com/support](http://zebra.com/support).

## Service Information

If you have a problem with your equipment, contact Customer Support for your region. Contact information is available at: [www.zebra.com/support](http://www.zebra.com/support).

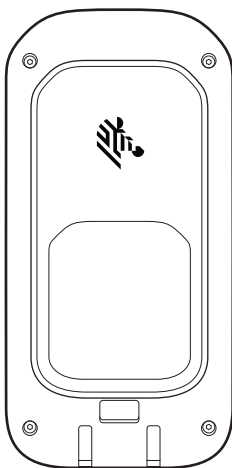
When contacting support, please have the following information available:

- Serial number of the unit (found on manufacturing label)
- Model number or product name (found on manufacturing label)
- Software type and version number.

Customer Support responds to calls by email or telephone within the time limits set forth in support agreements.

If the problem cannot be solved by Customer Support, you may need to return the equipment for servicing and will be given specific directions. We are not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If the device was purchased from a business partner, contact that business partner for support.



# Getting Started

## Introduction

This chapter provides information for getting the device up and running for the first time.

## Unpacking

1. Carefully remove all protective material from the device and save the shipping container for later storage and shipping.
2. Verify that the following were received:
  - Enterprise Companion
  - Regulatory Guide.
3. Inspect the equipment for damage. If any equipment is missing or damaged, contact the Global Customer Support center immediately.
4. Prior to using the device for the first time, remove the protective shipping film that covers the scan window and display.

## Features

Figure 1 Front View

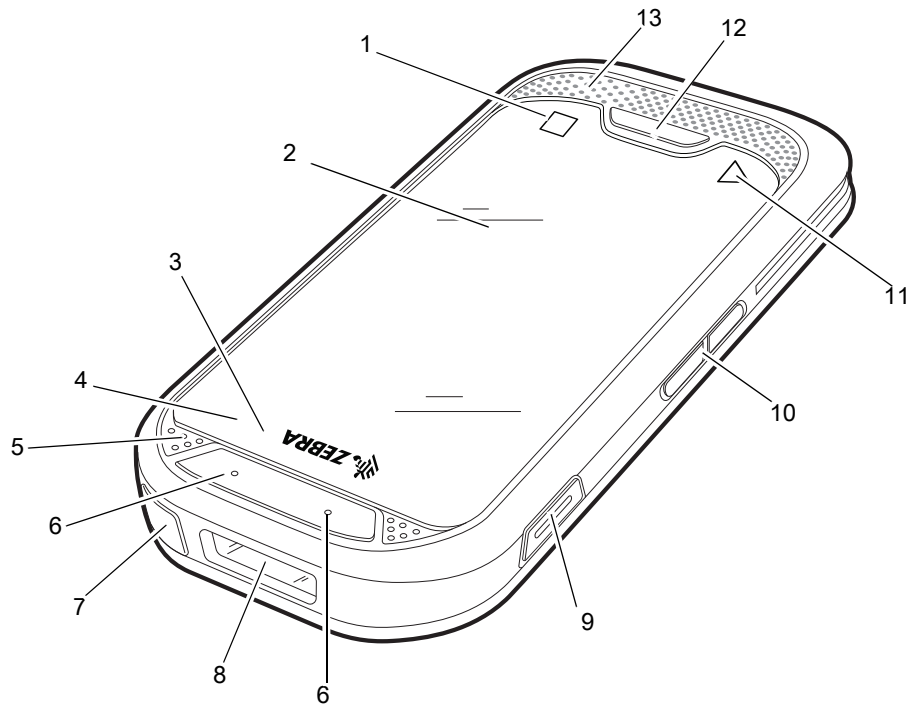


Table 1 Front View Features

Number	Item	Function
1	Recent	Displays recently used applications (programmable).
2	Touch Screen	Displays all information needed to operate the device.
3	Data Capture LED	Indicates data capture status.
4	Charging/Notification LED	Indicates battery charging status while charging and application generated notifications.
5	Microphone	Use for communications in Speakerphone mode.
6	Scan Button	Initiates data capture (programmable).
7	Power Button	Turns the display on and off. Press and hold to reset the device or power off.
8	Exit Window	Provides data capture using the imager.
9	PTT Button	Initiates push-to-talk communications (programmable).
10	Volume Up/Down Button	Increase and decrease audio volume (programmable).
11	Back	Displays the previous screen (programmable).
12	Home Button	Displays the Home screen (programmable).
13	Speaker	Provides audio output for video and music playback. Provides audio in speakerphone mode.

Figure 2 Rear View

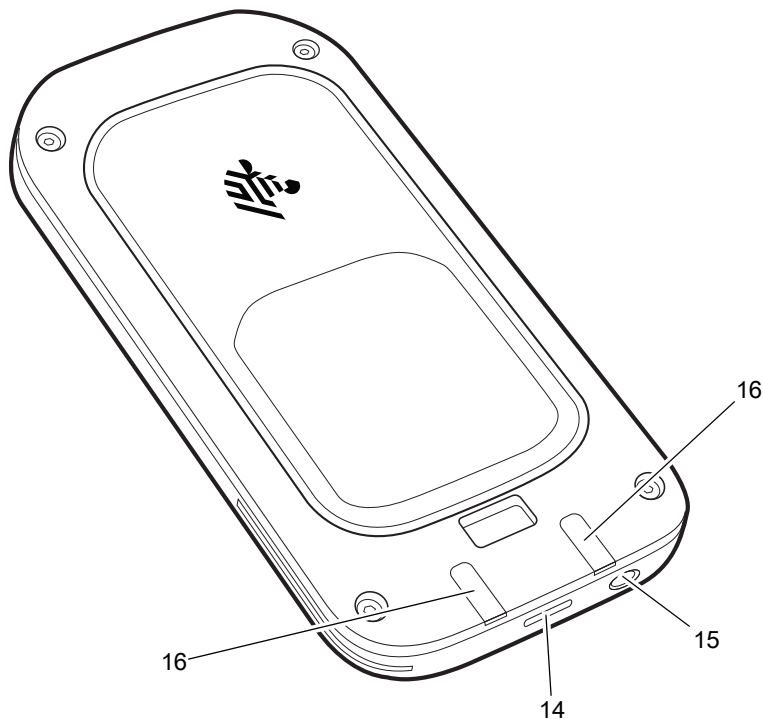


Table 2 Back View Features

Number	Item	Function
14	USB-C Connector	Provides USB host and client communications, device charging via cables and accessories.
15	3.5 mm Headset Jack	For audio output to headset (CTIA standard).
16	Cradle Charging Contacts	Provides device charging via cradles and accessories.

## Setup

To start using the device for the first time charge the device to at least 30% capacity.



**NOTE:** When the device is shipped from the factory, it is placed into Ship Mode, where the device enters its lowest possible power state. The device exits Ship Mode when you dock it in a powered cradle or attach it to a powered USB cable.

## Charging the Device



**IMPORTANT:** Do not store the device for extended periods of time as the battery may drain completely and become unrecoverable.

Use one of the following accessories to charge the EC30.

Table 3 Charging Accessories

Description	Part Number
<b>Cradles</b>	
2-Slot Charge Only Cradle	CRD-EC30-2SCHG1-01
10-Slot Charge Only Cradle	CRD-EC30-10SC1-01
10-Slot Charge Only Locking Cradle	CRD-EC30-10SLC1-01
<b>Charge and Communication Cables</b>	
USB-C Charging Cable 1.5 m (4.92 ft)	CBL-TC2X-USBC-01
USB-C Charging Cable 1 m (3.28 ft)	CBL-TC5X-USBC2A-01



**NOTE:** Ensure that you follow the guidelines for battery safety described in the EC30 Integrator Guide.

To charge the battery:

1. Connect the charging accessory to the appropriate power source.
2. Insert the device into a cradle or attach to a cable. The device turns on and begins charging. The Charging/Notification LED blinks amber while charging, then turns solid green when fully charged.

## Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or accessory always performs battery charging in a safe and intelligent manner. At higher temperatures (for example, approximately +37°C (+98°F)) the device or accessory may for small periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device or accessory indicates when charging is disabled due to abnormal temperatures via its LED and a notification appears on the display.

## Charging Indicators

Table 4 Charging LED Status Indicators

State	Indication
Off	Device is not charging. Device is not inserted correctly in the cradle or connected to a power source. Charger/cradle is not powered.
Slow Blinking Amber (1 blink every 4 seconds)	Device is charging.
Slow Blinking Red (1 blink every 4 seconds)	Device is charging but the battery is at end of useful life.
Solid Green	Charging complete.
Solid Red	Charging complete but the battery is at end of useful life.
Fast Blinking Amber (2 blinks/second)	Charging error, for example: <ul style="list-style-type: none"> <li>• Temperature is too low or too high.</li> <li>• Charging has gone on too long without completion (typically eight hours).</li> </ul>
Fast Blinking Red (2 blinks/second)	Charging error but the battery is at end of useful lif, for example: <ul style="list-style-type: none"> <li>• Temperature is too low or too high.</li> <li>• Charging has gone on too long without completion (typically eight hours).</li> </ul>

## Google Account Setup



**NOTE:** 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.

## Zebra Visibility Services

The device captures and provides device analytics to a system administrator. The first time the device boots (or after a Factory reset), the **Zebra Services** agreement screen displays.





Figure 3 Zebra Services



1. Touch the **Device Data** switch to disable the device from sending analytics data.
2. Touch **OK**.

## 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 .

## Battery Management



**NOTE:** Prior to checking the battery charge level, remove the device from any AC power source (cradle or cable).


To check the charge status of the main battery, open Settings and touch **System > About phone > Battery Information**.

**Battery present status** indicates that the battery is present and **Battery level** lists the battery charge (as a percentage of fully charged). The battery percentage can also be viewed next to the battery icon in the quick access panel. Swipe down with two fingers from the status bar to open the quick access panel.

## Monitoring Battery Usage

The **Battery** screen provides battery charge details, power management options, and a list of apps that consume the most battery power.

Use the power management options to extend battery life, or touch an app to display details about its power consumption. Different apps display different information. Some apps include buttons that open screens with settings to adjust power use. Use the **DISABLE** or **FORCE STOP** buttons to turn off apps that consume too much power.

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

### 2. Touch **Battery**.

Figure 4 Battery Screen



## 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.

Figure 5 Low Battery Notification



## Battery Optimization

Observe the following battery saving tips:


- Set the screen to turn off after a short period of non-use (recommended: 15 seconds).
- Reduce screen brightness (recommended: 30-50%).
- 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**.

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

## Display Settings

Use Display settings to change the screen brightness, enable night light, change the background image, enable screen rotation, set sleep time, and change font size.

### Setting the Screen Brightness



**NOTE:** For optimal battery life, recommended screen brightness is 30 percent.

To manually set the screen brightness using the touchscreen:

1. Swipe down with two fingers from the Status bar to open the Quick Access panel.
2. Slide the icon to adjust the screen brightness level.


Figure 6 Brightness Slider



### Setting Screen Rotation

By default, screen rotation is enabled.

To disable screen rotation:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Display > Advanced**.
3. Touch **Auto-rotate screen**.



**NOTE:** To change the Home screen rotation, see Setting Home Screen Rotation.

4. Touch the Home button.

### 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 **Allow Home screen rotation**.
4. Touch the Home button.
5. Rotate the device.

Figure 7 Rotated Home Screen




### Setting Screen Timeout



**NOTE:** For optimal battery life, the recommended screen timeout is 15 seconds.

To set the screen sleep time:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Display > Sleep**.

3. Select one of the sleep values.
  - **15 seconds** (default)
  - **30 seconds**
  - **1 minute**
  - **2 minutes**
  - **5 minutes**
  - **10 minutes**
  - **30 minutes**
4. Touch the Home button.

## Setting Font Size

To set the size of the font in system apps:


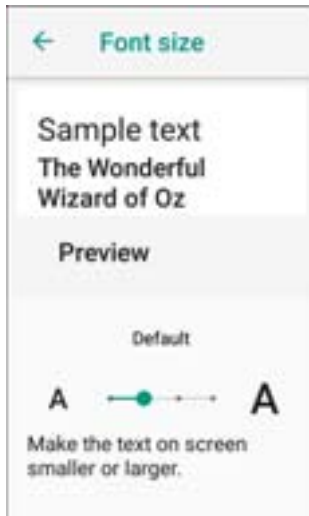
1. Swipe down from the Status bar to open the Quick Settings panel and then touch .
2. Touch **Display > Advanced**.
3. Touch **Font size**.

Figure 8 Font Settings




4. Select one of the font size values.
  - Small
  - Default
  - Large
  - Largest.
5. Touch the Home button.

## Setting Display Size


By default, display size is set to default.

To change the display size:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Display > Advanced**.
3. Touch **Display size**.
4. Touch - and + to change the display size.
  - Small
  - Default
  - Large.
5. Touch the Home button.

## Setting Notification LED


The Charging/Notification LED lights blue when an application, such as 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. Swipe down with from the Status bar to open the Quick Access panel and then touch .
2. Touch **Apps & notifications > Notifications**.
3. Touch **Blink light** to toggle the notification on or off.
4. Touch the Home button.

## General Sound Setting

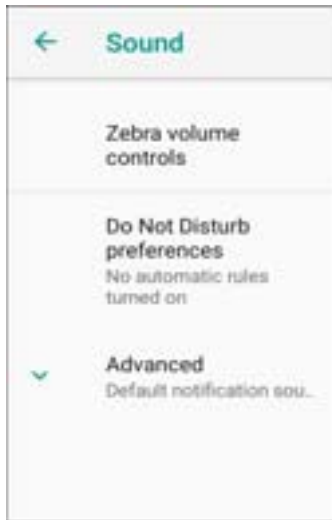
Use the **Sound** settings to configure media and alarm volumes.



To access sound settings:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Sound**.

3. Touch an option to set sounds.

Figure 9 Sound Screen



- **Zebra volume controls**
  - **Ring volume** - Controls the ringtone volume.
  - **Media volume** - Controls the music, games, and media volume.
  - **Alarm volume** - Controls the alarm clock volume.
  - **Notifications volume** - Controls the notification volume.
  - **Scanner volume** - Controls the scanner volume.
  - **Volume presets**
    -  - Mutes the ring, notifications, and scanner so that the device does not make sounds.
    -  - Enables all sounds at the user defined levels.
- **Do Not Disturb preferences** - Mutes some or all sounds.
  - **Priority only allows** - Use to set the priorities for the following:
    - **Reminders** - Switch on or off.
    - **Events** - Switch on or off.
    - **Alarms** - This is always enabled.
    - **Messages** - not applicable.
    - **Repeat callers** - not applicable.
  - **Block visual disturbances**
    - **Block when screen is on** - This option prevents notifications from displaying over the screen (peeking) while you are actively using the device.
    - **Block when screen is off** - This option prevents notifications from turning on the screen or pulsing the LED light when a new notification is received while you are not using the device.
  - **Automatic rules** - Choose when to automatically silence the device. Touch a default rule, such as Weekend or Weeknight, or create your own rule. To create your own rule, tap **Add more** and then **Time rule**.

- **Advanced** - Touch to display advanced sound options.
  - **Default notification sound** - Touch to select a sound to play for all system notifications.
  - **Default alarm sound** - Touch to select a sound to play for alarms.
  - **Other sounds and vibrations**
    - **Screen locking sounds** - Play a sound when locking and unlocking the screen (default – enabled).
    - **Charging sounds** - Not applicable.
    - **Touch sounds** - Play a sound when making screen selections (default – enabled).

## Wake-Up Sources

By default, the device wakes from suspend mode when the user presses the power button. The device can be configured to wake when the user presses the Home button, PTT button, or the Scan button.

1. Swipe up from the bottom of the Home screen and touch **Settings > Wake-Up Sources**.
2. Touch a checkbox. A check appears in the checkbox.
3. Touch the Home button.



# Using the Device

## 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.

## 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. For screen locking information see [Un-Locking the Screen on page 42](#).

Figure 10 Home Screen



Table 5 Home Screen Items

Item	Description
1 - Status Bar	Displays the time, status icons (right side), and notification icons (left side). For more information see <a href="#">Status Bar on page 26</a> and <a href="#">Managing Notifications on page 28</a> .
2 - Widgets	Launches stand-alone applications that run on the Home screen. See <a href="#">App Shortcuts and Widgets on page 31</a> for more information.
3 - Shortcut Icons	Opens applications installed on the device. See <a href="#">App Shortcuts and Widgets on page 31</a> for more information.

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.

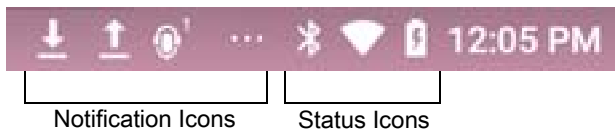
## Status Bar

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



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

Figure 11 Notification and Status Icons








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

## Status Icons

Table 6 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.
	Main battery is charging.
	Do Not Disturb mode active.

*Table 6 Status Icons (Continued)*

Icon	Description
	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.

## Notification Icons

*Table 7 Notification Icons*

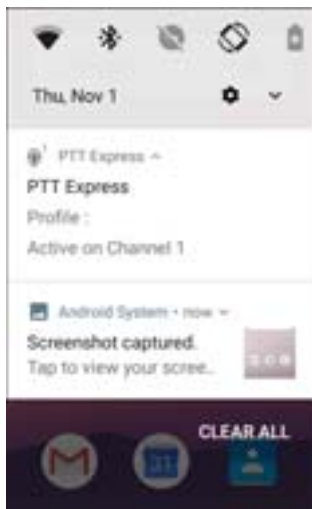
Icon	Description
	Main battery is low.
	More notifications are available for viewing.
	Data is syncing.
	Indicates an upcoming event. GMS devices only.
	Open Wi-Fi network is available.
	Song is playing.
	Problem with sign-in or sync has occurred.
	Device is uploading data.
	Device is downloading data when animated and download is complete when static.
	Device is connected 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.
	PTT Express Voice client status. See the PTT Express PTT Notification Icons for a complete list.
	Indicates that RxLogger app is running.
	Indicates the Bluetooth scanner is connected to the device.
	Indicates the RS507/RS507X or RS6000 is connected to the device in HID mode.

