

# PS20

## Personal Shopper



## Quick Start Guide



**ZEBRA**

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## Warranty

For the complete Zebra hardware product warranty statement, go to: [www.zebra.com/warranty](http://www.zebra.com/warranty).

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## 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 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](http://www.zebra.com/support).

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## Configurations

This guide covers the following configurations:

**Table 1** Configurations

Configuration	Radios	Display	Memory	Data Capture Options	5 MP Camera	Operating System
PS20 Base	WLAN: 802.11 a/b/g/n/d/h/i/k /r/v/ac WPAN: Bluetooth v5.0	WVGA 4.0" color	4 GB RAM/16 GB Flash	SE2100	No	Android Open Source Project (AOSP)/ Google Mobile Services (GMS) 8.1
PS20 Plus	WLAN: 802.11 a/b/g/n/d/h/i/k /r/v/ac WPAN: Bluetooth v5.0	WVGA 4.0" color	4 GB RAM/16 GB Flash	SE4710 + Digimarc	Yes	Android Open Source Project (AOSP)/ Google Mobile Services (GMS) 8.1

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## Unpacking

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

Verify that the box contains all the equipment listed below:

- PS20 (includes lithium-ion battery)
- Regulatory Guide

Inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact Support immediately. See [Service Information on page 2](#) for contact information.

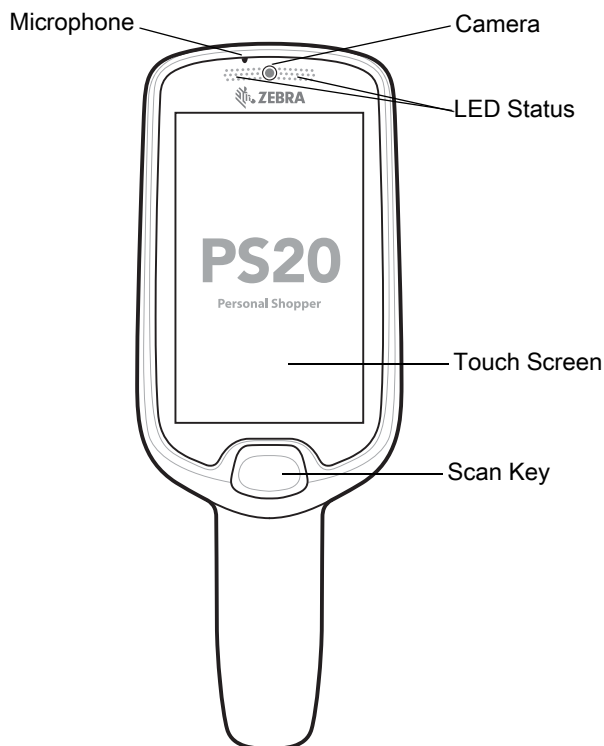
## Removing the Screen Protection Film

A screen protection film is applied to the PS20 screen to protect the screen during shipping. To remove the screen protector, carefully lift the thin film off the touch screen display.

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## Features

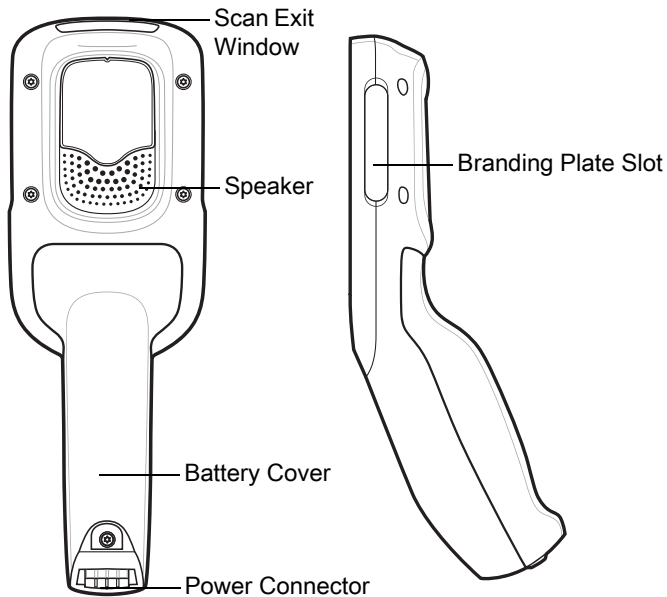
**Figure 1** Features - Front View



**Table 2** Features - Front View

Item	Function
Microphone	Use for audio input and SmartLens locationing. Allows shoppers to speak to a store associate via push-to-talk or to a virtual assistant via speech-to-text.
Camera	With the front-facing camera, the device supports Visible Light Communications (VLC) indoor positioning/locationing applications. In addition, the camera is used for image/face recognition. Available on Plus configurations.
LED Status	Indicates the battery charge state while charging or the scan/decode status. Red: Barcode scan in progress (Scan key is pressed). Single Green Blink: Successful decode.
Touch Screen	Displays all information needed to operate the device.
Scan Key	Use for trigger input for scanner or as a Select/Enter key.

