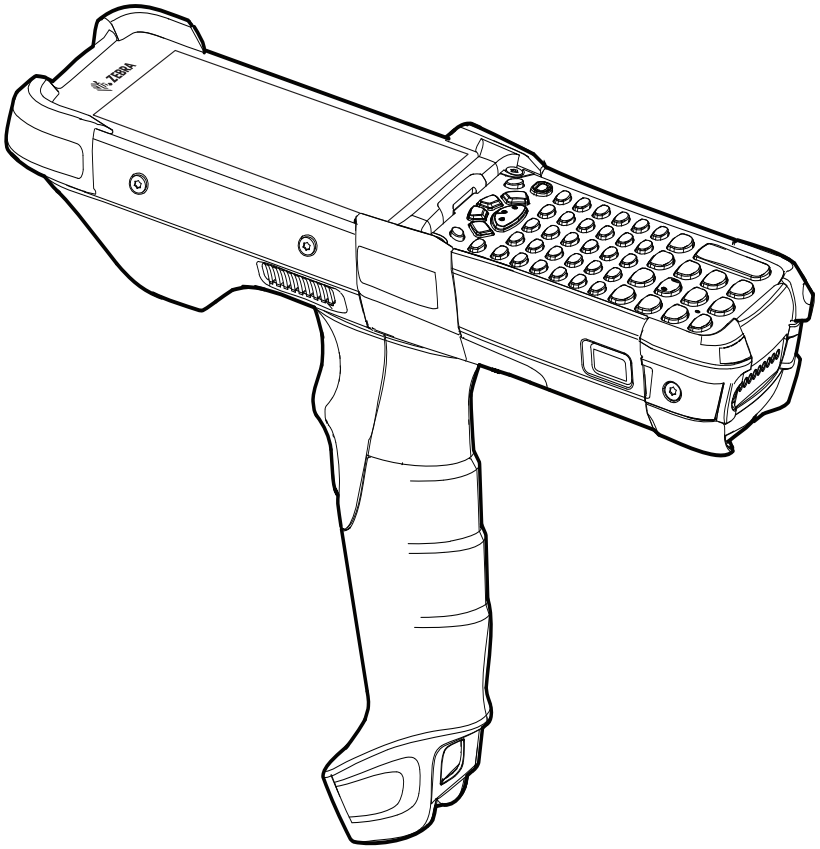
MC93XX

Mobile Computer



Quick Start Guide

ZEBRA

MN-003413-01 Rev. A

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Configurations

MC93XX used in this guide refers to the MC93XX-G mobile computer with scan trigger. This guide applies to the following Model Numbers: MC930B, MC930P.

Unpacking

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

Verify the following items are in the box:

- Device
- Lithium-ion battery
- Regulatory Guide.

Inspect the equipment for damage. If any equipment is missing or damaged, contact the Zebra Support Center immediately.

Device Features

Figure 1 MC93XX Front View

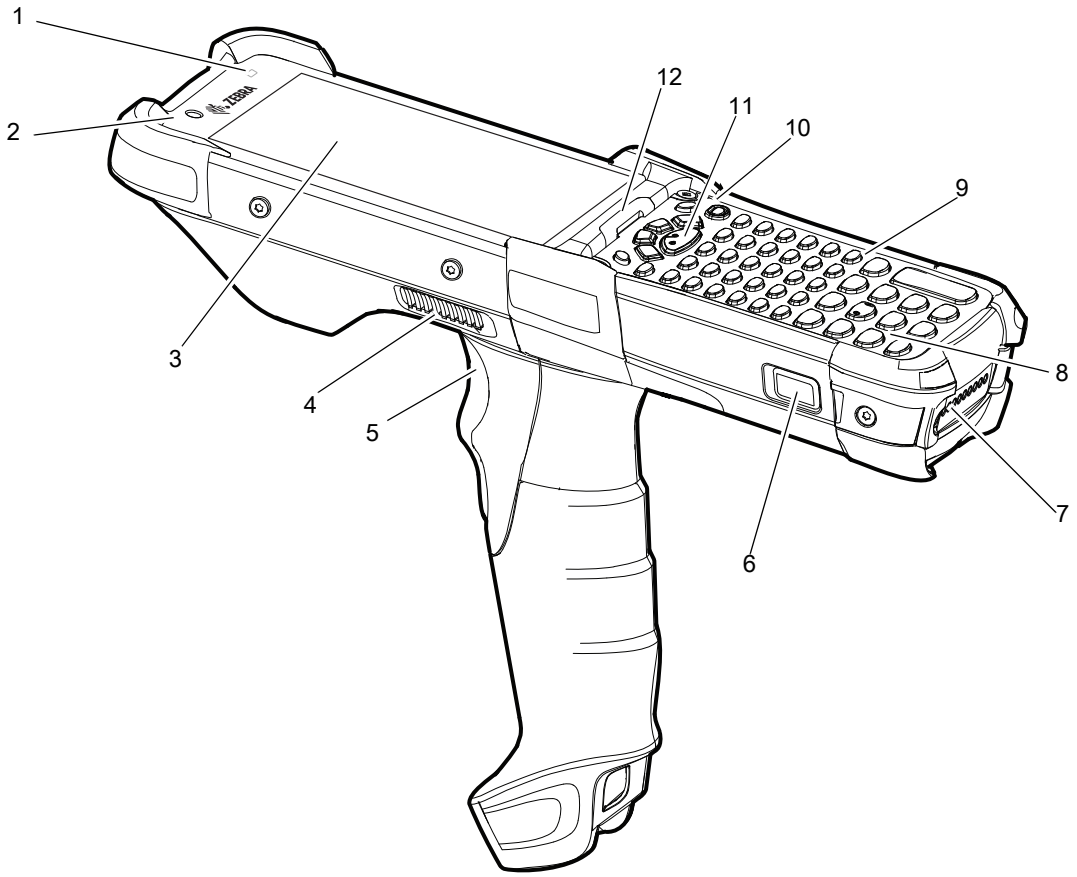


Table 1 *MC93XX Features - Front View*

Number	Item	Function
1	Ambient Light Sensor	Controls display and keyboard backlight.
2	Front Facing Camera	Use to take photos and videos. **NOTE:** The front camera is available only on the premium configurations.
3	Display	Displays all information needed to operate the device.
4	Speaker Side Port	Provides audio output for video and music playback.
5	Trigger	Initiates data capture when a scan application is enabled.
6	Battery Release Latch	Releases the battery from the device. **NOTE:** Press the battery release latch on both the sides of the simultaneously to release the battery.
7	Battery	Provides power for operating the device.
8	Microphone	Use for communications in Handset mode.

Table 1 *MC93XX Features - Front View (continued)*

Number	Item	Function
9	Keypad	Use to enter data and navigate on screen functions.
10	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. **Restart** - Restart the device when software stops responding.
11	Center Scan Button	Initiates data capture when a scan application is enabled.
12	Charger/Decode Status LED	Indicates battery charging status while charging, app generated notifications, and data capture status.

