

TC22R

Integrated Handheld RFID Reader



ZEBRA

Quick Start Guide

2025/10/15

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Model Numbers

This guide applies to the following model number: TC2205

Unpacking the Device

When you receive the device, ensure that all the items are in the shipping container.

1. Carefully remove all protective material from the device and save the shipping container for later storage and shipping.
2. Verify that the following were received:
 - Device
 - PowerPrecision Lithium-ion battery
 - Regulatory Guide
3. Inspect the equipment for damage. If any equipment is missing or damaged, contact the Global Customer Support Center immediately.
4. Prior to using the device for the first time, remove the protective shipping film that covers the scan window, display, and camera window.

Features

This section lists all the features of the TC22R.

Figure 1 Front Right View

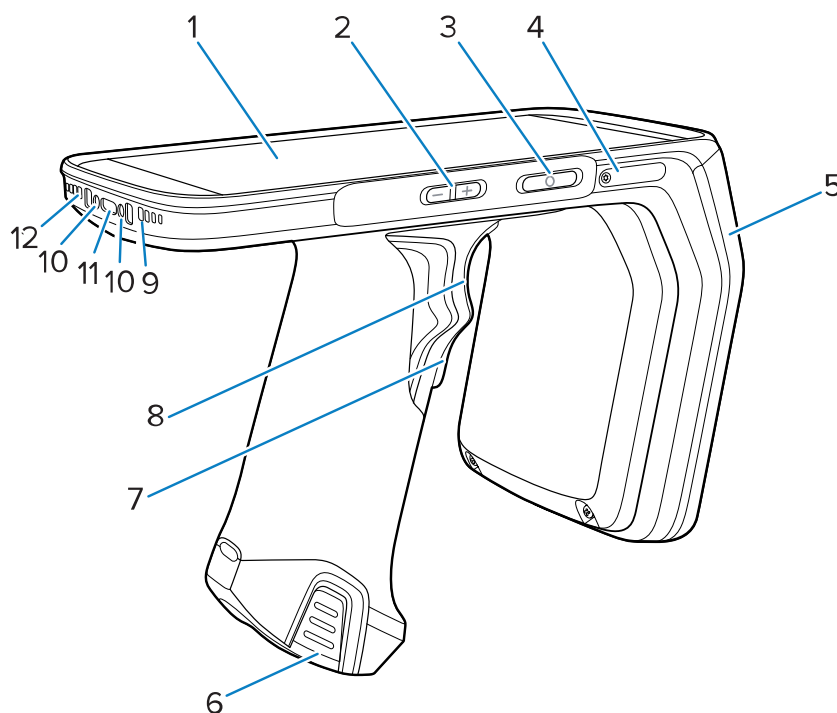
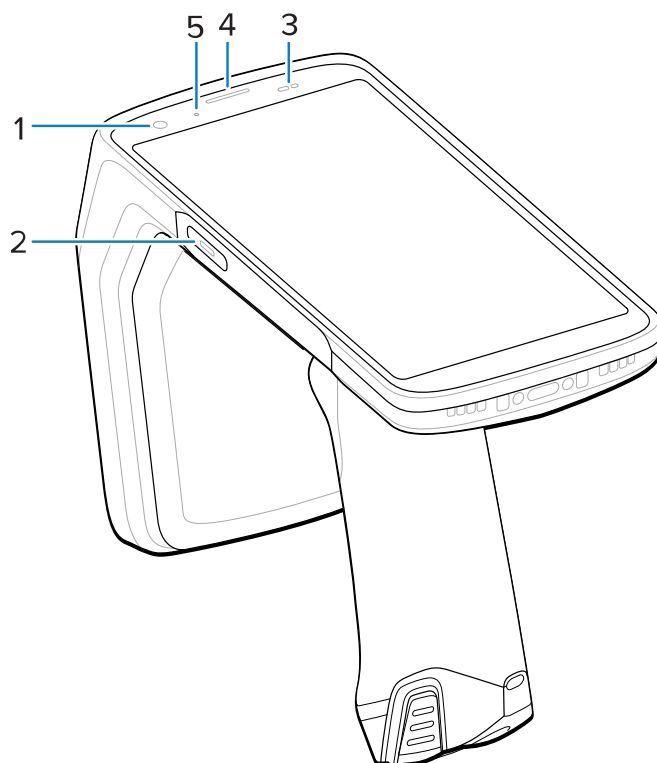


