RFD90 Ultra-Rugged UHF RFID Sled

Quick Start Guide

ZEBRA

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About this Document

This document provides information on using the RFD9030 Ultra-Rugged Standard-Range UHF RFID sled and the RFD9090 Long-Range Ultra-Rugged UHF RFID sled.

Notational Conventions

The following conventions are used in this document:

Bold text is used to highlight the following:

- Dialog box, window, and screen names.
- Drop-down list and list box names.
- Checkbox and radio button names.
- Checkbox and radio button names.
- Icons on a screen.
- Key names on a keypad.
- Button names on a screen.

Bullets (•) indicate:

- Action items.
- List of alternatives.
- Lists of required steps that are not necessarily sequential.

Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: zebra.com/support.

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number

Zebra responds to calls by email, telephone, or fax within the time limits outlined in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

Getting Started

The RFD90 Ultra-Rugged UHF RFID sled provides RAIN Radio Frequency Identification (RFID) tag reading, writing, and locating capability to support Zebra mobile computers and other host devices. This section provides information on sled features, adaptor installation, mobile computer attachment, battery replacement, UI indications, and charging.

To use the RFD90 sled for the first time with a mobile computer:

1. Insert the battery into the device.
2. Charge the RFD90 sled using the charging cradle or charging cup.
3. Replace the cover with the adaptor that is specific to the mobile computer to be used with the sled.
4. Place the mobile computer into the adaptor bottom first.
5. Secure the mobile computer into the adaptor by pressing down on the center of the top of the mobile computer.
6. Set the region using 123RFID Desktop or 123RFID Mobile applications.

For the latest versions of guides and software, go to: zebra.com/support.

For detailed information, refer to the Product Reference Guide at: zebra.com/support.

Unpacking

This section provides information on Zebra RFD90 Ultra-Rugged UHF RFID Sled sled parts, battery installation, mobile device attachment, LED indications, and charging. Carefully remove all protective material from the RFD90 Ultra-Rugged sled and save the shipping container for later storage and shipping.

Verify the following items are in the box:

- RFD90 Ultra-Rugged UHF RFID Sled
- Battery
- Quick Start Guide

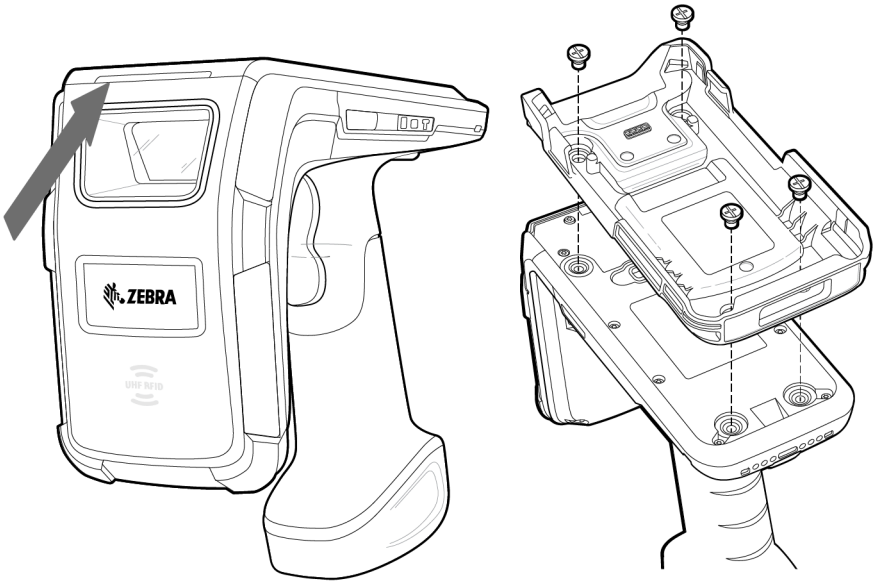
Inspect the equipment for damage. If any equipment is missing or damaged, contact the Zebra Support Center immediately.

For a full list of accessories that can be used with the RFD90 Ultra-Rugged UHF RFID sled, refer to the product-specific Technical Accessory Guide available at: zebra.com/support.

Adaptor Installation

RFD90 Ultra-Rugged UHF RFID Sleds can be used with various mobile devices by using an adaptor to mount the device onto the sled.