## 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.

Figure 12 Notification Panel




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

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.

## Setting App Notifications

To set notification settings for a specific app:


1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Apps & notifications > Notifications > App notifications**.
3. Select an app.
4. Select an available option:
  - **On / Off** - Select to turn all notifications from this app **On** (default) or **Off**.
  - **Allow notification dot** - Do not allow this app to add a notification dot to the app icon.
  - **Allow interruptions** - Do not allow notifications from this app to make sound or pop notifications on the screen.
  - **Override Do Not Disturb** - Allow these notifications to interrupt when Do Not Disturb is set to Priority Only.
  - **Categories** - Do not allow specific types of notifications from this app.
  - **Additional settings in the app** - Open the app settings.



**NOTE:** To change the notification settings for an app, slide the notification slightly left or right and touch .


### Viewing Notification Settings for All Apps

To view the notification settings for all apps:

1. Swipe down 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.

### Controlling Lock Screen Notifications

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

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Apps & notifications > Notifications**.
3. Touch **On the lock screen** and select one of the following:
  - **Show all notification content** (default)
  - **Don't show notifications at all**.

### Quick Access Panel

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

Figure 13 Quick Settings Bar



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 Quick Settings bar is open, touch the Down arrow.

Figure 14 Quick Access Panel



**NOTE:** 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.
- Location - Enable or disable locationing feature.
- 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.
- Nearby - Helps find and interact with services and devices close to the device.
- 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.

### Editing Icons on Quick Settings



The first several setting tiles from the Quick Access panel become the Quick Settings bar.

To move a setting tile:



1. Open the Quick Access panel.
2. Touch .
3. Touch and drag a setting tile to another location.

4. Release the tile.
5. Touch  to save tiles and return to the Quick Access panel.

To add a setting tile:

1. Open the Quick Access panel.
2. Touch .
3. Slide the Quick Settings panel up to reveal additional tiles.
4. Touch and drag a setting tile from the **Drag to add tiles** area to the main area.
5. Release the tile.
6. Touch  to save tiles and return to Quick Access panel.

To remove a setting tile:

1. Open the Quick Access panel.
2. Touch .
3. Touch and drag a setting tile to the **Drag here to remove** area.
4. Release the tile.
5. Touch  to save tiles and return to Quick Access panel.

## 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.

### 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.

### 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.

### 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.

### 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.

## Folders

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

### 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.

### Naming Folders


To name a folder:

1. Touch the folder.

Figure 15 Open 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.

### 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**.

## 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.
- Swipe - Move finger up and down or left and right on the screen to:
  - Unlock the screen.
  - View additional Home screens.
  - View additional app icons in the Launcher window.
  - View more information on an app's screen.
- Double-tap - Tap twice on a web page, map, or other screen to zoom in and out.
- Pinch - In some apps, zoom in and out by placing two fingers on the screen and pinching them together (to zoom out) or spreading them apart (to zoom in).

## Keyboards

The device supports the following types of keyboards:

- Android Keyboard - Non-GMS devices only.
- Gboard - GMS devices only.
- Enterprise Keyboard - Not pre-installed on the device. Contact Zebra Support for more information.




**NOTE:** By default the Gboard is enabled. All other virtual keyboards are disabled.

## Keyboard Configuration

### Enabling Keyboards

To enable keyboards:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
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 keyboard, touch and hold .

## Do Not Disturb Feature

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

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.

### Limit Sounds

Mute the device completely, or let through the important alarms or important calls.

### Total Silence

To completely mute the device so that it does not make a sound, choose **Total silence**.


In Total silence mode:

- Alarms do not make noise.
- Device does not make sounds when receiving a message, or notification.
- Sounds from music, videos, games, and other media are muted.



**NOTE:** All alarms are silenced in Total silence mode.

1. Swipe down with two fingers from the Status bar to open the Quick Access panel.
2. Touch **Do not disturb > Total silence**.
3. Choose **Until you turn it off** or select a time period.
4. Touch **Done**.


When Total Silence is on,  appears in the quick access panel and the Status bar.

To turn off Total Silence, open quick access panel and touch **Total silence**.

### Alarms Only

To mute the device so that you hear alarms, choose **Alarms only**. This option does not mute sounds from music, videos, games, or other media.

1. Swipe down with two fingers from the status bar to open the quick access panel.
2. Touch **Do not disturb > Alarms only**.
3. Choose **Until you turn it off** or select a time period.
4. Touch **Done**.

When Alarms Only is on,  appears in the quick access panel and the Status Bar.

To turn off Alarms Only, open the Quick Access panel and touch **Alarms only**.




**NOTE:** To quickly turn on Alarms Only, with the screen on, press and hold the Volume Down button until the volume is all the way down. Then, press Volume Down again to turn on Alarms Only.

To turn off Alarms Only, press either the Volume Up or Volume Down button and the touch **END NOW** in the alert message.

### Priority Notifications Only

To only be interrupted by important notifications, choose **Priority only**. This option does not mute sounds from music, videos, games, or other media.


Before turning on Priority Only mode, set the notification priorities:

1. Swipe down from the status bar to open the quick settings bar and then touch .
2. Touch **Sound > Do not disturb > Priority only allows**.
3. Set priorities.
  - **Alarms:** Disabled by default.
  - **Reminders** and **Events:** Switch on or off.
  - **Messages** and **Calls:** Choose **From anyone**, **From contacts only**, **From starred contacts only**, or **none**. To star contacts, use the **Contacts** applications.
  - **Repeat callers:** Choose whether to let the device ring if the same person calls again within 15 minutes.

After setting notification priorities, turn on Priority Only mode to limit interruptions. The priority notifications make a sound based on the current ringer volume, but other notifications will be silenced.

1. Swipe down with two fingers from the status bar to open the quick access panel.

2. Touch **Do not disturb > Priority only**.
3. Choose **Until you turn it off** or select a time period.
4. Tap **Done**.

When Priority Only is on,  appears in the quick access panel and the Status Bar.


To turn off Priority Only, open quick access panel and touch **Priority only**.

### Automatically Block Sounds

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


### Silence Sounds During Certain Times

To automatically silence the device during certain times, like at night or on weekends:



1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Sound > Do Not Disturb preferences**.
3. Touch a default **Weekend** or **Weeknight**. Or, to make a new rule, touch **Add more > Time rule**.
4. Enter a rule name.
5. Touch **OK**.
6. Edit the new rule:
  - **Rule name** - Rename the rule.
  - **Days, Start time, and End time** - Set the rule's schedule.
  - **Do Not Disturb preferences** - Choose whether the rule uses **Alarms only**, **Priority only**, or **Total silence**.
  - **Alarm can override end time** - Allow the alarm to continue to make sound until the next alarm begins.
7. Touch the On/Off switch at the top to turn on the rule.

### Silence Sounds During Events and Meetings

To automatically silence the device during events or meetings, set an event rules.

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Sound > Do Not Disturb preferences**.
3. To edit the default rule, touch **Event**. Or, to create a new rule, touch **Add rule > Event rule**.
4. Edit the rule settings.
  - **Rule name** - Rename the rule.
  - **During events for** - Select which Google Calendar events the rule uses.
  - **Where reply is** - Set to: **Yes**, **Maybe**, or **Not replied**, **Yes or Maybe**, or **Yes**.
  - **Do Not Disturb preferences** - Choose whether the rule uses **Priority only**, **Alarms only**, or **Total silence**.
5. Touch the On/Off switch at the top to turn on the rule.

## Turn Sounds Back On


When the device is in Do Not Disturb mode, Alarms only or Priority only display as , or Total silence displays as .

To turn off Do Not Disturb, either:

- In the Quick Access panel, touch **Alarms only**, **Priority only**, or **Total silence**.
- Press the Volume Down button and touch **End Now**.

## 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 **Override Do Not Disturb**.

## Apps

The **APPS** screen displays icons for all installed apps. The table below lists the apps installed on the device. Refer to the device Integrator Guide for Android Version 8.1 for information on installing and uninstalling apps.

Table 8 Apps







Icon	Description
	<b>Battery Manager</b> - Displays battery information, including charge level, status, health and wear level.
	<b>Bluetooth Pairing Utility</b> – Use to pair Zebra Bluetooth scanner with the device by scanning a barcode.
	<b>Calculator</b> - Provides the basic and scientific arithmetic functions.
	<b>Calendar</b> - Use to manage events and appointments. GMS/GMS-Restricted only.
	<b>Calendar</b> - Use to manage events and appointments. Non-GMS devices only.
	<b>Chrome</b> - Use to access the Internet or intranet. GMS/GMS-Restricted only

Table 8 Apps (Continued)







Icon	Description
	<b>Chromium</b> - Use to access the Internet or intranet. Non-GMS devices only.
	<b>Clock</b> - Use to schedule alarms for appointments or as a wake-up.
	<b>Contacts</b> - Use to manage contact information. See Contacts for more information.
	<b>Cradle Demo</b> - Provides a way to demonstrate features of the locking cradle.
	<b>DataWedge</b> - Enables data capture using the imager.
	<b>Device Central</b> - Use to display detailed information about the device and connected peripherals. See Device Central for more information.
	<b>Diagnostic Tool</b> - Use to diagnose the device.
	<b>Display Size</b> - Use to adjust the display and font size.
	<b>Drive</b> - Upload photos, videos, documents, and other files to personal storage site. GMS/GMS-Restricted only.
	<b>DWDemo</b> - Provides a way to demonstrate the data capture features using the imager. See DataWedge Demonstration for more information.
	<b>Email</b> - Use to send and receive email. Non-GMS devices only.
	<b>Files</b> - Organize and manage files on the device. See Files for more information.
	<b>Gallery</b> - Use to view photos stored on the . For more information, see Gallery for more information. Non-GMS devices only.
	<b>Gmail</b> - Use to send and receive email using a Google email account. GMS/GMS-Restricted only

Table 8 Apps (Continued)























Icon	Description
	<b>Google</b> - Launches Google <sup>TM</sup> search app. GMS/GMS-Restricted only
	<b>Keep Notes</b> - Use to create, edit, and share notes. GMS/GMS-Restricted only.
	<b>License Manager</b> - Use to manage software licenses on the device.
	<b>Maps</b> - 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.
	<b>Music</b> - Play music stored on the . Non-GMS devices only.
	<b>Notes</b> - Use to take and save notes. Non-GMS devices only
	<b>Phone</b> - Use to dial a phone number when used with some Voice over IP (VoIP) clients (VoIP telephony ready only).
	<b>Photos</b> - Use to sync photos with Google account. For more information, see Photo Settings. GMS/GMS-Restricted only.
	<b>Play Movies &amp; TV</b> - View movies and video on your device. GMS/GMS-Restricted only.
	<b>Play Music</b> - Use to listen to music. GMS/GMS-Restricted only.
	<b>Play Store</b> - Download music, movies, books, and Android apps and games from the Google Play Store. GMS/GMS-Restricted only.
	<b>PTT Express</b> - Use to launch PTT Express client for VoIP communication.
	<b>RxLogger</b> - Use to diagnose device and app issues. See the device Integrator Guide for Android Version 8.1 for more information.
	<b>RxLogger Utility</b> - Use to view, backup, and archive RxLogger data.

Table 8 Apps (Continued)

Icon	Description
	<b>Search</b> - Use to search the Web. Requires an Internet connection. Non-GMS devices only.
	<b>Settings</b> - Use to configure the device.
	<b>Sound Recorder</b> - Use to record audio.
	<b>StageNow</b> - Allows the device to stage a device for initial use by initiating the deployment of settings, firmware, and software.
	<b>Videos</b> - Use to view videos on the device. Non-GMS devices only.
	<b>Worry Free Wifi Analyzer</b> - A diagnostic intelligent app. Use to diagnose surrounding area and display network stats, such as coverage hole detection, or AP in vicinity. Refer to the Worry Free Wi-Fi Analyzer Administrator Guide for Android.
	<b>YouTube</b> - Use to view videos on the YouTube™ web site. GMS/GMS-Restricted only.
	<b>Zebra Bluetooth</b> - Use to configure Bluetooth logging.

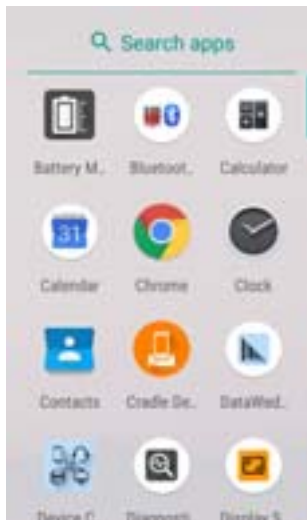
## Accessing Apps

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.



Figure 16 APPS Window Example



Slide the **APPS** window up or down to view more app icons. Touch an icon to open the app.

## Switching Between Recent Apps

To switch between recent apps:


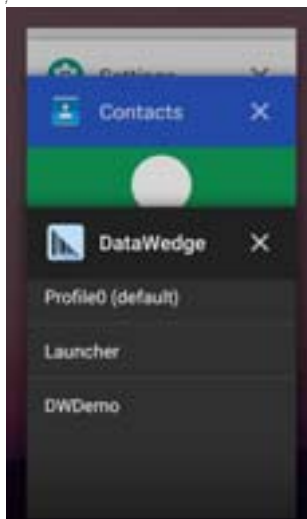

1. Touch . A window appears on the screen with icons of recently used apps.

Figure 17 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.

## 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.

Figure 18 Lock Screen



Figure 19 PIN Screen

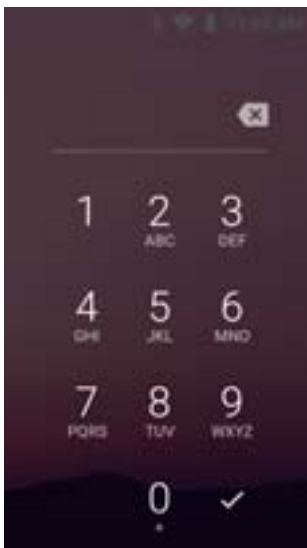
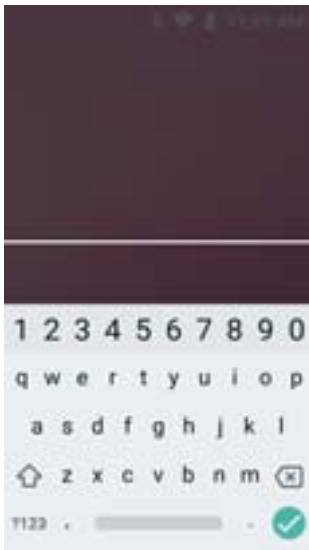


Figure 20 Pattern Screen



Figure 21 Password Screen



## Resetting the Device

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

### Performing a Soft Reset

Perform a soft reset if applications stop working.

1. Press and hold the Power button until the menu appears.
2. Touch **Restart**.  
The device reboots.

### Performing a Hard Reset

Perform a hard reset if the device stops responding.

1. Simultaneously press the Power and Volume Up buttons for at least five seconds.
2. When the screen turns off, release the buttons.

The device reboots.

### 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. See Un-Locking the Screen.



**NOTE:** 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.

### Transferring Files with a Host Computer via USB

Connect the device to a host computer using a USB cable 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.

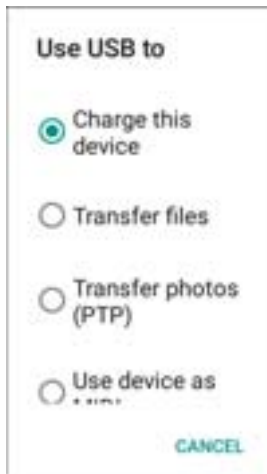
### Transferring Files



**NOTE:** Use Transfer files to copy files between the device (internal memory) and the host computer.

1. Connect a USB cable between the device and a host computer.
2. Pull down the Notification panel and touch **USB charging this device**.  
By default, **Charge this device** is selected.

Figure 22 Use USB to Dialog Box



3. Touch **Transfer files**.
4. On the host computer, open a file explorer application.
5. Locate the **device** as a portable device.
6. Open the **Internal storage** folder.
7. Copy files to and from the device or delete files as required.

## Transferring Photos

To transfer photos using Photo Transfer Protocol:



**NOTE:** Use Photo Transfer Protocol (PTP) to copy photos from the 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 **USB charging this device**.
3. Touch **Transfer photos (PTP)**.
4. On the host computer, open a file explorer application.
5. Open the **Internal storage** folder.
6. Copy or delete photos as required.

## Disconnect from the Host Computer

To disconnect the device from the host computer:



**CAUTION:** Carefully follow the host computer's instructions to disconnect USB devices correctly to avoid losing information.

1. On the host computer, unmount the device.
2. Remove the USB cable from the device.

# Applications

## Introduction

This section describes the applications installed on the device.

## 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 .

Figure 23 Battery Manager Screen



Table 9 Battery Icon Description





Battery Icon	Description
	Battery charge level.

Table 9 Battery Icon Description

Battery Icon	Description
	Battery charging.
	Battery charge level is below 18%.

- **Battery level** - The current battery charge level as a percentage. Displays -% when level is unknown.
- **Time until full** - The amount of time until the battery is fully charged.
- **Time since charging** - The amount of time since the device began charging.
- **Time until empty** - The amount of time until the battery is empty.
- **Battery status**
  - **Not charging** - The device is not charging.
  - **Charging over AC** - The device is connected to AC power and charging.
  - **Charging over USB** - The device is connected to a host computer with a USB cable and charging.
  - **Discharging** - That the battery is discharging.
  - **Full** - That the battery is fully charged.
  - **Unknown** - The battery status is unknown.
- **Battery health** - The health of the battery. If a critical error occurs,  appears. Touch to view the error description.
  - **Decommission** - The battery is past its useful life and should be replaced. See system administrator.
  - **Good** - The battery is good.
  - **Charge error** - An error occurred while charging. See system administrator.
  - **Over Current** - An over-current condition occurred. See system administrator.
  - **Dead** - The battery has no charge. Replace the battery.
  - **Over Voltage** - An over-voltage condition occurred. See system administrator.
  - **Below Temperature** - The battery temperature is below the operating temperature. See system administrator.
  - **Failure Detected** - A failure has been detected in the battery. See system administrator.
  - **Unknown** - See system administrator.
- **Wear level** - The health of the battery in graphical form. When the wear level exceeds 80%, the bar color changes to red.