Table 1 Front Right View Features

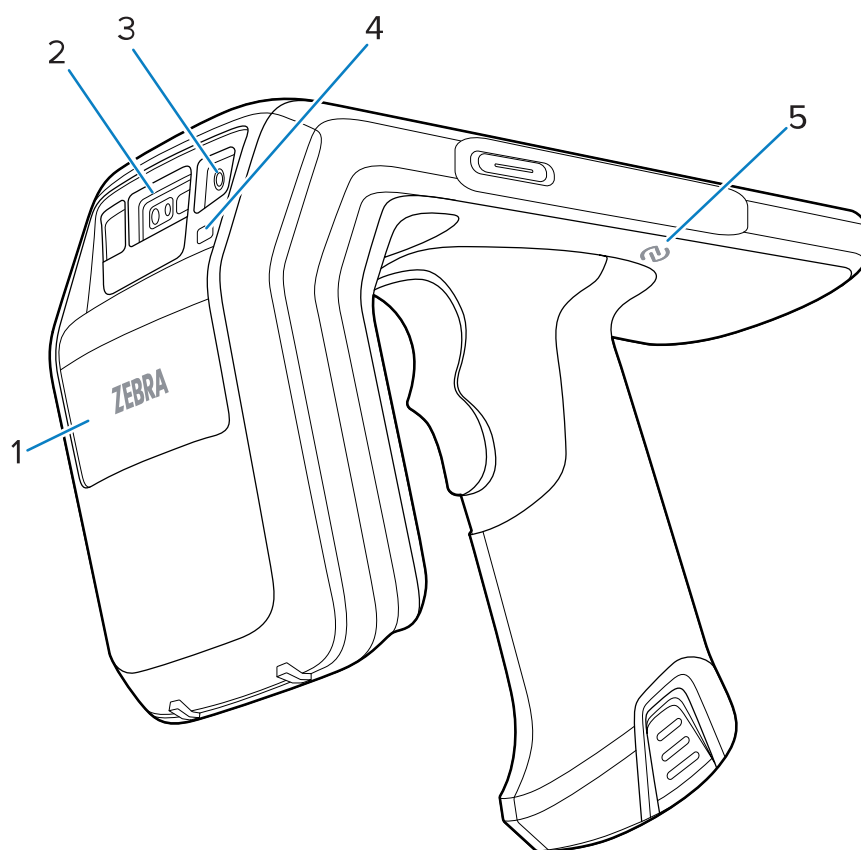
Number	Item	Description
1	Touch screen	Displays all information needed to operate the device.
2	Volume up/down button	Increase and decrease audio volume (programmable).
3	Power button	Turns the display on and off. Press and hold to reset the device or power it off.
4	Card holder	Holds a microSD card.
5	RFID antenna	Convert the RFID reader's signal into radio frequency waves that can be received by the RFID tag.
6	Battery release latches	Press to remove the battery.
7	Lower trigger	By default, for RFID.
8	Upper trigger	By default, for barcode scanning.
9	Speaker	Provides audio output for video and music playback. Provides audio in speakerphone mode.


Table 1 Front Right View Features (Continued)

Number	Item	Description
10	Cradle charging contacts	Provides device charging via cradles and accessories.
11	USB-C connector with plug	Provides USB host, client communications, and device charging via cables and accessories.
12	Microphone	Use for voice input.

Figure 2 Front Left View**Table 2** Front Left View Features

Number	Item	Description
1	Front camera	Takes photos and videos (available on some models).
2	Programmable button	This button is typically used for barcode scanning.
3	Light/proximity sensor	Determines ambient light for controlling display backlight intensity and proximity for turning off the display when in handset mode.
4	Data capture LED	Indicates data capture status.
5	Charging/notification LED	Indicates battery charging status while charging and application-generated notifications.

Figure 3 Side and Bottom View**Table 3** Side and Bottom View Features

Number	Item	Description
1	Label placement	Allows for customer branding if desired.  NOTE: For assistance with rebranding, please contact customer support at zebra.com/support .
2	Scanner exit window	Provides data capture using the imager.
3	Forward-facing camera	Takes photos and videos.
4	Camera flash	Provides illumination for the camera and operates as a flashlight.
5	NFC	Provides communication with other NFC-enabled devices.

Setting Up the Device

Set up the device before using it for the first time.

1. Install the battery.
2. Install a micro secure digital (SD) card (optional).
3. Charge the device.

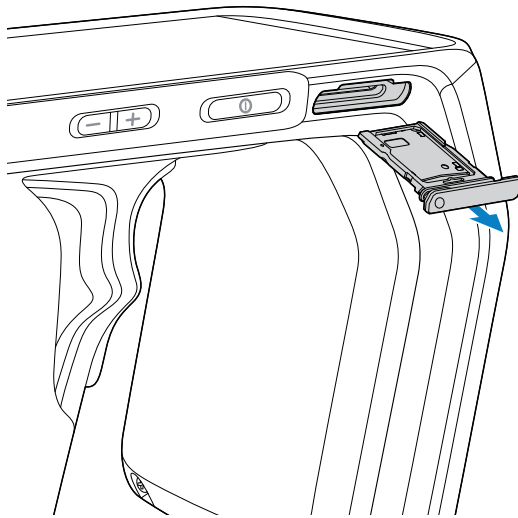
Installing a microSD Card

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

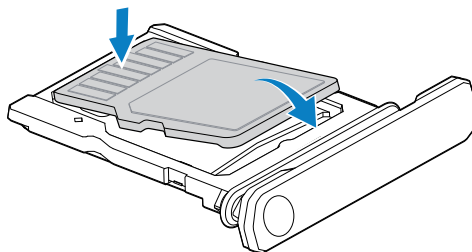


CAUTION: Follow proper electrostatic discharge (ESD) precautions to avoid damaging the microSD card. Proper ESD precautions include but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

1. Pull the card holder out of the device.

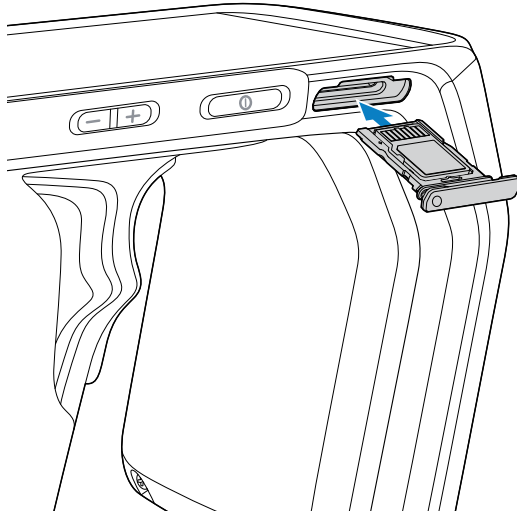


2. Place the microSD card, contact end first, with contacts facing up, into the card holder, then rotate the microSD card down.



