WS501/WS501 RFID

Enterprise Wearable Solution

Quick Start Guide

ZEBRA

MN-005363-02EN Rev. A

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2026/01/20

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Model Number

This guide applies to model numbers:

- WS5012
- WS5012-R

Unpacking the Device

This topic provides instructions to safely unpack your device.

1. Carefully remove the device from the box.
2. Verify that the following items are in the box:
   - WS501 and 1300 mAh battery or WS501 RFID and 2400 mAh battery
   - Mounting options: finger mount, back-of-hand mount, or wrist mount
   - Regulatory Guide
3. Inspect the equipment for damage. If any equipment is missing or damaged, contact Zebra Support immediately.
4. Before using the device for the first time, remove the protective shipping films that cover the scan window, display, and camera window.

Device Features

The WS501 is a wearable computer that offers flexible hands-free operation for right or left-hand users.

The devices are available in two configurations:

- Scanner
- Scanner+RFID

Scanner Features

The Scanner is worn on the operator's index and middle fingers and utilizes a thumb-operated trigger.

Front View

Figure 1 Scanner

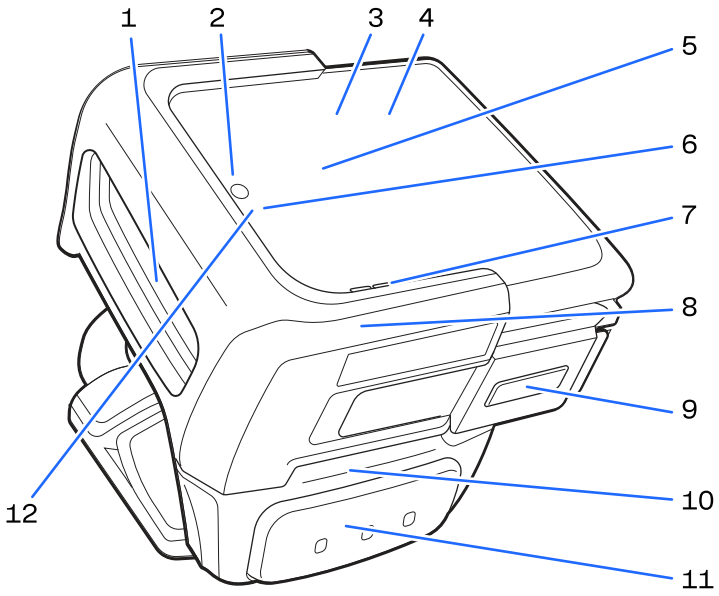
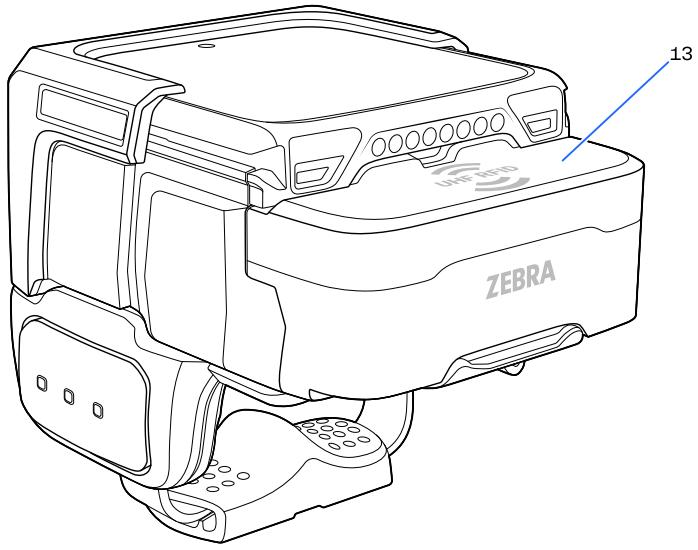


Figure 2 Scanner+RFID



1	Scanner window	Provides data capture using the imager.
2	Microphone	Use for voice communications or audio recordings.
3	Display	Displays all information needed to operate the device.
4	Ambient light sensor (under the display)	Determines ambient light for controlling display backlight intensity.
5	NFC antenna (under the display)	Provides communication with other NFC-enabled devices.
6	Charging LED	Indicates the battery charge state while charging.
7	Speaker	Use for voice communication or audio playback.
8	Deflector	Protects the device. **NOTE:** The deflector includes mandatory laser safety warning markings. Always fit the deflector when in use.
9	Left button	User programmable; defaults to **Back** button.
10	Trigger assembly	Consists of a finger strap and a scan trigger; can be removed and rotated to provide left-hand or right-hand use.
11	Scan trigger	Initiates barcode data capture when a scan-enabled application is active.
12	Notification LED	Indicates an application notification is received.
13	RFID module	Adds RFID tag reading capability.

Rear View

Figure 3 Scanner

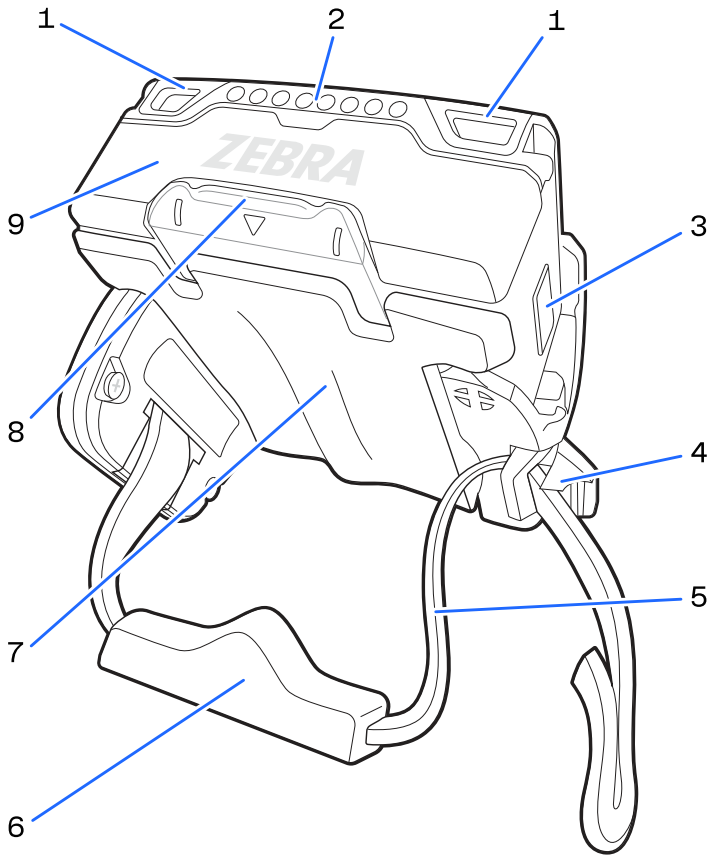
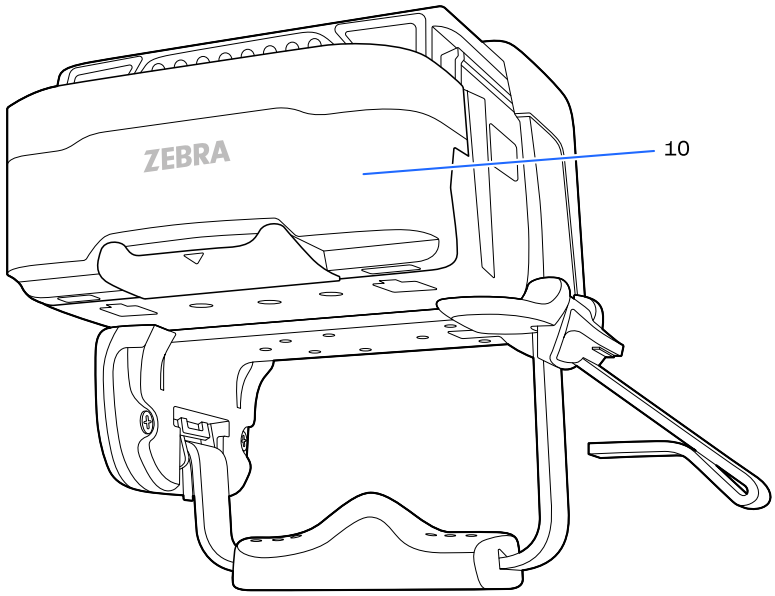


Figure 4 Scanner+RFID



1	Scan/Custom LED	Indicates data capture and custom applications-controlled status.
2	Interface connector	Provides USB host and client communication, and device charging via cables and accessories.
3	Right button	User programmable; defaults to **Home** button; press to power on the device.
4	Strap buckle	Tightens or loosens the finger strap on the fingers.
5	Finger strap	Use for securely holding the device on the fingers. Comes pre-installed on every WS501 finger mount.
6	Finger wedge	Cushions and stabilizes fingers within the strap.
7	Finger comfort pad	Cushions the fingers from the device.
8	Shell release tab	Press down to release the device from the shell.
9	Battery	High capacity 1300 mAh battery powers the WS501 device, and a 2400 mAh battery powers the WS501 RFID device.
10	RFID module	Adds RFID tag reading capability.