**Figure 2** Features - Back and Side View



**Table 3** Features - Back and Side View

Item	Function
Scan Exit Window	Provides data capture using the scanner.
Speaker	Provides audio output for video, music, notifications, and PTT.
Battery Cover	Encloses the battery and attaches to the device's handle.
Power/Cradle I/O Connector	Provides charging via cradle and cradle communication to lock/unlock the cradle slots. Use to perform a hard reset with the terminal reboot tool.
Branding Plate Slot	Provides space for custom logo.

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## Setup

To start using the device for the first time:

- Charge the battery to at least 30% capacity.



**NOTE** When the device is shipped from the factory, it is placed into Ship Mode, where the device enters its lowest possible power state. The device can exit Ship Mode by docking it in a powered cradle or in a powered USB cable. Fully charging the battery pack to 100% is recommended immediately after exiting ship mode to calibrate the state of charge.

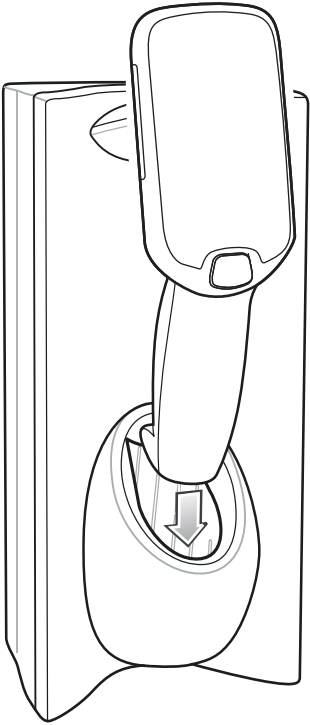
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## Charging the Battery

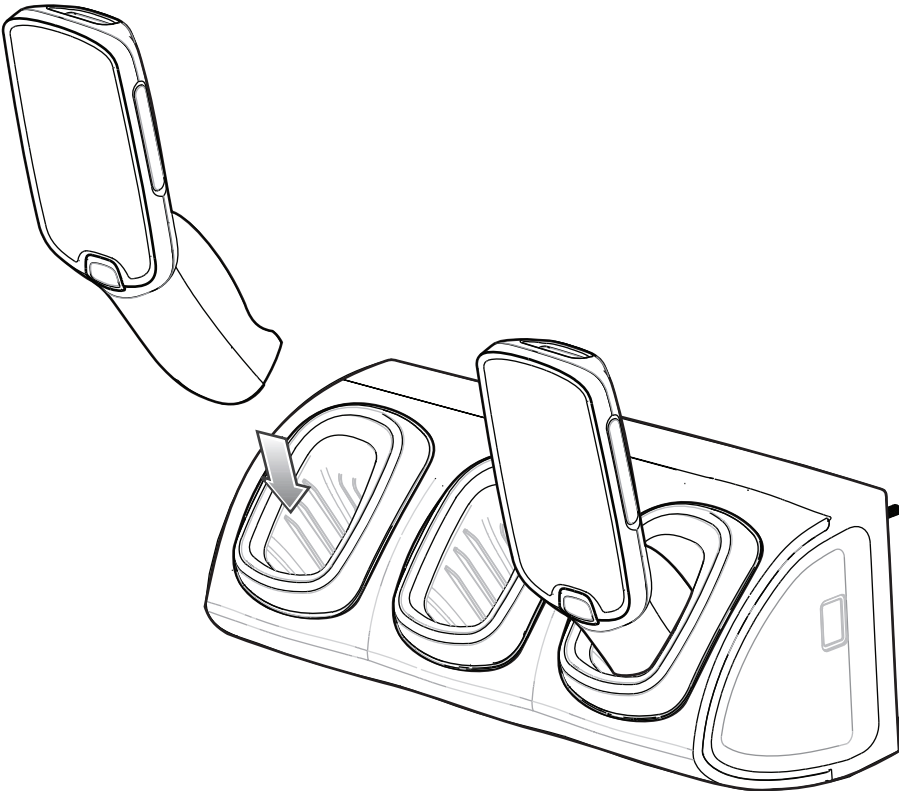
To charge the battery:

1. Ensure the cradle is connected to the appropriate power source.
2. Insert the PS20 into a cradle.

**Figure 3** Single Slot Cradle



**Figure 4** Three Slot Cradle



The battery charges 0 to 90% depending on the following conditions, measured at room temperature:

- When connected to a 1.0 cradle (normal charge mode), charge time is less than four hours.

- When connected to a 1.5 cradle (fast charge mode), charge time is less than three hours.





