



ZEBRA MC93XX Mobile Computer User Guide

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MC93XX
Mobile Computer



Quick Start Guide

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MC93XX Mobile Computer

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Warranty

For the complete Zebra hardware product warranty statement, go to www.zebra.com/warranty.

Service Information

Before you use the unit, it must be configured to operate in your facility's network and run your applications. If you have a problem running your unit or using your equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Zebra Global Customer Support at www.zebra.com/support.

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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	P1 – Dedicated PTT Key	Initiates push-to-talk communications (programmable).
7	Battery Release Latch	Releases the battery from the device. NOTE: To release the battery, simultaneously press the battery release latches on both the sides of the device.
8	Battery	Provides power for operating the device.
9	Microphone	Use for communications in Handset mode.
10	Keypad	Use to enter data and navigate on screen functions.
11	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.
12	Center Scan Button	Initiates data capture when a scan application is enabled.
13	Charger/Decode Status LED	Indicates battery charging status while charging, app generated notifications, and data capture status.

Figure 2 MC93XX Back View

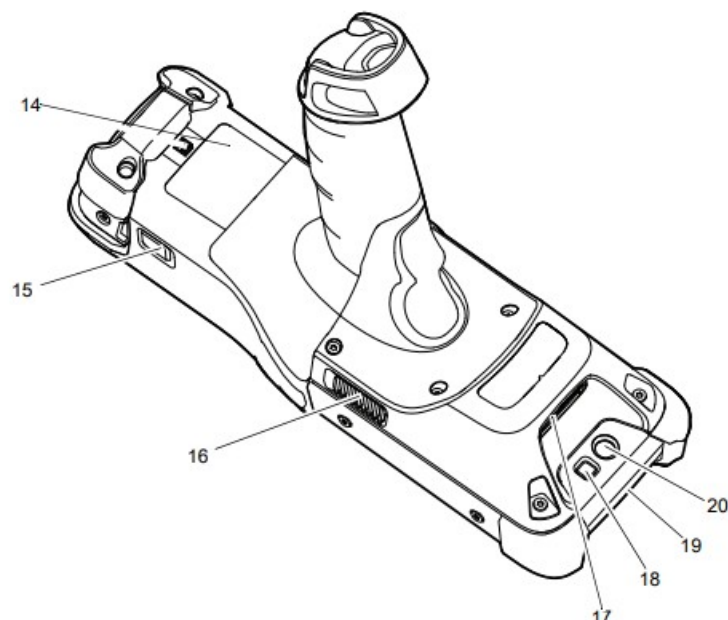


Table 2 MC93XX Features – Back View

Number	Item	Function
14	Passive NFC Tag (Inside the battery compartment.)	Provides secondary product label information (configuration, serial number and manufacture data code) in the event that the readable product label is worn or missing.
15	Battery Release Latch	Releases the battery from the device.
16	Side Speaker Port	Provides audio output for video and music playback.
17	Scanner Exit Window	Provides data capture using the scanner/imager.
18	Camera Flash	Provides illumination for the camera. NOTE: Camera is available only on some configurations.
19	NFC Antenna	Provides communication with other NFC-enabled devices. NOTE: NFC antenna is available only on the premium configurations.
20	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. It is strongly recommended that prior to use, you must format the microSD card on the

device.



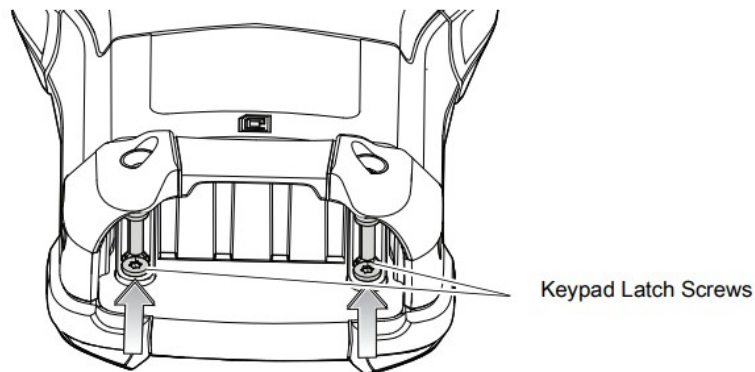
NOTE: For microSD card information see the MC93XX Mobile Computer User Guide.



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.

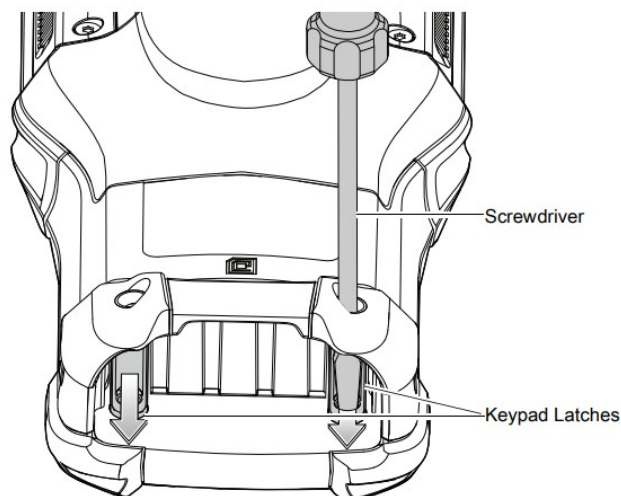
1. Power off the device.
2. Remove the battery.
3. Using a Torx T8 screwdriver with a large grip, remove the two keypad latch screws from inside the battery slot.