Setting Up the Device

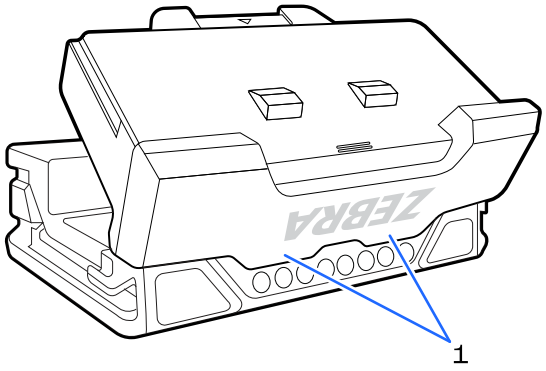
This section explains how to set up your device for a smooth and quick start.

1. Install the battery.
2. Charge the device using one of the charging accessories.
3. Power on the device.

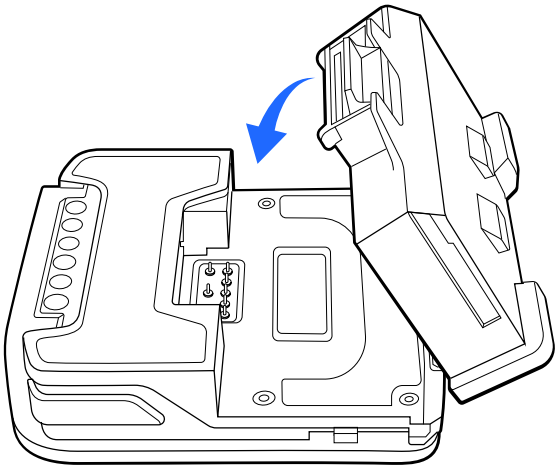
Installing the Battery in the WS501 Scanner

Install the 1300 mAh battery in the WS501 Scanner.

1. Align the battery so that the battery bottom engages the locking slots (1).



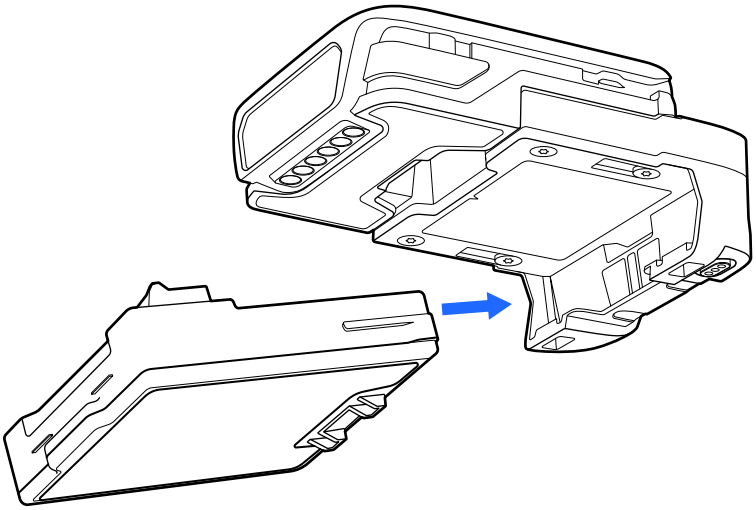
2. Press the battery down into the battery compartment until the battery release latches snap into place.



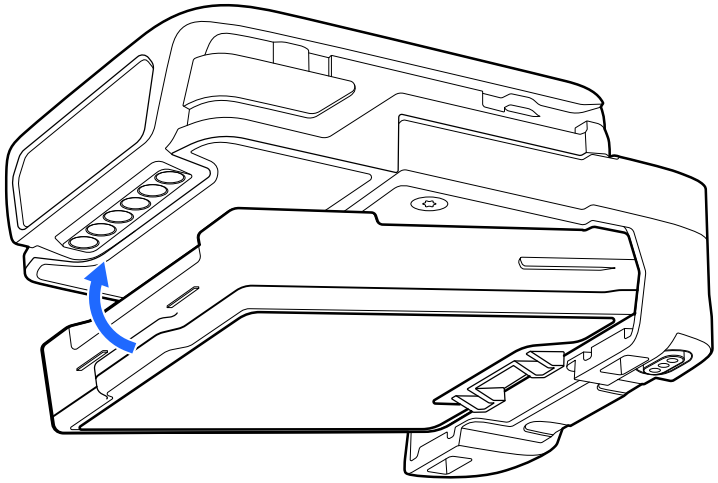
Installing the Battery in the WS501 RFID Scanner

Install the 2400 mAh battery into the WS501 RFID Scanner.

1. Align the battery so that the battery bottom engages the locking slots.



2. Press the battery into the battery compartment until it snaps into place.

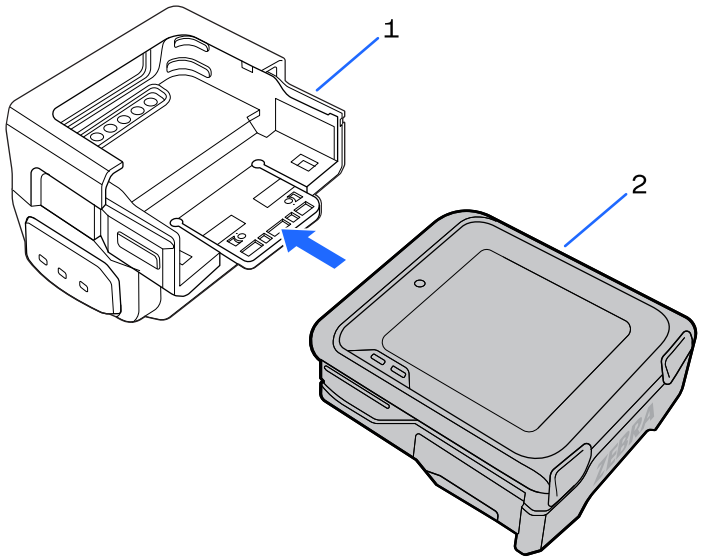


Installing the Trigger and Shell Assembly to the Scanner

Install the device to the trigger and shell assembly to utilize a thumb-operated trigger.

1. Ensure the touch panel of the device faces upward.
2. Slide the device (2) into the trigger and shell assembly (1) until the shell release latch snaps into place.

NOTE: Install the battery in the device before sliding the device into the shell.



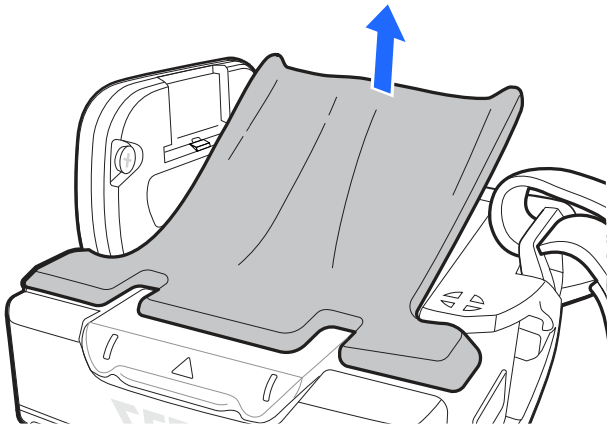
Changing the Trigger Position on the Finger Mount

The trigger assembly can be changed to accommodate left-hand or right-hand use.

Determine whether the WS501 is used on the right or left hand so that the Scan Trigger is positioned next to the thumb.

NOTE: The described procedures are applicable to both right-handed and left-handed users. As an example, the illustrations in this section show the steps to change the trigger position from right to left.