**NOTE** To charge the battery in the device, it is recommended to use a charging cradle instead of the USB cable, since it is more time efficient.

## LED Status Indicators

By default, the charging LED indication is disabled.

To enable the charging LED indication:

1. Swipe down from the status bar to open the quick access panel and then touch .
2. Touch **Display**.
3. Touch **Charging LED**. The option switch turns green.
4. Touch .

**Table 4** LED Status Indicators

LED State	Indication
<b>Imaging</b>	
Off	Normal operation or PS20 is turned off.
Red	Imaging in progress (Scan key is pressed).
Single Green Blink	Successful decode.
<b>Charging (PS20 docked in cradle)</b>	
Off	Power not applied to cradle. PS20 not inserted properly. Charging LED feature disabled.
Blinking Green	Charging.
Solid Green	Charging complete.
Blinking Red	Charging error, for example: <ul style="list-style-type: none"> <li>• Temperature is too low or too high.</li> <li>• Charging has gone on too long without completion (typically eight hours).</li> </ul>

## Installing the Battery

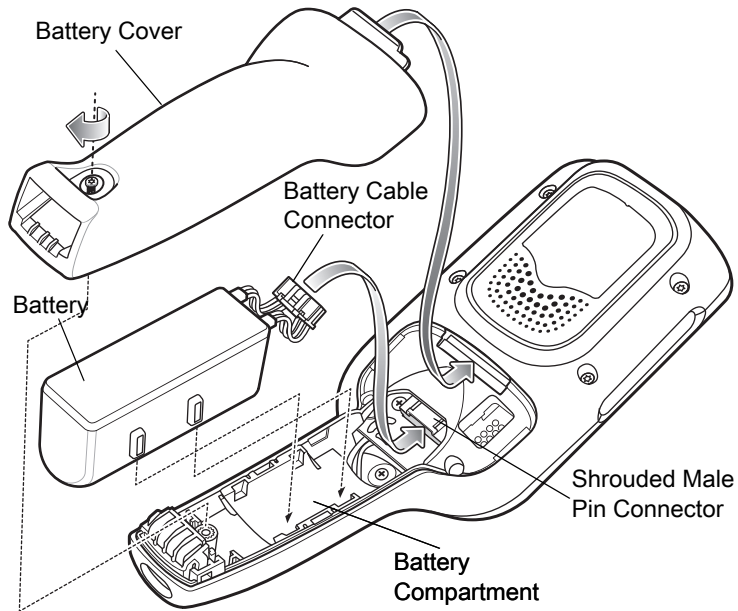
To install the battery:

1. Loosen the captive screw that secures the battery cover, using a Phillips (PH00) screwdriver.
2. Lift the battery cover from the handle.
3. Guide and press the battery cable connector into the shrouded male pin connector inside the battery compartment. The connector is designed to only fit one way.
4. Place the battery inside the battery compartment.




5. Place the battery cover onto the handle.
6. Secure the battery cover with the screw, using a Phillips (PH00) screwdriver.

**Figure 5** Installing the Battery



## Removing the Battery

To remove the battery:

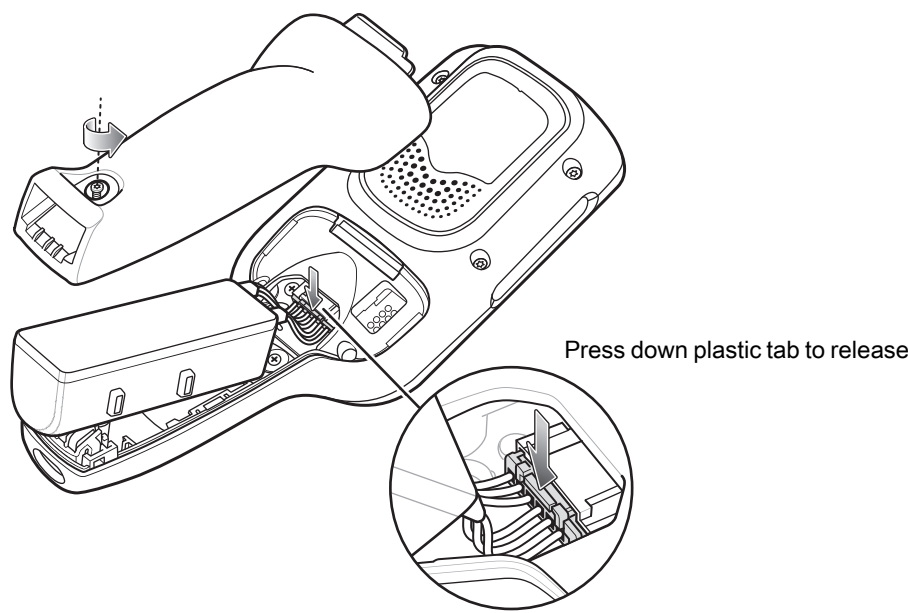
1. Touch and hold the soft power button  until the menu appears.
2. Touch **Power Off**.
3. Touch **OK**.



