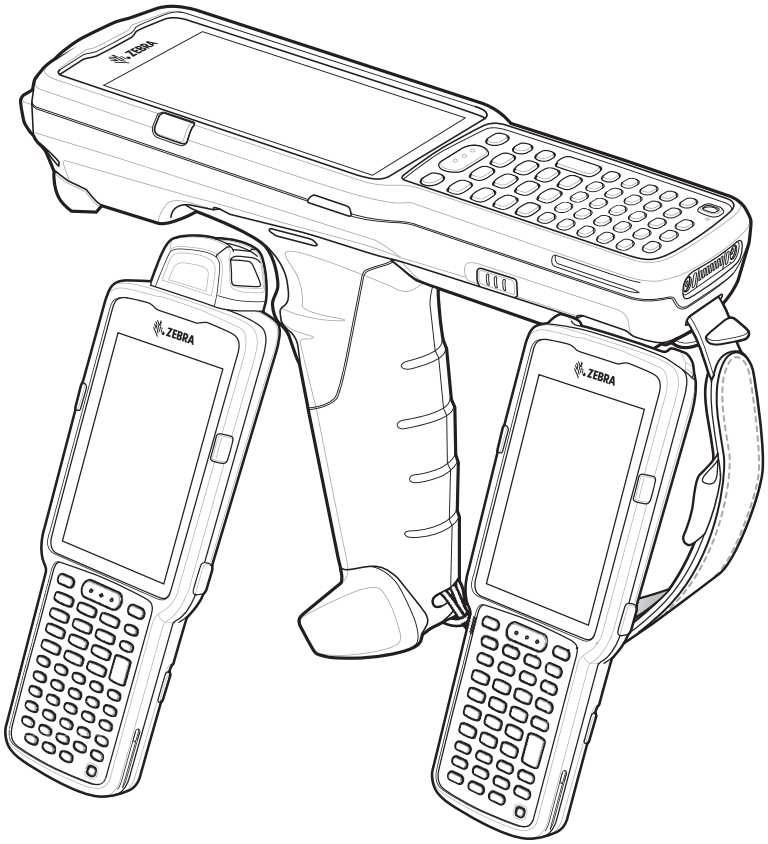
MC33XX

Mobile Computer



User Guide
for Android ™ 8.1 Oreo

ZEBRA

MN-003228-03 Rev A

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	12/2018	Initial release.

Change	Date	Description
-02 Rev A	05/2019	Updated the Features section in the Getting Started chapter to include the Application Notification LED and updated the Accessories chapter note to indicate that to function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.
-03 Rev A	09/2019	Updated to indicate the lanyard is compatible only with the MC33XX-R and MC33XX-S configurations, remove screws on the forklift mount, and replace the Screen Protector Mode screen.

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About This Guide

Introduction

This guide provides information about using the MC33XX mobile computer and accessories.

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

Configurations

MC33XX used in this guide refers to all configurations, except where noted. MC33XX-G refers to the Trigger configuration. MC33XX-R refers to the Rotate configuration. MC33XX-S refers to the Straight configuration. MC33XX-S45 refers to the 45 degree angle Straight configuration.

This guide covers the following configurations:

Table 1 *Configurations*

Configuration	Radios	Display	Memory	Data Capture Options	Operating System
MC33XX–G Standard	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE)	4.0” color	2 GB RAM / 16 GB Flash	SE965 1D, SE4750-SR 2D	Android-based AOSP/GMS 8.1
MC33XX–G Premium	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 16 GB Flash	SE965 1D, SE4750-SR 2D, SE4850-ER 2D	Android-based AOSP/GMS 8.1
MC33XX–G Premium +	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 32 GB Flash	SE965 1D, SE4750-SR 2D, SE4850-ER 2D	Android-based AOSP/GMS 8.1
MC33XX–R Standard	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE)	4.0” color	2 GB RAM / 16 GB Flash	SE965 1D	Android-based AOSP/GMS 8.1
MC33XX–R Premium	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 16 GB Flash	SE965 1D	Android-based AOSP/GMS 8.1

Table 1 *Configurations (Continued)*

Configuration	Radios	Display	Memory	Data Capture Options	Operating System
MC33XX–R Premium +	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 32 GB Flash	SE965 1D Color Camera	Android-based AOSP/GMS 8.1
MC33XX–S Standard	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE)	4.0” color	2 GB RAM / 16 GB Flash	SE965 1D, SE4750-SR 2D, SE4850-ER 2D	Android-based AOSP/GMS 8.1
MC33XX–S Premium	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 16 GB Flash	SE965 1D, SE4750-SR 2D, SE4850-ER 2D	Android-based AOSP/GMS 8.1
MC33XX–S Premium +	WLAN: IEEE® 802.11a/b/g/n/ac/d /h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 32 GB Flash	SE4750-SR 2D, SE4850-ER 2D Color Camera	Android-based AOSP/GMS 8.1

Table 1 *Configurations (Continued)*

Configuration	Radios	Display	Memory	Data Capture Options	Operating System
MC33XX–S45 Standard	WLAN: IEEE® 802.11a/b/g/n/ac/d/h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE)	4.0” color	2 GB RAM / 16 GB Flash	SE4750-SR 2D	Android-based AOSP/GMS 8.1
MC33XX–S45 Premium	WLAN: IEEE® 802.11a/b/g/n/ac/d/h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 16 GB Flash	SE4750-SR 2D	Android-based AOSP/GMS 8.1
MC33XX–S45 Premium +	WLAN: IEEE® 802.11a/b/g/n/ac/d/h/i/k/r/w WPAN: Bluetooth V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE) NFC	4.0” color	4 GB RAM / 32 GB Flash	SE4750-SR 2D Color Camera	Android-based AOSP/GMS 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**
   - **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 basic instructions for using the device with Android OS, including powering on and resetting the device.
- Applications describes the applications installed on the device.
- Data Capture provides information for capturing barcode data using the internal scanner and optional scan modules and Bluetooth scanner.
- Wireless provides information on the various wireless options.
- Accessories describes the available accessories and how to use them with the device.
- Maintenance and Troubleshooting includes instructions on cleaning and storing the device, and provides troubleshooting solutions for potential problems during device operation.
- Specifications provides the technical specifications for the device.
- Keypads provides keypad descriptions and special character generation tables.

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

- MC33XX Mobile Computer Quick Start Guide, p/n MN-003143-XX
- MC33XX Regulatory Guide, p/n MN-003144-XX
- MC33XX Mobile Computer Integrator Guide for Android 8.1 Oreo, p/n MN-003229-XX

For the latest version of this guide and all guides, go to: http://www.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.

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)

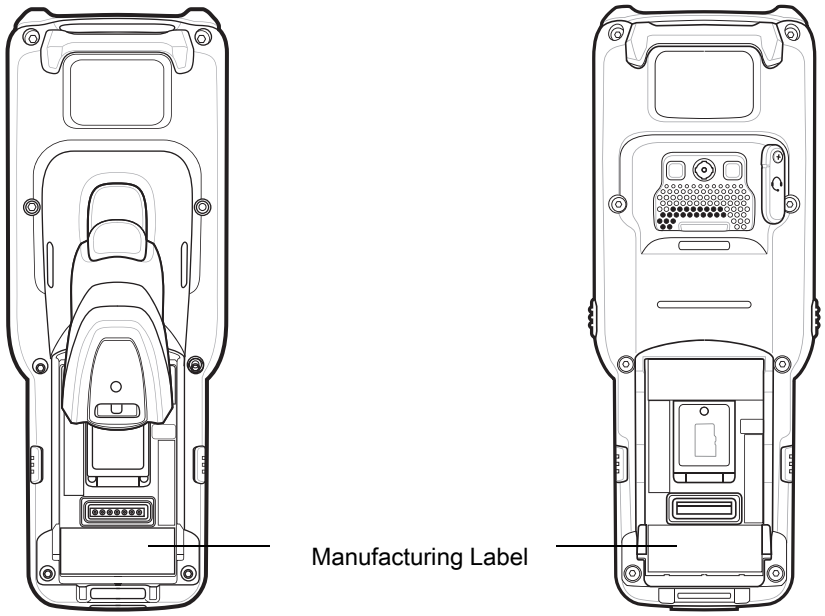
- Software type and version number

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. Remove the microSD card from the device before shipping for service.

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

Figure 1 Manufacturing Label Location



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If you have comments, questions, or suggestions about this guide, send an email to EVM-Techdocs@zebra.com.

Getting Started

Introduction

This chapter provides the features of the device and explains how to set it up for the first time.

MC33XX-G Features

Figure 2 MC33XX-G Front View

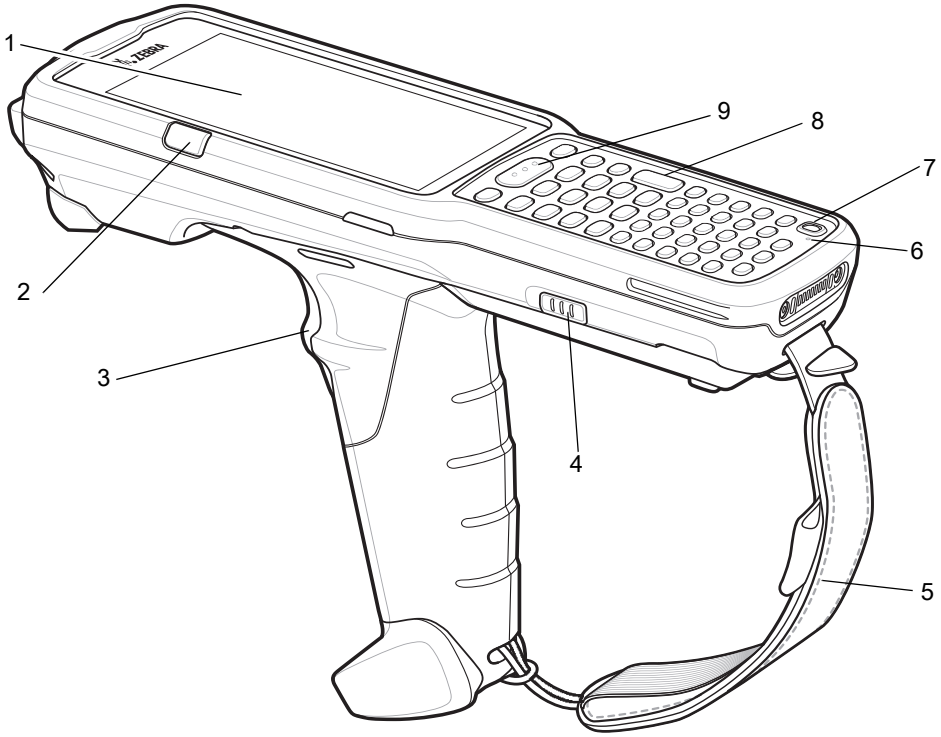


Table 2 *MC33XX-G Features - Front View*

Number	Item	Function
1	Display	Displays all information needed to operate the device.
2	Charge /Application Notification LED or Scan/Decode Status	Indicates the battery charge state while charging, an application notification was received, or the scan/decode status.
3	Trigger	Initiates data capture when a scan application is enabled.
4	Battery Release Latch	Release the battery from the device.
5	Hand Strap	Use for securely holding the device.
6	Microphone	Use for communications in Handset mode.
7	Power Button	Press and hold to turn on the device. Press to turn on or off the screen. Press and hold to select one of these options: **Power off** - Turn off the device. **Reboot** - Reboot the device when software stops responding. **Airplane mode** - Disable all wireless connections. **Silent mode** - All notifications are disabled except for alarms.
8	Keypad	Use to enter data and navigate on screen functions.
9	Scan Button	Initiates data capture when a scan application is enabled.

Figure 3 MC33XX-G Back View

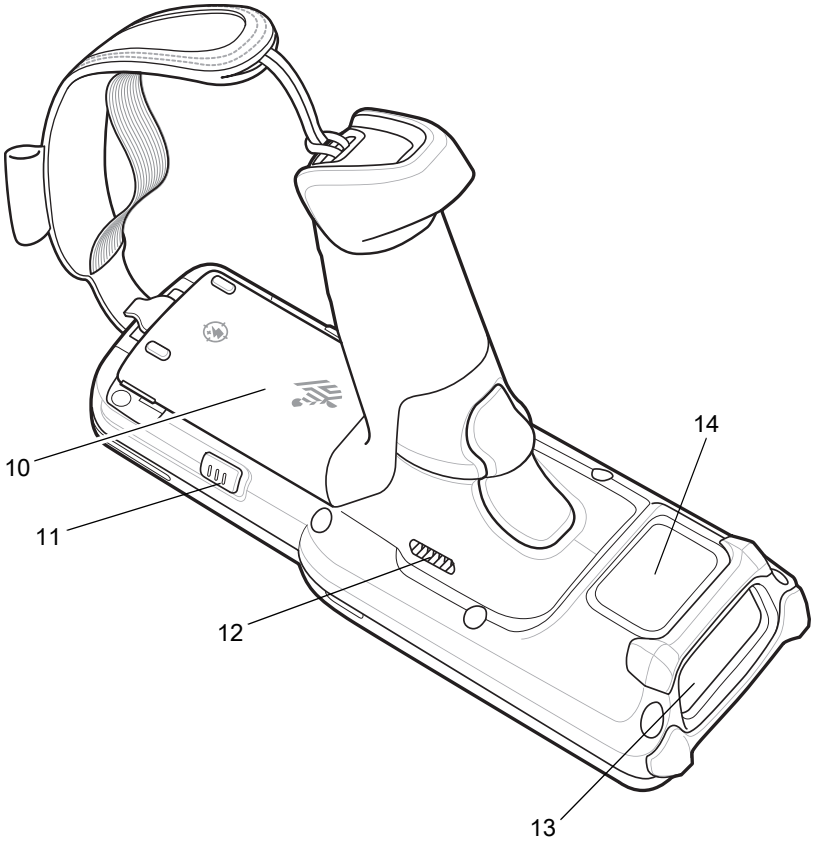


Table 3 *MC33XX-G Features - Back View*

Number	Item	Function
10	Battery	Provides power for operating the device.
11	Battery Release Latch	Release the battery from the device.
12	Speaker	Provides audio output for video and music playback.
13	Scanner Exit Window	Provides data capture using the scanner.
14	NFC Antenna	Provides communication with other NFC-enabled devices.

MC33XX-R Features

Figure 4 MC33XX-R Front View

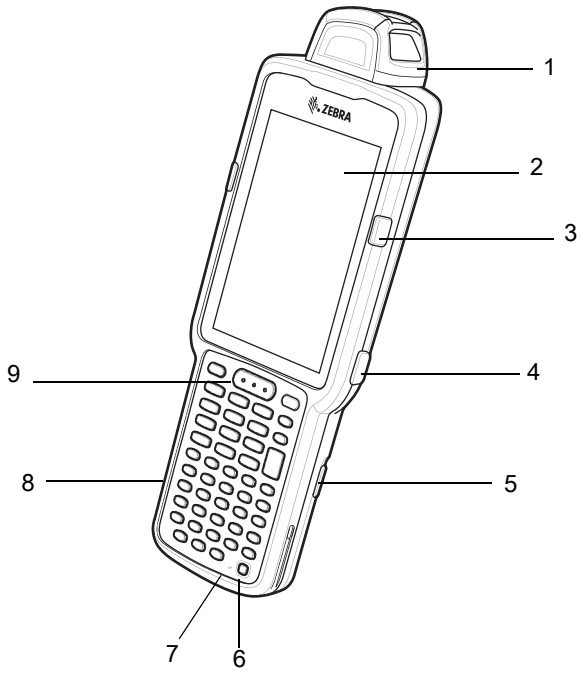


Table 4 *MC33XX-R Features - Front View*

Number	Item	Function
1	Rotating Turret	Rotates for easy scanning positions.
2	Display	Displays all information needed to operate the device.
3	Charge /Application Notification LED or Scan/Decode Status	Indicates the battery charge state while charging, an application notification was received, or the scan/decode status.
4	Side Key Scan Button	Initiates data capture when a scan application is enabled.
5	Battery Release Latch	Release the battery from the device.
6	Power Button	Press and hold to turn on the device. Press to turn on or off the screen. Press and hold to select one of these options: **Power off** - Turn off the device. **Reboot** - Reboot the device when software stops responding. **Airplane mode** - Disable all wireless connections. **Silent mode** - All notifications are disabled except for alarms.

Table 4 *MC33XX-R Features - Front View (Continued)*

Number	Item	Function
7	Microphone	Use for communications in Handset mode.
8	Keypad	Use to enter data and navigate on screen functions.
9	Scan Button	Initiates data capture when a scan application is enabled.

Figure 5 MC33XX-R Back View

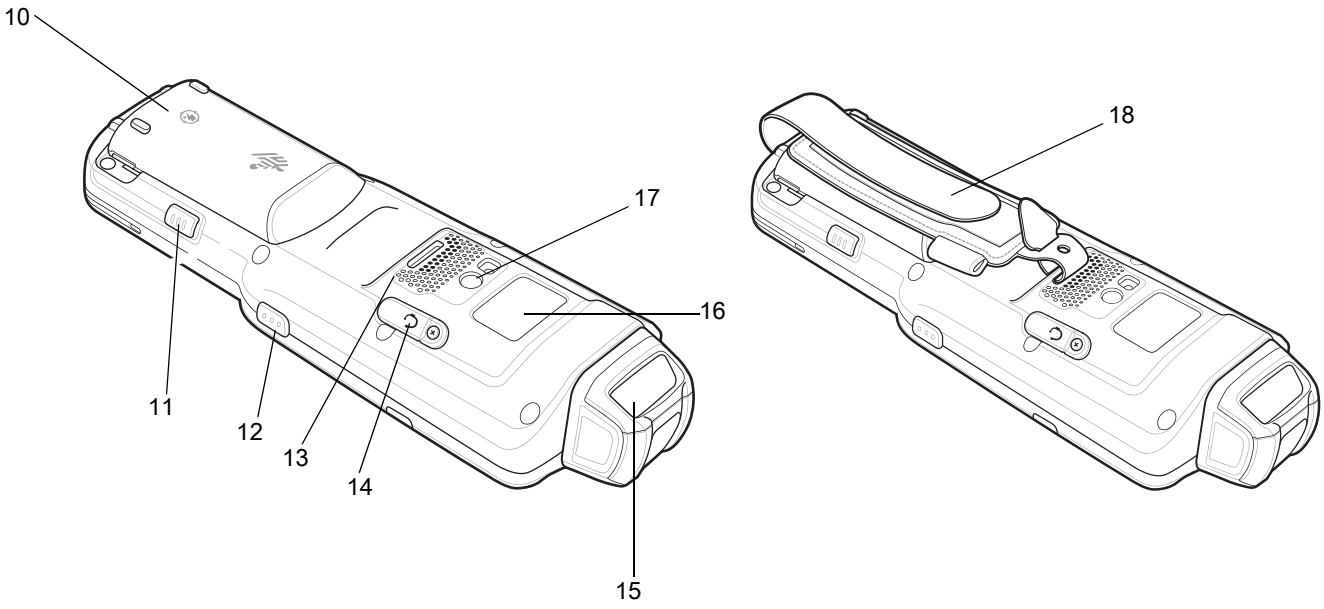


Table 5 *MC33XX-R Features - Back View*

Number	Item	Function
10	Battery	Provides power for operating the device.
11	Battery Release Latch	Release the battery from the device.
12	Side Key Scan Button	Initiates data capture when a scan application is enabled.
13	Speaker	Provides audio output for video and music playback.
14	Audio Jack	Connects to headsets (2.5 mm jack).
15	Scanner Exit Window	Provides data capture using the scanner.

Table 5 *MC33XX-R Features - Back View (Continued)*

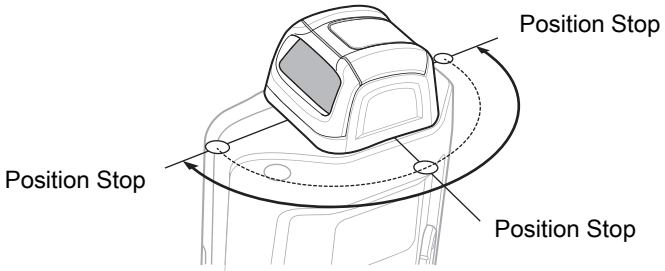
Number	Item	Function
16	NFC Antenna	Provides communication with other NFC-enabled devices.
17	Camera/Flash	Provides illumination for the camera.
18	Hand Strap	Use for securely holding the device.

Rotating Scan Turret

The MC33XX-R features a Rotating Turret with three position stops. This feature offers greater scanning flexibility.

CAUTION: Do not try to rotate the turret past the side position stops. Damage to device may occur.

Figure 6 MC33XX-R Rotating Turret



MC33XX-S Features

Figure 7 MC33XX-S Front View

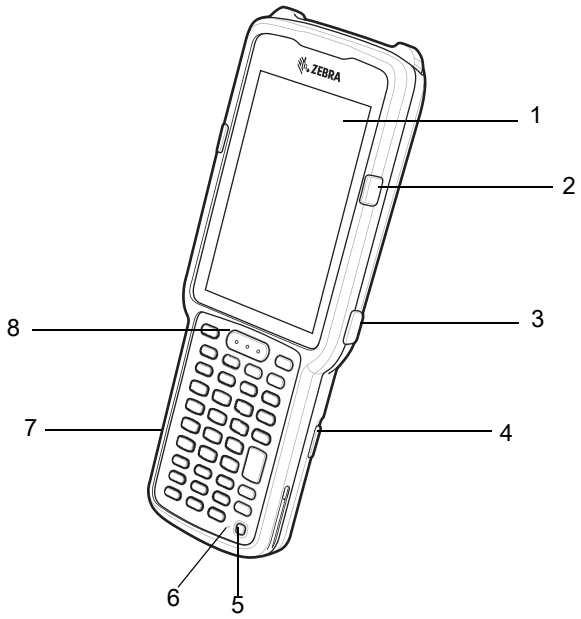


Table 6 *MC33XX-S Features - Front View*

Number	Item	Function
1	Display	Displays all information needed to operate the device.
2	Charge /Application Notification LED or Scan/Decode Status	Indicates the battery charge state while charging, an application notification was received, or the scan/decode status.
3	Side Key Scan Button	Initiates data capture when a scan application is enabled.
4	Battery Release Latch	Release the battery from the device.
5	Power Button	Press and hold to turn on the device. Press to turn on or off the screen. Press and hold to select one of these options: **Power off** - Turn off the device. **Reboot** - Reboot the device when software stops responding. **Airplane mode** - Disable all wireless connections. **Silent mode** - All notifications are disabled except for alarms.

Table 6 *MC33XX-S Features - Front View (Continued)*

Number	Item	Function
6	Microphone	Use for communications in Handset mode.
7	Keypad	Use to enter data and navigate on screen functions.
8	Scan Button	Initiates data capture when a scan application is enabled.

Figure 8 MC33XX-S Back View

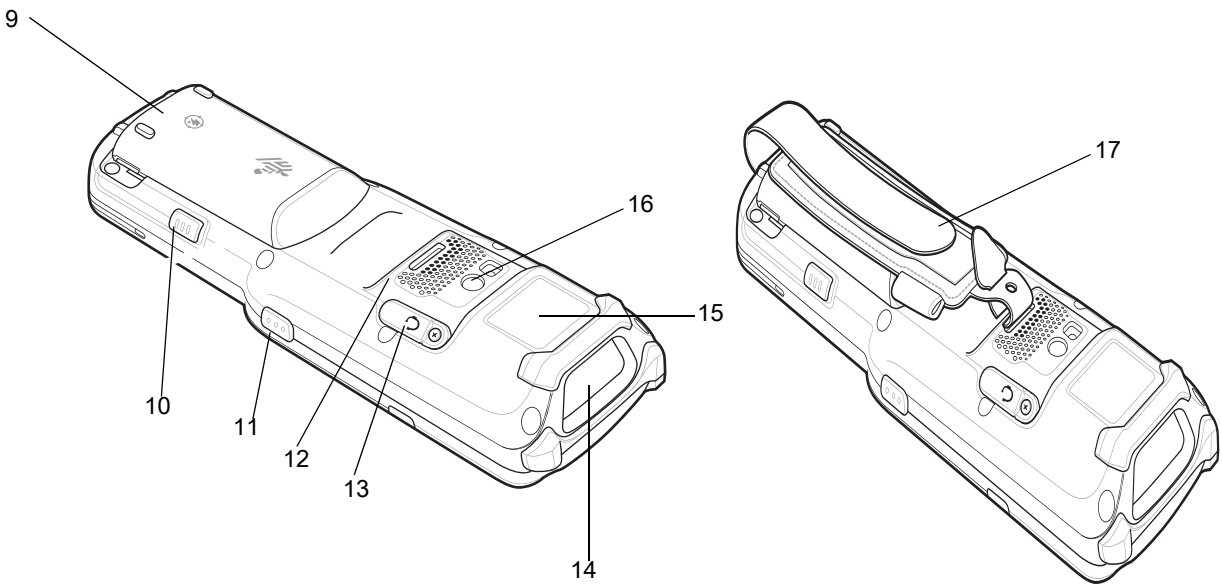


Table 7 *MC33XX-S Features - Back View*

Number	Item	Function
9	Battery	Provides power for operating the device.
10	Battery Release Latch	Release the battery from the device.
11	Side Key Scan Button	Initiates data capture when a scan application is enabled.
12	Speaker	Provides audio output for video and music playback.
13	Audio Jack	Connects to headsets (2.5 mm jack).
14	Scanner Exit Window	Provides data capture using the scanner.

Table 7 *MC33XX-S Features - Back View (Continued)*

Number	Item	Function
15	NFC Antenna	Provides communication with other NFC-enabled devices.
16	Camera/Flash	Provides illumination for the camera.
17	Hand Strap	Use for securely holding the device.

Unpacking

Carefully remove all protective material from the MC33XX and save the shipping container for later storage and shipping.

Verify the following items are in the box:

- MC33XX
- Lithium-ion battery
- Regulatory Guide.

Inspect the equipment for damage. If any equipment is missing or damaged, contact the Zebra Support Center immediately. See Service Information on page 17 for contact information.

Setup

To start using the MC33XX for the first time:

- Install a microSD card (optional)
- Install the battery
- Charge the MC33XX
- Power on the MC33XX.

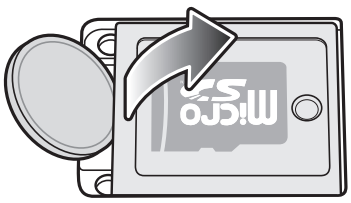
Installing a microSD Card

The microSD card slot provides secondary non-volatile storage. The slot is located under the battery pack. Refer to the documentation provided with the card for more information, and follow the manufacturer's recommendations for use.

CAUTION: Follow proper electrostatic discharge (ESD) precautions to avoid damaging the microSD card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

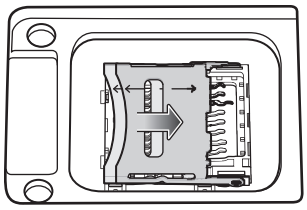
1. Using a coin or finger, remove the microSD card cover.

Figure 9 Remove microSD Card Cover



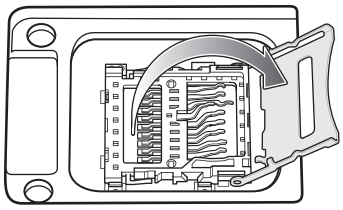
2. Slide the microSD card holder to the Open position.

Figure 10 Unlock microSD Card Holder



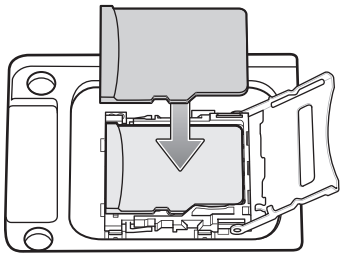
3. Lift the microSD card holder.

Figure 11 Lift microSD Card Holder



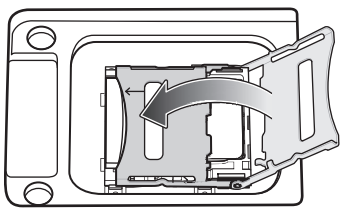
4. Place the microSD card into the contact area with the contacts facing down.

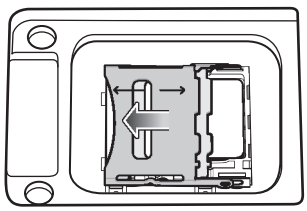
Figure 12 Install microSD Card



5. Close the microSD card holder and slide the microSD card holder to the Lock position.

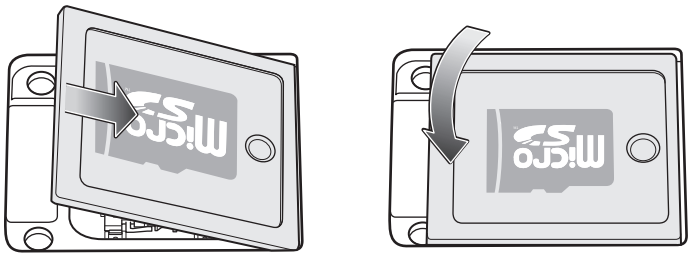
Figure 13 Lock microSD Card Holder





6. Replace the microSD card cover and ensure that it is installed properly.

Figure 14 Replace Cover



Installing the MC33XX-G Battery

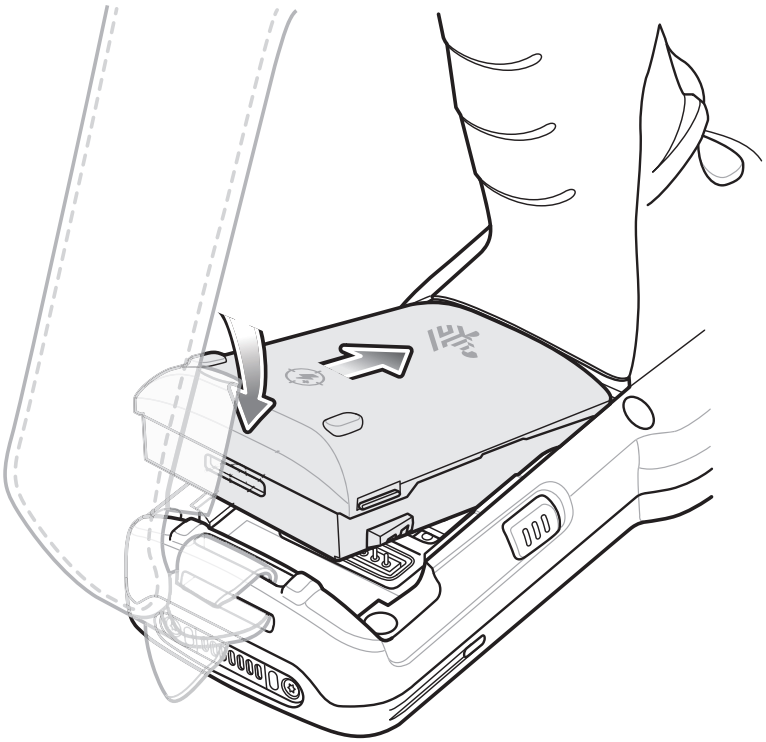
The MC33XX-G is compatible with the following batteries:

- MC33XX 5200 mAh PowerPrecision+ extended battery.
- MC32N0 5200 mAh PowerPrecision extended battery.

To install the battery:

1. Loosen the hand strap, if needed.
2. Align the battery into the battery compartment.

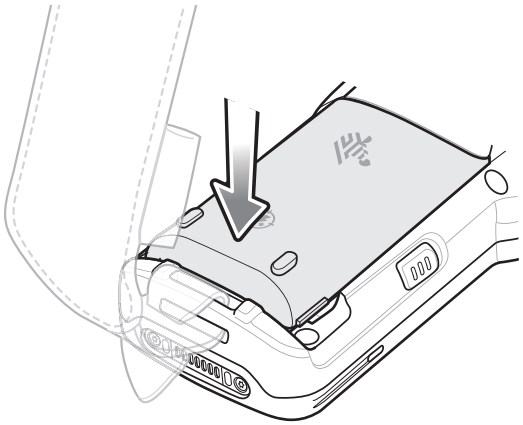
Figure 15 Inserting the Battery



3. Rotate the bottom of the battery into the battery compartment.

4. Press battery down firmly. Ensure that both battery release buttons on the sides of the MC33XX-G return to the home position.

Figure 16 Press Battery Down



5. Tighten the hand strap, if needed.
6. Press the Power button to turn on the device.

Installing the MC33XX-R/S Battery

The MC33XX-R/S is compatible with the following batteries:

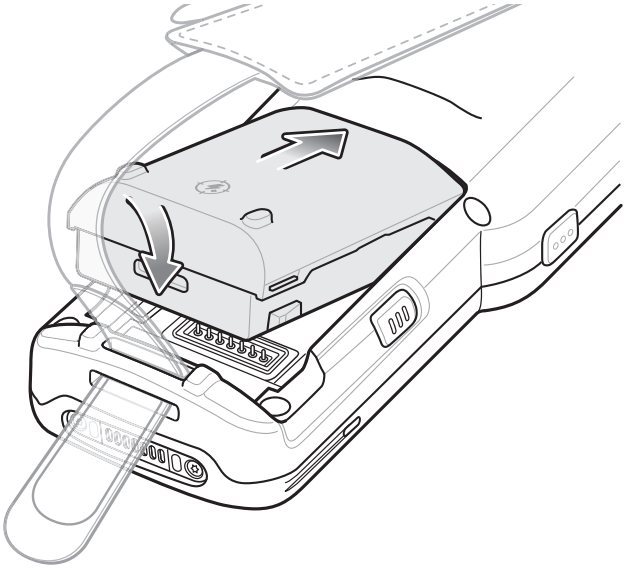
- MC33XX 2740 mAh PowerPrecision+ standard battery.
- MC33XX 5200 mAh PowerPrecision+ extended battery.
- MC32N0 2740 mAh PowerPrecision standard battery.
- MC32N0 5200 mAh PowerPrecision extended battery.

To install the battery:

1. Loosen the hand strap, if needed.

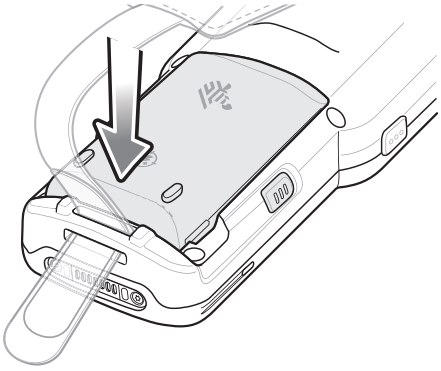
2. Align the top of the battery into the battery compartment.