3. Press the card down into the cardholder and ensure that it seats properly.

4. Re-install the cardholder.



Installing the Battery

This section describes how to install the battery into the device.

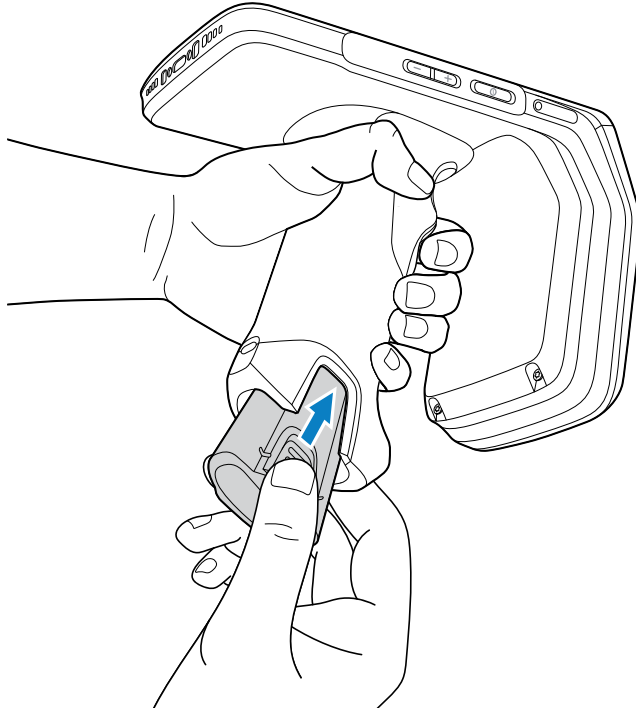


NOTE: User modification of the device, particularly in the battery well, such as labels, asset tags, engravings, stickers, etc., may compromise the intended performance of the device or accessories. Performance levels such as sealing (Ingress Protection (IP)), impact performance (drop and tumble), functionality, temperature resistance, etc. could be affected. DO NOT put labels, asset tags, engravings, stickers, etc., in the battery well.

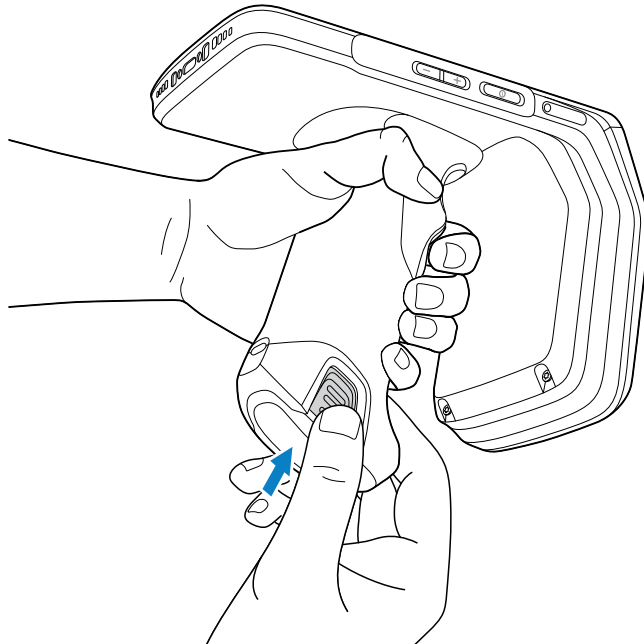


NOTE: The battery is keyed to ensure correct insertion. The notch on the battery is located on the back of the device.

1. Align the battery with the notch facing the back of the device, and slide the battery into the handle of the device.



2. Push the battery up into the handle until the battery release latches snap into place.



Charging the Device

To achieve optimal charging results, use only Zebra charging accessories and batteries. Charge batteries at room temperature with the device in Sleep mode.

The device goes into Sleep mode when you press Power or after a period of inactivity.

A battery charges from fully depleted to 90% in approximately 3 hours and 30 minutes. In many cases, a 90% charge provides enough charge for daily use. Depending on the usage profile, a full 100% charge may last for approximately 14 hours of use.

The device or accessory always performs battery charging in a safe and intelligent manner and indicates when charging is disabled due to abnormal temperatures via its LED, and a notification appears on the device display.

Temperature	Battery Charging Behavior
0 to 40°C (32 to 104°F)	Optimal charging range.
0 to 20°C (32 to 68°F)	Charging slows to optimize the JEITA requirements of the cell.
Below 0°C (32°F) / above 40°C (104°F)	Charging stops.
Above 55°C (131°F)	The device shuts down.

Battery Charging

Before using the device for the first time, charge the battery until the green Charging/Notification light-emitting diode (LED) remains lit. Use a cable or a cradle with the appropriate power supply to charge the device.

The compatible battery specification for the product is TC22R 7000 mAh PowerPrecision Plus Li-Ion Battery, with part numbers BTRY-RFD49-70MA1-01 worldwide and BTRY-RFD49-70MA1-IN in India.

The device's Charging/Notification LED indicates the battery charging status. The battery typically charges from 5% to 95% in approximately 4 hours.



NOTE: Charge batteries at room temperature with the device in Sleep mode.

Table 4 Charging/Notification LED Charging Indicators

State	Indication
Off	The device is not charging. It is incorrectly inserted in the cradle or connected to a power source, and the charger/cradle is not powered.
Slow blinking amber (1 blink every 4 seconds)	The device is charging.
Slow blinking red (1 blink every 4 seconds)	The device is charging, but the battery is at the end of its useful life.
Solid green	Charging complete.
Solid red	Charging is complete, but the battery is at the end of its useful life.