**CAUTION** The PS20 must be off before removing the battery. Failing to turn off the PS20 before removing the battery may damage the data stored on flash memory or corrupt the operating system files.

4. Loosen the captive screw that secures the battery cover, using a Phillips (PH00) screwdriver.
5. Lift the battery cover from the handle.
6. Inside the battery compartment, press down the plastic tab of the battery cable connector and slide it out of the shrouded male pin connector.
7. Remove the battery from the battery compartment.

**Figure 6** Remove the Battery



Compatibility

The table below displays compatibility between the PS20 and MC18 devices and accessories.

**Table 5** Compatibility

	PS20 Batteries	MC18 Batteries	MC18 Cradles
PS20	Yes	No	Yes
MC18	No	Yes	Yes

- PS20 PowerPrecision+ batteries are compatible with all PS20 devices and MC18 Single Slot and Three Slot cradles.
- PS20 PowerPrecision+ batteries are not compatible with MC18 devices.
- MC18 PowerPrecision+ batteries are not compatible with PS20 devices.

Battery Comparison

The table below displays a comparison of the PS20 batteries with the MC18 batteries.

**Table 6** Battery Comparison

Feature	MC18	PS20
Battery Type	PowerPrecision+	PowerPrecision+
Battery Capacity	2,725 mAh	3,500 mAh
Charging Mode	Standard and Fast	Standard and Fast

## Charging the PS20

Use one of the following accessories to charge the PS20.

**Table 7** Charging Cradles

Description	Part Number	Cables		
		DC Cable	Interconnect Cable	Extension Cable
Single Slot Cradle	CRD-MC18-1SLOT-01	CBL-DC-394A1-01 CBL-DC-393A1-02 CBL-DC-392A1-02	25-66431-01R 25-66430-01R	_____
High Density (HD) Three Slot Cradle (Locking)	CRD-MC18-3SLCKH-01	CBL-DC-394A1-01 CBL-DC-393A1-02 CBL-DC-392A1-02	25-66431-01R 25-66430-01R	CBL-MC18-EXINT1-01
High Density (HD) Three Slot Cradle (Non-Locking)	CRD-MC18-SLOTH-01	CBL-DC-394A1-01 CBL-DC-393A1-02 CBL-DC-392A1-02	25-66431-01R 25-66430-01R	CBL-MC18-EXINT1-01
Super High Density (HD) Three Slot Cradle (Locking)	CRD-MC18-3SLCKS-01	CBL-DC-394A1-01 CBL-DC-393A1-02 CBL-DC-392A1-02	25-66431-01R 25-66430-01R	CBL-MC18-EXINT1-01



**NOTE** Ensure that you follow the guidelines for battery safety described in the PS20 Product Reference Guide.

1. To charge the battery, connect the charging accessory to the appropriate power source.
2. Insert the PS20 into a cradle. The PS20 turns on and begins charging.

## Charging Temperature

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

## Releasing the PS20 from the Charging Cradles


Use one of the following methods to release the PS20 from the charging cradles:

- Software Release Using the Menu
- Software Release Using the Cradle Utility
- Manual Release using a Release Key.

## Software Release Using the Menu

The PS20 cradles contain a locking mechanism that locks the PS20 inside the cradle when docked. The PS20 releases from the cradle when a software command is received from the system.

To remove the PS20 from the cradle using the menu:

1. Touch and hold the soft power button  until the menu appears.
2. Touch **Cradle unlock**. The cradle unlocks the PS20.
3. Remove the PS20 from the cradle.

### Software Release Using the Cradle Utility

The PS20 cradles contain a locking mechanism that locks the PS20 inside the cradle when docked. The PS20 releases from the cradle when a software command is received from the system.

To remove the PS20 from the cradle using the Cradle Utility:

1. On the Home screen, swipe up from the bottom of the screen.
2. Touch **CradleUtility**.
3. Tap the **CRADLE UNLOCK** tab to set the cradle unlock information.
4. Touch **Unlock Cradle**.

### Manual Release Using a Release Key

The PS20 cradles contain a locking mechanism that locks the PS20 inside the cradle when docked. If the PS20 fails to unlock during normal operation, use a release key (KT-MC18-CKEY-20) to unlock the PS20.