Figure 2 MC93XX Back View

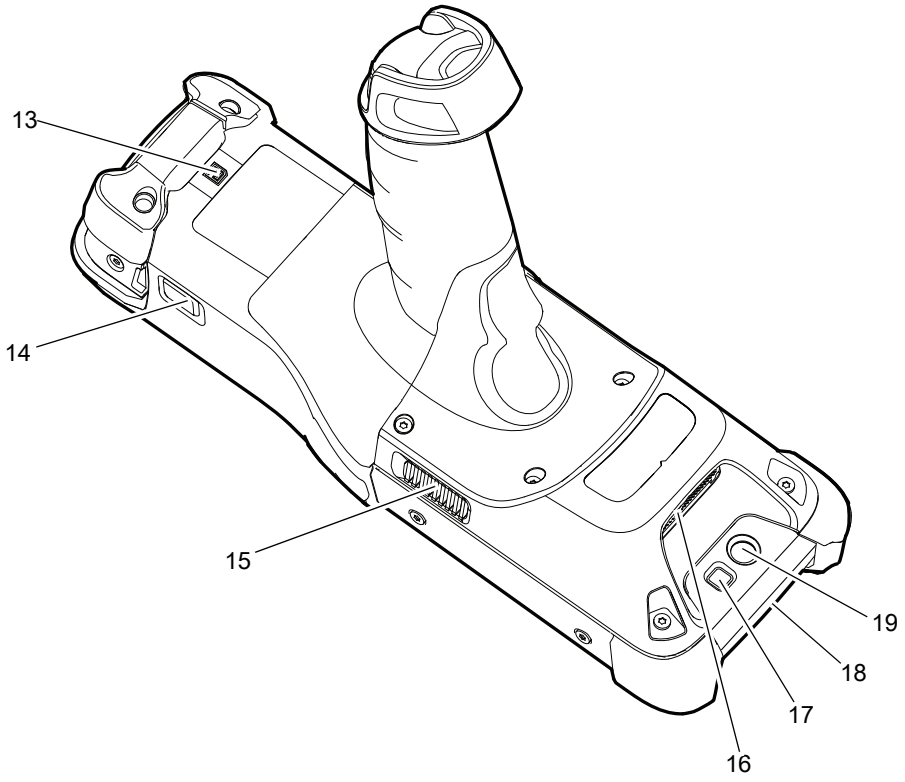


Table 2 *MC93XX Features - Back View*

Number	Item	Function
13	Passive NFC Tag	Provides secondary product label information (configuration, serial number and manufacture data code) in the event that the readable product label is worn or missing.
14	Battery Release Latch	Releases the battery from the device.
15	Side Speaker	Provides audio output for video and music playback.

Table 2 *MC93XX Features - Back View (continued)*

Number	Item	Function
16	Scanner Exit Window	Provides data capture using the scanner/imager.
17	Camera Flash	Provides illumination for the camera. **NOTE:** Camera is available only on some configurations.
18	NFC Antenna	Provides communication with other NFC-enabled devices. **NOTE:** NFC antenna is available only on the premium configurations.
19	Rear Camera	Takes photos and videos. **NOTE:** The rear camera is available only on the premium configurations.

Setup

To start using the device for the first time:

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

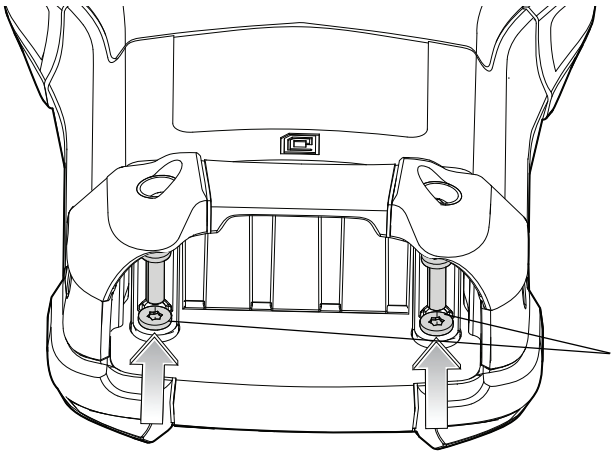
Installing a microSD Card

The microSD card slot provides secondary non-volatile storage. The slot is located under the keypad module. 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.

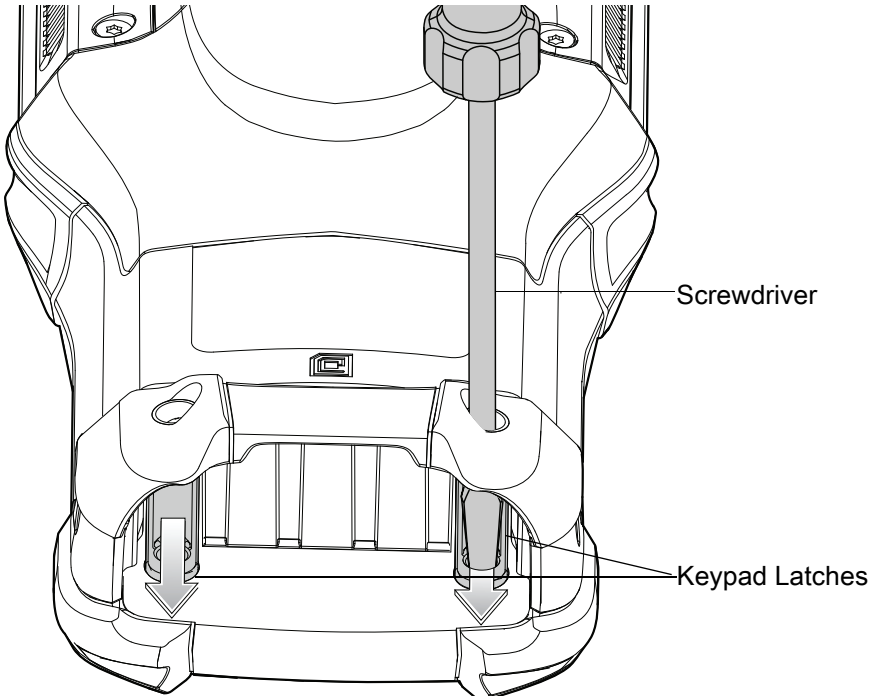
1. Using a Torx T8 screwdriver, remove the two keypad latch screws from inside the battery slot.

Figure 3 Remove Keypad Latch Screws



2. Slide the keypad latches toward the bottom of the device.

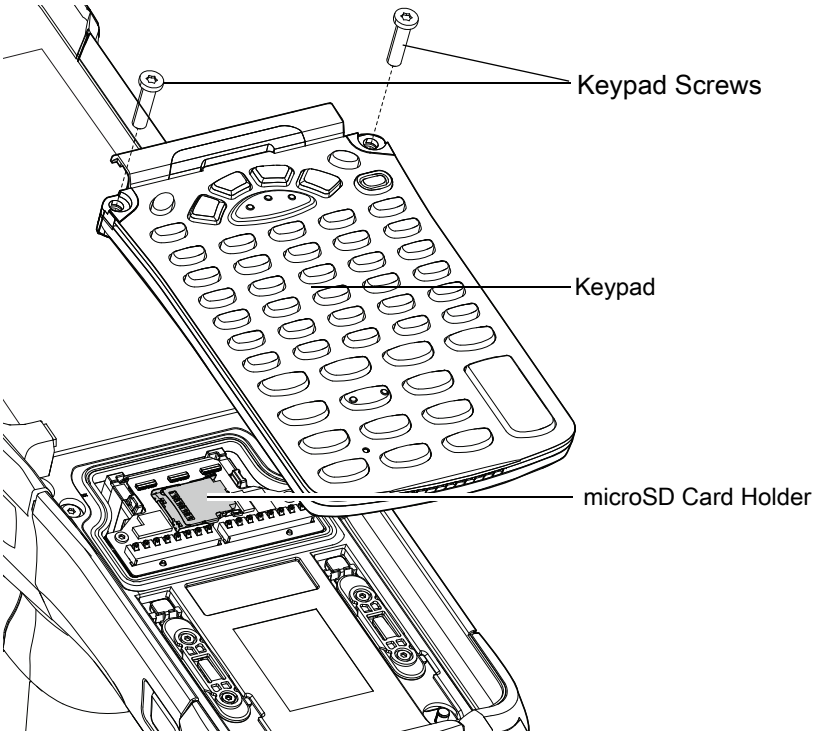
Figure 4 Release Keypad Latches



NOTE: If the keypad latches are hard to move, use a screwdriver to gently slide them towards the bottom of the device.

