CC600/CC6000

Customer Concierge

Product Reference Guide

For Android ™ 10

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01EN Rev A	7/2020	Initial Release
-02EN Rev A	10/2020	Updated Settings, Application, Application Deployment, and Wireless sections.
-03EN Rev A	08/2021	Updated the GMS Restricted section.

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About This Guide

Introduction

This guide provides information about using the CC600 and CC6000 Customer Concierge interactive kiosk and accessories.

NOTE: Screens and windows pictured in this guide are samples and can differ from actual screens.

Configurations

This guide covers the configurations listed in Table 1 and Table 2.

Table 1   CC600 Device Configurations

Configuration	Description	Front Camera	Scan Engine
CC600-5-3200LNWW	5 inch, OS: Android ™ 10, 32GB, Ethernet/Wi-Fi, Imager, Worldwide Configuration	No	SE2100
CC600-5-3200LNNA	5 inch, OS: Android ™ 10, 32GB, Ethernet/Wi-Fi, Imager, North America Configuration	No	SE2100
CC600-5-3200LNEU	5 inch, OS: Android ™ 10, 32GB, Ethernet/Wi-Fi, Imager, Europe Configuration	No	SE2100
CC600-5-3200LNIN	5 inch, OS: Android ™ 10, 32GB, Ethernet/Wi-Fi, Imager, India Configuration	No	SE2100

Table 2 CC6000 Device Configurations

Configuration	Description	Front Camera	Scan Engine
CC6000-10-3200LCWW	10 inch, OS: Android ™ 10, 32GB, Landscape, Imager, Worldwide Configuration	No	SE4710
CC6000-10-3200PCWW	10 inch, OS: Android ™ 10, 32GB, Portrait, Imager, Worldwide Configuration	Yes	SE4710
CC6000-10-3200LCNA	10 inch, OS: Android ™ 10, 32GB, Landscape, Imager, North America Configuration	Yes	SE4710
CC6000-10-3200PCNA	10 inch, OS: Android ™ 10, 32GB, Portrait, Imager, North America Configuration	Yes	SE4710
CC6000-10-3200LNNA	10 inch, OS: Android ™ 10, 32GB, Landscape, Imager, North America Configuration	No	SE4710

Chapter Descriptions

Topics covered in this guide are as follows:

- Getting Started provides information on getting the device up and running for the first time.
- Using the Device provides information for operating the device.
- Settings provides information provides information for operating the device.
- Applications provides information on using applications installed on the device.
- Data Capture describes how to capture data using the device.
- Wireless provides information on the various wireless options.
- Accessories provides information for using the accessories for the device.
- Application Deployment provides information for developing and managing applications.
- Maintenance and Troubleshooting includes instructions on cleaning and provides troubleshooting solutions for potential problems during device operation.
- Technical Specifications provides the technical specifications for the device.

Related Documents

- CC600/CC6000 Customer Concierge Quick Start Guide, p/n MN-003314-xx.
- CC600/CC6000 Customer Concierge Regulatory Guide, p/n MN-003435-xx.

For the latest version of this guide and all guides, go to: zebra.com/support.

Notational Conventions

Notational conventions are used to highlight important information.

- "Device" refers to all configurations of the CC600 Customer Concierge and CC6000 Customer Concierge.
- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons are used throughout the documentation set. These icons and their associated meanings are described below.

NOTE: The text here indicates information that is supplemental for the user to know and that is not required to complete a task.

IMPORTANT: The text here indicates information that is important for the user to know.

CAUTION: The text here indicates information that is important for the user to know.

WARNING: If danger is not avoided, the user CAN be seriously injured or killed.

Service Information

If you have a problem with your equipment, contact 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 (found on manufacturing label)
- Model number or product name (found on manufacturing label)
- Software type and version number
- IMEI number

Customer Support responds to calls by email or telephone within the time limits set forth in support agreements.

If the problem cannot be solved by Customer Support, the user may need to return the equipment for servicing and will be given specific directions. We are not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty. Remove the SIM card and/or microSD card from the device before shipping for service.

If the device was purchased from a business partner, contact that business partner for support.

Determining Software Versions

To determine the current software versions:

1. Swipe down from the Status bar with two fingers to open the Quick Access panel and then touch ⚙.

2. Touch **About phone**.

3. Scroll to view the following information:
   - Device name
   - Emergency information
   - SWComponents
   - Legal Informaiton
   - Model & hardware
   - Android version
   - IP address
   - Wi-Fi MAC adress
   - Ethernet MAC address
   - Bluetooth address
   - Up time
   - Build Fingerprint
   - Build number.

Determining the Serial Number

Before contacting Customer Support, determine the serial number of your device.

Touch **About phone** > **Model & hardware**.

Getting Started

Introduction

This chapter provides information for getting the device up and running for the first time.
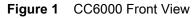
Unpacking
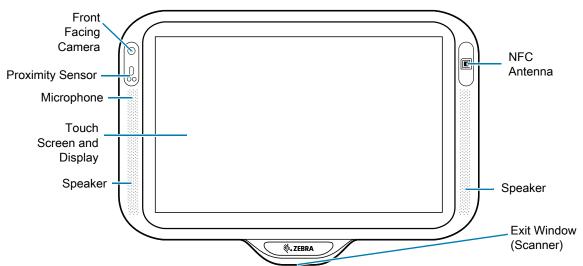
1. Carefully remove all protective material from the device and save the shipping container for later storage and shipping.

2. Verify that the following are included:
   - CC600 or CC6000 interactive kiosk.
   - Regulatory Guide.
   - CC600 only: Ferrite bead for EMI. Attaches to the DC power module.

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 display.
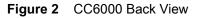
Features
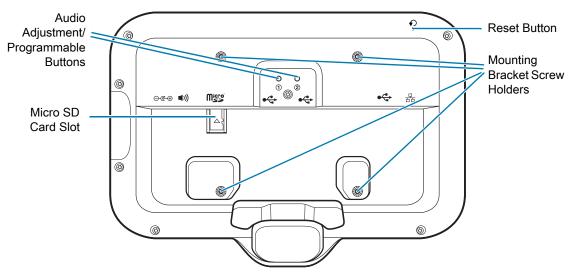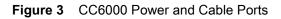
📝 **NOTE:** Although the orientations differ, the features on the CC6000 landscape and portrait devices are the same.

Figure 1   CC6000 Front View

Front Facing Camera

Proximity Sensor

Microphone

Touch Screen and Display

Speaker

NFC Antenna

Speaker

Exit Window (Scanner)

Figure 2   CC6000 Back View

Audio Adjustment/ Programmable Buttons

Micro SD Card Slot

Reset Button

Mounting Bracket Screw Holders

Figure 3   CC6000 Power and Cable Ports

Power
Port

Audio
Port

USB C Port

(Used for
External
display or
OTG)

USB A
Port

USB A
Port

Ethernet with POE

Figure 4   CC6000 Back With Bracket View

Mounting
Bracket
Locking
Screw

Wall Mount
Screw Holes

Mounting
Bracket

Mounting
Bracket Screw
Holders

Figure 5   CC600 Front Views

Microphone

Proximity Sensor

Speaker

Touch Screen
and Display

Exit Window
(Scanner)

Figure 6   CC600 Back View

Mounting Bracket Screw Holders (4)

Reset Button

Audio Adjustment/Programmable Buttons

Micro SD Card Slot

Figure 7   CC600 Power and Cable Ports

Micro SD Card Slot

USB C Port (Used for External display or OTG and other USB-2 peripherals)

Power Port

Ethernet with POE

Figure 8　CC600 Back With Bracket View

Mounting Bracket Locking Screw

Mounting Bracket

Mounting Bracket Screw Holders

Wall Mount Screw Holes

Table 3　Feature Descriptions

Item	Function
Touch Screen and Display	Displays all information needed to operate the device.
Exit Window (Scanner)	Provides data capture using the imager and reads a barcode. **Note**: To read a barcode, a scan-enabled app is required on the device.
Speaker	Provides audio output for video and music playback. Provides audio in speaker-phone mode.
NFC Antenna	Reads NFC tags. (CC6000 Only)
Proximity Sensor	Identifies the proximity of a user for turning up the display.
Microphone	Use for communications in Speakerphone mode.
Front Facing Camera	Captures still photos and videos. **Note**: Select CC6000 devices only.
Interface Connectors	See Figure 3 and Figure 7.
Volume Up/Down Button	Increase and decrease audio volume (programmable).
External Display	Designated for USB-C port utilization.
Reset button	Press and hold to reset the device. See Resetting the Device on page 25 for more information.

Setting Up the Device

Perform this procedure to start using the device for the first time.

• Install a micro secure digital (SD) card (optional).

- Connect the power supply to power on the device.
- Configure the device.
- Mount the device with the mounting bracket.
- Setup a Google account.

Inserting the microSD Card (Optional)

The microSD card slot provides secondary non-volatile storage. The slot is located on the back of the device to the right of the audio jack. Refer to the documentation provided with the card for more information, and follow the manufacturer's recommendations for use.
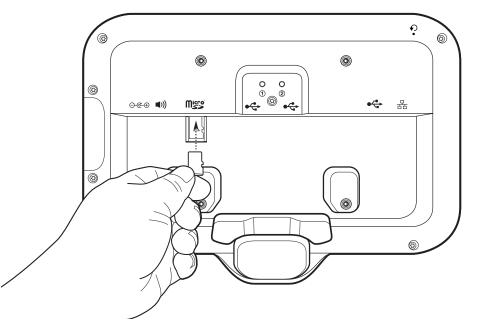
CAUTION: Follow proper electrostatic discharge (ESD) precautions to avoid damaging the microSD card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

To install the microSD card:

1. Remove the device from the mounting bracket, if installed.

2. Slide the microSD card, connectors down, into the device as shown in Figure 9.

Figure 9   Inserting microSD Card
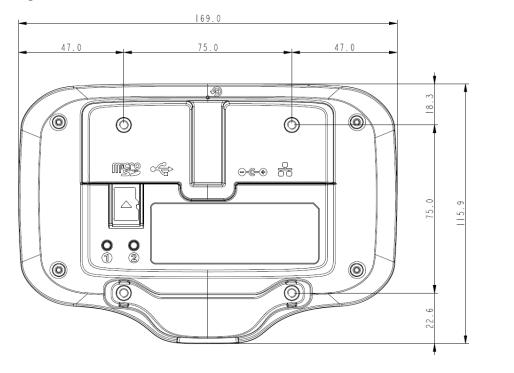
Mounting the Device

Each configuration of the device requires the appropriate mounting bracket to mount the device to a wall or other flat surface. The diameter of the holes for the wall screws is 5.8mm (0.228 in).

NOTE: Device measurements in Figure 10, Figure 11 and Figure 12 are in millimeters.