To install an adaptor:



1. Remove the cover by pulling up on the lip.
2. Secure the adaptor onto the RFD90 by fastening the four screws into the sled. Recommended Torque: 2.5 kgf-cm (14 ibf/in.)

RFD9030 Standard-Range Ultra-Rugged UHF RFID Sled Features

Figure 1 RFD9030 Standard-Range Ultra-Rugged UHF RFID Features

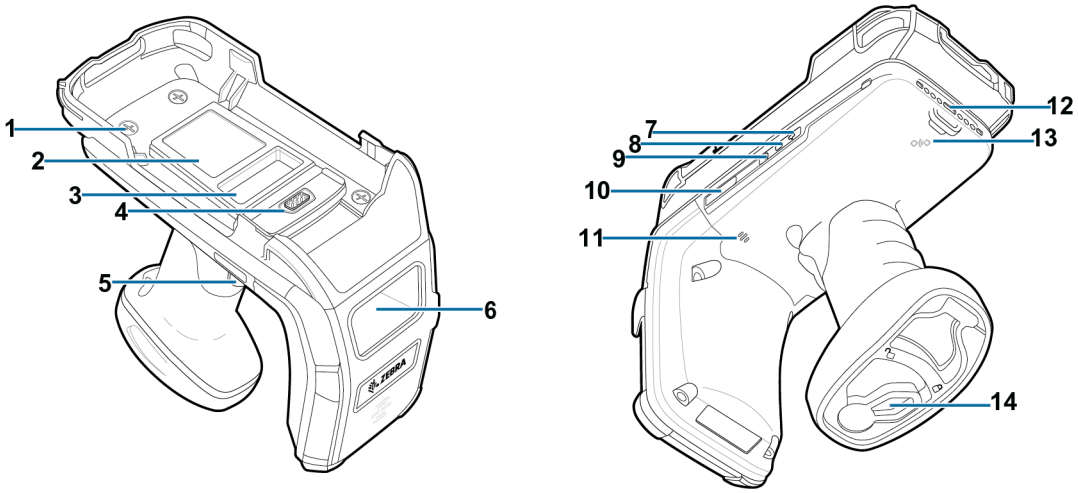


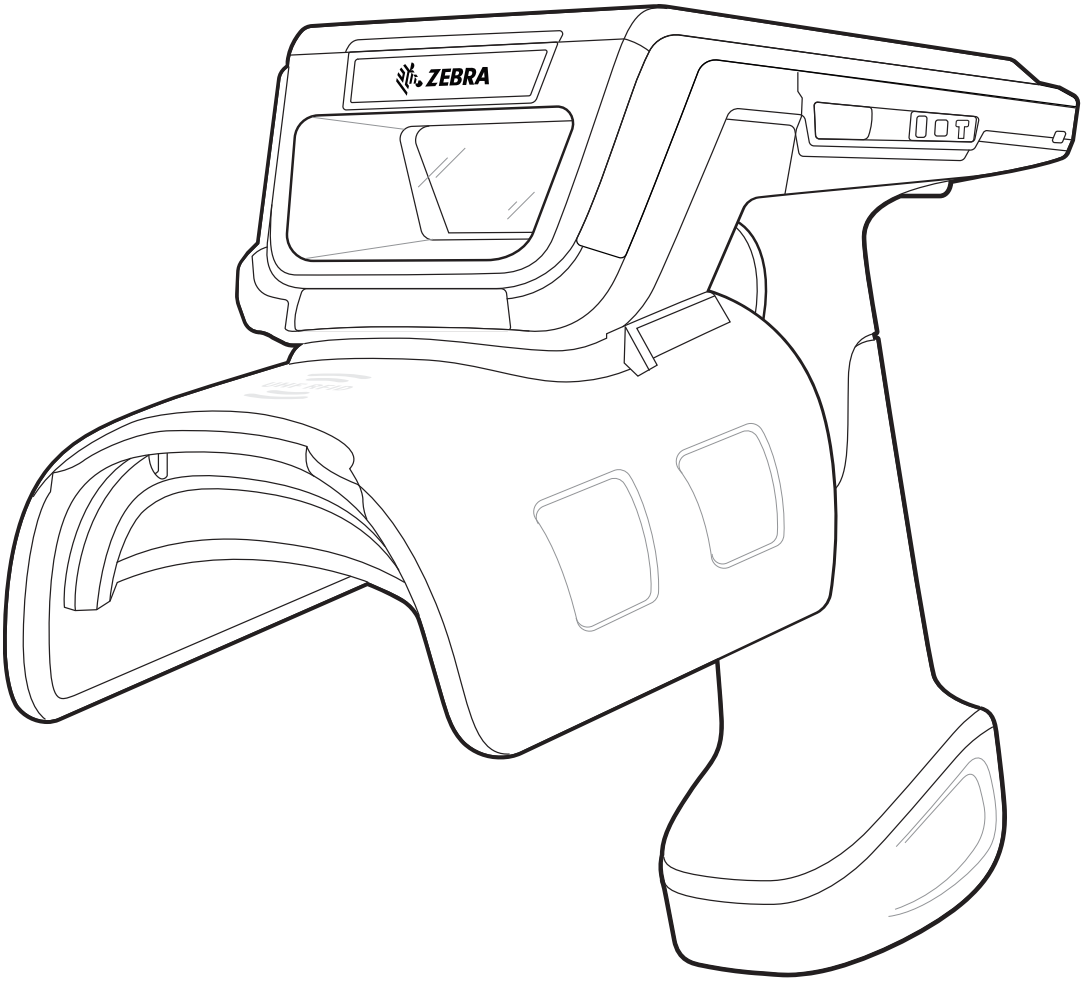
Table 1 RFD9030 Standard-Range Ultra-Rugged UHF RFID Sled Features