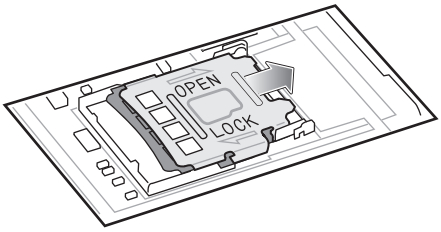
3. Turn the device over so that the keypad is visible.
4. Using a Torx T8 screwdriver, remove the two keypad assembly screws from the top of the keypad.

Figure 5 Remove Keypad



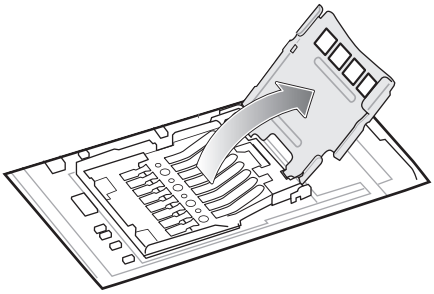
5. Lift the keypad from the device.
6. Slide the microSD card holder to the Open position.

Figure 6 Open microSD Card Holder



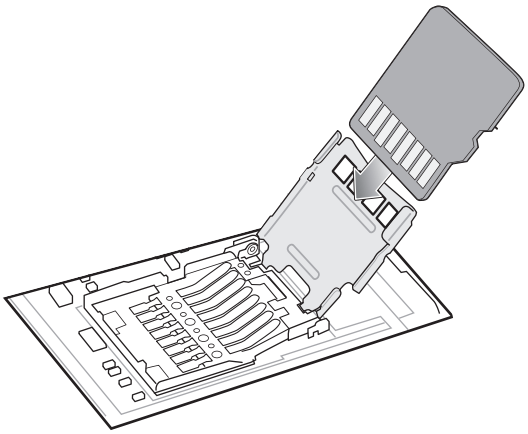
7. Lift the microSD card holder.

Figure 7 Lift microSD Card Holder



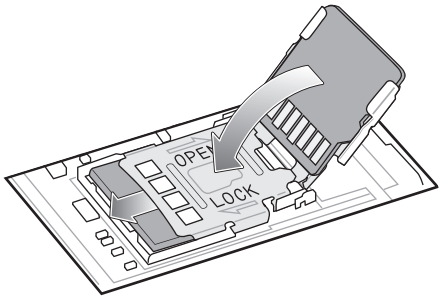
8. Insert the microSD card into the card holder door ensuring that the card slides into the holding tabs on each side of the door.

Figure 8 Insert microSD Card into Holder



9. Close the microSD card holder door and slide the door to the Lock position.

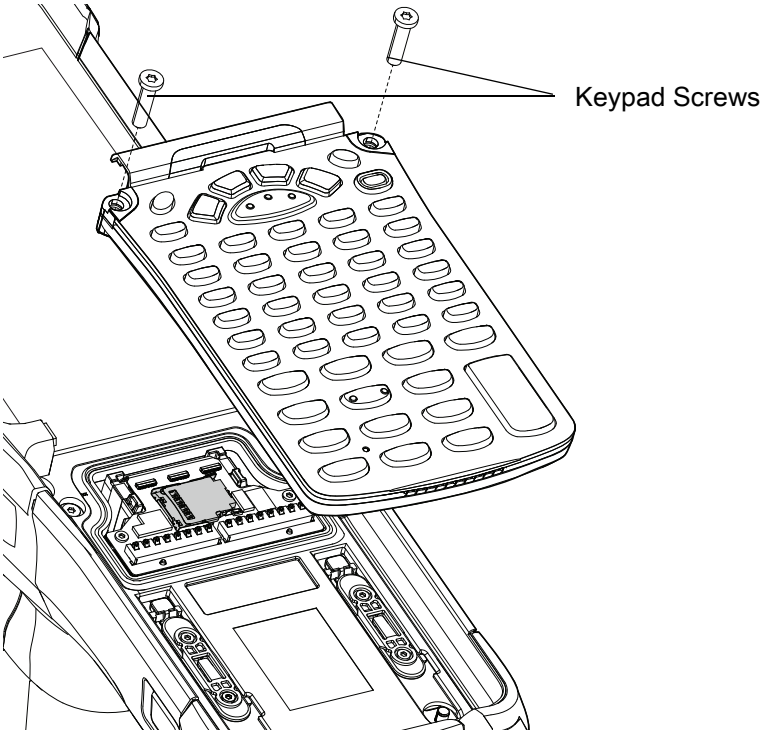
Figure 9 Close and Lock microSD Card in Holder



10. Align the keypad with the device.

11. Using a Torx T8 screwdriver, secure the keypad to the device using the two screws. Torque screws to 5.8 kgf-cm or 5.0 lbf-in.

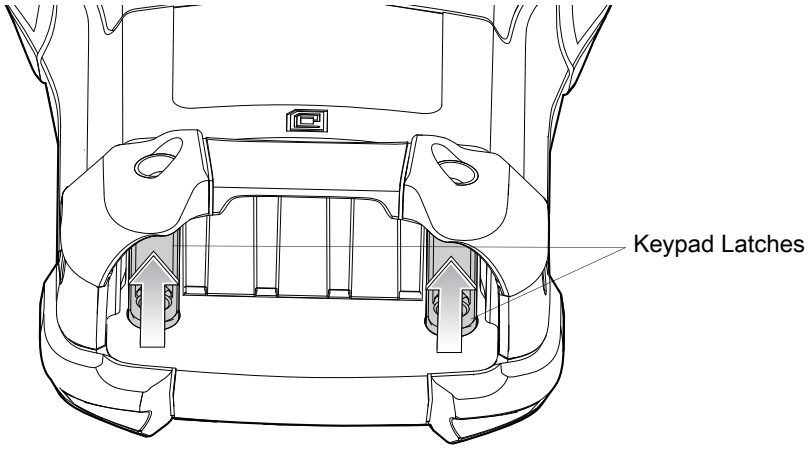
Figure 10 Replace Keypad



12. Turn the device over so that the keypad latches are visible.

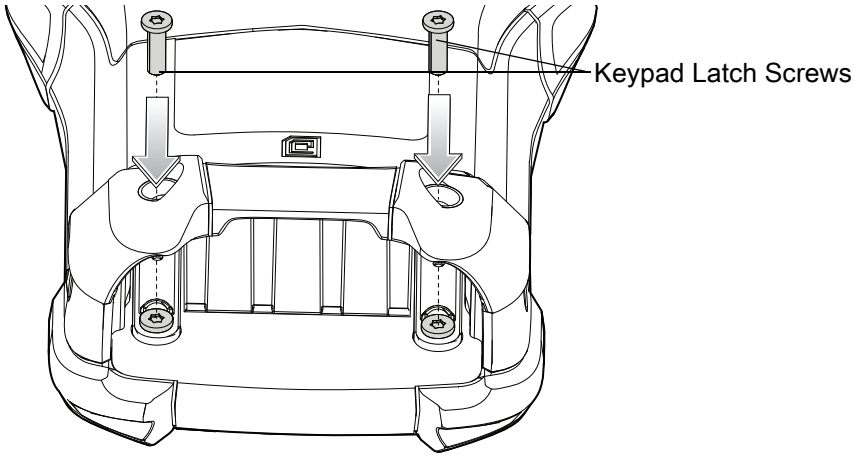
13. Slide both the keypad latches toward the top of the device.

Figure 11 Slide Keypad Latches



14. Using a Torx T8 screwdriver, replace the two keypad latch screws inside the battery slot and torque to 5.8 kgf-cm or 5.0 lbf-in.