Table 4 Charging/Notification LED Charging Indicators (Continued)

State	Indication
Fast blinking amber (2 blinks/second)	Charging error, for example: <ul style="list-style-type: none"> • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Fast blinking red (2 blinks/second)	Charging error, but the battery is at the end of its useful life, for example: <ul style="list-style-type: none"> • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).

Battery Charging Indicators

The LEDs on the 4-Slot Battery Charger indicate the status of the battery charging.

The battery charges from fully depleted to 90% in less than 4 hours.

LED	Indication
Solid amber	The battery is charging.
Solid green	The battery charging is complete.
Solid red	The battery is charging, and the battery is at the end of its useful life. Charging is complete, and the battery is at the end of its useful life.
Fast blinking red (2 blinks/second)	Error in charging; check the placement of the battery, and the battery is at the end of its useful life.
Off	No battery in the slot. The battery is not placed in the slot correctly. The cradle is not powered.

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 safely and intelligently. At higher temperatures (for example, approximately +37°C / +98°F), the device or cradle may, for small periods, alternately enable and disable battery charging to keep the battery at acceptable temperatures. 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 battery.

Charging and Communication

Description	Part Number	Charging		Communication	
		Battery (In device)	Spare Battery	USB	Ethernet
1-Slot Charge-Only Cradle	CRD-TC2R-BS1CG-01	Yes	No	No	No
4-Slot Battery Charger	SAC-TC8X-4SCHG-01	Yes	Yes	No	No
4-Slot Charge-Only Cradle	CRD-TC2R-BS4CG-01	Yes	No	No	No
4-Slot Ethernet Cradle	CRD-TC2R-SE4ET-01	Yes	No	No	Yes
USB Communication and Charge Cable	CBL-TC5X-USBC2A-01	Yes	No	Yes	No
USB-C Communication and Charge Cable	CBL-EC5X-USBC3A-01	Yes	No	Yes	No

1-Slot Charge-Only Cradle

The 1-Slot Charge-Only Cradle provides power to the device.

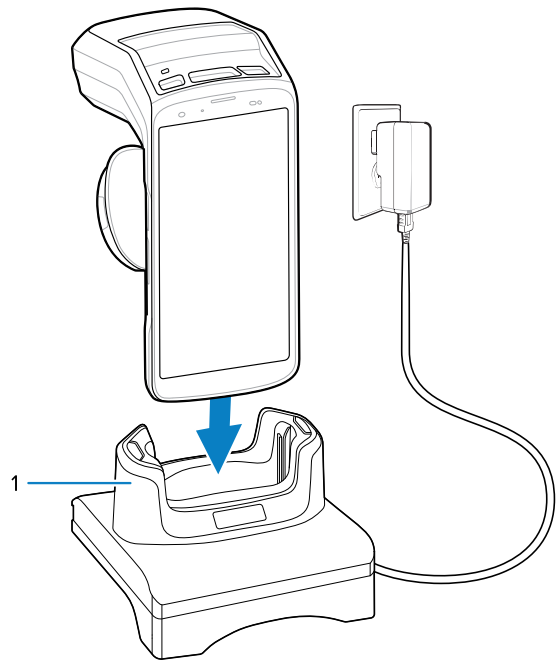


CAUTION: Ensure that you follow the guidelines for battery safety described in the Product Reference Guide.

The 1-Slot Charge-Only Cradle:

- Provides 5 VDC power for operating the device.
- Charges the device's battery.

Figure 4 1-Slot Charge-Only Cradle



1	Device charging slot with a shim.
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NOTE: To charge the device, insert it properly in the slot.

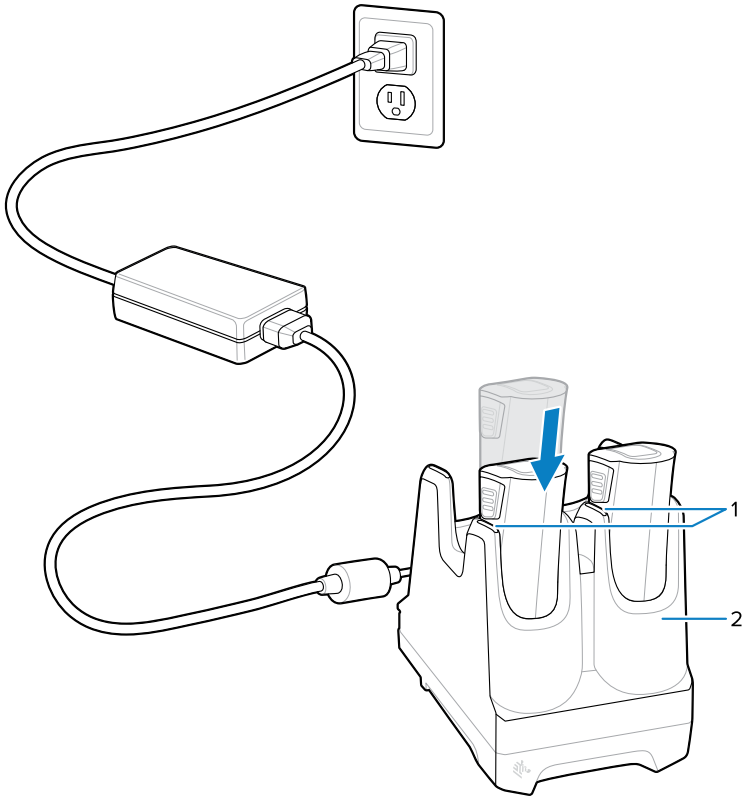
4-Slot Battery Charger

This section describes how to use the charger to charge up to four batteries simultaneously.