Figure 3 Remove Keypad Latch Screws



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

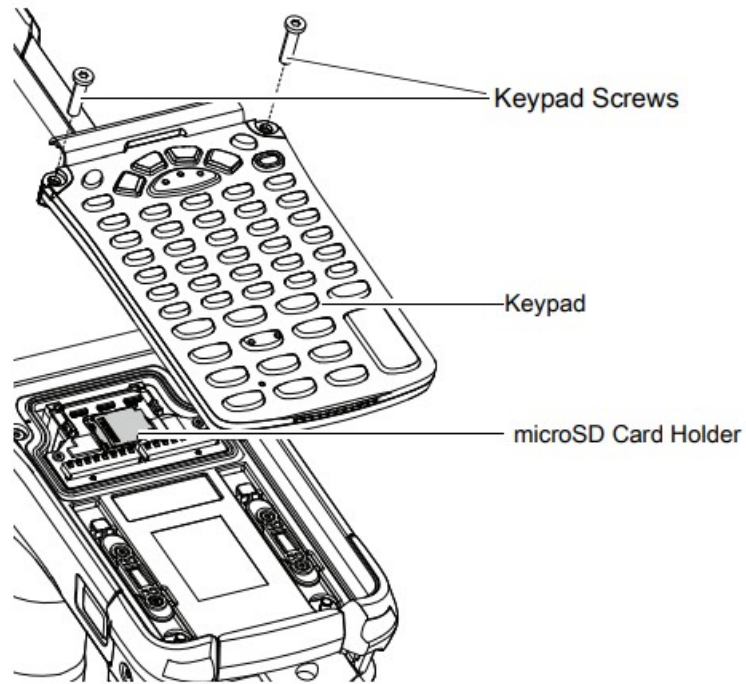
Figure 4 Release Keypad Latches



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

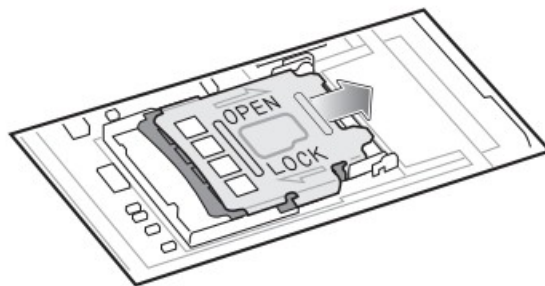
5. Turn the device over so that the keypad is visible.
6. Using a Torx T8 screwdriver with a large grip, remove the two keypad assembly screws from the top of the keypad.

Figure 5 Remove Keypad



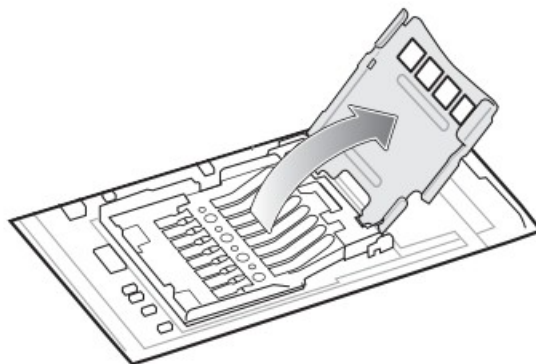
7. Lift the keypad from the device.
8. Slide the microSD card holder to the Open position.

Figure 6 Open microSD Card Holder



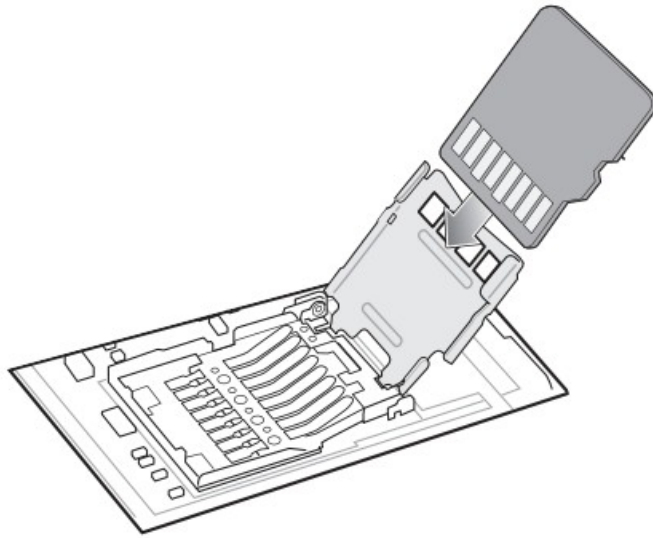
9. Lift the microSD card holder.

Figure 7 Lift microSD Card Holder



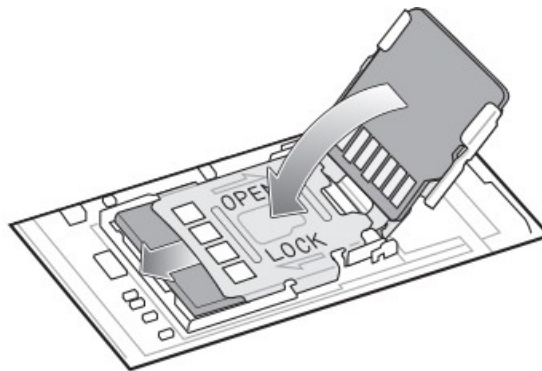
10. Insert the microSD card into the card holder door ensuring that the card slides into the holding tabs on each side of the door.