Figure 17 Inserting the Battery



3. Rotate the bottom of the battery into the battery compartment.
4. Press battery down firmly. Ensure that both battery release buttons on the sides of the MC33XX-R/S return to the home position.

Figure 18 Press Battery Down



5. Tighten the hand strap, if needed.
6. Press the Power button to turn on the device.

Charging the Battery

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196.

Use the mobile computer cradles, cables and spare battery chargers to charge the mobile computer main battery.

The main battery can be charged before insertion into the mobile computer or after it is installed. There are two main batteries for the MC33XX, the 2740 mAh PowerPrecision+ standard battery (1X) and the 5200 mAh PowerPrecision+ extended battery (2X). The MC33XX-G is compatible with the 5200 mAh PowerPrecision+ extended battery. The MC33XX-R/S are compatible with both the 2740 mAh PowerPrecision+ standard battery and the 5200 mAh PowerPrecision+ extended battery. Use one of the spare battery chargers to charge the main battery (out of the mobile computer) or one of the cradles to charge the main battery while it is installed in the mobile computer.

Before using the mobile computer for the first time, fully charge the main battery until the green Charge LED indicator remains lit and charge the battery using a cable or a cradle with the appropriate power supply. For information about the accessories available for the MC33XX, see Accessories. The 2740 mAh PowerPrecision+ standard battery fully charges (0% to 90% capacity) in less than 2.2 hours and the 5200 mAh PowerPrecision+ extended battery fully charges (0% to 90% capacity) in less than 3.8 hours.

The MC33XX retains data in memory for at least five minutes when the mobile computer's main battery is removed.

When the main battery reaches a very low battery state, the battery retains data in memory for at least 15 hours.

Batteries must be charged within the 0° to +40° C (32° to 104° F) ambient temperature range.

The following accessories can be used to charge batteries:

- Cradles (and a power supply):
  - 1-Slot USB Charge Cradle
  - 5-Slot Charge Only ShareCradle
  - 5-Slot Ethernet ShareCradle
  - 5-Slot Charge ShareCradle + 4-Slot Spare Battery Charger
  - 5-Slot Ethernet ShareCradle + 4-Slot Spare Battery Charger.
- Cables (and a power supply):
  - USB Charge Cable.
- Spare Battery Chargers (and a power supply):
  - 4-Slot Spare Battery Charger
  - 20-Slot Spare Battery Charger.

To charge the mobile computer using the cradles:

1. Insert the mobile computer into a cradle. See Accessories for accessory setup.

2. The mobile computer starts to charge automatically. The Charge LED Indicator indicates the charge status. See the table below for charging indications.

To charge the mobile computer using the cables:

1. Connect the MC33XX Communication/Charge Cable to the appropriate power source and connect to the mobile computer. See Accessories for accessory setup.

2. The mobile computer starts to charge automatically. The Charge LED Indicator indicates the charge status.

Table 8 *LED Charge Indicators*

Status	Indications
Off	• The battery is not charging. • The battery is not inserted correctly in the cradle or connected to a power source. • Cradle is not powered.
Slow Blinking Amber Every 3 seconds	• Battery is charging, but the battery is fully depleted and does not yet have sufficient charge to power the device.
Solid Amber	• Battery is charging.
Solid Green	• Battery charging is complete.
Fast Blinking Red 2 blinks/second	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Solid Red	• Spare battery is charging and battery is at the end of useful life. • Charging complete and battery is at the end of useful life.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Backup Power

The device is equipped with a supercapcitator (supercap) to provide backup power to the device when the main battery is removed. The supercap will retain random access memory (RAM) data in memory for approximately five minutes after the main battery is removed during Hot Swap.

IMPORTANT: The supercap is automatically charged from the main battery and requires approximately ten minutes to fully charge.

Charging Temperature

Charge batteries in ambient temperatures from 0°C to 40°C (32°F to 104°F) or up to 45°C (113°F) as reported by the battery. To view battery temperature, swipe up from the bottom of the Home screen and touch **Settings > System > About phone > Battery information**.

The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures (for example, 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.

Charging Spare Batteries

See the Accessories section for information on using accessories to charge spare batteries.

Hot Swap Mode

The device provides a Hot Swap mode where the user can replace the battery without powering off the device. When the user removes the battery, the display turns off and the device enters a low power state while in Hot Swap mode. In Hot Swap mode, the device retains RAM data for approximately 5 minutes. Replace the battery within 5 minutes to preserve memory persistence. If the user does not install a charged battery within 5 minutes, data in RAM will be lost. During Hot Swap mode, Wi-Fi and Bluetooth remain connected for 30 seconds. If the battery is not inserted within 30 seconds, Wi-Fi is disabled and then re-enabled when the device comes out of Hot Swap mode and Bluetooth is reset when the device comes out of Hot Swap mode.

IMPORTANT: The supercap requires time to recharge after performing a Hot Swap or after the main battery is fully depleted. Hot Swap mode will not retain data unless the supercap is fully charged.

Google Account Setup

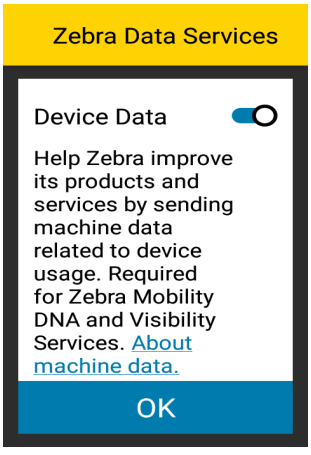
NOTE: The device has to be connected to the internet in order to set up a Google™ account.
A Google account is only required on devices with GMS software.

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/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 19 Zebra Services



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

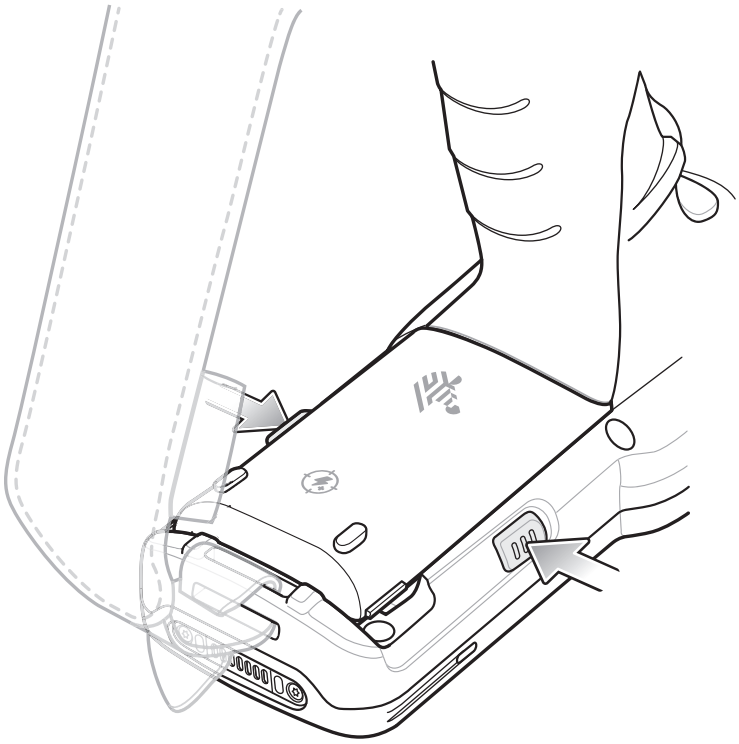
Replacing the Battery in the MC33XX-G

To replace the battery:

1. Push in the two Battery Release buttons.

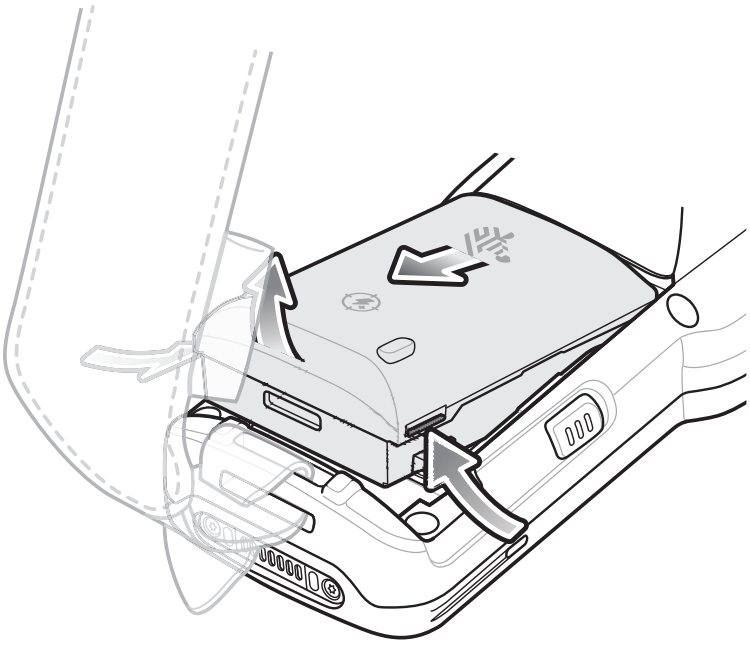
   The battery ejects slightly. With Hot Swap mode, when the user removes the battery, the display turns off and the device enters a low power state. The MC33XX-G retains RAM data for approximately five minutes. Replace the battery within five minutes to preserve memory persistence.

Figure 20 Release Battery



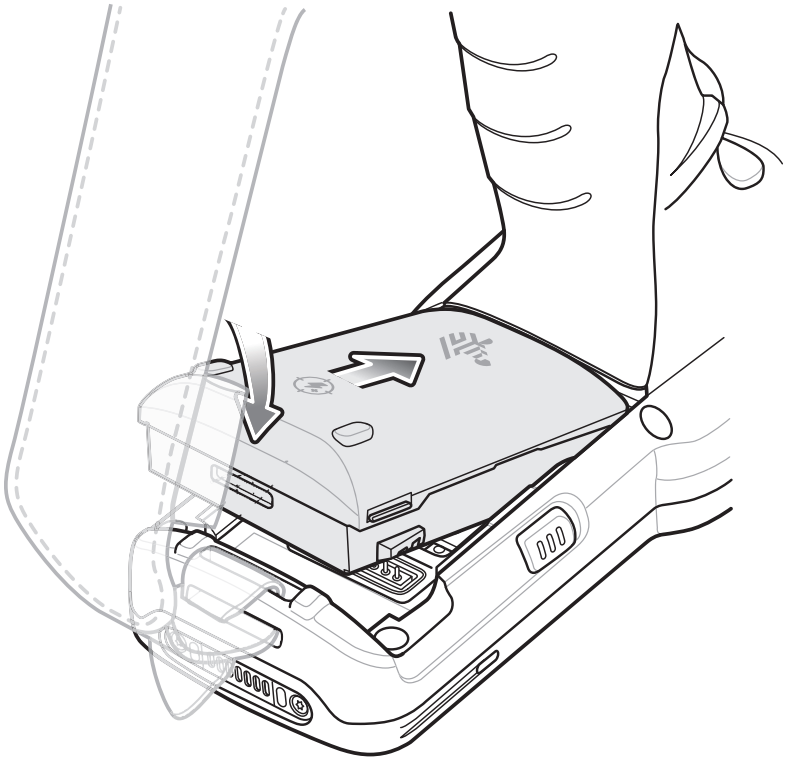
2. Remove the battery from the battery compartment.

Figure 21 Remove Battery



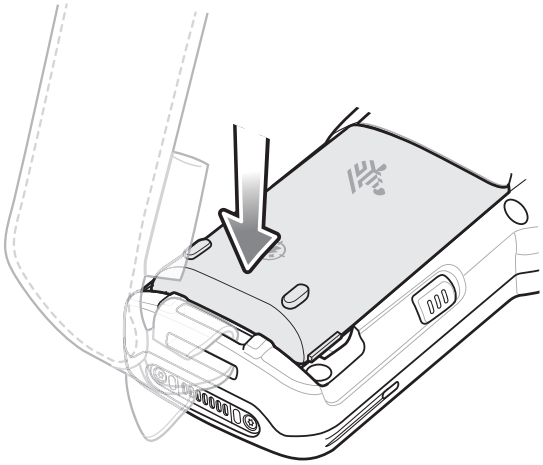
3. Align the battery into the battery compartment.

Figure 22 Inserting the Battery



4. Rotate the bottom of the battery into the battery compartment.
5. Press battery down firmly. Ensure that both battery release buttons on the sides of the MC33XX-G return to the home position.

Figure 23 Press Battery Down



6. Press the Power button to turn on the device.

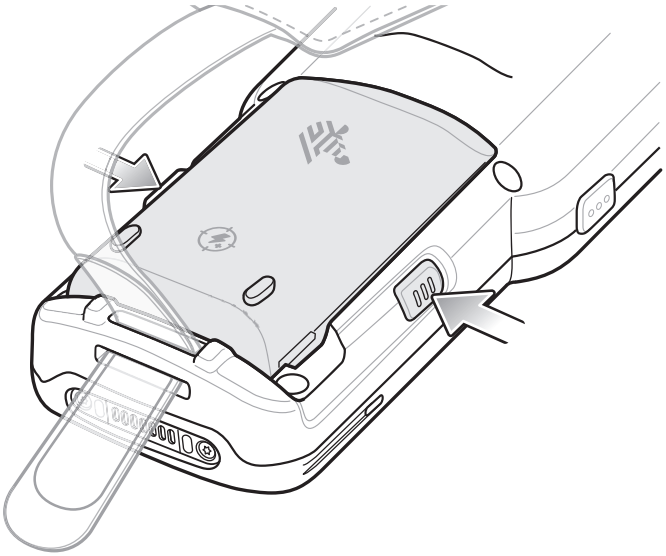
Replacing the Battery in the MC33XX-R/S

To replace the battery:

1. Push in the two Battery Release buttons.

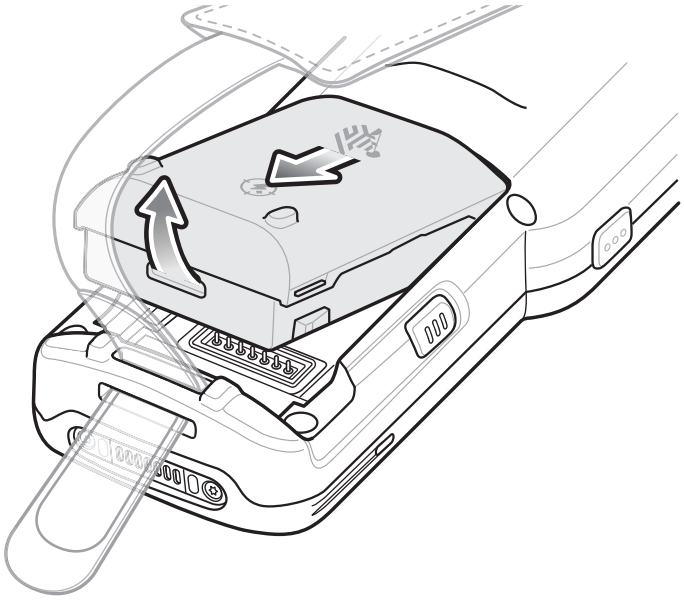
   The battery ejects slightly. With Hot Swap mode, when the user removes the battery, the display turns off and the device enters a low power state. The MC33XX-R/S retains RAM data for approximately five minutes. Replace the battery within five minutes to preserve memory persistence.

Figure 24 Release Battery



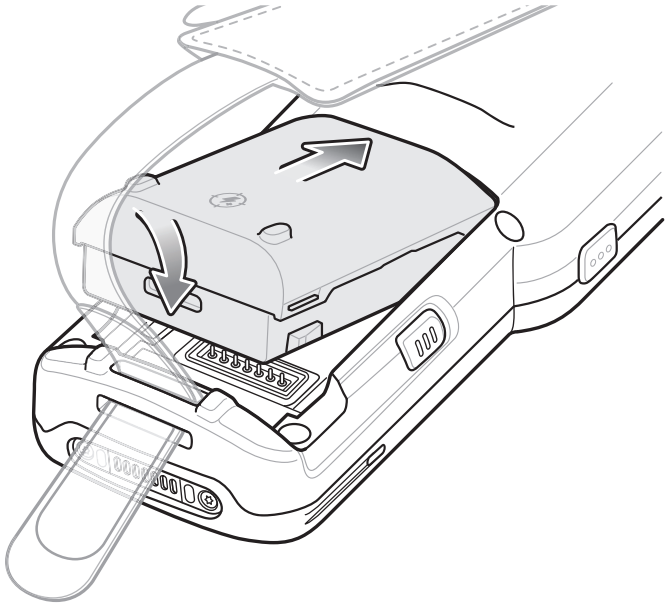
2. Remove the battery from the battery compartment.

Figure 25 Remove Battery



3. Align the battery into the battery compartment.

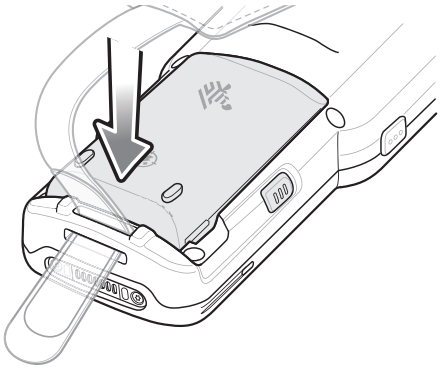
Figure 26 Inserting the Battery



4. Rotate the bottom of the battery into the battery compartment.

5. Press battery down firmly. Ensure that both battery release buttons on the sides of the MC33XX-R/S return to the home position.

Figure 27 Press Battery Down



6. Press the Power button to turn on the device.

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**.

IMPORTANT: At temperatures below 0°C, the Battery level may report a reduced value. This is normal due to temperature compensation.

Battery present status indicates if 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

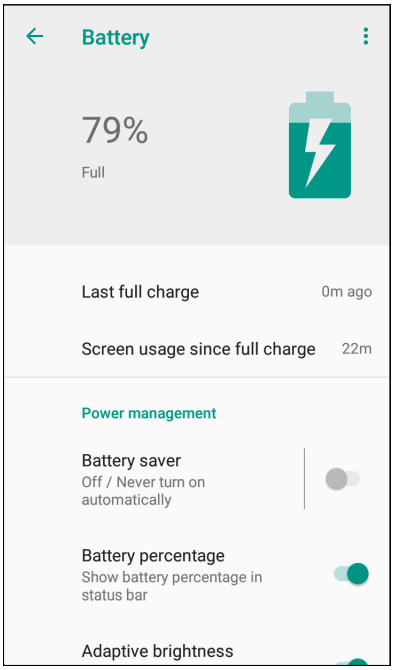
The **Battery** screen provides battery charge details, power management options, and a list of apps that consume the most battery power.

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 CLOSE** 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 28 Battery Screen



Low Battery Notification

When the battery charge drops below 23% (MC33XX 2740 mAh PowerPrecision+ standard battery) or 15% (MC33XX 5200 mAh PowerPrecision+ extended battery) to a low level, the MC33XX displays a notice to connect the MC33XX to power. The user should charge the battery using one of the charging accessories.

When the battery charge drops below 15% (MC33XX 2740 mAh PowerPrecision+ standard battery) or 8% (MC33XX 5200 mAh PowerPrecision+ extended battery) to a very low level, the MC33XX displays a notice to connect the MC33XX to power. The user should charge the battery using one of the charging accessories.

When the battery charge drops below 8% (MC33XX 2740 mAh PowerPrecision+ standard battery) or 4% (MC33XX 5200 mAh PowerPrecision+ extended battery), the MC33XX goes into critical suspend mode to save data. The screen turns off.

The user must replace the battery or charge the MC33XX using one of the charging accessories to retain data.

Battery Optimization

Observe the following battery saving tips:

- Set the screen to turn off after a short period of non-use.
- Reduce screen brightness.
- Turn off all wireless radios when not in use.
- Turn off automatic syncing for Email, Calendar, Contacts, and other apps.
- Minimize use of apps that keep the device from suspending, for example, music and video apps.

Turning Off the Radios

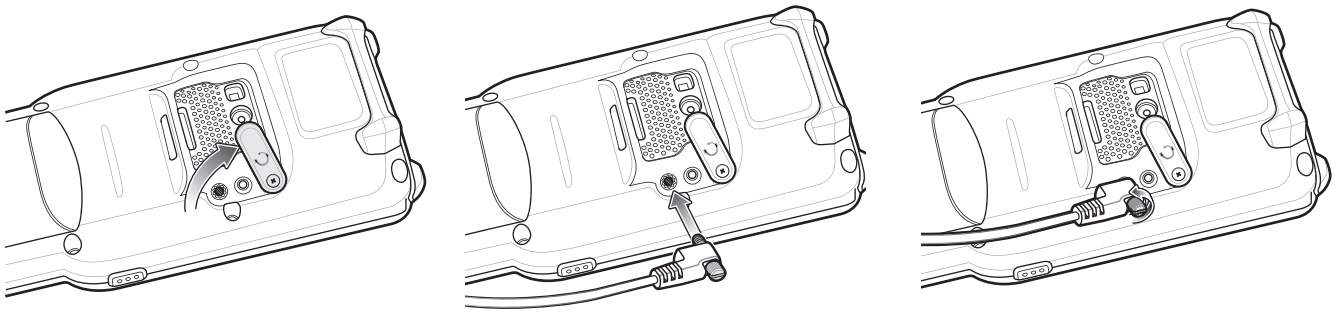
To turn off all the radios:

1. Swipe down from the Status bar to open the Quick Settings panel.
2. Touch **Airplane mode**. The airplane icon appears in the Status bar indicating that all the radios are off.

Connecting a Wired Headset

To connect a wired headset to the MC33XX-R/S:

Figure 29 Connect Headset to MC33XX–R/S



Real-Time Clock Backup

The device provides a Real-time Clock (RTC) backup feature. After boot-up, the device saves the system time in a file in persistent storage. When the device re-boots, it compares the system time to the time saved in a file. If the system time in not the latest, it restores the time from the file.

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 ◯.

Display Settings

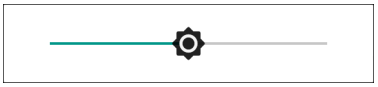
Use Display settings to change the screen brightness, enable night light, change the background image, enable screen rotation, set sleep time, and change font size.

Setting the Screen Brightness

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 30 Brightness Slider



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

1. Swipe down from the status bar to open the quick settings bar and then touch ⚙.
2. Touch **Display**.
3. If disabled, touch **Adaptive brightness** to automatically adjust the brightness.
   By default, **Adaptive brightness** is enabled. Toggle the switch to disable.
4. Touch ◯.

Setting Screen Timeout

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

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.

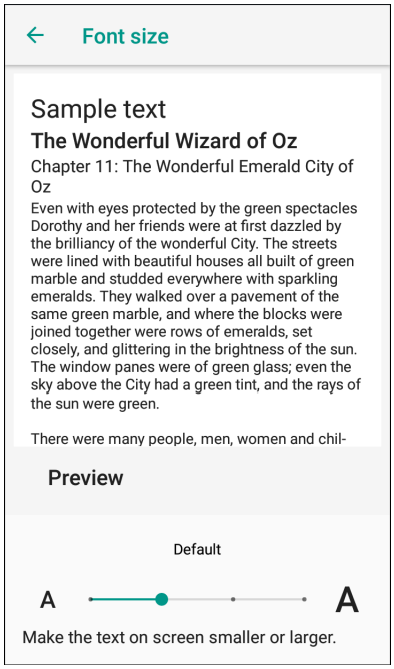
4. Touch ◯.

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 31 Font Settings



4. Select one of the font size values.
   - Small
   - Default
   - Large
   - Largest.

5. Touch ◯.

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 ◯.

Ambient Display

The Ambient display setting wakes the screen when notifications are received.

To disable ambient display:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.
2. Touch **Display** > **Advanced**.
3. Touch **Ambient display**.
4. In the **When to show** section, enable or disable an option using the switch.
5. Touch ◯.

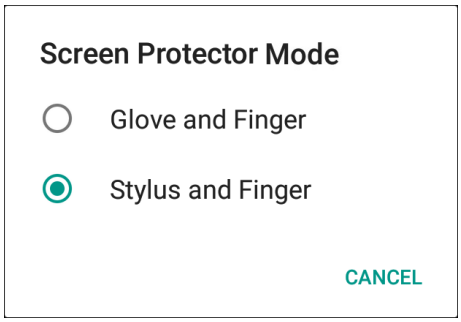
Touch Panel Mode

The device display is able to detect touches using a finger, a conductive-tip stylus, or gloved finger.

NOTE: A glove can be made of medical latex, leather, cotton, or wool.
For optimal performance use a Zebra certified stylus.

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

Figure 32 Screen Protector Mode Dialog Box



4. Select:
   a. **Glove and Finger** to use a finger or a gloved finger on the screen.
   b. **Stylus and Finger** to use a finger or a stylus on the screen.
5. Touch ◯.

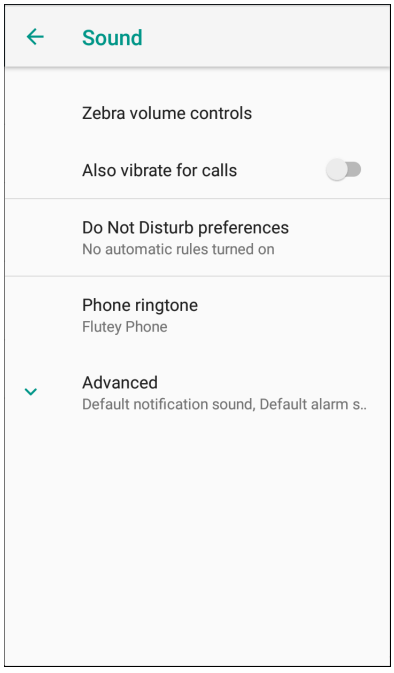
General Sound Setting

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 33 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 or vibrate.
    - - All sounds except media and alarms are silenced and vibrate mode is active.
    - - Enables all sounds at the user defined levels.
- Also vibrate for calls - Switch on or off.
- **Do Not Disturb preferences** - Mutes some or all sounds and vibrations.
  - **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** - Choose to allow messages from anyone, starred contacts, any contact, or none. To star contacts, use the Contacts app.
    - **Calls** - Choose to allow calls from anyone, starred contacts, any contact, or none. To star contacts, use the Contacts app.
    - **Repeat callers** - Choose whether or not the phone rings if the same person calls again within 15 minutes.
  - **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).
    - **Vibrate on tap** - Vibrate the device when making screen selections (default – disabled).
  - **Emergency alerts** - Touch to configure emergency broadcast settings and notifications.

Setting Device Advertisement

Device Advertisement consists of **Inactivity notification** and **Device paging** functionalities. Inactivity notification is based on the device sensor support (accelerometer). If the device doesn't have an accelerometer sensor, only the Device paging option is available.

To access Device Advertisement settings:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.
2. Touch **Device Advertisement**.
3. Select from the following options:
   - **Inactivity notification** - Enable to have the device notify the user with audible and/or LED notifications. The notification starts once the device battery level goes below the **Battery warning level** and the **Inactivity timeout** criteria is met (Default - disabled).
   - **Device paging** - The device must be connected to WLAN and be MDM managed. The MDM sends the device notification intent to the necessary device which has to be paged. This option is configurable through an MDM (StageNow, SOTI, or AirWatch) (Default - disabled).

   Configurations
   - **Battery warning level** - Enable **Inactivity notification** to activate this option. Set by the user. (Default - **20%**).
   - **Inactivity timeout** - Enable **Inactivity notification** to activate this option. Once the device is in an idle state (not in motion) and not charging or in a cradle, this is the time period after which the device will start sending notifications. Set between 1 - 60 minutes. (Default - **30**).
   - **LED notification** - Enable or disable this option to receive an LED notification.
   - **Audible notification** - Enable or disable this option to receive an audible notification.
   - **Audible timeout** - Enable this option to set the **Timeout of audible notification** option.
   - **Timeout of audible notification** - Enable **Audible timeout** to activate this option. This is the time period for which the notification is played continuously. If the **Audible timeout** is disabled and **Audible notification** is enabled, then the audio notification will keep playing without a timeout period. Set between 1-30 minutes (Default - **3**).
   - **Audible type** - valid options: **Ring**, **Notification**, and **Alarm**.
   - **Audible file** - The user can select from various pre-defined files, based on the audible type, or add a custom ringtone.
4. Touch ◯.

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 Trigger 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 ◯.

Using the Device

Introduction

This chapter describes the screens, status and notification icons, and controls on the device, and provides basic instructions for using the device.

Google Mobile Services

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

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

GMS includes:

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

Home Screen

Turn on the device to display the Home screen. Depending on the configuration, the Home screen may appear different. Contact your system administrator for more information.

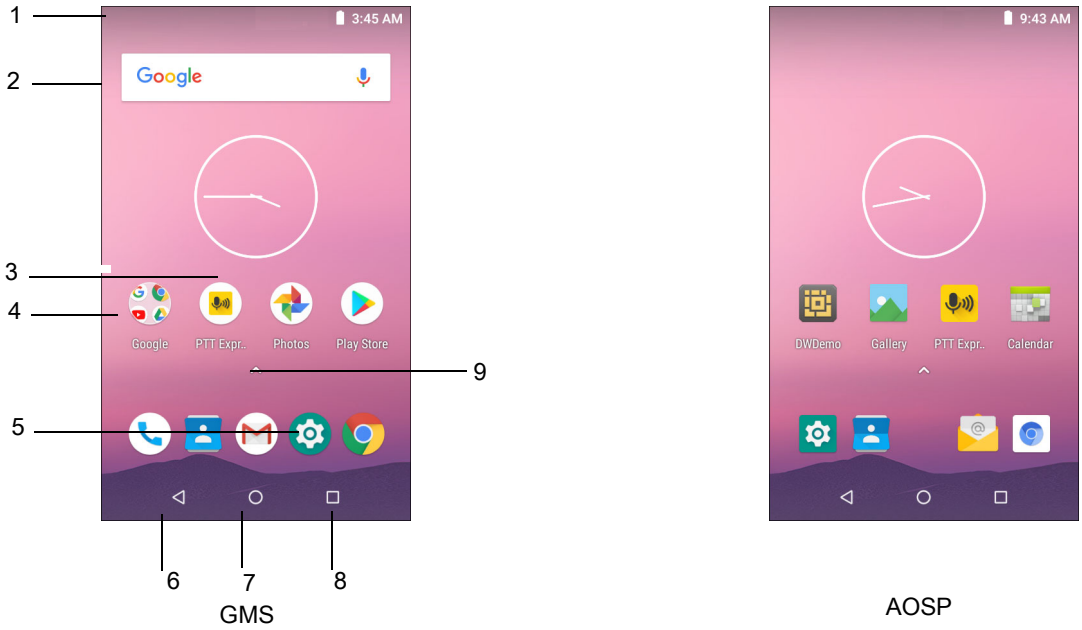
After a suspend or screen time-out, the Home screen displays with the lock slider. Touch the screen and slide up to unlock. For screen locking information, see Un-Locking the Screen.

The Home screen provides additional screens for placement of widgets and shortcuts. Swipe the screen left or right to view the additional screens.

NOTE:

By default, non-GMS devices do not have the same icons on the Home screen as GMS. Icons are shown below for example only.

Home screen icons can be configured by the user and may look different than shown.



The Home screen consists of the following:

Table 9 *Home Screen Items*

Item	Description
1 — Status Bar	Displays the time, status icons (right side), and notification icons (left side). For more information see Status Bar on page 51 and Managing Notifications on page 53.
2 — Widgets	Launches stand-alone applications that run on the Home screen. See App Shortcuts and Widgets on page 57 for more information.
3 — Shortcut Icons	Opens applications installed on the MC33XX. See App Shortcuts and Widgets on page 57 for more information.
4 — Folder	Contains apps.
5 — Settings Icon	Opens the Settings window.
6 — Back	Displays the previous screen.
7 — Home	Displays the Home screen.
8 — Recent Button	Displays recently used applications.
9 — All Apps Icon	Opens the APPS window.

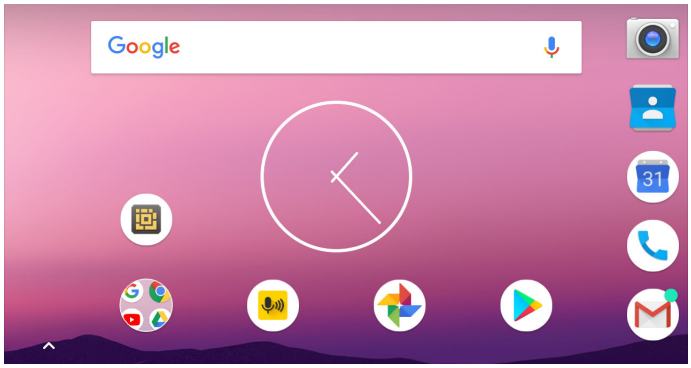
Setting Home Screen Rotation

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

To enable **Home** screen rotation:

1. Touch and hold anywhere on the **Home** screen until the options appear.
2. Touch **HOME SETTINGS**.
3. Touch the **Allow Home screen rotation** switch.
4. Touch ◯.
5. Rotate the device.

Figure 34 Rotated Home Screen



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 35 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 10 *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.
	All sounds, except media and alarms, are silenced and vibrate mode is active.
	Do Not Disturb mode active.
	Airplane Mode is active. All radios are turned off.
	Bluetooth is on.
	The device is connected to a Bluetooth device.
	Connected to a Wi-Fi network.
	Not connected to a Wi-Fi network or no Wi-Fi signal.
	Connected to an Ethernet network.
	Speakerphone enabled.
	Indicates that all sounds except media and alarms are silenced.
	Indicates that the Orange key is locked.
	Indicates that the Blue key is pressed.
A	Indicates that the ALT key is pressed.
C	Indicates that the CTRL key is pressed.
	Indicates that the Shift key is pressed.
	Indicates that the Shift key is locked.
	Indicates that a BT headset is connected to the MC33XX.