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

Figure 5 4-Slot Battery Charger



1	Battery charge LED
2	Battery slot



NOTE: To charge the battery, insert it properly in the slot.

Each LED displays the charging status of the battery in its corresponding slot. For more information, see [Battery Charging Indicators](#).

4-Slot Charge-Only Cradle

This section describes how to use the 4-Slot Charge-Only Cradle to charge up to four devices.

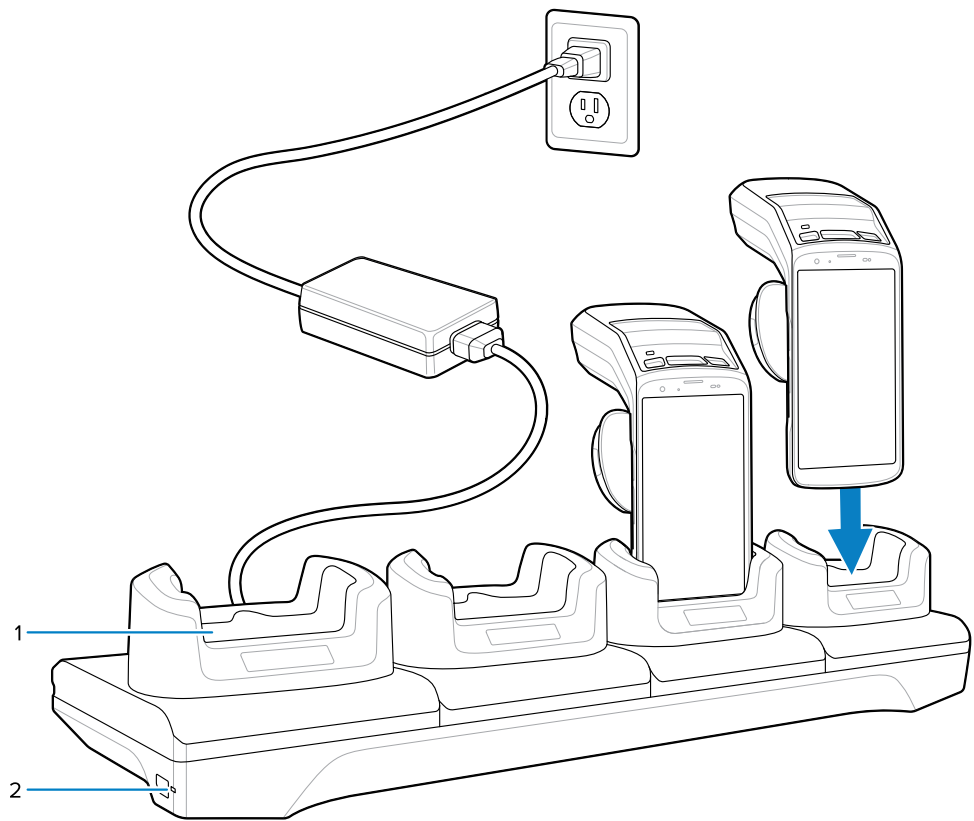


CAUTION: Ensure that you follow the guidelines for battery safety described in the Product Reference Guide.

The 4-Slot Charge-Only Cradle:

- Provides 5 VDC power for operating the device.
- Simultaneously charges up to four devices.

Figure 6 4-Slot Charge-Only Cradle



1	Device charging slot with shim
2	Power LED



NOTE: To charge the device, insert it properly in the slot.

4-Slot Ethernet Cradle

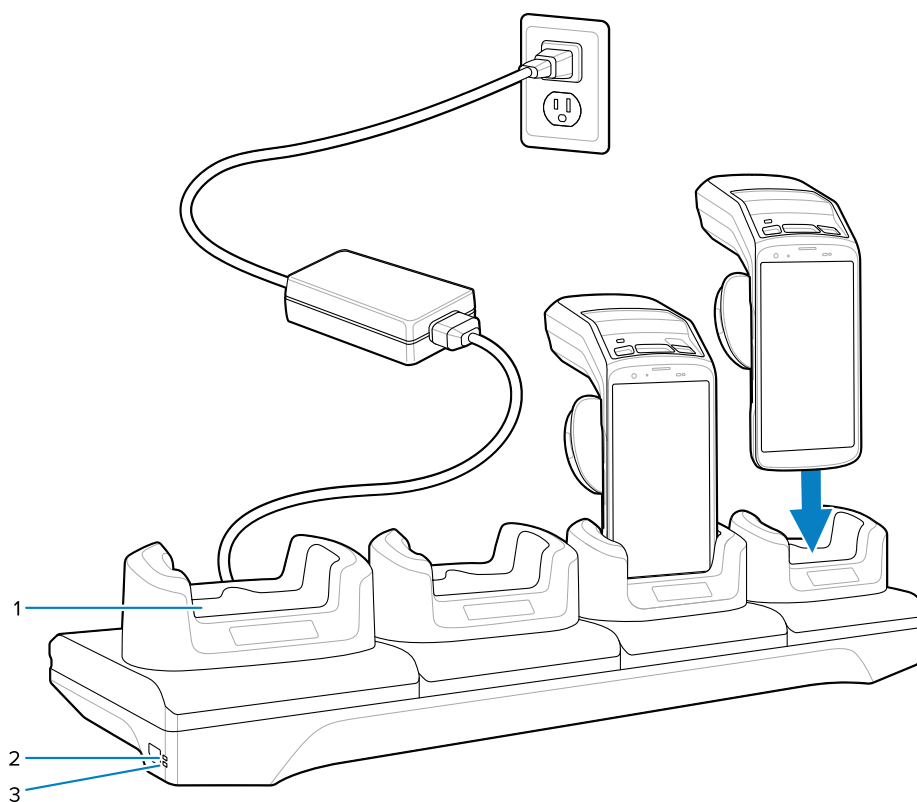
The 4-Slot Ethernet Cradle simultaneously charges up to four devices and provides Ethernet communication.