- **Advanced info** - Touch to view additional battery information.
  - **Battery present status** - Indicates that the battery is present.
  - **Battery level** - The battery charge level as a percentage of scale.
  - **Battery scale** - The battery scale level used to determine battery level (100).
  - **Battery voltage** - The current battery voltage in millivolts.
  - **Battery temperature** - The current battery temperature in degrees Centigrade.
  - **Battery technology** - The type of battery.
  - **Battery current** - The average current into or out of the battery over the last second in mAh.
  - **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 part number** - The battery part number.
  - **Battery rated capacity** - Lists the rated capacity of the backup battery in mAh.
  - **Battery decommission status** - Indicates if the battery is past its life span.
    - **Battery Good** - The battery is in good health.
    - **Decommissioned Battery** - The battery is past its useful life and should be replaced.
  - **Base cumulative charge** - Cumulative charge using Zebra charging equipment only.
  - **Battery present capacity** - Maximum amount of charge that could be pulled from the battery under the present discharge conditions if the battery were fully charged.
  - **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”.
  - **% decommission threshold** - The default % decommission threshold for a gifted battery as 80%.
  - **Battery present charge** - Amount of usable charge remaining in the battery at present under the current discharge conditions.
  - **Battery total cumulative charge** - The total accumulated charge in all chargers.
  - **Battery time since first use** - The time passed since the battery was placed in a Zebra terminal for the first time.
  - **Battery error status** - The error status of the battery.
  - **App version** - The application version number.




## 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.


### 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**.

### Editing Contacts

1. In the **Contacts** app, touch a contact name to edit.
2. Touch .
3. Edit the contact information.
4. Touch **SAVE**.

### Deleting Contacts

1. In the **Contacts** app, touch a contact name to delete.
2. Touch .
3. Touch **Delete**.
4. Touch **DELETE** to confirm.

## Cradle Demo




Requires the 10-Slot Locking Cradle. See Accessories for more information.

Use the **Cradle Demo** app to demonstrate the following features:

- Scan a barcode to unlock the device.
- Touch an on-screen button to unlock the device.
- Perform cradle diagnostics.

To use the Cradle Utility:

1. Dock the EC30 inside the cradle.
2. Swipe up from the bottom of the Home screen and touch .
3. Scan a barcode to unlock the device.
4. Touch **UNLOCK DEVICE** to unlock the device.
5. Touch **RUN DIAGNOSTIC** to perform a cradle diagnostics demonstration. The Indicator LED Insert illumination test runs, then the device unlocks for 5 seconds.

## DataWedge Demonstration



**NOTE:** DataWedge is disabled on the Home screen. To enable this feature, go to the DataWedge settings and enable Bar-code input option.

Use **DataWedge Demonstration** to demonstrate data capture functionality.

Figure 24 DataWedge Demonstration Window

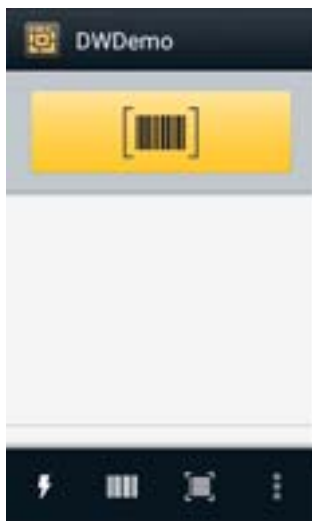



Table 10 DataWedge Demonstration Icons

	Icon	Description
Illumination		Imager illumination is on. Touch to turn illumination off.
		Imager illumination is off. Touch to turn illumination on.
Data Capture		The data capture function is through the internal imager.
		A Bluetooth scanner is connected.
		A Bluetooth scanner is not connected.
Scan Mode		Imager is in picklist mode. Touch to change to normal scan mode.
		Imager is in normal scan mode. Touch to change to picklist mode.
		Opens a menu to view the application information or to set the application DataWedge profile.



**NOTE:** See the device Integrator Guide for Android Version 8.1 for information on DataWedge configuration.

## Scanner Selection

To select a scanner, touch  > **Settings** > **Scanner selection**.

See Data Capture for more information.

Press the programmable button or touch the on-screen yellow scan button to capture data. The data appears in the text field below the yellow button.

## Device Central

**Device Central** displays detailed information about the device and connected peripherals and supports the following Zebra devices:

- RS507/RS507X Hands-free Imager
- RS6000 Bluetooth Ring Scanner
- HS3100 Bluetooth Headset

Device Central features include:

- Discovering and pairing with supported peripherals via Bluetooth or corded connection.
- Paging a connected RS6000 Ring Scanner.
- Updating the firmware of supported ring scanners. Refer to the RS6000 User Guide for more information.
- Displaying the connection status of peripherals.
- Displaying information for a connected peripheral in the notification bar.

Figure 25 Device Central Screen



## Scan and Pair Tab

Pairing to a Bluetooth peripheral is accomplished by one of the following methods:

- Scan and Pair
- Scan to Pair
- Manually Pairing.

### Scan and Pair

To scan the peripheral Bluetooth barcode to pair:

1. In the **Scan and Pair** tab, touch **Scan barcode to pair**. The peripheral's scan beam illuminates.
2. Ensure that Bluetooth is enabled on the peripheral and is set to discoverable mode. Refer to the peripheral user guide for instructions.
3. Scan the Bluetooth MAC address barcode label on the desired peripheral to pair.

When pairing is successful, the peripheral displays in the list. A green dot appears next to a Bluetooth scanner when the device is connected, and may be in use. A red dot appears next to other Bluetooth peripherals, such as a Bluetooth headset or printer, while they are connected but not in use.

### Scan to Pair

Use Scan and Pair to pair by scanning a barcode displayed on the screen. This applies to peripherals that have scanning capability, such as Bluetooth handheld scanners and ring scanners.

1. In the **Scan and Pair** tab, touch **Display barcode to pair**. A barcode displays.
2. Using the peripheral, scan the barcode on the screen.

When the pairing is successful, the peripheral displays in the list with a green dot indicating that it is paired.

### Manually Pairing

To manually pair a peripheral that is unable to pair via Bluetooth:

1. In the **Scan and Pair** tab, touch the **MAC address** field.
2. Enter the Bluetooth MAC address of the peripheral.
3. Touch **Pair**.

When pairing is successful, the peripheral displays in the list. A green dot appears next to a Bluetooth scanner when the device is connected, and may be in use. A red dot appears next to other Bluetooth peripherals, such as a Bluetooth headset or printer, while they are connected but not in use.

### Peripherals Tab

The **Peripherals** Tab displays all currently connected and previously connected peripherals. Connected peripherals display the length of time (in minutes) that they have been connected.

Touch the connected device icon to display details about the peripheral. The **Device Details** screen appears. When an RS6000 is connected the **Page** button displays at the bottom of the **Device Details** screen. See Paging an RS6000 Ring Scanner.

## My Device Tab

The **My Device** Tab displays information about the EC30.

- **Device Model** - Displays the name assigned to the device.
- **Device Serial Number** - Displays the serial number of the device.
- **OS Version** - Displays the operating system version.
- **Build Number** - Displays the software build number.
- **Battery Level** - The current battery charge level as a percentage.
- **Battery Part Number** - The battery part number.
- **Battery Serial Number** - The battery serial number. The number matches the serial number printed on the battery label.
- **Battery Manufactured Date** - The date of manufacture.

## Unpairing a Peripheral

To unpair a Bluetooth peripheral:

1. In the **Scan and Pair** tab, touch **Unpair** for the desired peripheral to unpair.  
A confirmation pop-up message appears.

2. Touch **OK**.

Once unpaired, a message appears indicating the peripheral has been disconnected, and the peripheral is removed from the list.

## Paging an RS6000 Ring Scanner

Use **Page** button to easily locate the currently connected RS6000 Ring Scanner:

1. With the RS6000 Ring Scanner connected, swipe up from the bottom of the Home screen, and touch .



**NOTE:** The RS6000 Ring Scanner must be within 10 m (32 ft) of the device.

2. Touch RS6000. The Device Details screen displays.
3. Under the RS6000 peripheral information, scroll down and touch **Page** to page the RS6000. The paged RS6000 beeps.

Figure 26 Page RS6000



To stop paging, press the scan trigger of the RS6000. On a triggerless RS6000, reset the RS6000 to stop paging. Refer to the RS6000 User Guide.

## Diagnostic Tool

The **Diagnostic Tool** is a utility that determines the health of the device. Use the Diagnostic Tool to troubleshoot the device.


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

Figure 27 Diagnostic Tool



2. Touch **RUN TEST**. The app tests all enabled subsystems (by default, only the Battery and System tests). See Settings to enable subsystem tests.

Figure 28 Test Passed Screen

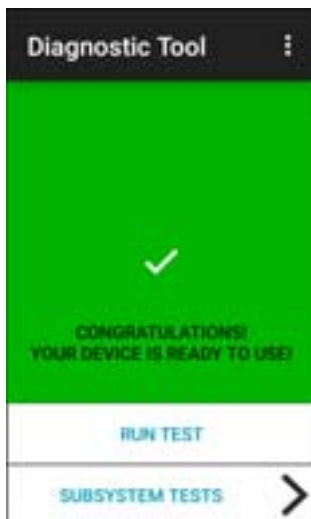




Figure 29 Test Failed Screen



3. To view each subsystem test, touch **Subsystem Tests**.

Figure 30 Subsystem Screen



4. Touch one of the subsystems to view details.

Table 11 Subsystem Test Result Indicators




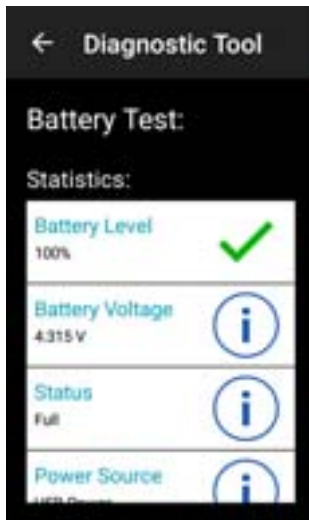
Status Icon	Description
	Test passed.
	Test failed.
	Test not supported or not enabled.

Figure 31 Battery Subsystem Details



## Settings

By default only the Battery and System tests are enabled. To enable other tests:

1. Touch **⋮** > **Settings**.
2. Touch to the left of the test name. A green box with a checkmark appears.
3. Touch **SAVE**.
4. Touch **Yes** to confirm.
5. Touch **◀**.

## Battery Test Information

The Battery Test obtains the following information:

- **Battery Level** - Current battery charge level
- **Battery Voltage** - Current battery voltage
- **Status** - Whether the battery is charging (on AC power) or discharging (on battery power)
- **Power Source** - Whether the device is receiving power from the battery or from an external source
- **Temperature** - Current battery temperature
- **Health Percentage** - Indicates the ratio of present capacity to design capacity at a discharge rate of design capacity.
- **Backup Battery Voltage** - Backup battery voltage.
- **Manufacture Date** - Manufacture date of the battery.

## GPS Test Information

Not supported on this device.

## System Test Information

Use the System Test to determine if the CPU or memory loads are too high, there are too many processes running on the device, or storage on the device is almost full.

The System Test obtains the following information:

- **CPU Load** - Amount of CPU being used
- **Free Physical Memory** - Amount of RAM available
- **Free Storage** - Amount of internal Flash memory available
- **Process Count** - Number of processes currently running.

## WLAN Test Information

If the WiFi radio is not present or disabled, skip this test. This test determines if the device's WLAN configuration is correct or whether there is any connection with an access point or network.

The WLAN test obtains the following information:

- **WLAN Enabled** - WLAN radio is enabled or disabled
- **WLAN Status** - Current status of association with the access point
- **ESSID** - Name of the wireless network
- **BSSID** - MAC address of the connected access point
- **MAC Address** - Device's MAC address
- **Signal** - Strength of the Wi-Fi signal (in dBm)
- **IP Address** - IP address of the device.

## WWAN Test Information

Not supported on this device.

## Bluetooth Test Information

The Bluetooth Test obtains the following information:

- **Enabled** - Whether the Bluetooth radio is enabled or disabled
- **Status** - Whether the device is paired to another Bluetooth device
- **Connectable/Discoverable** - Whether the device is discoverable or able to connect
- **Address** - Bluetooth radio MAC address
- **Name** - Bluetooth name for the device.

## Display Size

The Display Size app provides quick access to display and font size settings.

To change the display size:

1. Swipe up from the bottom of the Home screen.
2. Touch **Display Size**.
3. Touch an option to change the display size:
  - Default
  - Small
  - Smallest.
4. Touch **Font Scale** to set the size of the font in system apps:
5. Select one of the font size values.
  - 0.85
  - 1.0 (default)
  - 1.15
  - 1.30
  - 1.45
6. Touch the Home button.

## Files

Use the **Files** app to view and manage files on the device.










To open **Files**, swipe up from the bottom of the screen and touch .

Figure 32 Files Screen



- Touch and hold an item to open the File Operations menu. Select an option:
  -  - Share the file with other devices.
  -  - Delete the file.
  -  - View additional options.
    - **Open with** - Select which app is used to open the file.
    - **Select all** - Select all folders and files.
    - **Copy to...** - Copy the file.
    - **Move to...** - Move the file or folder to a new location.
    - **Compress** - Compress the selected file(s) into a ZIP file.
    - **Rename** - Rename the file.
- Touch the Sort drop-down to sort files by name, type, size, or date.
-  - View all file locations.
-  - Search for a specific file on the device.
-  /  - Change the folder to display items as a list / grid.
-  - Open the options menu.
  - **New Window** - Create a new Files window.
  - **New Folder** - Create a new folder.
  - **Select all** - Select all folders and files.
  - **Show/Hide internal storage** - Show or hide internal storage.

## Photos



**NOTE:** The device supports the following image formats: jpeg, gif, png, and bmp.

The device supports the following video formats: H.263, H.264, and MPEG4 Simple Profile.

Available on device with GMS only.

Use **Photos** to:

- View photos
- Play videos
- Perform basic editing of photos
- Set photos as wallpaper
- Set photos as a contact photo
- Share photos and videos.

**Photos** presents all photos and videos stored on the internal memory.

To open **Photos**, swipe up from the bottom of the Home screen and touch **Photos**.

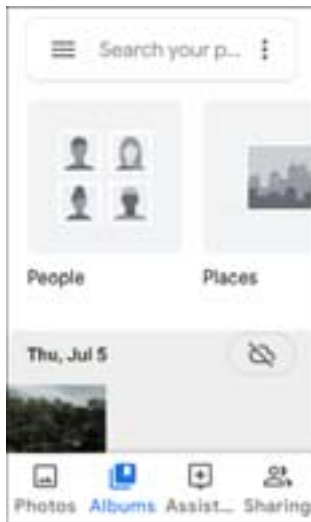
By default, **Photos** opens to the photos view.

Figure 33 Photos View



Touch **Albums** to view photos sorted by albums.

Figure 34 Albums View



- Touch an album to view its contents. The photos and videos in the album appear in chronological order.
- Touch a photo or video in an album to view it.
- Touch ← to return to the main screen.

## Working with Albums

Albums are groups of images and videos in folders. Touch an album to open it. The photos and videos are listed in a chronologically ordered grid. The name of the album displays at the top of the screen.



Figure 35 Photos Inside an Album



Swipe up to scroll through the images.



## Sharing an Album

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch **Albums**.

3. Touch an album.
4. Touch  > **Select**.
5. Select all photos in the album.
6. Touch . The Share menu opens.
7. Touch an app to share the selected albums.
8. Follow the instructions within the selected app.

### Deleting an Album

To delete an album and its contents:

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch **Albums**.
3. Touch an album.
4. Touch  > **Select**.
5. Select all photos in the album.
6. Touch .
7. Touch **Move to trash** to delete the album.

### Working with Photos

Use **Photos** to view photos on the internal memory.

#### Viewing and Browsing Photos

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a photo.



Figure 36 Photo Example



3. Swipe left or right to view the next or previous photo in the album.
4. Turn the device to view the photo in upright (portrait) or sideways (landscape) orientation. The photo is displayed (but not saved) in the new orientation.
5. Touch the photo to view the controls.
6. Double-tap the screen to zoom in, or pinch two fingers together or spread them apart to zoom in or out.
7. Drag the photo to view parts that are not in view.

### Cropping a Photo



1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a photo to view the controls.
3. Touch  > . The cropping tool appears.

Figure 37 Cropping Tool



4. Use the cropping tool to select the portion of the photo to crop.
  - Drag from the inside of the cropping area to move it.
  - Drag an edge of the cropping area to resize it to any proportion.
5. Touch **DONE**.
6. Touch **SAVE** to save a copy of the cropped photo. The original version is retained.


### Setting a Photo as a Contact Icon

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch the photo to open it.
3. Touch **⋮** > **Use as**.
4. Touch **Contact photo**.
5. In the **Contacts** app, touch a contact.
6. Touch the white box and crop the photo accordingly.
7. Touch **Done**.

### Sharing a Photo

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch an album to open it.
3. Touch a photo to open it.
4. Touch **↪**.
5. Touch the app to use to share the selected photo.
6. Follow the instructions within the selected app.

### Deleting a Photo

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a photo to open it.
3. Touch .
4. Touch **MOVE TO TRASH**.


### Working with Videos

Use **Photos** to view and share videos.


#### Watching a Video

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a video to play.
3. Touch the screen to view the playback controls.

#### Sharing a Video

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a video to open it.
3. Touch . The Share menu appears.
4. Touch the app to use to share the selected video.
5. Follow the instructions within the selected app.

#### Deleting a Video

1. Swipe up from the bottom of the Home screen and touch **Photos**.
2. Touch a video to open it.
3. Touch .
4. Touch **MOVE TO TRASH** to delete the video.