Item	Description
1	Screws (4)
2	Adaptor Label
3	Sled Label
4	eConnex Communication Port (available on eConnex-enabled adaptors only)
5	Tri-Function Trigger
6	Imager
7	Wi-Fi Status LED
8	Battery Status LED
9	Bluetooth LED
10	Status LED
11	Beeper
12	Charging Contacts
13	NFC Area
14	Battery Door Lock

RFD9090 Long-Range Ultra-Rugged UHF RFID Sled

The RFD9090 RFID Long Range Ultra-Rugged UHF RFID sled has the capacity to decode symbologies from an extended distance.

Figure 2 RFD9090 Long Range Ultra-Rugged UHF RFID Sled

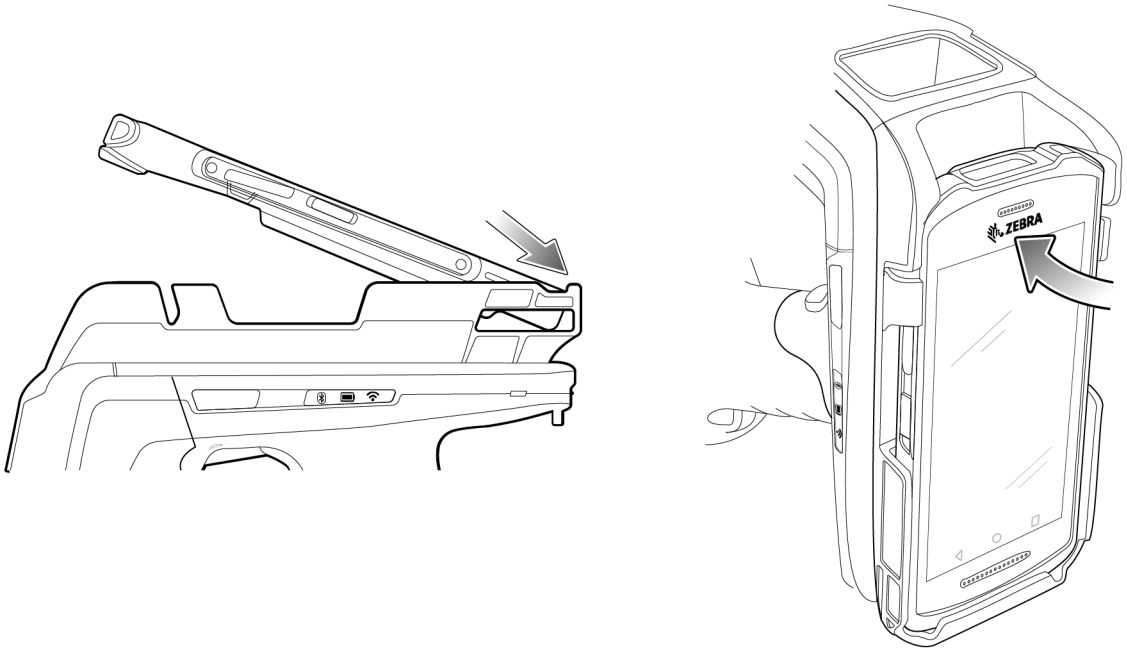


Device Installation

To secure the mobile computer to the RFD90 sled, place the bottom of the device fully forward into the RFD90 sled adaptor and push on the top center of the mobile computer to secure it.