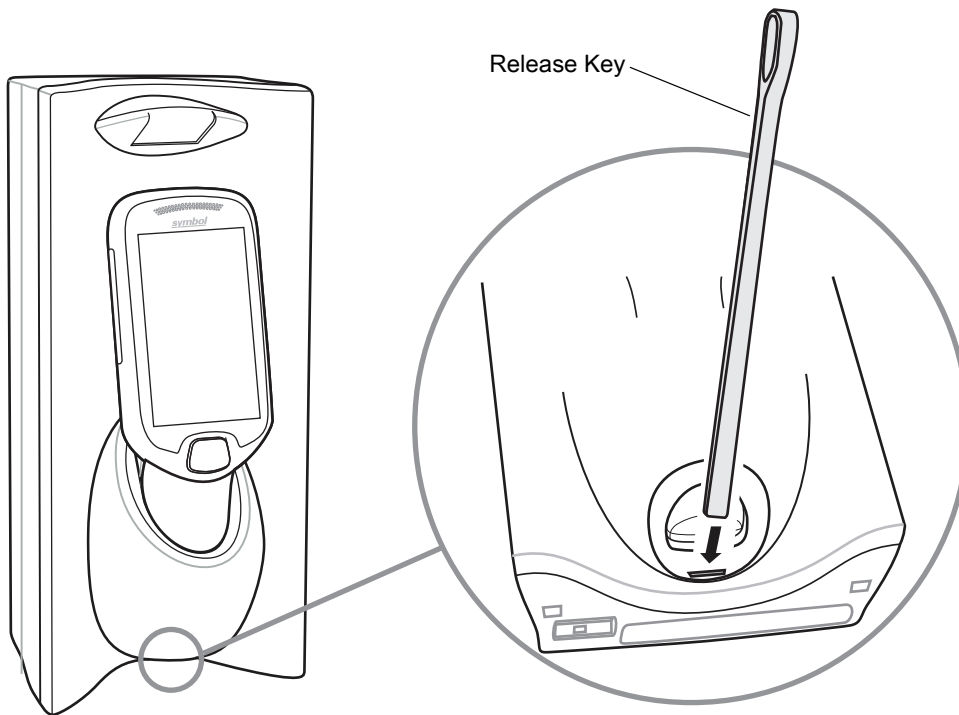
**CAUTION** Do not use any device to unlock the cradle other than the tools described below. Failure to comply could result in damage to the cradle and void the warranty.

### Manual Release of the PS20 from the Single Slot Cradle

To release a locked PS20 from a Single Slot Cradle:

1. Insert the release key into the slot located at the bottom side of the cradle.
2. While pressing the release key all the way into the slot, remove the PS20 from the cradle.

**Figure 7** Manual Release of PS20 from a Single Slot Cradle

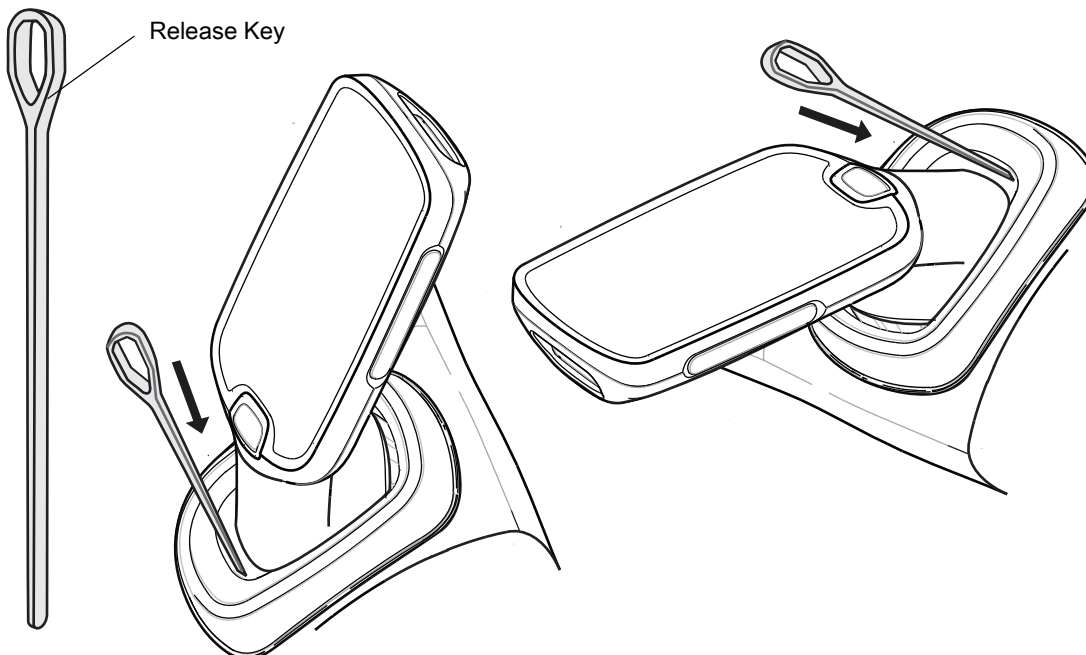


### Manual Release of the PS20 from the Three Slot Cradle

To release a locked PS20 from a Three Slot Cradle:

1. Insert the release key straight into the slot, to a point where the bend stops.
2. Hold the release key pressed inside the slot and remove the PS20 from the slot.