Notification Icons

Table 11 *Notification Icons*

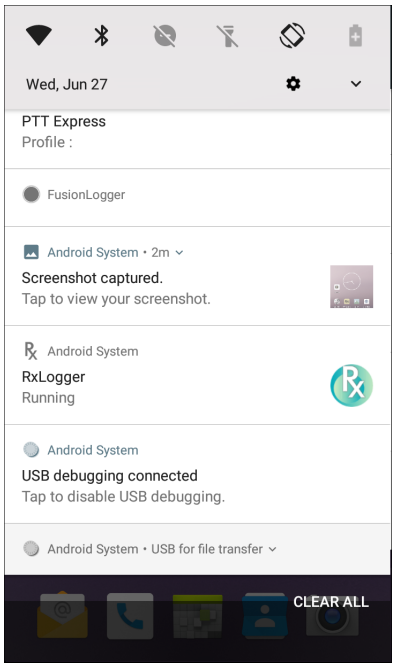
Icon	Description
	Main battery is low.
	More notifications are available for viewing.
	Data is syncing.
	Indicates an upcoming event. Non-GMS devices only.
	Indicates an upcoming event. GMS devices only.
	Open Wi-Fi network is available.
	Song is playing.
	Problem with sign-in or sync has occurred.
	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 RS6000 is connected to the device.
	Indicates the RS507 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 36 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, vibrate, 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**.

Blink Light

The Notification LED lights blue when an app, 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.

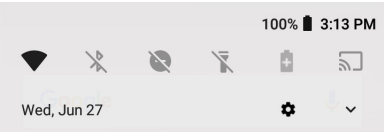
To change the notification setting:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.
2. Touch **Apps & notifications > Notifications**.
3. Touch **Blink light** to toggle the notification on or off.

Quick Access Panel

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

Figure 37 Quick Settings Bar

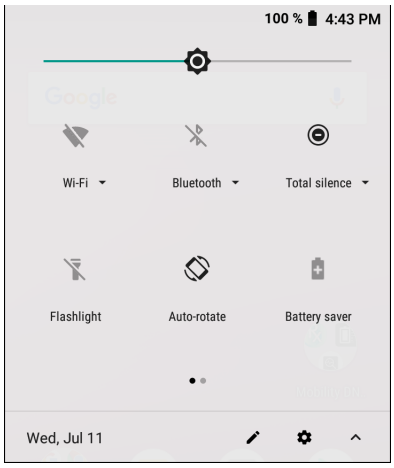


To see the full Quick Access panel:

- 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 38 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 power - Indicates percentage of battery power remaining. Touch to view battery usage.
- Do not disturb - Control how and when to receive notifications.
- Airplane mode - Turn Airplane mode on or off. When Airplane mode is on the device does not connect to Wi-Fi or Bluetooth.
- Auto-rotate - Lock the device's orientation in portrait or landscape mode or set to automatically rotate.
- Flashlight - Turn flashlight on or off. Turn camera flash on or off.

  The thermal protection safety feature for the camera provides the following behavior if the temperature range is 40°C or above:

  - If the flashlight is kept on for a certain period of time, it is automatically turned off and cannot be turned back on for a period of time until it has cooled off.
  - During the cooling off period, the camera cannot be turned on. If you attempt to use the camera, a message displays indicating to try again after a period of time.
- 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:

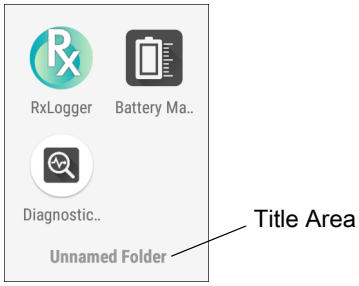
1. Go to the desired Home screen.
2. Touch and hold one app icon.
3. Drag the icon and stack on top of another icon.
4. Lift and release.

Naming Folders

To name a folder:

1. Touch the folder.

Figure 39 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 provides the following types of keyboards:

- Android Keyboard - Non-GMS devices only.
- Gboard - GMS devices only
- Enterprise Keyboard

NOTE: By default the Enterprise and 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 keyboards, touch and hold 🌐.
- On the Enterprise keyboard, touch 🌐.

Using the Enterprise Keyboard

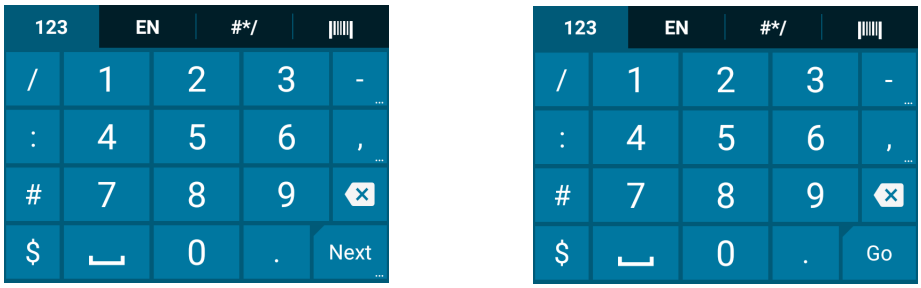
The Enterprise Keyboard contains the following keyboards:

- Numeric
- Alpha
- Special characters
- Data capture.

Numeric Tab

To access the numeric keyboard, touch the **123** tab. The keys displayed vary on the app being used. For example, an arrow displays in **Contacts**, however **Done** displays in **Email** account setup.

Figure 40 Numeric Keyboard



Alpha Tab

To access the alpha keyboard, touch the EN tab.

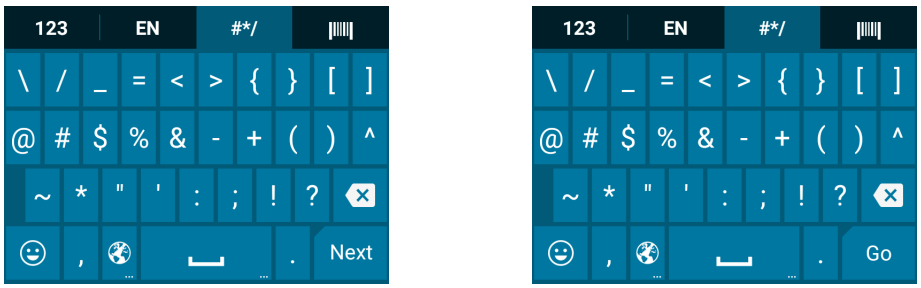
Figure 41 Alpha Keyboard

NOTE: The Enterprise keyboard supports English (US), English (UK), French, German, Spanish and Italian. When a keyboard language is selected in Settings, the corresponding keyboard language displays.

Additional Character Tab

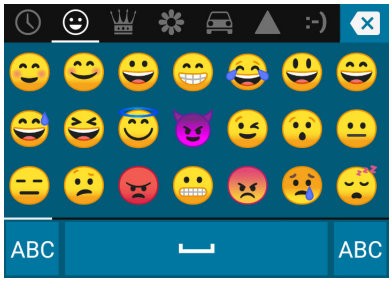
To access additional characters, touch the **#*/** tab.

Figure 42 Symbols Keyboard



Touch ☺ to enter emoji icons in a text message.

Figure 43 Emoji Keyboard

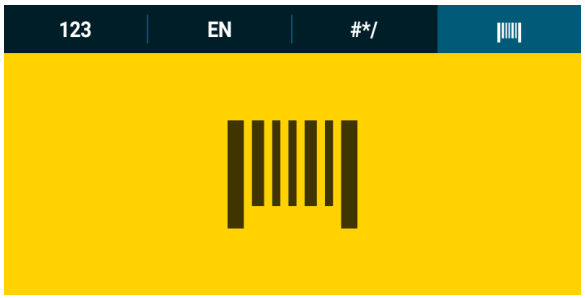


Touch **ABC** to return to the Symbols keyboard.

Scan Tab

The Scan tab provides an easy data capture feature for scanning barcodes.

Figure 44 Scan Keyboard



Using the Android and Gboard Keyboards

Use the Android or Gboard keyboards to enter text in a text field. To configure the keyboard settings, touch and hold **,** (comma) and then select **Android keyboard settings**.

Editing Text

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

Entering Numbers, Symbols, and Special Characters

To enter numbers and symbols:

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

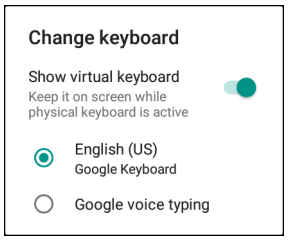
To enter special characters, touch and hold a number or symbol key to open a menu of additional symbols. A larger version of the key displays briefly over the keyboard.

Hiding On-Screen Keyboard

On devices with keypads, the user can hide the on-screen keyboard.

Touch in a text field to display the on-screen keyboard. Touch at the bottom right corner of the screen.

Figure 45 Hide Keyboard Option



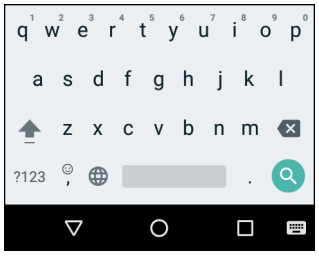
Touch the **Show virtual keyboard** switch to off. The on-screen keyboard automatically disappears.

To show the on-screen keyboard, Touch in a text field. Touch at the bottom right corner of the screen. Touch the **Show virtual keyboard** switch to on. The keyboard re-appears.

Switching Language Keyboards

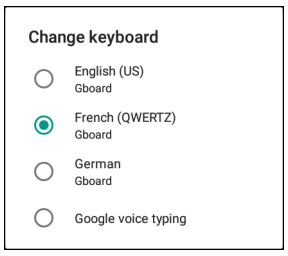
The user can enable multiple language keyboards.

Figure 46 Keyboard with Multiple Languages



To switch between language keyboard, touch at the bottom right corner of the screen.

Figure 47 Change Keyboard Option



Select one of the keyboard languages. The keyboard automatically changes to the selected language.

Do Not Disturb Feature

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

For example, use Do Not Disturb to:

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

Limit Sounds and Vibrations

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 or vibrate, choose **Total silence**.

In Total silence mode:

- Alarms do not make noise.
- Device does not vibrate or 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 or vibrate 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**.

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 12 *Apps*

Icon	Description
	Battery Manager - Displays battery information, including charge level, status, health and wear level.
	Bluetooth Pairing Utility – Use to pair the RS507 Hands-free Imager with the device by scanning a barcode.
	Calculator - Provides the basic and scientific arithmetic functions.
	Calendar - Use to manage events and appointments. GMS devices only
	Calendar - Use to manage events and appointments. Non-GMS devices only.
	Camera - Take photos or record videos. For more information see Camera.
	Chrome - Use to access the Internet or intranet. GMS devices only
	Chromium - Use to access the Internet or intranet. Non-GMS devices only.
	Clock - Use to schedule alarms for appointments or as a wake-up.
	Contacts - Use to manage contact information. See Contacts for more information.
	DataWedge - Enables data capture using the imager.
	Device Central - Use to display detailed information about the device and connected peripherals. See Device Central for more information.
	Diagnostic Tool - Use to diagnose the device.
	Drive - Upload photos, videos, documents, and other files to personal storage site. GMS devices only

Table 12 *Apps (Continued)*

Icon	Description
	DWDemo - Provides a way to demonstrate the data capture features using the imager. See DataWedge Demonstration for more information.
	Email - Use to send and receive email. Non-GMS devices only.
	Files - Organize and manage files on the device. See Files for more information.
	Gallery - Use to view photos stored on the microSD card. For more information, see Gallery for more information. Non-GMS devices only.
	Gmail - Use to send and receive email using a Google email account. GMS devices only
	Google - Launches Google ™ search app. GMS devices only
	Hangouts - Use to communicate with friends using text messages and photos. GMS devices only
	Keep- Use to create, edit, and share notes. GMS devices only
	License Manager - Use to manage software licenses on the device.
	Maps - Use to see your location on a map (with public transit, traffic, or satellite overlays). Search for any business or place of interest. Provides turn-by-turn navigation with voice guidance, traffic-avoidance, and alternate routes, for drivers, cyclists, walkers, and users of public transportation. GMS devices only
	MC33XX User Guide - Opens the on-device User Guide for the device.
	Music - Play music stored on the microSD card. Non-GMS devices only.
	Notes - Use to take and save notes.Non-GMS devices only
	Photos - Use to sync photos with Google account. For more information, see Photo Settings. GMS devices only

Table 12 *Apps (Continued)*

Icon	Description
	Play Movies & TV - View movies and video on your device. GMS devices only
	Play Music - Use to listen to music. GMS devices only
	Play Store - Download music, movies, books, and Android apps and games from the Google Play Store. GMS devices only
	PTT Express - Use to launch PTT Express client for VoIP communication.
	RxLogger - Use to diagnose device and app issues. See the device Integrator Guide for Android Version 8.1 for more information.
	RxLogger Utility - Use to view, backup, and archive RxLogger data.
	Search - Use to search the Web. Requires an Internet connection. Non-GMS devices only.
	Settings - Use to configure the device.
	SimulScan Demo - Use to demonstrate the document capture feature of the device.
	SMARTMU - A diagnostic intelligent app. Use to diagnose surrounding area and display network stats, such as coverage hole detection, or AP in vicinity.
	Sound Recorder - Use to record audio.
	StageNow - Allows the device to stage a device for initial use by initiating the deployment of settings, firmware, and software.
	Velocity - Opens the Ivanti (formerly Wavelink) terminal emulation app.
	Videos - Use to view videos on the device. Non-GMS devices only.

Table 12 *Apps (Continued)*

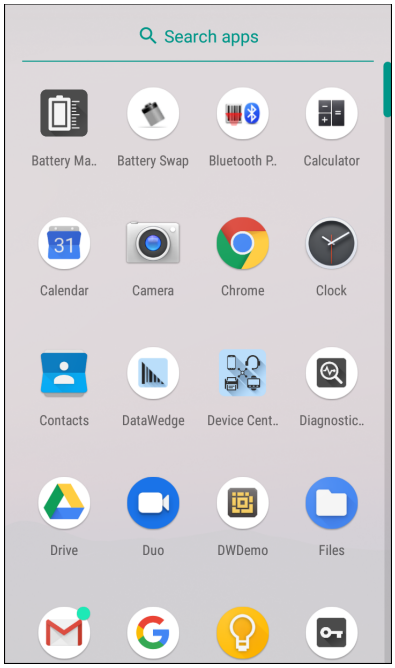
Icon	Description
	Voice Search - Use to perform searches by asking questions. GMS devices only
	Worry Free Wifi Analyzer - A diagnostic intelligent app. Use to diagnose surrounding area and display network stats, such as coverage hole detection, or AP in vicinity. Refer to the Worry Free Wi-Fi Analyzer Administrator Guide for Android.
	YouTube - Use to view videos on the YouTube ™ web site. GMS devices only
	Zebra Bluetooth - 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 48 APPS Window Example



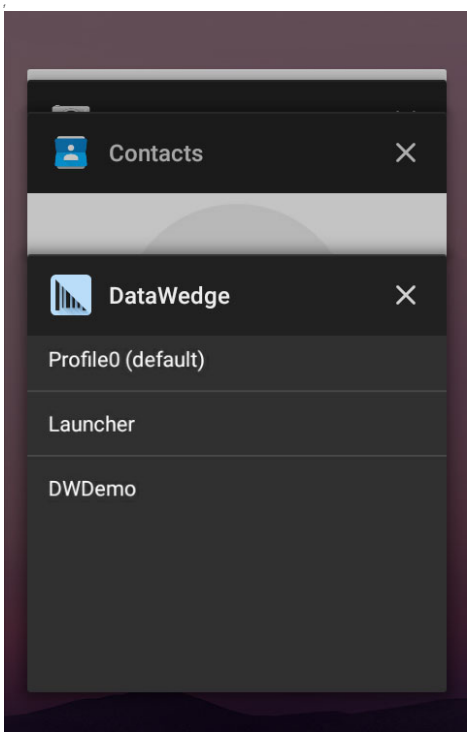
Slide the **APPS** window up or down to view more app icons. Touch an icon to open the app.

Switching Between Recent Apps

To switch between recent apps:

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

Figure 49 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 50 Lock Screen

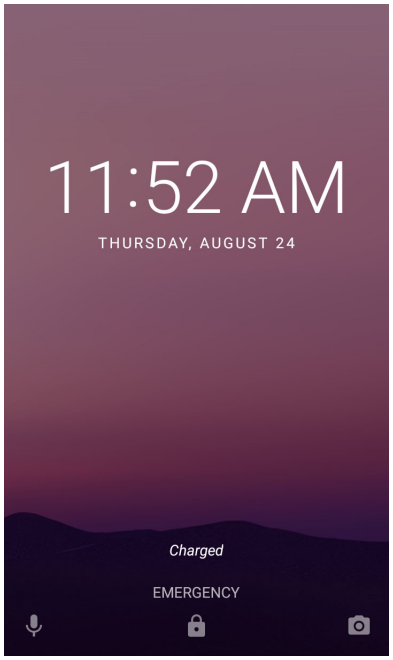


Figure 51 PIN Screen

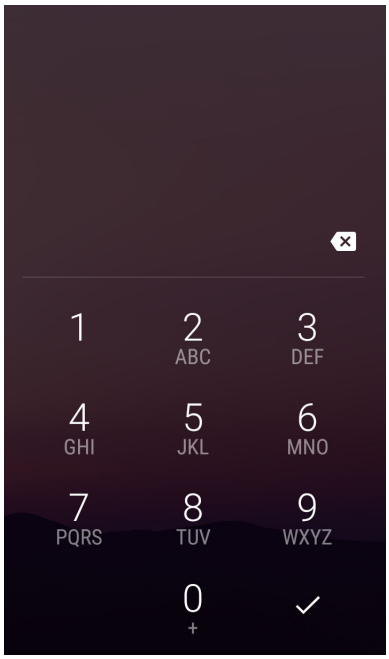


Figure 52 Pattern Screen

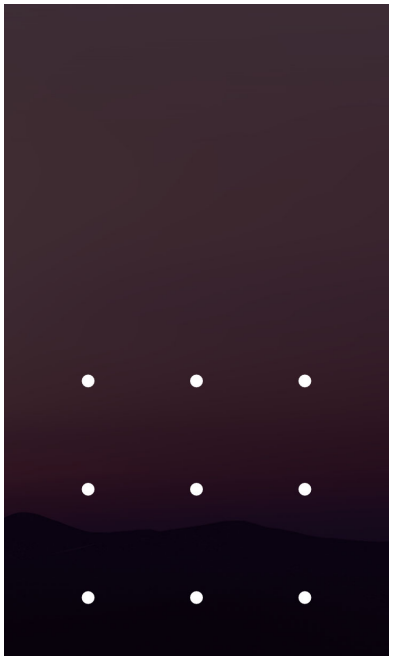
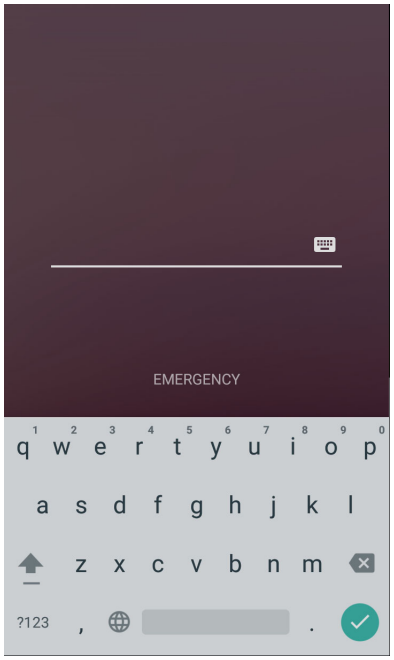


Figure 53 Password Screen



Interactive Sensor Technology

The MC3300 contains sensors that monitor movement and orientation:

- Gyroscope - Measures angular rotational velocity to detect rotation of the device.

- Accelerometer - Measures the linear acceleration of movement to detect the orientation of the device.

In order to take advantage of these sensors, applications use API commands. Refer to the Zebra Android EMDK for more information.

Resetting the Device

The reset functions include the following:

- Soft reset
- Hard reset
- Enterprise 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

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

Perform a hard reset if the device stops responding.

1. Simultaneously press and hold the Power button, 1 and 9 keys for 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 or a USB cradle to transfer files between the device and the host computer.

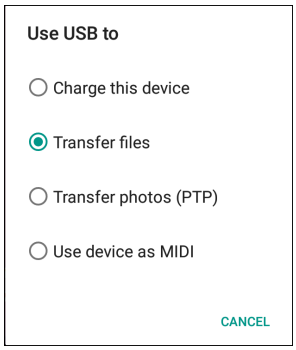
When connecting the device to a host computer, follow the host computer's instructions for connecting and disconnecting USB devices, to avoid damaging or corrupting files.

Transferring Files

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

1. Connect a USB cable to the device or place the device into a USB cradle.
2. Pull down the Notification panel and touch **USB charging this device**.
   By default, **Charge this device** is selected.

Figure 54 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 **SD card** or 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 either the microSD card or internal memory to the host computer.

1. Connect USB cable to the device or place the device into a USB cradle. See Accessories for setup information.
2. Pull down the Notification panel and touch **USB charging this device**.
3. Touch **Transfer photos (PTP)**.
4. On the host computer, open a file explorer application.
5. Open the **SD card** or the **Internal storage** folder.
6. Copy or delete photos as required.

Disconnect from the Host Computer

To disconnect the device from the host computer:

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

1. On the host computer, unmount the device.
2. Remove the USB from the device or remove the device from the cradle.

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 55 Battery Manager Screen

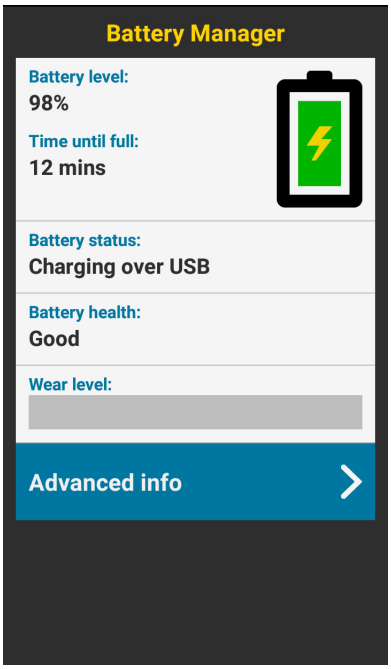


Table 13 Battery Icon Description

Battery Icon	Description
	Battery charge level.
	Battery charging.
	Battery charge level is below 20%.

- **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 connected to AC power.
  - **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.

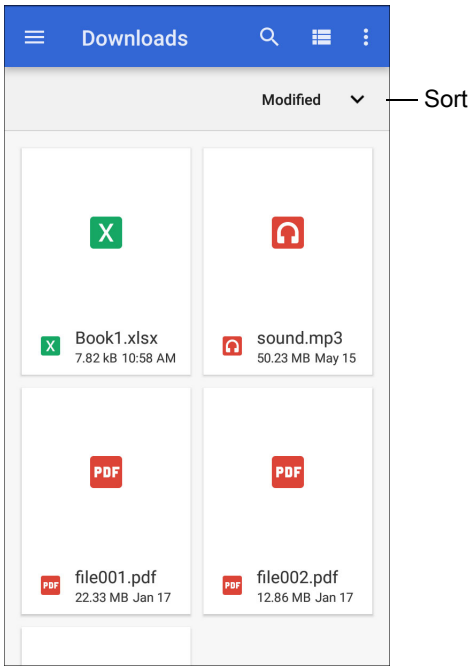
- **Advanced info** - Touch to view additional battery information.
  - **Battery present status** - Indicates that the battery is present.
  - **Battery level** - The battery charge level as a percentage of scale.
  - **Battery scale** - The battery scale level used to determine battery level (100).
  - **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.

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 56 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.

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.

Camera

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

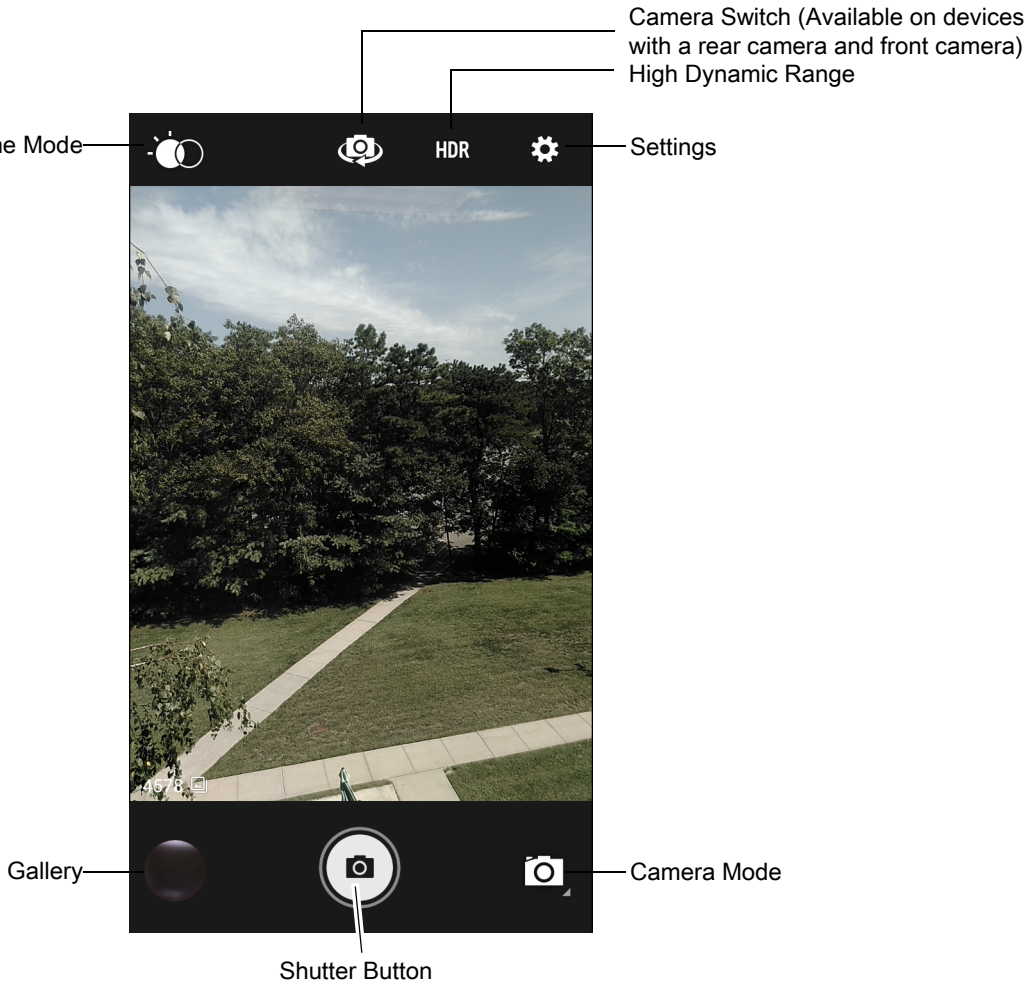
The device saves photos and videos on the microSD card, if installed and the storage path is changed manually. By default, or if a microSD card is not installed, the device saves photos and videos on the internal storage.

Taking Photos

NOTE: See Photo Settings for camera setting descriptions.

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

Figure 57 Camera Mode



2. If necessary, touch the Camera Mode icon and touch .
3. To switch between the rear camera and front camera (if available), touch .
4. Frame the subject on the screen.

5. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.
6. Touch an area on the screen to focus. The focus circle appears. The two bars turn green when in focus.
7. Touch .

   The camera takes a photo and a shutter sound plays.

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

Taking a Panoramic Photo

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

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

Figure 58 Panoramic Mode

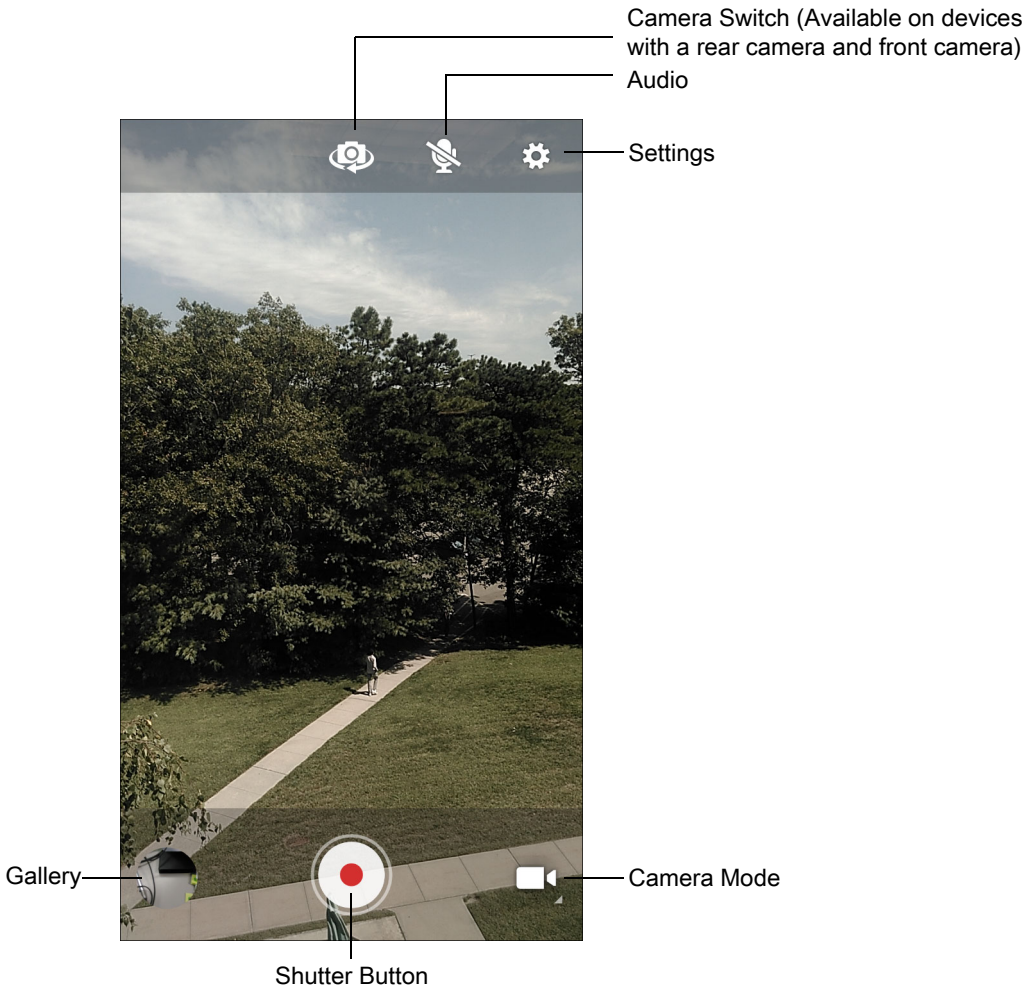
2. Touch the Camera Mode icon and touch .
3. Frame one side of the scene to capture.
4. Touch and slowly pan across the area to capture. A small white square appears inside the button indicating the capture is in progress.

   If you are panning too quickly, the message **Too fast** appears.
5. Touch to end the shot. The panorama appears immediately and a progress indicator displays while it saves the image.

Recording Videos

1. Swipe up from the bottom of the Home screen and touch **Camera**.
2. Touch the camera mode menu and touch .

Figure 59 Video Mode



3. To switch between the rear camera and front camera (if available), touch .
4. Point the camera and frame the scene.
5. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.
6. Touch to start recording.

   The video time remaining appears in the top left of the screen.
7. Touch to the end recording.

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

Photo Settings

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

Rear Camera

- **Flash** - Select whether the camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** - Disable flash.
  - **Auto** - Adjust flash automatically depending upon light meter (default).
  - **On** - Enable flash upon taking a photo.
  - **Torch** - Turn flash on continuously.
- **Picture size** - The size (in pixels) of the photo to: **13M pixels** (default), **8M pixels**, **5M pixels**, **3M pixels**, **HD 1080**, **2M pixels**, **1.3M pixels**, **HD720**, **1M pixels**, **WVGA**, **VGA,** or **QVGA**.
- **Picture quality** - Set the picture quality setting to: **Low**, **Standard** (default) or **High**.
- **Countdown timer** - Select **Off** (default), **2 seconds**, **5 seconds** or **10 seconds**.
- **Storage** – Set the location to store the photo to: **Phone** or **SD Card**.
- **Face Detection** - Select to turn face detection **Off** (default) or **On**.
- **ISO** - Set camera sensitivity to light to: **Auto** (default), **ISO Auto (HJR)**, **ISO100**, **ISO200**, **ISO400**, **ISO800** or **ISO1600**.
- **Exposure** - Set the exposure settings to: **+2**, **+1**, **0**(default), **-1** or **-2**.
- **White balance** - Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors:
  - **Incandescent** - Adjust the white balance for incandescent lighting.
  - **Fluorescent** - Adjust the white balance for florescent lighting.
  - **Auto** - Adjust the white balance automatically (default).
  - **Daylight** - Adjust the white balance for daylight.
  - **Cloudy** - Adjust the white balance for a cloudy environment.
- **Focus mode** - Set the camera focus to **CAF** (Continuous Auto Focus).
- **ZSL** - Set the camera to immediately take a picture when the button is pressed (default – enabled).

Video Settings

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

Rear Camera

- **Flash** - Select whether Rear-facing Camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** - Disable flash (default).
  - **Torch** - Turn flash on continuously.

- **Video quality** - Set video quality to: **HD 1080p** (default), **HD 720p**, **SD 480p**.
- **Video duration** - Set to: **30 seconds (MMS)**, or **30 minutes** (default).
- **Storage** – Set the location to store the photo to: **Phone** (default) or **SD Card**.
- **White balance** - Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors.
  - **Incandescent** - Adjust the white balance for incandescent lighting.
  - **Fluorescent** - Adjust the white balance for florescent lighting.
  - **Auto** - Adjust the white balance automatically (default).
  - **Daylight** - Adjust the white balance for daylight.
  - **Cloudy** - Adjust the white balance for a cloudy environment.

Gallery

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 AOSP only.

Use Gallery to:

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

Gallery presents all photos and videos stored on the microSD card and internal memory.

