

TN28

Touch Computer



ZEBRA

Quick Start Guide

ZEBRA and the stylized Zebra head are trademarks of Zebra Technologies Corporation, registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners. ©2022 Zebra Technologies Corporation and/or its affiliates. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements.

For further information regarding legal and proprietary statements, please go to:

SOFTWARE: zebra.com/linkoslegal.

COPYRIGHTS: zebra.com/copyright.

WARRANTY: zebra.com/warranty.

END USER LICENSE AGREEMENT: zebra.com/eula.

Terms of Use

Proprietary Statement

This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

Product Improvements

Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

Liability Disclaimer

Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability

In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Unpacking

Unpacking the device from the box.

1. Carefully remove all protective material from the device and save the shipping container for later storage and shipping.
2. Verify the following items are in the box:
 - Touch computer
 - 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. Before using the device for the first time, remove the protective shipping film that covers the display.

Features

This section lists the features of the TN28 touch computer.

Figure 1 Front View

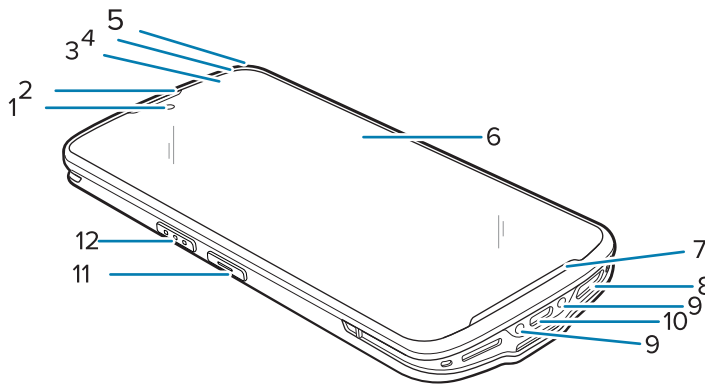


Table 1 Front View

Number	Item	Description
1	Front camera	Takes photos and videos (available on some models).
2	Receiver/Sub microphone	Use the receiver for audio playback in Handset mode. Use the sub microphone for speakerphone mode.
3	Proximity/Light sensor	Determines proximity for turning off display when in handset mode. Determines ambient light for controlling display backlight intensity.
4	Charging/ Notification LED	Indicates battery charging status while charging and application generated notifications.
5	Data capture LED	Indicates data capture status.
6	Touch screen	Displays all information needed to operate the device.
7	Microphone	Use for communications in Handset mode.

Table 1 Front View (Continued)

Number	Item	Description
8	Speaker	Provides audio output for video and music playback. Provides audio in speakerphone mode.
9	Cradle charging contacts	Provides device charging via cradles and accessories.
10	USB-C connector	Provides USB host and client communications, and device charging via cables and accessories.
11	Programmable button	This button is configurable for use with other applications.
12	Scan button	Initiates data capture (programmable).

Figure 2 Rear View

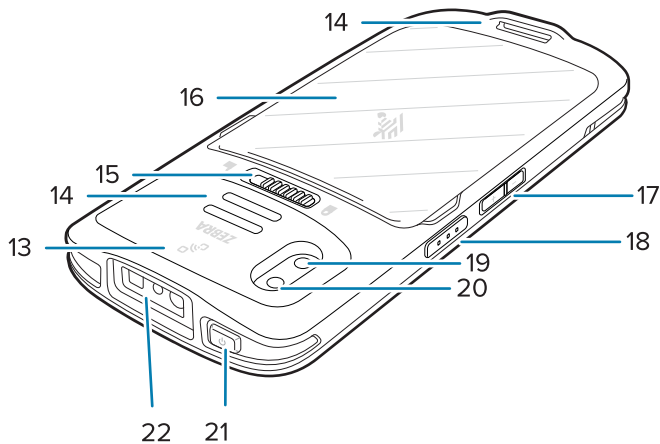


Table 2 Rear View

Number	Item	Description
13	NFC antenna	Provides communication with other NFC-enabled devices.
14	Basic hand strap mount	Provides mounting point for Basic Hand Strap accessory.
15	Battery release latch	Slide to remove the battery cover.
16	Battery cover	Removable cover that encloses the 5,000 mAh (typical) Lithium-ion Battery.
17	Volume up/down button	Increase and decrease audio volume (programmable).
18	Scan button	Initiates data capture (programmable).
19	Camera flash	Provides illumination for the camera.
20	Rear camera	Takes photos and videos.
21	Power button	Turns the display on and off. Press and hold to reset the device or power off.
22	Exit window	Provides data capture using the imager.

Setting Up the Device

To start using the device for the first time, you must set it up.

1. Install a microSD card (optional).
2. Install a nano SIM card (optional).
3. Install the battery.
4. Install hand strap (optional).
5. Charge the device.
6. Power on the device.

Installing or Replacing a microSD Card

The microSD card slot provides secondary non-volatile storage. The slot is located within the battery compartment and is found after removing the battery. Refer to the documentation provided with the card for more information, and follow the manufacturer's recommendations for use.

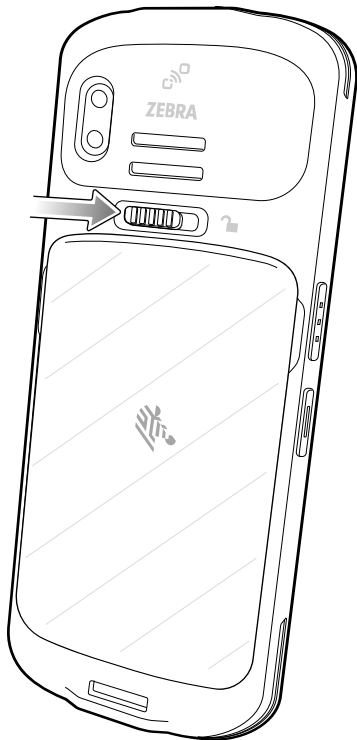


NOTE: The SD/SIM card drawer can hold either two SIM cards or one SIM card and one microSD card.

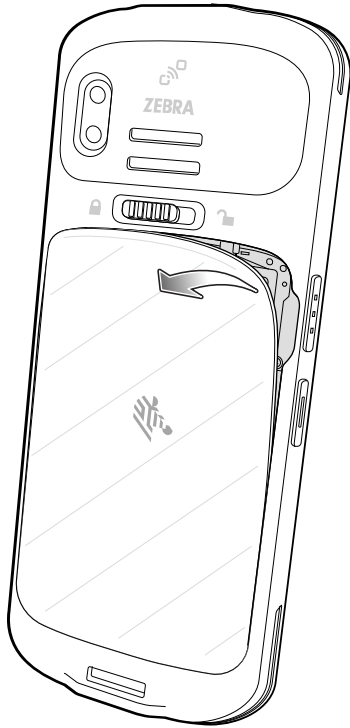


CAUTION: Follow proper electrostatic discharge (ESD) precautions to avoid damaging the microSD card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

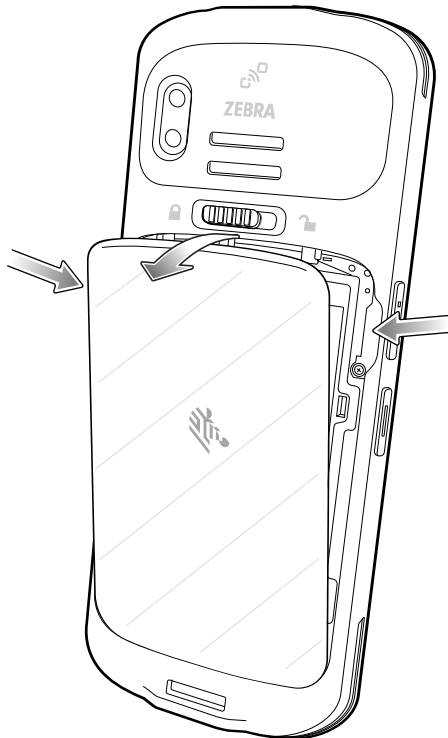
1. Power the device down before installing or replacing the microSD card.
2. Slide the battery release latch to the unlock position and hold in the unlock position.