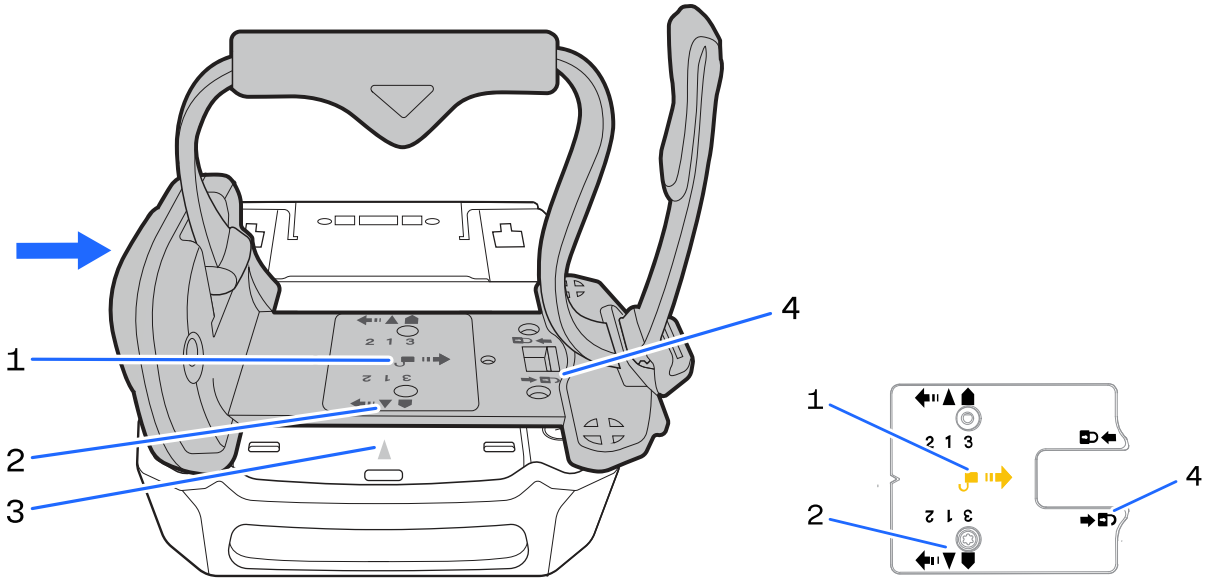
1. On the bottom of the device, lift the finger comfort pad from the front of the device, and then lift it from the rear.



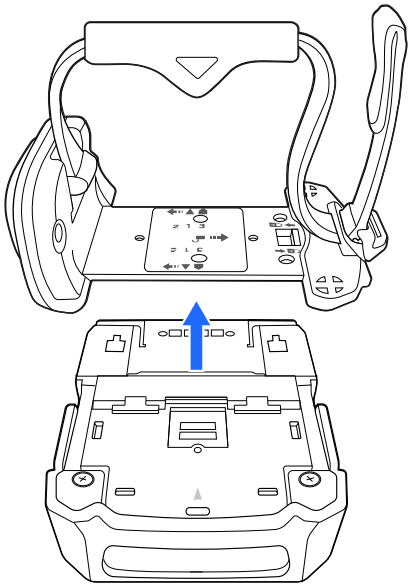
2. Follow the instructions on the back of the device to unmount the trigger assembly.

a) Unlock the trigger assembly by pushing the release latch to Unlock (4).

b) Slide the trigger assembly following the Unlock (1) direction until the black triangle (2) is aligned with the engraved triangle (3).

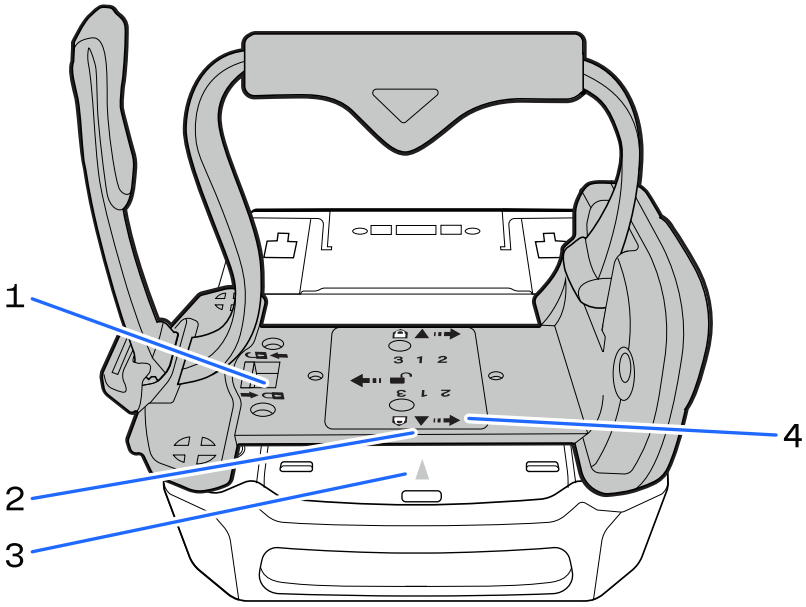


c) Lift the trigger assembly.



3. Position the trigger assembly so that the scan trigger is positioned next to the thumb.

4. When replacing the trigger assembly onto the back of the core in the shell, ensure the black triangle (2) is aligned with the engraved triangle (3).



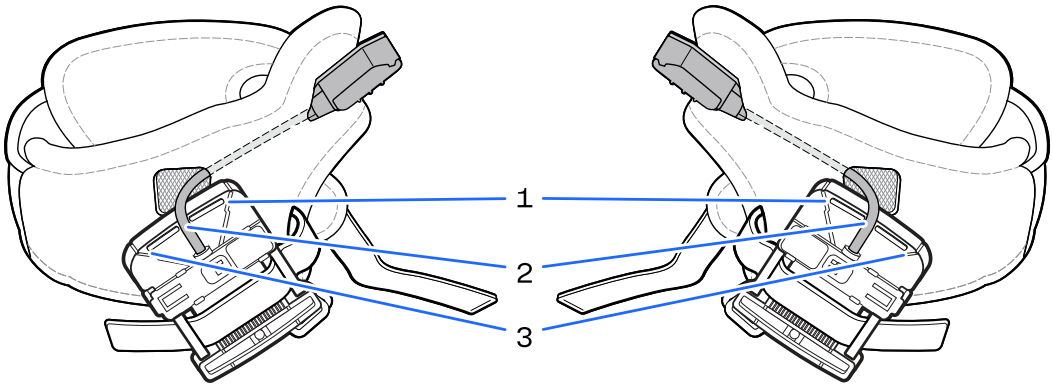
5. Slide the trigger assembly following the Lock (4) direction.
6. Lock the trigger assembly by pushing the latch to the Lock (1) position.
7. Reattach the finger comfort pad onto the bottom of the device.

Installing the Back of Hand Mount

Mount the Back of Hand (BOH) mount to the hand wrap, and then install the device in the shell onto the BOH mount.

Determine whether the device is used on the right or left hand.

NOTE: The described procedures are applicable to both right-handed and left-handed users. The steps in this section use a right-hand wrap as an example.



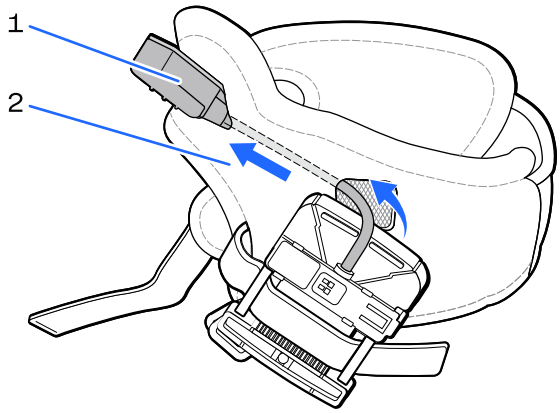
The BOH mount has three slots for you to position the trigger cable. Insert the trigger cable into one of the slots according to the size of your hand:

1	For large-handed users

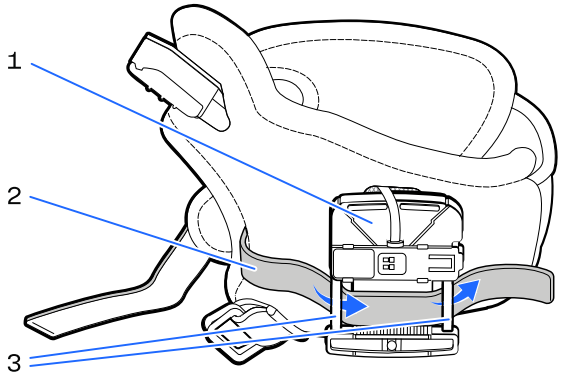
2	For medium-handed users
3	For small-handed users

1. To mount a BOH mount to the hand wrap:

a) Insert the trigger cable and button (1) through the trigger slot of the hand wrap (2).