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

The 4-Slot Ethernet Cradle:

- Provides 5.0 VDC power for operating the device.
- Connects up to four devices to an Ethernet network.

Figure 7 4-Slot Ethernet Cradle

1	Device charging slot with shim
2	10/100Base-T LED
3	1000Base-T LED



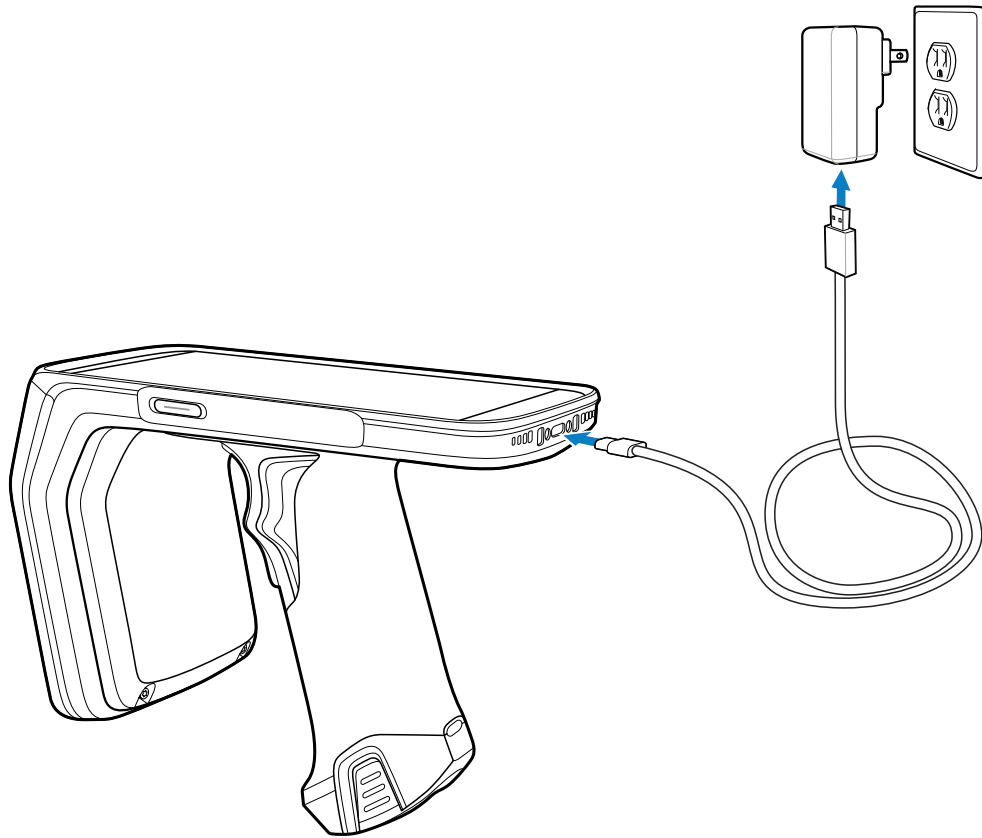
NOTE: To charge the device, insert it properly in the slot.

Charge/USB-C Cable

The USB-C Cable snaps onto the bottom of the device and can be removed easily when not in use.



NOTE: When attached to the device, it provides charging and allows the device to transfer data to a host computer.

Figure 8 USB-C Cable

Scanning with Internal Imager

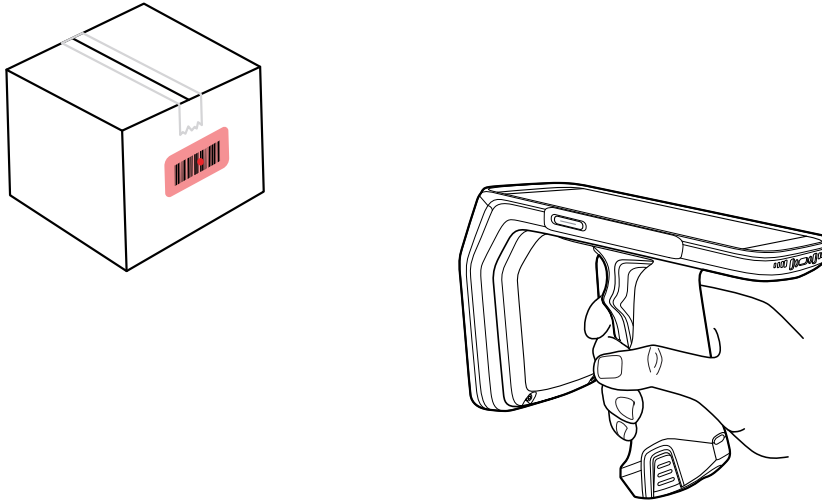
To read a barcode, a scan-enabled application is required. The device contains the DataWedge application, which allows you to enable the imager, decode the barcode data, and display the barcode content.



NOTE: The imager displays a red dot aimer.