## PTT Express Voice Client



**NOTE:** PTT Express Voice Client enables Push-To-Talk (PTT) communication between disparate enterprise devices. Leveraging existing Wireless Local Area Network (WLAN) infrastructure, PTT Express delivers simple PTT communication without requiring a voice communication server.

- **Group Call:** Press and hold the PTT (Talk) button to start communicating with other voice client users.
- **Private Response:** Double-press the PTT button to respond to the originator of the last broadcast or to make a Private Response.

### PTT Audible Indicators

The following tones provide helpful cues when using the voice client.

- **Talk Tone:** Double chirp. Plays when the Talk button is depressed. This is a prompt for you to start talking.
- **Access Tone:** Single beep. Plays when another user just finished a broadcast or response. You can now initiate a Group Broadcast or Private Response.
- **Busy Tone:** Continuous tone. Plays when the Talk button is depressed and another user is already communicating on the same talkgroup. Plays after the maximum allowed talk time is reached (60 seconds).
- **Network Tone:**
  - Three increasing pitch beeps. Plays when PTT Express acquires the WLAN connection and the service is enabled.
  - Three decreasing pitch beeps. Plays when PTT Express loses the WLAN connection or the service is disabled.



### PTT Notification Icons

Notification icons indicate the current state of the PTT Express Voice client.


Table 12 PTT Express Icon Descriptions

Status Icon	Description
	The PTT Express Voice client is disabled.
	The PTT Express Voice client is enabled but not connected to a WLAN.
	The PTT Express Voice client is enabled, connected to a WLAN, and listening on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and communicating on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and in a private response.

Table 12 PTT Express Icon Descriptions (Continued)

Status Icon	Description
	The PTT Express Voice client is enabled and muted.
	The PTT Express Voice client is enabled but it is not able to communicate due to a VoIP telephony call in progress.

## Enabling PTT Communication

1. Swipe up from the bottom of the Home screen and touch .
2. Slide the **Enable/Disable Switch** to the **ON** position. The button changes to **ON**.

## Selecting a Talk Group

One of 32 Talk Groups can be selected by PTT Express users. However, only one talk group may be enabled at a time on the device. Touch one of the 32 Talk Groups. The selected Talk Group is highlighted.

## PTT Communication



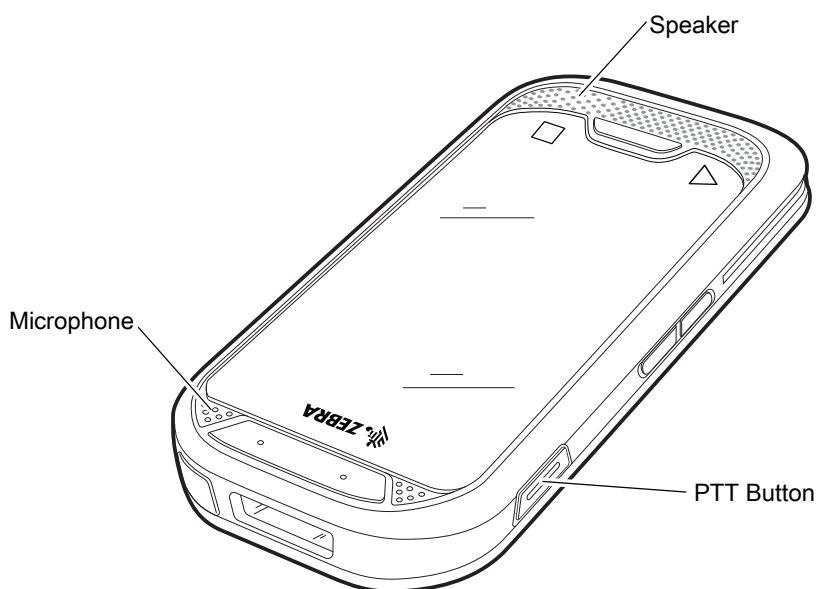
**NOTE:** This section describes the default PTT Express client configuration. Refer to the PTT Express V1.2 User Guide for detailed information on using the client.

PTT communication may be established as a Group Call. When PTT Express is enabled, the PTT button on the left side of the device is assigned for PTT communication. When the Wired Headset is used, Group Calls can also be initiated using the headset Talk button. When not using a headset, optimal placement of EC30 microphone is two and six inches from your mouth.



**NOTE:** When using a wired headset, use only Zebra approved wired headsets with a PTT button.

Figure 38 PTT Button



### Creating a Group Call



**NOTE:** When using a wired headset, use only Zebra approved wired headsets with a PTT button.

1. Press and hold the PTT button (or the Talk button on the headset) and listen for the talk tone.  
If you hear a busy tone, release the button and wait a moment before making another attempt. Ensure that PTT Express and the WLAN are enabled.
2. Start talking after hearing the talk tone.





**NOTE:** Holding the button for more than 60 seconds (default) drops the call, allowing others to make Group calls. Release the button when finished talking to allow others to make calls.

### Responding with a Private Response

The Private Response can only be initiated once a Group Call has been established. The initial Private Response is made to the originator of the Group Call.

1. Wait for an access tone.
2. Within 10 seconds, double-press the PTT button, and listen for the talk tone.
3. If you hear a busy tone, release the button and wait a moment before making another attempt. Ensure that PTT Express and the WLAN are enabled.
4. Start talking after the talk tone plays.
5. Release the button when finished talking.

### Disabling PTT Communication

1. Swipe up from the bottom of the Home screen and touch .
2. Slide the **Enable/Disable Switch** to the **OFF** position. The button changes to **OFF**.
3. Touch .

## RxLogger

RxLogger is a comprehensive diagnostic tool that provides app and system metrics. Create custom plug-ins that work seamlessly with this tool. RxLogger diagnoses device and application issues, and tracks information for: CPU load, memory load, memory snapshots, battery consumption, power states, wireless logging, TCP dumps, Bluetooth logging, GPS logging, logcat, ANR dumps, etc. All logs and files generated are saved in flash storage on the device (internal or external).

Figure 39 RxLogger



## RxLogger Utility

RxLogger Utility is a data monitoring application for viewing logs in the device while RxLogger is running. Access the logs and RxLogger Utility features in the App View or the Overlay View.

In the App View, view logs in the RxLogger Utility.

Figure 40 RxLogger Utility App View



Refer to the device Integrator Guide for detailed information on the RxLogger Utility.




## Sound Recorder

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

Recordings are saved on the internal storage and are available in the Play Music application (GMS devices).

Figure 41 Sound Recorder Application



Touch  to open options menu.

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

# Data Capture

## Introduction

The device supports data capture using:

- Integrated imager
- RS507/RS507X Hands-free imager
- RS6000 Bluetooth Ring Scanner.

## 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.

## Operational Modes

The device with an integrated imager supports two modes of operation, listed below. Activate each mode by pressing the Scan button.

- **Decode Mode:** In this mode, the device attempts to locate and decode enabled barcodes within its field of view. The imager remains in this mode as long as the user holds the scan button, or until it decodes a barcode.



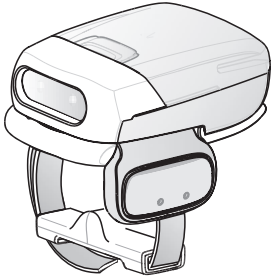
**NOTE:** To enable Pick List Mode, configure in DataWedge or set in an application using a API command.

- **Pick List Mode:** This mode allows the user to selectively decode a barcode when more than one barcode is in the device's field of view. To accomplish this, move the aiming crosshair or dot over the required barcode to decode only this barcode. This feature is ideal for pick lists containing multiple barcodes and manufacturing or transport labels containing more than one barcode type (either 1D or 2D).

## RS507/RS507x Hands-Free Imager

The RS507 and RS507x Hands-free Imagers are wearable barcode scan solution for both 1D and 2D bar code symbologies. The scanner supports Bluetooth Human Interface Device (HID) connection to the device.

Figure 42 RS507/RS507x Hands-Free Imager

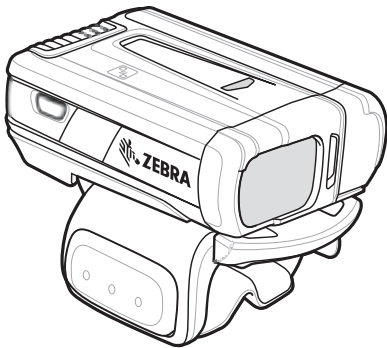


Refer to the RS507/RS507x Hands-free Imager Product Reference Guide for more information.

## RS6000 Bluetooth Ring Scanner

The RS6000 Bluetooth Ring Scanner is a wearable bar code scan solution for both 1D and 2D bar code symbologies.

Figure 43 RS6000 Bluetooth Ring Scanner



Refer to the RS6000 Bluetooth Ring Scanner Product Reference Guide for more information.

## 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.



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

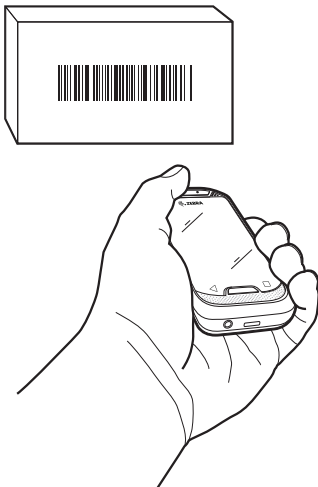
## Scanning with Internal Imager

To read a barcode, a scan-enabled app is required. The device contains the DataWedge 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.

Figure 44 Imager Scanning



3. Press and hold the scan button. The white aiming pattern turns on to assist in aiming.



**NOTE:** When the device is in Picklist mode, the imager does not decode the barcode until the crosshair on the device display overlays the barcode.

4. Ensure the barcode is within the area formed by aiming pattern.

Figure 45 Aiming Pattern



5. The Data Capture LED lights green and a beep sounds, by default, to indicate the barcode was decoded successfully.

6. Release the scan button.



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

7. The barcode content data displays in the text field.

## Picklist Mode

When Picklist Mode is enabled, the screen displays an image of the barcode and a red cross-hair. See device Integrator Guide for Android Version 8.1 for information on setting Picklist Mode.

When the device is in Picklist Mode, the imager does not decode the barcode until the cross-hair touches the barcode.

Figure 46 Pick List Mode with Multiple Barcodes in Aiming Pattern



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

1. Ensure that an application 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 the barcodes.
3. Press and hold the scan button.  
The white aiming pattern turns on to assist in aiming.
4. Ensure the barcodes are within the area formed by the aiming pattern.

Figure 47 SE2100 Aiming Pattern with Multiple Barcodes



5. The Data Capture LED lights green and a beep sounds, by default, to indicate the barcode was decoded successfully. Captured data from all barcodes is delivered as a single string.
6. Release the scan button.



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

7. The barcode content data displays in the text field.

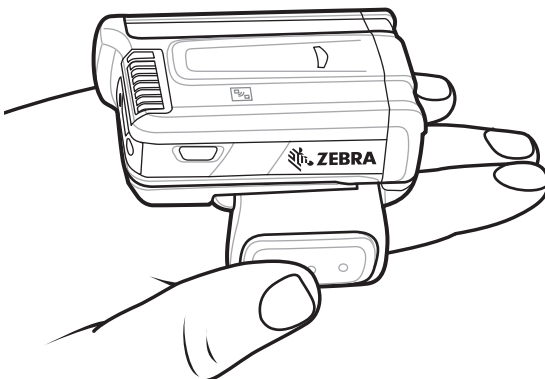
## Scanning with RS6000 Bluetooth Ring Scanner

To read a barcode, a scan-enabled app is required. Devices that contain the Zebra DataWedge app allows you to enable the scanner to decode barcode data and display the barcode content.

To scan with the RS6000:

1. Pair the RS6000 with the device. See Pairing Using Bluetooth Human Interface Device for more information.
2. Ensure that an app is open on the device and a text field is in focus (text cursor in text field).
3. Point the RS6000 at a barcode.

Figure 48 Barcode Scanning with RS6000



4. Press and hold the trigger.

The red laser aiming pattern turns on to assist in aiming. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

The RS6000 LEDs light green and a beep sounds to indicate the barcode was decoded successfully. When

the RS6000 is in Pick List mode, the RS6000 does not decode the barcode until the center of the crosshair touches the barcode.

Figure 49 RS6000 Aiming Pattern

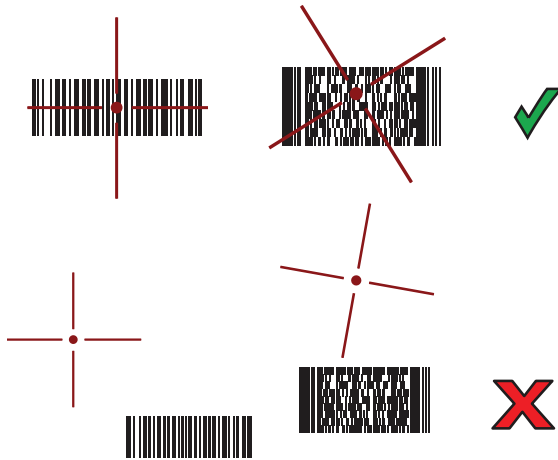


Figure 50 RS6000 Pick List Mode with Multiple Barcodes in Aiming Pattern



5. The captured data appears in the text field.

## Scanning with RS507/RS507X Hands-Free Imager

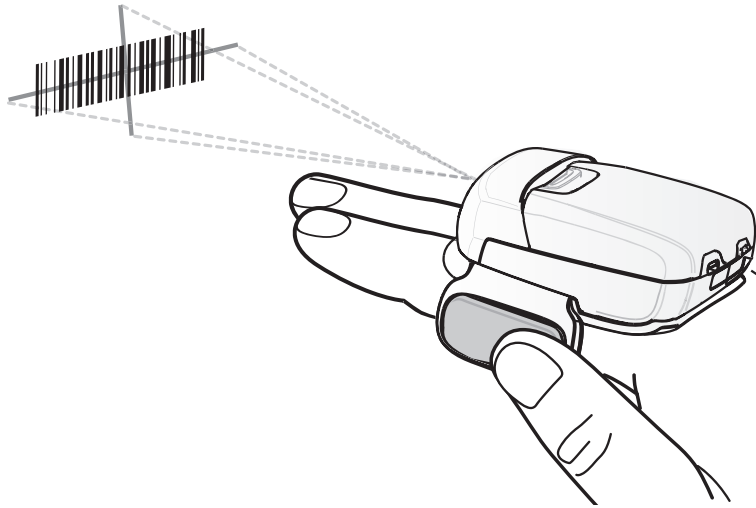
To read a barcode, a scan-enabled app is required. The device contains the DataWedge app that allows you to enable the scanner to decode barcode data and display the barcode content.

To scan with the RS507/RS507X:

1. Pair the RS507/RS507X with the device. See [Pairing Using Simple Serial Interface](#), [Pairing Bluetooth Scanners](#) or [Pairing Using Bluetooth Human Interface Device](#) for more information.
2. Ensure that an app is open on the device and a text field is in focus (text cursor in text field).

3. Point the RS507/RS507X at a barcode.

Figure 51 Barcode Scanning with RS507/RS507X



4. Press and hold the trigger.

The red laser aiming pattern turns on to assist in aiming. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

The RS507/RS507X LEDs light green and a beep sounds to indicate the barcode was decoded successfully. When the RS507/RS507X is in Pick List mode, the RS507/RS507X does not decode the barcode until the center of the crosshair touches the barcode.

Figure 52 RS507/RS507X Aiming Pattern



Figure 53 RS507/RS507X Pick List Mode with Multiple Barcodes in Aiming Pattern





5. The captured data appears in the text field.

## Pairing the RS507/RS507X/RS6000 Hands-Free Imager

To connect the RS507/RS507X or RS6000 imager to the device, use one of the following methods:

- Simple Serial Interface (SSI)
- Bluetooth Human Interface Device (HID) Mode.

### Pairing Using Simple Serial Interface (SSI)

To pair the RS507/RS507X or RS6000 with the device using SSI.


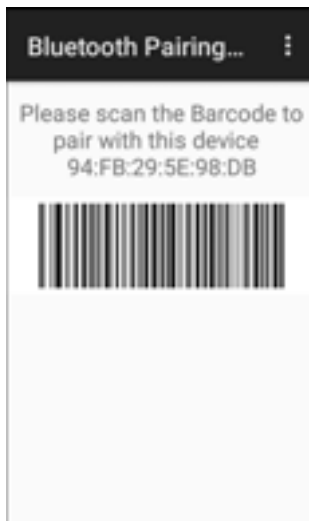
1. Swipe up from the bottom of the Home screen and touch .

Figure 54 Bluetooth Pairing Utility



2. Using the RS507/RS507X or RS6000, scan the barcode on the screen.

The RS507/RS507X or RS6000 emits a string of high/low/high/low beeps. The Scan LED flashes green indicating that the RS507/RS507X or RS6000 is attempting to establish connection with the device. When connection is established, the Scan LED turns off and the RS507/RS507X or RS6000 emits one string of low/high beeps.

A notification appears on the Notification panel and the  icon appears in the Status bar.

### Pairing Using Bluetooth Human Interface Device

To pair the RS507/RS507X or RS6000 with the device using Human Interface Device (HID):

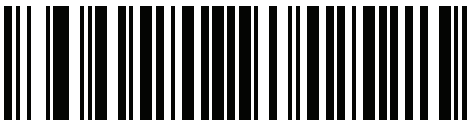
1. Ensure that Bluetooth is enabled on both devices.
2. Ensure that the Bluetooth device to discover is in discoverable mode.
3. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
4. Place the RS507/RS507X or RS6000 in HID mode. If the RS507/RS507X or RS6000 is already in HID mode, skip to step 5.


- a. Remove the battery from the RS507/RS507X or RS6000.
- b. Press and hold the Restore key.
- c. Install the battery onto the RS507/RS507X or RS6000.
- d. Keep holding the Restore key for about five seconds until a chirp is heard and the Scan LEDs flash green.
- e. Scan the barcode below to place the RS507/RS507X or RS6000 in HID mode.