Figure 8 Insert microSD Card into Holder



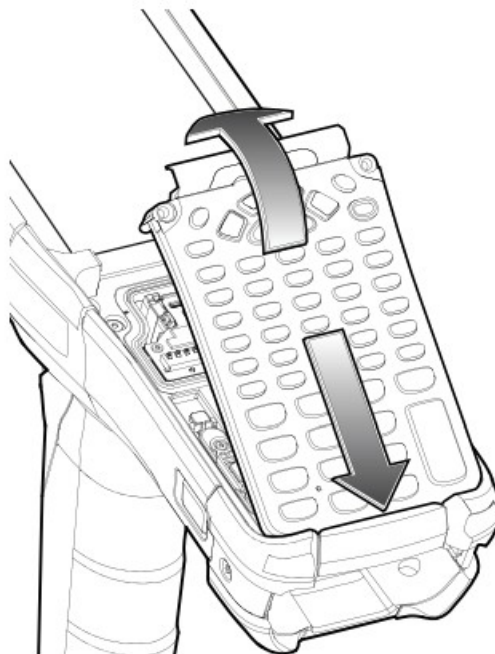
11. Close the microSD card holder door and slide the door to the Lock position.

Figure 9 Close and Lock microSD Card in Holder



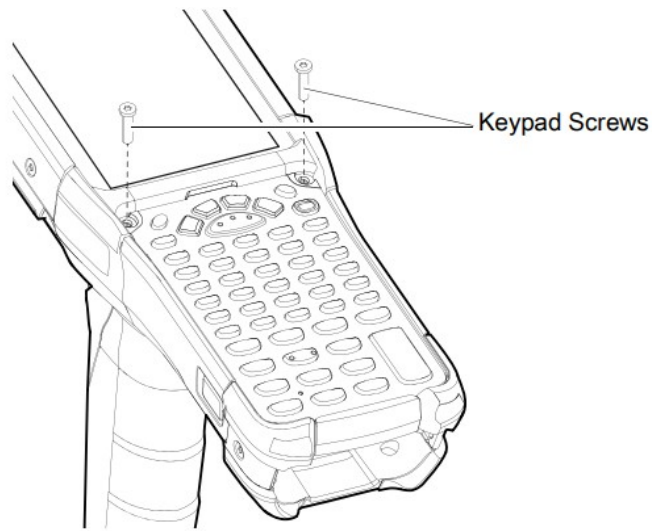
12. Align the keypad along the bottom ridge of the device, and then lay it flat.

Figure 10 Replace Keypad



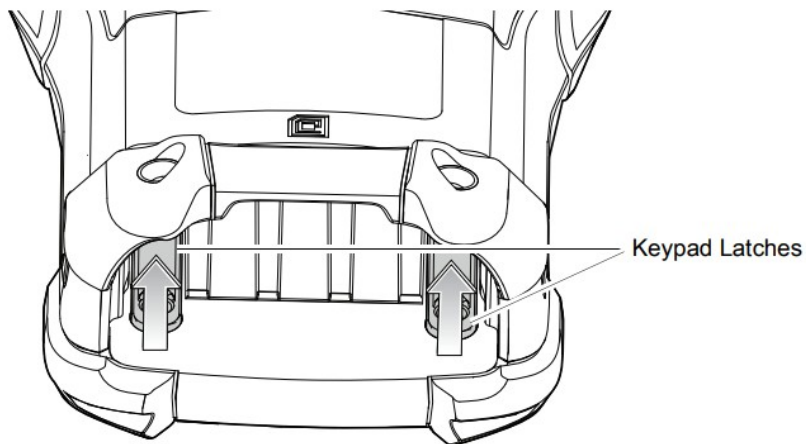
13. Using a Torx T8 screwdriver with a large grip and a long shaft, secure the keypad to the device using the two screws. Torque screws to 5.8 kgf-cm or 5.0 lbf-in.

Figure 11 Replace Keypad Screws



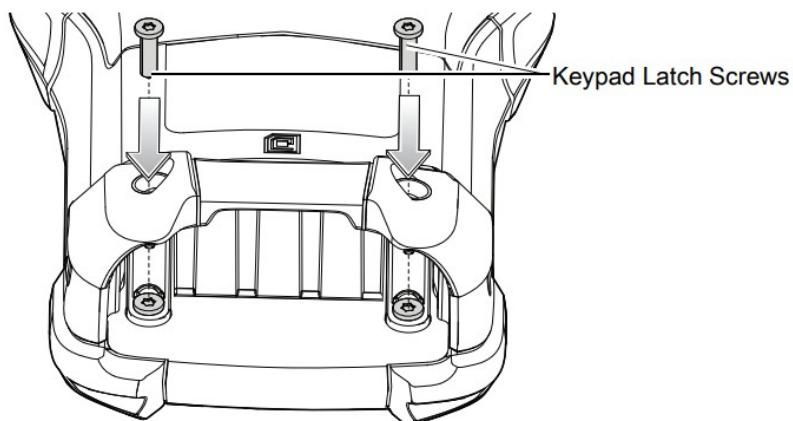
14. Turn the device over so that the keypad latches are visible.
15. Slide both the keypad latches toward the top of the device.