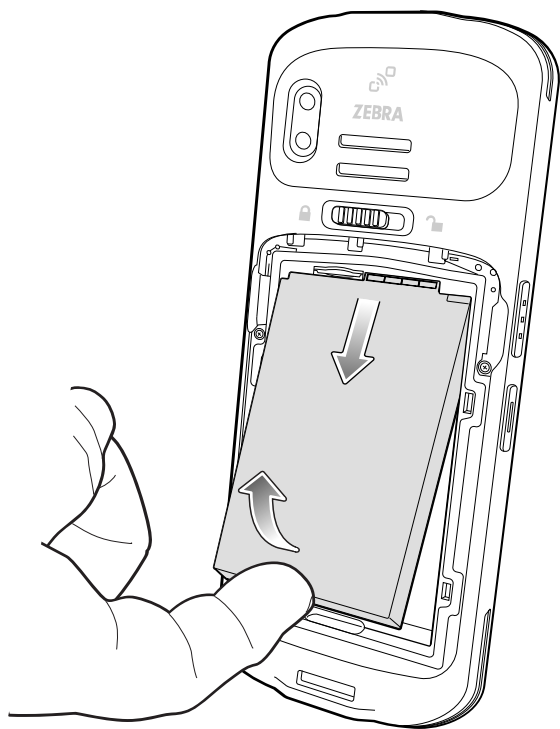
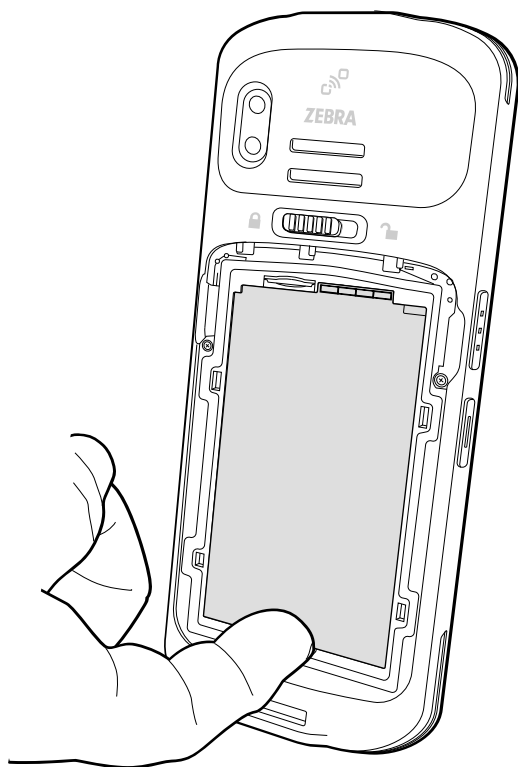
3. Disengage the battery cover from either the right or left side recess grooves, and let go of the battery release latch.



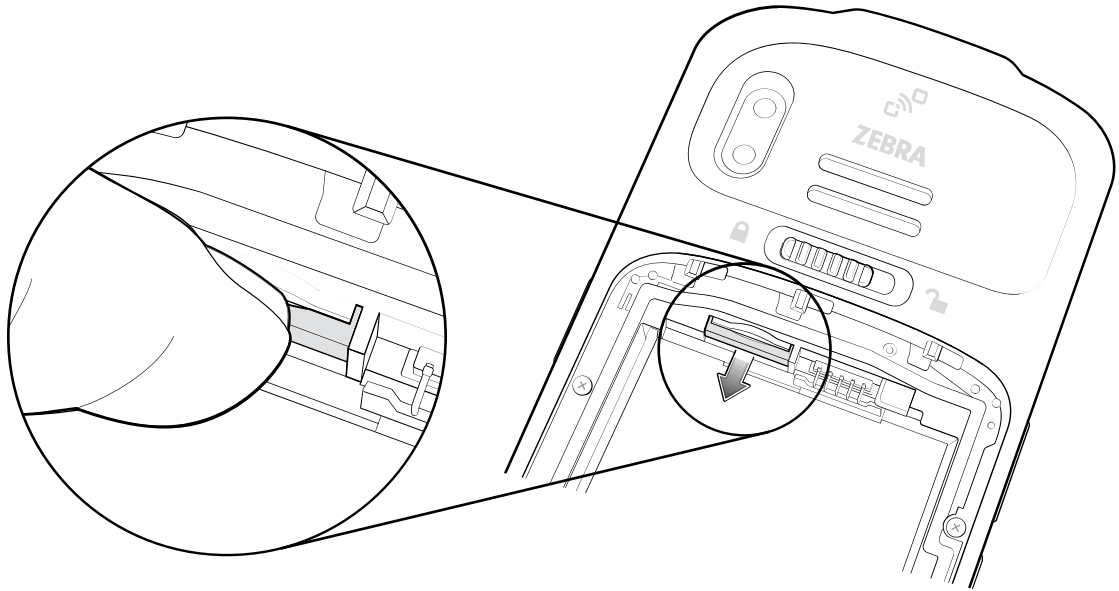
4. Hold the battery cover near the right and left side recess grooves and pull the battery cover off.



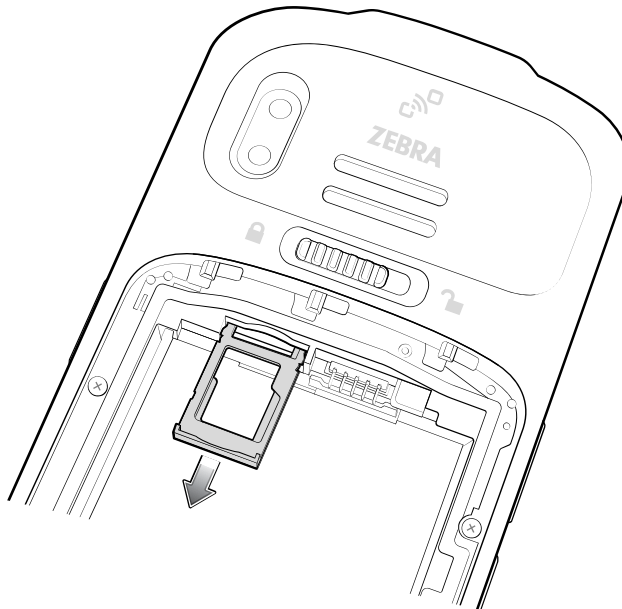
5. Remove the battery.