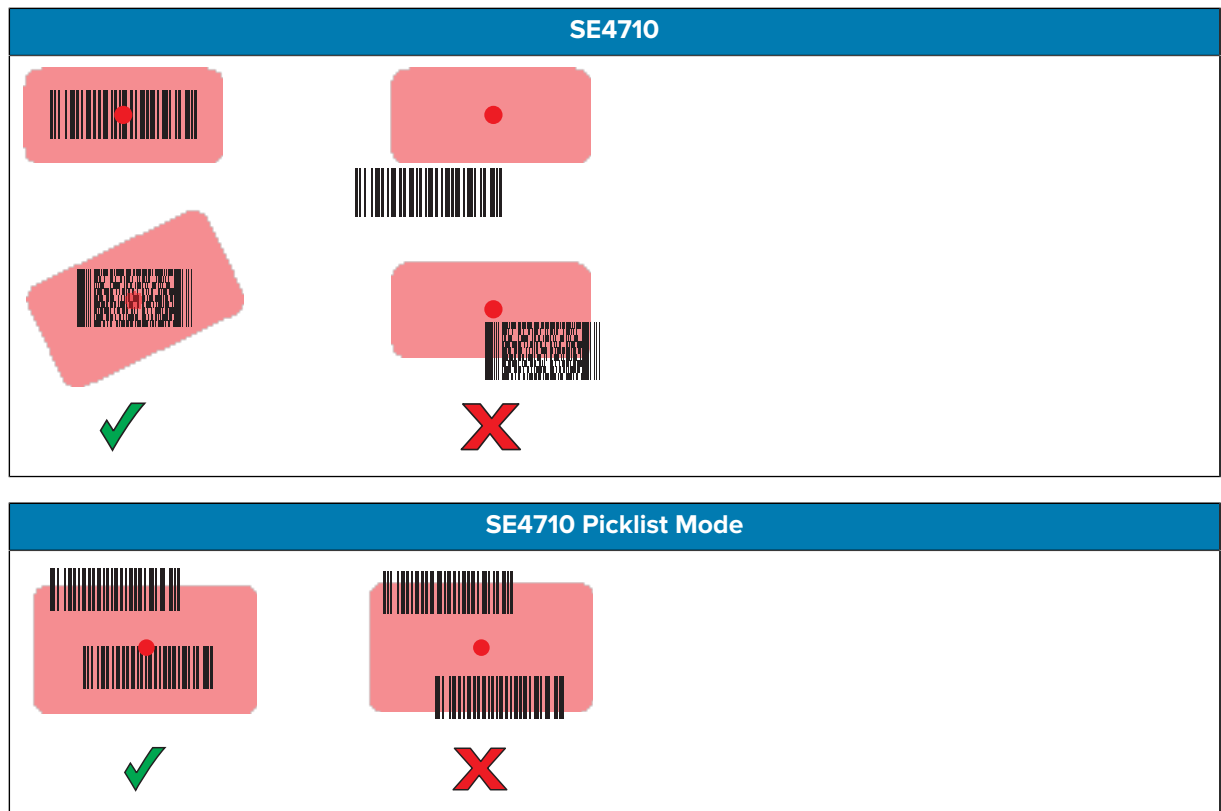
1. Ensure that an application is open on the device and a text field is in focus (text cursor in text field).

2. Point the scanner exit window of the device at a barcode.



3. Press and hold the lower trigger for scanning.
The device projects the aiming pattern.

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



The Data Capture LED light turns on, and the device beeps, by default, to indicate that the barcode was decoded successfully.

5. Release the scan button.



NOTE: Imager decoding usually occurs instantaneously. The device repeats the steps required to take a digital picture (image) of a poor or difficult barcode as long as the scan button remains pressed.

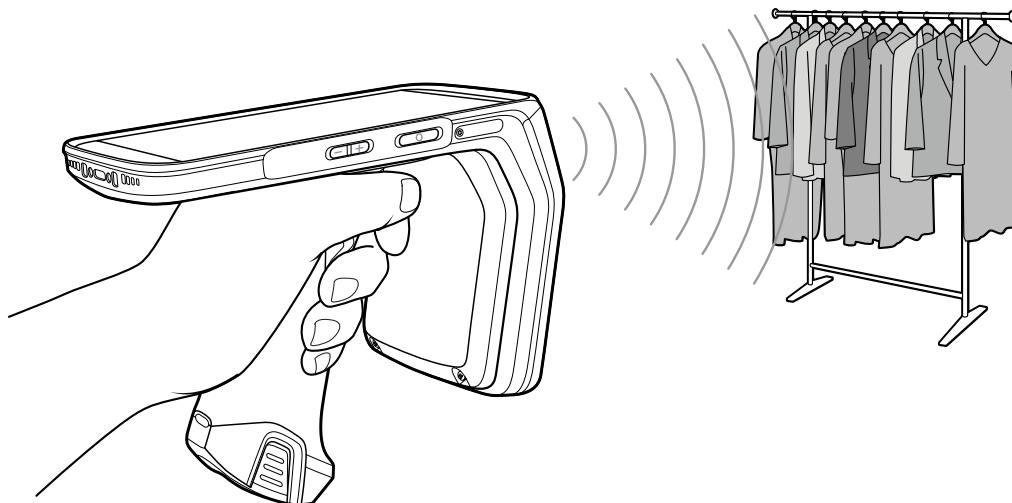
The device displays the barcode data in the text field.

Optimum RFID Tag Decoding

Use the 123RFID mobile reader application to enable tag reading.