Figure 12 Replace Keypad Latch Screws



Installing the Battery

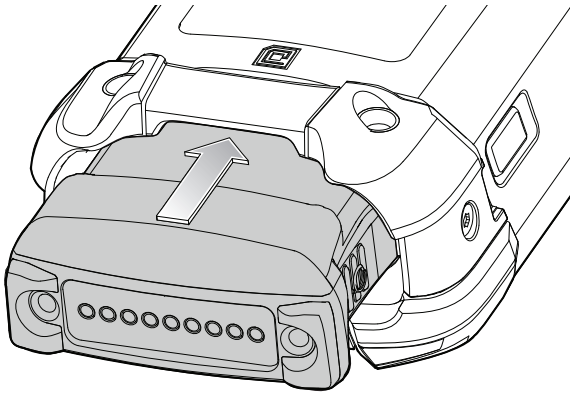
The MC93XX-G is compatible with the following batteries:

- 7000 mAh PowerPrecision+ standard battery
- 5000 mAh PowerPrecision+ cold storage battery
- 7000 mAh PowerPrecision+ non-incendive battery

To install the battery:

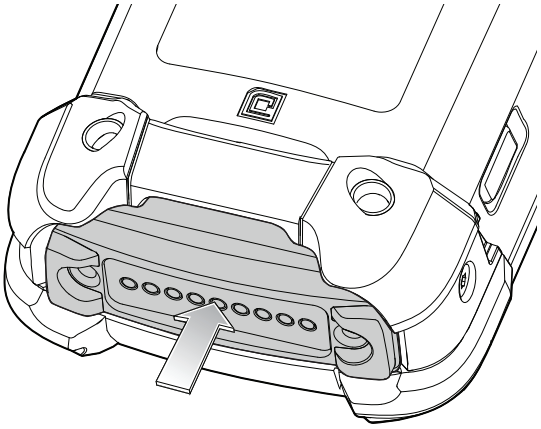
1. Align the battery with the battery slot.

Figure 13 Inserting the Battery



2. Push the battery into the battery slot.
3. Press the battery in firmly. Ensure that both battery release buttons on the sides of the device return to the home position.

Figure 14 Press Battery In



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

Charging the Device

Use one of the following accessories to charge the battery.

Table 3 Charging and Communication

Description	Part Number	Charging		Communication
		Battery (In Device)	Spare Battery	USB
1-Slot USB Charge Cradle with Spare Battery Charger	CRD-MC93-2SUCHG-01	Yes	Yes	Yes
4-Slot Charge Only ShareCradle	CRD-MC93-4SCHG-01	Yes	No	No
4-Slot Spare Battery Charger	SAC-MC93-4SCHG-01	No	Yes	No
16-Slot Spare Battery Charger	SAC-MC93-16SCHG-01	No	Yes	No
USB Charge/Com Snap-on Cup [1]	CBL-MC93-USBCHG-01	Yes	No	Yes
Charge Only Adapter	ADP-MC93-CRDCUP-01	Yes	NA	No
1. A separate USB cable and power supply is required to support fast charging.				

Charging the Main Battery

To charge the main battery:

1. Connect the charging accessory to the appropriate power source.
2. Insert the device into a cradle or attach a cable.

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

Table 4 LED Charge Indicators

Status	Indications
Off	• The battery is not charging. • The device 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. • After battery removal, indicates that the device is in hot swap mode with connectivity persistence. **NOTE:** The SuperCap requires a minimum of 15 minutes to fully charge in order to provide adequate connectivity and memory session persistence.
Solid Amber	• Battery is charging.

Table 4 LED Charge Indicators (continued)

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

The 7000 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 3.5 hours at room temperature using a Zebra accessory.

The 5000 mAh PowerPrecision+ freezer battery charges from 0% to 90% in less than 2.5 hours at room temperature using a Zebra accessory.

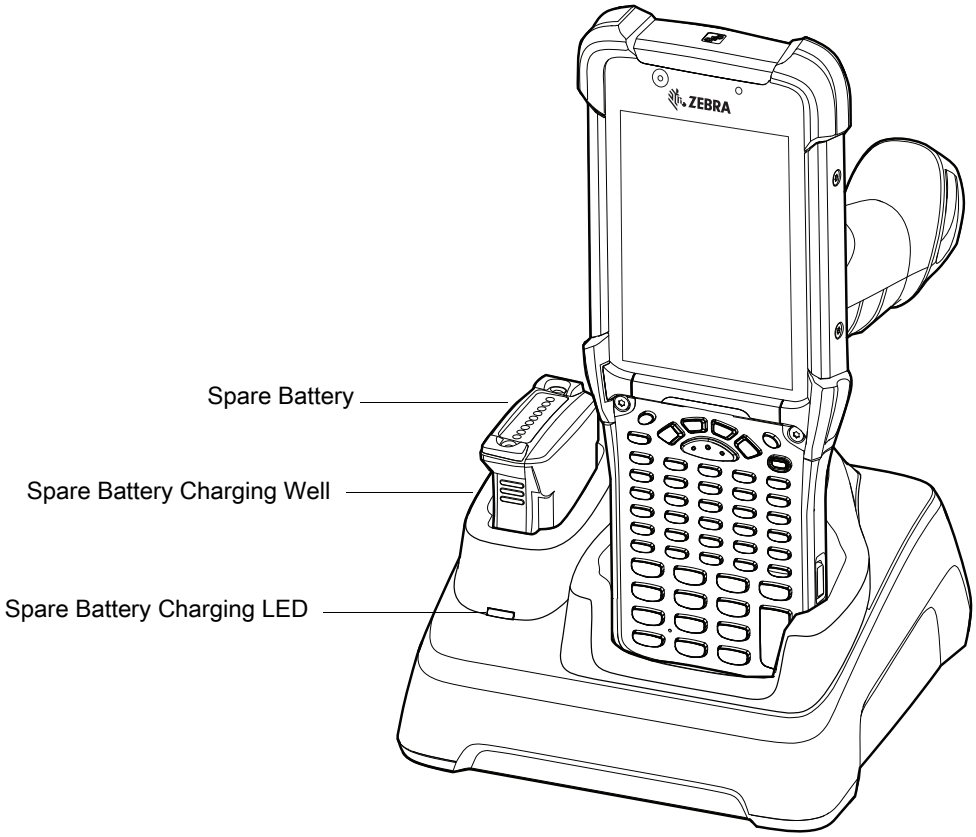
The 7000 mAh PowerPrecision+ non-incendive battery charges from 0% to 90% in less than 3.5 hours at room temperature using a Zebra accessory.

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures, for example at 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 the Spare Battery

1. Ensure that the cradle is connected to power.
2. Insert the spare battery into the charging well, contacts first, onto the contact pins.

Figure 15 Charging the Spare Battery



3. Gently press down on the battery to ensure proper contact.

The Spare Battery Charging LEDs on the front of the cradle indicates the spare battery charging status. The following table specifies charging indicators.