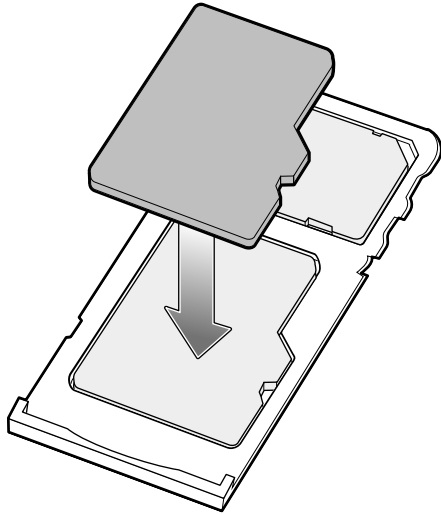
6. Using your finger, pull out the SD/SIM card drawer.



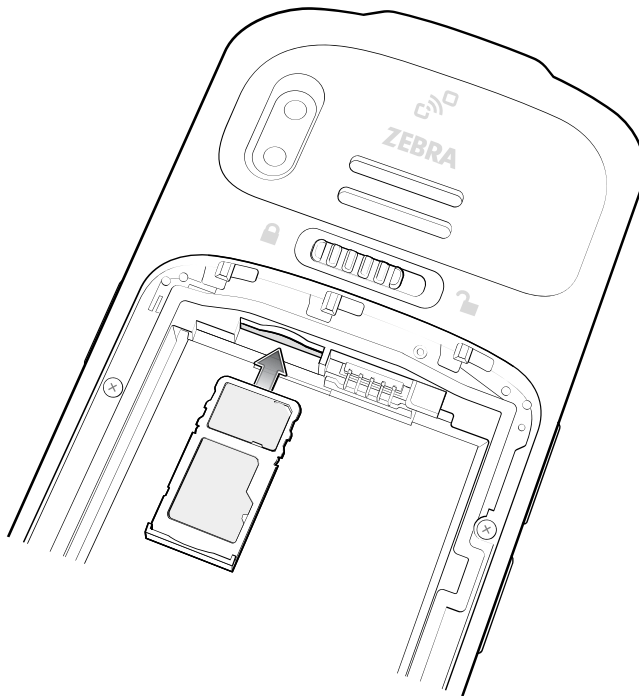
7. Remove the SD/SIM card drawer from the device.



8. Insert or replace the microSD card into the SD/SIM card drawer.

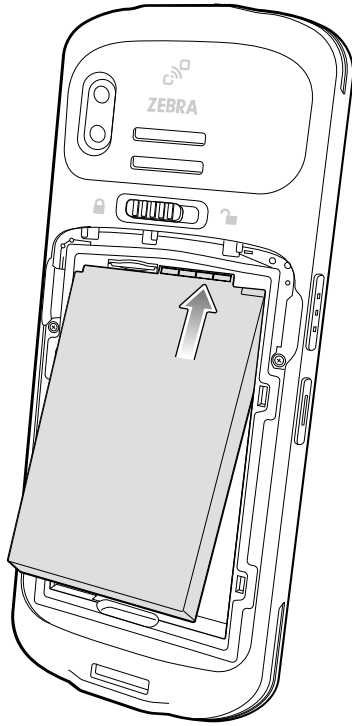


9. Insert the SD/SIM card drawer into the device.

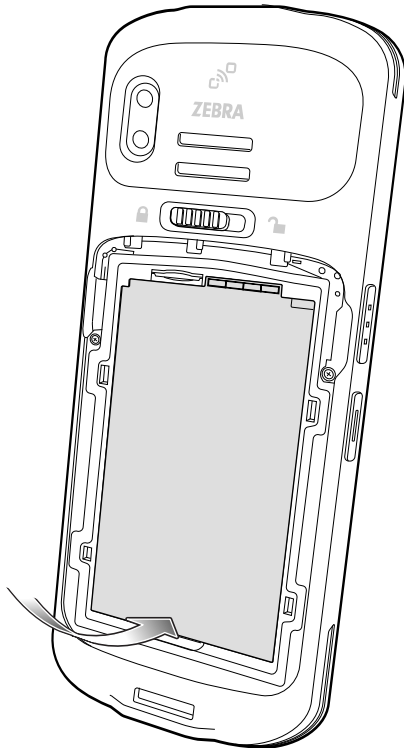


10. Press the SD/SIM card drawer into the device to ensure it is in securely.

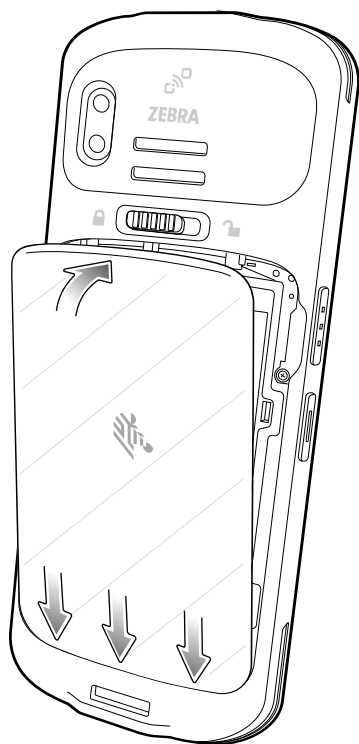
11. Align the contacts, slide the battery in position on an angle, and insert the battery, top first, into the battery compartment in the back of the device.



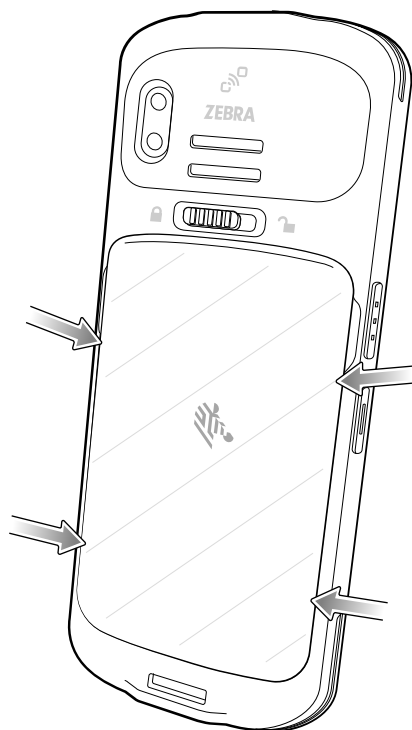
12. Press the bottom of the battery down into the battery compartment.



- 13.** Insert and align the cover into the bottom latches.



- 14.** Push the cover down into the top latches, until it snaps into place.



Installing or Replacing the SIM Card

The slot is located within the battery compartment and is found after removing the battery. Refer to the documentation provided with the card for more information, and follow the manufacturer's recommendations for use.

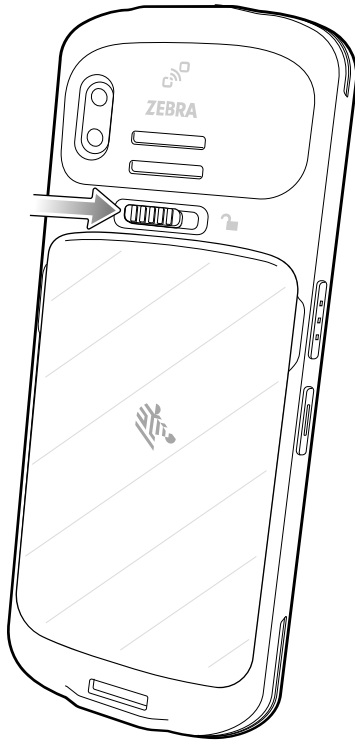


NOTE: Only use a nano SIM card. The SD/SIM card drawer can hold either two SIM cards or one SIM card and one microSD card.