Figure 10   CC600 Measurements
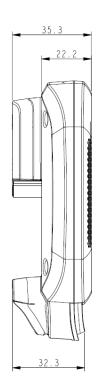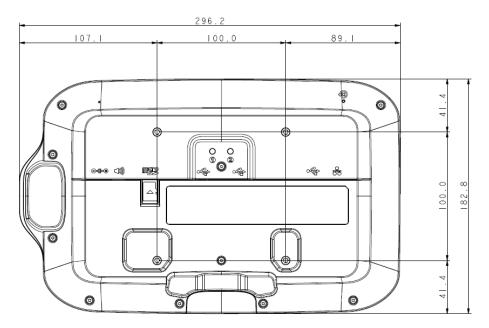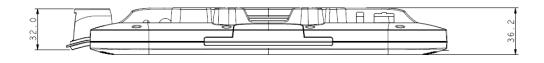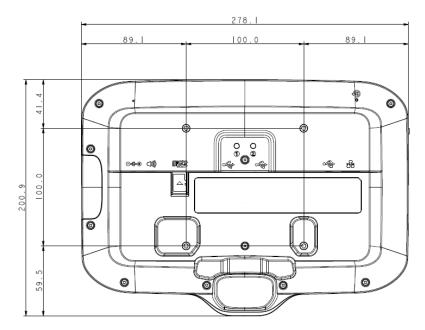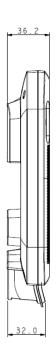
Figure 11   CC6000 Portrait Measurements

Figure 12   CC6000 Landscape Measurements

Figure 13   CC600 Mounting Bracket

Securing Screw Hole

Shoulder Screw Hole (4)

Securing Screw

Wall Screw Hole (3)

Figure 14 CC6000 Mounting Bracket - Portrait Orientation

Shoulder Screw Hole (4)

Power Supply

Wall Screw Hole (4)
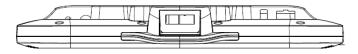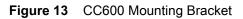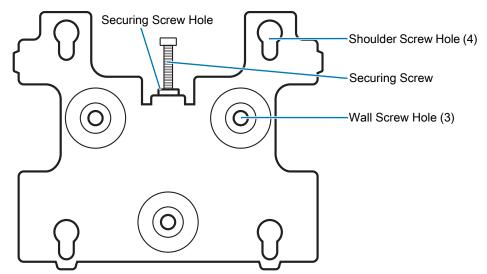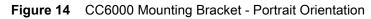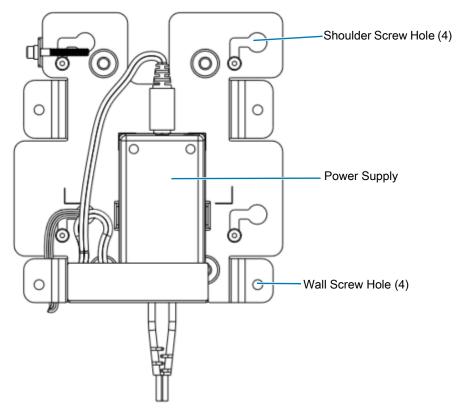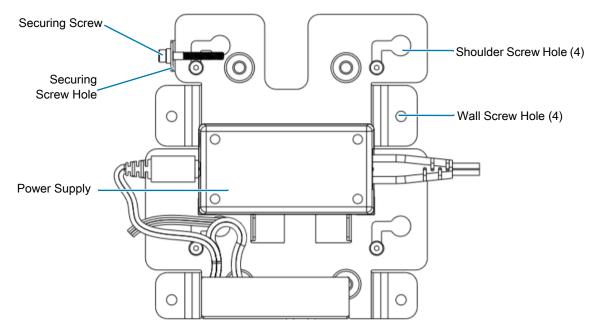
Figure 15 CC6000 Mounting Bracket (KT-152098-03) - Landscape Orientation

Securing Screw

Securing Screw Hole

Shoulder Screw Hole (4)

Wall Screw Hole (4)

Power Supply

To mount the device:

1. Determine the CC600 or CC6000 mounting location.

2. Secure the mounting plate to the wall using the screws provided (three screws for the CC600 plate and four screws for the CC6000).

Figure 16 Attaching the CC600 Bracket To Wall

To Wall
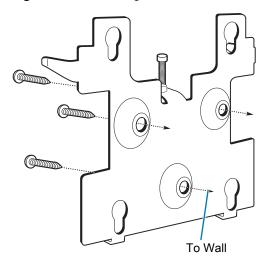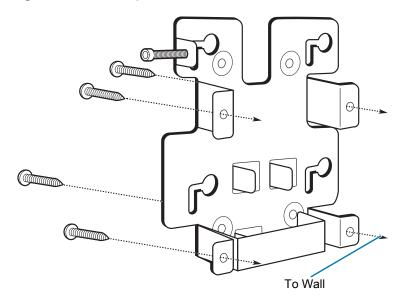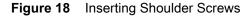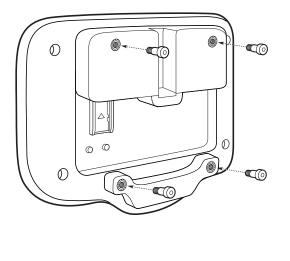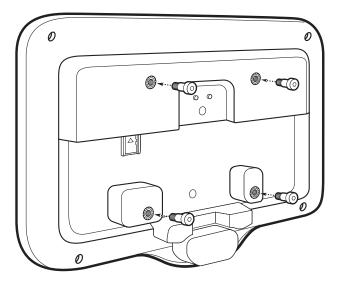
Figure 17 Attaching the CC6000 Bracket To Wall

To Wall
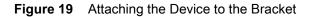
3. Insert the four shoulder screws, also provided, into the mounting holes in the back of the device.

Figure 18   Inserting Shoulder Screws
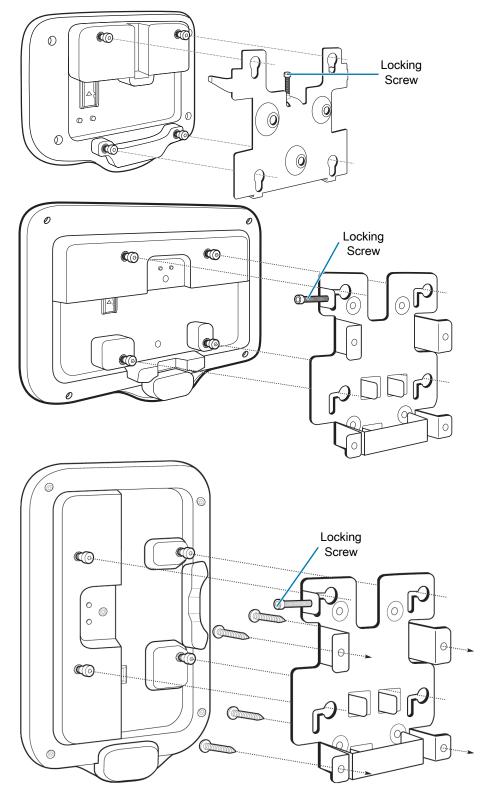
4. Connect the power supply to the power port. Connect any additional cables into the appropriate ports shown in Figure 3 and Figure 7.

5. Mount the device by placing the shoulder screws through the four keyholes on the mounting plate, and slide the device down to secure in place.

Figure 19   Attaching the Device to the Bracket

6. Insert the locking screw through the hole in the tab at the top of the mounting plate. Hand tighten the screw to secure the device.

Resetting the Device

The device has a recessed reset button (see CC6000 Back View on page 13 and CC600 Back View on page 16 for the location of the button).

To activate the reset button, use the tip of a small paper clip (1mm in diameter), insert into the recess, push and hold for 3 seconds.

Device has a recovery console accessible via pressing the Button #1 on the back of the device upon power up or via ADB connection and command.

The following reset functions are supported:

- Soft reset is performed with an ADB command.
- Enterprise reset (see Performing an Enterprise Reset on page 111 for more information).
- Factory reset (see Performing a Factory Reset on page 112 for more information).

The device recovery mode supports the following functions:

- Flash image from zip file on an SD card or from internal flash.
- Apply a system update from an SD card or from internal flash.

Using the Device

Introduction

This chapter explains the buttons, status icons, and controls on the device, and provides basic instructions for using the device including resetting the device and entering data.

Home Screen

Turn on the device to display the **Home** screen. Depending on the configuration, the Home screen may appear different. Contact your system administrator for more information.

Touch the screen and slide up to unlock. For screen locking information see .

NOTE: By default, non-GMS devices do not have the same icons on the Home screen as GMS. Icons are shown below for example only. Home screen icons can be configured by the user and may look different than shown.

Figure 20   Home Screen
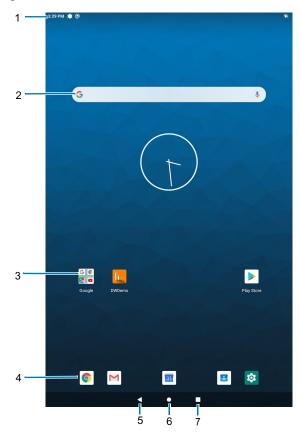
Table 4   Home Screen Features

1	Status Bar	Displays the time, status icons (right side), and notification icons (left side). For more information see
2	Widgets	Launches stand-alone apps that run on the Home screen.
3	Folder	Contains apps.
4	Shortcut Icons	Opens apps installed on the device.
5	Back	Displays the previous screen.
6	Home	Displays the Home screen.
7	Recent	Displays recently used applications.

Status Bar

The Status bar displays the time, notification icons (left side), and status icons (right side).

If there are more notifications than can fit in the Status bar, a dot displays indicating that more notifications exist. Swipe down from the Status bar to open the Notification panel and view all notifications and status.

NOTE: Some Status icons may not appear in the Status bar if there are too many icons to display.

Figure 21 Notification and Status Icons

1	Notification Icons. See Notification Icons on page 28.
2	Status Icons. See Status Icons on page 29.

Notification Icons

Notification icons indicate app events and messages.

Table 5 Notification Icons

Icon	Description
•	More notifications are available for viewing.
	Data is syncing.
	Indicates an upcoming event. Non-GMS devices only.
31	Indicates an upcoming event. GMS devices only.
	Open Wi-Fi network is available.
	Song is playing.
	Problem with sign-in or sync has occurred.
	Device is uploading data.
	Device is downloading data when animated and download is complete when static.
	Device is connected to or disconnected from virtual private network (VPN).
	Preparing internal storage by checking it for errors.
	USB debugging is enabled on the device.
	Headset is connected to the device.

Table 5   Notification Icons (Continued)

Icon	Description
	PTT Express Voice client status. See the PTT Express PTT Notification Icons on page 55 for a complete list.
	Indicates that RxLogger app is running.
	Indicates the Bluetooth scanner is connected to the device.
	Indicates the ring scanner is connected to the device in HID mode.

Status Icons

Status icons display system information for the device.

Table 6   Status Icons

Icon	Description
	Alarm is active.
	Indicates that all sounds except media and alarms are silenced.
	Do Not Disturb mode active.
	Airplane Mode is active. All radios are turned off.
	Bluetooth is on.
	The device is connected to a Bluetooth device.
	Connected to a Wi-Fi network. Indicates the Wi-Fi version number.
	Not connected to a Wi-Fi network or no Wi-Fi signal.
	Connected to an Ethernet network.
	Indicates that a headset is connected to the device.

Managing Notifications

Notification icons report the arrival of new messages, calendar events, alarms, and ongoing events. When a notification occurs, an icon appears in the Status bar with a brief description. See Table 5 on page 28 for a list of possible notification icons and their description. Open the Notification panel to view a list of all the notifications.

- To view a list of all notifications, open the Notification panel by dragging the Status bar down from the top of the screen.

Figure 22   Notification Panel

- To respond to a notification, open the Notification panel and then touch a notification. The Notification panel closes and the corresponding app opens.
- To manage recent or frequently used notifications, open the Notification panel and then touch **Manage**. Touch the toggle switch next to an app to turn off all notifications, or touch an app for more notification options.
- To clear all notifications, open the Notification panel and then touch **CLEAR ALL**. All event-based notifications are removed. Ongoing notifications remain in the list.
- To close the Notification panel, swipe the Notification panel up.

Opening the Quick Access Panel

Use the Quick Access panel to access frequently used settings (for example, Airplane mode).

- If the device is locked, swipe down once.
- If the device is unlocked, swipe down once with two fingers, or twice with one finger.

30

- If the Notification panel is open, swipe down from the Quick Settings bar.

Figure 23   Quick Access Panel

NOTE: Not all icons are pictured. Icons may vary.