NOTE: While installing the mobile computer into the adaptor, use caution and do not collide with the pogo pins on the RFD90.

Figure 3 Device Installation

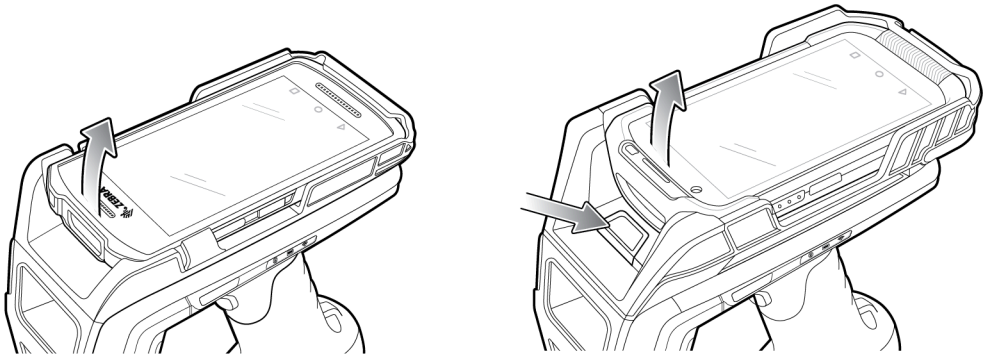


Device Removal

To remove the mobile computer from the sled, firmly hold the sled handle, and lift the device off the sled adaptor.

NOTE: If using a TC7 mobile computer (shown on the right in the figure below) with the RFD90 sled, press the button on the adaptor to release the mobile computer and lift the device off of the sled adaptor.

Figure 4 Device Removal

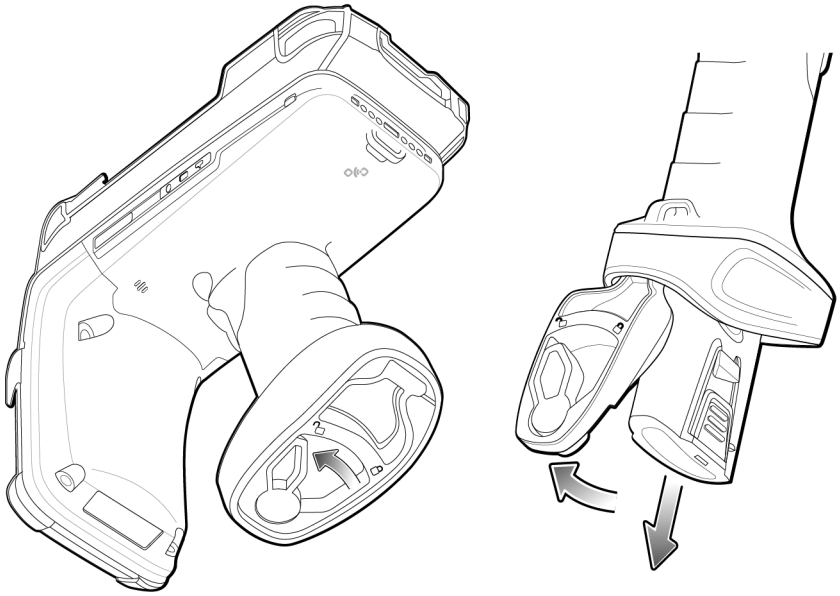


Battery Replacement

The battery that comes standard with the sled can be replaced by following the instructions outlined in this section.