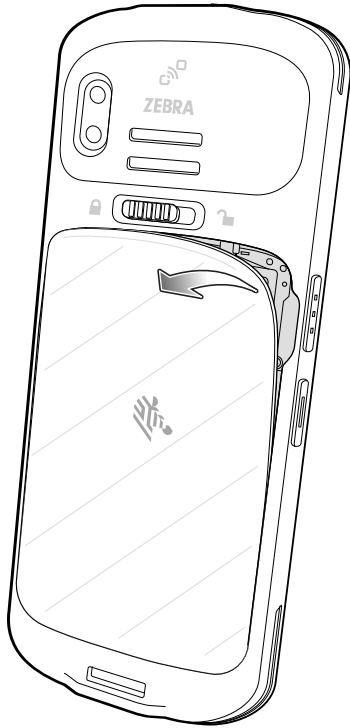


CAUTION: Follow proper electrostatic discharge (ESD) precautions to avoid damaging the SIM card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

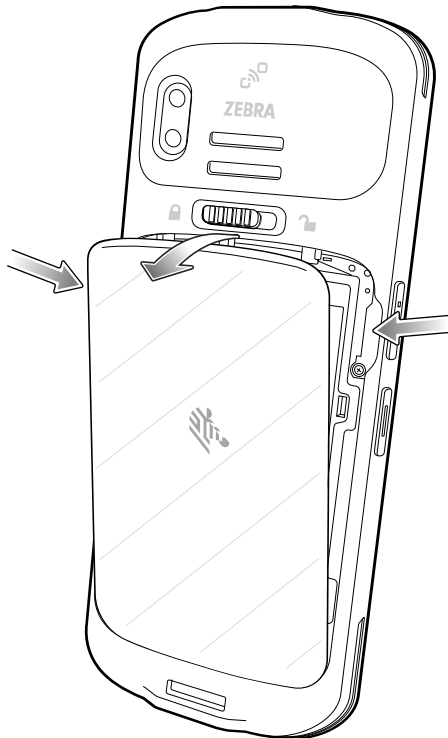
1. Power the device down before installing or replacing the SIM card.
2. Slide the battery release latch to the unlock position and hold in the unlock position.



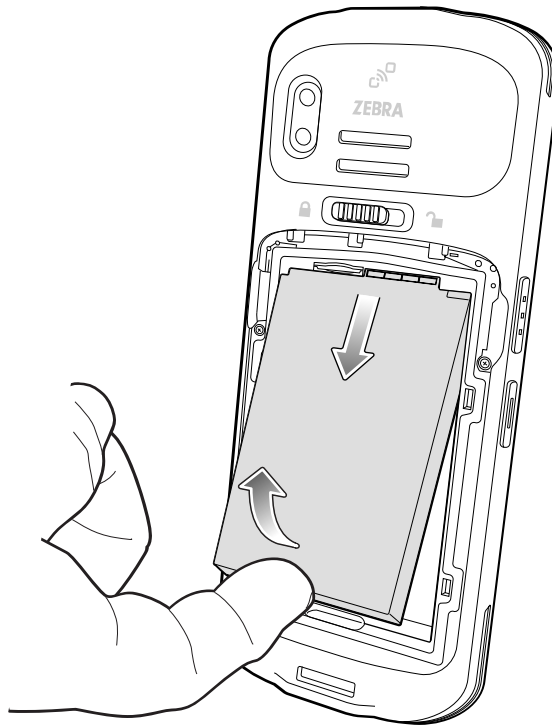
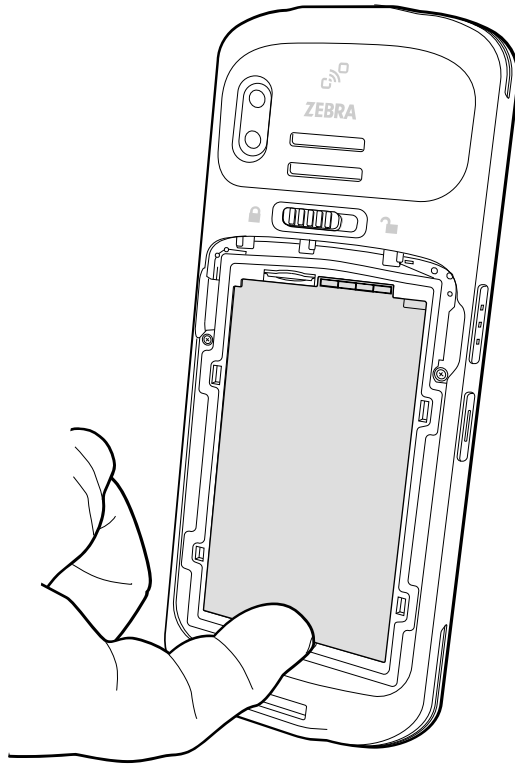
3. Disengage the battery cover from either the right or left side recess grooves, and let go of the battery release latch.



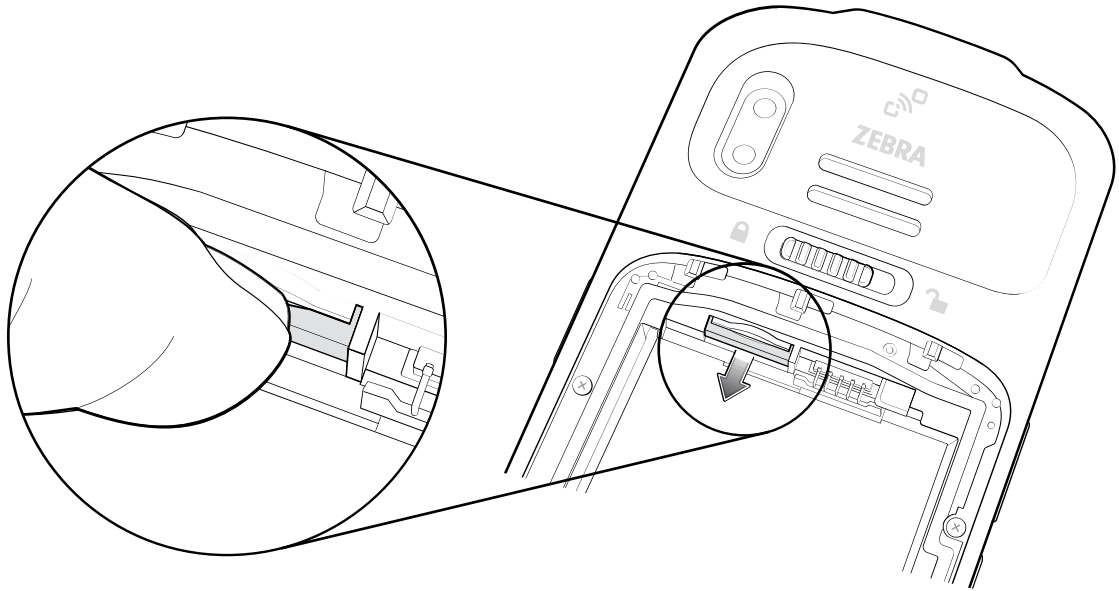
4. Hold the battery cover near the right and left side recess grooves and pull the battery cover off.