Figure 55 RS507 Bluetooth HID Barcode




Figure 56 RS6000 Bluetooth HID Barcode



5. Remove the battery from the RS507/RS507X or RS6000.
6. Re-install the battery into the RS507/RS507X or RS6000.
7. Swipe down from the Status bar to open the Quick Access panel and then touch .
8. Touch **Bluetooth**.
9. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.
10. Scroll through the list and select RS507/RS507X or RS6000.

The device connects to the RS507/RS507X or RS6000 and **Connected** appears below the device name. The Bluetooth device is added to the **Paired devices** list and a trusted (“paired”) connection is established.

A notification appears on Notification panel and the  icon appears in the Status bar.

## Pairing a Bluetooth Scanner

Connect the scanner to the device using one of the following methods:

- Simple Serial Interface (SSI) mode
- Bluetooth Human Interface Device (HID) mode.

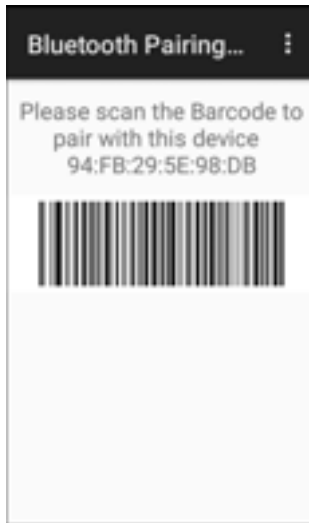
### Pairing Using Simple Serial Interface


To pair the scanner with the device using SSI:

1. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
2. Install the battery into the scanner.

3. On the device swipe up from the bottom of the Home screen and touch .

Figure 57 Bluetooth Pairing Utility



4. Using the scanner, scan the barcode on the screen.  
The scanner emits a high/low/high/low beeps. The Scan LED flashes green indicating that the scanner is attempting to establish connection with the device. When connection is established, the Scan LED turns off and the scanner emits one string of low/high beeps.
5. On the device touch .


## Pairing Using Bluetooth Human Interface Device

To pair the scanner with the device using HID:

1. Remove the battery from the scanner.
2. Replace the battery.
3. After the scanner reboots, scan the barcode below to place the scanner in HID mode.

Figure 58 Bluetooth HID Classic Barcode



4. On the device, swipe down from the Status bar to open the Quick Access panel and then touch .
5. Touch **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 XXXXX xxxxxx, where XXXXX is the scanner and xxxxxx is the serial number.

The device connects to the scanner, the scanner beeps once and **Connected** appears below the device



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

## 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.

To configure DataWedge refer to the device Integrator Guide or Product Reference Guide.

### Enabling DataWedge

1. Swipe up from the bottom of the Home screen and touch .
2. Touch  > **Settings**.
3. Touch the **DataWedge enabled** checkbox. A blue checkmark appears in the checkbox indicating that DataWedge is enabled.
4. Touch the Home button.

### Disabling DataWedge

1. Swipe up from the bottom of the Home screen and touch .
2. Touch  > **Settings**.
3. Touch the **DataWedge enabled** checkbox. A blue checkmark disappears from the checkbox indicating that DataWedge is disabled.
4. Touch the Home button.

# Wireless

## Introduction

This section provides information on the wireless features:

- Wireless Local Area Network (WLAN)
- Bluetooth
- Cast.

## 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).

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



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

## Connecting to a Wi-Fi Network

To connect to a Wi-Fi network:

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



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

Figure 59 Wi-Fi Screen




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.

## Removing a Wi-Fi Network

To remove a remembered or connected network:

1. Swipe down from the status bar to open the quick access panel and then touch .
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.

## 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.

## 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.



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

## 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.

## Bluetooth Profiles

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

Table 13 Bluetooth Profiles

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.
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.



Table 13 Bluetooth Profiles (Continued)

Profile	Description
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.
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.

## 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.

## 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.



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


### Enabling Bluetooth

To enable Bluetooth:

1. Swipe down from the Status bar to open the Quick Access panel.
2. Touch  to turn Bluetooth on.
3. Touch the Home button.

### Disabling Bluetooth

To disable Bluetooth:

1. Swipe down from the Status bar to open the Quick Access panel.
2. Touch  to turn Bluetooth off.
3. Touch the Home button.


## 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. To find Bluetooth devices in the area:

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 **Bluetooth**.
6. Touch **MORE SETTINGS**. The **Bluetooth** screen appears.
7. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.
8. Scroll through the list and select a device. The Bluetooth pairing request dialog box appears.
9. Touch **Pair** on both devices.
10. The Bluetooth device is added to the **Paired devices** list and a trusted ("paired") connection is established.


## Changing the Bluetooth Name

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

1. Swipe down from the Status bar to open the Quick Access panel and then touch .
2. Touch **Connected devices > 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.

## Connecting to a Bluetooth Device



Once paired, connect to a Bluetooth device.

1. Swipe down from the Status bar to open the Quick Access panel and then touch .
2. Touch **Connected device > Bluetooth**.
3. In the list, touch the unconnected Bluetooth device.

When connected, **Connected** appears below the device name.



## Selecting Profiles on the Bluetooth Device

Some Bluetooth devices have multiple profiles. To select a profile:

1. Swipe down from the Status bar to open the Quick Access panel and then touch .
2. Touch **Connected Devices > 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.



### Unpairing a Bluetooth Device

To unpair a Bluetooth device and erase all pairing information:

1. Swipe down from the Status bar to open the Quick Access panel and then touch .
2. Touch **Connected devices > Bluetooth**.
3. In the **Paired Devices** list, touch  next to the device name.
4. Touch **FORGET**.
5. Touch the Home button.

### Cast

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

1. Swipe down from the Status bar to open the Quick Settings bar and then touch .
2. Touch **Connected Devices**.
3. Touch **Cast**.
4. Touch  > **Enable wireless display**. The device searches for nearby Miracast devices and lists them.
5. Touch a device to begin casting.
6. Touch the Home button.

# Accessories

## Introduction

This chapter provides information for using the accessories for the device.

## Accessories

This table lists the accessories available for the device.

**Table 14** *Accessories*

Accessory	Part Number	Description
<b>Cradles</b>		
2-Slot Charge Only Cradle	CRD-EC30-2SCHG1-01	Provides device charging. Use with power supply, p/n PWR-BGA12V50W0WW.
10-Slot Charge Only Cradle	CRD-EC30-10SC1-01	Charges up to 10 devices. Use with power supply, p/n PWR-BGA12V108W0WW and DC line cord, p/n CBL-DC-381A1-01.
10-Slot Charge Only Locking Cradle	CRD-EC30-10SLC1-01	Charges up to 10 devices. Use with power supply, p/n PWR-BGA12V108W0WW and DC line cord, p/n CBL-DC-381A1-01.
Cradle Mount	BRKT-SCRD-SMRK-01	Mounts the 10-Slot Charge Only Cradle and 10-Slot Charge Only Locking Cradle to a rack.
Cradle Mount Plate	BRKT-EC30-10SC1-01	Mounts the 10-Slot Charge Only Cradle and 10-Slot Charge Only Locking Cradle to a rack with the displays facing up.
Locking Cradle Release Tool	KT-MC18-CKEY-20	Manually unlocks the EC30 from the 10-Slot Charge Only Locking Cradle (20-pack)
<b>Charge and Communication Cables</b>		
USB-C Charging Cable	CBL-TC2X-USBC-01	Provides device charging and USB communication with a host computer.
USB-C Charging Cable	CBL-TC5X-USBC2A-01	Provides device charging and USB communication with a host computer.

**Table 14** Accessories (Continued)

Accessory	Part Number	Description
<b>Audio Accessories</b>		
Bluetooth Headset	HS3100-OTH	Rugged Bluetooth Headset. Includes HS3100 Boom Module and HSX100 OTH Headband Module.
3.5 mm Headset	HDST-35MM-PTT1-01	Use for PTT and VoIP calls.
3.5 mm Headset 3.5 mm Quick Disconnect Adapter Cable	HDST-35MM-PTVP-01 CBL-TC51-HDST35-01	Use headset for PTT and VoIP calls. Adapter provides connection to the 3.5 mm Headset.
<b>Carrying Solutions</b>		
Basic Lanyard	SG-EC30-BLYD1-01	EC30 basic lanyard with adjustable neck strap and adapter (1-pack).
Basic Lanyard	SG-EC30-BLYD1-10	EC30 basic lanyard with adjustable neck strap and adapter (10-pack).
Retractable Lanyard	SG-EC30-RLYD1-01	EC30 retractable lanyard with magnetic recoil, adjustable neck strap, and adapter (1-pack).
Retractable Lanyard	SG-EC30-RLYD1-10	EC30 retractable lanyard with magnetic recoil, adjustable neck strap, and adapter (10-pack).
Soft Holster	SG-EC30-HLSTR1-01	EC30 soft holster.
Rigid Holster	SG-EC30-RHLSTR1-01	EC30 rigid holster with rotating belt clip.
Garment Clip	SG-EC30-CLIP1-01	EC30 vest/garment clip with coiled tether and adapter.
Belt Clip	SG-EC30-RCB1-01	EC30 retractor with magnetic recoil, carabiner, and adapter.
Arm Mount	SG-EC30-ARM1-01	EC30 arm mount adapter (standard strap size).
Arm Mount	SG-EC30-ARML1-01	EC30 arm mount adapter (long strap size).
Screen Protector	SG-EC30-SCRNP1-05	Provides additional protection for the screen (5-pack).
<b>Power Supplies</b>		
Power Supply	PWR-BGA12V50W0WW	Provides power to the 2-Slot cradle. Requires DC Line Cord, p/n CBL-DC-388A1-01 and country specific three wire grounded AC line cord sold separately.
Power Supply	PWR-BGA12V108W0WW	Provides power to the 10-Slot Charge Only cradle and the 10-Slot Locking Cradle. Requires DC Line Cord, p/n CBL-DC-381A1-01 and country specific three wire grounded AC line cord sold separately.

**Table 14** Accessories (Continued)

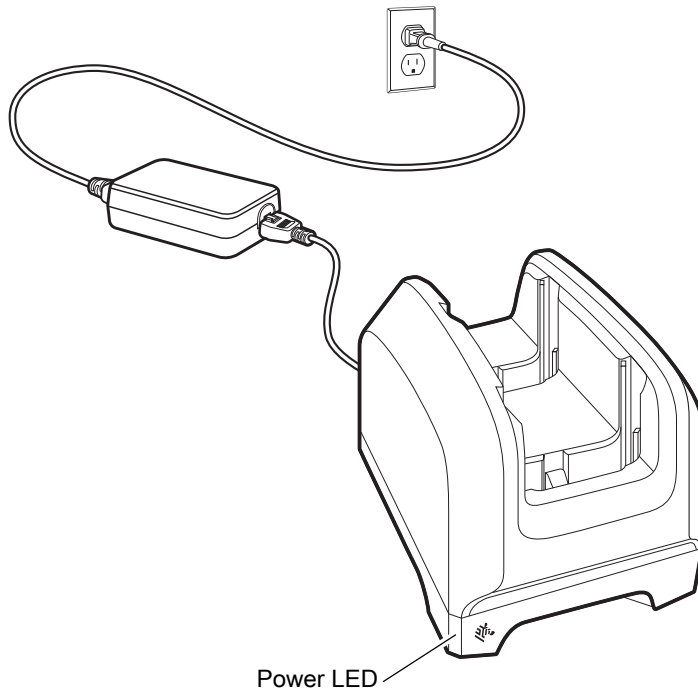
Accessory	Part Number	Description
Power Supply	PWR-WUA5V12W0US	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with US plug.
Power Supply	PWR-WUA5V12W0GB	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with Great Britain plug.
Power Supply	PWR-WUA5V12W0EU	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with Europe plug.
Power Supply	PWR-WUA5V12W0AU	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with Australia plug.
Power Supply	PWR-WUA5V12W0CN	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with China plug.
Power Supply	PWR-WUA5V12W0BR	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with Brazil plug.
Power Supply	PWR-WUA5V12W0KR	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with Korea plug.
Power Supply	PWR-WUA5V12W0IN	Provides power to the EC30. Requires USB-C Charging Cable. Power Supply-100-240 VAC, 5 V, 2.5 A with India plug.
DC Line Cord	CBL-DC-388A1-01	Provides power from the power supply to the 2-Slot cradle.
DC Line Cord	CBL-DC-381A1-01	Provides power from the power supply to the 10-Slot Charge Only Cradle and 10-Slot Locking Cradle.

## 2-Slot Charge Only Cradle

The 2-Slot Charge Only Cradle:

- Provides 5 VDC power for operating the cradle.
- Simultaneously charges up to two devices.

**Figure 60** 2-Slot Charge Only Cradle

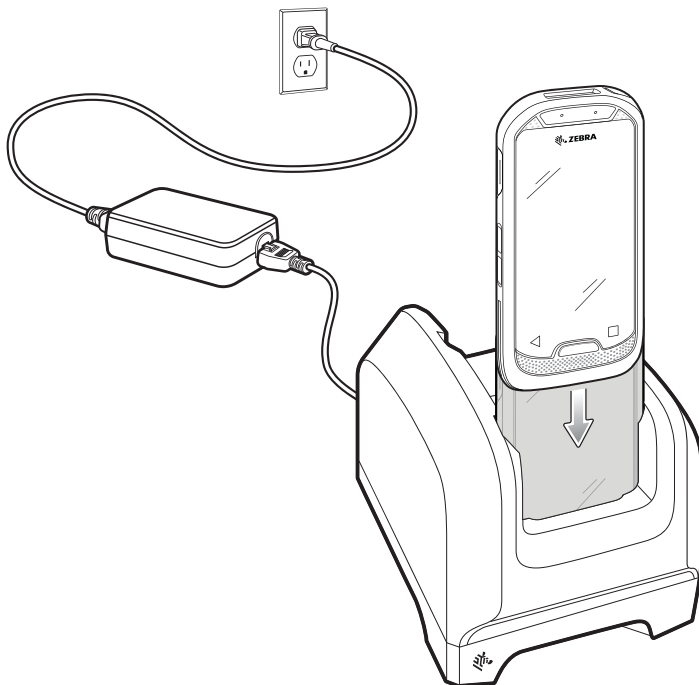


## Charging the Device

To charge a device:

1. Insert the device into the slot to begin charging.

**Figure 61** Battery Charging



2. Ensure the device is seated properly.

## Battery Charging

The device's Charging/Notification LED indicates the status of the battery charging in the device. See Table 4 on page 16 for device charging status. The 1,200 mAh (typical) / 1,100 mAh (minimum) battery charges from fully depleted to 90% in approximately 2.5 hours and from fully depleted to 100% in approximately three hours.



**NOTE:** In most use cases the 90% charge provides plenty of charge for daily use. A full 100% charge can last for approximately 10 hours of use depending on device settings.

To achieve the best fast charging results use only Zebra charging accessories. Charge device at room temperature with the device in sleep mode.

## Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures (e.g. approximately +37°C (+98°F)) the device or cradle may for small periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device and cradle indicates when charging is disabled due to abnormal temperatures via its LED.

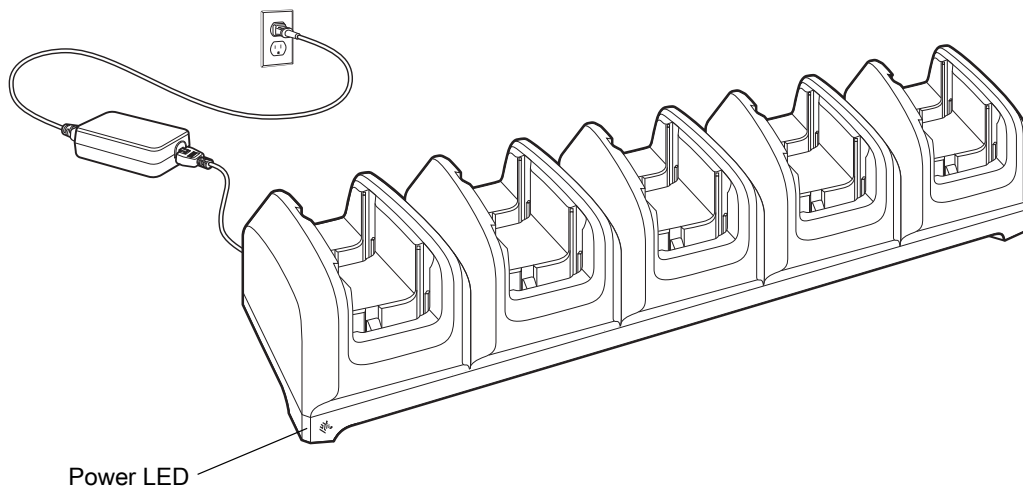


## 10-Slot Charge Only Cradle

The 10-Slot Charge Only Cradle:

- Provides 5 VDC power for operating the cradle.
- Simultaneously charges up to ten devices.

**Figure 62** 10-Slot Charge Only Cradle

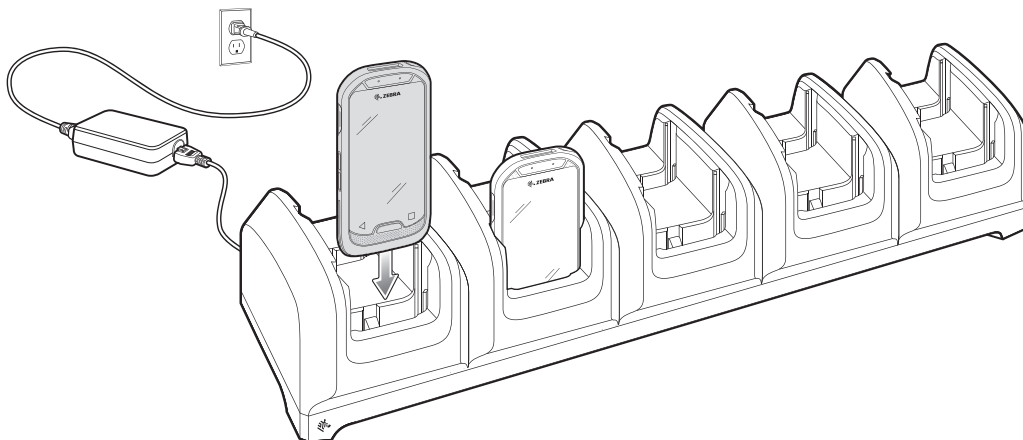


## Charging the Device

To charge a device:

1. Insert the device into a slot to begin charging.

**Figure 63** Device Battery Charging



2. Ensure the device is seated properly.

## Battery Charging

The device's Charging/Notification LED indicates the status of the battery charging in the device. See Table 4 on page 16 for device charging status. The 1,200 mAh (typical) / 1,100 mAh (minimum) battery charges from fully depleted to 90% in approximately 2.5 hours and from fully depleted to 100% in approximately three hours.