Quick Access Panel Icons

- Display brightness - Use the slider to decrease or increase the brightness of the screen.
- Wi-Fi network - Turn Wi-Fi on or off. To open Wi-Fi settings, touch the Wi-Fi network name.
- Bluetooth settings - Turn Bluetooth on or off. To open Bluetooth settings, touch **Bluetooth**.
- Invert colors - Invert the display colors.
- Do not disturb - Control how and when to receive notifications.
- Airplane mode - Turn Airplane mode on or off. When Airplane mode is on the device does not connect to Wi-Fi or Bluetooth.
- Night Light - Tint the screen amber to make it easier to look at the screen in dim light. Set Night Light to turn on automatically from sunset to sunrise, or at other times.
- Screen Cast - Share phone content on Chromecast or a television with Google Cast built-in. Touch cast screen to display a list of devices, then touch a device to begin casting.
- Dark Theme - Toggles dark theme on and off. Dark themes reduce the luminance emitted by the screen, while meeting minimum color contrast ratios. It helps improve visual ergonomics by reducing eye strain, adjusting brightness to current lighting conditions, and facilitating screen use in dark environments.
- Bedtime mode - Turn on to block all data usage during set time periods. To open Bedtime mode settings, touch and hold.
- Focus mode - Turn on to pause distracting apps. To open Focus mode settings, touch and hold.
- Nearby Share - Helps find and interact with services and devices close to the device.

Editing Icons on Quick Settings

The first several setting tiles from the Quick Access panel become the Quick Settings bar.

- Open the Quick Access panel and touch ✎ to edit, add, or remove settings tiles.

Un-Locking the Screen

Users can set the Lock screen upon initial boot. Use the Lock screen to protect access to data on the device. Got to Setting Screen Lock on page 39 for information on setting up the locking feature.

When set to lock screen during an initial boot, a pattern, PIN, or password is required to unlock the device.

When the Lock screen displays, swipe the screen up to unlock. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen. If the PIN or Password screen unlock feature is enabled, enter the PIN or password after unlocking the screen.

USB Communication

Connect the device to a host computer to transfer files between the device and the host computer.

When connecting the device to a host computer, follow the host computer's instructions for connecting and disconnecting USB devices, to avoid damaging or corrupting files. For information on USB communication accessories available for this device, see Accessories on page 100.

Transferring Files

Use Transfer files to copy files between the device and the host computer.

1. Connect the device to a host computer using a USB accessory.

2. On the device, pull down the Notification panel and touch **Connect this device via USB**.

   By default, **No data transfer** is selected.

3. Touch **File Transfer**.

> **NOTE:** After you change the setting to **File Transfer**, and then disconnect the USB cable, the setting reverts back to **No data transfer**. If the USB cable is reconnected, select **File Transfer** again.

4. On the host computer, open a file explorer application.

5. Locate the **device** as a portable device.

6. Open the **Internal storage** folder.

7. Copy files to and from the device or delete files as required.

Transferring Photos

Use PTP to copy photos from the device to the host computer.

1. Connect the device to a host computer using a USB accessory.

2. On the device, pull down the Notification panel and touch **Connect this device via USB**.

3. Touch **PTP**.

4. On the host computer, open a file explorer application.

5. Open the **Internal storage** folder.

6. Copy or delete photos as required.

Disconnect from the Host Computer

⚠️ **CAUTION:** Carefully follow the host computer's instructions to disconnect USB devices correctly to avoid losing information.

To disconnect the device from the host computer:

1. On the host computer, unmount the device.

2. Remove the device from the USB accessory.

Settings

Introduction

This chapter describes settings available for configuring the device.

Accessing Settings

There are multiple ways to access settings on a device.

- Swipe down with two fingers from the top of the Home screen to open the Quick Access panel and touch ⚙.
- Double-swipe down from the top of the Home screen to open the Quick Access panel and touch ⚙.
- Swipe up from the bottom of the Home screen to open APPS and touch ⚙.

Display Settings

Use Display settings to change the screen brightness, enable night light, change the background image, enable dark theme, set sleep time, and change font size.

Setting the Screen Brightness

Manually set the screen brightness using the touchscreen.

1. Swipe down with two fingers from the Status bar to open the Quick Access panel.
2. Slide the icon to adjust the screen brightness level.

Setting Night Light

The Night Light setting tints the screen amber, making the screen easier to look at in low light.

1. Go to **Settings**.
2. Touch **Display**.
3. Touch **Night Light.**
4. Touch **Schedule**.

5. Select one of the schedule values:
   - None (default)
   - Turns on at custom time
   - Turns on from sunset to sunrise.

6. By default, **Night Light** is disabled. Touch **TURN ON NOW** to enable.

7. Adjust the tint using the **Intensity** slider.

8. Touch the Home button.

Setting Screen Timeout

Set the screen sleep time.

1. Go to **Settings**.

2. Touch **Display > Screen timeout**.

3. Select one of the sleep values.
   - **15 seconds**
   - **30 seconds**
   - **1 minute**
   - **2 minutes**
   - **5 minutes**
   - **10 minutes**
   - **30 minutes**
   - **Never** (default)**.**

4. Touch the Home button.

Lock Screen Display

The lock screen display setting wakes the screen when notifications are received.

1. Go to **Settings**.

2. Touch **Display > Advanced**.

3. Touch **Lock screen display**.

4. In the **When to show** section, enable or disable an option using the switch.

5. Touch the Home button.

Setting Font Size

Set the size of the font in system apps.

1. Go to **Settings**.

2. Touch **Display > Advanced.**

3. Touch **Font size**.

4. Select one of the font size values.

    *   Small
    *   Default
    *   Large
    *   Largest.

5. Touch the Home button.

Setting Display Size

By default, display size is set to default.

To change the display size:

1. Swipe down from the Status bar to open the Quick Settings bar and then touch ⚙.

2. Touch **Display > Advanced**.

3. Touch **Display size**.

4. Touch - and + to change the display size.

    *   Small
    *   Default
    *   Large
    *   Larger
    *   Largest.

5. Touch the Home button.

Setting the Date and Time

You are only required to set the time zone or set the date and time if the wireless LAN does not support Network Time Protocol (NTP).

1. Go to **Settings**.

2. Touch **System > Date & time**.

3. Touch **Use network-provided time zone** to disable automatic time zone synchronization.

4. Touch **Update Interval**.

5. Select the interval time to synchronize your device time from the network.

6. Touch **Date**.

7. In the calendar, set today's date.

8. Touch **OK**.

9. Touch **Time**.

10. Touch the green circle, drag to the current hour and then release.

11. Touch the green circle, drag to the current minute and then release.

12. Touch **AM** or **PM**.

13. Touch **OK**.

14. Touch **Time zone**.

15. Select the current time zone from the list.

16. Touch **Use 24-hour format**.

17. Touch the Home button.

General Sound Setting

Use the **Sound** settings to configure media and alarm volumes.

1. Go to **Settings**.

2. Touch **Sound**.

3. Touch an option to set sounds.

Sound Options

- **Zebra volume controls**
    - **Ring volume** - Controls the ringtone volume.
    - **Media volume** - Controls the music, games, and media volume.
    - **Alarm volume** - Controls the alarm clock volume.
    - **Notifications volume** - Controls the notification volume.
    - **In call volume** - Controls the volume during a call.
    - **Scanner volume** - Controls the scanner volume.
    - **Volume presets**
        - 🔕 - Mutes the ring, notifications, and scanner so that the device does not make sounds or vibrate.
        - 🔔 - Enables all sounds at the user defined levels.
- **Do Not Disturb** - Mutes some or all sounds and notifications.
- **Shortcut to prevent ringing** - Select how the shortcut method prevents ringing.
- **Default notification sound** - Select a sound to play for all system notifications.
- **Default alarm sound** - Select a sound to play for alarms.
- **Other sounds and vibrations**
    - **Screen locking sounds** - Play a sound when locking and unlocking the screen (default – enabled).
    - **Touch sounds** - Play a sound when making screen selections (default – enabled).

Remapping a Button

Buttons on the device can be programmed to perform different functions or as shortcuts to installed apps. For a list of key names and descriptions, refer to techdocs.zebra.com.

1. Go to **Settings**.

2. Touch **Key Programmer**. Two programmable buttons display.

3. Select the button to remap.

4. Touch the **BUTTON REMAPPING** tab or the **SHORTCUT** tab that lists the available functions and applications.

5. Touch a function or application shortcut to map to the button.

> **NOTE:** If you select an application shortcut, the application icon appears next to the button on the Key Programmer screen.

6. Touch the Home button.

7. If remapping the Back, Home, Search, or Menu button, perform a Soft Reset.

Remappable Keys

Figure 24   CC6000 Key Positions
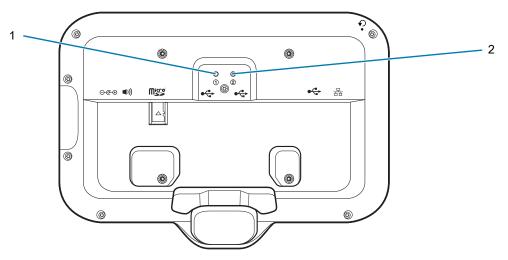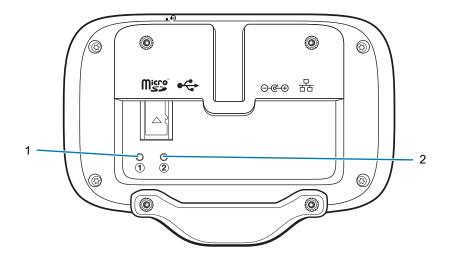
Figure 25   CC600 Key Positions

1	VOLUME_UP	Volume up button.
2	VOLUME_DOWN	Volume down button.

Setting Screen Lock

Use the **Device security** settings to set preferences for locking the screen on an initial boot.

1. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

2. Touch **Security**.

NOTE: Options vary depending upon the policy of some apps, such as email.

- **Screen lock** - Touch to configure the device to require a slide, pattern, PIN, or password to unlock the screen.
  - **None** - Disable screen unlock security.
  - **Swipe** - Slide the lock icon to unlock the screen.
  - **Pattern** - Draw a pattern to unlock screen. See Setting Screen Unlock Using Pattern on page 40 for more information.
  - **PIN** - Enter a numeric PIN to unlock screen. See Setting Screen Lock Using PIN on page 39 for more information.
  - **Password** - Enter a password to unlock screen. See Setting Screen Unlock Using Password on page 40 for more information.

Lock the screen to protect access to data on the device. Some email accounts require locking the screen. The Locking feature functions differently in Single-user versus Multiple-user mode.

Slide the screen up to unlock. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen.

If the PIN or Password screen unlock feature is enabled, enter the PIN or password after unlocking the screen.

Setting Screen Lock Using PIN

1. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

2. Touch **Security**.

3. Touch **Screen lock**.

4. Touch **PIN**.

5. To require a PIN upon device start up select **Yes**, or select **No** not to require a PIN.

6. Touch in the text field.

7. Enter a PIN (4 numbers) then touch **Next**.

8. Re-enter PIN and then touch **Next**.

9. Select the type of notifications that appear when the screen is locked and then touch **Done**.

10. Touch the Home button. The next time the device is powered on, a PIN is required.

Setting Screen Unlock Using Password

1. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.
2. Touch **Security**.
3. Touch **Screen lock**.
4. Touch **Password**.
5. To require a password upon device start up select **Yes**, or select **No** not to require a password.
6. Touch in the text field.
7. Enter a password (between 4 and 16 characters) then touch **Next**.
8. Re-enter the password and then touch **Next**.
9. Select the type of notifications that appear when the screen is locked and then touch **Done**.
10. Touch the Home button. The next time the device is powered on, a password is required.