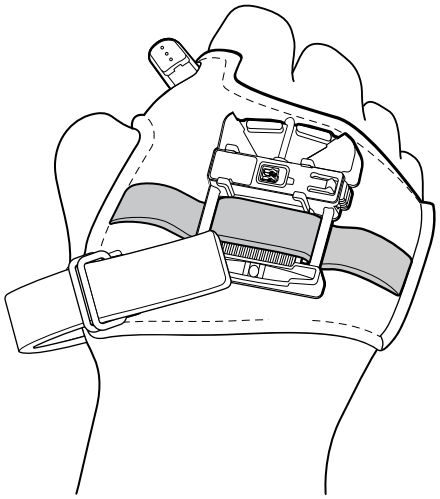


b) Insert the strap (2) through one of the strap slots (3) on the BOH mount (1).

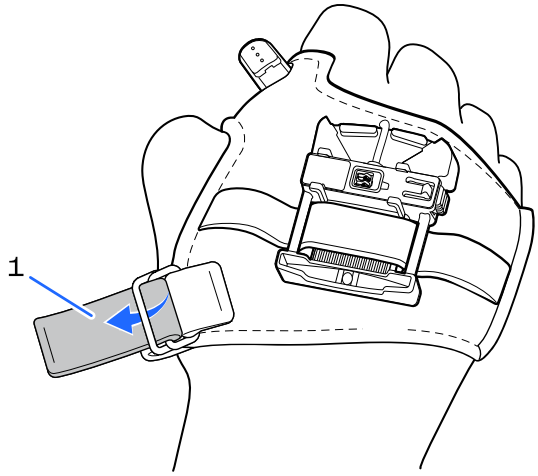


c) Insert the strap through the other slot of the mount, and then fasten it with the hook and loop fastener.

2. Position the hand wrap on the hand by sliding your hand through the hand wrap, with your thumb through the smaller opening and your remaining four fingers through the larger opening.



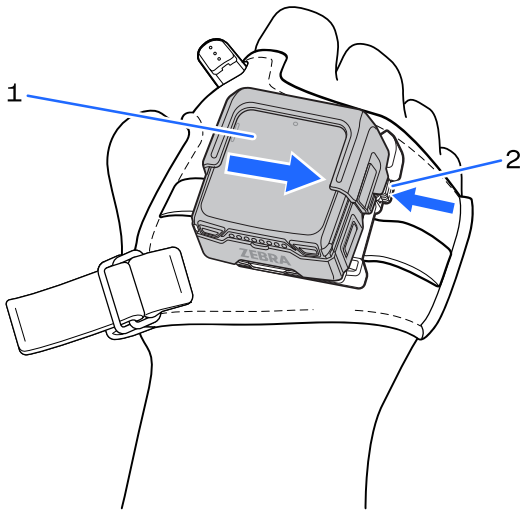
3. Slide the strap (1) through the buckle and secure the end of the strap in place with the hook and loop fastener.



Adjust the strap to a comfortable position to fit securely by tightening or loosening the strap.

4. Position the trigger button so that the button is easily accessible to your thumb, and then secure it on the hand wrap using the hook and loop fastener.

5. Slide the device (1) in the shell onto the BOH mount.Press the BOH mount button (2) when mounting.



Release the button (2) when the device snaps into place on the BOH mount.

6. Reposition the mount on the hand wrap to align the mount with the middle finger knuckle.
7. Tighten or loosen the hand wrap strap, if necessary.

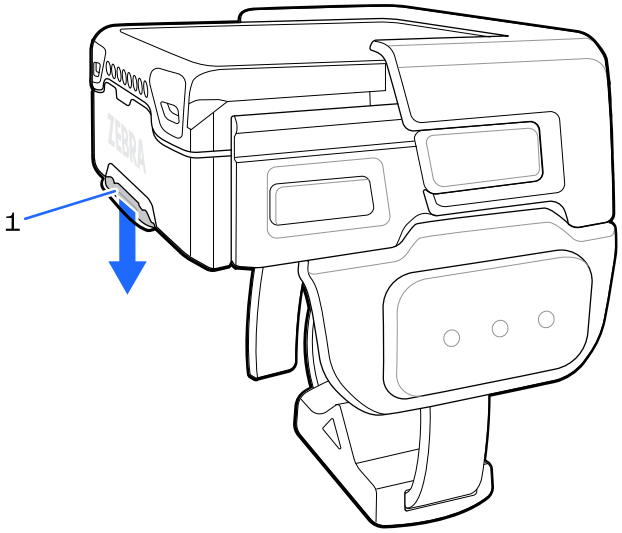
To unmount the device in the shell from the BOH mount, press the BOH mount button and slide the device in the shell away from the BOH mount button.

NOTE: Refer to the WS501/WS501 RFID Product Reference Guide for more information.

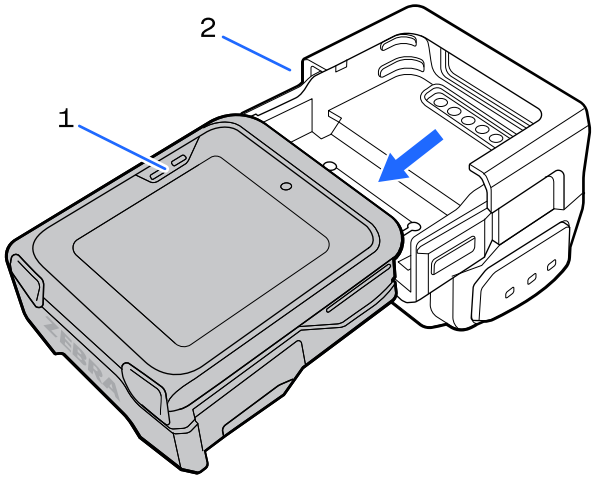
Removing the Trigger and Shell Assembly

Remove the device from the trigger and shell assembly when you need to change a battery.

1. Press down the shell release tab (1).



2. Slide the device (1) away from the trigger and shell assembly (2).



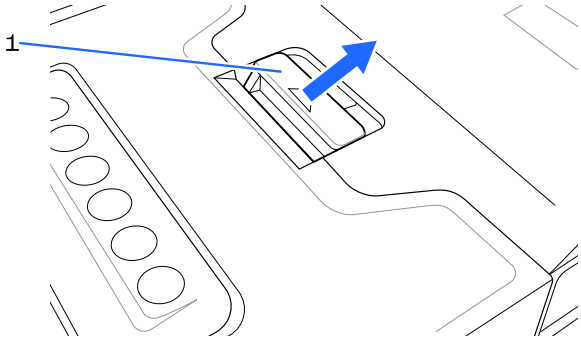
Replacing the WS501 Battery

The device supports Hot Swap mode, allowing you to replace the battery without powering off the device. When you remove the device from the shell, the display turns off and the device enters a low power state (indicated by a single red flash of the scan/custom LED). Replace the battery within two minutes to preserve memory persistence.

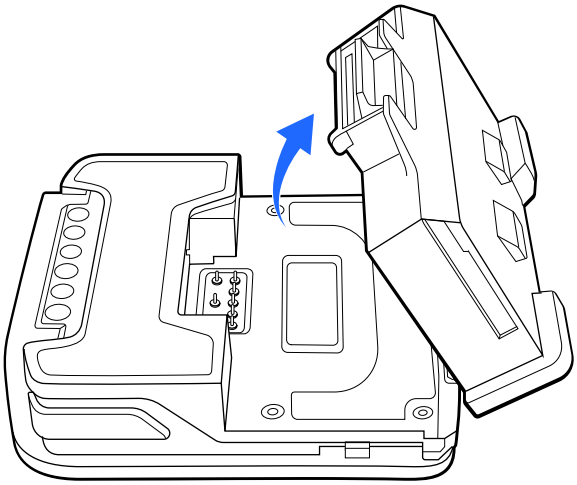
1. Remove the wearable assembly.

   For information about removing the finger trigger, see Removing the Trigger and Shell Assembly.