Table 5 *Charging/Notification LED Charging Indicators*

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

4. When charging is complete, lift the battery out of the slot.

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures, for example at approximately +37°C (+98°F), the

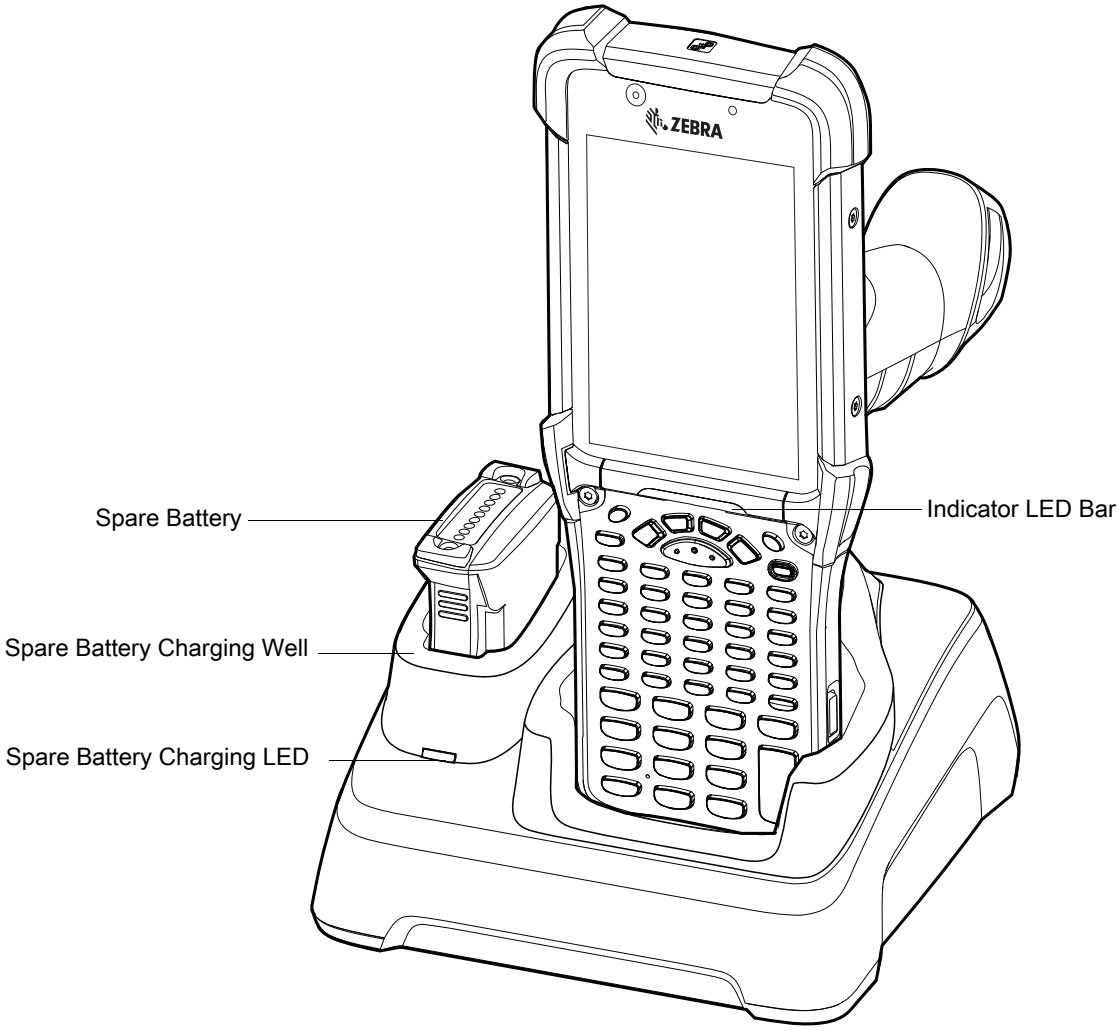
device or cradle may for small periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device and cradle indicates when charging is disabled due to abnormal temperatures via its LED.

1-Slot USB Charge Cradle with Spare Battery Charger

The 1-Slot USB Charge Cradle with spare battery:

- Provides 9 VDC power to operate the mobile computer and charge 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, for example, 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:
  - 7000 mAh PowerPrecision+ standard battery
  - 5000 mAh PowerPrecision+ cold storage battery
  - 7000 mAh PowerPrecision+ non-incendive battery

Figure 16 1-Slot USB Charge Cradle with Spare Battery Charger

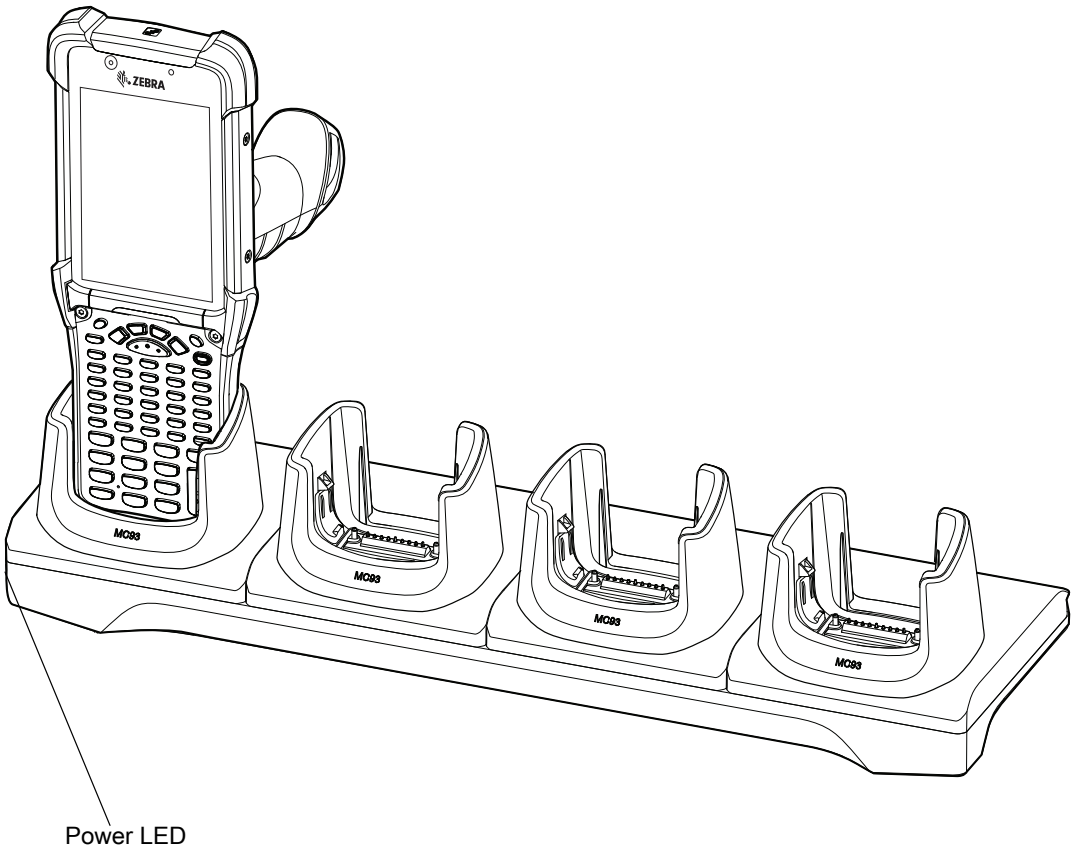


4-Slot Charge Only ShareCradle

The 4-Slot Charge Only ShareCradle:

- Provides 9 VDC power to operating the mobile computer and charge the battery.
- Simultaneously charges up to four mobile computers.
- Compatible with devices using the following batteries:
  - 7000 mAh PowerPrecision+ standard battery
  - 5000 mAh PowerPrecision+ cold storage battery
  - 7000 mAh PowerPrecision+ non-incendive battery