Setting Screen Unlock Using Pattern

1. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.
2. Touch **Security**.
3. Touch **Screen lock**.
4. Touch **Pattern**.
5. To require a pattern upon device start up select **Yes**, or select **No** not to require a pattern.
6. Draw a pattern connecting at least four dots.
7. Touch **Continue**.
8. Re-draw the pattern.
9. Touch **Confirm**.
10. Select the type of notifications that appear when the screen is locked and then touch **Done**.
11. Touch the Home button. The next time the device is powered on, a pattern is required.

Keyboards

The device provides multiple keyboard options.

*   Android Keyboard - Non-GMS devices only
*   Gboard - GMS devices only
*   Enterprise Keyboard - Not pre-installed on the device. Contact Zebra Support for more information.

NOTE: By default the Enterprise and Virtual Keyboards are disabled.

Keyboard Configuration

Enabling Keyboards

1. Go to **Settings**.

2. Touch **System** > **Languages & input** > **Virtual keyboard** > **Manage keyboards**.

3. Touch a keyboard to enable.

Switching Between Keyboards

To switch between keyboards, touch in a text box to display the current keyboard.

-   On the Gboard keyboard, touch and hold ⊕ (GMS devices only).
-   On the Android keyboard, touch and hold ⊕ (Non-GMS devices only).
-   On the Enterprise keyboard, touch ⊛.

Using the Android and Gboard Keyboards

Use the Android or Gboard keyboards to enter text in a text field.

To configure the keyboard settings, touch and hold , (comma) and then select **Android keyboard settings**.

Edit Text

Edit entered text and use menu commands to cut, copy, and paste text within or across apps. Some apps do not support editing some or all of the text they display; others may offer their own way to select text.

Entering Numbers, Symbols, and Special Characters

1. Enter numbers and symbols.
    -   Touch and hold one of the top-row keys until a menu appears then select a number or special character.
    -   Touch the Shift key once for a single capital letter. Touch the Shift key twice to lock in uppercase. Touch the Shift key a third time to unlock Capslock.
    -   Touch **?123** to switch to the numbers and symbols keyboard.
    -   Touch the **=\<** key on the numbers and symbols keyboard to view additional symbols.

2. Enter special characters.
    -   Touch and hold a number or symbol key to open a menu of additional symbols. A larger version of the key displays briefly over the keyboard.

Using the Enterprise Keyboard

The Enterprise Keyboard contains multiple keyboard types.

-   Numeric
-   Alpha
-   Special characters

- Data capture.

Numeric Tab

The numeric keyboard is labeled **123**. The keys displayed vary on the app being used. For example, an arrow displays in **Contacts**, however **Done** displays in **Email** account setup.

Alpha Tab

The alpha keyboard is labeled using the language code. For English, the alpha keyboard is labeled **EN**.

Additional Character Tab

The additional characters keyboard is labeled **#*/**.

Touch 😊 to enter emoji icons in a text message.

Touch **ABC** to return to the Symbols keyboard.

Scan Tab

The Scan tab provides an easy data capture feature for scanning barcodes.

Language Usage

Use the **Language & input** settings to change the device's language, including words added to the dictionary.

Changing the Language Setting

1. Go to **Settings**.

2. Touch **System > Languages & input**.

3. Touch **Languages**. A list of available languages displays.

4. If the desired language is not listed, touch **Add a language** and select a language from the list.

5. Touch and hold ≡ to the right of the desired language, then drag it to the top of the list.

6. The operating system text changes to the selected language.

Adding Words to the Dictionary

1. Go to **Settings**.

2. Touch **System > Languages & input > Advanced > Personal dictionary**.

3. If prompted, select the language where this word or phase is stored.

4. Touch **+** to add a new word or phrase to the dictionary.

5. Enter the word or phrase.

6. In the **Shortcut** text box, enter a shortcut for the word or phrase.

7. Touch the Home button.

Notifications

Control when and how notifications are received for specific apps or all apps.

Setting App Notifications

To set notification settings for a specific app:

1. Go to **Settings**.

2. Touch **Apps & notifications** > **SEE ALL XX APPS.** The **App info** screen displays.

3. Select an app.

4. Touch **Notifications**.

    Options vary depending on the app selected.

5. Select an available option:

- **Show notifications** - Select to turn all notifications from this app on (default) or off.
- Touch a notification category to display additional options.
    - **Alerting** - Allow notifications from this app to make sound to the device.
        - **Pop on screen** - Allow notifications from this app to pop notifications on the screen.
    - **Silent** - Do not allow notifications from this app to make sound or vibrate.
        - **Minimize** - In the Notification panel, collapse notifications to one line.
    - **Advanced** - Touch for additional options.
        - **Sound** - Select sound notifications for this app.
        - **Show notification dot** - Allow notifications from this app to add a notification dot to the app icon.
        - **Override Do Not Disturb** - Allow these notifications to interrupt when Do Not Disturb is enabled.
        - **Allow notification dot** - Do not allow this app to add a notification dot to the app icon.
        - **Additional settings in the app** - Open the app settings.

Viewing Notification Settings for All Apps

To view the notification settings for all apps:

1. Go to **Settings**.

2. Touch **Apps & Notifications**.

3. Scroll down to **Notifications** to view how many apps have notifications turned off.

4. To set or view notifications settings for a specific app, see .

Controlling Lock Screen Notifications

To control whether notifications can be seen when the device is locked:

1. Go to **Settings**.

2. Touch **Apps & notifications** > **Notifications**.

3. Touch **Notifications on lockscreen** and select one of the following:

- **Show alerting and silent notifications** (default)
- **Show alerting notifications only**
- **Don't show notifications**.

Applications

Introduction

This section describes the applications installed on the device.

Apps

The **APPS** screen displays icons for all installed apps. See Application Deployment for information on installing and uninstalling apps. For information on standard Android apps, go to support.google.com.

The following table describes the apps installed on the device.

Table 7   Apps

Icon	Description
	Bluetooth Pairing Utility – Use to pair a Zebra Bluetooth scanner with the device by scanning a barcode.
	Calculator - Provides the basic and scientific arithmetic functions.
	Calendar - Use to manage events and appointments. GMS devices only.
	Calendar - Use to manage events and appointments. Non-GMS devices only.
	Camera - Take photos or record videos. For more information see Camera on page 49.
	Chrome - Use to access the Internet or intranet. GMS devices only.
	Chromium - Use to access the Internet or intranet. Non-GMS devices only.

Table 7   Apps (Continued)

Icon	Description
	Clock - Use to schedule alarms for appointments or as a wake-up.
	Contacts - Use to manage contact information.
	DataWedge - Enables data capture using the imager.
	DisplayLink Presenter - Use to present the device screen onto a connected monitor.
	Drive - Upload photos, videos, documents, and other files to personal storage site. GMS devices only.
	DWDemo - Provides a way to demonstrate the data capture features using the imager. See for more information.
	Email - Use to send and receive email. Non-GMS devices only.
	Files - Organize and manage files on the device.
	Gallery - Use to view photos stored on the microSD cardinternal storage. For more information, see Gallery for more information. Non-GMS devices only.
	Gmail - Use to send and receive email using a Google email account. GMS devices only.
	Google - Launches Google ™ search app. GMS devices only.
	Keep Notes - Use to create, edit, and share notes. GMS devices only.
	License Manager - Use to manage software licenses on the device.
	Maps - Use to see your location on a map (with public transit, traffic, or satellite overlays). Search for any business or place of interest. Provides turn-by-turn navigation with voice guidance, traffic-avoidance, and alternate routes, for drivers, cyclists, walkers, and users of public transportation. GMS devices only.

Table 7 Apps (Continued)

Icon	Description
	Music - Play music stored on the microSD card or internal storage. Non-GMS devices only.
	Notes - Use to take and save notes. Non-GMS devices only.
	Photos - Use to sync photos with Google account. GMS devices only.
	Play Movies & TV - View movies and video on your device. GMS devices only.
	Play Store - Download music, movies, books, and Android apps and games from the Google Play Store. GMS devices only.
	PTT Express - Use to launch PTT Express client for VoIP communication.
	RxLogger - Use to diagnose device and app issues.
	Search - Use to search the Web. Requires an Internet connection. Non-GMS devices only.
	Settings - Use to configure the device.
	Sound Recorder - Use to record audio.
	StageNow - Allows the device to stage a device for initial use by initiating the deployment of settings, firmware, and software.
	VoD - The Video on Device basic app provides a how-to video for proper device cleaning. For Video on Device licensing information, go to learning.zebra.com.
	Worry Free Wifi - A diagnostic intelligent app. Use to diagnose surrounding area and display network stats, such as coverage hole detection, or AP in vicinity. Refer to the Worry Free Wi-Fi Analyzer Administrator Guide for Android.
	YouTube - Use to view videos on the YouTube ™ web site. GMS devices only.

Table 7   Apps (Continued)

Icon	Description
	YT Music - Use to listen to music. GMS devices only.
	Zebra Bluetooth Settings - Use to configure Bluetooth logging.
	Zebra Data Services - Use to enable or disable Zebra Data Services. Some options are set by your system administrator.

Accessing Apps

All apps installed on the device are accessed using the **APPS** window.

1. On the Home screen, swipe up from the bottom of the screen.

2. Slide the **APPS** window up or down to view more app icons.

3. Touch an icon to open the app.

Switching Between Recent Apps

1. Touch Recent button.

    A window appears on the screen with icons of recently used apps.

2. Slide the apps displayed up and down to view all recently used apps.

3. Swipe left or right to remove app from the list and force close the app.

4. Touch an icon to open an app or touch Back button to return to the current screen.

Camera

This section provides information for taking photos and recording videos using the integrated digital cameras.
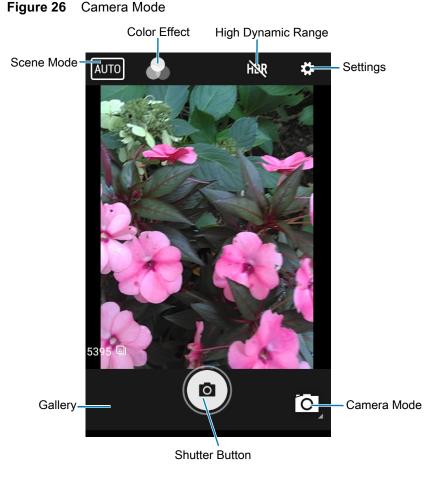
NOTE: The device saves photos and videos on the microSD card, if installed and the storage path is changed manually. By default, or if a microSD card is not installed, the device saves photos and videos on the internal storage.

Taking Photos

NOTE: See Photo Settings on page 51 for camera setting descriptions.

1. Swipe up from the bottom of the Home screen and touch **Camera**.

Figure 26 Camera Mode

Color Effect

High Dynamic Range

Scene Mode

Settings

Gallery

Camera Mode

Shutter Button
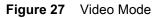
2. If necessary, touch the Camera Mode icon and touch 📷.

3. Frame the subject on the screen.

4. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.

5. Touch an area on the screen to focus. The focus circle appears. The two bars turn green when in focus.

6. Touch ⊙.
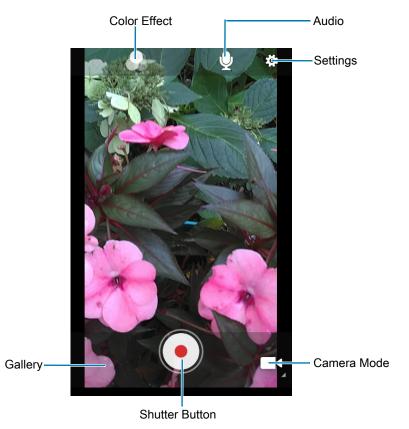
   The camera takes a photo and a shutter sound plays.

   The photo momentarily displays as a thumbnail in the lower left corner.

Recording Videos

1. Swipe up from the bottom of the Home screen and touch **Camera**.

2. Touch the camera mode menu and touch ◼◀.

Figure 27   Video Mode

3. Point the camera and frame the scene.

4. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.