Figure 12 Slide Keypad Latches



16. 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 13 Replace Keypad Latch Screws



17. Insert the battery.
18. Press and hold the Power key to power on the device.

Installing the Battery

The MC93XX is compatible with the following batteries:

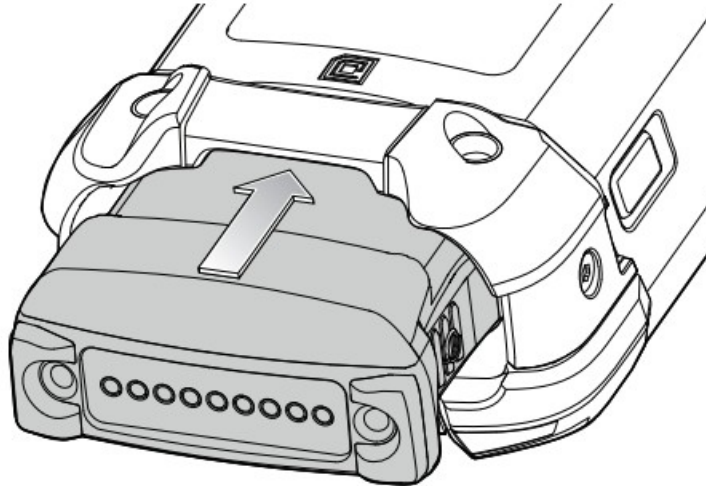
- 7000mAh PowerPrecision+ standard battery

- 5000mAh PowerPrecision+ freezer battery
- 7000mAh PowerPrecision+ non-incendive battery.

To install the battery:

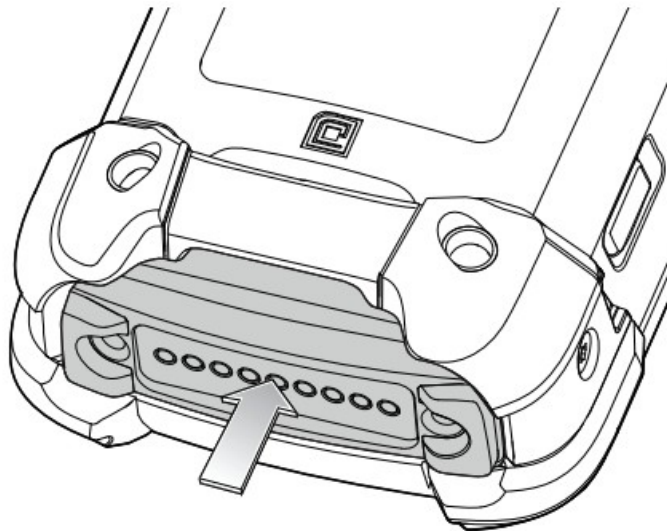
1. Align the battery with the battery slot.

Figure 14 Inserting the Battery



2. Push the battery into the battery slot.
3. Press battery firmly into the battery well. Ensure that both the battery release buttons on the sides of the device return to the home position. An audible click sound indicates that both the battery release buttons on the sides of the device have returned to the home position locking the battery in place.

Figure 15 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	Ethernet
1-Slot USB Charge Cradle with Spare Battery Charger	CRD-MC93-2SUCHG-01	Yes	Yes	Yes	No
4-Slot Charge Only ShareCradle	CRD-MC93-4SCHG-01	Yes	No	No	No
4-Slot Spare Battery Charger	SAC-MC93-4SCHG-01	No	Yes	No	No
4-Slot Ethernet ShareCradle	CRD-MC93-4SETH-01	Yes	No	No	Yes
16-Slot Spare Battery Charger	SAC-MC93-16SCHG-01	No	Yes	No	No
USB Charge/Com Snap-on Cup NOTE: A separate USB cable and power supply is required to support fast charging. USB (Type-C) Cable is required to allow communication from the snap-on to the PC/laptop.	CBL-MC93-USBCRG-01	Yes	No	Yes	No
Charge Only Adapter	ADP-MC93-CRDCUP-01	Yes	NA	No	No

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

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

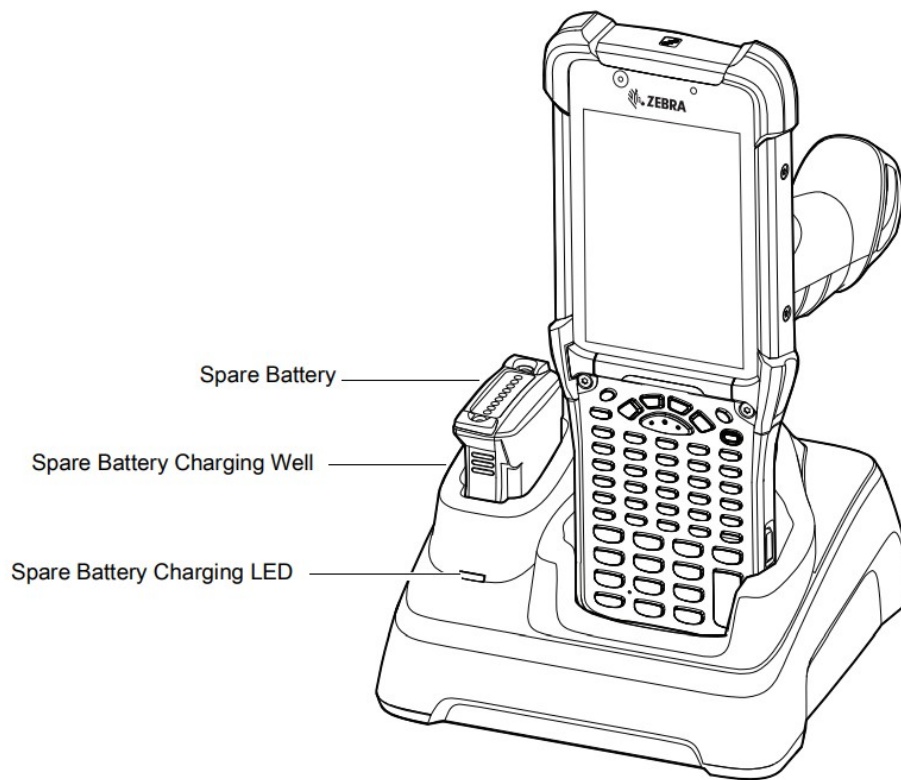
The 7000mAh PowerPrecision+ non-incendive battery charges from 0% to 90% in less than 3.5 hours at room temperature using a Zebra accessory.