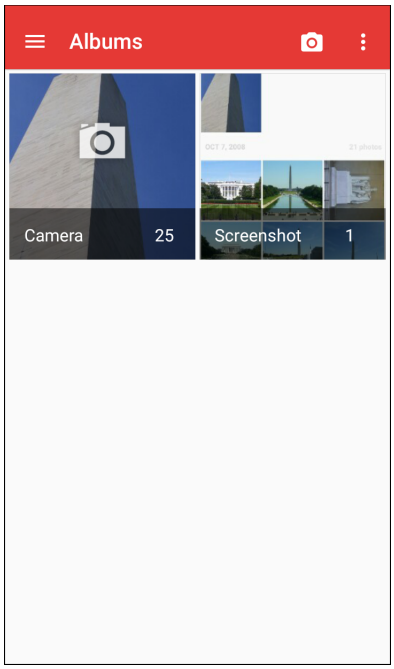
To open **Gallery**, swipe up from the bottom of the Home screen and touch **Gallery**, or in the camera app touch the thumbnail image at the bottom left.

By default, **Gallery** opens to the **Timeline** view.

Figure 60 Gallery - Timeline View

Touch ☰ > **Albums** to view photos sorted by albums or ☰ > **Videos** to view only videos.

Figure 61 Gallery — Albums View



- Touch an album to open it and view its contents. The photos and videos in the album are displayed in chronological order.
- Touch a photo or video in an album to view it.
- Touch ☰ > **Timeline** to return to the default **Gallery** 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 62 Photos Inside an Album

Swipe up or down to scroll through the images.

Sharing an Album

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch and hold an album to highlight it.
3. Touch other albums as required.
4. Touch . The Share menu opens.
5. Touch the app to use to share the selected albums.
6. Follow the instructions within the selected app.

Getting Album Information

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch and hold an album to highlight it.
3. Touch .
4. Touch **Details**.

Deleting an Album

To delete an album and its contents:

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch and hold an album to highlight it.
3. Check other albums to delete.

4. Touch .
5. In the **Delete selected item?** menu, touch **OK** to delete the album.

Working with Photos

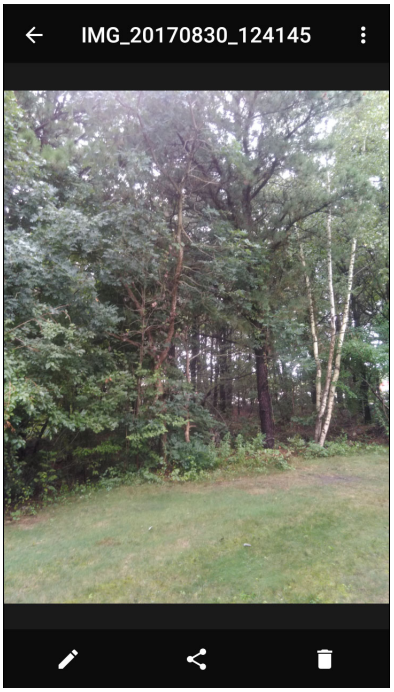
Use **Gallery** to view photos on the device and edit and share photos.

Viewing and Browsing Photos

To view a photo:

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch an album to open it.
3. Touch a photo.

Figure 63 Photo Example



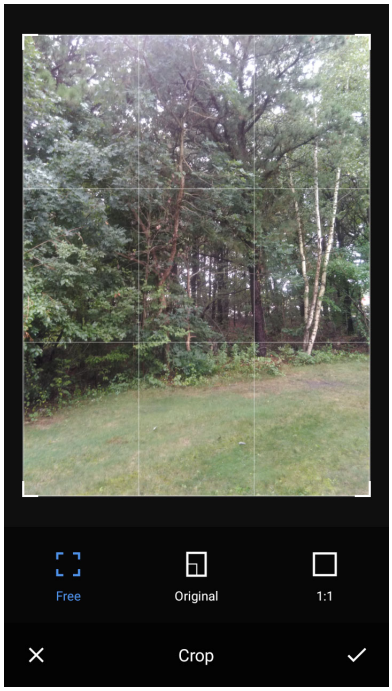
4. Swipe left or right to view the next or previous photo in the album.
5. Turn the device to view the photo in upright (portrait) or sideways (landscape) orientation. The photo is displayed (but not saved) in the new orientation.
6. Touch the photo to view the controls.
7. Double-tap the screen to zoom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

Cropping a Photo

1. In **Gallery**, touch a photo to view the controls.

2. Touch > > . The cropping tool appears.
3. Use the cropping tool to select the portion of the photo to crop.
   - Drag from the inside of the cropping tool to move it.
   - Drag an edge of the cropping tool to resize it to any proportion.

Figure 64 Cropping Tool



4. 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 **Gallery**.
2. Touch an album to open it.
3. Touch a photo to open it.
4. Touch .
5. Touch **Set picture as**.
6. Touch **Contact photo**.
7. In **Contacts**, touch a contact.
8. Touch the white box and crop the photo accordingly.
9. Touch **SAVE**.

Sharing a Photo

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
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 **Gallery**.
2. Touch an album to open it.
3. Touch a photo to open it.
4. Touch .
5. Touch **OK** to delete the photo.

Working with Videos

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

Watching Videos

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch an album to open it.
3. Touch a video.
4. Touch to play.
5. Touch the screen to view the playback controls.

Sharing a Video

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

Deleting a Video

1. Swipe up from the bottom of the Home screen and touch **Gallery**.
2. Touch an album to open it.
3. Touch a video to open it.
4. Touch .
5. Touch **OK**.

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:

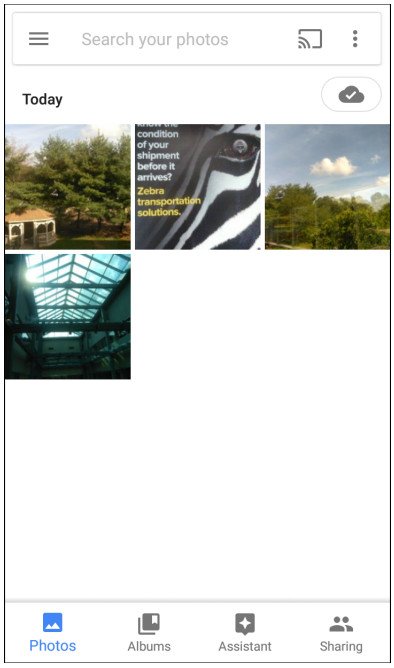
- View photos
- Play videos
- Perform basic editing of photos
- Set photos as wallpaper
- Set photos as a contact photo
- Share photos and videos.

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

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

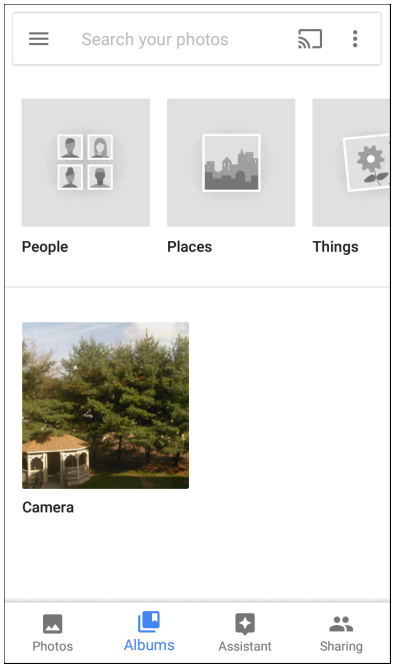
By default, **Photos** opens to the photos view.

Figure 65 Photos View



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

Figure 66 Albums View

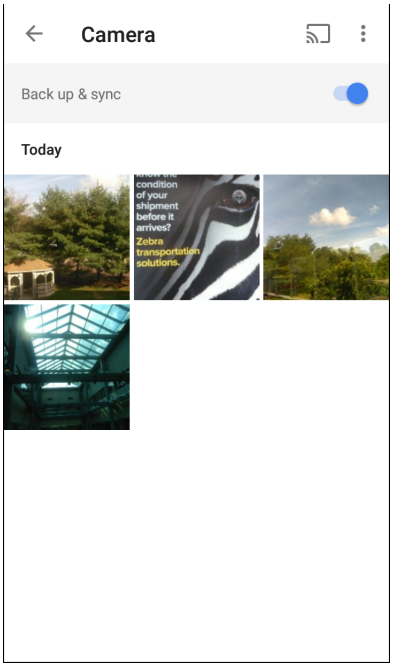


- Touch an album to view its contents. The photos and videos in the album appear in chronological order.
- Touch a photo or video in an album to view it.
- Touch ← to return to the main screen.

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 67 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.

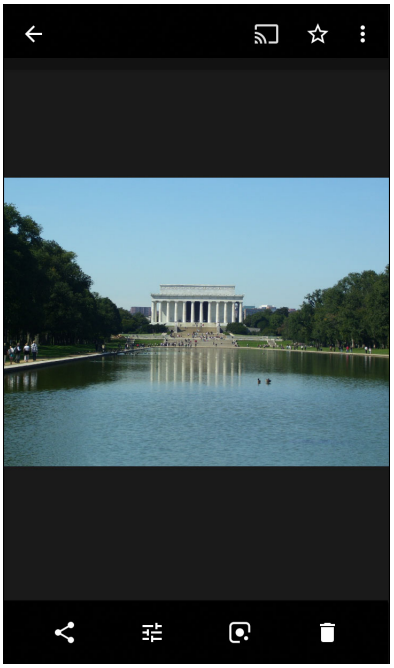
Working with Photos

Use **Photos** to view photos on the internal memory and the microSD card.

Viewing and Browsing Photos

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

Figure 68 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 69 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.

DataWedge Demonstration

NOTE: DataWedge is enabled on the Home screen.To disable this feature, go to the DataWedge settings and disable the **Launcher** profile.

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

Figure 70 DataWedge Demonstration Window

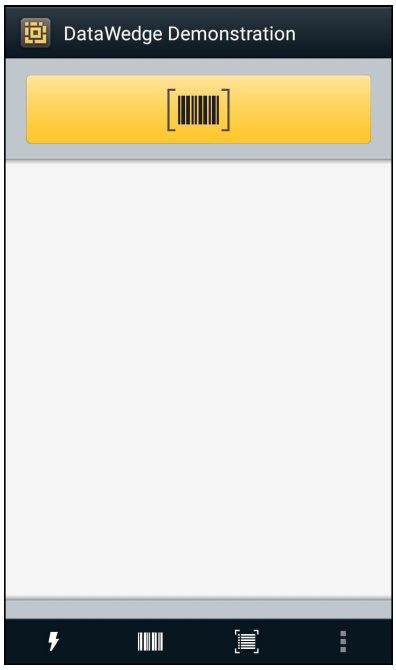


Table 14 DataWedge Demonstration Icons

	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.
		AnRS507 or RS6000 Bluetooth imager is connected.
		AnRS507 or RS6000 Bluetooth imager 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.

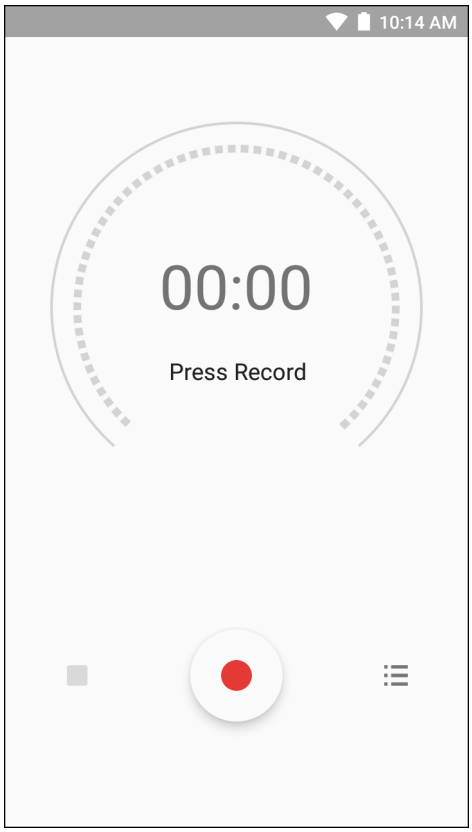
Either press the programmable button or touch the yellow scan button to capture data. The data appears in the text field below the yellow button.

Sound Recorder

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

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

Figure 71 Sound Recorder Application



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 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 15 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 15 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.

In order to use a PTT Key with PTT Express, remap BUTTON_L2 key to any available physical key, such as LEFT_TRIGGER_1, RIGHT_TRIGGER_1, SCAN, P1 or P2. By default, a PTT button is not assigned. When the wired headset is used, Group Calls can also be initiated using the headset Talk button. For information on how to remap a key, refer to the MC33XX Integrator Guide.

PTT communication may be established as a Group Call.

Creating a Group Call

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.

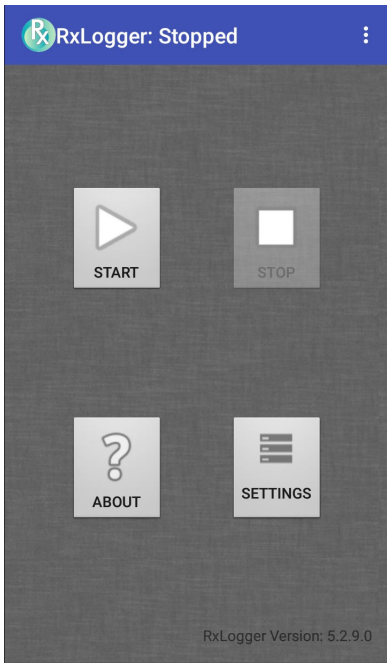
Disabling PTT Express Voice Client Communication

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 72 RxLogger

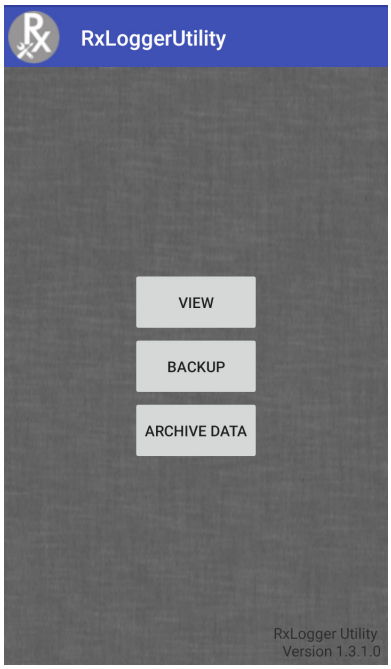


RxLogger Utility

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 73 RxLogger Utility App View



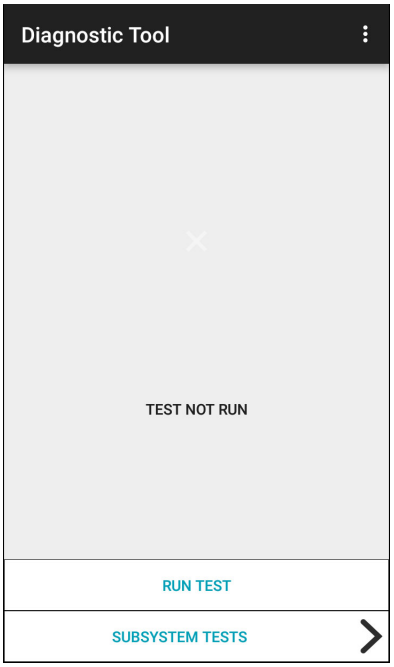
Refer to the device Integrator Guide for detailed information on the RxLogger Utility.

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 74 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 75 Test Passed Screen

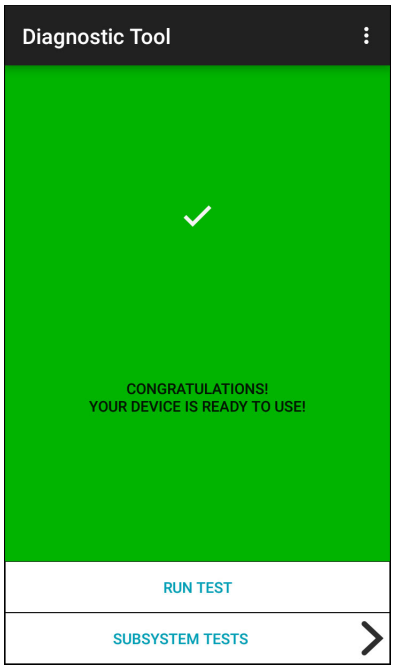
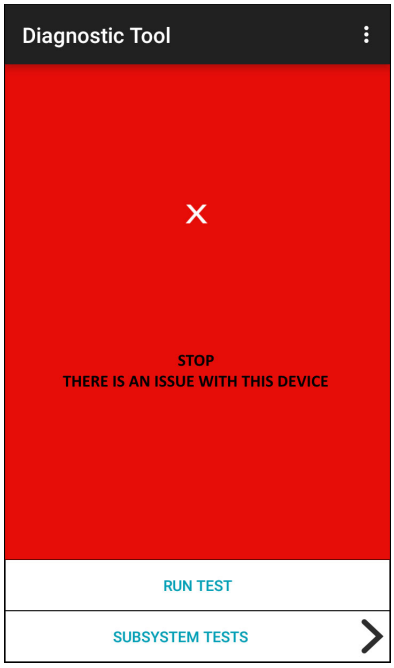
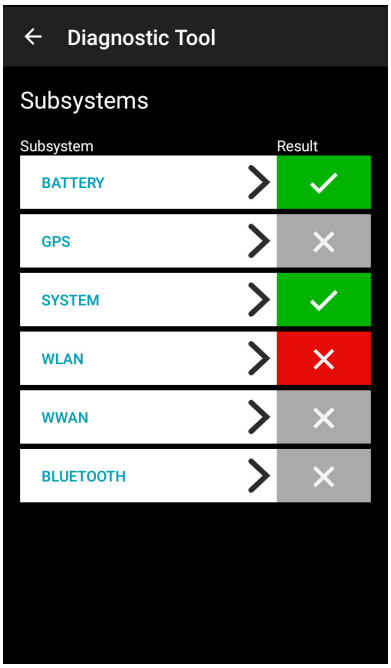


Figure 76 Test Failed Screen



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

Figure 77 Subsystem Screen

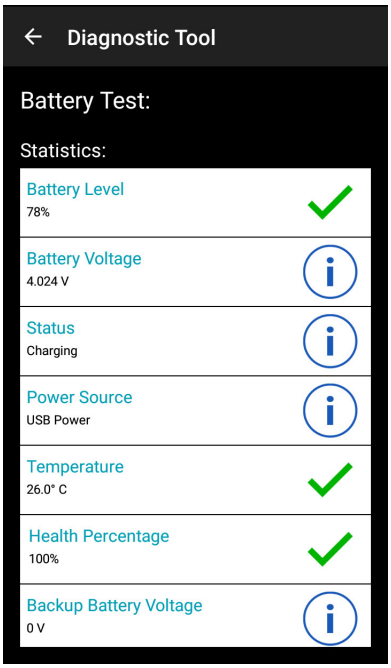


4. Touch one of the subsystems to view details.

Table 16 Subsystem Test Result Indicators

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

Figure 78 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.

Device Central

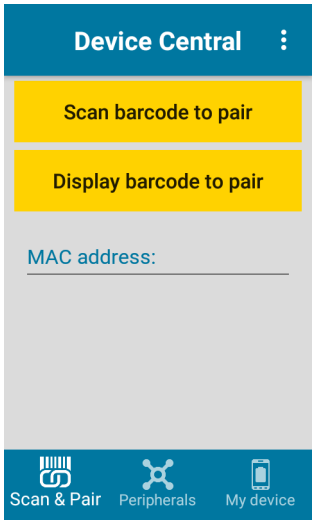
Device Central displays detailed information about the device and connected peripherals and supports the following Zebra devices:

- RS507/RS507X Hands-free Imager
- RS5000 Corded Ring Scanner
- HS3100 Bluetooth Headset
- DS3678 Digital Scanner.

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 RS5000 Quick Start Guide or RS6000 User Guide for more information.
- Displaying the connection status of peripherals.
- Displaying information for a connected peripheral in the notification bar.

Figure 79 Device Central Screen



Paging an RS6000 Ring Scanner

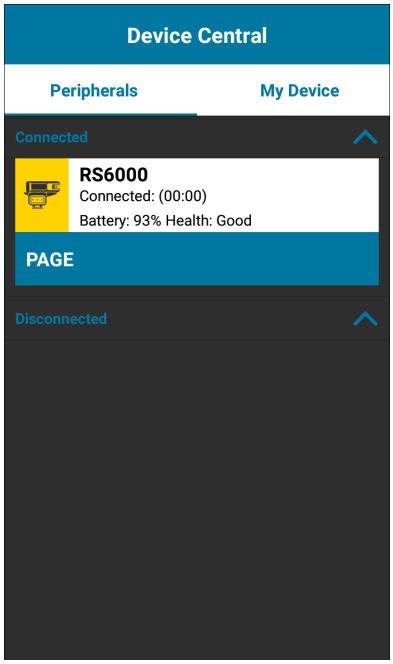
Use **Page** to easily locate the connected RS6000 Ring Scanner:

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

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

2. Under the RS6000 peripheral information, touch **Page** to page the RS6000. The paged RS6000 beeps and vibrates.

Figure 80 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.

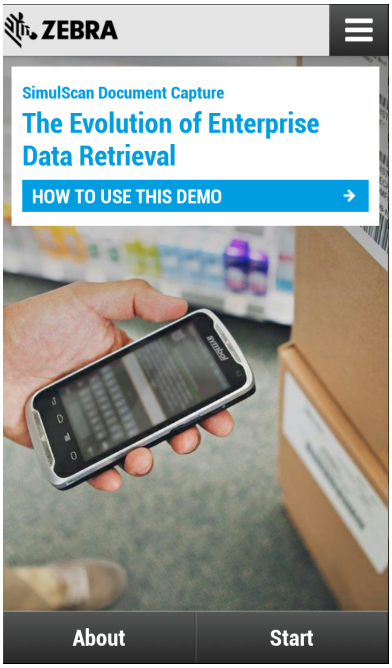
SimulScan Demo

The SimulScan Demo app is an out of the box demonstration app, included on devices that support SimulScan.

The SimulScan Demo app includes the following:

- Postal, Transportation and Logistics Example - Demonstrate the Optical Character Recognition (OCR) and Optical Mark Recognition (OMR) features.
- Manufacturing Example - Demonstrate the MultiCode 20 feature.
- Demo Customization - Create a template using the Template Builder or use a default template. Test templates on the device.

Figure 81 SimulScan Demo Home Screen



Printing the Sample Forms

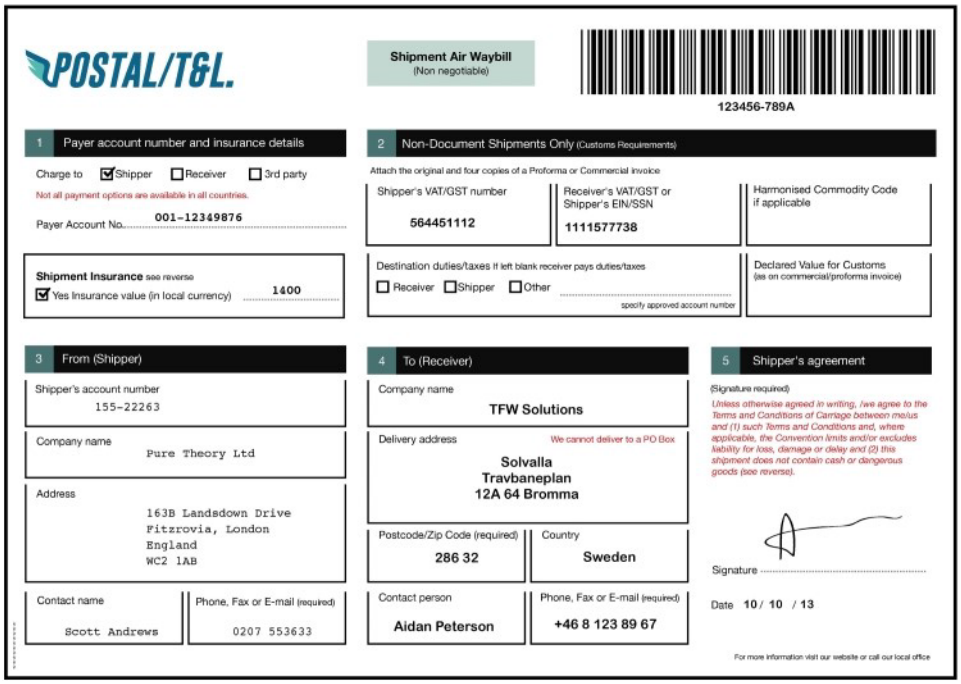
In order to perform the Postal, Transportation & Logistics or Manufacturing demonstrations, print the example forms stored on the device.

1. Launch **SimulScan Demo** application.
2. On the **SimulScan Demo** home screen, touch **HOW TO USE THIS DEMO**.
3. Scroll down and touch **Export sample forms** button. The device copies the forms to the **`\simulscan\samples`** folder in Internal Storage.
4. Connect the device to a computer using the USB Charging cable.
5. Copy the files from the **`\simulscan\samples`** folder in Internal Storage to the computer.
6. Print the forms.

Using the Postal, Transportation and Logistics Example

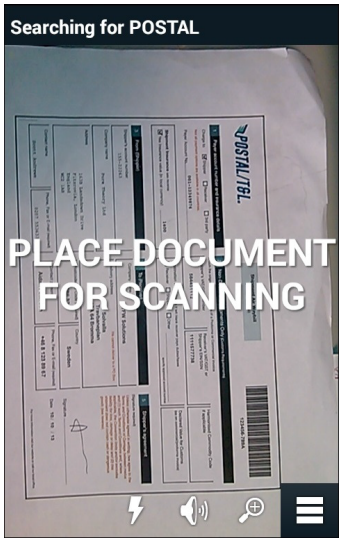
1. Print the Postal, Transportation and Logistics form. See Printing the Sample Forms.

Figure 82 Postal, Transportation and Logistics Form



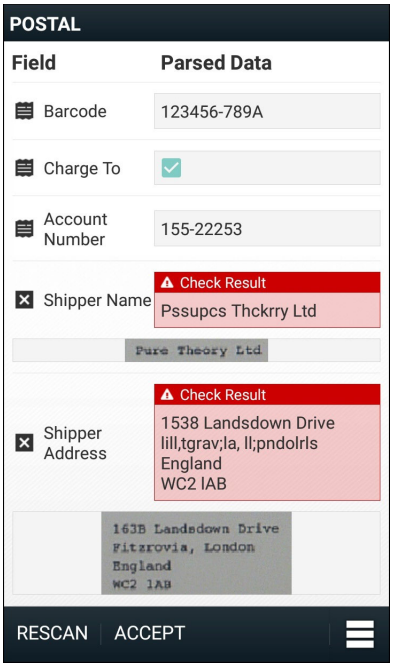
2. Place the form on a flat surface.
3. On the device, launch **SimulScan Demo** app.
4. Touch the **Menu** icon in the top right corner of the screen.
5. Touch **Postal, Transportation & Logistics**.
6. Touch **Start SimulScan**.
7. Use the image control at the bottom of the screen to control the flash, audio and zoom level.

Figure 83 Image Controls



8. Position the camera over the form. Ensure that the complete border of the form is visible on the screen.
9. Hold the device steady.
10. Once the device detects the form **Tap Screen to Scan** appears on the screen.
11. Tap the screen to start the data capture. When completed, the device beeps and the data from the form displays.

Figure 84 Postal Data Screen



12. Touch the text boxes to correct any errors. Note: if there are too many errors, touch **Rescan** to perform the capture again.
13. Touch **Accept** to confirm the data is correct. The **Results summary** screen appears.
14. Touch **OK**.

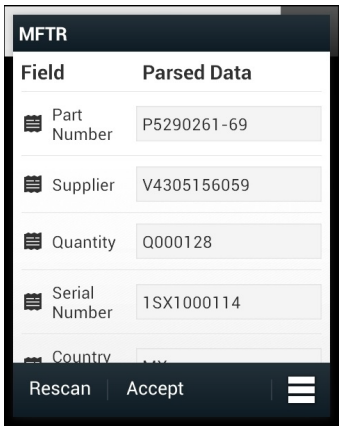
Using the Manufacturing Example

1. Print the Manufacturing form. See Printing the Sample Forms.

Figure 85 Manufacturing Form

2. Place the form on a flat surface.
3. On the device, launch **SimulScan Demo** app.
4. Touch the **Menu** icon in the top right corner of the screen.
5. Touch **Manufacturing**.
6. Touch **Start SimulScan**.
7. Point the top of the device at the document and center the target on the document.
8. Hold the device steady.
9. The device starts the data capture. When completed, the device beeps and the data from the document displays.

Figure 86 Manufacturing Data

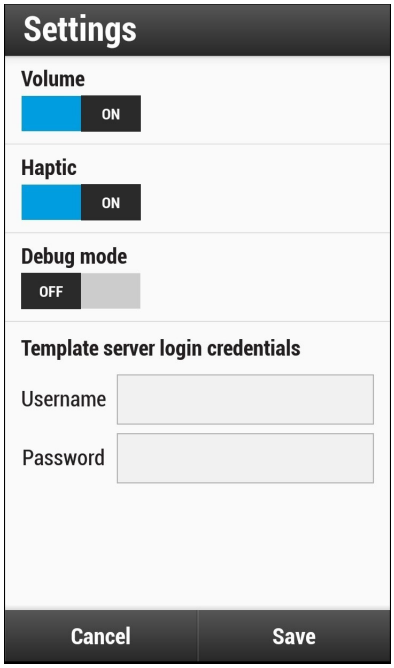


10. Touch the text boxes to correct any errors. If there are too many errors, touch **Rescan** to perform the capture again.
11. Touch **Accept** to confirm the data is correct. The **Results summary** screen appears.
12. Touch **OK**.

Settings

To set the settings for the **SimulScan Demo** application touch **Menu** icon **> Settings**.

Figure 87 Settings Screen

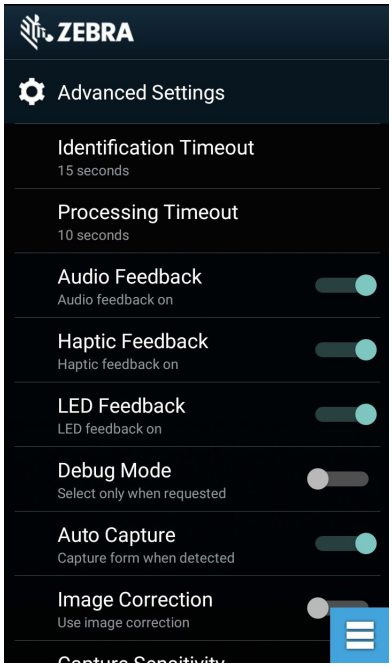


- **Volume** - Toggle switch to turn audible notification on and off.
- **Haptic** - Toggle switch to turn vibration notification on and off.
- **Debug mode** - Toggle switch to enable or disable debug mode.
- **Template server login credentials** - enter credentials for accessing the template server.

Advanced Settings

Use the Advanced setting to configure data capture options. In the data capture screen, touch in the bottom right corner of the screen.

Figure 88 Advanced Settings Screen



- **Identification Timeout** - Set the amount of time to wait before timing out identifying the target document. Options: **2 seconds**, **5 seconds**, **10 seconds**, **15 seconds**, **20 seconds** or **25 seconds**.
- **Processing Timeout** - Once the target document is identified, amount of time to wait before timing out processing.
- **Audio Feedback** - Turn on or off audio feedback on successful parse.
- **Haptic Feedback** - Turn on or off haptic (vibration) feedback on successful parse.
- **LED Feedback** - Turn on or off LED feedback on successful parse.
- **Debug Mode** - If enabled, allows a session to write form capture, region images, region values, and other data to storage. Use only when directed by administrator.
- **Auto Capture** - Set to **On** to automatically capture forms when detected. Set to **Off** to manually capture forms when user taps screen or presses a trigger button.
- **Image Correction** - Turn on when document is crumpled or curved and requires advanced image correction.
- **Capture Sensitivity** - Increase sensitivity for increased document identification accuracy before processing.
- **About** - Displays the SimulScan Engine version number.
- **Quit Scanner** - Exit Advanced Settings screen.

Creating a Demo Customization

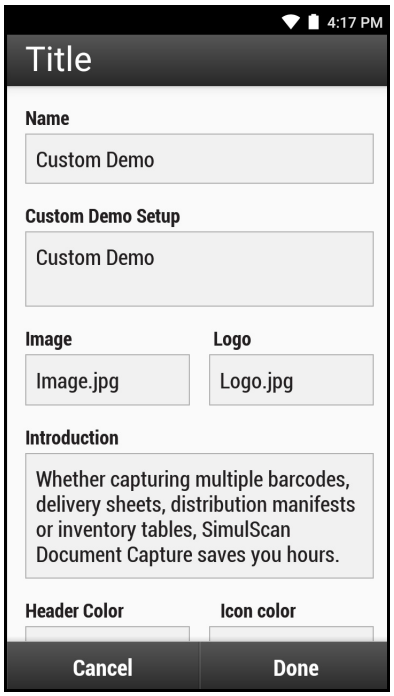
Before creating a customized demo, first:

- Create a template using the Template Builder tool.

- Copy a company logo and image to the device storage location.

1. Touch **Menu** icon.
2. Touch **Setup Custom Demo**.

Figure 89 Custom Demo Setup Screen



3. In the **Name** text box, enter a name for the custom demo that appears in the drop-down menu.
4. In the **Custom Demo Setup** text box, enter a title for the demo that appears in the demo screen title box.
5. Touch the **Image** field to select an image from the SD card.
6. Touch the **Logo** field to select the logo image from the SD card.
7. In the **Introduction** text box, enter text that appears on the demo screen.
8. In the **Header color** text box, enter the hex color value for the header.
9. In the **Icon color** text box, enter the hex color value for Menu icon and button text.
10. In the **Key Features** text box, enter text that appears in bullet format under the Key Feature heading.
11. Touch one of the **SimulScan Document Capture Template** fields to select a template
    a. **Browse external storage** - select a template loaded on the device.
    b. **Default templates** - select one of the default templates.
    c. **Select from server** - select a template from the SimulScan server.
12. Touch **Done**. The customized example appears on the screen.
13. Touch **Start SimulScan** to begin the demonstration.