5. Touch ⊙ to start recording.

   The video time remaining appears in the top left of the screen.

6. Touch ⊙ to the end recording.

   The video momentarily displays as a thumbnail in the lower left corner.

Photo Settings

- **Selfie Flash -** Turns screen white to help produce a little extra light in dimmer settings. Options: **Off** (default), or **On**.
- **Picture size** - Set the size (in pixels) of the photo to: **5M pixels** (default), **3M pixels**, **HD1080**, **2M pixels**, **HD720**, **1M pixels**, **WVGA**, **VGA,** or **QVGA**.
- **Picture quality** - Set the picture quality setting to: **Low**, **Standard** (default) or **High** (default).
- **Countdown timer** - Set to: **Off** (default), **2 seconds**, **5 seconds** or **10 seconds**.
- **Storage** – Set location to store the photo to: **Phone** or **SD Card**.
- **Continuous Shot** - Select to take a series of photos quickly while holding the capture button. **Off** (default) or **On**.
- **Face Detection** - Select to turn face detection **Off** (default) or **On**.
- **ISO** - Set how sensitive the camera is to light. Options: **Auto** (default), **ISO Auto (HJR)**, **ISO100**, **ISO200**, **ISO400**, **ISO800** or **ISO1600**.
- **Exposure** - Touch to adjust the exposure settings. Options: **+2**, **+1**, **0** (default), **-1** or **-2**.
- **White balance** - Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors:

  - 🔅 **Incandescent** - Adjust the white balance for incandescent lighting.

  - 🔅 **Fluorescent** - Adjust the white balance for florescent lighting.

  - 🔅 **Auto** - Adjust the white balance automatically (default).

  - 🔅 **Daylight** - Adjust the white balance for daylight.

  - ☁ **Cloudy** - Adjust the white balance for a cloudy environment.

- **Redeye reduction** - Helps eliminate redeye effect. Options: **Disabled** (default), or **Enable**.
- **ZSL** - Set the camera to immediately take a picture when the button is pressed (default – enabled)
- **Selfie Mirror** - Select to save a mirror image of the photo. Options: **Disable** (default), or **Enable**.
- **Shutter Sound** - Select to play a shutter sound when taking a photo. Options: **Disable** (default) or **Enable**.
- **Anti Banding** - Allows the camera to avoid problems caused by artificial light sources that are not constant. These sources cycle (flicker) fast enough to go unnoticed to the human eye, appearing continuous. The camera's eye (its sensor) can still see this flicker. Options: **Auto** (default), **60 Hz**, **50 Hz**, or **Off**.

Video Settings

In Video mode, video settings appear on screen. Touch ✿ to display the video settings options.

- **Video quality** - Set video quality to: **HD1080** (default), **HD 720p** (default), **SD 480p**, **VGA**, **CIF**, or **QVGA**.
- **Video duration** - Set to: **30 seconds (MMS)** or **30 minutes** (default).
- **Storage** – Set the location to store the photo to: **Phone** (default) or **SD Card**.

- **White balance** - Select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors.

    - 🔆 **Incandescent** - Adjust the white balance for incandescent lighting.

    - 🔆 **Fluorescent** - Adjust the white balance for florescent lighting.

    - 🔆 **Auto** - Adjust the white balance automatically (default).

    - 🔆 **Daylight** - Adjust the white balance for daylight.

    - ☁️ **Cloudy** - Adjust the white balance for a cloudy environment.

- **Image Stabilization** - Set to reduce blurry videos due to device movement. Options: **On** or **Off** (default).

DataWedge Demonstration

NOTE: DataWedge is enabled on the Home screen. To disable this feature, go to the DataWedge settings and disable the **Launcher** profile.

Use **DataWedge Demonstration** to demonstrate data capture functionality.

Table 8   DataWedge Demonstration Icons

	Icon	Description
Illumination	⚡	Imager illumination is on. Touch to turn illumination off.
	×⚡	Imager illumination is off. Touch to turn illumination on.
Data Capture	‖‖‖	The data capture function is through the internal imager.
	🔌	Indicates a USB scanner is connected to the device.
	🔌×	Indicates a USB scanner is not connected to the device.
	✳	A Bluetooth scanner is connected.
	✳×	A Bluetooth scanner is not connected.
Scan Mode	⌖	Imager is in picklist mode. Touch to change to normal scan mode.
	▤	Imager is in normal scan mode. Touch to change to picklist mode.
Menu	⋮	Opens a menu to view the application information or to set the application DataWedge profile.

NOTE: To configure DataWedge, refer to techdocs.zebra.com/datawedge/.

Scanner Selection

To select a scanner, touch ⋮ > **Settings** > **Scanner selection**.

See Data Capture for more information.

Touch the Data Capture icon to select the data capture mode. The data appears in the text field below the yellow button.

PTT Express Voice Client

NOTE: Requires a PTT Express License.

PTT Express Voice Client enables Push-To-Talk (PTT) communication between disparate enterprise devices. Leveraging existing Wireless Local Area Network (WLAN) infrastructure, PTT Express delivers simple PTT communication without requiring a voice communication server.

- **Group Call**: Press and hold the GROUP CALL button to start communicating with other voice client users.
- **Private Response**: Press and hold the PRIVATE CALL button to respond to the originator of the last broadcast or to make a Private Response.

NOTE: Refer to the PTT Express V1.2 User Guide (p/n MN000935Axx) for more information on the PTT Express Voice client configuration.

PTT Express User Interface

Figure 28 PTT Express Default User Interface

Table 9 PTT Express Default User Interface Descriptions

Number	Item	Description
1	Notification Icon	Indicates the current state of the PTT Express client.
2	Service Indication	Indicates the status of the PTT Express client. Options: **Service Enabled**, **Service Disabled** or **Service Unavailable**.
3	Talk Groups	Lists all 32 Talk Groups available for PTT communication.

Table 9 PTT Express Default User Interface Descriptions (Continued)

Number	Item	Description
4	Settings	Opens the PTT Express Settings screen.
5	Enable/Disable Switch	Turns the PTT service on and off.

PTT Audible Indicators

The following tones provide helpful cues when using the voice client.

- **Talk Tone**: Double chirp. Plays when the Talk button is depressed. This is a prompt for you to start talking.
- **Access Tone**: Single beep. Plays when another user just finished a broadcast or response. You can now initiate a Group Broadcast or Private Response.
- **Busy Tone**: Continuous tone. Plays when the Talk button is depressed and another user is already communicating on the same talkgroup. Plays after the maximum allowed talk time is reached (60 seconds).
- **Network Tone**:
    - Three increasing pitch beeps. Plays when PTT Express acquires the WLAN connection and the service is enabled.
    - Three decreasing pitch beeps. Plays when PTT Express loses the WLAN connection or the service is disabled.

PTT Notification Icons

Notification icons indicate the current state of the PTT Express Voice client.

Table 10 PTT Express Icon Descriptions

Status Icon	Description
	The PTT Express Voice client is disabled.
	The PTT Express Voice client is enabled but not connected to a WLAN.
	The PTT Express Voice client is enabled, connected to a WLAN, and listening on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and communicating on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and in a private response.

Table 10   PTT Express Icon Descriptions (Continued)

Status Icon	Description
	The PTT Express Voice client is enabled and muted.
	The PTT Express Voice client is enabled but it is not able to communicate due to a VoIP telephony call in progress.

Enabling PTT Communication

1. Swipe up from the bottom of the Home screen and touch .

2. Slide the **Enable/Disable Switch** to the **ON** position. The button changes to **ON**.

Selecting a Talk Group

One of 32 Talk Groups can be selected by PTT Express users. However, only one talk group may be enabled at a time on the device. Touch one of the 32 Talk Groups. The selected Talk Group is highlighted.

PTT Communication

NOTE: This section describes the default PTT Express client configuration. Refer to the PTT Express V1.2 User Guide for detailed information on using the client.

Creating a Group Call

NOTE: When using a wired headset, use only Zebra approved wired headsets with a PTT button.

1. Press and hold the Group Call button (or the Talk button on the headset) and listen for the talk tone.

   If you hear a busy tone, release the button and wait a moment before making another attempt. Ensure that PTT Express and the WLAN are enabled.

2. Start talking after hearing the talk tone.

NOTE: Holding the button for more than 60 seconds (default) drops the call, allowing others to make Group calls. Release the button when finished talking to allow others to make calls.

Responding with a Private Response

The Private Response can only be initiated once a Group Call has been established. The initial Private Response is made to the originator of the Group Call.

1. After the Group Call is completed, wait until you receive an access tone.

2. Press and hold the configured PRIVATE CALL button.

3. If you hear a busy tone, release the PRIVATE CALL button and wait a moment before making another attempt. Ensure that PTT Express and the WLAN are enabled.

4. Start talking after the talk tone plays.

5. Release the button when finished talking.

Disabling PTT Communication

1. Swipe up from the bottom of the Home screen and touch 🎙️.

2. Slide the **Enable/Disable Switch** to the **OFF** position. The button changes to **OFF**.

3. Touch the Home button.

RxLogger

RxLogger is a comprehensive diagnostic tool that provides application and system metrics, and diagnoses device and application issues. RxLogger logs the following information: CPU load, memory load, memory snapshots, battery consumption, power states, wireless logging, cellular logging, TCP dumps, Bluetooth logging, GPS logging, logcat, FTP push/pull, ANR dumps, etc. All generated logs and files are saved onto flash storage on the device (internal or external).

RxLogger Configuration

RxLogger is built with an extensible plug-in architecture and comes packaged with a number of plug-ins already built-in. For information on configuring RxLogger, refer to techdocs.zebra.com/rxlogger/.

To open the configuration screen, from the RxLogger home screen touch **Settings**.

Configuration File

RxLogger configuration can be set using an XML file. The `config.xml` configuration file is located on the microSD card in the `RxLogger\config` folder. Copy the file from the device to a host computer using a USB connection. Edit the configuration file and then replace the XML file on the device. There is no need to stop and restart the RxLogger service since the file change is automatically detected.

Enabling Logging

To enable logging:

1. Swipe the screen up and select ℞.
2. Touch **Start**.
3. Touch the Home button.

Disabling Logging

To disable logging:

1. Swipe the screen up and select ℞.
2. Touch **Stop**.
3. Touch the Home button.

Extracting Log Files

1. Connect the device to a host computer using an USB connection.
2. Using a file explorer, navigate to the `RxLogger` folder.
3. Copy the file from the device to the host computer.
4. Disconnect the device from the host computer.

Backing Up

RxLogger Utility allows the user to make a zip file of the **RxLogger** folder in the device, which by default contains all the RxLogger logs stored in the device.

To save the backup data, touch ⋮ > **BackupNow**.

RxLogger Utility

RxLogger Utility is a data monitoring application for viewing logs in the device while RxLogger is running. Logs and RxLogger Utility features are accessed using Main Chat Head.

Initiating the Main Chat Head

To initiate the Main Chat Head:

1. Open **RxLogger**.

2. Touch ⋮ > **Toggle Chat Head**. The Main Chat Head icon appears on the screen.

3. Touch and drag the Main Chat head icon to move it around the screen.

Removing the Main Chat Head

To remove the Main Chat Head icon:

1. Touch and drag the icon. A circle with an X appears.

2. Move the icon over the circle and then release.

Viewing Logs

To view logs:

1. Touch the Main Chat Head icon. The RxLogger Utility screen appears.

2. Touch a log to open it. The user can open many logs with each displaying a new sub Chat Head.

3. If necessary, scroll left or right to view additional Sub Chat Head icons.

4. Touch a Sub Chat Head to display the log contents.

Removing a Sub Chat Head Icon

To remove a sub chat Head icon, press and hold the icon until it disappears.

Backing Up In Overlay View

RxLogger Utility allows the user to make a zip file of the **RxLogger** folder in the device, which by default contains all the RxLogger logs stored in the device.