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, small end first, onto the contact pins.

Figure 16 Charging the Spare Battery



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

The 1-Slot USB charge cradle charges the MC93XX's main battery and a spare battery simultaneously. The MC93XX's Charge LED indicates the status of the battery charging in the device. See LED Charge Indicators for charging status indications.

Table 5 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.
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.

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

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

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

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

Table 6 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.

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

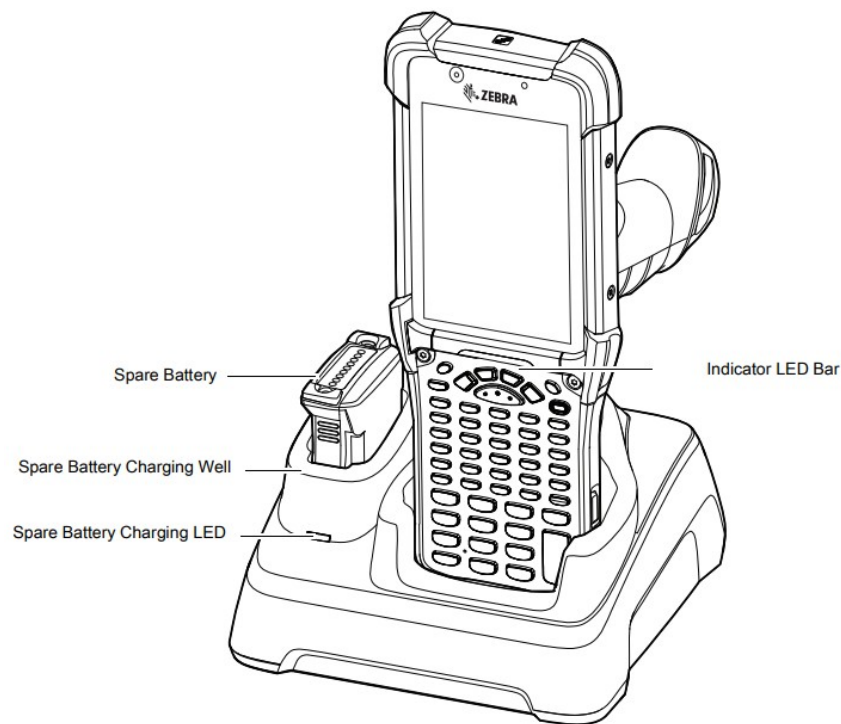
Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures, for example at approximately +37°C (+98°F), the device or cradle may for small periods of time alternately enable and disable 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:
 - 7000mAh PowerPrecision+ standard battery
 - 5000mAh PowerPrecision+ freezer battery
 - 7000mAh PowerPrecision+ non-incendive battery.

Figure 17 1-Slot USB Charge Cradle with Spare Battery Charger

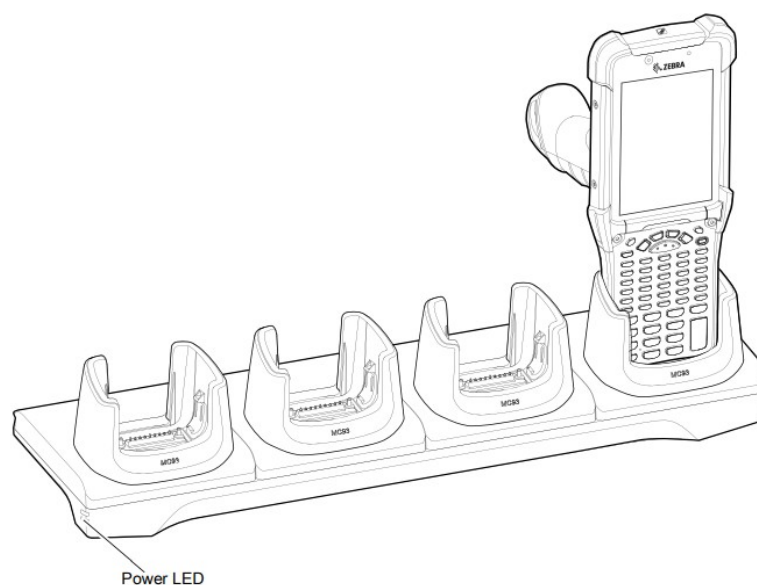


4-Slot Charge Only ShareCradle

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:
 - 7000mAh PowerPrecision+ standard battery
 - 5000mAh PowerPrecision+ freezer battery
 - 7000mAh PowerPrecision+ non-incendive battery.