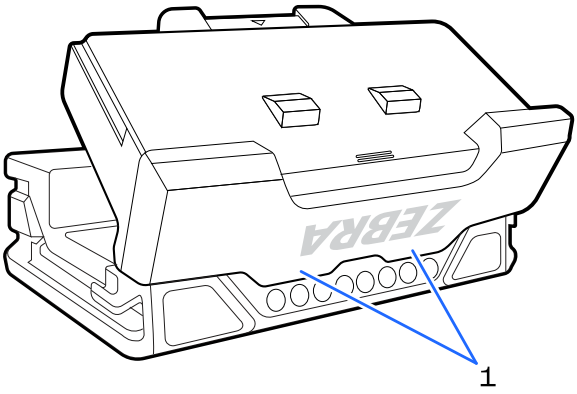
2. Rotate the device so that the touch screen is facing downward.
3. Push the battery release latch (1).



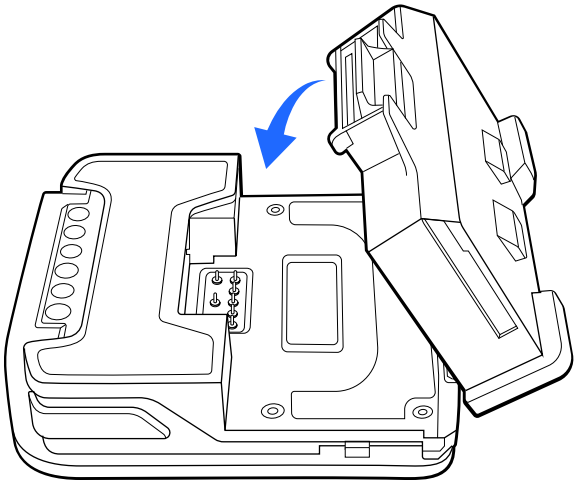
4. Lift the battery from the battery compartment.



5. Align the battery so that the battery bottom engages the locking slots (1).



6. Press the battery down into the battery compartment until the battery release latches snap into place.



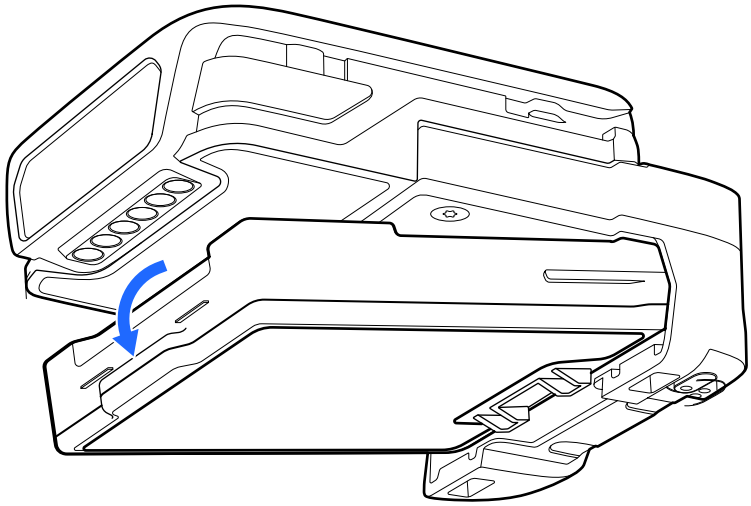
Removing the WS501 RFID Battery

This section describes how to remove the WS501 RFID battery.

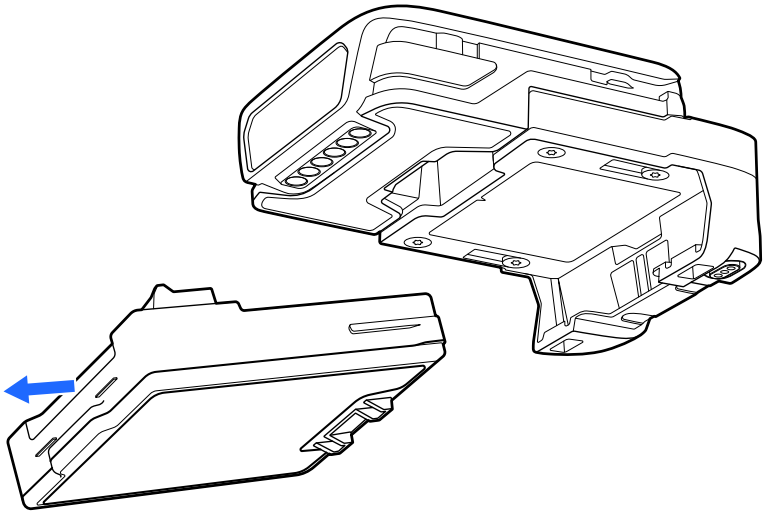
1. Remove the wearable assembly.

   For information about removing the finger trigger and wrist mount assemblies, see Removing the Trigger and Shell Assembly.

2. Rotate the battery within the support slot.



3. Lift the battery away from the battery compartment.



Device Navigation

This section explains how to move between screens and access device features.

Go Back

Swipe from the left or right edge of the screen to go back to the previous screen.

Figure 5 Swipe Left

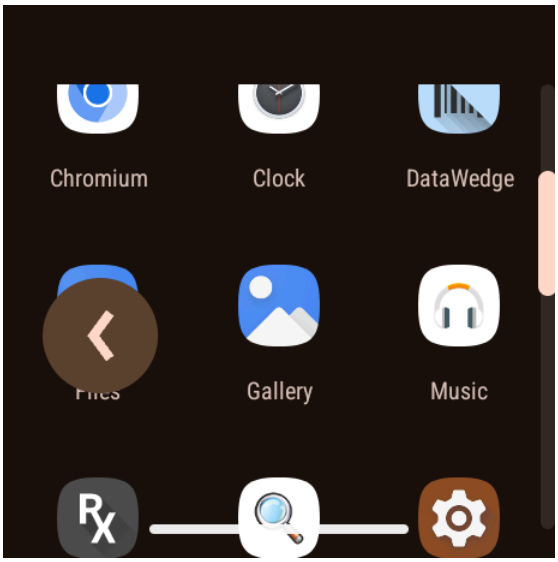
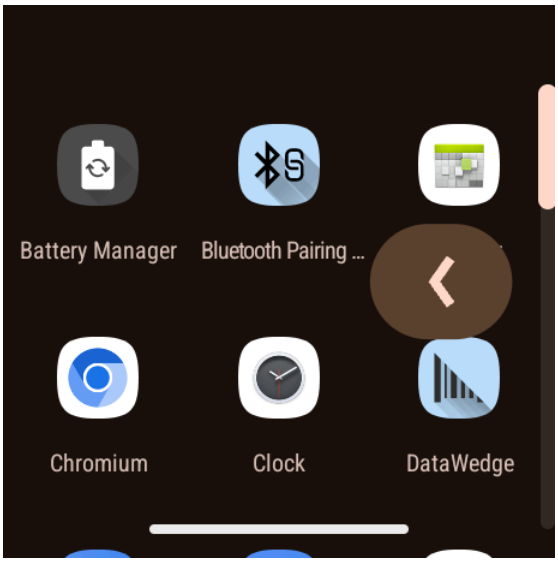


Figure 6 Swipe Right



Go to Home Screen

Swipe up from the bottom of the screen to go back to the Home Screen.

Figure 7 All Applications

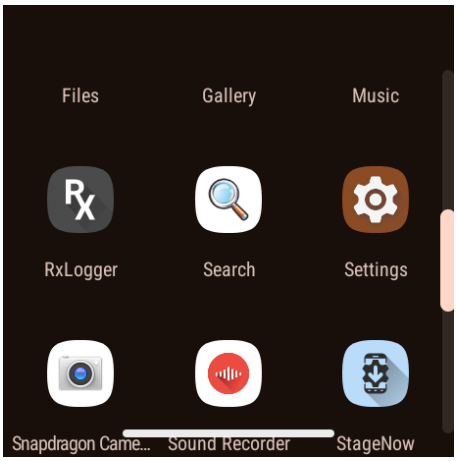
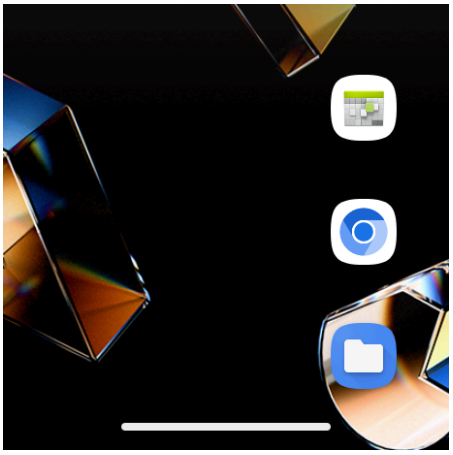


Figure 8 Home Screen



NOTE: By default, the home screen rotation is disabled.