Default Templates

The following templates are available:

- **Default - BankCheck.xml** – Reads the MICR E-13B font (length between 19 and 40 characters) on bank checks.
- **Default - Barcode 1.xml** – Reads a single supported bar code.
- **Default - Barcode 10.xml** – Reads up to 10 supported bar codes.
- **Default - Barcode 2.xml** – Reads two supported bar codes.
- **Default - Barcode 4.xml** – Reads up to supported four bar codes.
- **Default - Barcode 5.xml** – Reads up to supported five bar codes.
- **Default - BookNumber.xml** – Reads the OCR-B ISBN 10 or 13 digit book numbers.
- **Default - DocCap + Optional Barcode** – Captures a full page image and decode any supported bar codes that are in the form. The captured area is the largest rectangular region in the field of view defined by the solid border or contrast of background. Any OCR or OMR content will not be decoded in this mode. The captured area is further processed to correct, de-skew and sharpen and returned as a picture.
- **Default - DocCap + Required Barcode** – Captures a full page image and decode of any supported bar codes that are present in the form. The captured area is the largest rectangular region in the field of view defined by the solid border or contrast of background. Any OCR or OMR content will not be decoded in this mode. The captured area is further processed to correct, de-skew and sharpen and returned as a picture.
- **Default - TravelDoc.xml** – Reads passport and Visa travel documents with OCR-B types A and B fonts.
- **Default - Unstructured Multi-Line** – Reads up to seven lines of text.
- **Default - Unstructured Single Line** – Reads a single line of text.

Data Capture

Introduction

This chapter provides information for capturing barcode data using the internal camera and optional scan modules and Bluetooth scanner.

The MC33XX offers the following data capture options:

- Imager (SE4750-SR 2D and SE4850-ER 2D).
- Laser Scanner (SE965 1D).
- Bluetooth (RS507/RS507X Hands-free imager, RS6000 Bluetooth Ring Scanner, and DS3678 Digital Barcode Scanner).

NOTE: DataWedge is installed and enabled on the MC33XX by default.

By default, the good decode beep is set to system volume (Music and Media). The good decode beep can be set to another sound (Notifications or Alarms) and the volume can be independently controlled. See the DataWedge section in the MC33XX Integrator Guide for more information.

Integrated Imager

The device with an integrated 2D imager has the following features:

- Omnidirectional reading of a variety of barcode symbologies, including the most popular linear, postal, PDF417, Digimarc, and 2D matrix code types.
- The ability to capture and download images to a host for a variety of imaging applications.
- Advanced intuitive laser aiming cross-hair and dot aiming for easy point-and-shoot operation.

The imager uses imaging technology to take a picture of a barcode, stores the resulting image in memory, and executes state-of-the-art software decoding algorithms to extract the barcode data from the image.

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 - The device attempts to locate and decode enabled barcodes within its field of view. The imager remains in this mode as long as you hold 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 - Selectively decode a barcode when more than one barcode is in the device's field of view by moving the aiming crosshair or dot over the required barcode. Use this feature for pick lists containing multiple barcodes and manufacturing or transport labels containing more than one barcode type (either 1D or 2D).

Laser Scanner

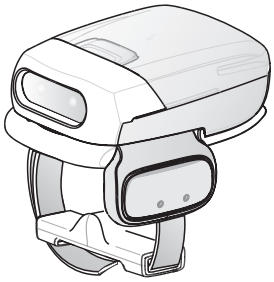
The device with a laser scanner has the following features:

- Reading of a variety of barcode symbologies, including the most popular linear, postal, and 1D code types.
- Intuitive laser aiming for easy point-and-shoot operation.

RS507/RS507X Hands-Free Imager

The RS507/RS507X Hands-free Imager is a wearable barcode scan solution for both 1D and 2D barcode symbologies.

Figure 90 RS507/RS507X Hands-Free Imager

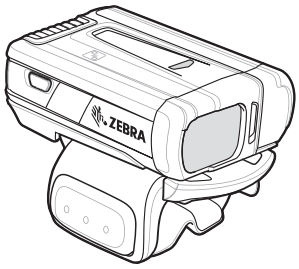


Refer to the RS507/RS507X Hands-free Imager Product Reference Guide for more information.

RS6000 Bluetooth Ring Scanner

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

Figure 91 RS6000 Bluetooth Ring Scanner

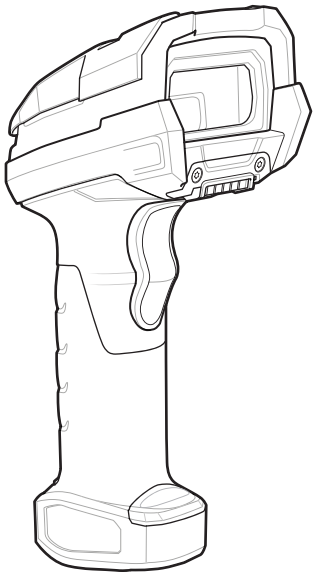


Refer to the RS6000 Bluetooth Ring Scanner Product Reference Guide for more information.

DS3678 Digital Scanner

The cordless DS3678 combines superior 1D and 2D omnidirectional barcode scanning performance and advanced ergonomics in a lightweight design. See the DS36X8 Product Reference Guide for more information.

Figure 92 DS3678 Digital Scanner



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.

Barcode Capture with Imager

To capture barcode data:

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 top of the device at a barcode.

Figure 93 Barcode Scanning – MC33XX–G

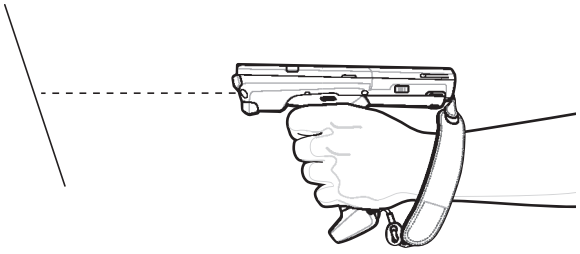
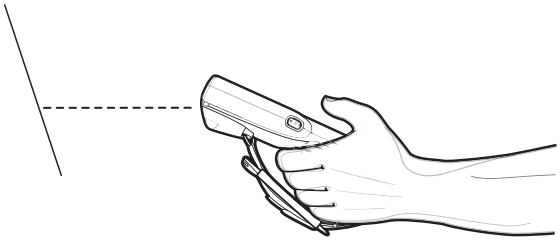


Figure 94 Bar Code Scanning – MC33XX–S



3. Press and hold the Scan button or Trigger.

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

4. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot is used for increased visibility in bright lighting conditions.

   The Scan LEDs light green and a beep sounds, by default, to indicate the barcode was decoded successfully. Note that when the device is in Pick List Mode, the device does not decode the barcode until the center of the crosshair touches the barcode.

Figure 95 Aiming Pattern: Standard and Extended Range

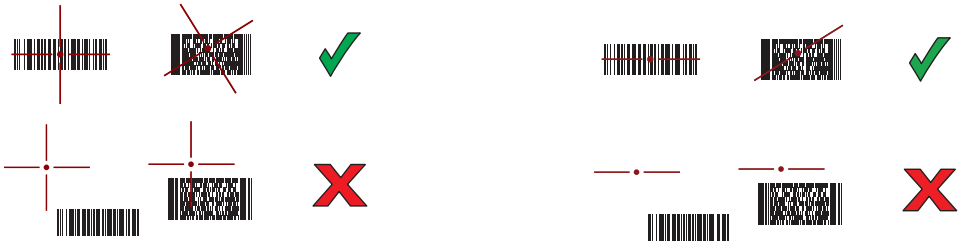


Figure 96 Pick List Mode with Multiple Barcodes in Aiming Pattern: Standard and Extended Range

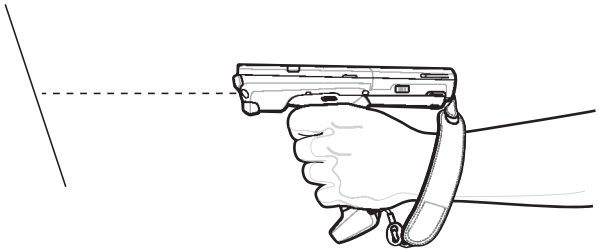
5. Release the scan button or Trigger.
6. The barcode content data appears in the text field.

Barcode Capture with Laser Scanner

To capture barcode data:

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 top of the device at a barcode.
3. On the MC33XX–R, rotate the Turret for optimal scanning position.
4. Point the scan exit window at a barcode.

Figure 97 Barcode Scanning – MC33XX-G

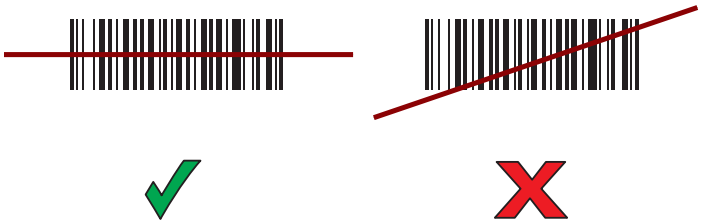


5. Press and hold the Scan button.

   The red scan line turns on to assist in aiming. Ensure that the scan line crosses every bar and space of the barcode.

   The Scan LEDs light green and a beep sounds, by default, to indicate the barcode was decoded successfully.

Figure 98 Linear Scanner Aiming Pattern



6. Release the scan button.
7. The captured data appears in the text field.

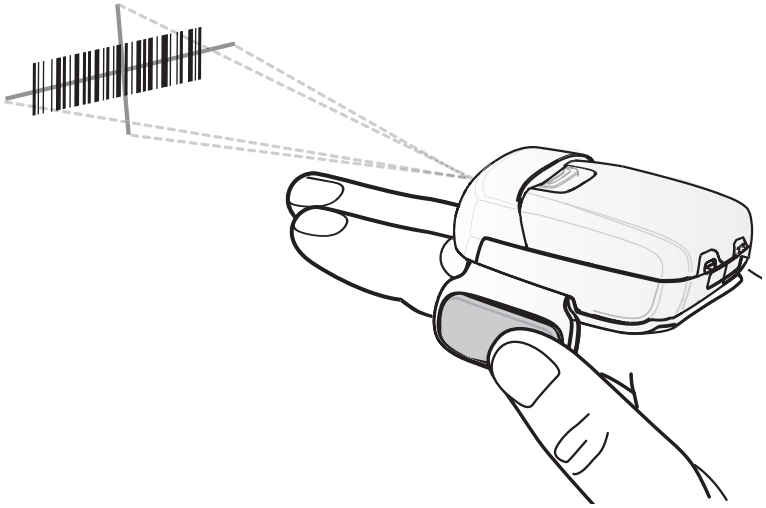
Scanning with RS507/RS507X Hands-Free Imager

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 InterfacePairing 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 99 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 100 RS507/RS507X Aiming Pattern

Figure 101 RS507/RS507X Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.

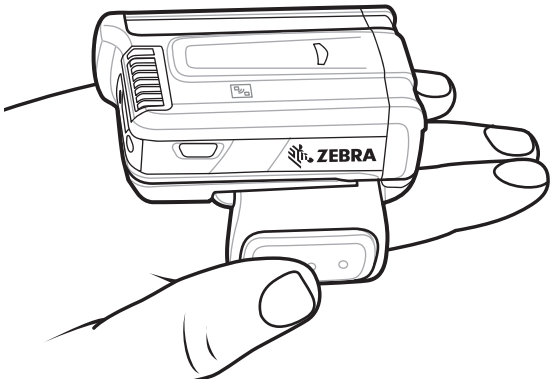
Scanning with RS6000 Bluetooth Ring Scanner

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 102 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 103 RS6000 Aiming Pattern

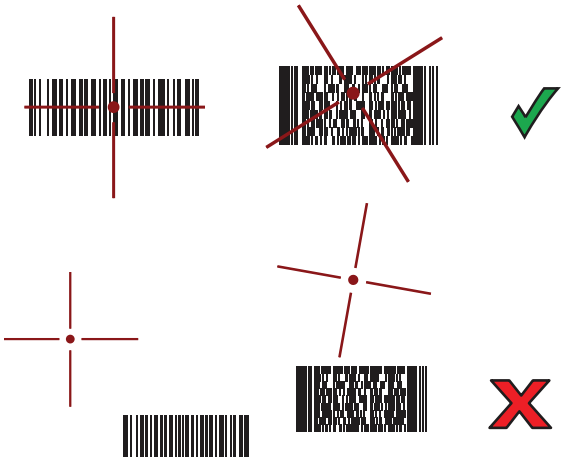


Figure 104 RS6000 Pick List Mode with Multiple Barcodes in Aiming Pattern

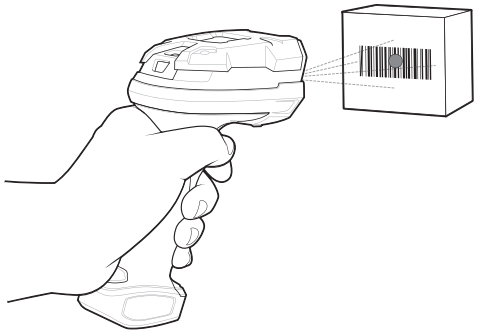
5. The captured data appears in the text field.

Scanning with the DS3608 USB Scanner or DS3678 Bluetooth Scanner

To scan with the DS3608 or DS3678:

1. Pair the scanner with the device. For more information, see Connecting a USB Scanner for the DS3608 or Pairing Bluetooth Scanners for the DS3678.
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 scanner at a barcode.

Figure 105 Barcode Scanning (DS3678 shown)



4. Press and hold the trigger.

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

Figure 106 DS3608/DS3678 Aiming Pattern

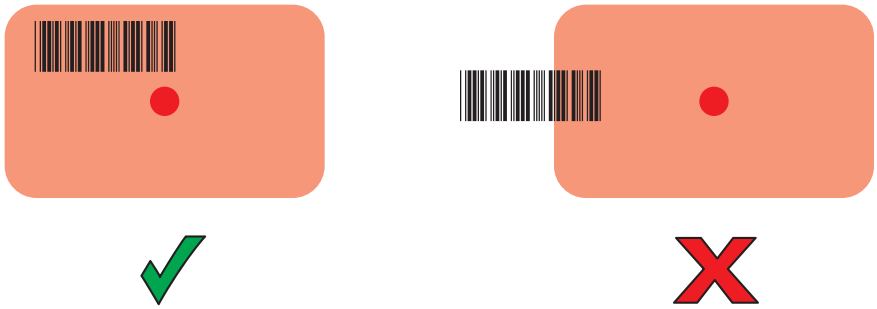
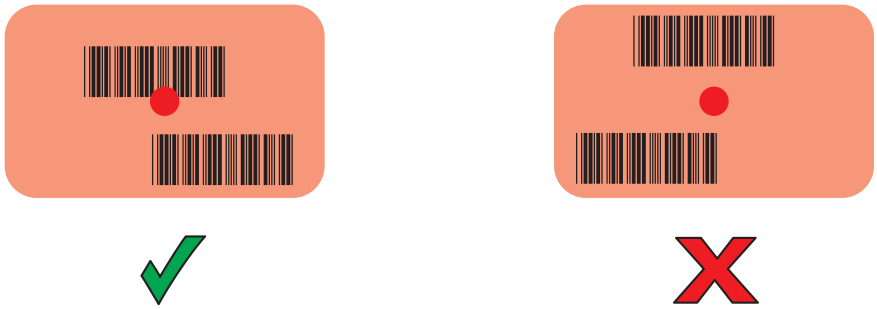


Figure 107 DS3608/DS3678 Pick List Mode with Multiple Barcodes in Aiming Pattern



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:

- Near Field Communication (NFC) (RS6000 only)
- Simple Serial Interface (SSI)
- Bluetooth Human Interface Device (HID) Mode.

Pairing Using Near Field Communication

NOTE: NFC is supported on the premium and premium + configurations of the device and only with the RS6000.

The MC33XX provides the ability to pair the RS6000 using NFC.

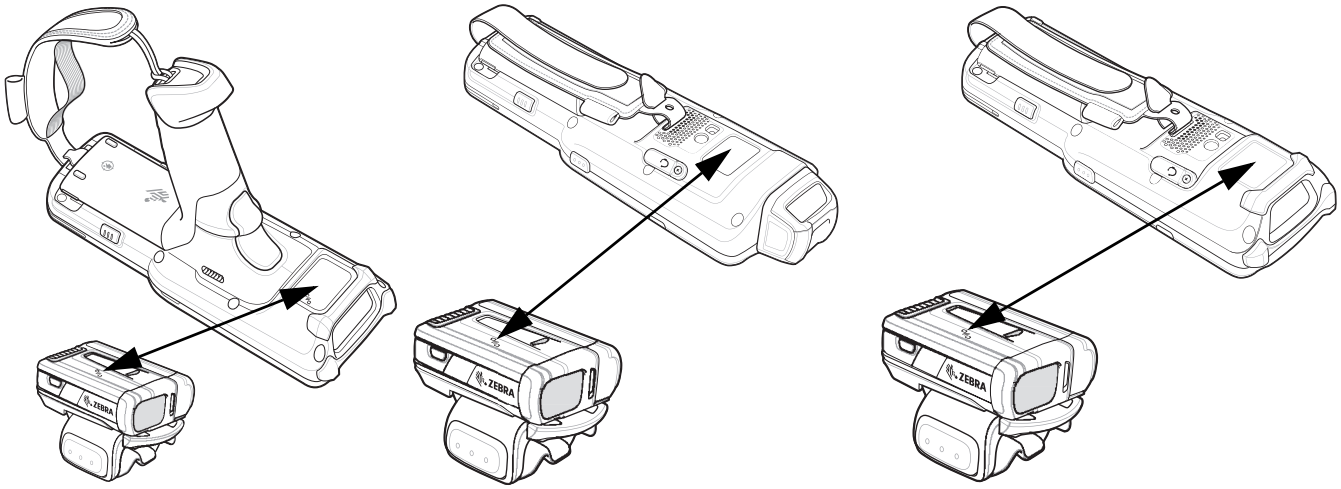
1. Ensure that the RS6000 is in SSI mode. Refer to the RS6000 User Guide for more information.
2. Ensure that NFC is enabled on the MC33XX.
3. Align the NFC icon on the RS6000 with the NFC icon on the back of the MC33XX.

   The Status LED blinks blue indicating that the RS6000 is attempting to establish connection with the MC33XX. When connection is established, the Status LED turns off and the RS6000 emits a single string of low/high beeps.

   A notification appears on the MC33XX screen.

   The icon appears in the Status bar.

Figure 108 Align NFC Antennas



The MC33XX pairs with the RS6000 and appears in the Status bar.

NOTE: Not all Zebra devices support NFC readers and the Tap-to-Pair feature.

Pairing in HID Mode Using Near Field Communication

The MC33XX provides the ability to pair the RS6000 in HID Mode using NFC.

NOTE: NFC is supported on the premium and premium + configurations of the device and only with the RS6000.

1. Ensure that NFC is enabled on the MC33XX.
2. Ensure that Bluetooth is enabled on both devices.
3. Ensure that the Bluetooth device to discover is in discoverable mode.
4. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
5. Place the RS6000 in Human Interface Device (HID) mode. If the RS6000 is already in HID mode, skip to step 6.
   a. Remove the battery from the RS6000.
   b. Press and hold the Restore key.
   c. Install the battery onto the 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 RS6000 in HID mode.

Figure 109 Bluetooth HID Barcode

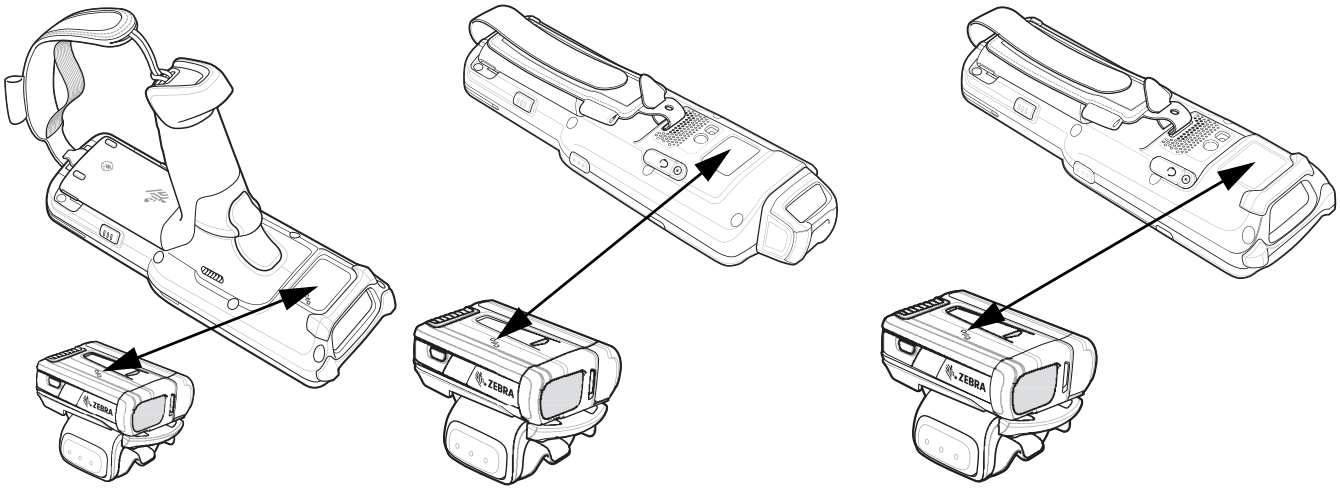
6. Remove the battery from the RS6000.
7. Re-install the battery into the RS6000.
8. Align the NFC icon on the RS6000 with the NFC icon on the MC33XX.

   The Status LED blinks blue indicating that the RS6000 is attempting to establish connection with the MC33XX. When connection is established, the Status LED turns off and the RS6000 emits a single string of low/high beeps.

   A notification appears on the MC33XX screen.

   The icon appears in the Status bar.

Figure 110 Align NFC Antennas



The MC33XX pairs with the RS6000 and appears in the Status bar.

NOTE: Not all Zebra devices support NFC readers and the Tap-to-Pair feature.

Pairing Using Simple Serial Interface

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 111 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.

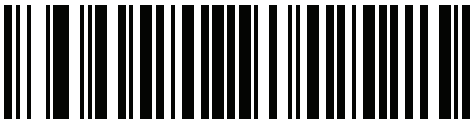
Pairing Using Bluetooth Human Interface Device

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 112 RS507 Bluetooth HID Barcode

Figure 113 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 A icon appears in the Status bar.

Pairing a Bluetooth Scanner

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

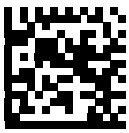
- Simple Serial Interface (SSI) mode
- Bluetooth Human Interface Device (HID) mode.

Pairing Using 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 114 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 ◯.

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 ◯.

Wireless

Introduction

This section provides information on the wireless features:

- Wireless Local Area Network (WLAN)
- Bluetooth
- Near Field Communications (NFC)
- 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).
  - LEAP
  - Protected Extensible Authentication Protocol (PEAP) - with MSCHAPV2 and GTC authentication
  - Transport Layer Security (TLS)
  - TTLS - with Password Authentication Protocol (PAP), MSCHAP and MSCHAPv2 authentication.
  - EAP-FAST - with MSCHAPV2 and GTC authentication.

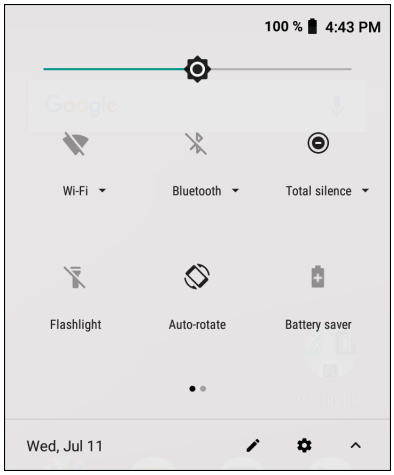
The **Status** bar displays icons that indicate Wi-Fi network availability and Wi-Fi status.

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

Connecting to a Wi-Fi Network

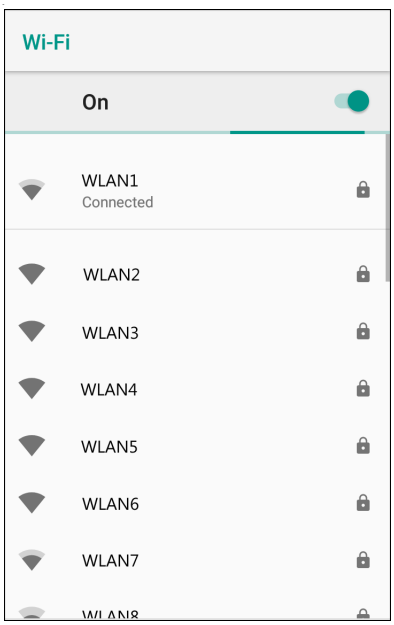
To connect to a Wi-Fi network:

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 115 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 ◯.

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 17 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.

Table 17 Bluetooth Profiles (Continued)

Profile	Description
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.
Symbol Serial Interface (SSI)	Allows for communication with Bluetooth Imager.
File Transfer Profile (FTP)	Provides the capability to browse, manipulate and transfer files in file system of another system. Uses GOEP as a basis.
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.
HID Over GATT Profile (HOGP)	Defines the procedures and features used by Bluetooth low energy HID Devices using GATT and Bluetooth HID Hosts using GATT.

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 ◯.

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 ◯.

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 ◯.

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 ◯.

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 ◯.

Using a Bluetooth Headset

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

Near Field Communications

NOTE: NFC is supported only on the premium and premium + configuration of the device.

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

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

Using NFC, the device can:

- Read contactless cards such as contactless tickets, ID cards and ePassport.
- Read and write information to contactless cards such as SmartPosters and tickets, as well as devices with NFC interface such as vending machines.
- Read information from supported medical sensors.

- Pair with supported Bluetooth devices such as printers , ring scanners (ex. RS6000), and headsets (ex. HS3100).
- Exchange data with another NFC device.
- Emulate contactless card such as payment, ticket, or SmartPoster.

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

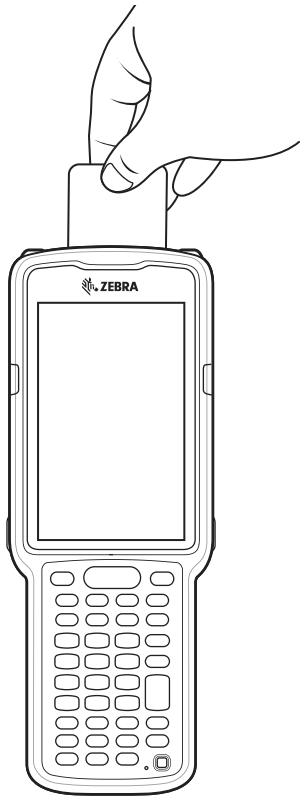
The device NFC antenna is centrally aligned with the back housing directly underneath the regulatory label and is designed for reading a range of NFC tags at distances from contact up to 2 cm from the rear of the device.

Reading NFC Cards

To read NFC cards:

1. Launch an NFC enabled application.
2. Hold device as shown.
3. Move the device close to the NFC card until it detects the card.
4. Hold the card steadily until the transaction is complete (usually indicated by the application).

Figure 116 Reading Cards



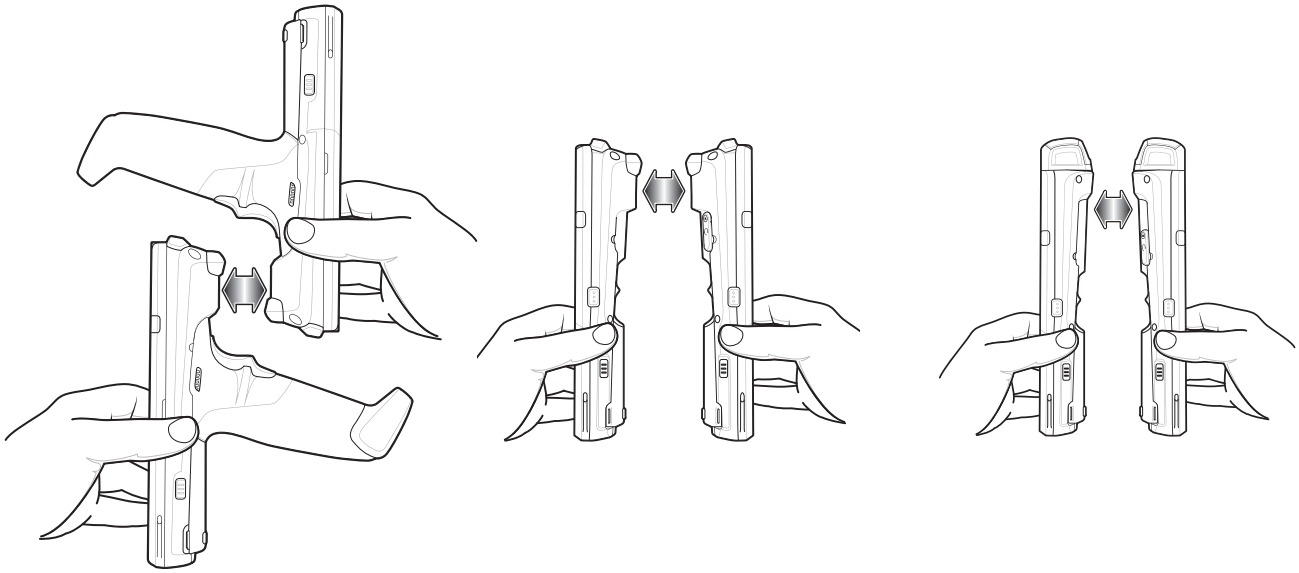
Sharing Information Using NFC

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

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

1. Open a screen that contains a web page, video, photo or contact.
2. Move the back of the device toward the back of the other device.

Figure 117 Sharing Data Using NFC



When the devices connect, a sound emits, the image on the screen reduces in size, the message **Touch to beam** displays.

3. Touch anywhere on the screen.

   The transfer begins.

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 ◯.

Accessories

Introduction

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

MC33XX Accessories

The table below lists the accessories available for the MC33XX.

Table 18 MC33XX Accessories

Accessory	Part Number	Description
Cradles		
1-Slot USB Charge Cradle with Spare Battery Charger	CRD-MC33-2SUCHG-01	Charges the MC33XX main battery and a spare battery, and synchronizes the MC33XX with a host computer through a USB connection. Requires power supply (PWR-BGA12V50W0WW), DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
5-Slot Charge Only ShareCradle	CRD-MC33-5SCHG-01	Charge only. Charges up to five MC33XXs. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
5-Slot Ethernet ShareCradle	CRD-MC33-5SETH-01	Charges up to five MC33XXs and provides Ethernet communication for up to five devices. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.

Table 18 MC33XX Accessories (Continued)

Accessory	Part Number	Description
5-Slot Charge ShareCradle with 4-Slot Battery Charger	CRD-MC33-4SC4BC-01	Charge only. Charges up to four MC33XXs and up to four spare batteries. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
5-Slot Ethernet ShareCradle with 4-Slot Battery Charger	CRD-MC33-4SE4BC-01	Charges up to four MC33XXs and up to four spare batteries and provides Ethernet communication for up to four MC33XXs. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
Chargers		
4-Slot Spare Battery Charger	SAC-MC33-4SCHG-01	Charges up to four MC33XX spare batteries. Requires power supply (PWR-BGA12V50W0WW), DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
20-Slot Spare Battery Charger	SAC-MC33-20SCHG-01	Charges up to 20 MC33XX spare batteries. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
Power Supply	PWR-BGA12V50W0WW	Level VI power supply. Provides 12 VDC, 2.5A power to the 1-Slot USB Charge Cradle and the 4-Slot Spare Battery Charger. Requires a DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
Power Supply	PWR-BGA12V108W0WW	Level VI power supply. Provides 12 VDC, 2.5A power to the 5-Slot Charge Only Cradle, 5-Slot Ethernet Cradle, 5-Slot Charge Cradle with 4-Slot Battery Charger, 5-Slot Ethernet Cradle with 4-Slot Battery Charger and 20-Slot Battery Charger. Requires a DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.

Table 18 MC33XX Accessories (Continued)

Accessory	Part Number	Description
Power Supply	PWR-WUA5V12W0US	Wall adapter; Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the United States.
Power Supply	PWR-WUA5V12W0GB	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the European Union.
Power Supply	PWR-WUA5V12W0EU	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the United Kingdom.
Power Supply	PWR-WUA5V12W0AU	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in Australia.
Power Supply	PWR-WUA5V12W0CN	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in China.
Power Supply	PWR-WUA5V12W0IN	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in India.
US AC Line Cord	23844-00-00R	Provides power to 3–wire power supplies PWR-BGA12V50W0WW and PWR-BGA12V108W0WW.
DC Line Cord	CBL-DC-381A1-01	Provides power from the power supply (PWR-BGA12V108W0WW) to the 5-Slot Charge Only Cradle, 5-Slot Ethernet Cradle, 5-Slot Charge Cradle with 4-Slot Battery Charger, 5-Slot Ethernet Cradle with 4-Slot Battery Charger and 20-Slot Battery Charger.
DC Line Cord	CBL-DC-388A1-01	Provides power from the power supply (PWR-BGA12V150W0WW) to the 1-Slot USB Charge Cradle and 4-Slot Battery Charger.
Cables		
USB Charge Cable	CBL-MC33-USBCHG-01	Provides power and/or communication over USB to the device. Requires wall adapter/power supply PWR-WUA5V12W0xx.
1-Slot Cradle USB Cable	25-124330-01R	Provides USB communication through the 1-Slot USB cradle to the host computer.
Headset Quick Disconnect Adapter Cable (2.5 mm)	25-124411-03R	Connects an RCH51, HS2100, or third party quick disconnect headset to the MC33XX-R/S.

Table 18 MC33XX Accessories (Continued)

Accessory	Part Number	Description
Miscellaneous		
Cradle Adapter	ADP-MC33-CRDCUP-01	MC33XX Charge Only Adapter for backwards compatibility with MC32 cradles. Works with MC32N0 1-Slot USB Cradle, 4-Slot Charge Only Cradle, and 4-Slot Ethernet Cradles.
2740 mAh Battery (Standard PowerPrecision+)	BTRY-MC33-27MA-01 BTRY-MC33-27MA-10 BTRY-MC33-27MA-IN	Replacement standard capacity battery. Replacement standard capacity battery (10–pack). Replacement standard capacity battery (India).
5200 mAh Battery (Extended PowerPrecision+)	BTRY-MC33-52MA-01 BTRY-MC33-52MA-10 BTRY-MC33-52MA-IN	Replacement extended capacity battery. Replacement extended capacity battery (10–pack). Replacement extended capacity battery (India).
MC33XX-G Hand Strap	SG-MC33-HDSTPG-01	Replacement hand strap for the MC33XX-G. Hand strap loop holds an optional stylus (SG-TC7X-STYLUS-03).
MC33XX-R/S Hand Strap	SG-MC33-HDSTPB-01	Replacement hand strap for the MC33XX-R and MC33XX-S.
Lanyard	SG-MC33-LNYDB-01	Optional lanyard for MC33XX-R and MC33XX-S, for securing the device to the user with the cross-body strap or the belt clip (both options included).
Rigid Holster	SG-MC33-RDHLST-01	Provides a clip on holder for the MC33XX-R and MC33XX-S.
MC33XX-G Fabric Holster	SG-MC3021212–01R	Provides a soft, clip on holster and a shoulder strap for the MC33XX–G.
MC33XX-R/S Fabric Holster	SG-MC3X-SHLSTB-01	Provides a soft, clip on holder and a shoulder strap for the MC33XX-R and MC33XX-S.
Shoulder Strap	58-40000-007R	Universal shoulder strap.
Belt	11-08062-02R	Belt for fabric holster.
MC33XX-G Rubber Boot	SG-MC33-RBTG-01	Provides additional protection for wear and tear of the MC33XX-G.
MC33XX-S Rubber Boot	SG-MC33-RBTS-01	Provides additional protection for the MC33XX-S.
MC33XX–R Rubber Boot for Terminal	SG-MC33-RBTRD-01	Provides additional protection for the MC33XX–R (terminal).