Figure 18 4-Slot Charge Only ShareCradle

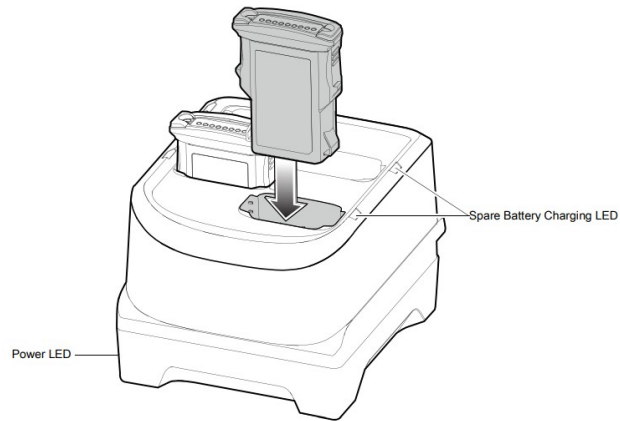


4-Slot Spare Battery Charger

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:
 - 7000mAh PowerPrecision+ standard battery
 - 5000mAh PowerPrecision+ freezer battery
 - 7000mAh PowerPrecision+ non-incendive battery.

Figure 19 4-Slot Spare Battery Charger

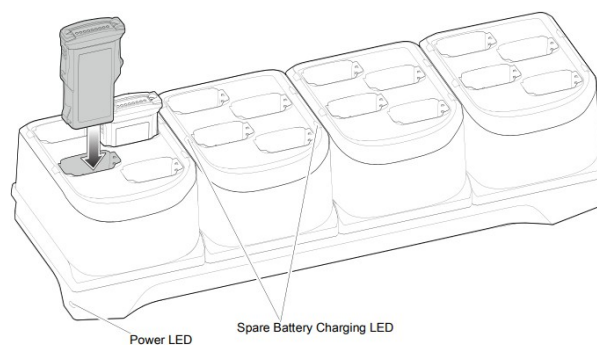


16-Slot Spare Battery Charger

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:
 - 7000mAh PowerPrecision+ standard battery
 - 5000mAh PowerPrecision+ freezer battery
 - 7000mAh PowerPrecision+ non-incendive battery.

Figure 20 16-Slot Spare Battery Charger



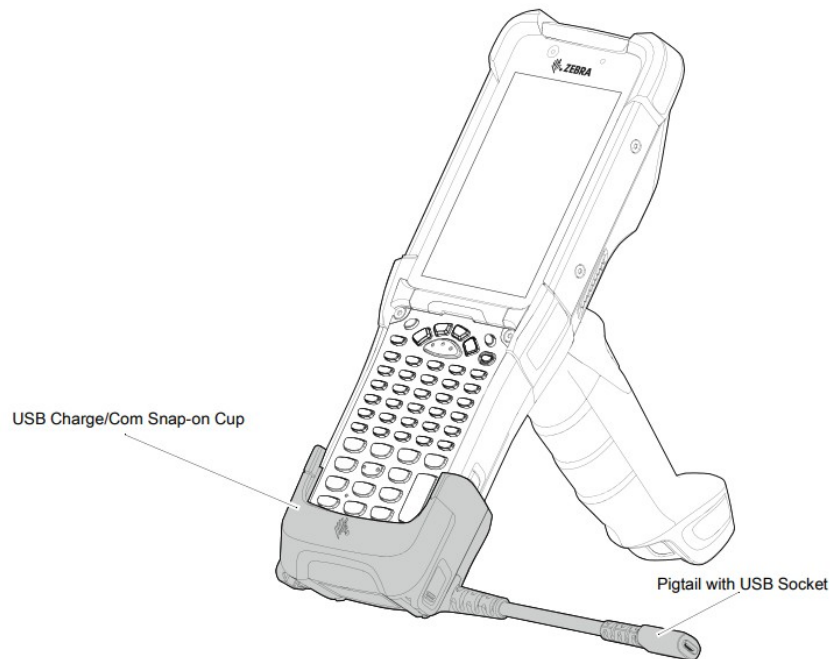
USB Charge/Com Snap-on Cup

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:

- 7000mAh PowerPrecision+ standard battery
- 5000mAh PowerPrecision+ freezer battery
- 7000mAh PowerPrecision+ non-incendive battery.

Figure 21 USB Charge/Com Snap-on Cup



MC93XX 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 1-Slot Cradle and 4-Slot Cradle.
- Charge Only Adapter provides charge only and no communication when used with the MC9XXX cradles.