**NOTE:** In most use cases the 90% charge provides plenty of charge for daily use. A full 100% charge can last for approximately 10 hours of use depending on device settings.

To achieve the best fast charging results use only Zebra charging accessories. Charge device at room temperature with the device in sleep mode.

## 10-Slot Locking Charge Only Cradle

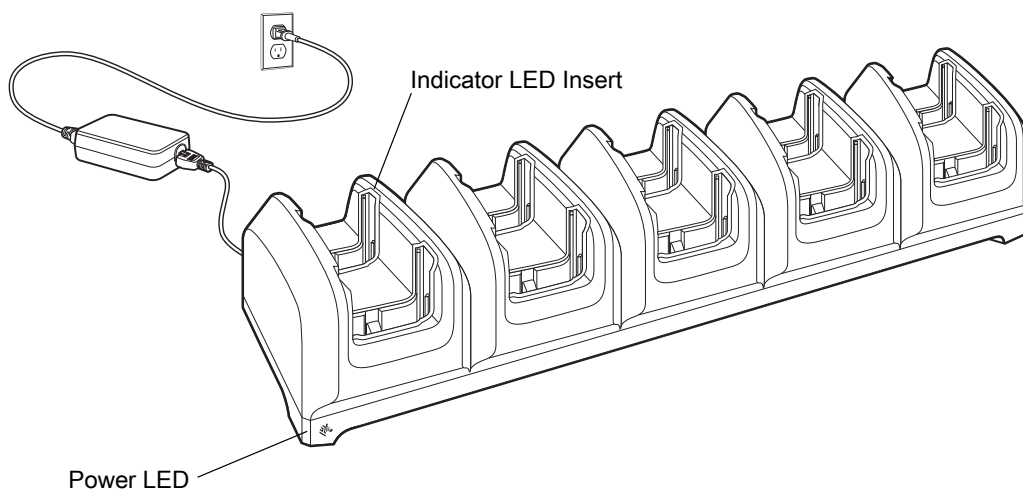


**NOTE:** Controlling the locking cradle is done through a software API. For more information, go to [techdocs.zebra.com](http://techdocs.zebra.com).

The 10-Slot Locking Charge Only Cradle:

- Provides 5 VDC for operating the cradle.
- Simultaneously charges up to ten devices.
- Each slot contains an Indicator LED Insert with RGB LEDs.

**Figure 64** 10-Slot Locking Charge Only Cradle

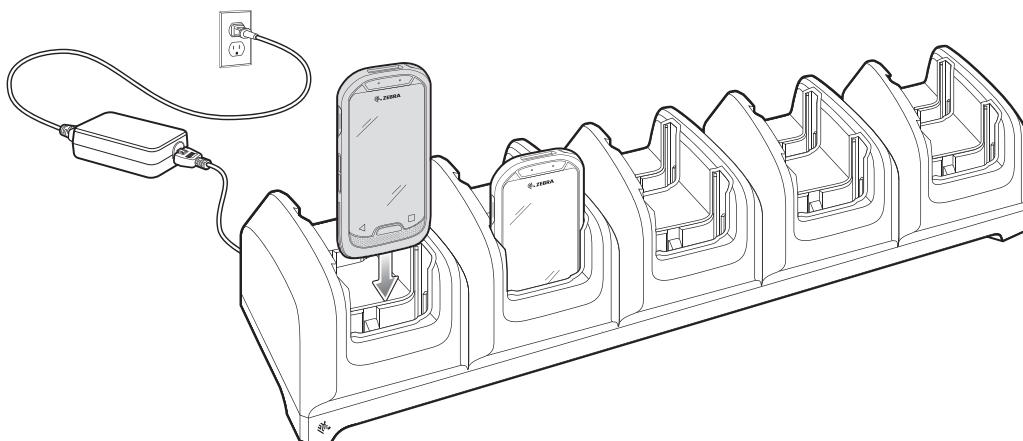


## Charging the Device

To charge a device:

1. Insert the device into a slot to begin charging.

**Figure 65** Device Battery Charging



2. Ensure the device is seated properly.

## Manual Release Using a Release Key

The EC30 10-Slot Locking Charge Only Cradle contains a locking mechanism that locks the EC30 inside the cradle when docked. If the EC30 fails to unlock during normal operation, use a release key (KT-MC18-CKEY-20) to unlock the EC30.

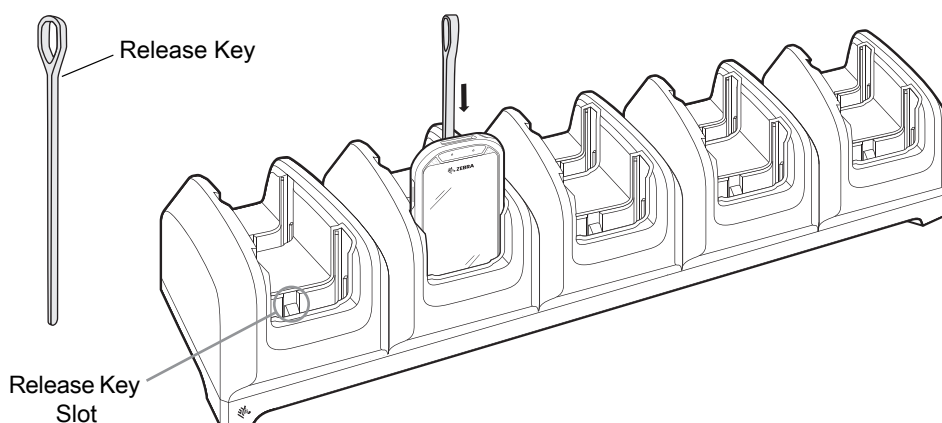


**CAUTION:** Do not use any device to unlock the cradle other than the tools described below. Failure to comply could result in damage to the cradle and void the warranty.

To release a locked EC30:

1. Insert the release key straight into the slot as shown below.
2. While pressing the release key all the way into the slot, remove the EC30 from the cradle.

**Figure 66** Manual Release of the EC30



## Battery Charging

The device's Charging/Notification LED indicates the status of the battery charging in the device. See Table 4 on page 16 for device charging status. The 1,200 mAh (typical) / 1,100 mAh (minimum) battery charges from fully depleted to 90% in approximately 2.5 hours and from fully depleted to 100% in approximately three hours.



**NOTE:** In most use cases the 90% charge provides plenty of charge for daily use. A full 100% charge can last for approximately 10 hours of use depending on device settings.

To achieve the best fast charging results use only Zebra charging accessories. Charge device at room temperature with the device in sleep mode.

## Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures (e.g. approximately +37°C (+98°F)) the device or cradle may for small periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device and cradle indicates when charging is disabled due to abnormal temperatures via its LED.

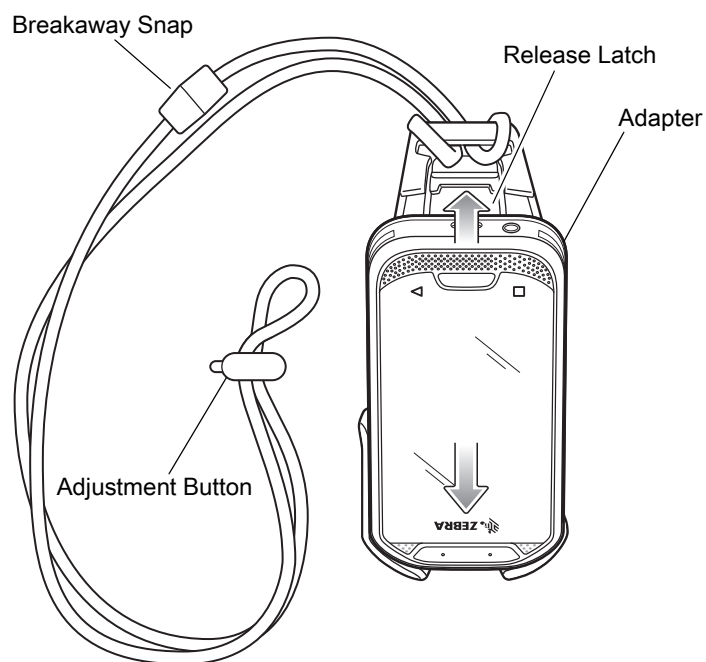
## Basic Lanyard

Use the basic lanyard to hold the EC30 around the neck for easy access.

1. Insert the top of the EC30 into the bottom of the adapter with the USB-C connector facing the release latch.
2. Push the EC30 into the adapter until it securely snaps in place.

To adjust the length of the lanyard, press and hold the adjustment button and slide the button up or down the string.

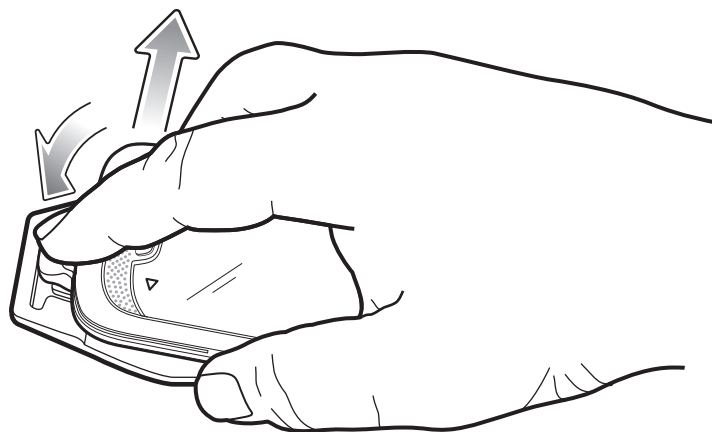
**Figure 67** Basic Lanyard



## Device Removal

To remove the EC30 from the adapter, push the release tab and pull the bottom of the EC30 away from the adapter.

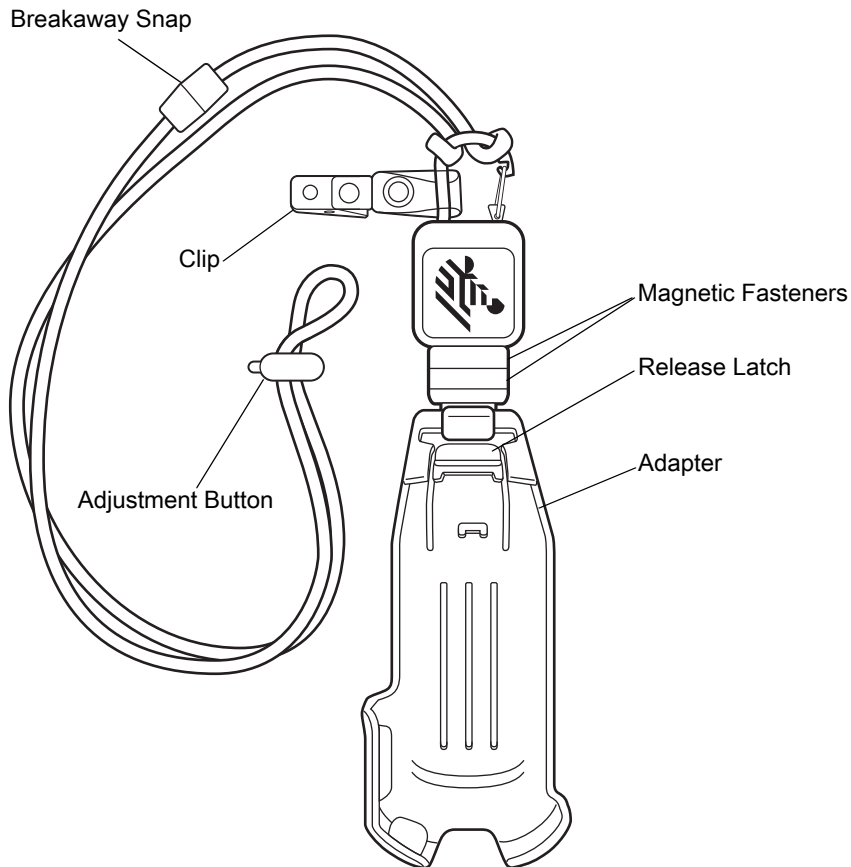
**Figure 68** Remove EC30 from Basic Lanyard



## Retractable Lanyard

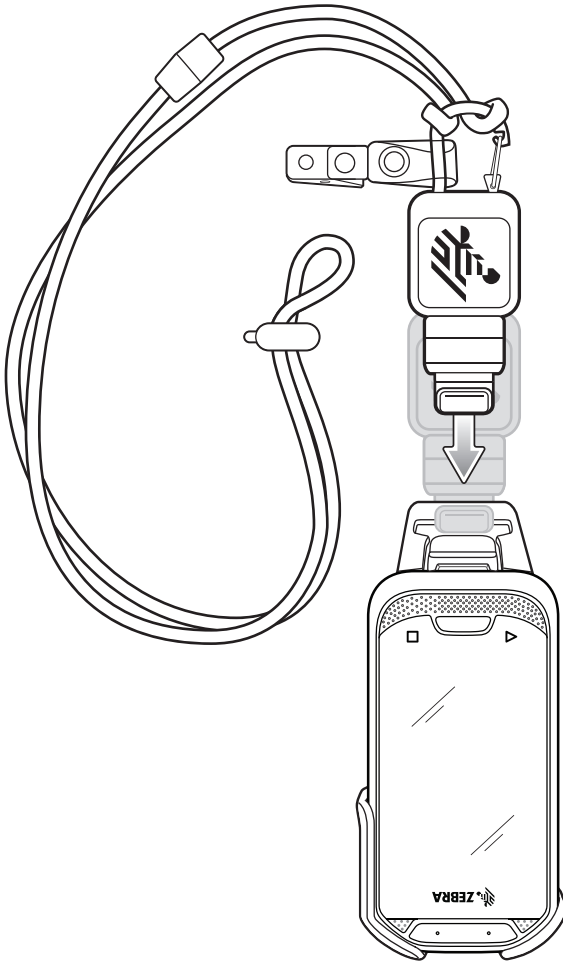
The retractable lanyard holds the EC30 around the neck and provides a retractable cord for easy access. Magnetic fasteners hold the EC30 securely when not in use.

**Figure 69** Retractable Lanyard



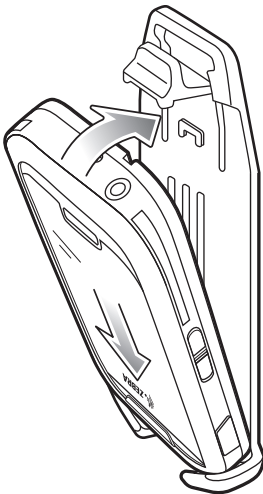
1. Snap the end of the lanyard onto the adapter.

**Figure 70** Attaching Lanyard to Adapter



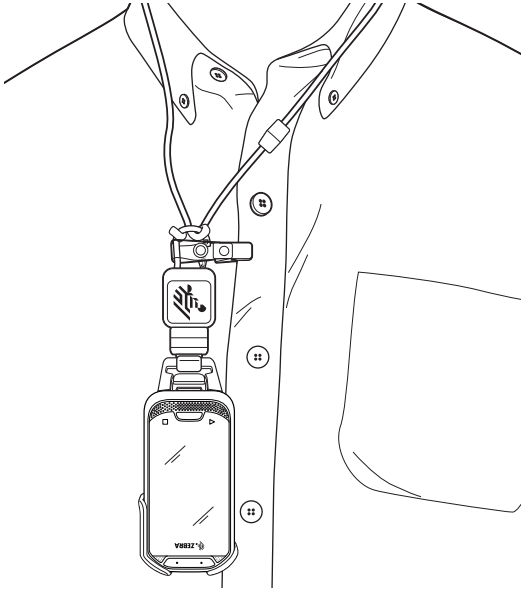
2. Insert the top of the EC30 into the bottom of the adapter with the USB-C connector facing the release latch.
3. Push the EC30 into the adapter until it securely snaps in place.

**Figure 71** Installing EC30 Into Lanyard Adapter



4. Use the clip to secure the retractable lanyard to clothing.

**Figure 72** Wearing Retractable Lanyard

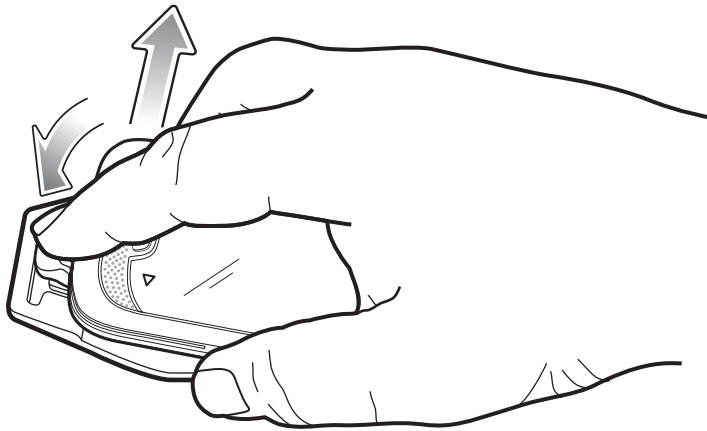


To adjust the length of the lanyard, press and hold the adjustment button and slide the button up or down the string.

## Device Removal

To remove the EC30 from the adapter, push the release tab and pull the bottom of the EC30 away from the adapter.