Table 18 MC33XX Accessories (Continued)

Accessory	Part Number	Description
MC33XX-R Rubber Boot for Turret Cup	SG-MC33-RBTRT-01	Provides additional protection for the MC33XX-R (turret cup).
Tempered Glass Screen Protector	MISC-MC33-SCRN-01	Provides additional protection for display (5-pack).
Stylus and Tether	SG-TC7X-STYLUS-03	Conductive carbon-filled stylus for capacitive touch panel; includes coiled tether (3-pack).
Un-powered Forklift Mount	MNT-MC33-FLCHKT-01	Un-powered forklift mount. Allows installing the device on a roll bar or square surface of a forklift. Includes: Forklift holder (MNT-MC33-FLCH-01), RAM double socket arm for 1” ball (MNT-RAM-B201U) and RAM forklift clamp 2.5” max width square rail base with 1” ball (MNT-RAM-B247U25).

Compatibility

The table below displays compatibility between MC33XX and MC32N0 mobile computers and accessories.

Table 19 Compatibility

	MC33XX PP+ Batteries	MC32N0 PP Batteries	MC33XX Cradles	MC32N0 Cradles	MC33XX Battery Charger	MC32N0 Battery Charger
MC33XX mobile computer	Yes	Yes	Yes	Yes w/adapter	N/A	N/A
MC32N0 mobile computer	No	Yes	No	Yes	N/A	N/A
MC33XX PP+ Battery	N/A	N/A	Yes	No	Yes	No
MC32N0 PP Battery	N/A	N/A	Yes	Yes	Yes	Yes

- MC33XX mobile computers are compatible with all batteries (MC33XX PowerPrecision+ and MC32N0 PowerPrecision).
- MC33XX mobile computers are compatible with all cradles.

  An additional adapter is needed to use any MC32N0 cradle slot, which provides charge only, no communication.
- MC33XX battery charger slots are compatible with all batteries (MC33XX PowerPrecision+ and MC32N0 PowerPrecision).
- MC32N0 mobile computers are not compatible with MC33XX cradles.

Battery Comparison

The table below displays a comparison of the MC33XX batteries with the MC32N0 batteries.

Table 20 Battery Comparison

Feature	MC32N0	MC33XX
Battery Type	PowerPrecision	PowerPrecision+
Includes Zebra and PowerPrecision+ recessed logos	No	Yes
Back Label	Grey	Blue

Battery Compatibility

- MC33XX PowerPrecision+ batteries are compatible with all MC33XX mobile computers and accessories.
- MC33XX PowerPrecision+ batteries are not compatible with MC32N0 mobile computers and accessories.
- MC32N0 PowerPrecision batteries are compatible with all MC32N0 mobile computers and accessories.
- MC32N0 PowerPrecision batteries are compatible with all MC33XX mobile computers and accessories.
- The MC33XX-G is compatible with MC33XX 5200 mAh PowerPrecision+ extended batteries and MC32N0 5200 mAh PowerPrecision extended batteries.
- The MC33XX-R/S are compatible with MC33XX 2740 mAh PowerPrecision+ standard batteries, MC33XX 5200 mAh PowerPrecision+ extended batteries, MC32N0 2740 mAh PowerPrecision standard batteries, and MC32N0 5200 mAh PowerPrecision extended batteries.

1-Slot USB Charge Cradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

The 1-Slot USB Charge Cradle:

- Provides 9 VDC power for charging the mobile computer and charging the battery.
- Provides 4.2 VDC power to charge the spare battery.
- Provides a USB port for data communication between the mobile computer and a host computer or other USB devices (e.g., a printer).
- Synchronizes information between the mobile computer and a host computer. With customized or third party software, it can also synchronize the mobile computer with corporate databases.
- Compatible with the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Charging the MC33XX Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer Charge LED Indicator, indicates the mobile computer battery charging status. For charging status, see Table 21 on page 152

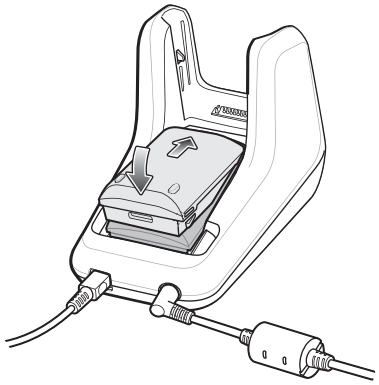
Figure 118 MC33XX Battery Charging

3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Charging an MC33XX Spare Battery

1. Ensure that the cradle is connected to power.
2. Insert the spare battery into the cradle, bottom first, and pivot the top of the battery down onto the contact pins.

Figure 119 MC33XX Spare Battery Charging



3. Gently press down on the battery to ensure proper contact.
   The Spare Battery Charging LED on the front of the cradle indicates the spare battery charging status.
4. When charging is complete, lift the battery out of the slot.

Battery Charging in 1- Slot USB Charge Cradle

The 1-Slot USB charge cradle charges the MC33XX's main battery and a spare battery simultaneously.

The MC33XX's Charge LED indicates the status of the battery charging in the MC33XX. See Table 21 for charging status indications.

The spare battery charging LED on the cradle indicates the status of the spare battery charging in the cradle. See below for charging status indications.

Table 21 Spare Battery LED Charging Indicators

Spare Battery LED (on cradle)	Indication
Off	• The battery is not charging. • The battery is not inserted correctly in the cradle or connected to a power source. • Cradle is not powered.
Solid Amber	• Battery is charging.

Table 21 Spare Battery LED Charging Indicators (Continued)

Spare Battery LED (on cradle)	Indication
Solid Green	• Battery charging is complete.
Fast Blinking Red 2 blinks/second	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Solid Red	• Spare battery is charging and battery is at the end of useful life. • Charging complete and battery is at the end of useful life.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

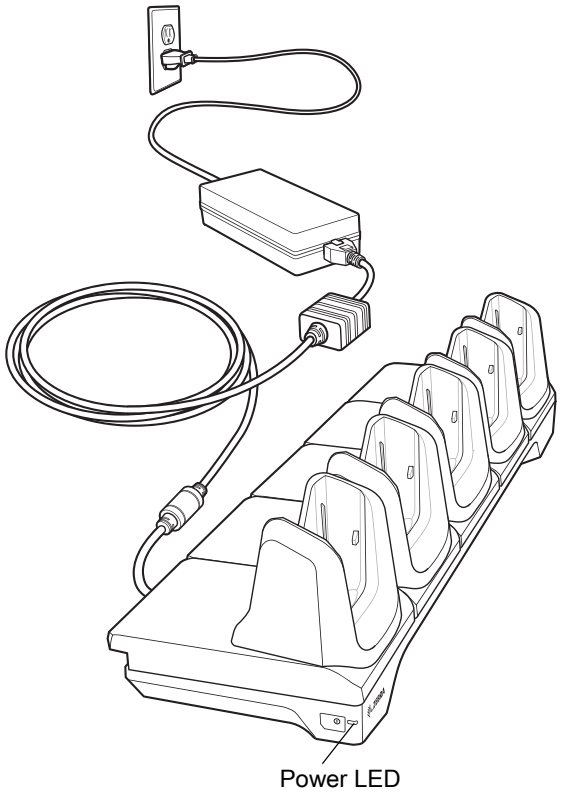
5-Slot Charge Only ShareCradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

The 5-Slot Charge Only ShareCradle:

- Provides 9 VDC power for operating the mobile computer and charging the battery.
- Simultaneously charges up to five mobile computers.
- Compatible with devices using the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Figure 120 5-Slot Charge Only ShareCradle



Charging the MC33XX Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer Charge LED Indicator, indicates the mobile computer battery charging status.
3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Battery Charging in the 5-Slot Charge Only ShareCradle

The MC33XX's Charge LED indicates the status of the battery charging in the MC33XX. See Table on page 23 for charging status indications.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

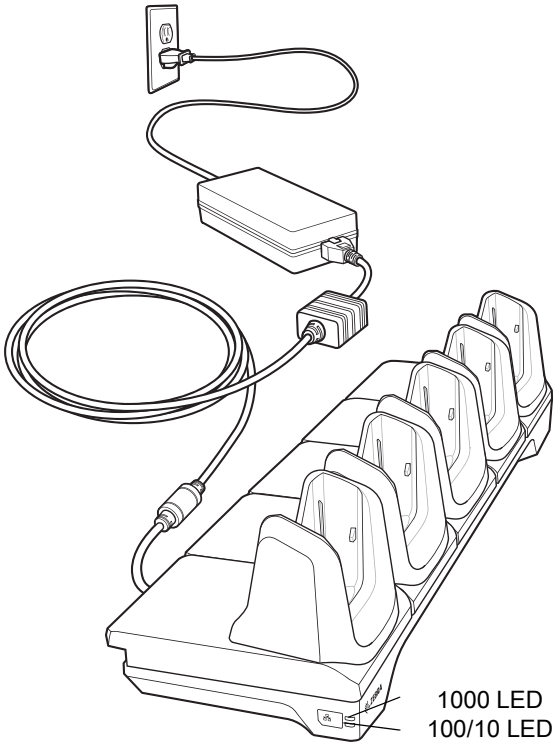
5-Slot Ethernet ShareCradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

The 5-Slot Ethernet ShareCradle:

- Provides 9 VDC power for operating the mobile computer and charging the battery.
- Simultaneously charges up to five mobile computers.
- Compatible with devices using the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Figure 121 5-Slot Ethernet ShareCradle



Charging the MC33XX Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer amber Charge LED Indicator, indicates the mobile computer battery charging status.
3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Battery Charging in the 5-Slot Ethernet ShareCradle

The MC33XX's Charge LED indicates the status of the battery charging in the MC33XX. See Table 8 on page 34 for charging status indications.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

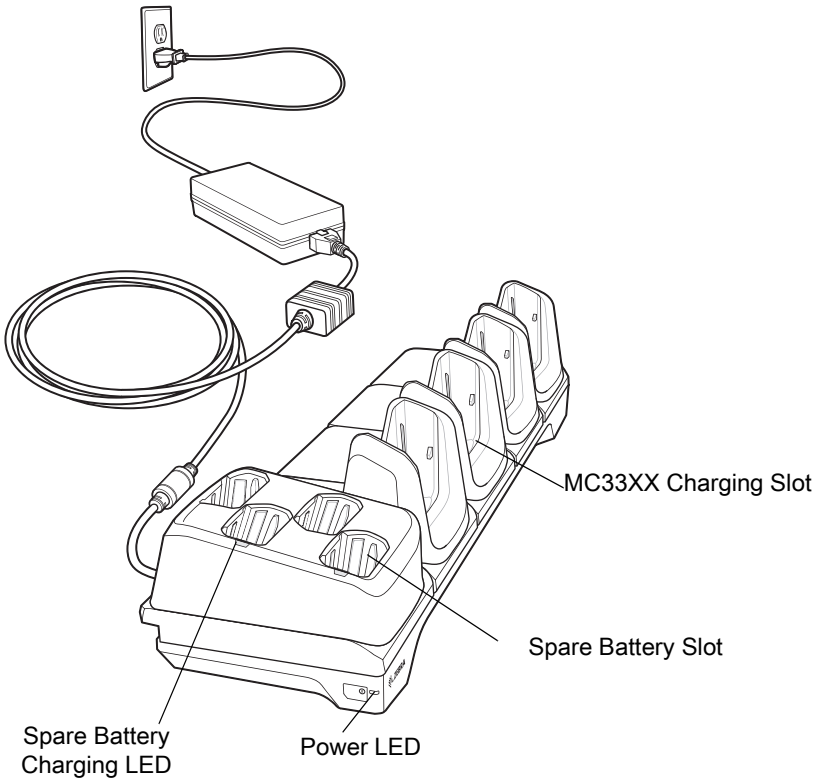
5-Slot ShareCradle with 4-Slot Battery Charger

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

The 5-Slot ShareCradle with 4-Slot Battery Charger:

- Provides 9 VDC power for operating the mobile computer and charging the battery.
- Provides 4.2 VDC power for charging spare batteries.
- Simultaneously charges up to four mobile computers and four spare batteries.
- Compatible with the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Figure 122 5-Slot ShareCradle with 4-Slot Battery Charger



Charging the MC33XX Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer amber Charge LED Indicator, indicates the mobile computer battery charging status.
3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Charging Spare Batteries

Insert the battery into the charger and gently press down on the battery to ensure proper contact.

Battery Charging in the 5-Slot ShareCradle with 4-Slot Battery Charger

The MC33XX's Charge LED or the spare battery LED indicates the status of the battery charging in the MC33XX. See Table 8 on page 34 for charging status indications.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

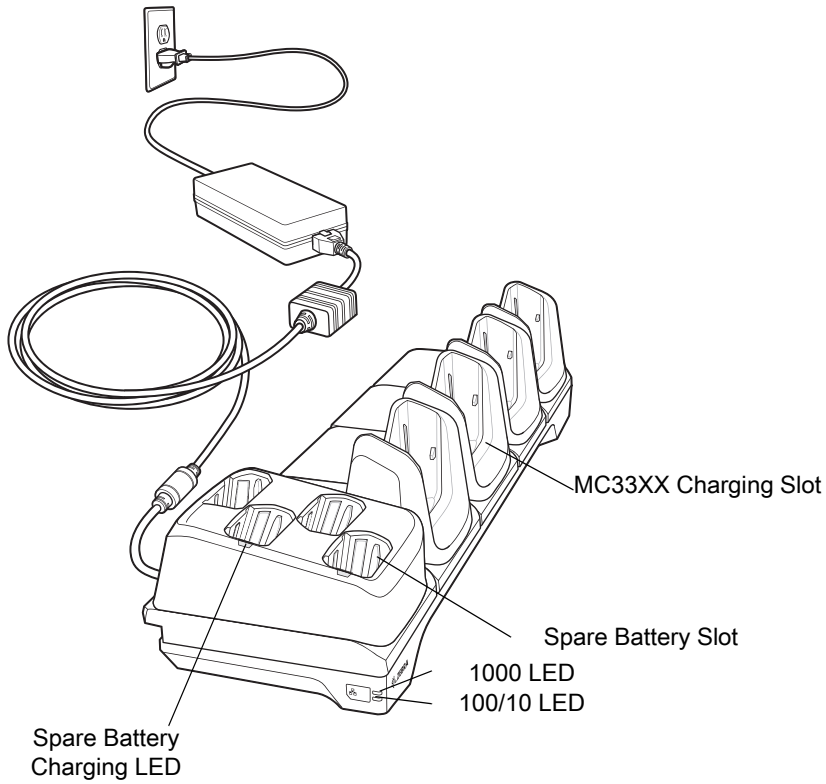
5-Slot Ethernet ShareCradle with 4-Slot Battery Charger

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

The 5-Slot Ethernet ShareCradle with 4-Slot Battery Charger:

- Provides 9 VDC power for operating the mobile computer and charging the battery.
- Provides 4.2 VDC power for charging spare batteries.
- Simultaneously charges up to four mobile computers and four spare batteries.
- Compatible with the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Figure 123 5-Slot Ethernet ShareCradle with 4-Slot Battery Charger



Charging the MC33XX Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer amber Charge LED Indicator, indicates the mobile computer battery charging status.
3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Charging Spare Batteries

Insert the battery into the charger and gently press down on the battery to ensure proper contact.

Battery Charging in the 5-Slot Ethernet ShareCradle with 4-Slot Battery Charger

The MC33XX's Charge LED or the spare battery LED indicates the status of the battery charging in the MC33XX. See Table 8 on page 34 for charging status indications.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

4-Slot Spare Battery Charger

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

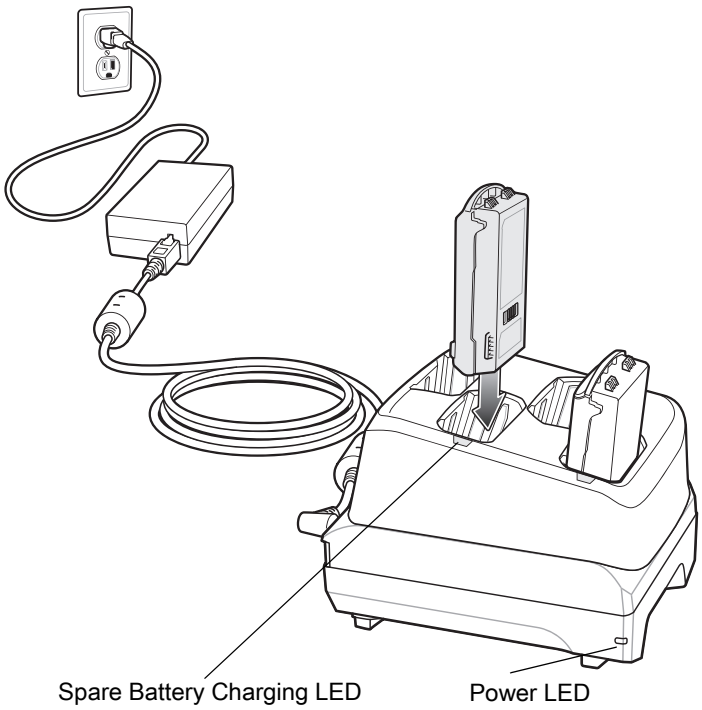
The 4-Slot Battery Charger:

- Charges up to four MC33XX spare batteries.
- Provides 4.2 VDC power to charge the spare battery.
- Compatible with the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Charging Spare Batteries

1. Connect the charger to a power source.
2. Insert the battery into the charger and gently press down on the battery to ensure proper contact.

Figure 124 4-Slot Battery Charger



Battery Charging

Spare Battery Charging

Each Battery Charging LED indicates the status of the battery charging in each slot. The table below describes the Battery Charging LED status.

Table 22 Battery LED Charging Indicators

LED	Indication
Off	• The battery is not charging. • The battery is not inserted correctly in the cradle or connected to a power source. • Cradle is not powered.
Solid Amber	• Battery is charging.
Solid Green	• Battery charging is complete.
Fast Blinking Red 2 blinks/second	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Solid Red	• Spare battery is charging and battery is at the end of useful life. • Charging complete and battery is at the end of useful life.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the changer alternately enables and disables battery charging to keep the battery at acceptable temperatures. The charger indicates when charging is disabled due to abnormal temperatures via its LED.

20-Slot Spare Battery Charger

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 196

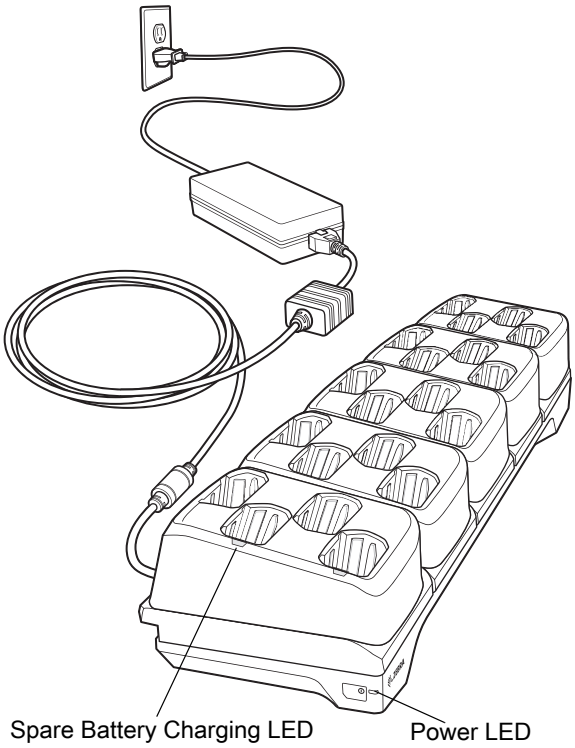
The 20-Slot Battery Charger:

- Charges up to twenty MC33XX spare batteries.
- Provides 4.2 VDC power to charge the spare battery.
- Compatible with the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Charging Spare Batteries

1. Connect the charger to a power source.
2. Insert the battery into the charger and gently press down on the battery to ensure proper contact.

Figure 125 20-Slot Battery Charger



Battery Charging

Spare Battery Charging

Each Battery Charging LED indicates the status of the battery charging in each slot. The table below describes the Battery Charging LED status.

Table 23 Battery LED Charging Indicators

LED	Indication
Off	• The battery is not charging. • The battery is not inserted correctly in the cradle or connected to a power source. • Cradle is not powered.
Solid Amber	• Battery is charging.

Table 23 Battery LED Charging Indicators (Continued)

LED	Indication
Solid Green	• Battery charging is complete.
Fast Blinking Red 2 blinks/second	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Solid Red	• Spare battery is charging and battery is at the end of useful life. • Charging complete and battery is at the end of useful life.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the changer alternately enables and disables battery charging to keep the battery at acceptable temperatures. The charger indicates when charging is disabled due to abnormal temperatures via its LED.

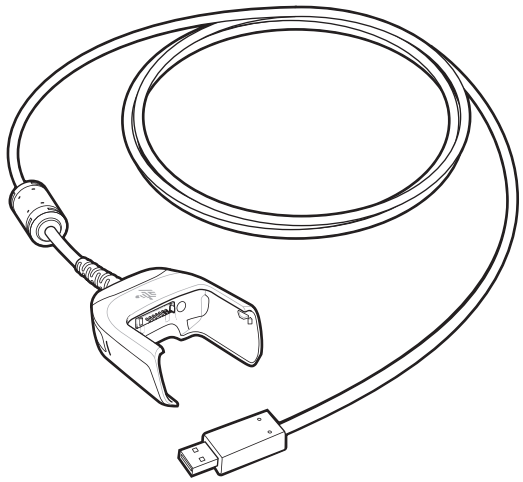
USB Charge Cable

The USB Charge Cable:

- Provides 5 VDC power to charge the battery.
- Provides power and/or communication with the host computer over USB to the device.
- Compatible with devices using the following batteries:
  - MC33XX 2740 mAh PowerPrecision+ standard battery.
  - MC33XX 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

The USB Charge Cable snaps onto the bottom of the MC33XX and removes easily when not in use. When attached to the MC33XX allows charging only.

Figure 126 USB Charge Cable

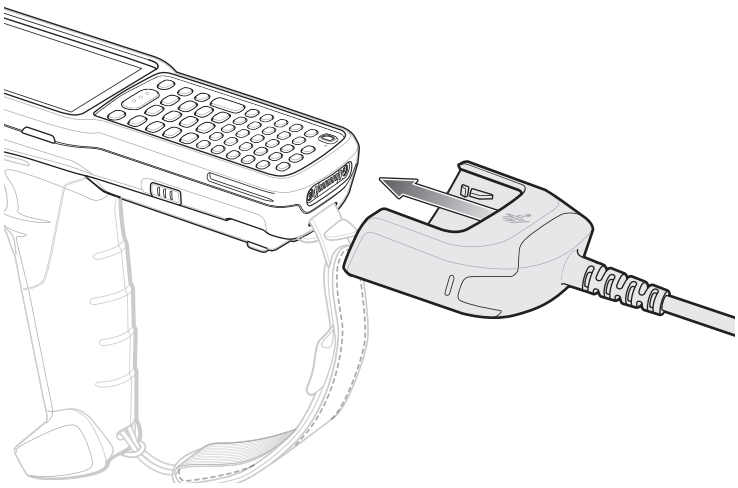


Connecting the USB Charge Cable to Device

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

To connect the USB Charge Cable to the device, insert the USB Charge Cable straight onto the device until the device touches the bottom of the cable cup.

Figure 127 Connecting the USB Charge Cable

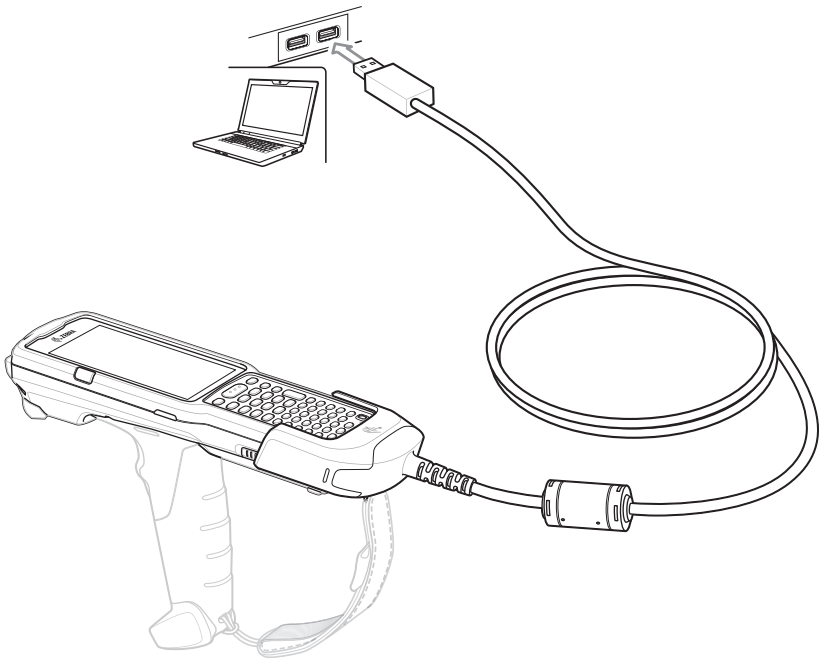


Connecting the USB Charge Cable to Host Computer

To connect the USB Charge Cable to a host computer:

1. Connect the USB Charge Cable to the MC33XX.
2. Connect the USB connector of the cable to a host computer.

Figure 128 Connecting USB Charge Cable to Host Computer



Main Battery Charging

The device's Charging/Notification LED indicates the status of the battery charging in the device.

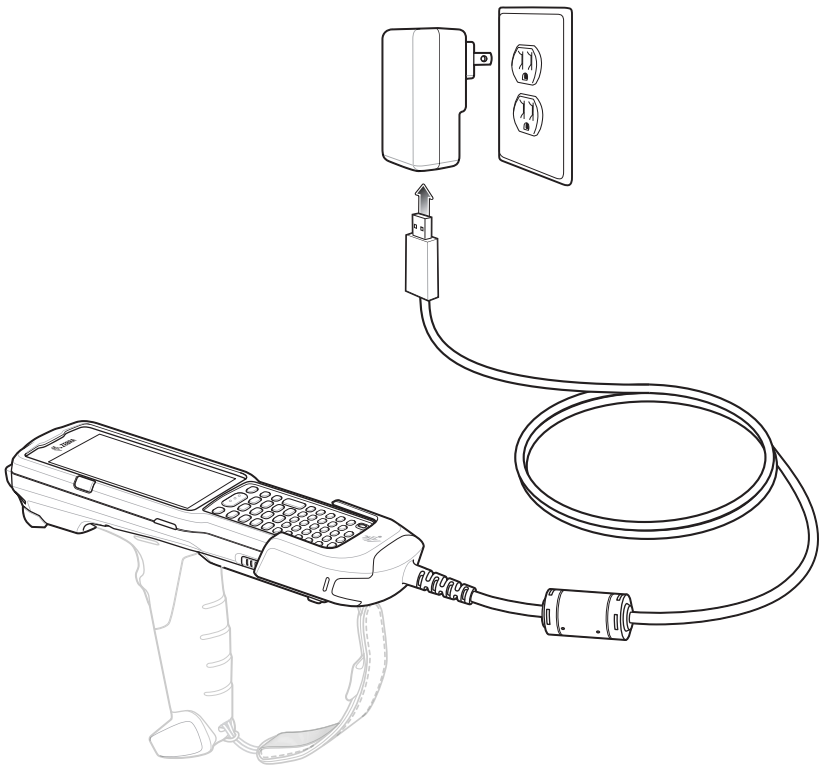
NOTE: Charging using a host computer USB port could take longer.
To achieve the best charging results use only Zebra charging accessories and batteries. Charge batteries at room temperature with the MC33XX in sleep mode.

Charging the Device

To charge the device using the USB Charge Cable:

1. Connect the USB Charge Cable to the MC33XX.
2. Connect the USB connector of the power supply.
3. Plug the power supply into a power outlet.

Figure 129 Charging the Device



Main Battery Charging

The device's Charging/Notification LED indicates the status of the battery charging in the device.

NOTE: In many cases the 90% charge provides plenty of charge for daily use.
To achieve the best charging results use only Zebra charging accessories and batteries. Charge batteries at room temperature with the MC33XX in sleep mode.

The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 6 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

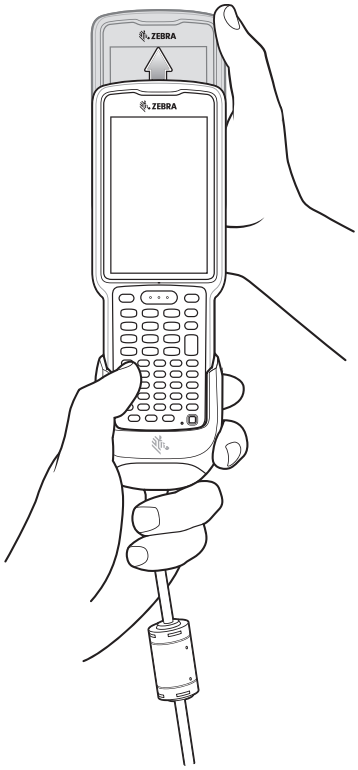
The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 6 hours at room temperature.

Disconnecting the USB Charge Cable

To disconnect the USB Charge Cable from the MC33XX:

1. Grasp the cable cup in one hand (by pinching the front and back) and the device in the other hand.
2. Remove the device by pulling straight up.

Figure 130 Disconnecting the USB Charge Cable



MC33XX Charge Only Adapter

Use the MC33XX Charge Only Adapter for backwards compatibility with the MC32N0 cradles and the MC33XX mobile computer.

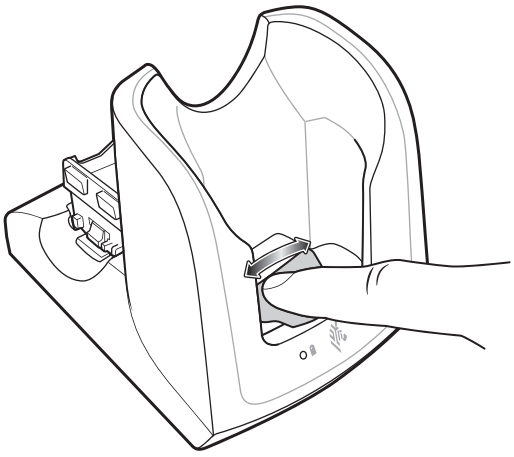
- MC33XX Charge Only Adapter supports the MC32N0 1-Slot USB Cradle, MC32N0 4-Slot Charge Only Cradle, and MC32N0 4-Slot Ethernet Cradle.
- MC33XX Charge Only Adapter provides charge only; no communication when used with the MC32N0 cradles.
- MC32N0 1-Slot USB Cradle provides 5.4V DC to charge the device.
- MC32N0 1-Slot USB Cradle (with the MC33XX Charge Only Adapter) is compatible with an MC33XX mobile computer charging either MC33XX PowerPrecision+ batteries or MC32N0 PowerPrecision batteries, but the MC32N0 1-Slot USB Cradle spare battery slot is only compatible with MC32N0 PowerPrecision batteries.

Adapter Installation

To install the MC33XX Charge Only Adapter into the MC32N0 Cradle:

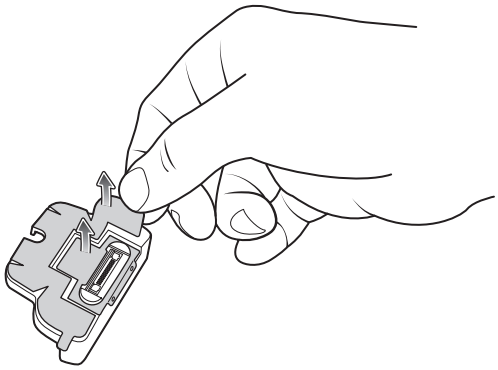
1. Clean the MC32N0 cradle and contacts with an alcohol wipe, using a back and forth motion with your finger. For more information about cleaning, see Maintenance and Troubleshooting.

Figure 131 Clean MC32N0 Cradle



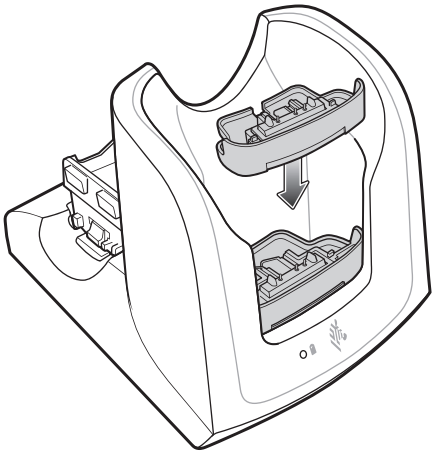
2. Peel and remove the adhesive from the back of the adapter.