Find All Applications

Swipe up from the center (1) of the screen to see all installed applications.

Figure 9 Home Screen

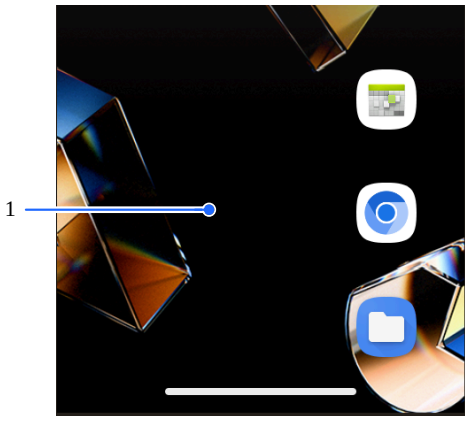
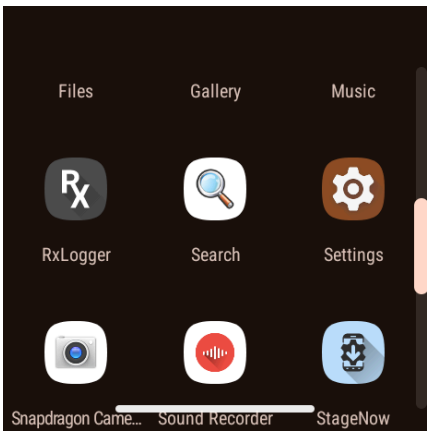


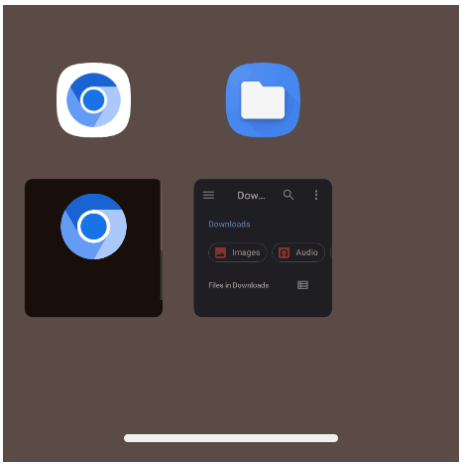
Figure 10 All Applications



Find All Open Applications

Swipe up from the bottom, hold, and then let go to see all open applications.

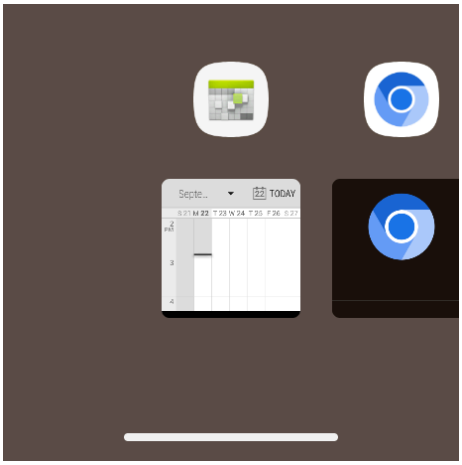
Figure 11 Open Applications



Switch Between Open Applications

At the very bottom of the screen, swipe from left to right.

Figure 12 Open Applications

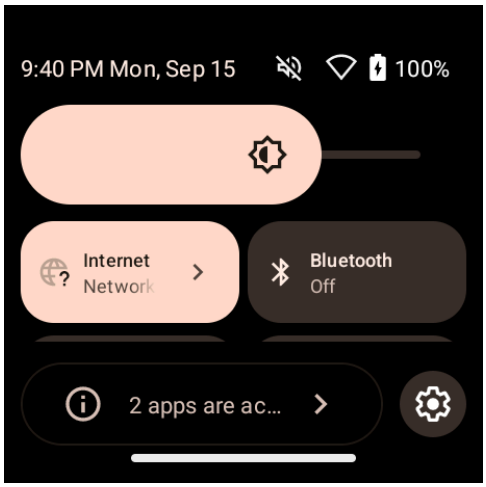


Opening the Quick Access Panel

Use the Quick Access panel to access frequently used settings (for example, Bluetooth, Screen Brightness, etc.)

- If the device is locked, swipe down once to access the Quick Access Panel.

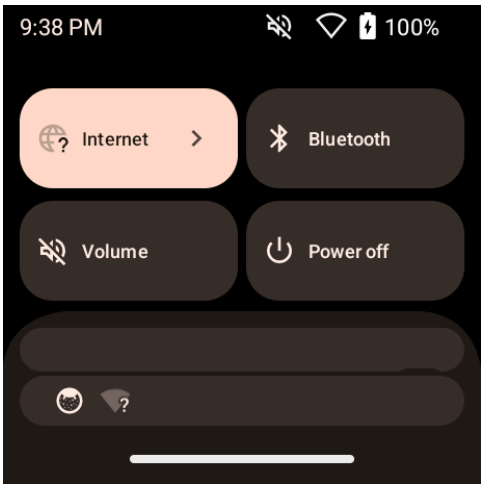
Figure 13 Quick Access Panel



.

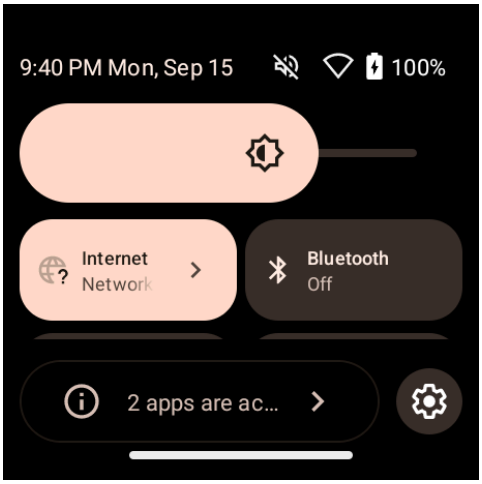
- If the device is unlocked:
  - Swipe down once until you see the Notification Panel.

Figure 14 Notification Panel



  - Swipe down a second time to access the Quick Access Panel.

Figure 15 Quick Access Panel



Charging the Device

Before using the device for the first time, connect it to an external power source and keep it connected until fully charged. The Charging Indicator LED turns green when the device is fully charged.

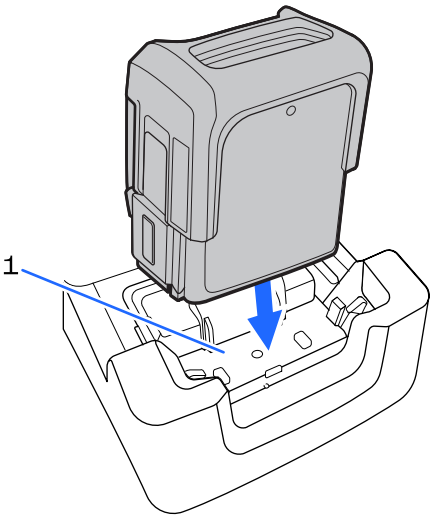
Charging the Main Battery

Charge the battery in a device with one of the charge-only cradles or the USB charge cable.

CAUTION: Ensure that you follow the guidelines for battery safety described in the WS501/WS501 RFID Product Reference Guide.

1. Connect the charger to a power source.

2. Insert the device into a cradle slot (1) or attach it to the USB charge cable.

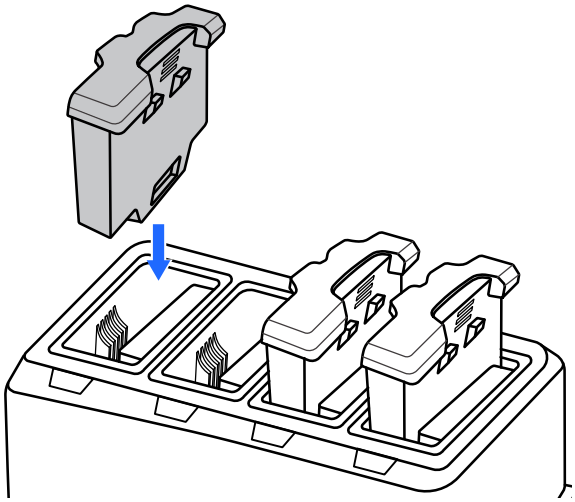


The device turns on and begins charging. The Notification LED on the touch panel displays amber while charging, then turns solid green when fully charged.