The Backup icon is always available in Overlay View.

1. Touch 🖫. The Backup dialog box appears.

2. Touch **Yes** to create the back up.

Sound Recorder

Use **Sound Recorder** to record audio messages.

Recordings are saved on the microSD card (if installed) or the internal storage and are available in the Music application (non-GMS devices) or the Play Music application (GMS devices).

Touch ⋮ to open options menu.

- **File type** - Select the file type for the recording file.
  - **AMR**
  - **3GPP**
  - **AAC**
  - **WAV**
  - **AMR-WB**
  - **AMR-WB-3GPP**.
- **Storage location** - Select the location for the recording file.
  - **Phone storage**
  - **SD card.**

Data Capture

Introduction

The device supports data capture using:

- Internal linear imager
- RS507/RS507x Hands-free imager
- RS6000 Bluetooth Ring Scanner
- RS5100 Bluetooth Ring Scanner
- DS3678 Digital Scanner
- LI3678 Linear Imager
- DS2278 Digital Scanner
- DS8178 Digital Scanner.

Imaging

The imager uses imaging technology to take a picture of a barcode, stores the resulting image in its memory, and executes state-of-the-art software decoding algorithms to extract the bar code data from the image. With a 2D imager, the device has the following features:

- Omnidirectional reading of a variety of bar code symbologies, including the most popular linear, postal, PDF417, and 2D matrix code types.
- Advanced intuitive laser aiming cross-hair and dot aiming for easy point-and-shoot operation.

Linear Imager

The device with an integrated linear imager has the following features:

- Reading a variety of bar code symbologies, including the most popular 1-D code types.
- Intuitive aiming for easy point-and-shoot operation.

The imager uses imaging technology to take a picture of a bar code, stores the resulting image in its memory, and executes state-of-the-art software decoding algorithms to extract the bar code data from the image.

Operational Modes

The device with an integrated imager supports two modes of operation, listed below. Activate each mode by pressing the Scan button.

- **Decode Mode**: In this mode, the device attempts to locate and decode enabled barcodes within its field of view. The imager remains in this mode as long as the user holds the scan button, or until it decodes a barcode.

NOTE: To enable Pick List Mode, configure in DataWedge or set in an application using a API command.

- **Pick List Mode**: This mode allows the user to selectively decode a barcode when more than one barcode is in the device's field of view. To accomplish this, move the aiming crosshair or dot over the required barcode to decode only this barcode. This feature is ideal for pick lists containing multiple barcodes and manufacturing or transport labels containing more than one barcode type (either 1D or 2D).
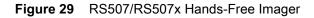
NOTE: To enable Basic MultiBarcode Mode, configure in DataWedge or set in an application using a API command.

- **Basic MultiBarcode Mode**: In this mode, the device attempts to locate and decode a specific number of unique barcodes within its field of view. The device remains in this mode as long as the user holds the scan button, or until it decodes all the barcodes.
  - The device attempts to scan the programmed number of unique barcodes (from 2 through 100).
  - If there are duplicate barcodes (same symbology type and data), only one of the duplicate barcodes is decoded and the remainder are ignored. If the label has two duplicate barcodes plus another two different barcodes, a maximum of three barcodes will be decoded from that label; one will be ignored as a duplicate.
  - Barcodes can be of multiple symbology types and still be acquired together. For example, if the specified quantity for a Basic MultiBarcode scan is four, two barcodes can be symbology type Code 128 and the other two can be symbology type Code 39.
  - If the specified number of unique barcodes is not initially in view of the device, the device will not decode any data until the device is moved to capture the additional barcode(s) or time out occurs. If the device field of view contains a number of barcodes greater than the specified quantity, the device randomly decodes barcode(s) until the specified number of unique barcodes is reached. For example, if the count is set to two and eight barcodes are in the field of view, the device decodes the first two unique barcodes it sees, returning the data in random order.
  - Basic MultiBarcode Mode does not support concatenated barcodes.

RS507/RS507x Hands-Free Imager

The RS507 and RS507x Hands-free Imagers are wearable barcode scan solution for both 1D and 2D bar code symbologies. The scanner supports Bluetooth Human Interface Device (HID) connection to the device.

Figure 29   RS507/RS507x Hands-Free Imager

Refer to the RS507/RS507x Hands-free Imager Product Reference Guide for more information.

RS6000 Bluetooth Ring Scanner

The RS6000 Bluetooth Ring Scanner is a wearable bar code scan solution for both 1D and 2D bar code symbologies.

Figure 30   RS6000 Bluetooth Ring Scanner

Refer to the RS6000 Bluetooth Ring Scanner Product Reference Guide for more information.

RS5100 Ring Scanner

The RS5100 Ring Scanner is a wearable barcode scan solution for both 1D and 2D bar code symbologies. The scanner supports Bluetooth Human Interface Device (HID) connection to the device.

Figure 31   RS5100 Bluetooth Ring Scanner
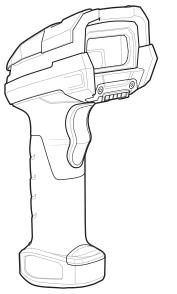
Refer to the RS5100 Ring Scanner Product Reference Guide for more information.

DS3678 Digital Scanner

The cordless DS3678 combines superior 1D and 2D omnidirectional bar code scanning performance and advanced ergonomics in a lightweight design.

Figure 32   DS3678 Digital Scanner
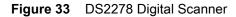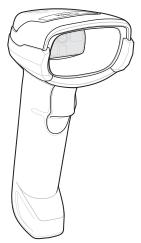
Refer to the DS36X8 Digital Scanner Product Reference Guide for more information.

DS2278 Digital Scanner

The DS2278 digital imager scanner scans both 1D and 2D bar codes and does not compromise performance or features.

Figure 33   DS2278 Digital Scanner

Refer to the DS22788 Digital Scanner Product Reference Guide for more information.

Scanning Considerations

Typically, scanning is a simple matter of aim, scan, and decode, with a few quick trial efforts to master it. However, consider the following to optimize scanning performance:

- **Range**

  Scanners decode best over a particular working range — minimum and maximum distances from the barcode. This range varies according to barcode density and scanning device optics. Scan within range for quick and constant decodes; scanning too close or too far away prevents decodes. Move the scanner closer and further away to find the right working range for the barcodes being scanned.

- **Angle**

  Scanning angle is important for quick decodes. When the illumination/flash reflects directly back into the imager, the specular reflection can blind/saturate the imager. To avoid this, scan the barcode so that the beam does not bounce directly back. Do not scan at too sharp an angle; the scanner needs to collect scattered reflections from the scan to make a successful decode. Practice quickly shows what tolerances to work within.

- Hold the device farther away for larger symbols.

- Move the device closer for symbols with bars that are close together.

NOTE: Scanning procedures depend on the app and device configuration. An app may use different scanning procedures from the one listed above.

Scanning with Internal Imager
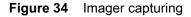
To read a barcode, a scan-enabled app is required. The device contains the DataWedge app that allows the user to enable the imager, decode the barcode data, and display the barcode content.
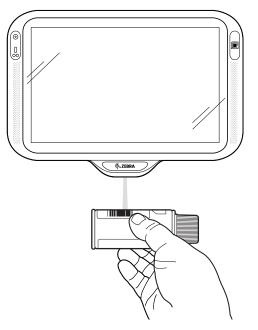
To scan with the internal imager:

NOTE: Configure the imager illumination setting in the DataWedge application.
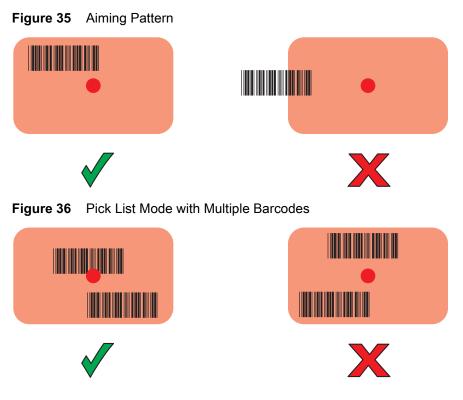
1. Ensure that an application is open on the device and a text field is in focus (text cursor in text field).

2. Place the barcode in the field of view of the device's scan window. Ensure the barcode is within the scanner's aiming pattern.

Figure 34 Imager capturing

3. By default, a beep sounds indicates that the barcode was decoded successfully. Note that when the device is in Pick List Mode, the device does not decode the barcode until the center of the illuminated line or dot touches the barcode.

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

Figure 35   Aiming Pattern

Figure 36   Pick List Mode with Multiple Barcodes
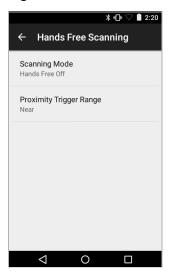
Settings

Use the **Hands Free Scanning** setting to configure scanning mode and the proximity trigger sensitivity.

Swipe up from the bottom of the Home screen and touch **Settings** > **Hands Free Scanning**.
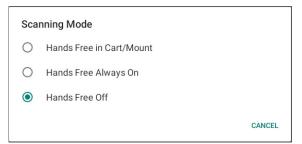
Figure 37   Hands Free Scanning Settings

Scanning Mode

Use the **Scanning Mode** settings to configure how the device functions while in hands-free scanning mode.

Figure 38   Scanning Mode Dialog Box

- • **Hands Free in Cart/Mount** - Select to enable scanning when the device is in the Cart/Mount.
- • **Hands Free Always On** - Select to place the device in hands free scanning mode.
- • **Hands Free Off** - Select to disable hands free scanning mode (default).

Proximity Range

To configure the proximity sensor range sensitivity, touch **Proximity Trigger Range**.

Figure 39   Proximity Trigger Range Dialog Box

- • **Near** - Proximity sensor detects and generates a trigger when the barcode is within 0 to 15 cm (nominal) (default).
- • **Far** - Proximity sensor detects and generates a trigger when the barcode is within 0 to 26 cm (nominal).

Barcode Capture with an Imager

To capture barcode data with the DS22X8 or DS81X8 imager:

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

2. Press and hold the trigger until either:

   a. The imaging scanner reads the bar code. The imaging scanner beeps, the LED flashes, and the scan line turns off.
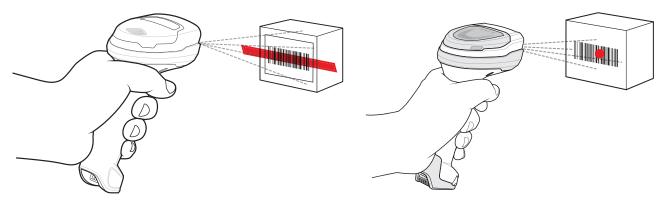
   or

   b. The imaging scanner does not read the bar code and the scan line turns off.

   Note that when the device is in Pick List Mode, the device does not decode the barcode until the center of the illuminated line or dot touches the barcode.

Figure 40   Aiming Pattern on Bar Code - DS22X8 and DS81X8

3. Release the trigger.

4. The barcode content data appears in the text field.
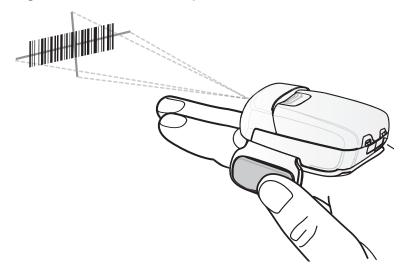
Scanning with RS507/RS507X Hands-Free Imager

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

To scan with the RS507/RS507X:

1. Pair the RS507/RS507X with the device. See Pairing Using Pairing Using Simple Serial Interface on page 79 or Pairing Using Bluetooth Human Interface Device on page 79 for more information.