Figure 22 MC9X 1-Slot Cradle Charge Only Adapter

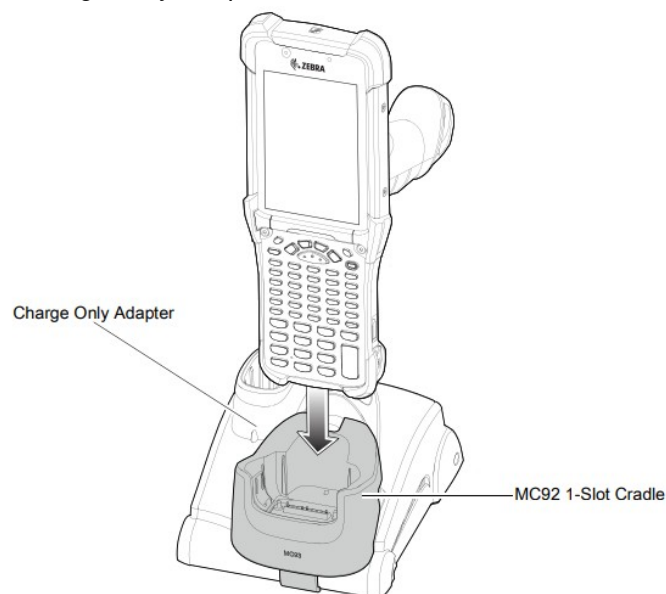
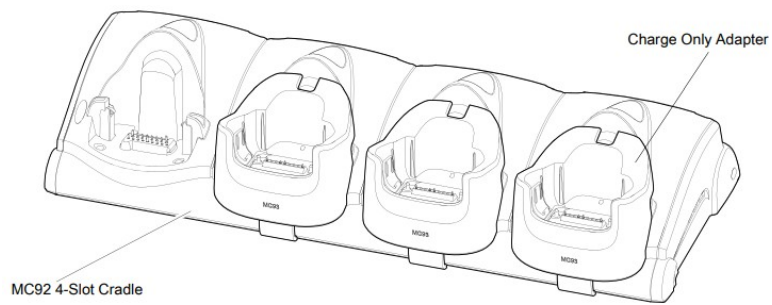


Figure 23 MC9X 4-Slot Cradle Charge Only Adapter



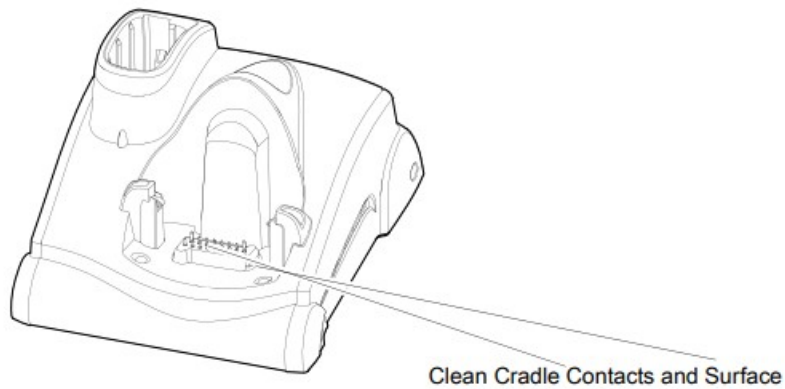
Charge Only Adapter Installation

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.

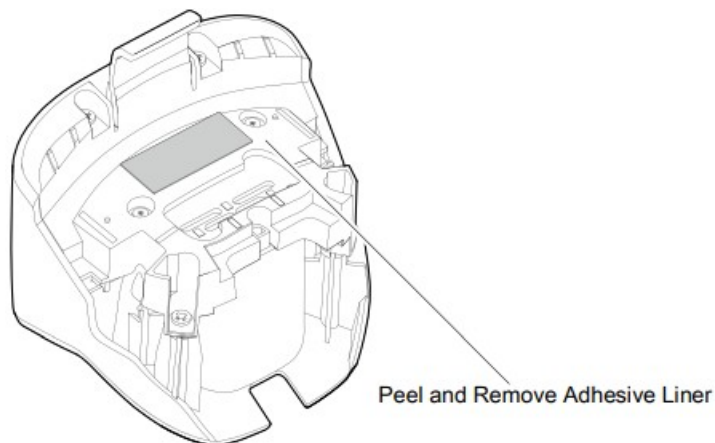
For more information about cleaning, refer to the MC93XX Mobile Computer User Guide.