Figure 132 Peel and Remove Adhesive



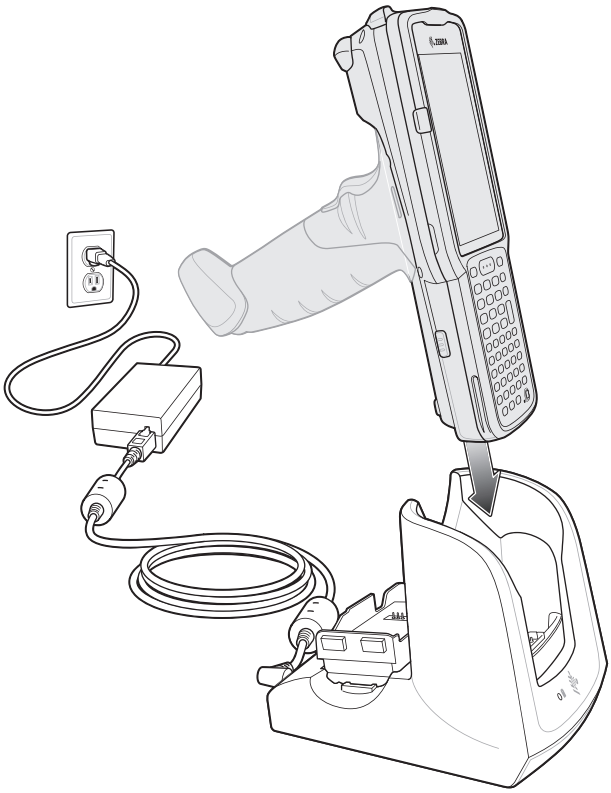
3. Insert the adapter into the MC32N0 cradle and adhere to the bottom of the cradle.

Figure 133 Insert Adapter into Cradle and Adhere



4. Insert the MC33XX device into the MC32N0 cradle.

Figure 134 Insert MC33XX device into MC32N0 Cradle



The MC33XX 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC33XX 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). Charging is intelligently controlled by the MC33XX.

To accomplish this, for small periods of time, the MC33XX or cradle alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC33XX or cradle indicates when charging is disabled due to abnormal temperatures via its LED.

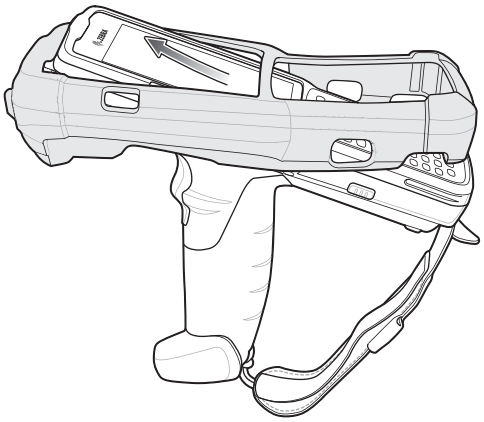
MC33XX-G Rubber Boot

The rubber boot provides additional protection to the MC33XX-G.

To attach the rubber boot:

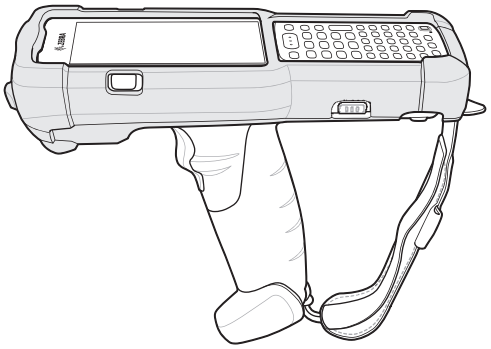
1. Slide the top of the MC33XX-G into the top of the rubber boot.

Figure 135 Attach top of Rubber Boot



2. Grasp the bottom of the rubber boot and place over the bottom of the MC33XX-G.

Figure 136 Attach bottom of Rubber Boot



NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle or rigid holster.

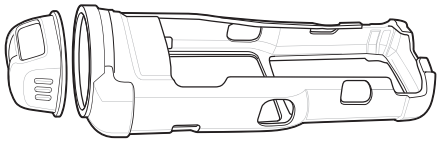
MC33XX-R Rubber Boot

The rubber boot provides additional protection to the MC33XX-R. The rubber boot is comprised of two pieces; one for the mobile computer and one for the turret cup.

To attach the rubber boot:

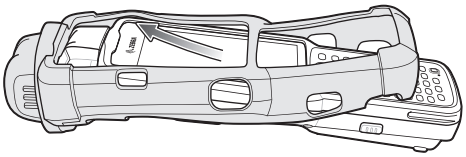
1. Insert the rubber boot for the turret cup into the rubber boot for the mobile computer, to form a single piece, if it is not already attached.

Figure 137 Two Piece Rubber Boot



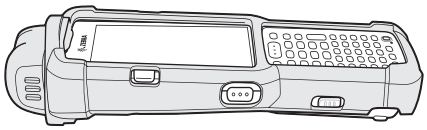
2. Slide the top of the MC33XX-R into the top of the rubber boot.

Figure 138 Attach Top of Rubber Boot



3. Grasp the bottom of the rubber boot and place over the bottom of the MC33XX-R.

Figure 139 Attach Bottom of Rubber Boot



NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle or rigid holster.

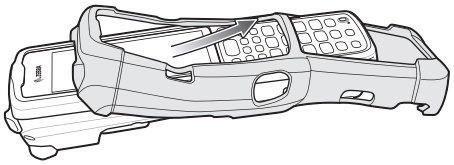
MC33XX-S Rubber Boot

The rubber boot provides additional protection to the MC33XX-S.

To attach the rubber boot:

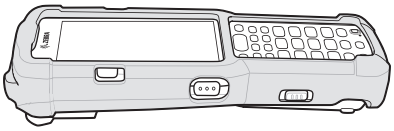
1. Slide the bottom of the MC33XX-S into the bottom of the rubber boot.

Figure 140 Attach Bottom of Rubber Boot



2. Grasp the top of the rubber boot and place over the top of the MC33XX-S.

Figure 141 Attach Top of Rubber Boot



NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle or rigid holster.

Rigid Holster

The Rigid Holster provides a holder for the MC33XX-R/S. It consists of a mobile computer holder and a detachable belt clip. Press the release button to remove the detachable belt clip.

Figure 142 Plastic Holster

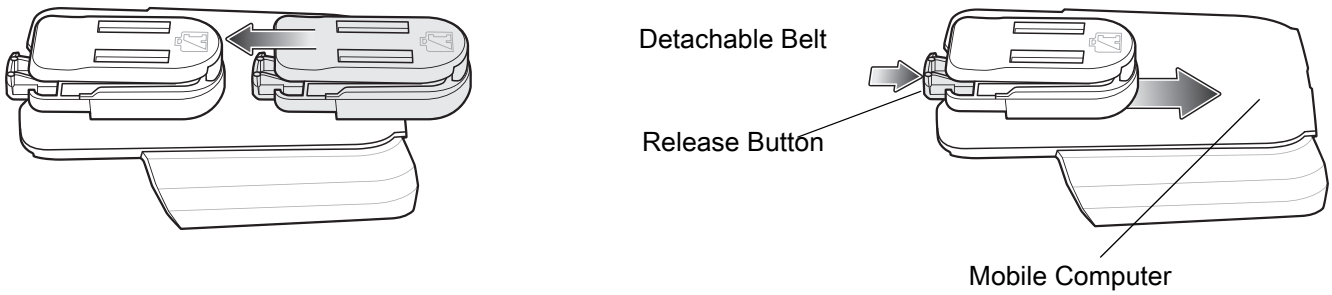
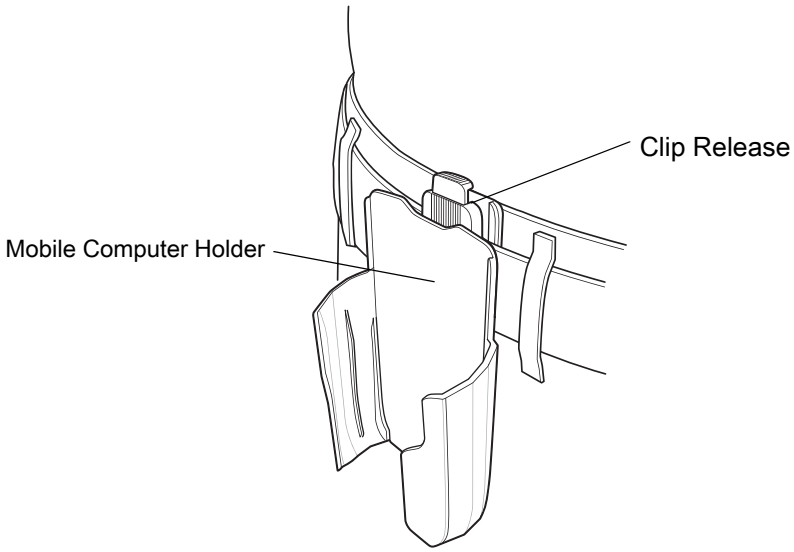


Figure 143 Attaching the Rigid Holster

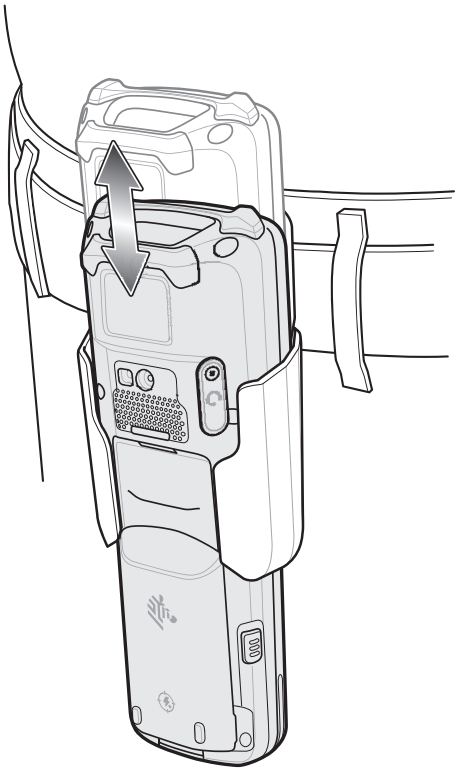


The Rigid Holster holds the mobile computer on a belt or waist band.

To insert the mobile computer, slide the mobile computer into the Rigid Holster with the screen facing the user.

To remove the mobile computer, press and lift to remove the mobile computer.

Figure 144 Insert and Remove the Mobile Computer



NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a rigid holster.

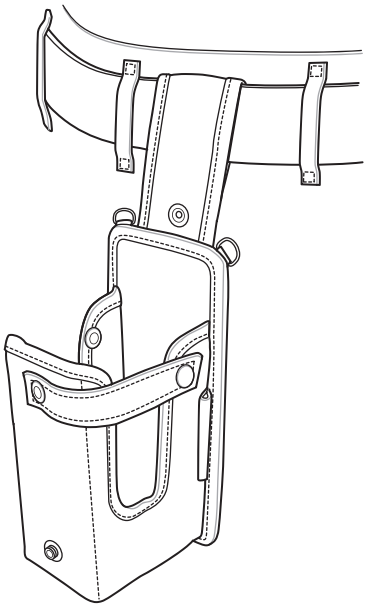
MC33XX-G Fabric Holster

The fabric holster provides a soft holder for the mobile computer. It consists of a fabric mobile computer holder, a detachable shoulder strap and a belt strap. See figures below to attach the fabric holster to a belt and shoulder strap.

Belt Strap

Attach the fabric holster to a belt or waist band.

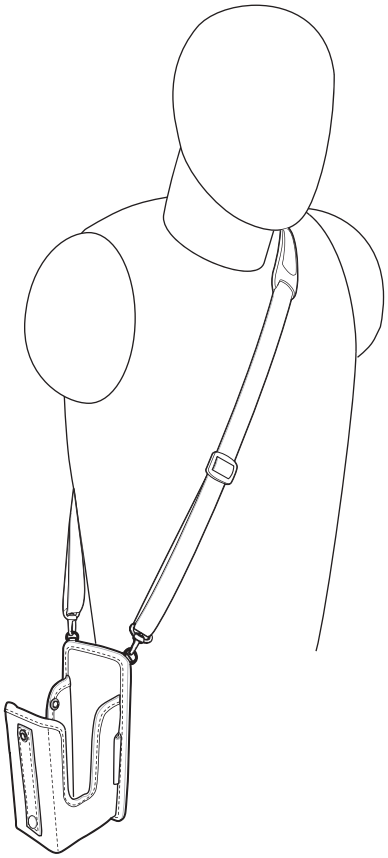
Figure 145 Attach the Fabric Holster to a Belt



Shoulder Strap

Attach the fabric holster to a shoulder strap.

Figure 146 Attach the Fabric Holster to a Shoulder Strap

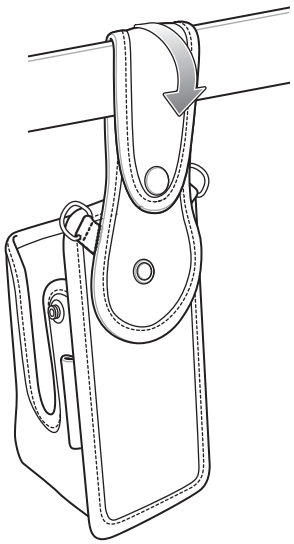


Using the Belt Strap

The fabric holster holds the MC33XX-G on a belt or waist band.

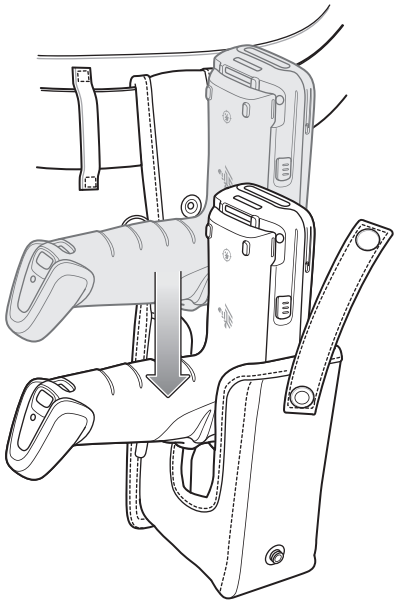
1. Secure the belt strap over the belt or waistband and snap into place.

Figure 147 Secure Belt Strap On Belt



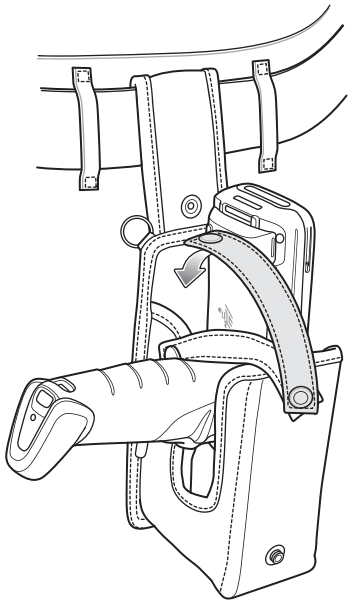
2. To insert the MC33XX-G, slide the mobile computer into the fabric holster with the screen facing the user.

Figure 148 Insert MC33XX-G



3. Secure the MC33XX-G with the restraining strap and place over the MC33XX-G to secure in place.

Figure 149 Secure with Strap

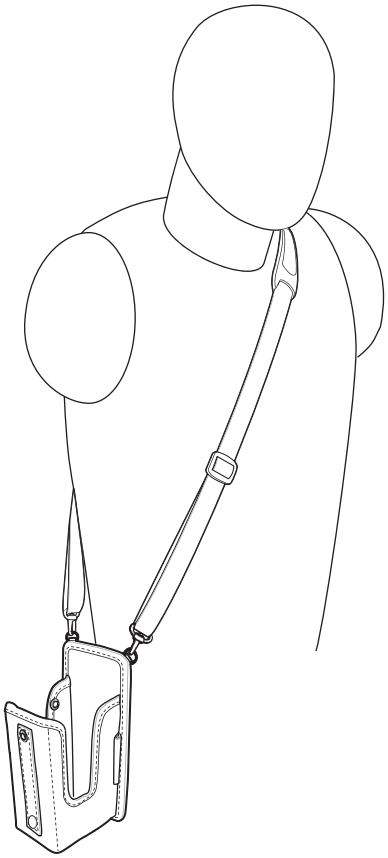


4. To remove the MC33XX-G, unsnap the restraining strap to release. Lift the MC33XX-G out of the fabric holster.

Using the Shoulder Strap

1. Connect the clips on the shoulder strap to the rings on the fabric holster.
2. Place the shoulder strap over your head and rest on your shoulder.

Figure 150 Shoulder Strap



3. Lift the strap and insert the MC33XX-G into the holster.
4. Secure the strap to hold the MC33XX-G in place.

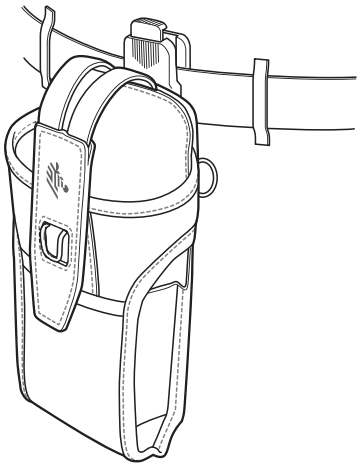
MC33XX-R/S Fabric Holster

The fabric holster provides a soft holder for the mobile computer. It consists of a fabric mobile computer holder, a detachable shoulder strap and a belt clip. See figures below to attach the fabric holster to a belt and shoulder strap.

Belt Clip

Attach the fabric holster to a belt or waist band.

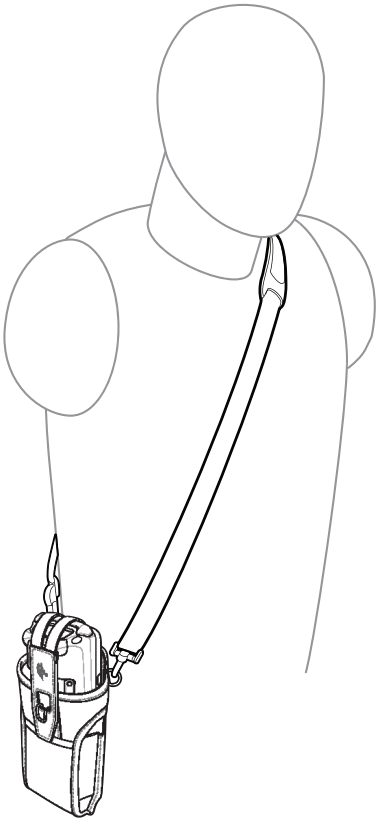
Figure 151 Attach the Fabric Holster to a Belt



Shoulder Strap

Attach the fabric holster to a shoulder strap.

Figure 152 Attach the Fabric Holster to a Shoulder Strap

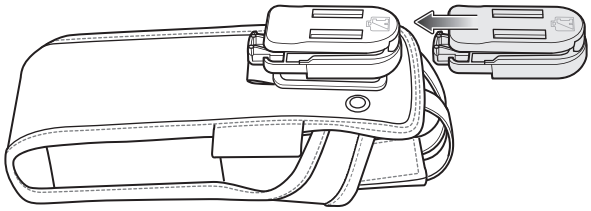


Using the Belt Clip

The fabric holster holds the MC33XX-R/S on a belt or waist band.

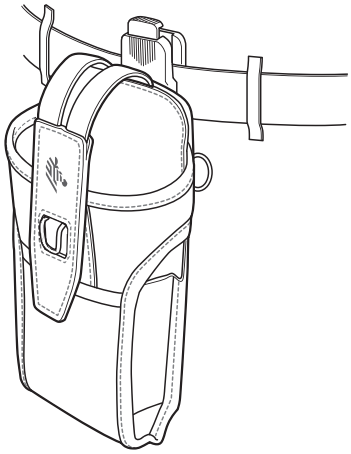
1. Secure the belt clip on the fabric holster, if it is not already attached.

Figure 153 Secure Belt Clip On Fabric Holster



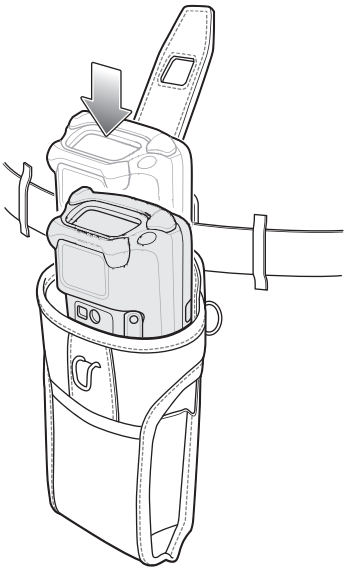
2. Secure the belt clip on the belt or waistband.

Figure 154 Secure Belt Clip On Belt



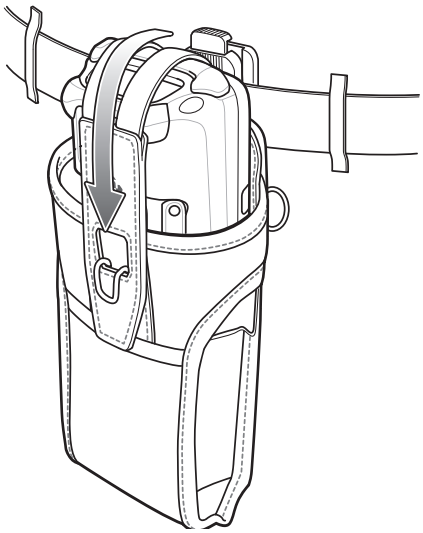
3. To insert the MC33XX-R/S, slide the mobile computer into the fabric holster with the screen facing the user.

Figure 155 Insert MC33XX-R/S



4. Secure the MC33XX-R/S with the restraining strap and place over the MC33XX-R/S to secure in place.

Figure 156 Secure with Strap

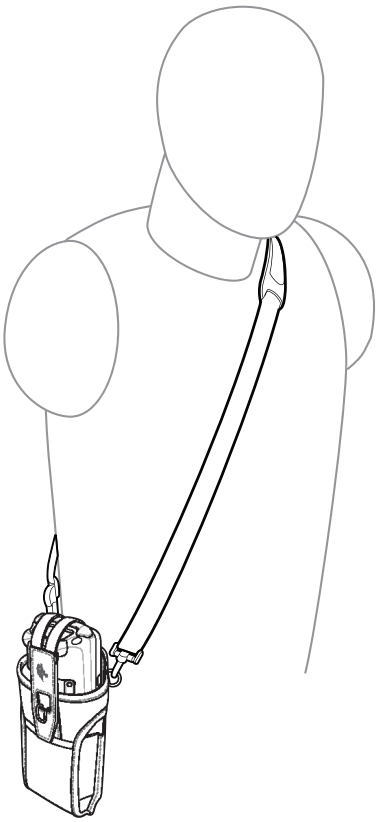


5. To remove the MC33XX-R/S, lift the restraining strap to release. Lift the MC33XX-R/S out of the fabric holster.

Using the Shoulder Strap

1. Connect the clips on the shoulder strap to the rings on the fabric holster.
2. Place the shoulder strap over your head and rest on your shoulder.

Figure 157 Shoulder Strap

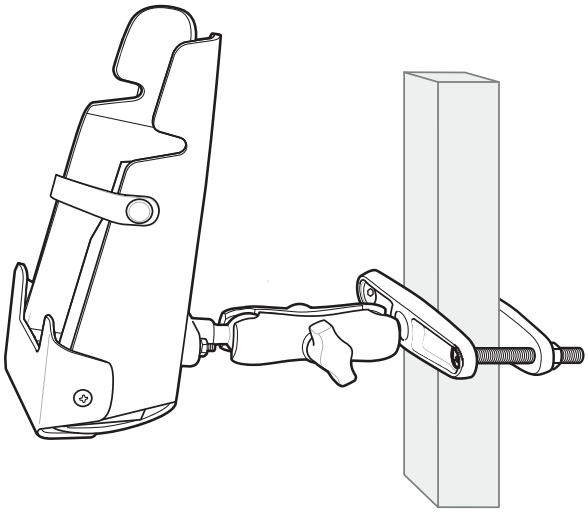


3. Lift the strap and insert the MC33XX-R/S into the holster.
4. Secure the strap to hold the MC33XX-R/S in place.

Un-powered Forklift Mount

The Un-powered Forklift Mount allows the user to place the MC33XX in a holder while installed on a forklift. However, it does not provide charging or communication to the terminal. The Forklift Mount can be installed on a square surface or roll bar of a forklift and supports portrait (vertical) orientation.

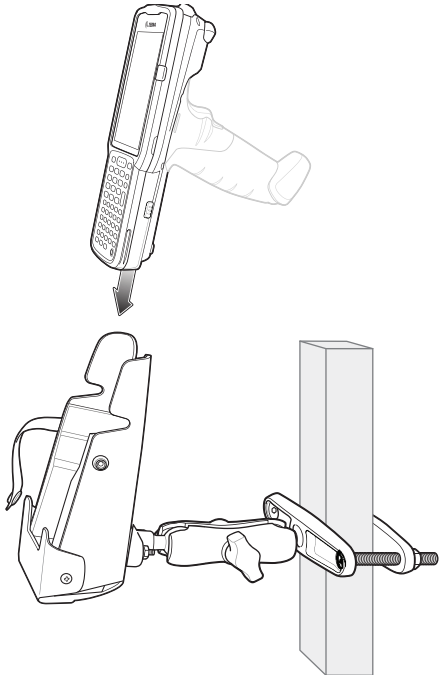
Figure 158 Forklift Mount



To use the MC33XX in the forklift mount holder:

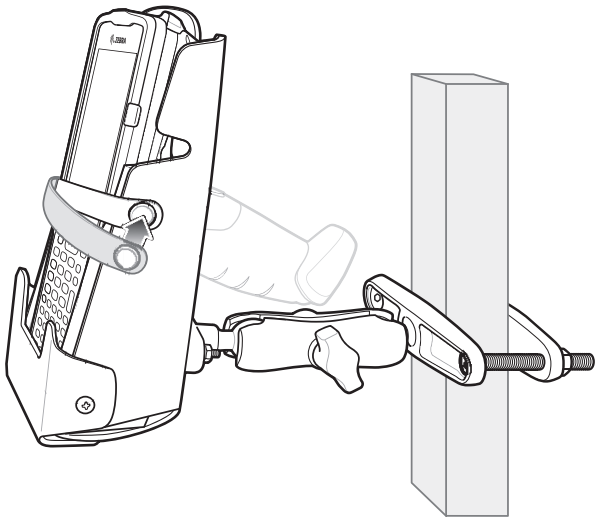
1. Insert the MC33XX into the Forklift Mount Holder in an upright position.

Figure 159 Insert MC33XX



2. Secure the device with the rubber strap and snap into place.

Figure 160 Secure Device and Snap

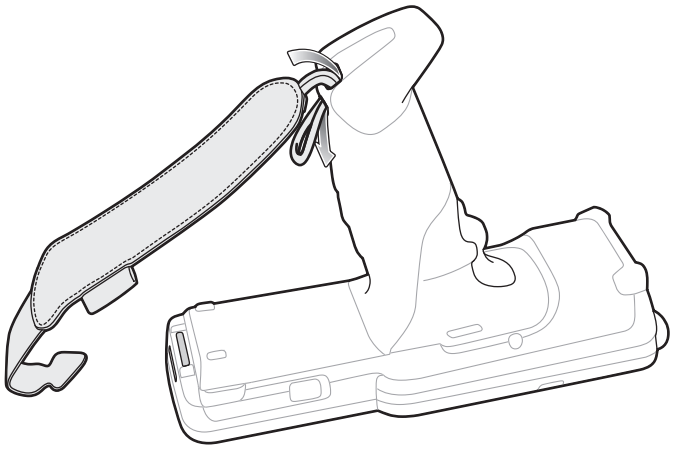


Replacement Hand Strap for MC33XX-G

To install the hand strap:

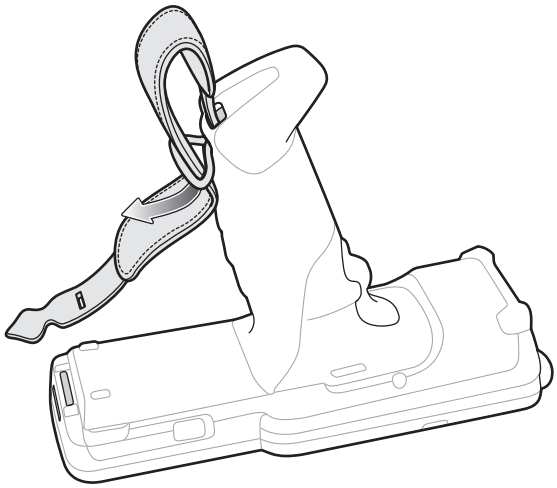
1. Thread the lanyard loop through the opening near the base of the trigger handle.

Figure 161 Insert Loop Through Handle Slot



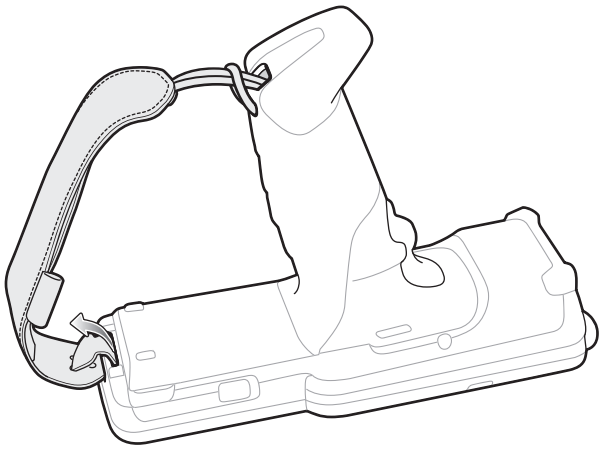
2. Insert the top end of the hand strap through the loop.

Figure 162 Thread Hand Strap Through Loop



3. Thread the hand strap through the lanyard.
4. Pull the hand strap through the loop.
5. Thread the end of the hand strap with the tab through the slot on the bottom of the MC33XX-G.

Figure 163 Thread Tab Through Slot



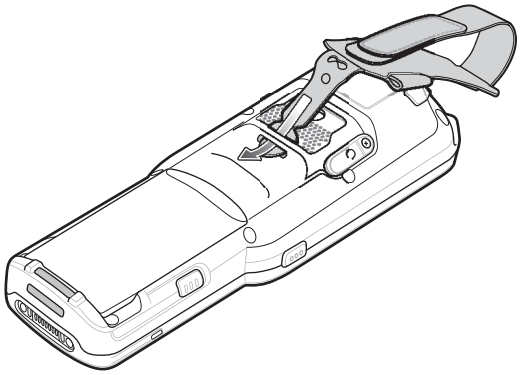
6. Slide the tab through the slit in the hand strap so that the tip of the tab is facing away from the MC33XX-G.

Replacement Hand Strap for MC33XX-R/S

To install the hand strap:

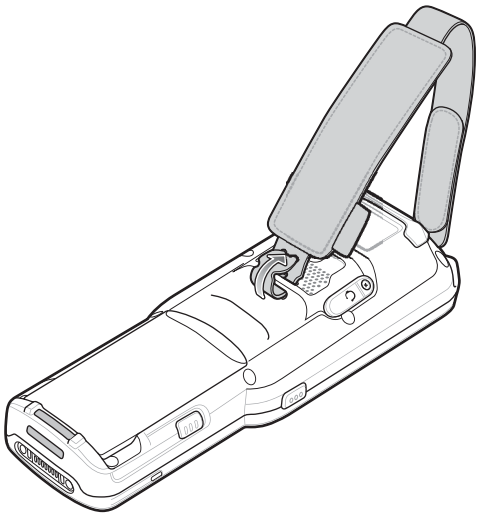
1. Thread the end of the hand strap with the tab through the slot toward the top of the MC33XX-R/S.

Figure 164 Thread Tab Through Top Slot



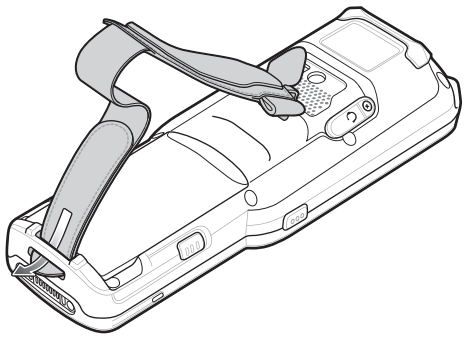
2. Slide the tab through the slit in the hand strap so that the tip of the tab is facing away from the MC33XX-R/S.

Figure 165 Slide Tab Through Slit



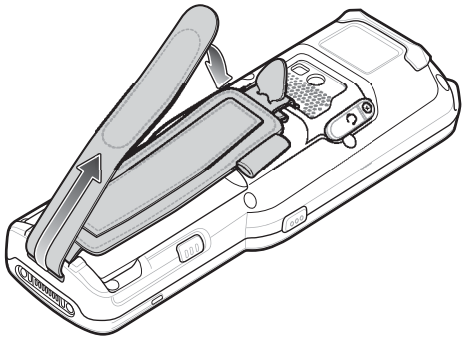
3. Thread the end of the hand strap with the velcro through the slot at the bottom of the MC33XX-R/S.

Figure 166 Thread Velcro Through Bottom Slot



4. Pull the strap to the desired length and secure using the velcro.

Figure 167 Pull Strap and Secure Velcro

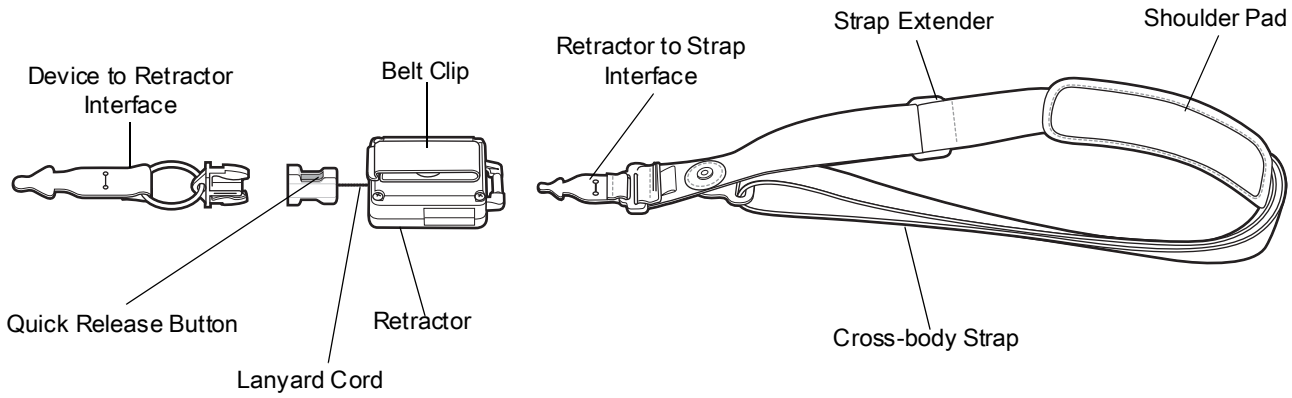


Lanyard

WARNING: This accessory is not intended to be used with the MC33XX-G device.