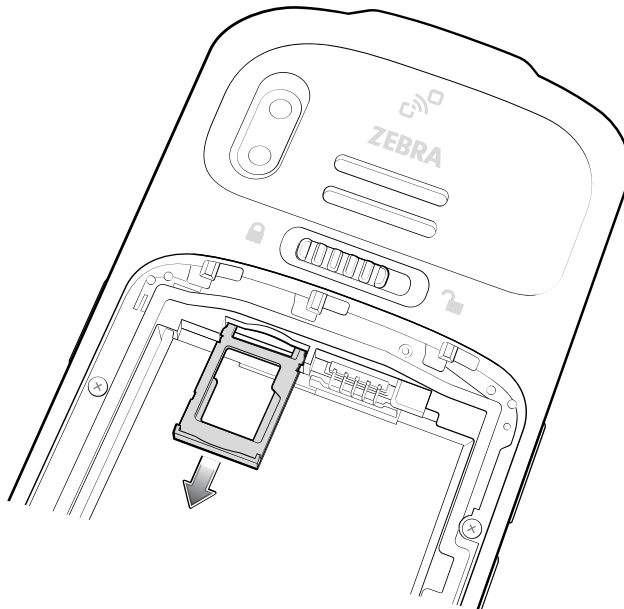
5. Remove the battery.



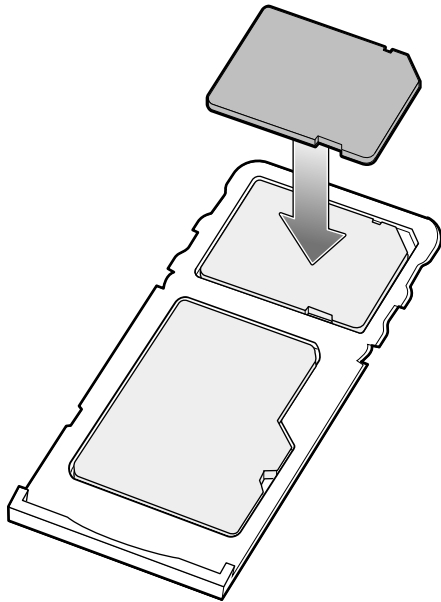
6. Using your finger, pull out the SD/SIM card drawer.



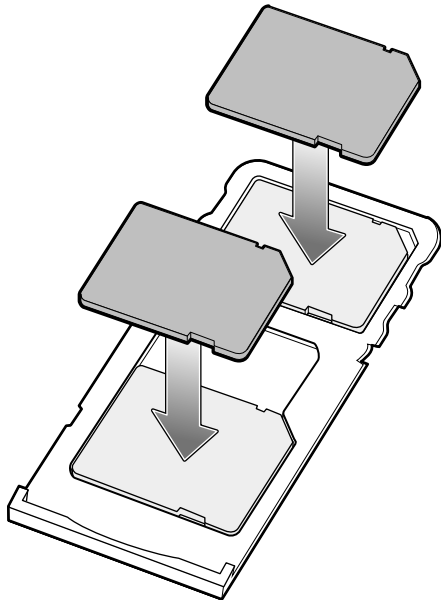
7. Remove the SD/SIM card drawer from the device.



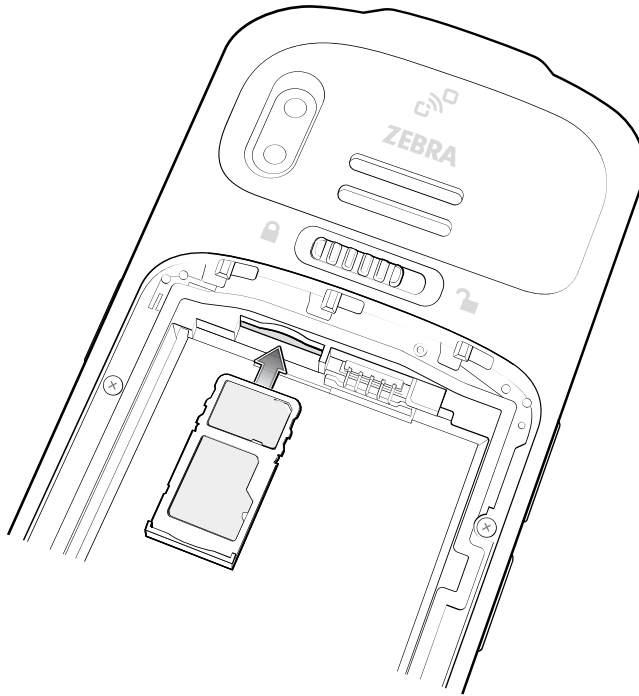
8. Insert or replace the SIM card into the SD/SIM card drawer.



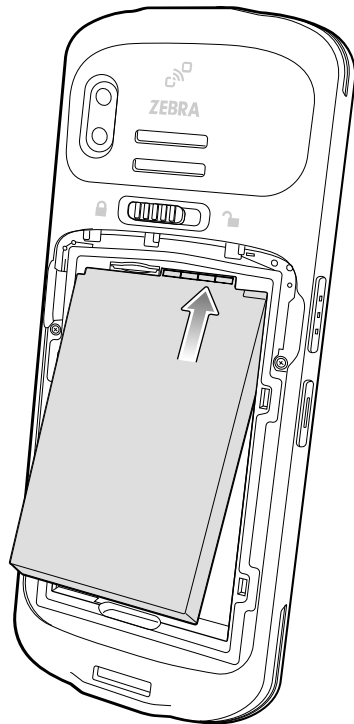
9. If you are using two SIM cards, insert the second SIM card into the microSD card slot.



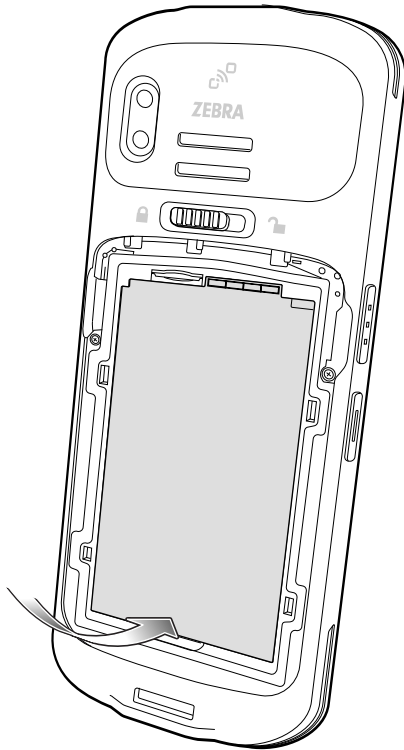
10. Insert the SD/SIM card drawer into the device.



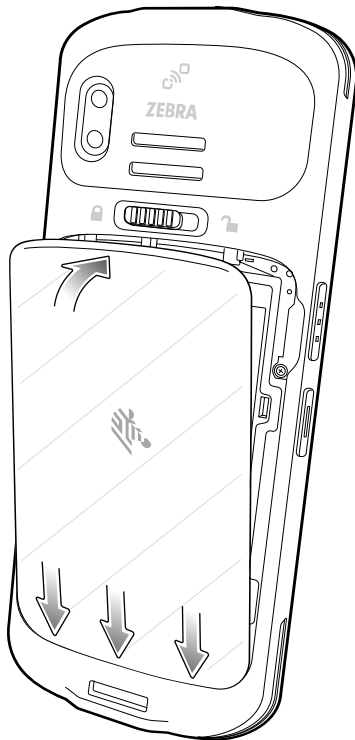
11. Press the SD/SIM card drawer into the device to ensure it is in securely.
12. Align the contacts, slide the battery in position on an angle, and insert the battery, top first, into the battery compartment in the back of the device.