Charging the Spare Battery

Charge the spare battery with one of the battery chargers.

1. Connect the charger to a power source.
2. Insert the battery into a battery charging well.



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

   The spare battery charging LED on the battery charger indicates the status of the battery charging.

Charging Indicators

The spare battery charging LED on the cradle cup indicates the status of the spare battery charging.

Table 1 Spare Battery Charging LED Indicators

State	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	Healthy battery is charging.
Solid Green	Healthy 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	Unhealthy battery is charging or fully charged.

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 (for example, approximately +37°C (+98°F) the device or cradle may, for short periods, alternately enable and disable battery charging to maintain the battery at an acceptable temperature. The device and cradle indicate when charging is disabled due to abnormal temperatures via their LED.

Charging Accessories

Use one of the following accessories to charge the device and/or spare battery.

Table 2 Charging Accessories

Accessories	Part Number	Charging		Communication	
		Battery (In device)	Spare Battery	USB	Ethernet
PD 12W Power Supply	PWR-WUA5V12W0XX	Yes	Yes	No	No
WS501 and/or 1300 mAh Battery					
USB Charge Cable	CBL-WS5X-USB1-02	Yes	No	Yes	No
2-Slot Charge-Only Cradle	CRD-WS5X-2SRD-01	Yes	No	No	No
10-Slot Charge-Only Cradle	CRD-WS5X-10SRD-01	Yes	No	No	No
4-Slot Battery Charger	SAC-WS5X-4S13-01	No	Yes	No	No
20-Slot Battery Charger	SAC-WS5X-20S13-01	No	Yes	No	No

Table 2 Charging Accessories (Continued)

Accessories	Part Number	Charging		Communication	
		Battery (In device)	Spare Battery	USB	Ethernet
WS501 RFID and/or 2400 mAh Battery					
USB Charge Cable	BL-WS5X-USBA-01	Yes	No	Yes	No
2-Slot Charge-Only Cradle	CRD-WS5X-2SRD-01	Yes	No	No	No
10-Slot Charge-Only Cradle	CRD-WS5X-10SRD-01	Yes	No	No	No
4-Slot Battery Charger	SAC-WS5X-4S24-01	No	Yes	No	No
20-Slot Battery Charger	SAC-WS5X-20S24-01	No	Yes	No	No

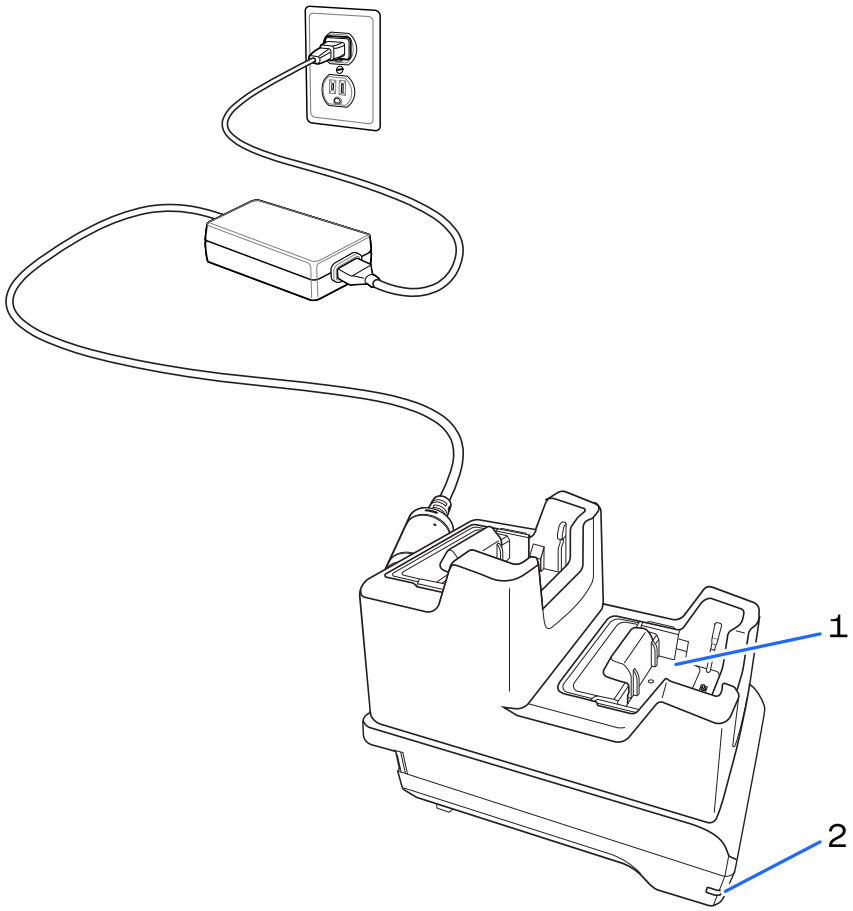
NOTE: For PWR-WUA5V12W0XX, replace XX as follows to get the right plug style based on region: AR (Argentina) • AU (Australia) • BR (Brazil) • CN (China) • EU (European Union) • GB (Great Britain) • IN (India) • KR (Korea) • LA (Latin America) • US (United States)

2-Slot Charge-Only Cradle

The 2-Slot Charge-Only Cradle provides 12 VDC nominal power for operating the device and charges the device's battery.

CAUTION: Ensure that you follow the guidelines for battery safety described in the WS501/WS501 RFID Product Reference Guide.

Figure 16 2-Slot Charge-Only Cradle



1	Device charging slot
2	Power LED

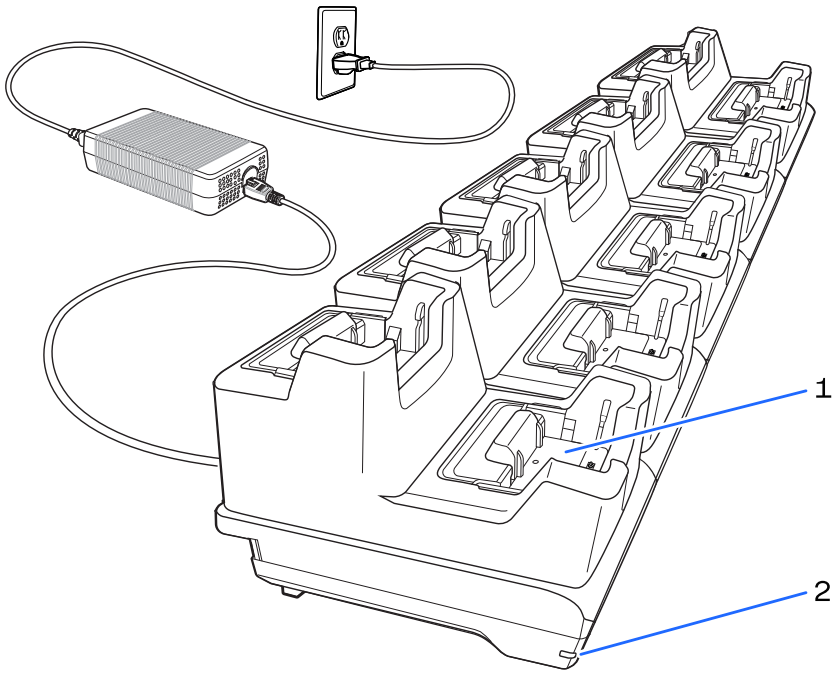
NOTE: Insert the device properly in the slot to charge it.

10-Slot Charge-Only Cradle

The 10-Slot Charge-Only Cradle provides 12 VDC nominal power for operating the device and charges the device's battery.

CAUTION: Ensure that you follow the guidelines for battery safety described in the WS501/ WS501 RFID Product Reference Guide.