**Figure 8** Manual Release of the PS20 from a Three Slot Cradle



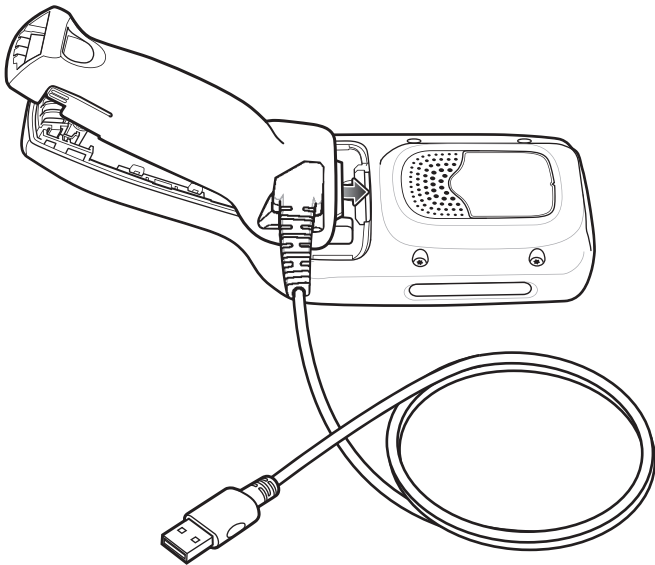
## Installing the USB Cable Battery Cover

Use the USB Cable Battery Cover to connect the device to a host computer.

To install the USB Cable Battery Cover:

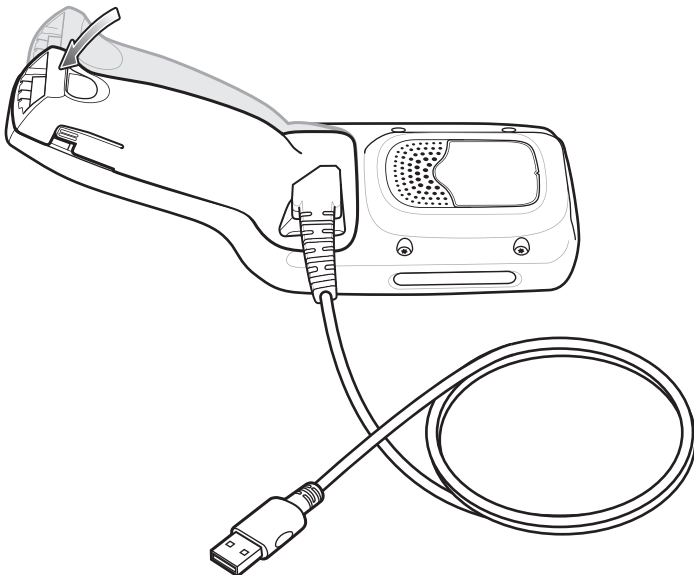
1. Remove the standard battery cover that comes installed on the device, if it is not already removed.
  - a. Loosen the captive screw that secures the battery cover, using a Phillips (PH00) screwdriver.
  - b. Lift the battery cover from the handle.
2. Slide the tab on the top of the USB Cable Battery Cover into the slot on the back of the device.

**Figure 9** Install USB Cable Battery Cover - Top



3. Push the bottom of the USB Cable Battery Cover down, until it snaps into place.

**Figure 10** Install USB Cable Battery Cover - Bottom



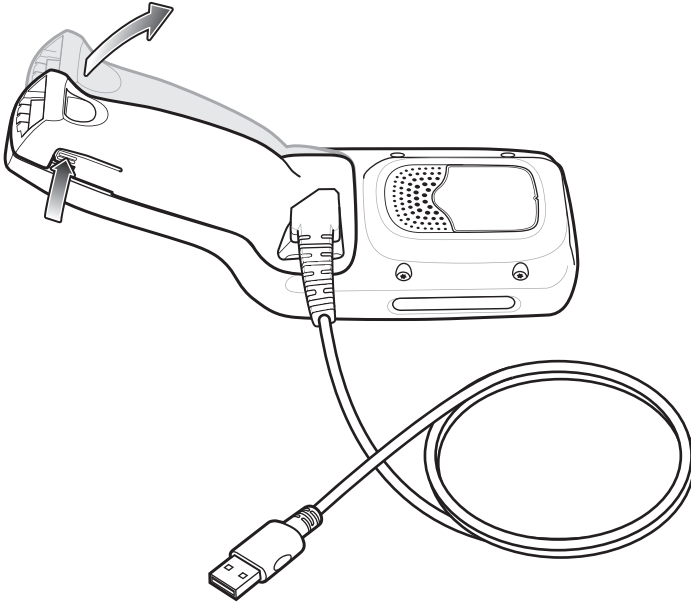
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## Removing the USB Cable Battery Cover

To remove the USB Cable Battery Cover:

1. Squeeze the left and right tabs in on the bottom of the USB Cable Battery Cover.
2. Lift the bottom of the USB Cable Battery Cover up.
3. Slide the top of the USB Cable Battery Cover out to remove.