Figure 24 Clean MC9XXX Cradle Contacts and Surfaces

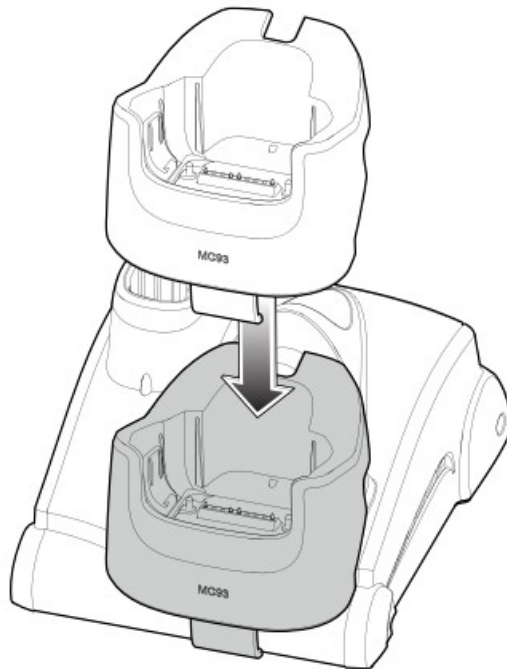


2. Peel and remove the adhesive from the back of the adapter.

Figure 25 Peel and Remove Adhesive

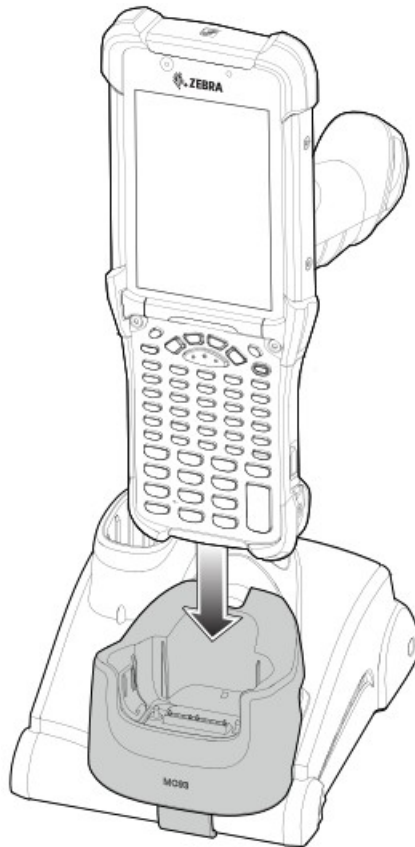


3. Insert the adapter into the MC9XXX cradle and adhere to the bottom of the cradle.



4. Insert the device into the cradle.

Figure 27 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 28 Aiming Pattern: Standard and Extended Range



Figure 29 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 30 Laser Scanner Aiming Pattern



5. Release the Scan button or trigger.

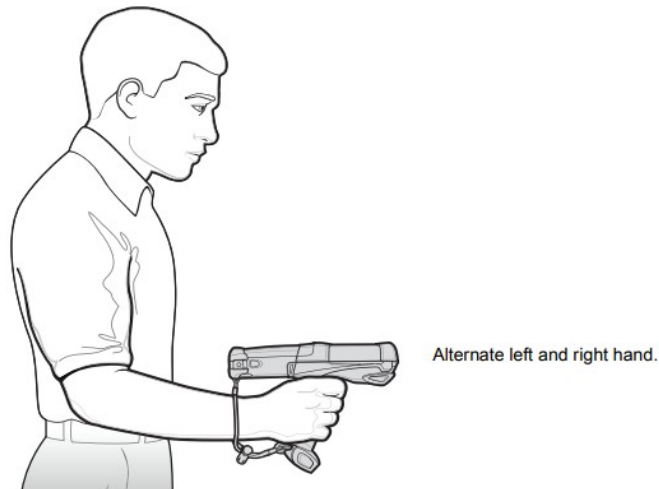
The captured data appears in the text field.

Ergonomic Considerations

Taking breaks and task rotation are recommended.

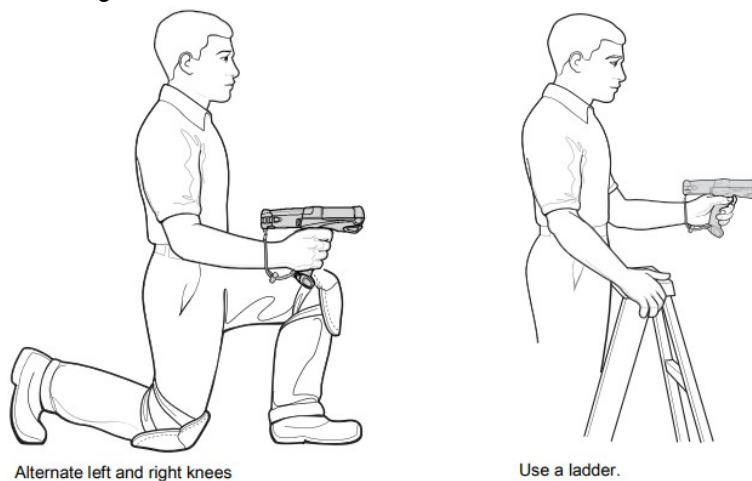
Optimum Body Posture

Figure 31 Optimum Upright Body Posture



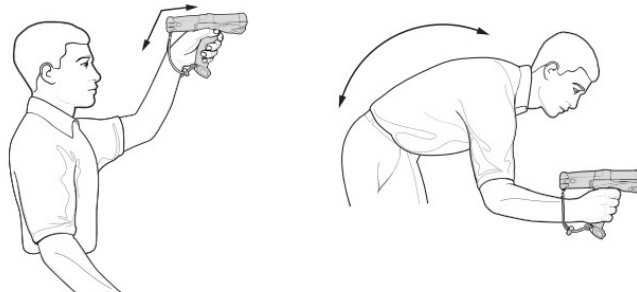
Optimize Body Posture for Scanning

Figure 32 Low and High Scanning



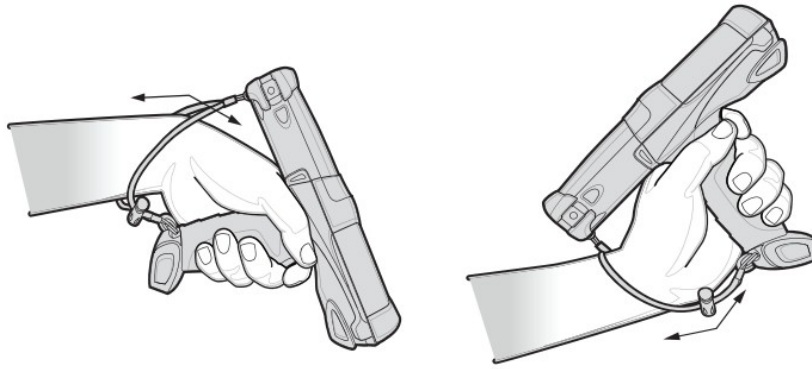
Avoid Reaching and Bending

Figure 33 Avoid Reaching and Bending



Avoid Extreme Wrist Angles

Figure 34 Avoid Extreme Wrist Angles



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