Figure 17 4-Slot Charge Only ShareCradle

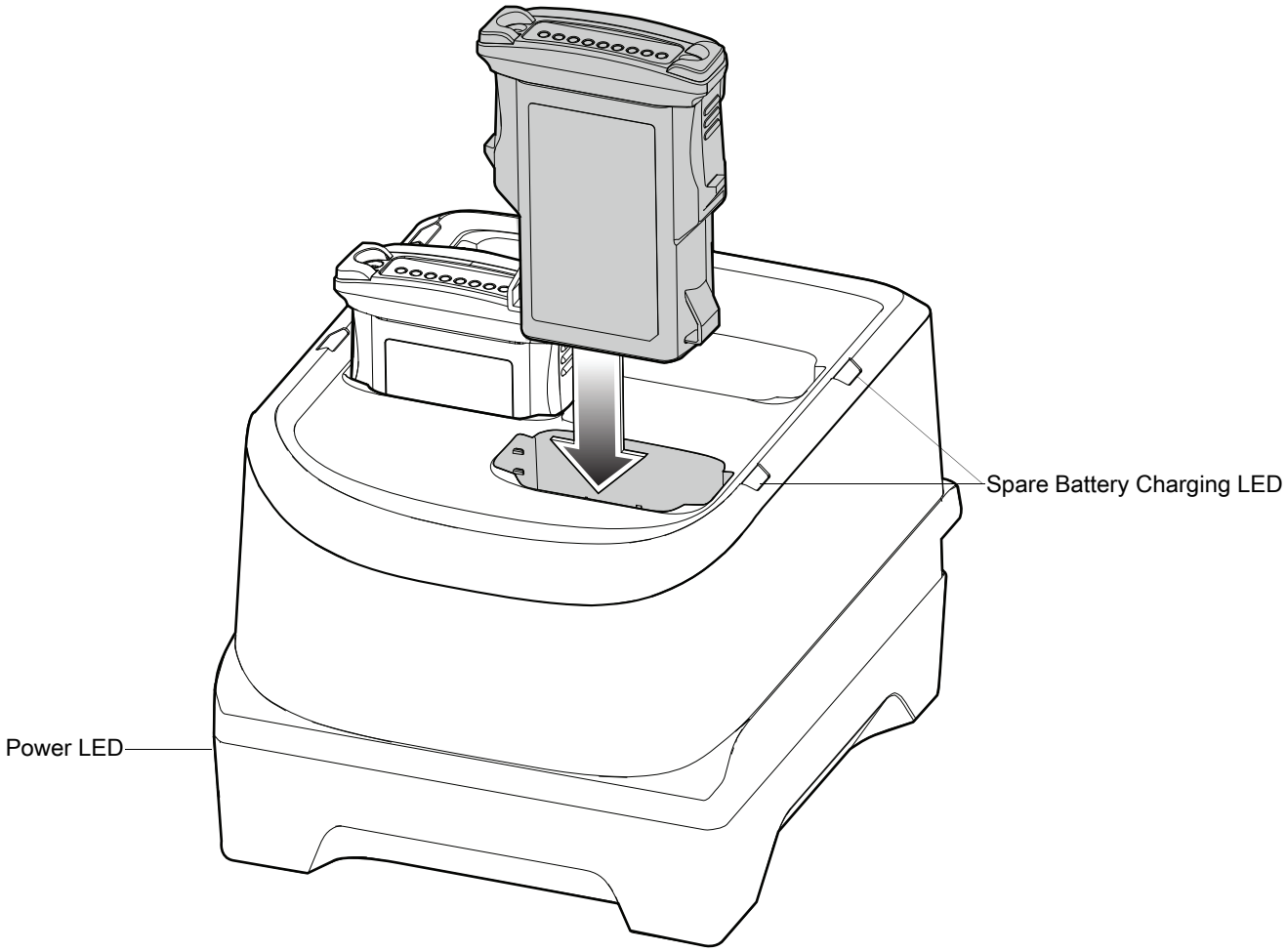


4-Slot Spare Battery Charger

The 4-Slot Spare Battery Charger:

- Charges up to four spare batteries.
- Provides 4.2 VDC power to charge the spare battery.
- Compatible with the following batteries:
  - 7000 mAh PowerPrecision+ standard battery
  - 5000 mAh PowerPrecision+ cold storage battery
  - 7000 mAh PowerPrecision+ non-incendive battery

Figure 18 4-Slot Spare Battery Charger

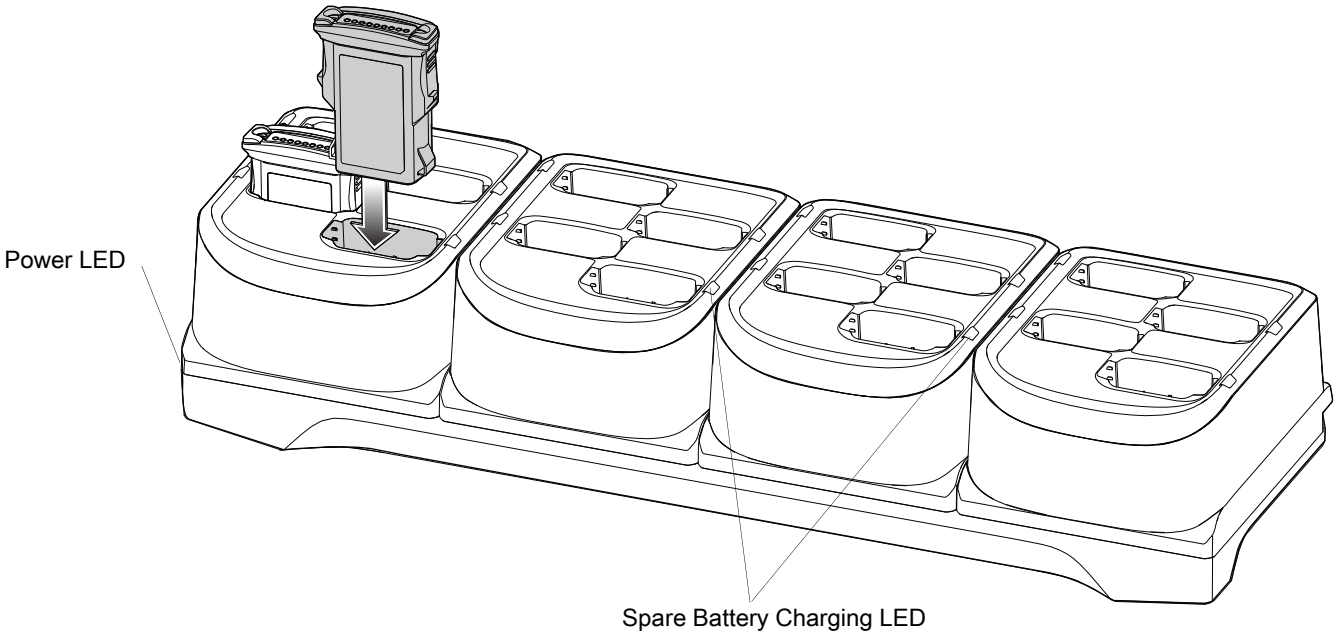


16-Slot Spare Battery Charger

The 16-Slot Spare Battery Charger:

- Charges up to 16 spare batteries.
- Provides 4.2 VDC power to charge the spare battery.
- Compatible with the following batteries:
  - 7000 mAh PowerPrecision+ standard battery
  - 5000 mAh PowerPrecision+ cold storage battery
  - 7000 mAh PowerPrecision+ non-incendive battery

Figure 19 16-Slot Spare Battery Charger



USB Charge/Com Snap-on Cup

The USB Charge/Com Snap-on Cup:

- Provides 5 VDC power to operate the device and 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:
  - 7000 mAh PowerPrecision+ standard battery
  - 5000 mAh PowerPrecision+ cold storage battery
  - 7000 mAh PowerPrecision+ non-incendive battery

Figure 20 USB Charge/Com Snap-on Cup

MC9XXX Charge Only Adapter

Use the Charge Only Adapter for backwards compatibility with the MC9XXX cradles and the MC93XX mobile computer.