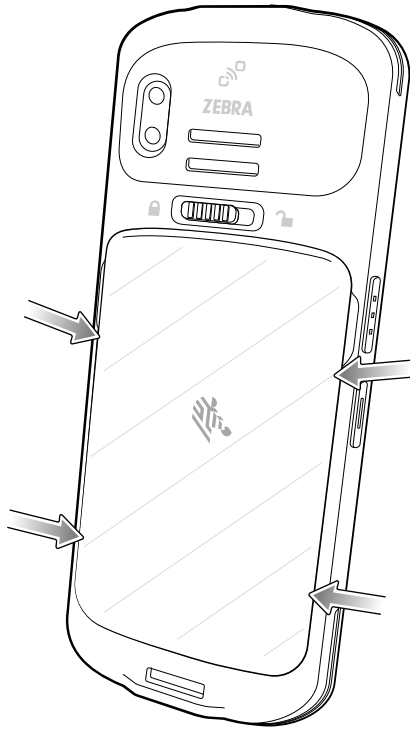
- 13.** Press the bottom of the battery down into the battery compartment.



- 14.** Insert and align the cover into the bottom latches.



15. Push the cover down into the top latches, until it snaps into place.



Installing or Replacing the Battery

This section describes how to install the battery into the device or replace an existing battery.



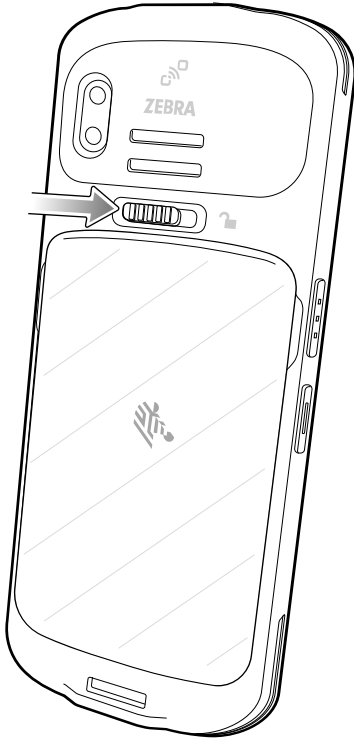
IMPORTANT: It is necessary to remove the battery in order to install a microSD card or SIM card.



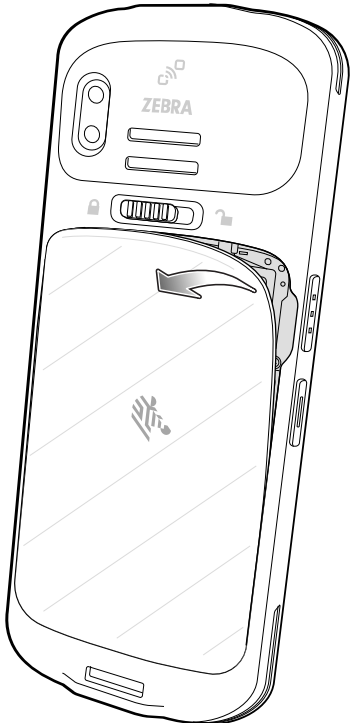
NOTE: User modification of the device, particularly in the battery well, such as labels, asset tags, engravings, stickers, etc., may compromise the intended performance of the device or accessories. Performance levels such as sealing (Ingress Protection (IP)), impact performance (drop and tumble), functionality,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

1. Power the device down before installing or replacing the battery.

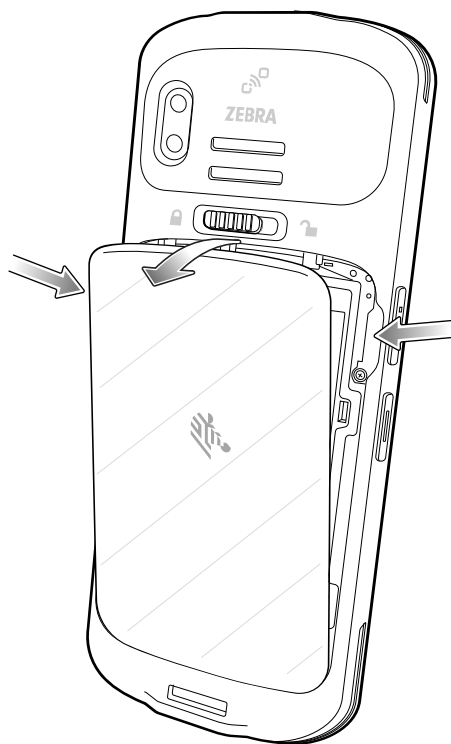
2. Slide the battery release latch to the unlock position and hold in the unlock position.



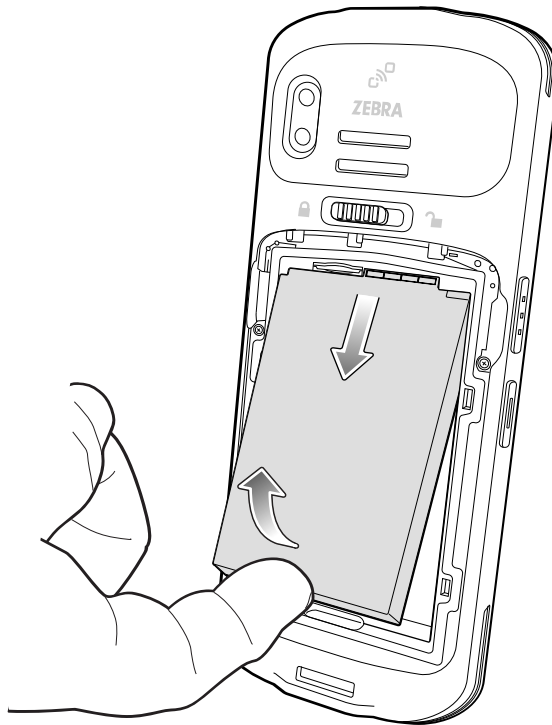
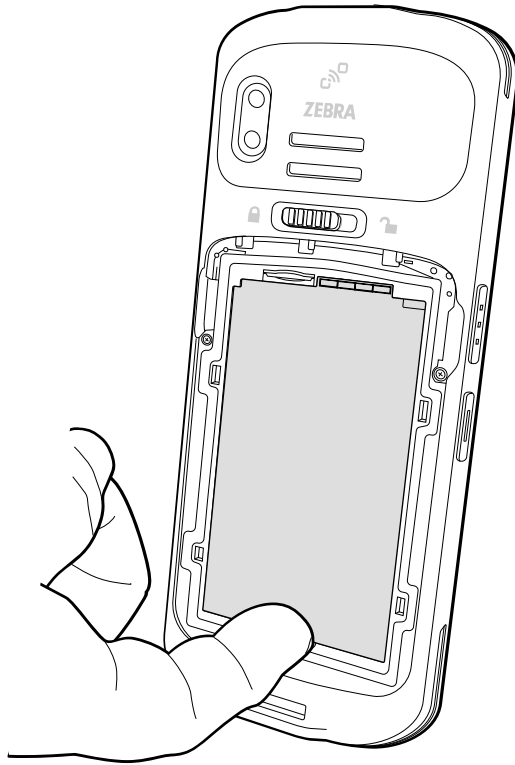
3. Disengage the battery cover from either the right or left side recess grooves, and let go of the battery release latch.