To remove the battery from the sled:

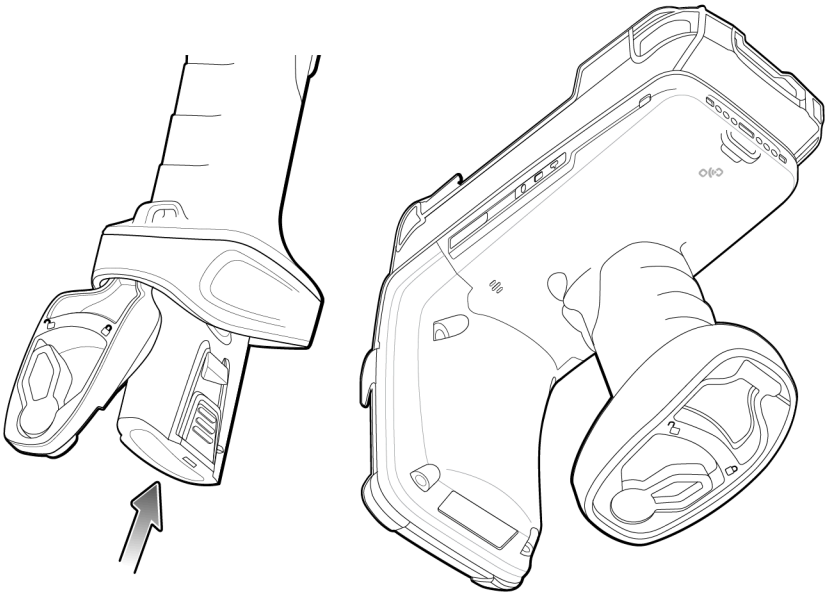
Figure 5 Battery Removal



1. Slide the locking latch to the left to unlock the battery door.
2. Open the battery door.
3. Pull the battery downward to remove it.

Battery Installation

Open the battery locking door and slide the battery into the handle to install the battery into the sled. Slide the lock on the battery locking door into the locked position to lock the door and secure the battery.



Pairing the Sled with a Mobile Computer

Pair the sled with a mobile computer by connecting directly with the communication port, scanning the 2D barcode on the device, or using the Tap-to-Pair feature on the RFD90 to activate NFC Bluetooth pairing and facilitate Bluetooth communication between the sled and the mobile computer.

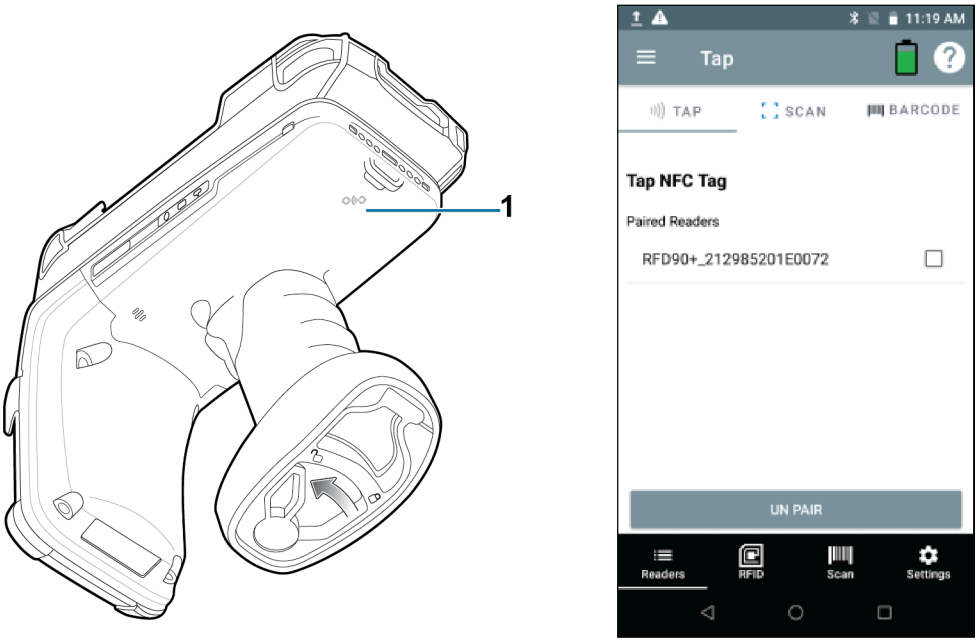
- To connect via scan, scan the code on the sled using the mobile computer to obtain the Bluetooth MAC address to pair the device to the sled.

Figure 6 Scan 2D Barcode to Obtain MAC Address

1	2D Barcode on Bluetooth Connection Manufacturing Label

- To connect via NFC, align the NFC area behind the sled handle with the NFC area on the back of the mobile computer to pair.