**Figure 73** Remove EC30 from Retractable Lanyard

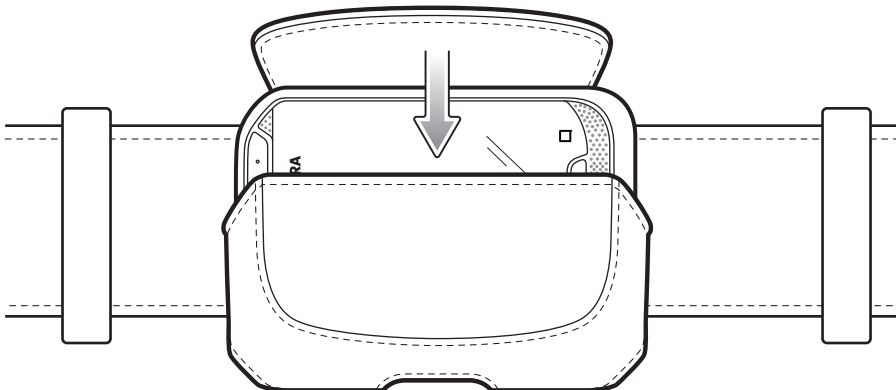




## Soft Holster

Use the soft holster to securely hold the device on a belt for easy access.

**Figure 74** Soft Holster

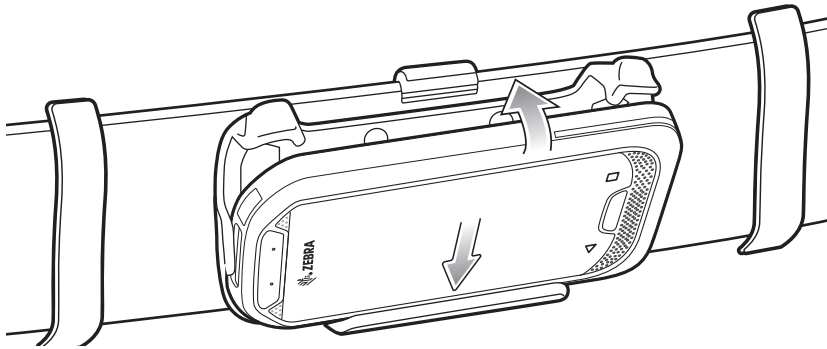


## Rigid Holster

Use the rigid holster to securely hold the device on a belt for easy access.

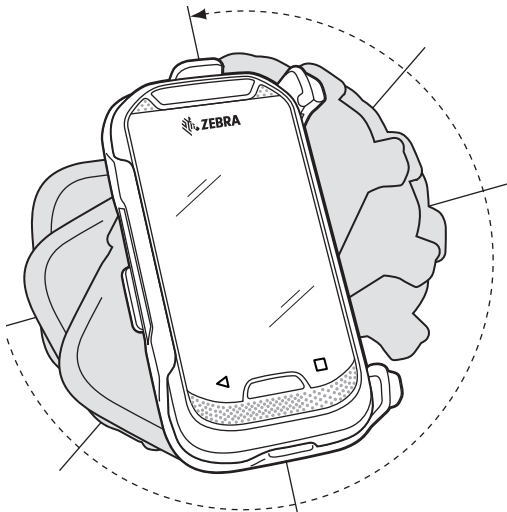
1. Insert the bottom of the EC30 into the bottom of the rigid holster.
2. Push the EC30 into the rigid holster until it securely snaps in place.

**Figure 75** Rigid Holster



3. Rotate the device for the best viewing angle.

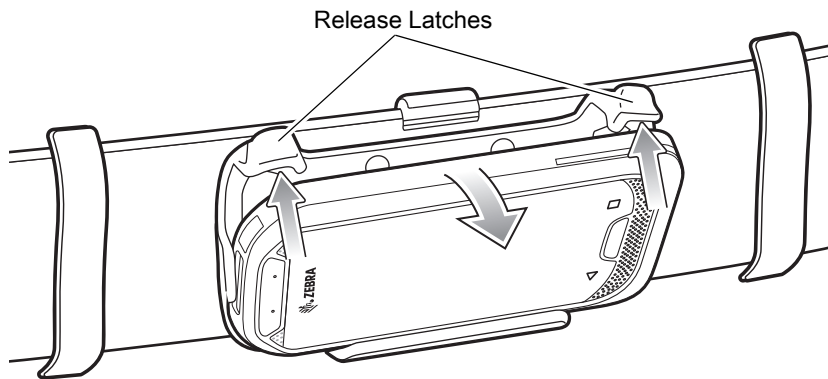
**Figure 76** Device Rotation



## Device Removal

To remove the EC30 from the rigid holster push the release latches up and pull the bottom of the EC30 away from the adapter.

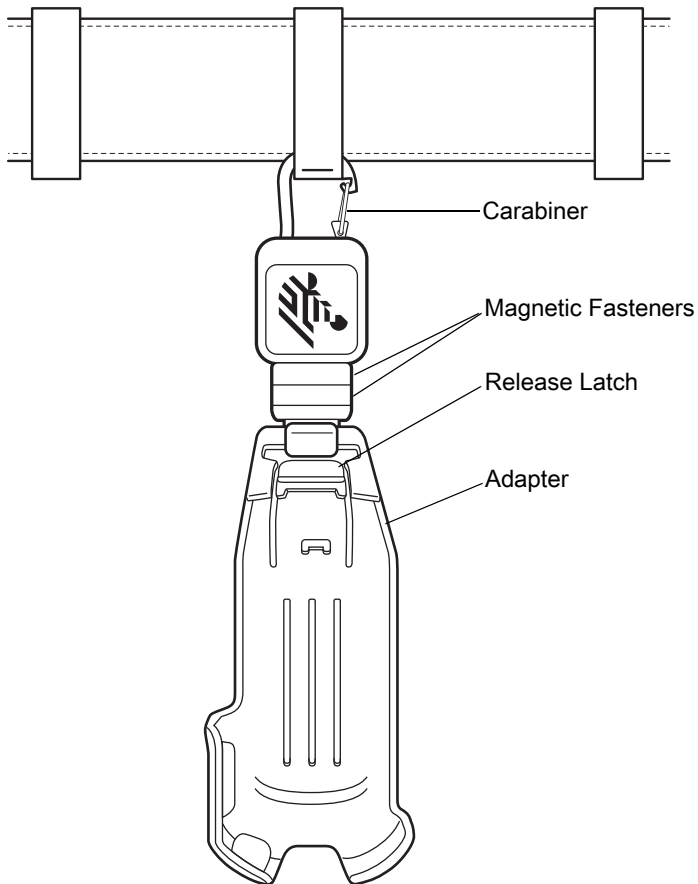
**Figure 77** Remove EC30 from Rigid Holster



## Belt Clip

The belt clip holds the EC30 on a belt and provides a retractable cord for easy access. Magnetic fasteners hold the EC30 securely when not in use.

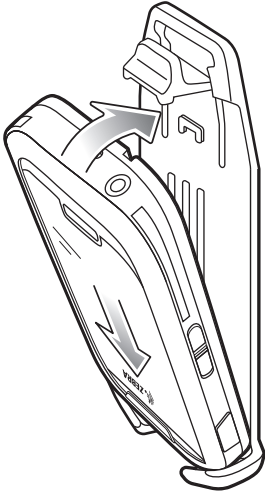
**Figure 78** Belt Clip



1. Insert the top of the EC30 into the bottom of the adapter with the USB-C connector facing the release latch.

2. Push the EC30 into the adapter until it securely snaps in place.

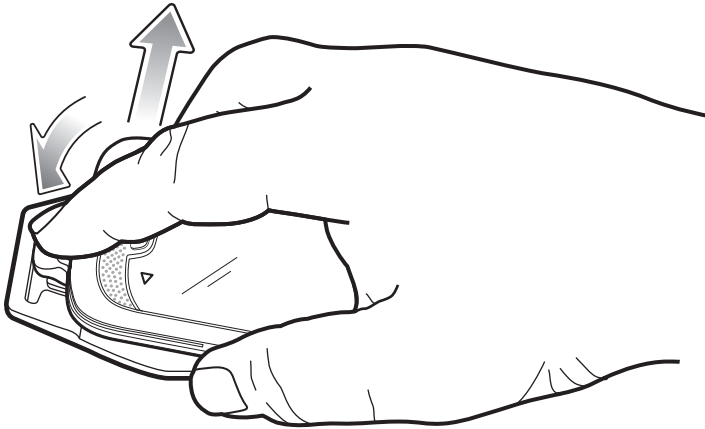
**Figure 79** Installing EC30 Into Belt Clip



## Device Removal

To remove the EC30 from the adapter, push the release tab and pull the bottom of the EC30 away from the adapter.

**Figure 80** Remove EC30 from Belt Clip

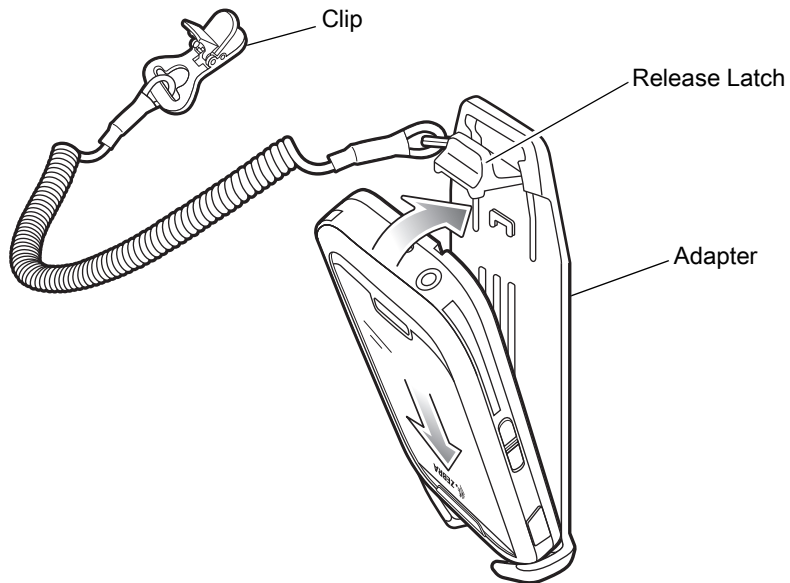


## Garment Clip

Use the garment clip to tether the EC30 to a vest or other garment.

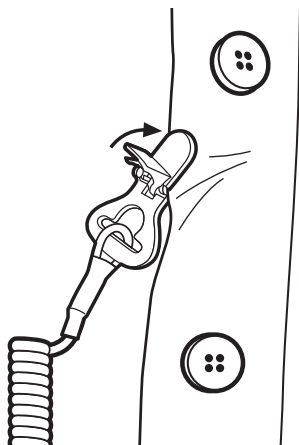
1. Insert the top of the EC30 into the bottom of the adapter with the USB-C connector facing the release latch.

**Figure 81** Installing EC30 into Garment Clip



2. Push the EC30 into the adapter until it snaps into place.
3. Attach the clip to a vest or other garment.

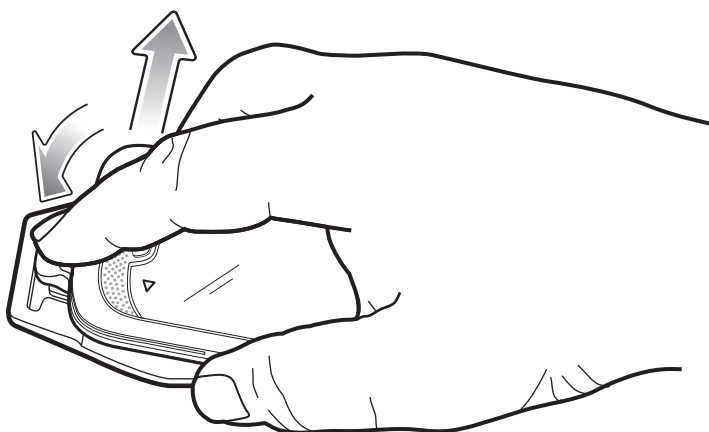
**Figure 82** Attaching Clip to a Garment



## Device Removal

To remove the EC30 from the adapter, push the release tab and pull the bottom of the EC30 away from the adapter.

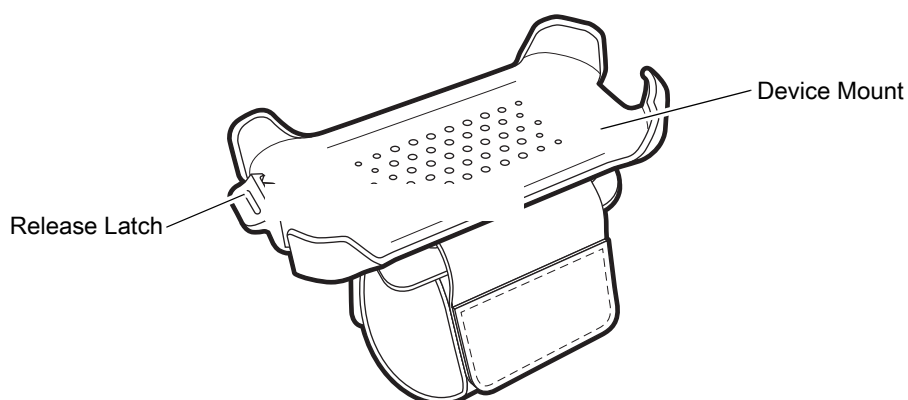
**Figure 83** Remove EC30 from Garment Clip



## Arm Mount

The Arm Mount allows the user to mount the EC30 onto the forearm for hands-free applications. Install the mount on either arm with the release latch closer to the elbow.

**Figure 84** Arm Mount

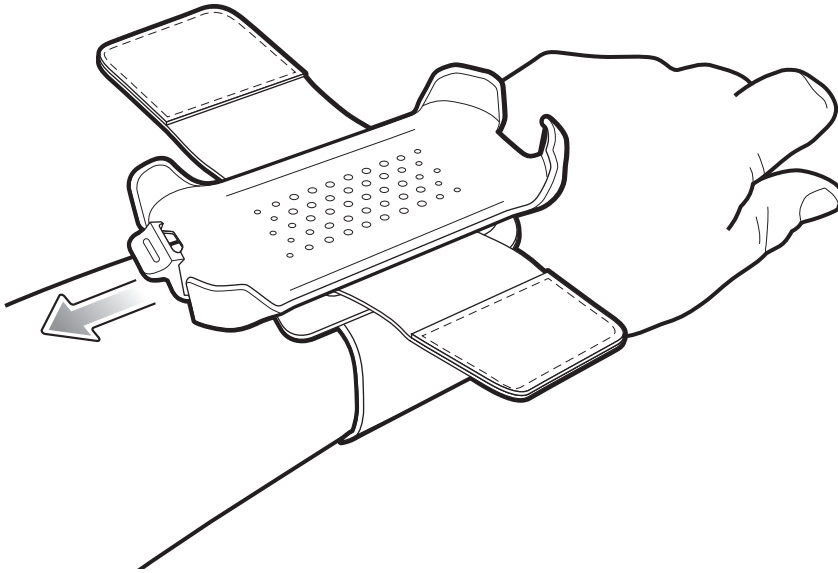


## Arm Mount Installation

To install the Arm Mount:

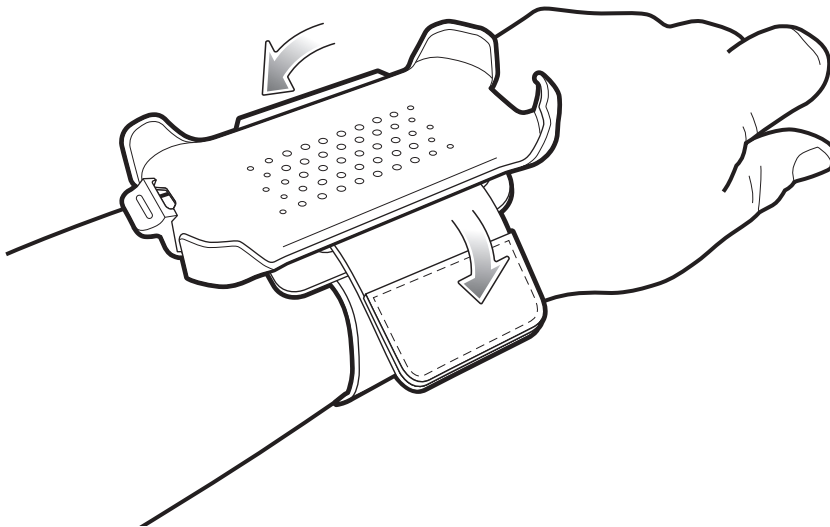
1. Loosen the strap.
2. Slide the Arm Mount onto arm with the release latch closer to the elbow.

Figure 85 Slide onto Forearm



3. Tighten the strap and press the hook and loop material together.

Figure 86 Tighten Strap



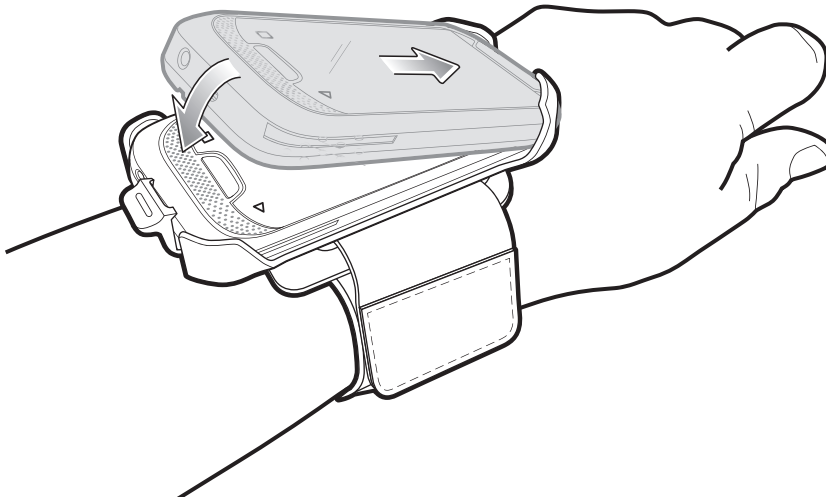
## Device Installation

To install the EC30 onto the mount:

1. Insert the top of the EC30 into the bottom of the adapter with the USB-C connector facing the release latch.
2. Push the EC30 into the adapter until it securely snaps in place.