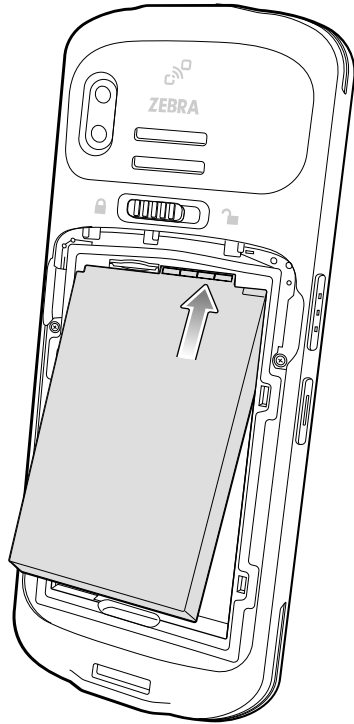
4. Hold the battery cover near the right and left side recess grooves and pull the battery cover off.



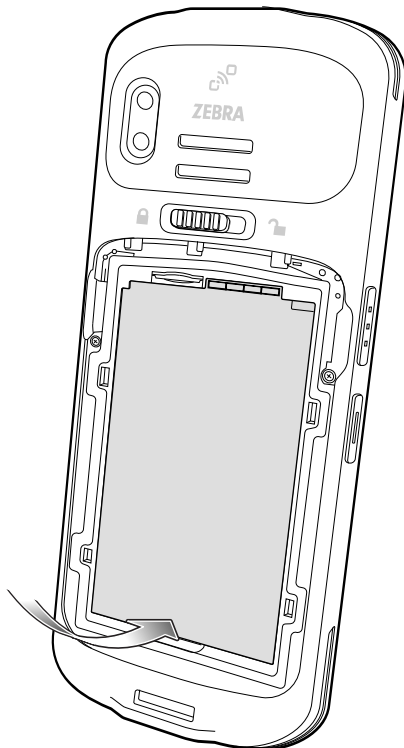
5. To replace or remove an existing battery, lift the battery up from the bottom of the battery.



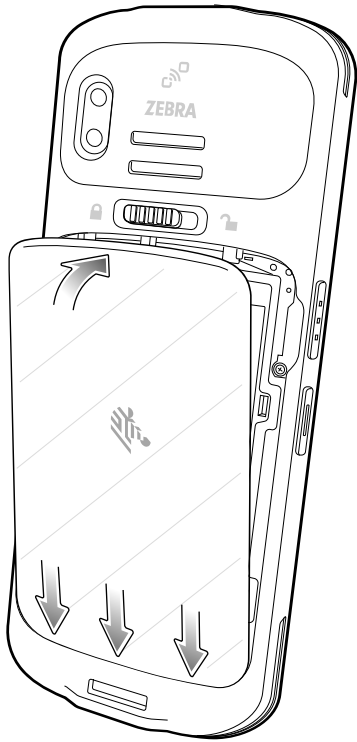
6. To insert a battery, align the contacts, slide the battery in position on an angle, and insert the battery top first, into the battery compartment in the back of the device.



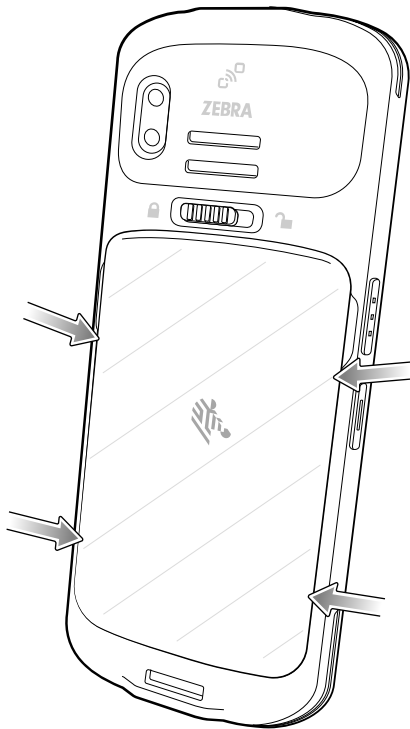
7. Press the bottom of the battery down into the battery compartment.



- 8.** Insert and align the cover into the bottom latches.



- 9.** Push the cover down into the top latches, until it snaps into place.



Charging



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

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

Accessory	Part Number	Description
1-Slot Charge Only Cradle with Spare Battery Charger	CRD-TC1XTN28-2SC-01	Provides device charging only. Requires DC Cable (CBL-DC-388A1-01), AC Cord (23844-00R) and power supply (PWR-BGA12V50W0WW).
TN28 USB-C2C Cable	CBL-TN28USBC2C-01	Provides UBC-C to USB-C power to the device.

Charging the Device

1. Insert the device into a cradle charging slot to begin charging.
 - If the device includes a rubber boot, then it is not necessary to use a shim in the cradle. If the shim is in the cradle, you must remove it first, before inserting the device in the charging slot.
 - If the device does not include a rubber boot, then it is necessary to use a shim in the cradle. If the shim is not in the cradle, it must be inserted first, before inserting the device in the charging slot.

2. Ensure the device is seated properly.

The device's Charging/Notification LED indicates the status of the battery charging in the device. The battery charges from fully depleted to 80% in less than 2 hours and charges from fully depleted to 100% in less than 3.5 hours.



NOTE: In many cases the 80% charge provides plenty of charge for daily use.

To achieve the best fast charging results use only Zebra charging accessories and batteries. Charge batteries at room temperature with the device in sleep mode.

Charging Indicators

The Charge LED Indicator indicates the charge status.

Table 3 LED Charge Indicators

Status	Indications
Off	<ul style="list-style-type: none"> • Device is not charging. • Device is not inserted correctly in the cradle or connected to a power source. • Charger/cradle is not powered.
Slow Blinking Amber (1 blink every 4 seconds)	Device is charging.

Table 3 LED Charge Indicators (Continued)

Status	Indications
Slow Blinking Red (1 blink every 4 seconds)	Device is charging but the battery is at end of useful life.
Solid Green	Charging complete.
Solid Red	Charging complete but the battery is at end of useful life.
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 end of 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).

Charging the Spare Battery

1. Align the contacts, slide the battery in position on an angle, and insert the battery, top first, into a battery charging well.
2. Gently press down on the battery to ensure proper contact.

The Spare Battery Charging LED on the cup indicates the status of the spare battery charging. The battery charges from fully depleted to 80% in approximately 2 hours at 10°C to 45°C (50°F to 113°F). The battery charges from fully depleted to 80% in approximately 3.5 hours at 5°C to 10°C (41°F to 50°F) and 45°C to 50°C (113°F to 122°F).



NOTE: In many cases the 80% charge provides plenty of charge for daily use.

To achieve the best fast charging results use only Zebra charging accessories and batteries. Charge batteries at room temperature with the device in sleep mode.

Spare Battery LED Charging Indicators

The Charge LED Indicator indicates the charge status.

Table 4 LED Charge Indicators

Status	Indications
Solid Amber	Spare battery is charging.
Solid Green	Spare battery charging is complete.