The lanyard is an optional accessory for securing the MC33XX-R or MC33XX-S device to the user, which is comprised of multiple pieces. The lanyard can be worn using the cross-body strap, or it can be worn on the belt, after removing the cross-body strap.

Figure 168 Lanyard

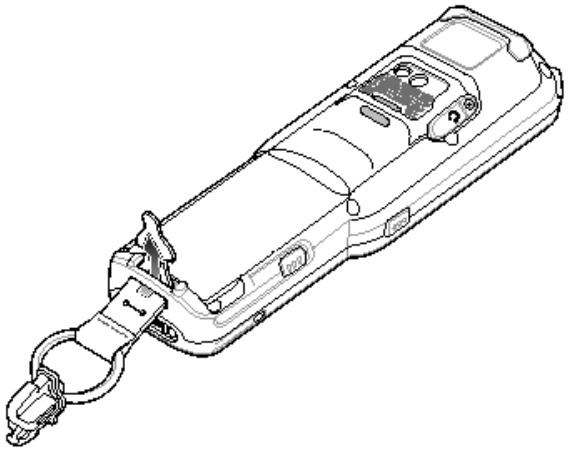


Install Lanyard on MC33XX

To install the lanyard on the MC33XX:

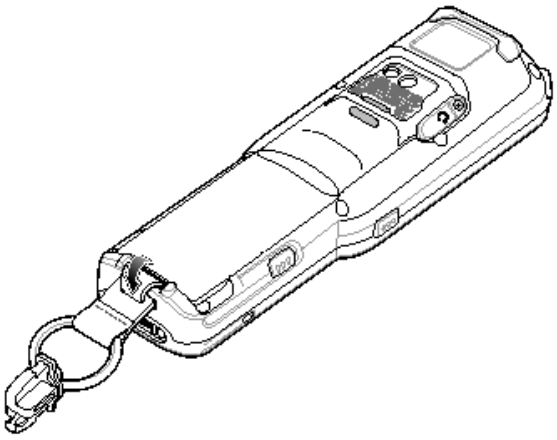
1. Thread the tab of the Device to Retractor Interface through the slot at the bottom of the MC33XX.

Figure 169 Thread Tab Through Slot



2. Slide the tab through the slit in the Device to Retractor Interface.

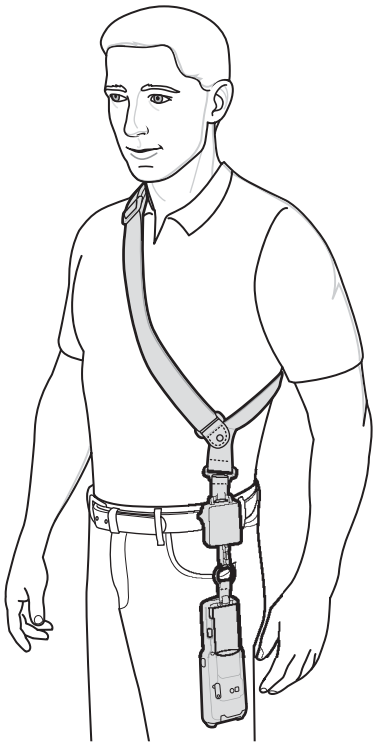
Figure 170 Slide Tab Through Slit



Using the Cross-body Strap

1. Place arm through strap and over the head to wear cross-body.

Figure 171 Cross-body Lanyard



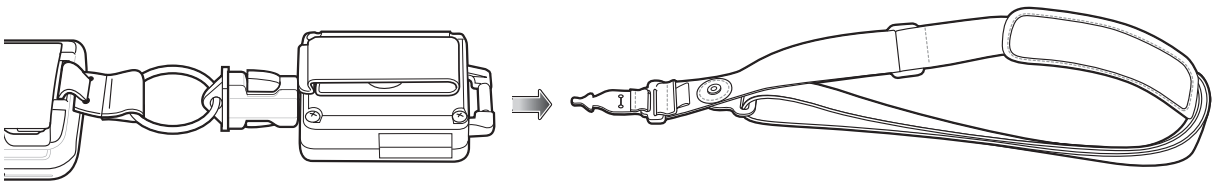
2. If needed, slide the Strap Extender to adjust the length of the Cross-body Strap to the desired length.
3. If needed, slide the Shoulder Pad along the Cross-body Strap to adjust the position of the Shoulder Pad for comfort.

Using the Belt Clip

To use the lanyard on a belt:

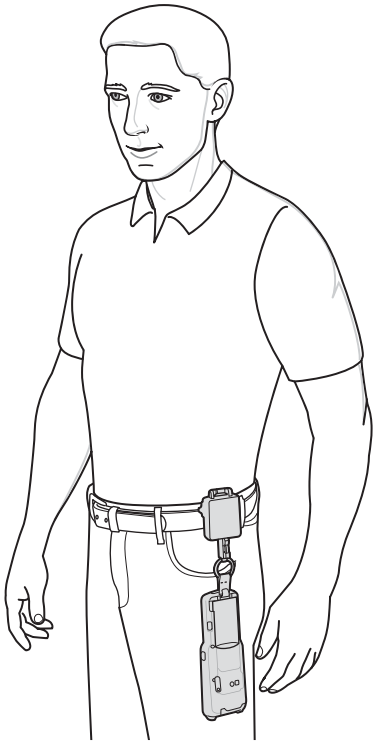
1. Detach the Cross-body Strap from the Retractor. To do this, unthread the tab of the Retractor to Strap Interface from the slot in the Retractor.

Figure 172 Remove Cross-body Strap



2. Place the Belt Clip on a belt or waistband.

Figure 173 Belt Clip Lanyard



Charging the MC33XX with the Lanyard

To charge the MC33XX when using the lanyard:

1. Press the Quick Release Button on the Retractor.
2. Place the MC33XX in the charging cradle.

The Device to Retractor Interface remains attached to the MC33XX, while charging.

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:

- In order to avoid scratching the screen, use the supplied stylus or plastic-tipped pens 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.
- A screen protector is applied to the device. Zebra recommends using this to minimize wear and tear. Screen protectors enhance the usability and durability of touch screen displays. Benefits include:
  - Protection from scratches and gouges
  - Durable writing and touch surface with tactile feel
  - Abrasion and chemical resistance
  - Glare reduction
  - Keeping the device’s screen looking new
  - Quick and easy installation.

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 battery and charger temperatures must be between +32ºF and +104ºF (0ºC and +40ºC)
- 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.
- To enable authentication of an approved battery, as required by IEEE1725 clause 10.2.1, all batteries will carry a hologram. Do not fit any battery without checking it has the authentication hologram.
- Do not disassemble or open, crush, bend or deform, puncture, or shred 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[1] **(see important note below)**, hydrogen peroxide, ammonium chloride or mild dish soap.

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

[1]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; acqueous 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.

Cleaning Materials Required

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

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, but gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Allow the unit to air dry before use.

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 ethanolamine, 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 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.

For consistency and optimum image capture, it is recommended to clean the camera window periodically especially when used in environments prone to dirt or dust.

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.

Camera and Exit Window

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

Cleaning Battery Connectors

To clean the battery connectors:

1. Remove the main battery from the mobile computer.
2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.
3. To remove any grease or dirt, rub the cotton portion of the cotton-tipped applicator back-and-forth across the connectors on the battery and terminal sides. Do not leave any cotton residue on the connectors.
4. Repeat at least three times.
5. Use a dry cotton-tipped applicator and repeat steps 3 and 4. Do not leave any cotton residue on the connectors.
6. Inspect the area for any grease or dirt and repeat the cleaning process if necessary.

CAUTION: After cleaning the battery connectors with bleach-based chemicals, follow the Battery Connector Cleaning instructions to remove bleach from the connectors.

Cleaning Cradle Connectors

To clean the connectors on a cradle:

1. Remove the DC power cable from the cradle.

2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.
3. Rub the cotton portion of the cotton-tipped applicator along the pins of the connector. Slowly move the applicator back-and-forth from one side of the connector to the other. Do not leave any cotton residue on the connector.
4. All sides of the connector should also be rubbed with the cotton-tipped applicator.
5. Remove any lint left by the cotton-tipped applicator.
6. If grease and other dirt can be found on other areas of the cradle, use a lint-free cloth and alcohol to remove.
7. Allow at least 10 to 30 minutes (depending on ambient temperature and humidity) for the alcohol to air dry before applying power to cradle.

   If the temperature is low and humidity is high, longer drying time is required. Warm temperature and low humidity requires less drying time.

CAUTION: After cleaning the cradle connectors with bleach-based chemicals, follow the Cleaning Cradle Connectors instructions to remove bleach from the connectors.

Troubleshooting the MC33XX

Table 24 Troubleshooting the MC33XX

Problem	Cause	Solution
Mobile computer does not turn on.	Main battery not charged.	Charge or replace the main battery.
	Main battery not installed properly.	Ensure the battery is installed properly.
	MC33XX not responding.	Perform a soft reset. If the mobile computer still does not turn on, perform a hard reset. For more information see Resetting the Device on page 72.
Battery did not charge.	Battery failed.	Replace battery. If the mobile computer still does not operate, try a soft reset, then a hard reset. See Resetting the Device on page 72.
	Mobile computer removed from cradle while battery was charging.	Insert mobile computer in cradle and begin charging. If a battery is fully depleted, it can take up to 2.2 hours to fully recharge a 2740 mAh PowerPrecision+ standard battery and it can take up to 3.8 hours to fully recharge a 5200 mAh PowerPrecision+ extended battery.
	Extreme battery temperature.	Battery does not charge if ambient charging temperature of the battery is below 32°F (0°C) or above 104°F (40°C).
Cannot see characters on screen.	Mobile computer not powered on.	Press the Power button.

Table 24 Troubleshooting the MC33XX (Continued)

Problem	Cause	Solution
During data communication, no data was transmitted, or transmitted data was incomplete.	Mobile computer removed from cradle or unplugged from host computer during communication.	Replace the mobile computer in the cradle, or reattach the cable and re-transmit.
	Incorrect cable configuration.	See the system administrator or refer to the MC33XX Integrator Guide.
Mobile computer does not emit sound.	Volume setting is low or turned off.	Click on the speaker icon to increase the volume.
MC33XX turns itself off.	MC33XX is inactive.	The mobile computer turns off after a period of inactivity. This period can be set from 15 seconds to 30 minutes.
	Battery is depleted.	Recharge or replace the battery.
A message appears stating that the mobile computer memory is full.	Too many applications installed on the mobile computer.	Remove user-installed applications on the MC33XX to recover memory. Select > **Apps.** Select the unused programs and touch **Uninstall**.
The MC33XX does not decode when reading barcode.	DataWedge is not enabled.	Ensure that DataWedge is enabled and configured properly. Refer to the MC33XX Integrator Guide for more information.
	Unreadable barcode.	Ensure the symbol is not defaced.
	Distance between the MC33XX and barcode is incorrect.	Place the MC33XX within proper scanning range.
	MC33XX is not programmed for the barcode type.	Program the MC33XX to accept the type of barcode being scanned. Refer to the MC33XX Integrator Guide for DataWedge configuration.
	MC33XX is not programmed to generate a beep.	If the MC33XX does not beep on a good decode, set the application to generate a beep on good decode.

Table 24 Troubleshooting the MC33XX (Continued)

Problem	Cause	Solution
MC33XX 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 connect to WLAN (on channels 12-13 and all 5GHz channels).	Access Point (AP) does not broadcast country code.	Disable 802.11d feature. Touch > **Wi-Fi** > > **Additional settings** > **Country Selection**. A warning window pops up indicating you must select the country in which you are using the device. This enables all channels for the selected country even if the AP does not broadcast country code.
When trying to open Files or other applications, the application automatically closes.	The Internal Memory is full.	Connect the MC33XX to a host computer and delete files from Internal Memory using the host computer.

Specifications

Introduction

The following sections provide technical specification for the device.

MC33XX Technical Specifications

The following table summarizes the MC33XX's intended operating environment and technical hardware specifications.

Table 25 MC33XX Technical Specifications

Item	Description
Physical Characteristics	
Dimensions	MC33XX-G: 202.6 mm L x 74.7 mm W x 163.9 mm H (7.96 in L x 2.94 in W x 6.45 in D) MC33XX-S: (202.2 mm L x 74.7 mm W x 34.5 mm D) 7.96 in L x 2.94 in W x 1.35 in D MC33XX-R: 8.79 in L x 2.94 in W x 1.35 in D (223.4 mm L x 74.7 mm W x 34.5 mm D) MC33XX-45: 7.96 in L x 2.94 in W x 1.35 in D 202.2 mm L x 74.7 mm W x 34.5 mm D
Weight	MC33XX-G (with extended battery) - 505 g (17.8 oz) MC33XX-R (with standard battery) - 13.3 oz (377 g) MC33XX-S (with standard battery) - 13.2 oz (375 g) MC33XX-45 (with standard battery) - 13.5 oz (382 g)
Display	4.0 inch capacitive; WVGA; color
Imager Window	Corning® Gorilla® Glass
Touch Panel	Corning® Gorilla® Glass touch panel w/air gap
Backlight	LED backlight

Table 25 MC33XX Technical Specifications (Continued)

Item	Description
Battery	Standard: Rechargeable Lithium-Ion 2740 mAh minimum (3.7V) Extended Life: Rechargeable Lithium-Ion 5200 mAh minimum (3.7V)
Expansion Slot	User accessible microSD slot. Supports up to 32 GB microSDHC.
Network Connections	USB 2.0 High Speed (host and client), WLAN and Bluetooth
Notification	Side LEDs and auditable tone.
Keypad Options	29-key Numeric 38-key Function Numeric (calculator-style integrated numeric keypad) 47-key Alpha-Numeric (calculator-style integrated numeric keypad)
Voice	PTT Voice Support (Internal Speaker)
Audio	Speaker
Audio Jack (Premium/Premium +)	MC33XX-S, MC33XX-R, MC33XX-45: Integrated 2.5 mm
Buttons	MC33XX-S, MC33XX-R, MC33XX-45: Two Scan Side Keys (programmable)
Performance Characteristics	
CPU	Qualcomm 8056 1.8 GHz hexa-core 64-bit with power optimization
Operating System	Android-based AOSP (8.1); GMS (8.1) select configurations
Memory	Standard: 2 GB RAM/16 GB Flash. Premium: 4 GB RAM/16 GB Flash. Premium +: 4 GB RAM/32 GB Flash.
Output Power (USB)	USB: 5 VDC @ 500 mA max.
User Environment	
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F) without battery
Charging Temperature	0°C to 40°C (32°F to 104°F)
Humidity	5% to 95% RH non-condensing
Drop Specification	Multiple 1.5 m (5 ft.) drops to concrete over the entire operating temperature range.
Tumble Specification	500 drops 1 m (3.2 ft.) Tumbles (1000 hits)
Sealing	IP54
Vibration	5 Hz to 2 KHz
Thermal Shock	-40°C to 70°C (-40°F to 158°F)
Electrostatic Discharge (ESD)	±20 kVdc air discharge, ± 10 kVdc contact discharge
Wireless LAN Data Communications	
Wireless Local Area Network (WLAN) radio	IEEE® 802.11a/b/g/n/ac/d/h/i/k/r/w

Table 25 MC33XX Technical Specifications (Continued)

Item	Description
Data Rates Supported	2.4 GHz: 144 Mbps 5 GHz: 867 Mbps
Operating Channels	Chan 36 - 165 (5 GHz), Chan 1 - 13 (2.4 GHz); actual operating channels/frequencies depend on regulatory rules and certification agency.
Security and Encryption	**Security Modes**: WPA and WPA2 (Personal or Enterprise) **Encryption:** WEP40/WEP104, TKIP and AES **Authentication**: EAP-TLS; EAP-TTLS (MSCHAP, MSCHAPv2, PAP); PEAP (MSCHAPv2, EAP-GTC); LEAP **Other**: Wi-Fi certified, and supports IPv6 Data in Motion: FIPS 140-2 Level 1 Data at Rest: FIPS 140-2 Level 1
Certifications	802.11n/ac, WMM-PS, WMM-AC, PMF, Voice Enterprise, Wi-Fi Direct, WPS
Fast Roam	PMKID/OKC/CCKM/802.11r
Wireless PAN Data	
Bluetooth	V4.1, V2.1 + EDR w/ Bluetooth Low Energy (BLE). Class 2
Data Capture	
Scanning	MC33XX-S: SE965 1D, SE4750 SR 2D, SE4850 ERI MC33XX-R: SE965 1D Laser MC33XX-G: SE965 1D, SE4750 SR 2D, SE4850 ERI MC33XX-45: SE4750 SR 2D
Rear Camera (13 MP) with Flash	MC33XX-S, MC33XX-R, MC33XX-45: Available on Premium +
NFC	ISO14443 Type A&B, ISO15693 and Felica cards. Peer to Peer mode and Card Emulation via Host (HCE) Available on Premium/Premium + only.
Laser Scanner (SE965) Specifications	
Optical Resolution	0.005 in. minimum element width
Roll	Condition: 20 mil Code 39 at 10 in. ± 35° from vertical
Pitch Angle	Condition: 20 mil Code 39 at 10 in. ± 65° from normal
Skew Tolerance	Condition: 20 mil Code 39 at 10 in. ± 40° from normal

Table 25 MC33XX Technical Specifications (Continued)

Item	Description
Ambient Light	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED: 450 ft. Candles (4,844 Lux) Sunlight: 10,000 Ft Candles (107,640 Lux) Note: LED lighting with high AC ripple content can impact scanning performance.
Scan Repetition Rate	104 (± 14) scans/sec (bidirectional)
Scan Angle	Wide (Default): 47° (typical) Medium: 35° (typical) Narrow: 10° (typical)
2D Imager Engine (SE4750) Specifications	
Field of View	Horizontal - 48.0° Vertical - 36.7°
Image Resolution	1280 horizontal X 960 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: 17.7 cm (7.0 in.)
Laser Aiming Element	Visible Laser Diode (VLD): 655 nm +/- 10 nm Central Dot Optical Power: 0.6 mW (typical) Pattern Angle: 48.0º horizontal, 38.0º vertical
Illumination System	LEDs: Warm white LED Pattern Angle: 80° at 505 intensity
2D Extended Range Imager Engine (SE4850) Specifications	
Field of View	Near camera: Horizontal - 32.0°, Vertical 20° Far camera: Horizontal - 12°, Vertical - 7.6°
Image Resolution	1280 horizontal X 800 vertical pixels
Roll	360°
Pitch Angle	+/- 60° from normal
Skew Tolerance	+/- 60° from normal
Ambient Light	Sunlight: 10,000 ft. candles (107,639 lux)
Laser Aiming Element	Laser Wavelength: 655 nm Central Dot Optical Power: 0.6 mW (Class 2 IEC60825:2014)
Illumination System	LEDs: Hyper Red 660nm

Table 25 MC33XX Technical Specifications (Continued)

Item	Description
Supported Symbologies	
1D	Chinese 2 of 5, Codabar, Code 11, Code 128, Code 39, Code 93, Discrete 2 of 5, EAN-8, EAN-13, GS1 DataBar, GS1 DataBar Expanded, GS1 DataBar Limited, Interleaved 2 of 5, Korean 2 of 5, MSI, TLC 39, Matrix 2 of 5, Trioptic, UPCA, UPCE, UPCE1, Web Code.
2D	Australian Postal, Aztec, Canadian Postal, Composite AB, Composite C, Data Matrix, Dutch Postal, Japan Postal, Maxicode, Micro PDF, Micro QR, PDF, QR Code, UK Postal, US Planet, US Postnet, US4State, US4State FICS.

Keypads

Introduction

The MC33XX offers three types of keypad configurations: 29 key, 38 key and 47 key.

MC33XX 29-Key Keypad

The 29-key keypad contains a Power button, application keys, scroll keys and function keys. The keypad is color-coded to indicate the alternate function key (blue) values and the alternate ALPHA key (orange) values. Note that keypad functions can be changed by an application so the mobile computer keypad may not function as described. See the tables below for key and button descriptions and keypad alternate functions.

Figure 174 29-Key Keypad Configuration

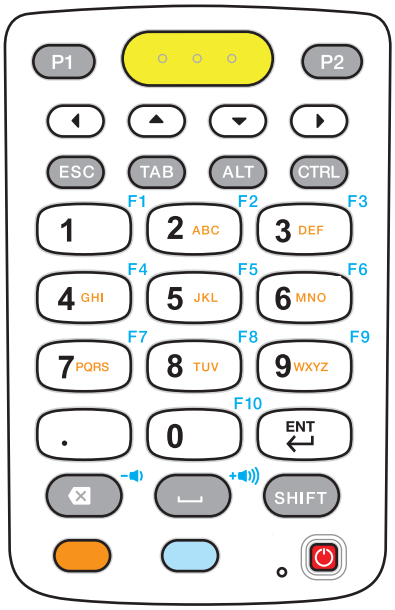


Table 26 29-Key Keypad Descriptions

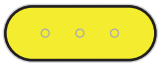
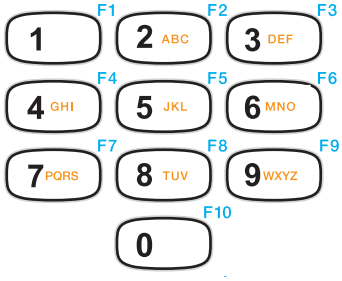
Key	Description
Power (red)	Powers the mobile computer screen on and off (resume and suspend).
Program 1	User programmable; defaults to Back button.
Program 2	User programmable; defaults to Menu button.
Scan (yellow) 	Used in scanning applications, press to scan a barcode. This key has the same function as activating the side mounted scan buttons.
Scroll Keys	Moves up, down, left, or right from one item to another. Increases/decreases specified values.
ESC	Produces the ESC function.
TAB	Produces the TAB function.
ALT	Produces the ALT function.
CTRL	Press and release the CTRL key to activate the keypad alternate CTRL functions. The C icon appears in the Status bar. A Press and release the CTRL key two times to return to the default keypad functions.
Numeric/Alpha/Special Function 	Numeric, alpha or special function keys. Numeric by default. Produces a special function when the blue function key is activated. Produces alpha values when the orange alpha key is activated. In Alpha state, produces the lower case alphabetic characters on the key. Each key press produces the next alphabetic character in sequence. For example, press and release the alpha key and then press the 4 key once to produce the letter ‘g’; press and release the alpha key and then press the 4 key three times to produce the letter ‘i’. When the SHIFT key is pressed in Alpha state, the upper case alphabetic characters on the key are produced. For example, press and release the alpha key, press and hold the SHIFT key and then press the 4 key once to produce the letter ‘G’; press and release the alpha key, press and hold the SHIFT key and then press the 4 key three times to produce the letter ‘I’.

Table 26 29-Key Keypad Descriptions (Continued)

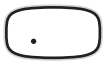
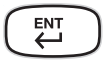
Key	Description
Period/Decimal Point 	Produces a period for alpha entries and a decimal point for numeric entries by default.
Enter 	Executes a selected item or function.
BKSP	Backspace function by default. Decreases volume when the blue function key is activated.
SPACE	Space function by default. Increases volume when the blue function key is activated.
Shift	Press and release the SHIFT key to activate the keypad alternate SHIFT functions. The icon appears on the Status bar. Press and release the SHIFT key again to return to the default keypad functions.
Orange	Press the orange alpha key to access the alternate alpha characters (shown on the keypad in orange). The icon appears on the Status bar. Press and release the orange alpha key again to return to the default keypad functions.
Blue	Press and release the blue function key to activate the keypad alternate functions (shown on the keypad in blue). The icon appears on the Status bar. Press and release the blue function key again to return to the default keypad functions.

Table 27 29-key Keypad Input Modes

Key	Numeric State		Orange Key (Alpha Lowercase State)				Orange Key + Shift Key (Alpha Uppercase State)				Blue Key
		SHIFT + Key	1st Press	2nd Press	3rd Press	4th Press	1st Press	2nd Press	3rd Press	4th Press	
1	1	!	*								F1
2	2	@	a	b	c		A	B	C		F2
3	3	#	d	e	f		D	E	F		F3
4	4	$	g	h	i		G	H	I		F4
5	5	%	j	k	l		J	K	L		F5
6	6	^	m	n	o		M	N	O		F6
7	7	&	p	q	r	s	P	Q	R	S	F7
8	8	*	t	u	v		T	U	V		F8
9	9	(	w	x	y	z	W	X	Y	Z	F9
0	0	)	0				0				F10

Table 27 29-key Keypad Input Modes (Continued)

Key	Numeric State		Orange Key (Alpha Lowercase State)				Orange Key + Shift Key (Alpha Uppercase State)				Blue Key
		SHIFT + Key	1st Press	2nd Press	3rd Press	4th Press	1st Press	2nd Press	3rd Press	4th Press	
.	.	>	.				.				
Back-space											Decrease Volume
Space											Increase Volume
NOTE: An application can change the key functions. The keypad may not function exactly as described.											

MC33XX 38-Key Keypad

The 38-key keypad contains a Power button, application keys, scroll keys and function keys. The keypad is color-coded to indicate the alternate function key (orange) values. Note that keypad functions can be changed by an application so the mobile computer keypad may not function as described. The tables below provide key and button descriptions and keypad alternate functions.

Figure 175 38-Key Keypad Configuration

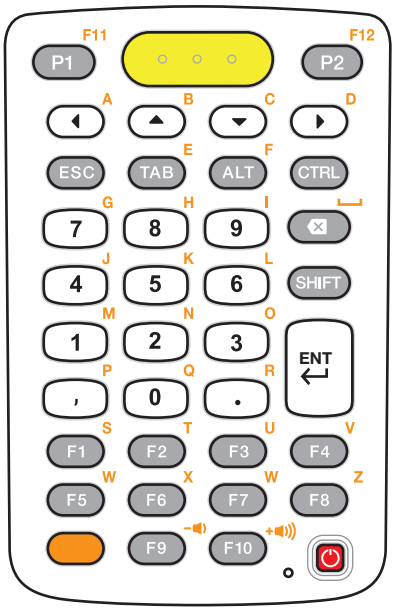


Table 28 38-Key Keypad Descriptions

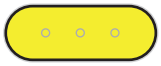
Key	Description
Power (red)	Powers the mobile computer screen on and off (resume and suspend).
Program 1	User programmable; defaults to Back button.
Program 2	User programmable; defaults to Menu button.
Scan (yellow) 	Used in scanning applications, press to scan a barcode. This key has the same function as activating the side mounted scan buttons.
Scroll	Moves up, down, left, or right from one item to another.
Orange	Press the orange alpha key to access the alternate alpha characters (shown on the keypad in orange). The icon appears on the Status bar. Press and release the orange alpha key again to return to the default keypad functions.
CTRL	Press and release the CTRL key to activate the keypad alternate CTRL functions. The C icon appears on the Status bar. Press and release the CTRL key again to return to the default keypad functions. Press and release the blue FUNC key and then the CTRL key to activate the ALT functions. The A icon appears on the Status bar. Press and release the CTRL key two times to return to the default keypad functions.
ESC	Produces the ESC function.
TAB	Produces the TAB function.
ALT	Produces the ALT function.
CTRL	Produces the CTRL function.

Table 28 38-Key Keypad Descriptions (Continued)

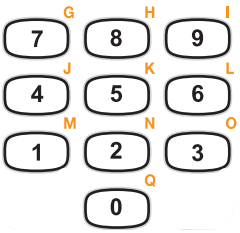
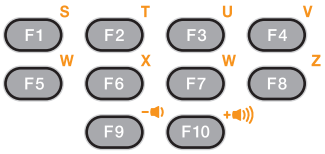
Key	Description
Numeric/Alpha/Special Function 	Press for the default numeric value. Produces alpha values when the orange alpha key is activated.
BKSP	Backspace function by default. Decreases brightness when the blue FUNC key is activated.
Shift	Press and release the SHIFT key to activate the keypad alternate SHIFT functions. The ⇑ icon appears on the Status bar. Press and release the SHIFT key again to return to the default keypad functions.
Enter	Executes a selected item or function.
Period	Produces a period for alpha entries and a decimal point for numeric entries.
Comma	Produces a comma by default.
F1 - F10 	Special function keys by default.

Table 29 38-key Keypad Input Modes

Key	Normal	SHIFT + Key	Orange + Key	Orange + SHIFT + Key
P1			F11	
P2			F12	
Left Arrow			a	A
Up Arrow			b	B

Table 29 38-key Keypad Input Modes (Continued)

Key	Normal	SHIFT + Key	Orange + Key	Orange + SHIFT + Key
Down Arrow			c	C
Right Arrow			d	D
ESC				
TAB			e	E
ALT			f	F
CTRL				
7	7	&	g	G
8	8	*	h	H
9	9	(	I	I
BKSP	Backspace	Backspace	Space	Space
4	4	$	j	J
5	5	%	k	K
6	6	^	l	L
1	1	!	m	M
2	2	@	n	N
3	3	#	o	O
,	,	<	p	P
0	0	)	q	Q
.	.	>	r	R
F1			s	S
F2			t	T
F3			u	U
F4			v	V
F5			w	W
F6			x	X
F7			y	Y
F8			z	Z
F9			Decrease Volume	
F10			Increase Volume	
NOTE: An application can change the key functions. The keypad may not function exactly as described.				

MC33XX 47-Key Keypad

The 47-key keypad contains a Power button, application keys, scroll keys and function keys. The keypad is color-coded to indicate the alternate function key (blue) values. Note, that keypad functions can be changed by

an application so the mobile computer keypad may not function as described. The tables below provide key and button descriptions and keypad alternate functions.

Figure 176 47-Key Keypad Configuration

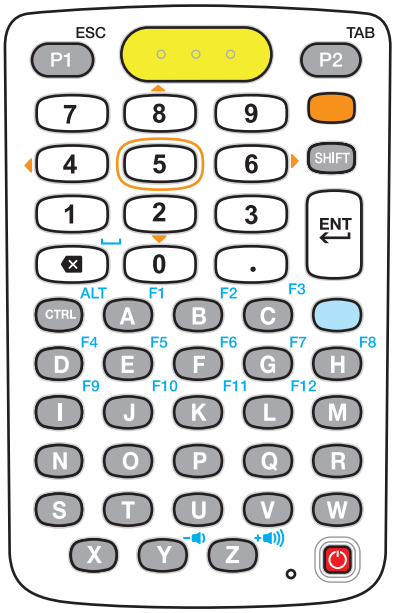


Table 30 47-Key Keypad Descriptions

Key	Description
Power (red)	Powers the mobile computer screen on and off (resume and suspend).
Program 1/ESC	User programmable; defaults to Back button. With the Shift key activated, P1 produces the ESC function.
Program 2/TAB	User programmable; defaults to Menu button. With the Shift key activated, P2 produces the TAB function.
Scan (yellow)	Used in scanning applications, press to scan a barcode. This key has the same function as activating the side mounted scan buttons on the MC33XX-R or MC33XX-S.
Orange	Press the orange key to access the alternate navigation and selection functions. The icon appears on the Status bar. Press and release the orange key again to return to the default keypad functions.

Table 30 47-Key Keypad Descriptions (Continued)

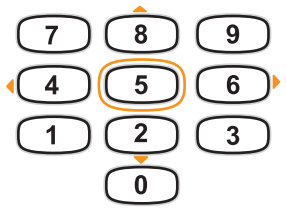
Key	Description
Numeric/Scroll/Select 	Numeric, scroll, select keys. Numeric by default. With the orange key activated, the 2, 4, 6, and 8 keys produce scroll functions and the 5 key produces a select function.
Shift	Press and release the SHIFT key to momentarily activate the keypad alternate SHIFT functions. The icon appears on the Status bar. Press and release the SHIFT key a second time to lock the keypad into the Shift-Lock mode. The icon appears on the Status bar. Press and release the SHIFT key again to return to the default keypad functions.
Enter	Executes a selected item or function.
Backspace/Space	Backspace function by default. Produces the Space function when the blue function key is activated.
Period	Produces a period for alpha entries and a decimal point for numeric entries.

Table 30 47-Key Keypad Descriptions (Continued)

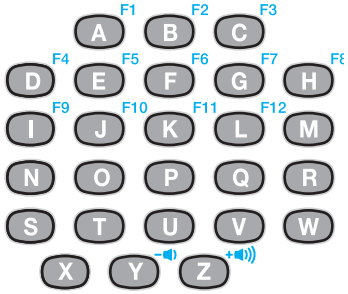
Key	Description
CTRL	Press and release the CTRL key to activate the keypad alternate CTRL functions. The C icon appears on the Status bar. Press and release the CTRL key again to return to the default keypad functions. Press and release the blue function key and then the CTRL key to activate the ALT functions. The A icon appears on the Status bar. Press and release the CTRL key two times to return to the default keypad functions.
Alpha/Special Function 	Alpha by default. Special function by default when the blue function key is activated.
Blue	Press and release the blue function function key to activate the keypad alternate functions (shown on the keypad in blue). The □ icon appears on the Status bar. Press and release the blue function function key again to return to the default keypad functions.

Table 31 47-key Keypad Input Modes

Key	Normal	SHIFT + Key	Blue + Key	Orange + Key
A	a	A	F1	
B	b	B	F2	
C	c	C	F3	
D	d	D	F4	
E	e	E	F5	
F	f	F	F6	
G	g	G	F7	
H	h	H	F8	
I	I	I	F9	
J	j	J	F10	
K	k	K	F11	
L	l	L	F12	
M	m	M		
N	n	N		
O	o	O		
P	p	P		

Table 31 47-key Keypad Input Modes (Continued)

Key	Normal	SHIFT + Key	Blue + Key	Orange + Key
Q	q	Q		
R	r	R		
S	s	S		
T	t	T		
U	u	U		
V	v	V		
W	w	W		
X	x	X		
Y	y	Y	Decrease Volume	
Z	z	Z	Increase Volume	
Backspace	Backspace	Delete	Space	
1	1	!		
2	2	@		Down Arrow
3	3	#		
4	4	$		Left Arrow
5	5	%		
6	6	^		Right Arrow
7	7	&		
8	8	*		Up Arrow
9	9	(		
0	0	)		
.		>		
P1			ESC	
P2			TAB	
CTRL			ALT	
NOTE: An application can change the key functions. The keypad may not function exactly as described.				

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