Figure 17 10-Slot Charge-Only Cradle



1	Device charging slot
2	Power LED

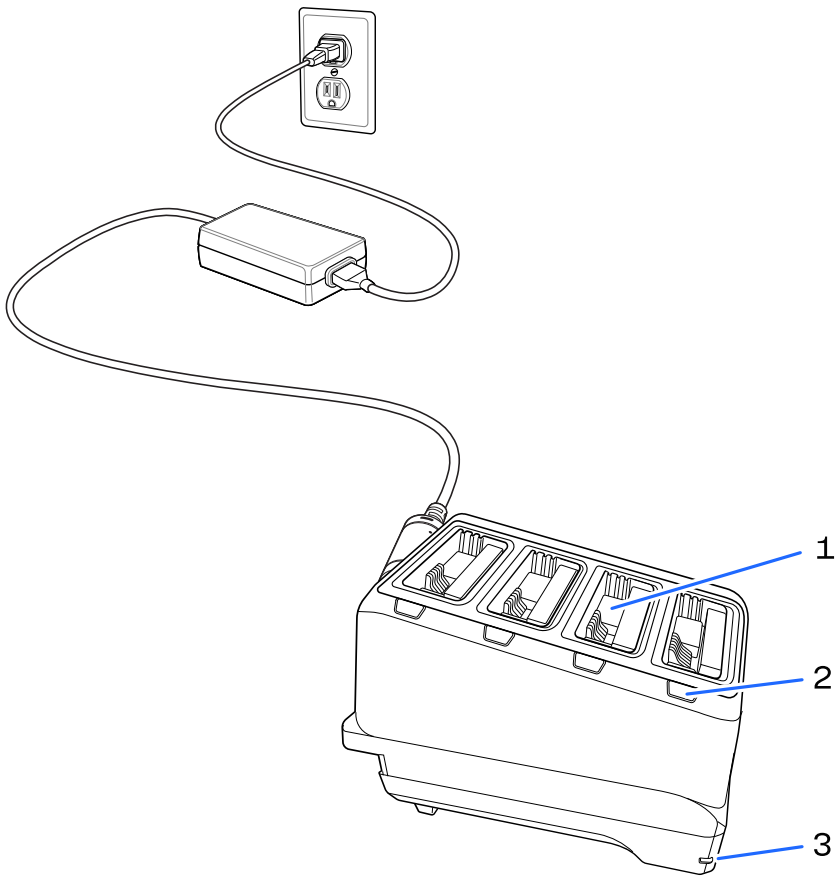
NOTE: Insert the device properly in the slot to charge it.

4-Slot Battery Charger

The 4-Slot Battery Charger charges up to four spare batteries.

CAUTION: Ensure that you follow the guidelines for battery safety described in the WS501/ WS501 RFID Product Reference Guide.

Figure 18 4-Slot Battery Charger



1	Battery slot
2	Battery charging LED
3	Power LED

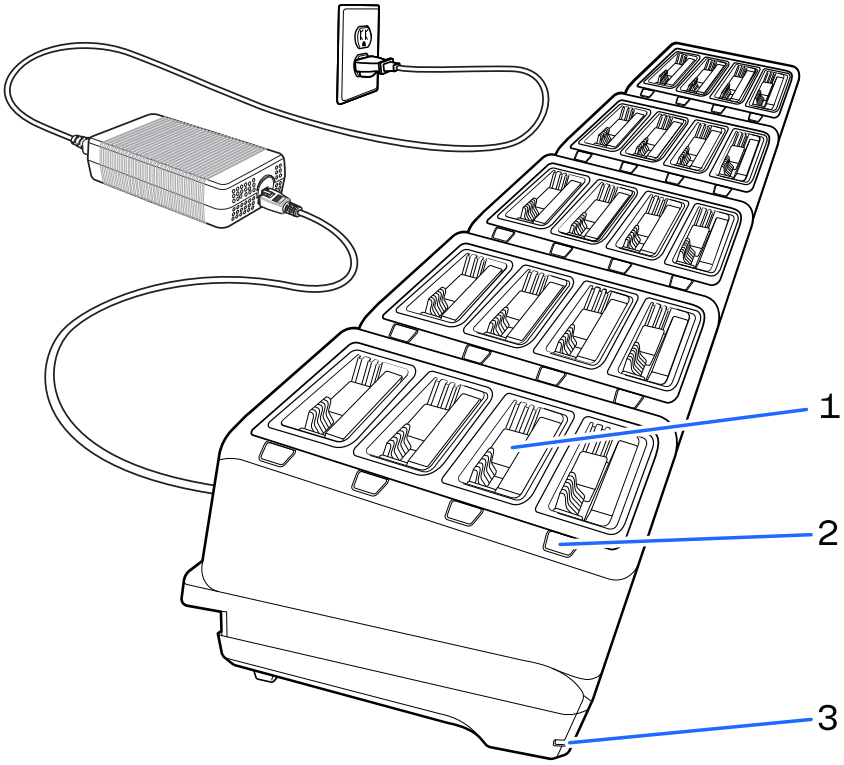
NOTE: Insert the battery properly in the slot to charge it.

20-Slot Battery Charger

The 20-Slot Battery Charger charges up to 20 spare batteries.

CAUTION: Ensure that you follow the guidelines for battery safety described in the WS501/WS501 RFID Product Reference Guide.

Figure 19 20-Slot Battery Charger



1	Battery slot
2	Battery charging LED
3	Power LED

NOTE: Insert the battery properly in the slot to charge it.

USB Charge Cable

The USB Charge Cable snaps onto the bottom of the device and is easily removed when not in use. The cable charges the device and allows the device to transfer data to a host computer.

Figure 20 Connecting to a Power Source

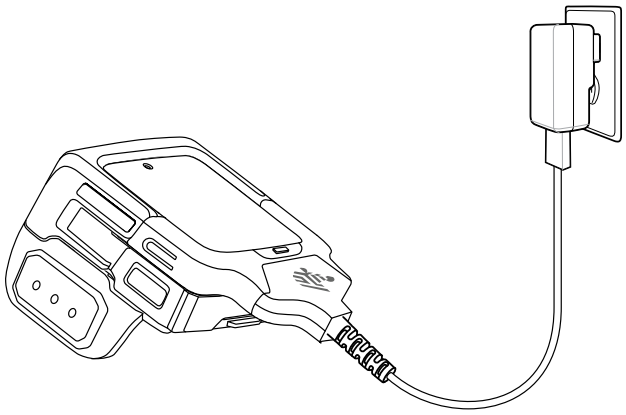
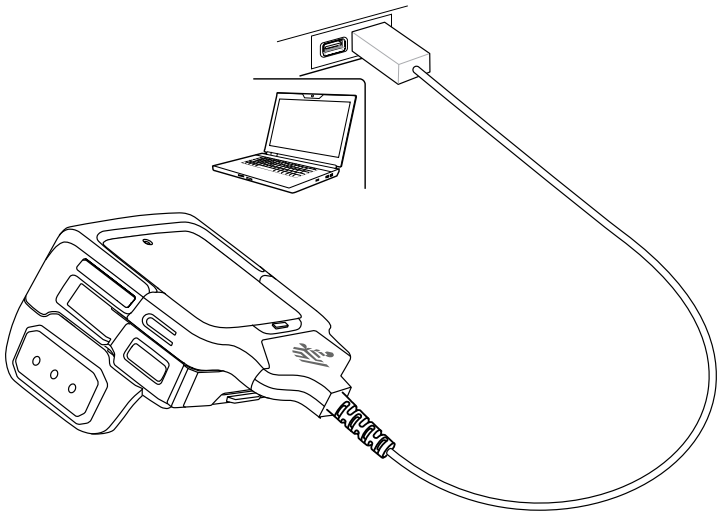


Figure 21 Connecting to a Computer



Maintaining the Device with the Screen Protector

A screen protector is applied to the device. Zebra recommends using a screen protector to minimize wear and tear. Screen protectors enhance the usability and durability of touchscreen displays. Benefits include:

- Protection from scratches and gouges.
- Durable touch surface with tactile feel.
- Abrasion and chemical resistance.
- Glare reduction.
- Keeping the device's screen looking new.
- Quick and easy installation.

Ergonomic Recommendations

To avoid or minimize risk of ergonomic injury, follow the ergonomic recommendations.

- Ensure users are trained in proper and secure mounting of the device on their fingers.
- Ensure that the finger comfort pad is in place and the strap buckle is used to properly secure the device to your fingers.
- Ensure that the device is mounted so that the display is oriented towards you.
- Maintain and clean wearable components such as straps and soft goods.
- Reduce or eliminate unnecessary repetitive motion and activation.
- Maintain a neutral posture.
- Reduce or eliminate elevated or raised arm and shoulder postures.
- Reduce or eliminate excessive force.
- Keep objects that are used frequently within easy reach.
- Perform tasks at correct heights.
- Reduce or eliminate direct pressure.
- Provide adequate clearance.
- Provide a suitable working environment.
- Improve working procedures using the device.