**Figure 11** Remove USB Cable Batter Cover



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## Soft Holster

The soft holster provides a holder for the MC18/PS20 and allows for wearing the device on the hip, using a belt clip, or crossbody, using the detachable shoulder strap.

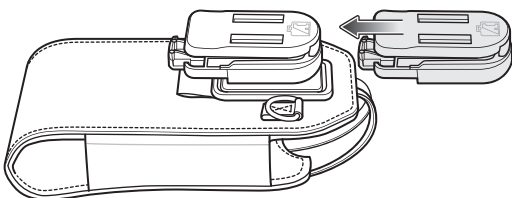
Always place the device with the correct orientation when using the soft holster with a belt clip or shoulder strap, as shown in the following diagrams.

### Using the Belt Clip

To attach the soft holster to a belt or waist band:

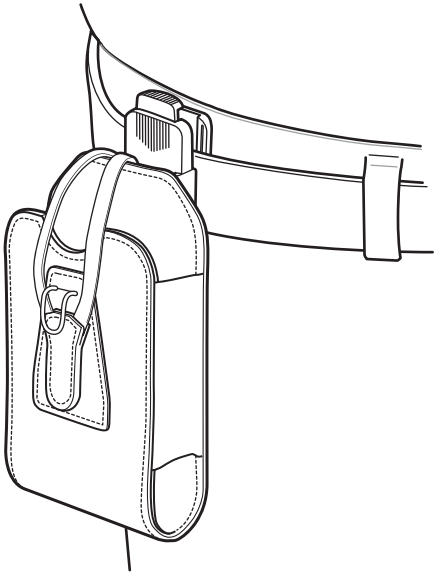
1. Secure the belt clip on the soft holster, if it is not already attached.

**Figure 12** Secure Belt Clip on Soft Holster



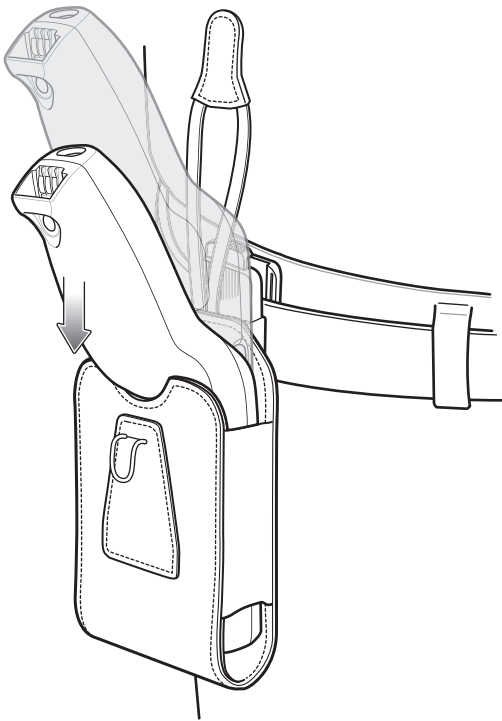
2. Secure the belt clip on the belt or waistband.

**Figure 13** Secure Belt Clip on Belt



3. To insert the device, slide the device into the soft holster, with the screen facing the user.

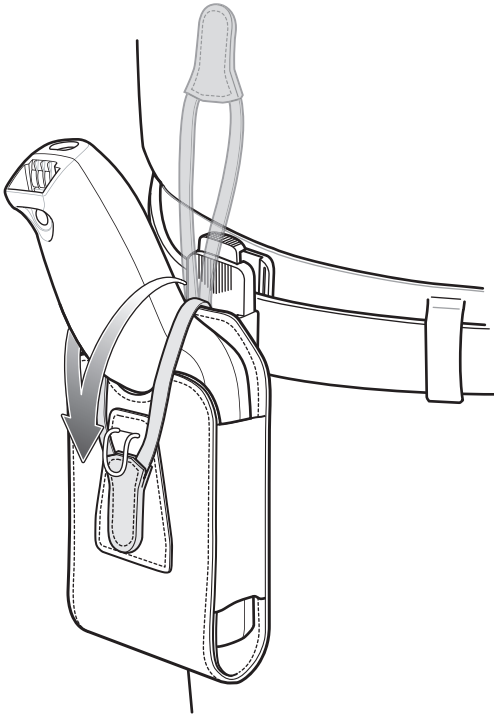
**Figure 14** Insert Device



4. Secure the device with the restraining strap and place over the device and hook to secure in place.



**Figure 15** Secure with Strap



5. To remove the device, lift the restraining strap to release. Lift the device out of the soft holster.

## Using the Shoulder Strap

To attach the soft holster to a shoulder strap:

1. Connect the clips on the shoulder strap to the rings on the soft holster, if not already attached.
2. Place the shoulder strap over your head and rest on your shoulder.