- Charge Only Adapter supports terminal charging only for the MC9XXX Single Slot Cradle and 4-Slot Cradle.
- Charge Only Adapter provides charge only and no communication when used with the MC9XXX cradles.

Figure 21 Single Slot Cradle Charge Only Adapter

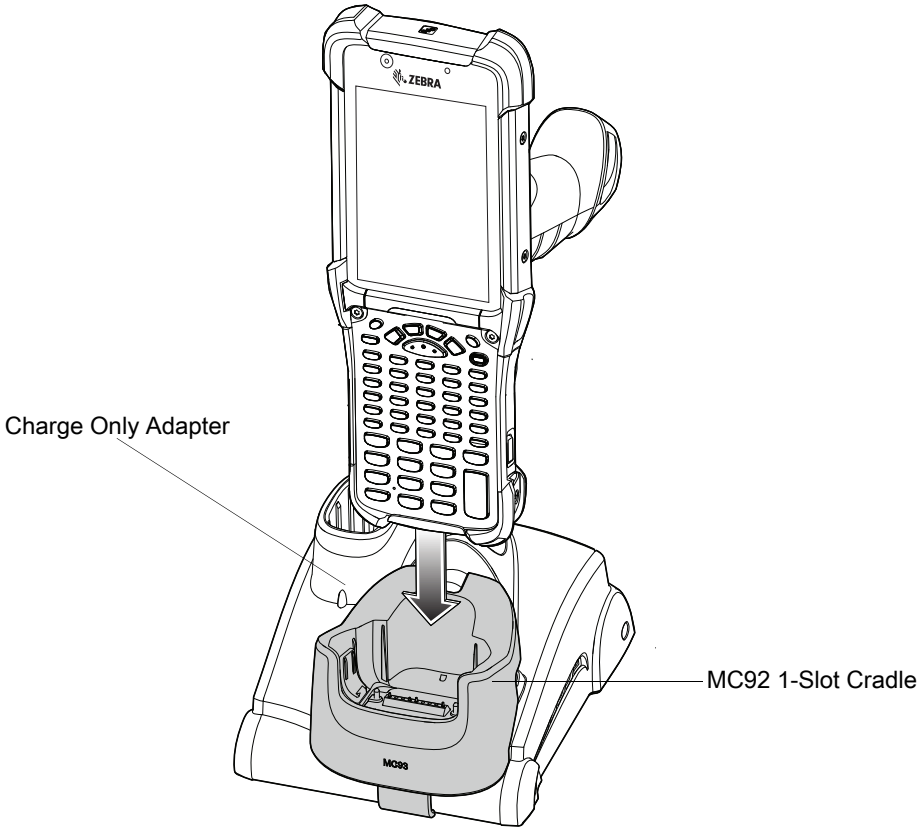
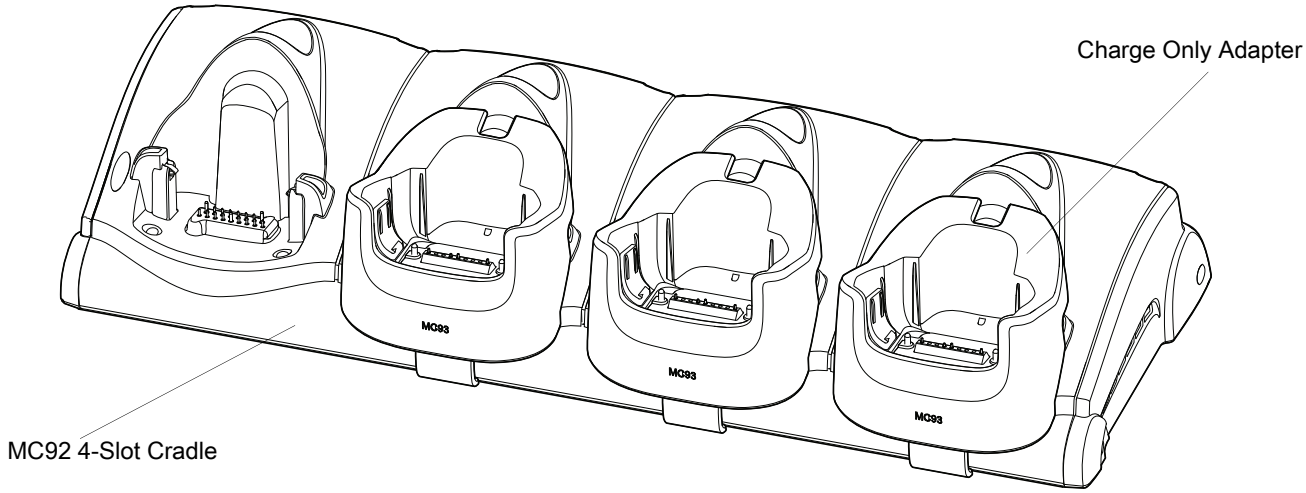


Figure 22 4-Slot Cradle Charge Only Adapter

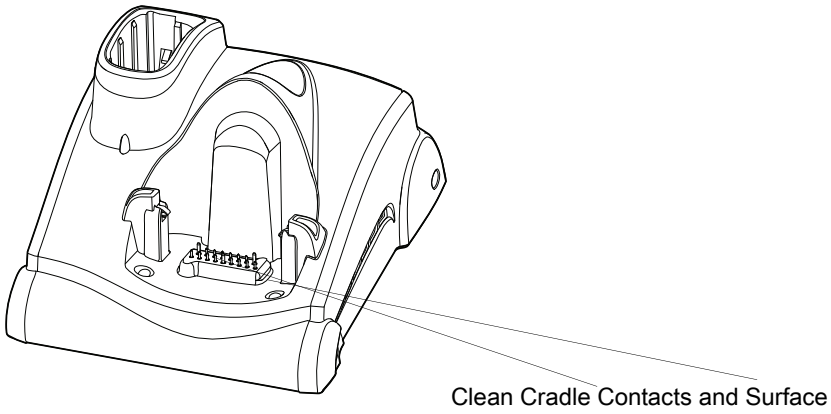


Charge Only Adapter Installation

To install the Charge Only Adapter:

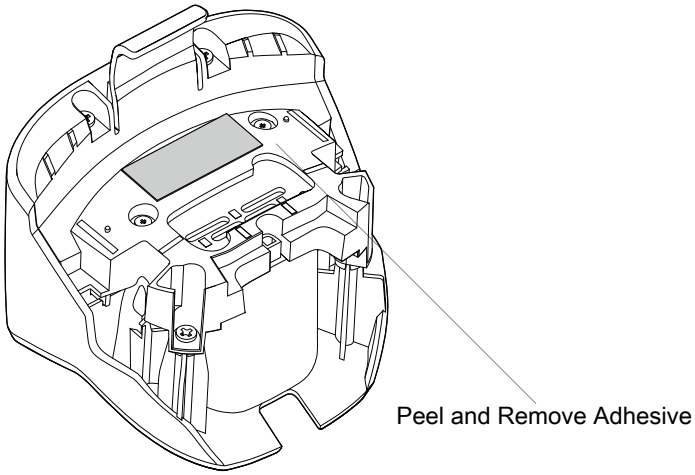
1. Clean the MC9XXX cradle and contacts surface as specified with an alcohol wipe, using a back and forth motion with your finger.
   For more information about cleaning, refer to the MC93XX Mobile Computer User Guide.