Table 4 LED Charge Indicators (Continued)

Status	Indications
Fast Blinking Red (2 blinks/second)	Charging error. For example: <ul style="list-style-type: none"> • Check placement of spare battery and battery is at the end of useful life.
Off	<ul style="list-style-type: none"> • No spare battery in slot. • Spare battery not placed in slot correctly. • Cradle is not powered.

Charging Temperature

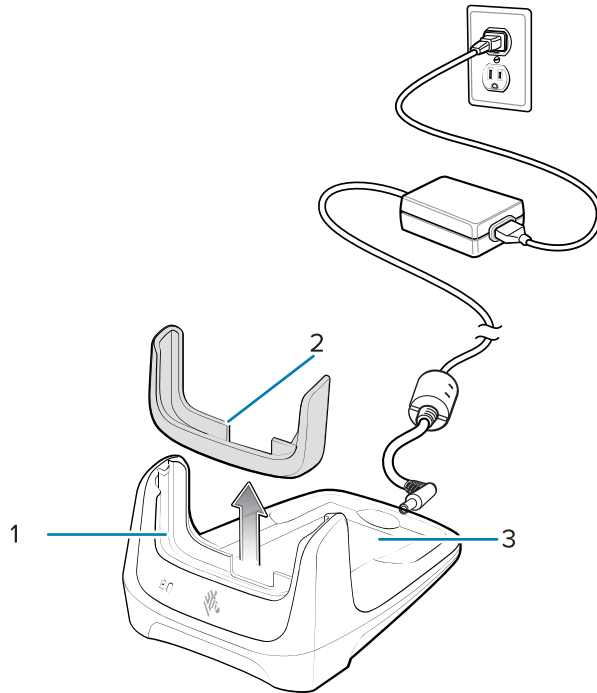
Charge batteries in temperatures from 5°C to 50°C (41°F to 122°F). The device or accessory always performs battery charging in a safe and intelligent manner. At higher temperatures, for example, at approximately 37°C (98°F), the device or accessory may for brief periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device or accessory indicates when charging is disabled due to abnormal temperatures via its LED and a notification appears on the display.

1-Slot Charge Only Cradle with Spare Battery Charger



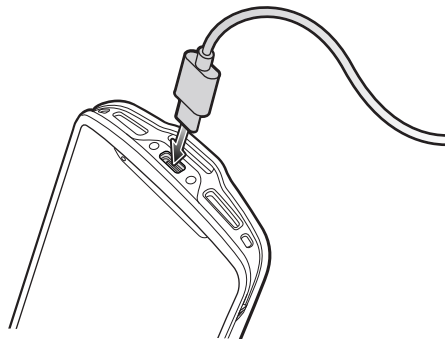
NOTE:

- If the device includes a rubber boot, then it is not necessary to use a shim in the cradle. If the shim is in the cradle, you must remove it first, before inserting the device in the charging slot.
- If the device does not include a rubber boot, then it is necessary to use a shim in the cradle. If the shim is not in the cradle, it must be inserted first, before inserting the device in the charging slot.



1	Device charging slot
2	Shim
3	Spare battery charging slot

USB-C Cable

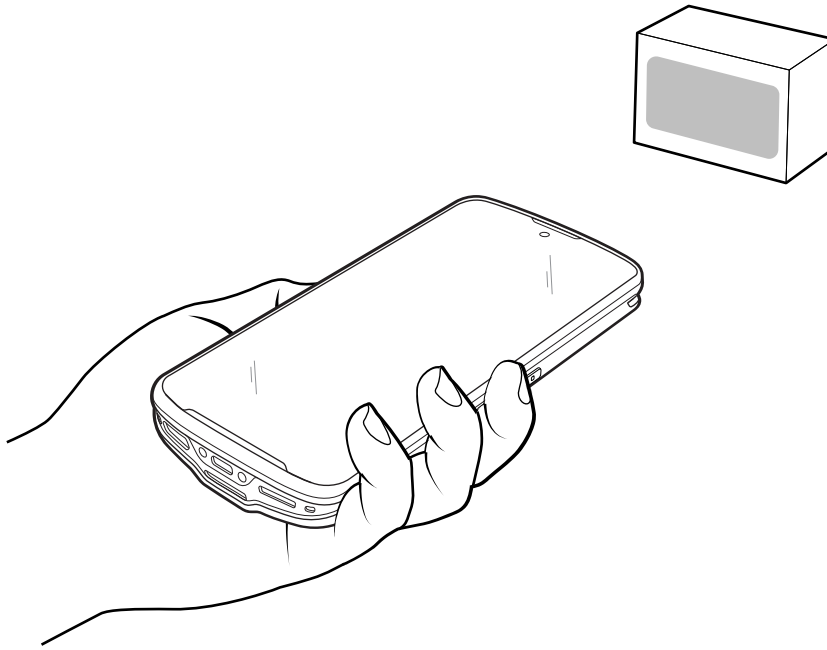


Scanning with Internal Imager

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

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 exit window on the top of the device at a barcode.



3. Press and hold the scan button.

The red laser aiming pattern turns on to assist in aiming.



NOTE: When the device is in Picklist mode, the imager does not decode the barcode until the crosshair or aiming dot touches the barcode.

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

Figure 3 Aiming Pattern

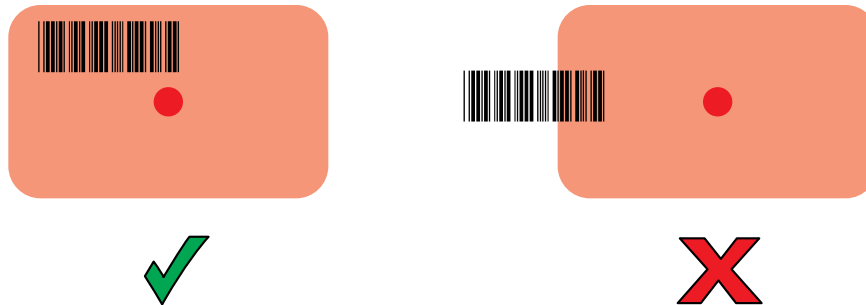
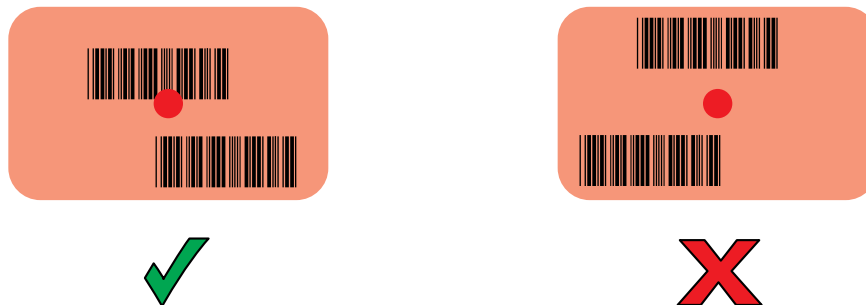


Figure 4 Picklist Mode with Multiple Barcodes in Aiming Pattern



5. The Data Capture LED lights red for SE4710 or the laser lights as a red crosshair for SE4770 and a beep sounds, by default, to indicate the barcode was decoded successfully.
6. 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.

7. The barcode content data displays in the text field.

Ergonomic Considerations

Taking breaks and task rotation are recommended.



CAUTION: Avoid extreme wrist angles.