Figure 7 Tap-to-Pair



1	NFC Area

Once the mobile computer has paired with the sled, it recognizes the device going forward and automatically connects using the 123RFID Mobile.

Charging

Before using the RFD90 RFID Ultra-Rugged UHF RFID for the first time, fully charge the battery by placing it in the charging cradle until the LED Power/Charging Indicator turns solid green.

The sled and mobile computer may be charged in the charging cradle individually or attached. The sled automatically powers on when removed from the charging cradle. The sled enters Off mode if it is idle for thirty minutes.

NOTE: The cradle does not charge the device if the battery is completely depleted.

NOTE: A 12V power supply must be connected to the power jack when charging the sled using the cable cup accessory.

UI Indicators

The sled presents multiple forms of feedback to inform the user of various device states. The sled provides LED definitions for decode and battery status as well as beeper indications to indicate battery charge progress. The trigger on the device is capable of initiating a bootloader recovery and carrying out various programmable tasks.

LED Definitions

The sled provides user feedback in the form of LED indications for decode, battery, Bluetooth, and Wi-Fi states.

Decode LED Definitions

The following table outlines the context in which decode LED feedback is provided and the indication that is presented for a given device state.

NOTE: The LED indicators on the sled differ from the LED indicators on the mobile computer being used with the sled.

Table 2 Decode LED Indicators

Condition	Indication
Good Scan	Green
Scan Error	Red
RFID Rag Read Indicator Enabled	Green
Read Error	Red

Battery LED Definitions

The following table outlines the context in which battery LED feedback is provided and the indication that is presented for a given device state.

Table 3 Battery LED Definitions While Charging

Conditions	Indications
Pre-charging	Amber (Fast, Fast, Slow)
Charging	Amber (Blinking)
Fully Charged	Green (Stays On)
Charging Error	Amber (Fast Blinking)

Bluetooth LED Definitions

The following table outlines the context in which Bluetooth LED feedback is provided and the indication that is presented for a given device state.

Table 4 Bluetooth LED Definitions

Condition	Indication
Looking to Pair	Blue (Blinking)
Pairing	Blue (Stays On)
Paired/Connected	Blue (Stays On)
Error	Red (Stays On)

Wi-Fi LED Definitions

The following table outlines the context in which Wi-Fi LED feedback is provided and the indication that is presented for a given device state.

Table 5 Wi-Fi LED Definitions

Condition	Indication
Connecting	Green (Blinking)
Connected	Green (Stays On)
Transmission Error/Out of Range	Red (Stays On)

Beeper Indications

The sled provides user feedback in the form of beeper tones for decode, battery, Bluetooth, and Wi-Fi states.

Decode Beeper Indications

The following table outlines the context in which beeper feedback is provided and the indication that is presented for a specific decode event

Table 6 Decode Beeper Indications

Condition	Tone
Good Decode	Short high tone

Table 6 Decode Beeper Indications (Continued)

Condition	Tone
Decode Transmission Error	No beep
Good RFID Decode	Short medium tone
RFID Error	No beep
Error Message (Other)	No beep
Sled Memory Full (Batch Mode)	Long tones for 5 seconds

Battery Beeper Indications

The following table outlines the context in which decode LED feedback is provided and the indication that is presented for a given device state.

Table 7 Battery Beeper Indications

Condition	Tone
Low Battery (20%)	Medium-length tones
Lower Battery (10%)	Short tones - repeat
Suspend	High/Medium/Low
Charging	Short tone when the charger is connected.
Fully Charged	One beep
Charging Error	Three beeps (single occurrence)
Power On	Low/Medium/High beep

Bluetooth Beeper Indications

The following table outlines the context in which beeper feedback is provided and the indication that is presented for a specific Bluetooth state.

Table 8 Bluetooth Beeper Indications

Condition	Tone
On/Not Connected	No beep
On/Pairing in Process	No beep
On/Connected	Short/Low/High
Out of Range	Short/High/Low
Pairing Error	No beep
Off	No beep

Wi-Fi Beeper Indications

The following table outlines the context in which beeper feedback is provided and the indication that is presented for specific Wi-Fi states.

Table 9 Wi-Fi Beeper Indications

Condition	Tone
On/Not Connected	No beep
On/Pairing in Process	No beep
On/Connected	Short/Low/High
Out of Range	Short/High/Low
Pairing Error	No beep
Off	No beep