Figure 23 Clean MC9XXX Cradle Contacts and Surfaces



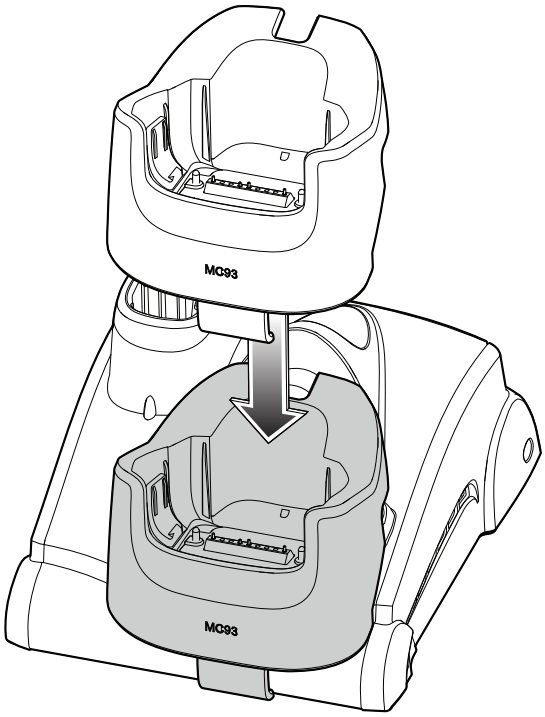
2. Peel and remove the adhesive from the back of the adapter.

Figure 24 Peel and Remove Adhesive



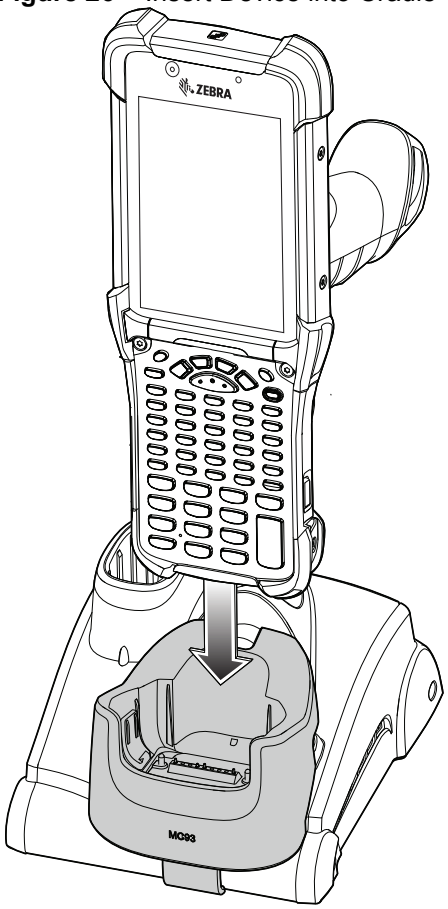
3. Insert the adapter into the MC9XXX cradle and adhere to the bottom of the cradle.

Figure 25 Insert Adapter into Cradle



4. Insert the device into the cradle.

Figure 26 Insert Device into Cradle



Scanning

The MC93XX offers the following data capture options:

- SE4750-SR 1D/22D imager
- SE4850-ER 1D/2D imager
- SE965 1D laser scanner

Refer to the MC93XX Mobile Computer User Guide for additional scanning options.

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.
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 27 Aiming Pattern: Standard and Extended Range

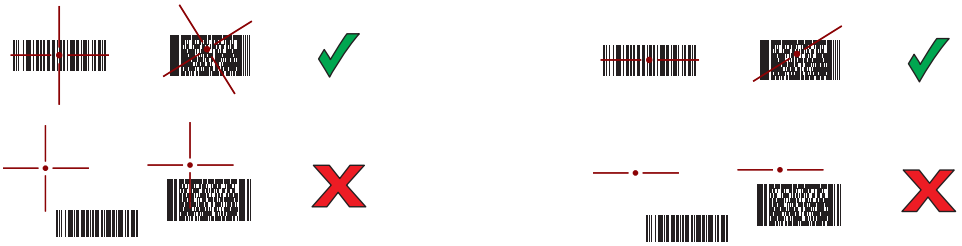


Figure 28 Pick List Mode with Multiple Barcodes in Aiming Pattern: Standard and Extended Range

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:

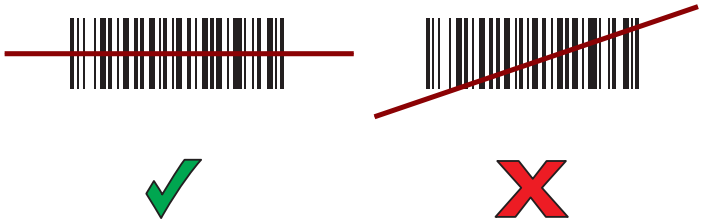
1. Ensure that an application is open on the device and a text field is in focus (text cursor in text field).
2. Point the top of the device at a barcode.

3. Point the scan exit window at a bar code.
4. Press and hold the Scan button or trigger.

   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 29 Laser Scanner Aiming Pattern



5. Release the Scan button or trigger.

The captured data appears in the text field.

Ergonomic Considerations

Taking breaks and task rotation are recommended.

Optimum Body Posture

Figure 30 Optimum Uright Body Posture

Alternate left and right hand.

Optimize Body Posture for Scanning

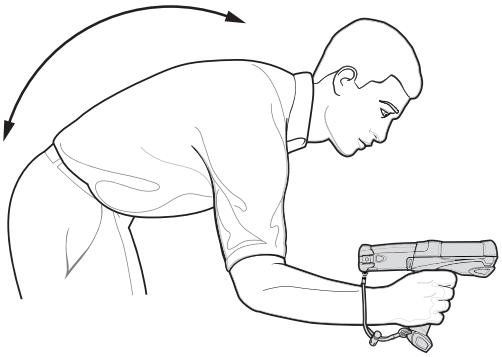
Figure 31 Low and High Scanning

Alternate left and right knees

Use a ladder.

Avoid Reaching and Bending

Figure 32 Avoid Reaching and Bending



Avoid Extreme Wrist Angles

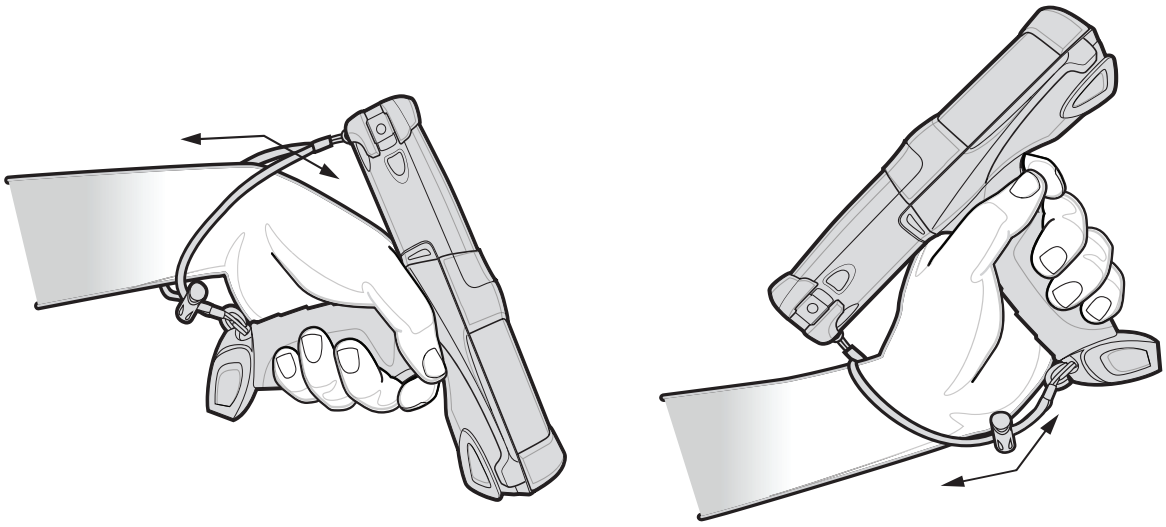



Figure 33 Avoid Extreme Wrist Angles