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

3. Point the RS507/RS507X at a barcode.
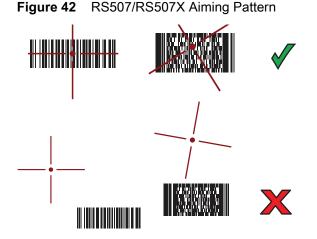
Figure 41   Barcode Scanning with RS507/RS507X
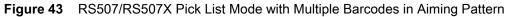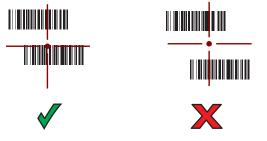
4. Press and hold the trigger.

The red laser aiming pattern turns on to assist in aiming. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

The RS507/RS507X LEDs light green and a beep sounds to indicate the barcode was decoded successfully. When the RS507/RS507X is in Pick List mode, the RS507/RS507X does not decode the barcode until the center of the crosshair touches the barcode.

Figure 42   RS507/RS507X Aiming Pattern

Figure 43   RS507/RS507X Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.
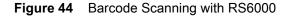
Scanning with RS6000 Bluetooth Ring Scanner
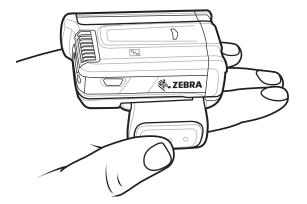
To read a barcode, a scan-enabled app is required. Devices that contain the Zebra DataWedge app allows you to enable the scanner to decode barcode data and display the barcode content.

To scan with the RS6000:

1. Pair the RS6000 with the device. See Pairing the Bluetooth Ring Scanner on page 76 for more information.

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

Figure 44   Barcode Scanning with RS6000
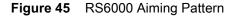
3. Point the RS6000 at a barcode.

4. Press and hold the trigger.

   The red laser aiming pattern turns on to assist in aiming. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

   The RS6000 LEDs light green and a beep sounds to indicate the barcode was decoded successfully. When the RS6000 is in Pick List mode, the RS6000 does not decode the barcode until the center of the crosshair touches the barcode.

Figure 45   RS6000 Aiming Pattern
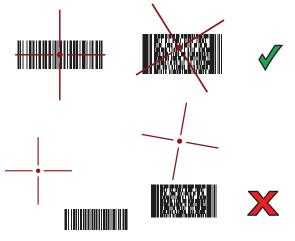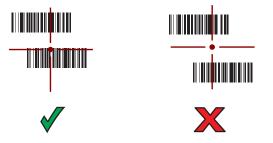
Figure 46   RS6000 Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.
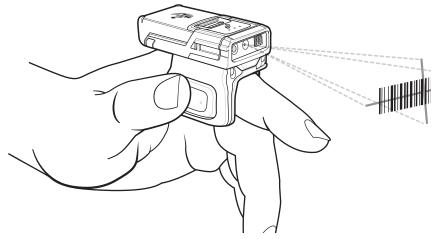
Scanning with RS5100 Ring Scanner

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

To scan with the RS5100:

1. Pair the RS5100 with the device. See for more information.

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

3. Point the RS5100 at a barcode.

Figure 47 Barcode Scanning with RS5100

4. Press and hold the trigger.

   The red laser aiming pattern turns on to assist in aiming. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

   The RS5100 LEDs light green and a beep sounds to indicate the barcode was decoded successfully. When the RS5100 is in Pick List mode, the RS5100 does not decode the barcode until the center of the crosshair touches the barcode.
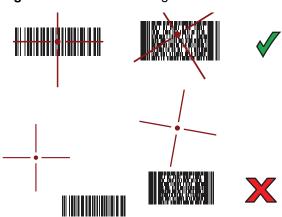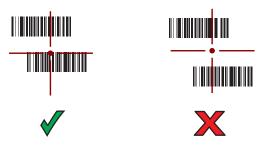
Figure 48 RS5100 Aiming Pattern

Figure 49   RS5100 Pick List Mode with Multiple Barcodes in Aiming Pattern
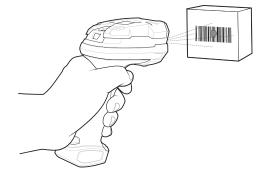
5. The captured data appears in the text field.

Scanning with the DS3678 Bluetooth Scanner

To scan with the DS3678 Bluetooth Scanner:

1. Pair the scanner with the device. For more information, see Pairing a Bluetooth Scanner on page 81.

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

3. Point the scanner at a barcode.
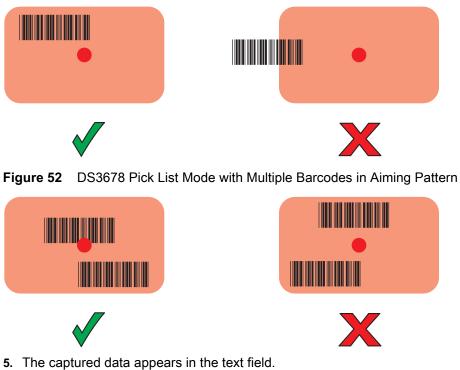
Figure 50   Barcode Scanning (DS3678 shown)

4. Press and hold the trigger.

Ensure the barcode is within the area formed by the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

Figure 51 DS3678 Aiming Pattern

Figure 52 DS3678 Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.
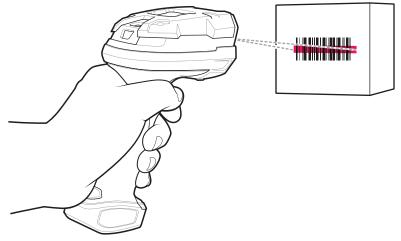
Scanning with LI3678 Linear Imager

To scan with the LI3678:
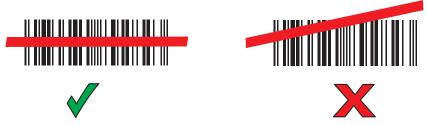
1. Pair the LI3678 with the device. See for more information.

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

3. Point the LI3678 at a barcode.

Figure 53   Barcode Scanning with LI3678

4. Press and hold the trigger.

5. Ensure the aiming pattern covers the barcode.

Figure 54   LI3678-SR Aiming Pattern
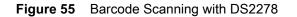
6. Upon successful decode, the scanner beeps and the LED displays a single green flash.

7. The captured data appears in the text field.
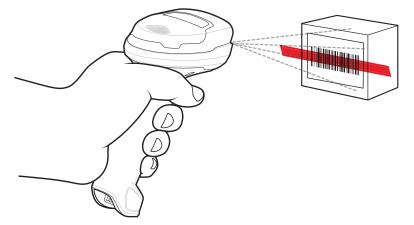
Scanning with DS2278 Digital Scanner

To scan with the DS2278:

1. Pair the DS278 with the device. See Pairing a Bluetooth Scanner on page 81 for more information.

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

**3.** Point the scanner at a barcode.

Figure 55 Barcode Scanning with DS2278

4. Press and hold the trigger.

5. Ensure the aiming pattern covers the barcode.

Figure 56 DS2278 Aiming Pattern

6. Upon successful decode, the scanner beeps and the LED flashes, and the scan line turns off.

7. The captured data appears in the text field.

Pairing the Bluetooth Ring Scanner

To connect the RS507/RS507X, RS6000, or RS5100 Bluetooth Ring Scanner to the device, use one of the following methods:

- Near Field Communication (NFC) (CC6000 with RS5100 and RS6000 imagers only)
- Simple Serial Interface (SSI)
- Bluetooth Human Interface Device (HID) Mode.

Pairing Using Near Field Communication

The device provides the ability to pair the RS5100 or RS6000 using NFC.
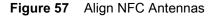
NOTE: Applicable to CC6000 with RS5100 and RS6000 imagers only.
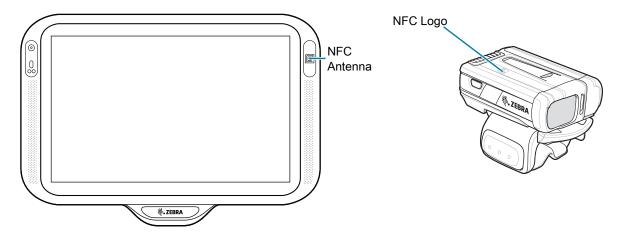
To pair using NFC:

1. Ensure that the RS5100 or RS6000 is in SSI mode. Refer to the RS5100 or RS6000 User Guide for more information.

2. Ensure that NFC is enabled on the device.

3. Align the NFC icon on the RS5100 or RS6000 with the NFC antenna on the device.

   The RS6000 Status LED blinks blue indicating that the RS5100 or RS6000 is attempting to establish connection with the device. When connection is established, the Status LED turns off and the RS5100 or RS6000 emits a single string of low/high beeps.

   A notification appears on the device screen and the 🖥 icon appears in the Status bar.

Figure 57   Align NFC Antennas

Pairing in HID Mode Using Near Field Communication

The device provides the ability to pair the RS5100 or RS6000 in HID mode using NFC.

NOTE: Applicable to CC6000 with RS5100 and RS6000 imagers only.

To pair in HID mode using NFC:

1. Ensure that NFC is enabled on the device.

2. Ensure that Bluetooth is enabled on the device.

3. Place the RS5100 or RS6000 in Human Interface Device (HID) mode. If the RS5100 or RS6000 is already in HID mode, skip to step 4.

   a. Remove the battery from the RS5100 or RS6000.

   b. Press and hold the Restore key.

   c. Install the battery onto the RS5100 or RS6000.

    d. Keep holding the Restore key for about five seconds until a chirp is heard and the Scan LEDs flash green.

    e. Scan the barcode below to place the RS5100 or RS6000 in HID mode.

Figure 58   RS6000 Bluetooth HID Barcode
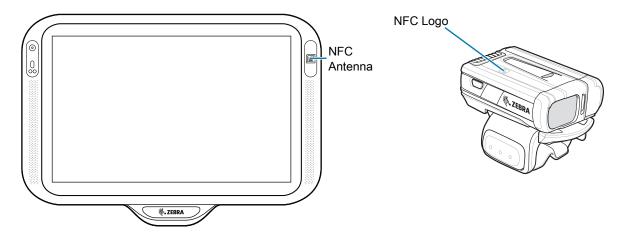
4. Remove the battery from the RS5100 or RS6000.

5. Re-install the battery into the RS5100 or RS6000.

6. Align the NFC icon on the RS5100 or RS6000 with the NFC antenna on the device.

The RS5100 or RS6000 Status LED blinks blue indicating that the RS5100 or RS6000 is attempting to establish connection with the device. When connection is established, the Status LED turns off and the RS5100 or RS6000 emits a single string of low/high beeps.

A notification appears on the device screen and the ![A] icon appears in the Status bar.

Figure 59   Align NFC Antennas

NFC Logo

NFC Antenna

Pairing Using Simple Serial Interface

To pair the Bluetooth Ring Scanner with the device using SSI.

1. Swipe up from the bottom of the Home screen and touch ⌗🔵.

Figure 60 Bluetooth Pairing Utility

2. Using the Bluetooth Ring Scanner, scan the barcode on the screen.

   The Bluetooth Ring Scanner emits a string of high/low/high/low beeps. The Scan LED flashes green indicating that the Bluetooth Ring Scanner is attempting to establish connection with the device. When connection is established, the Scan LED turns off and the Bluetooth Ring Scanner emits one string of low/high beeps.

   A notification appears on the Notification panel and the ⌗ icon appears in the Status bar.

Pairing Using Bluetooth Human Interface Device

To pair the Bluetooth Ring Scanner with the device using Human Interface Device (HID):

1. Ensure that the two devices are within 10 meters (32.8 feet) of one another.

2. Place the Bluetooth Ring Scanner in HID mode. If the Bluetooth Ring Scanner is already in HID mode, skip to step 5.

   a. Remove the battery from the Bluetooth Ring Scanner.

   b. Press and hold the Restore key.

   c. Install the battery onto the Bluetooth Ring Scanner.

   d. Keep holding the Restore key for about five seconds until a chirp is heard and the Scan LEDs flash green.

    e. Scan the barcode below to place the Bluetooth Ring Scanner in HID mode.