1. Tap the **123RFID Mobile** application to launch the RFID reader demonstration application.
2. Point the device at the tag, which is oriented horizontally or vertically, depending on its orientation. The distance between the tag and the antenna is the approximate read range.

3. Press the upper trigger or tap **Read Start** button on the screen to interrogate all RFID tags within the Radio Frequency (RF) field of view and capture data from each new tag found.



4. Release the trigger or tap **Stop Read** command to stop interrogating tags.

Ergonomic Considerations

Follow these ergonomic recommendations for an optimum scanning experience. Zebra recommends taking breaks and rotating tasks to prevent strain.

Optimize Body Posture

Figure 9 Upright Scanning

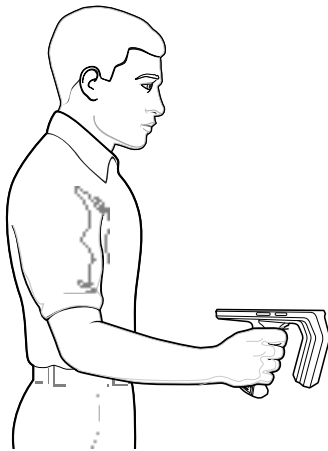
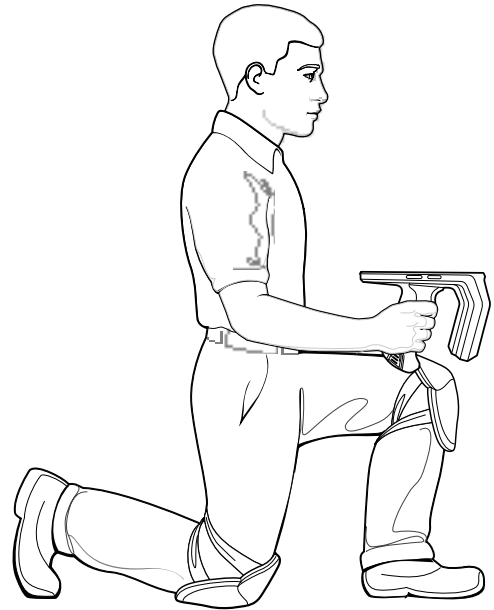


Figure 10 Low Scanning



Alternate left and right knees.

Figure 11 High Scanning



Alternate left and right hands.

Figure 12 Avoid bending

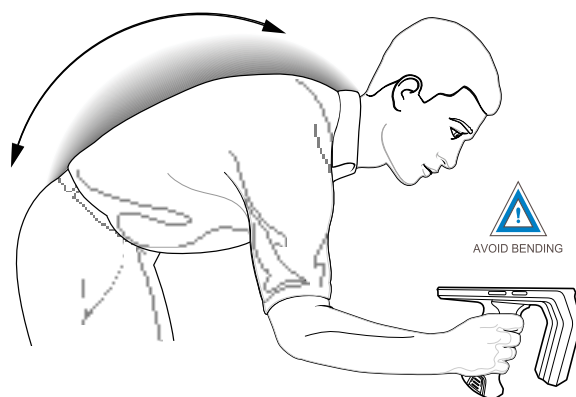
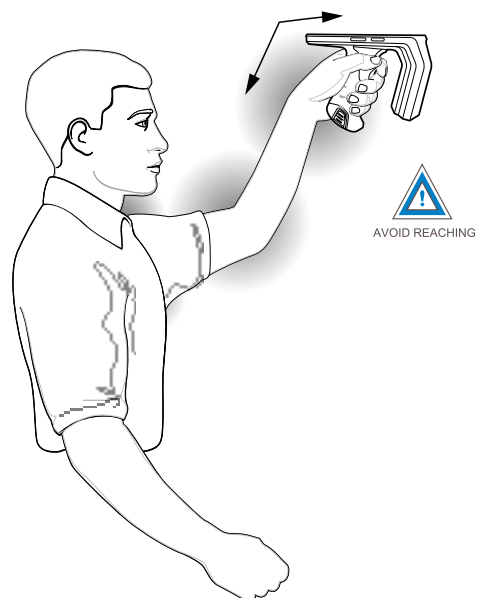
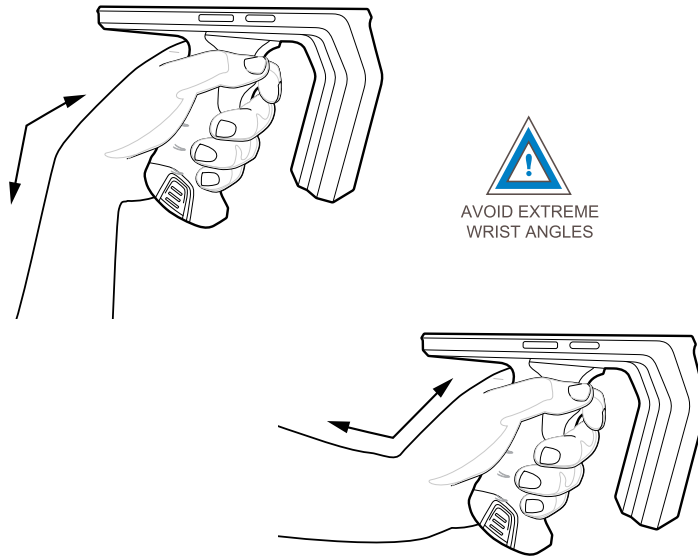


Figure 13 Avoid reaching



Avoid Extreme Wrist Angles



Service Information

Repair services using Zebra-qualified parts are available for at least three years after the end of production and can be requested at zebra.com/support.