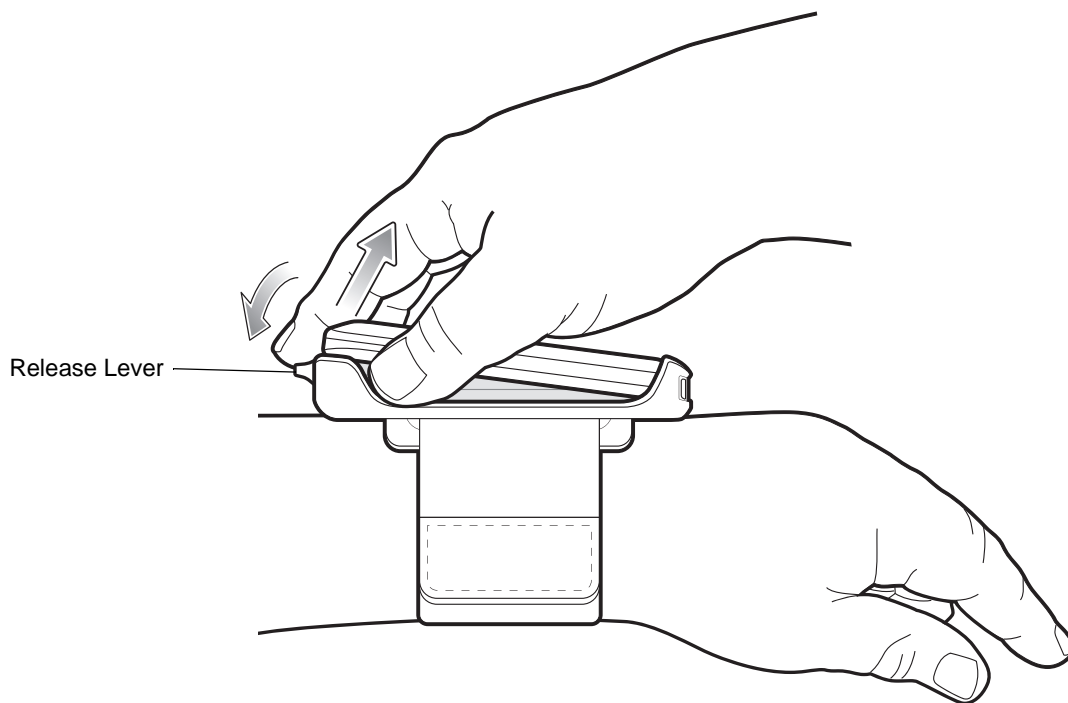
Figure 87 Install Device



## Device Removal

To remove the EC30 from the adapter, push the release tab and pull the bottom of the EC30 away from the adapter.

Figure 88 EC30 Removal

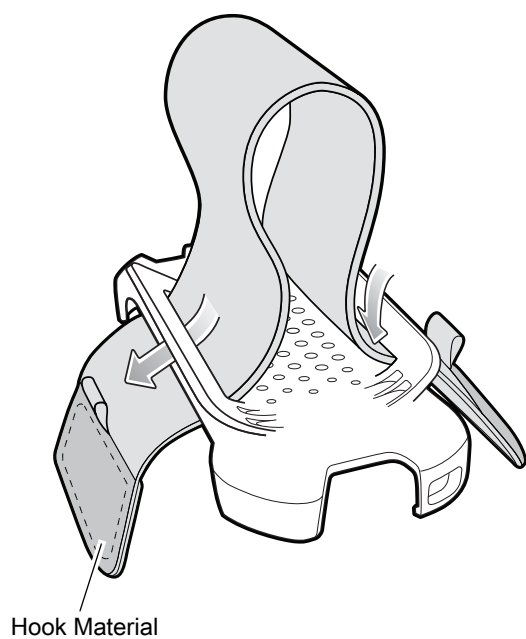


## Strap Installation

The user can remove the strap for replacement or cleaning and then re-install a new strap.

1. Remove existing strap.
2. Feed the ends of the strap through the slots with hook material positioned as shown below.

Figure 89 Feed Strap through Slots



3. Fold end over and press hook and loop material together.

# Maintenance and Troubleshooting

## Introduction

This chapter includes instructions on cleaning and storing the device, and provides troubleshooting solutions for potential problems during operation.

## Maintaining the Device

For trouble-free service, observe the following tips when using the device:

- To avoid scratching the screen, use a Zebra approved stylus or plastic-tipped pens capacitive touch panel compatible stylus intended for use with a touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the device screen.
- The touch-sensitive screen of the device is glass. Do not drop the device or subject it to strong impact.
- Protect the device from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- Do not store the device in any location that is dusty, damp, or wet.
- Use a soft lens cloth to clean the device. If the surface of the device screen becomes soiled, clean it with a soft cloth moistened with an approved cleanser. For a list of approved cleansers, see Approved Cleanser Active Ingredients.
- Periodically replace the rechargeable battery to ensure maximum battery life and product performance. Battery life depends on individual usage patterns.

## Battery Safety Guidelines

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non commercial environment.
- Follow battery usage, storage, and charging guidelines found in this guide.
- Improper battery use may result in a fire, explosion, or other hazard.
- To charge the mobile device battery, the ambient battery and charger temperatures must be between +32°F and +104°F (0°C and +40°C).
- Do not use incompatible batteries and chargers, including non-Zebra batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact the Global Customer Support Center.
- For devices that utilize a USB port as a charging source, the device shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- Do not disassemble or open, crush, bend or deform, puncture, or shred the battery.

- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.
- Battery usage by children should be supervised.
- Please follow local regulations to properly dispose of used re-chargeable batteries.
- Do not dispose of batteries in fire.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with water for 15 minutes, and seek medical advice.
- If you suspect damage to your equipment or battery, contact Customer Support to arrange for inspection.

## Cleaning Instructions



**CAUTION:** Always wear eye protection.

Read warning label on alcohol product before using.

If you have to use any other solution for medical reasons please contact the Global Customer Support Center for more information.



**WARNING:** Avoid exposing this product to contact with hot oil or other flammable liquids. If such exposure occurs, unplug the device and clean the product immediately in accordance with these guidelines.

## Approved Cleanser Active Ingredients

100% of the active ingredients in any cleaner must consist of one or some combination of the following: isopropyl alcohol, bleach/sodium hypochlorite<sup>1</sup> (see important note below), hydrogen peroxide, ammonium chloride, or mild dish soap.



**IMPORTANT:** Use pre-moistened wipes and do not allow liquid cleaner to pool.

<sup>1</sup>When using sodium hypochlorite (bleach) based products, always follow the manufacturer's recommended instructions: use gloves during application and remove the residue afterwards with a damp alcohol cloth or a cotton swab to avoid prolonged skin contact while handling the device.

Due to the powerful oxidizing nature of sodium hypochlorite, the metal surfaces on the device are prone to oxidation (corrosion) when exposed to this chemical in the liquid form (including wipes). In the event that these type of disinfectants come in contact with metal on the device, prompt removal with an alcohol-dampened cloth or cotton swab after the cleaning step is critical.

## Harmful Ingredients

The following chemicals are known to damage the plastics on the device and should not come in contact with the device: acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; aqueous or alcoholic alkaline solutions; ethanolamine; toluene; trichloroethylene; benzene; carbolic acid and TB-lysoform.

Many vinyl gloves contain phthalate additives, which are often not recommended for medical use and are known to be harmful to the housing of the device.

### Device Cleaning Instructions

Do not apply liquid directly to the device. Dampen a soft cloth or use pre-moistened wipes. Do not wrap the device in the cloth or wipe, instead gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Before use, allow the unit to air dry.



**NOTE:** For thorough cleaning, it is recommended to first remove all accessory attachments, such as hand straps or cradle cups, from the mobile device and to clean them separately.

### Special Cleaning Notes

The device should not be handled while wearing vinyl gloves containing phthalates, or before hands are washed to remove contaminant residue after gloves are removed.

If products containing any of the harmful ingredients listed above are used prior to handling the device, such as hand sanitizer that contain ethanalamine, hands must be completely dry before handling the device to prevent damage to the device.



**IMPORTANT:** If the battery connectors are exposed to cleaning agents, thoroughly wipe off as much of the chemical as possible and clean with an alcohol wipe. It is also recommended to install the battery in the terminal prior to cleaning and disinfecting the device to help minimize buildup on the connectors.

When using cleaning/disinfectant agents on the device, it is important to follow the directions prescribed by the cleaning/disinfectant agent manufacturer.

### Cleaning Materials Required

- Alcohol wipes
- Lens tissue
- Cotton-tipped applicators
- Isopropyl alcohol
- Can of compressed air with a tube.

### Cleaning Frequency

The cleaning frequency is at the customer's discretion due to the varied environments in which the mobile devices are used and may be cleaned as frequently as required. When dirt is visible, it is recommended to clean the mobile device to avoid build up of particles which make the device more difficult to clean later on.

### Cleaning the Device

#### Housing

Thoroughly wipe the housing, including all buttons and triggers, using an approved alcohol wipe.

#### Display

The display can be wiped down with an approved alcohol wipe, but care should be taken not to allow any pooling of liquid around the edges of the display. Immediately dry the display with a soft, non-abrasive cloth to prevent streaking.

## Exit Window

Wipe the exit window periodically with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.


## Troubleshooting

The following tables provides typical problems that might arise and the solution for correcting the problem.

**Table 15** *Troubleshooting the EC30*

Problem	Cause	Solution
When pressing the power button the device does not turn on.	Battery not charged.	Charge or replace the battery in the device.
	System crash.	Perform a reset.
When pressing the power button the device does not turn on but two LEDs blink.	Battery charge is at a level where data is maintained but battery should be re-charged.	Charge the battery in the device.
Battery did not charge.	Battery failed.	Contact system administrator.
	Device removed from cradle while battery was charging.	Insert device in cradle. See Charging the Device on page 15.
	Extreme battery temperature.	Battery does not charge if ambient temperature is below 0°C (32°F) or above 40°C (104°F).
Cannot see characters on display.	Device not powered on.	Press the <b>Power</b> button.
During data communication with a host computer, no data transmitted, or transmitted data was incomplete.	Device disconnected from host computer during communication.	Reattach the communication cable and re-transmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software was incorrectly installed or configured.	Perform setup.
During data communication over Wi-Fi, no data transmitted, or transmitted data was incomplete.	Wi-Fi radio is not on.	Turn on the Wi-Fi radio.
	You moved out of range of an access point.	Move closer to an access point.

**Table 15** *Troubleshooting the EC30 (Continued)*

Problem	Cause	Solution
During data communication over Bluetooth, no data transmitted, or transmitted data was incomplete.	Bluetooth radio is not on.	Turn on the Bluetooth radio.
	You moved out of range of another Bluetooth device.	Move within 10 meters (32.8 feet) of the other device.
No sound.	Volume setting is low or turned off.	Adjust the volume.
Device shuts off.	Device is inactive.	The display turns off after a period of inactivity. Set to 15 seconds for optimal battery life.
	Battery is depleted.	Replace the battery.
Tapping the window buttons or icons does not activate the corresponding feature.	The device is not responding.	Reboot the device.
A message appears stating that the device memory is full.	Too many files stored on the device.	Delete unused memos and records. If necessary, save these records on the host computer.
	Too many applications installed on the device.	Remove user-installed applications on the device to recover memory. Select  > <b>Apps</b> . Select the unused application and tap <b>UNINSTALL</b> .
The device does not decode with reading bar code.	Scanning application is not loaded.	Load a scanning application on the device or enable DataWedge. See the system administrator.
	Unreadable bar code.	Ensure the symbol is not defaced.
	Distance between exit window and bar code is incorrect.	Place the device within proper scanning range.
	Device is not programmed for the bar code.	Program the device to accept the type of bar code being scanned. Refer to the EMDK or DataWedge application.
	Device is not programmed to generate a beep.	If the device does not beep on a good decode, set the application to generate a beep on good decode.
	Battery is low.	If the scanner stops emitting an LED beam upon a trigger press, check the battery level. When the battery is low, the scanner shuts off before the device low battery condition notification. Note: If the scanner is still not reading symbols, contact the distributor or the Global Customer Support Center.

**Table 15** *Troubleshooting the EC30 (Continued)*

Problem	Cause	Solution
Device cannot find any Bluetooth devices nearby.	Too far from other Bluetooth devices.	Move closer to the other Bluetooth device(s), within a range of 10 meters (32.8 feet).
	The Bluetooth device(s) nearby are not turned on.	Turn on the Bluetooth device(s) to find.
	The Bluetooth device(s) are not in discoverable mode.	Set the Bluetooth device(s) to discoverable mode. If needed, refer to the device's user documentation for help.
Cannot unlock device.	User enters incorrect password.	If the user enters an incorrect password five times, the user is requested to wait for 30 seconds when using a PIN, Pattern or Password.
Some screen contents are not visible.	Some screen contents do not display correctly.	Rotate the device to enable landscape mode.



# Technical Specifications

## Introduction

The following sections provide technical specification for the device.

**Table 16** EC30 Technical Specifications

Item	Description
<b>Physical Characteristics</b>	
Dimensions	Height: 114 mm (4.49 in.) Width: 57 mm (2.24 in.) Depth: 14 mm (0.55 in.)
Weight	110 g (3.88 oz)
Display	3.0" Full Wide Video Graphics Array (854 x 480); 400 Nits maximum; optically bonded to touch panel
Touch Panel	Dual mode capacitive touch with stylus or bare or gloved fingertip input; Corning Gorilla Glass 3
Backlight	Light Emitting Diode (LED)
Battery	Rechargeable Li-Ion, Power Precision+ Standard Capacity, 1200 mAh; improved battery technology for longer cycle times and real-time visibility into battery metrics for better battery management; fast USB charging (500 mA)
Connection Interface	Universal Serial Bus (USB) 2.0 High Speed (host and client)
Network Connections	WLAN, WPAN (Bluetooth)
Notification	Audible tone; multi-color LEDs
Keypad	On-screen keyboard
Voice and Audio	One microphone support with noise suppression; speaker; Bluetooth wireless headset support. Hands-free mode (PTT only); headset mode (PTT and VoIP); HD Voice.
Buttons	Dedicated push-to-talk button, volume up/down buttons, Home button, Power Button, and Scan button.
<b>Performance Characteristics</b>	
CPU	Snapdragon 660 64-bit Hexa-Core 2.2 GHz
Operating System	Android 8.1 Oreo with Zebra's Mobility Extensions (Mx)

**Table 16** EC30 Technical Specifications

Item	Description
Memory	4 GB RAM/32 GB Flash
Output Power	USB - 5 VDC @ 500 mA max
<b>User Environment</b>	
Operating Temperature	0°C to 50°C (32°F to 122°F)
Relative Humidity	Operating: 5 to 95% non-condensing
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Charging Temperature	0° C to 40° C (32°F to 104°F)
Humidity	5 to 85% non-condensing
Drop Specification	Multiple 1.2 m (4 ft.) to smooth concrete over 0°C to 50°C (14°F to 122°F).
Tumble	1000 0.5 m (1.6 ft.) tumbles; meets and exceeds IEC tumble specifications
Sealing	IP54 per applicable IEC sealing specifications
Electrostatic Discharge (ESD)	+/-20 kVDC air discharge, +/-10 kVDC direct discharge, +/- 10 kVDC indirect discharge
Vibration	IEC 60721-3-3 - Dynamic conditions per class 3M2
Thermal Shock	-40°C to 70°C (-40°F to 158°F) rapid transition
<b>Interactive Sensor Technology (IST)</b>	
Motion Sensor	3-axis accelerometer with MEMS Gyro
Magnetometer	eCompass automatically detects direction and orientation.
<b>Wireless LAN Data and Voice Communications</b>	
Radio	IEEE 802.11a/b/g/n/ac/d/h/i/k/r/w; Wi-Fi™ certified; IPv4, IPv6; 2X2 MIMO
Data Rates Supported	5GHz: 802.11a/n/ac - up to 866.7 Mbps 2.4GHz: 802.11b/g/n - up to 144 Mbps
Operating Channels	Chan 1 - 13 (2412 - 2472 MHz) Chan 36 - 165 (5180 - 5825 MHz) Channel Bandwidth: 20, 40, 80 MHz Actual operating channels/frequencies depend on regulatory rules and certification agency
Security and Encryption	WEP (40 or 104 bit); WPA/WPA2 Personal (TKIP, and AES); WPA/WPA2 Enterprise (TKIP and AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC and LEAP Data in Motion: FIPS 140-2 Level 1 Data at Rest: FIPS 140-2 Level 1
Certifications	WFA (802.11n, 802.11ac, WMM-AC, Voice Enterprise, WMM-PS), Miracast
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC
<b>Wireless PAN Data and Voice Communications</b>	

**Table 16** EC30 Technical Specifications

Item	Description
Bluetooth	Class 2, Bluetooth v5.0 (Bluetooth Smart technology); Bluetooth Wideband support HFPv1.6; Bluetooth v5.2 Low Energy (LE)
<b>Data Capture Specifications</b>	
Scanning	SE2100 imager (1D and 2D) with LED aimer.
<b>2D Imager Engine Specifications</b>	
Field of View	Horizontal - 41.5° Vertical - 31.7°
Image Resolution	640 horizontal X 480 vertical pixels
Roll	360°
Pitch Angle	+/- 60° from normal
Skew Tolerance	+/- 60° from normal
Ambient Light	Sunlight: 10,000 ft. candles (107,639 lux)
Focal Distance	From front of engine: 10.7 cm (4.2 in.)
Illumination System	LEDs: Ultra white Pattern Angle: 42° horizontal, 32.0° vertical at 50% intensity

**Table 17** Data Capture Supported Symbolologies

Item	Description
1D Bar Codes	Code 128, EAN-8, EAN-13, GS1 DataBar Expanded, GS1 128, GS1 DataBar Coupon, UPCA, Interleaved 2 of 5, UPC Coupon Code
2D Bar Codes	PDF-417, QR Code

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