**Figure 16** Shoulder Strap



3. Lift the strap and insert the device into the soft holster, with the screen facing the user.
4. Secure the device with the restraining strap and place over the device and hook to secure in place.

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## Scanning

To scan a barcode:

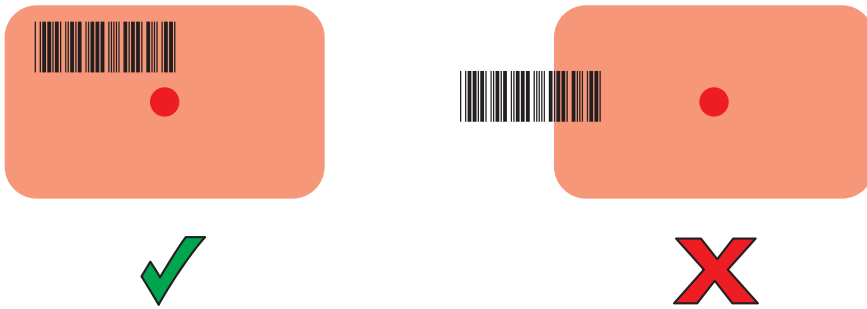
1. Launch a scanning application.
2. Press the Scan key and aim the device at a barcode.
3. Adjust the position of the device so that the:
  - Red aiming dot appears at the center of the barcode on devices with the SE4710 imager.
  - White LED appears around the barcode on devices with the SE2100 imager.

Ensure the barcode is within the area formed by the aiming pattern. On devices with the SE4710 imager, the aiming dot is used for increased visibility in bright lighting conditions.

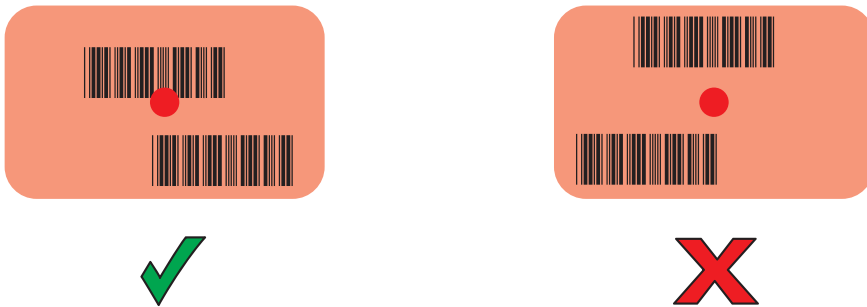
4. Press the Scan key.

The Status LED illuminates red. Upon successful decode, the Status LED changes from red to green and an audible beep sounds.

**Figure 17** SE4710 Imager Decode Mode



**Figure 18** SE4710 Imager Picklist Mode



**NOTE** Picklist Mode is only available on the PS20 with the SE4710 imager. When the PS20 is in Picklist Mode, the imager does not decode the barcode until the crosshair or aiming dot touches the barcode.

**Figure 19** SE2100 Imager Decode Mode



5. Release the Scan key.  
The barcode data displays on the screen.

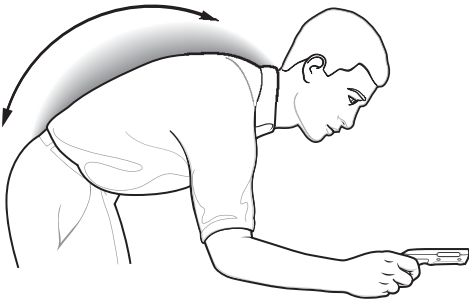
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## Ergonomic Considerations

Taking breaks and task rotation is recommended.

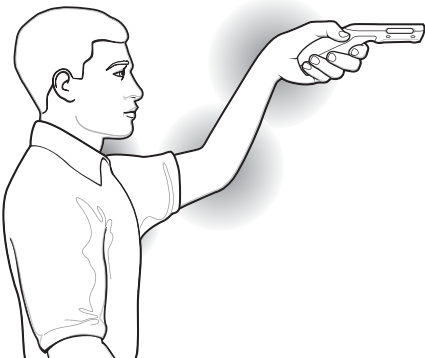
### Avoid Bending

**Figure 20** Avoid Bending



### Avoid Reaching

**Figure 21** Avoid Reaching



## Avoid Extreme Wrist Angles

**Figure 22** Avoid Extreme Wrist Angles