Figure 61   RS507 Bluetooth HID Barcode

Figure 62   RS6000 Bluetooth HID Barcode

3. Remove the battery from the Bluetooth Ring Scanner.

4. Re-install the battery into the Bluetooth Ring Scanner.

5. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

6. Touch **Bluetooth**.

7. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.

8. Scroll through the list and select RS507/RS507X or RS6000.

    The device connects to the RS507/RS507X or RS6000 and **Connected** appears below the device name. The Bluetooth device is added to the **Paired devices** list and a trusted ("paired") connection is established.

    A notification appears on Notification panel and the 🅰 icon appears in the Status bar.

Pairing a Bluetooth Scanner

Connect the scanner to the device using one of the following methods:

- Simple Serial Interface (SSI) mode
- Bluetooth Human Interface Device (HID) mode.

Pairing Using Simple Serial Interface (SSI)

To pair the scanner with the device using SSI:

1. Ensure that the two devices are within 10 meters (32.8 feet) of one another.

2. Install the battery into the scanner.

3. On the device swipe up from the bottom of the Home screen and touch ⫿🅱.

Figure 63 Bluetooth Pairing Utility

4. Using the scanner, scan the barcode on the screen.

   The scanner emits a high/low/high/low beeps. The Scan LED flashes green indicating that the scanner is attempting to establish connection with the device. When connection is established, the Scan LED turns off and the scanner emits one string of low/high beeps.

5. On the device touch Home button.

Pairing Using Bluetooth Human Interface Device

To pair the Bluetooth scanner with the device using HID:

1. Ensure that the two devices are within 10 meters (32.8 feet) of one another.

2. Remove the battery from the scanner.

3. Replace the battery.

4. After the scanner reboots, scan the barcode below to place the scanner in HID mode.

Figure 64 Bluetooth HID Classic Barcode

5. On the device, swipe down from the Status bar to open the Quick Access panel and then touch ⚙.

6. Touch **Bluetooth**.

7. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.

8. Scroll through the list and select XXXXX xxxxxx, where XXXXX is the scanner and xxxxxx is the serial number.

   The device connects to the scanner, the scanner beeps once and **Connected** appears below the device name. The Bluetooth device is added to the **Paired devices** list and a trusted ("paired") connection is established.

DataWedge

DataWedge is a utility that adds advanced barcode scanning capability to any application without writing code. It runs in the background and handles the interface to built-in barcode scanners. The captured barcode data is converted to keystrokes and sent to the target application as if it was copied and pasted, or typed on the keypad.

DataWedge allows any app on the device to get data from input sources such as a barcode scanner, MSR, RFID, voice, or serial port and manipulate the data based on options or rules.

Configure DataWedge to

*   Provide data capture services from any app.
*   Use a particular scanner, reader or other peripheral device.
*   Properly format and transmit data to a specific app.

To configure DataWedge refer to techdocs.zebra.com/datawedge/.

Enabling DataWedge

Datawedge is enabled by default on this device. Re-enable DataWedge on the device from the DataWedge app.

1. Swipe up from the bottom of the Home screen and touch ▨ .
2. Touch ⋮ > **Settings**.
3. Touch the **DataWedge enabled** checkbox. A blue checkmark appears in the checkbox indicating that DataWedge is enabled.
4. Touch the Home button.

Disabling DataWedge

1. Touch ⋮ .
2. Touch **Settings**.
3. Touch **DataWedge enabled**.

The blue check disappears from the checkbox indicating that DataWedge is disabled.

Supported Decoders

NOTE: DataWedge supports the decoders listed below but not all are validated on this device.

Table 11   Supported Decoders

Decoders	Internal Imager SE2100	Internal Imager SE4710	RS507/RS507X	RS6000	RS5100	DS2278	DS3678	LI3678	DS8178
Australian Postal	O	O	O	O	O	O	O	--	O
Aztec	X	X	X	X	X	X	X	--	X
Canadian Postal	O	O	--	O	O	--	--	--	--
Chinese 2 of 5	O	O	O	O	O	O	O	O	O
Codabar	X	X	X	X	X	X	X	X	X
Code 11	O	O	O	O	O	O	O	O	O
Code 128	X	X	X	X	X	X	X	X	X
Code 39	X	X	X	X	X	X	X	X	X
Code 93	O	O	O	O	O	O	O	O	O
Composite AB	O	O	O	O	O	O	O	--	O
Composite C	O	O	O	O	O	O	O	--	O
Discrete 2 of 5	O	O	O	O	O	O	O	O	O
Datamatrix	X	X	X	X	X	X	X	--	X
Dutch Postal	O	O	O	O	O	O	O	--	O
DotCode	O	O	O	O	O	O	O	O	O
EAN13	X	X	X	X	X	X	X	X	X
EAN8	X	X	X	X	X	X	X	X	X
Grid Matrix	O	O	O	O	O	O	O	O	O
GS1 DataBar	X	X	X	X	X	X	X	X	X
GS1 DataBar Expanded	X	X	X	X	X	X	X	X	X
GS1 DataBar Limited	O	O	O	O	O	O	O	O	O
GS1 Datamatrix	O	O	--	O	O	O	O	--	O
GS1 QRCode	O	O	--	O	O	O	O	--	O
HAN XIN	--	--	--	O	O	--	O	O	--
Interleaved 2 of 5	O	O	O	O	O	O	O	O	O

Table 11   Supported Decoders (Continued)

Decoders	Internal Imager SE2100	Internal Imager SE4710	RS507/RS507X	RS6000	RS5100	DS2278	DS3678	LI3678	DS8178
Japanese Postal	O	O	O	O	O	O	O	--	O
Korean 3 of 5	O	O	O	O	O	O	O	O	O
MAIL MARK	X	X	--	X	X	X	X	--	X
Matrix 2 of 5	O	O	O	O	O	O	O	O	O
Maxicode	X	X	X	X	X	X	X	--	X
MicroPDF	O	O	O	O	O	O	O	--	O
MicroQR	O	O	O	O	O	O	O	--	O
MSI	O	O	O	O	O	O	O	O	O
PDF417	X	X	X	X	X	X	X	--	X
QR Code	X	X	X	X	X	X	X	--	X
Decoder Signature	O	O	O	O	O	O	--	--	--
TLC 39	O	O	O	O	O	O	O	O	O
Trioptic 39	O	O	O	O	O	O	O	O	O
UK Postal	O	O	O	O	O	O	O	--	O
UPCA	X	X	X	X	X	X	X	X	X
UPCE0	X	X	X	X	X	X	X	X	X
UPCE1	O	O	O	O	O	O	O	O	O
US4state	O	O	O	O	O	O	O	--	O
US4state FICS	O	O	O	O	O	O	O	--	O
US Planet	O	O	O	O	O	O	O	--	O
US Postnet	O	O	O	O	O	O	O	--	O

Key

X = Enabled
O = Disabled
-- = Not Supported

Touch the Back button to return to the previous screen.

Wireless

Introduction

This section provides information on the wireless features:

- Wireless Local Area Network (WLAN)
- Bluetooth
- Cast
- Near Field Communications (NFC).

Wireless Local Area Networks

Wireless local area networks (WLANs) allow the device to communicate wirelessly inside a building. Before using the device on a WLAN, the facility must be set up with the required hardware to run the WLAN (sometimes known as infrastructure). The infrastructure and the device must both be properly configured to enable this communication.

Refer to the documentation provided with the infrastructure (access points (APs), access ports, switches, Radius servers, etc.) for instructions on how to set up the infrastructure.

Once the infrastructure is set up to enforce the chosen WLAN security scheme, use the **Wireless & networks** settings configure the device to match the security scheme.

The device supports the following WLAN security options:

- None
- Enhanced Open
- Wireless Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)/WPA2 Personal (PSK)
- WPA3-Personal
- WPA/WPA2/WPA3 Enterprise (EAP)
- WPA3-Enterprise 192-bit

The **Status** bar displays icons that indicate Wi-Fi network availability and Wi-Fi status.

Connecting to a Wi-Fi Network

To connect to a Wi-Fi network:

1. Go to **Settings**.

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2. Touch **Network & internet**.

3. Touch **Wi-Fi** to open the **Wi-Fi** screen. The device searches for WLANs in the area and lists them.

4. Scroll through the list and select the desired WLAN network.

5. For open networks, touch profile once or press and hold and then select **Connect** or for secure networks enter the required password or other credentials then touch **Connect**. See the system administrator for more information.

   The device obtains a network address and other required information from the network using the dynamic host configuration protocol (DHCP) protocol. To configure the device with a fixed internet protocol (IP) address, see Configuring the Device to Use a Static IP Address on page 90.

6. In the Wi-Fi setting field, **Connected** appears indicating that the device is connected to the WLAN.

Removing a Wi-Fi Network

To remove a remembered or connected network:

1. Go to **Settings**.

2. Touch **Network & internet > W-Fi**.

3. Scroll down to the bottom of the list and touch **Saved networks**.

4. Touch the name of the network.

5. Touch **FORGET**.

6. Touch the Home button.

WLAN Configuration

This section provides information on configuring Wi-Fi settings.

Configuring a Secure Wi-Fi Network

1. Go to **Settings**.

2. Touch **Network & internet > Wi-Fi**.

3. Slide the switch to the **ON** position.

4. The device searches for WLANs in the area and lists them on the screen.

5. Scroll through the list and select the desired WLAN network.

6. Touch the desired network. If the network security is **Enhanced Open**, the device automatically connects to the network. For all other network security a dialog box appears.

7. If the network security is **WPA/WPA2-Personal**, **WPA3-Personal**, or **WEP**, enter the required password and then touch **Connect**.

8. If the network security is **WPA/WPA2/WPA3** Enterprise:

   • Touch the **EAP method** drop-down list and select one of the following:

     • **PEAP**
     • **TLS**

- **TTLS**
- **PWD**
- **LEAP**.

- Touch the **Phase 2 authentication** drop-down list and select an authentication method.
- If required, touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
- If required, touch **User certificate** and select a user certificate. Note: User certificates are installed using the Location & security settings.
- If required, in the **Identity** text box, enter the username credentials.
- If desired, in the **Anonymous identity** text box, enter an anonymous identity username.
- If required, in the **Password** text box, enter the password for then given identity.

9. If the network security is **WPA3-Enterprise 192-bit**:
   - Touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
   - Touch **User certificate** and select a user certificate. Note: User certificates are installed using the **Security** settings.
   - In the **Identity** text box, enter the username credentials.

NOTE: By default, the network Proxy is set to **None** and the IP settings is set to **DHCP**. See Configuring for a Proxy Server on page 89 for setting connection to a proxy server and see Configuring the Device to Use a Static IP Address on page 90 for setting the device to use a static IP address.

10. Touch **Connect**.

11. Touch the Home button.

Manually Adding a Wi-Fi Network

Manually add a Wi-Fi network if the network does not broadcast its name (SSID) or to add a Wi-Fi network when out of range.

1. Go to **Settings**.

2. Touch **Network & internet > Wi-Fi**.

3. Slide the Wi-Fi switch to the **On** position.

4. Scroll to the bottom of the list and select **Add network**.

5. In the **Network name** text box, enter the name of the Wi-Fi network.

6. In the **Security** drop-down list, set the type of security to:
   - **None**
   - **Enhanced Open**
   - **WEP**
   - **WPA/WPA2-Personal**
   - **WPA3-Personal**
   - **WPA/WPA2/WPA3-Enterprise**
   - **WPA3-Enterprise 192-bit**

7. If the network security is **None** or **Enhanced Open**, touch **Save**.

8. If the network security is **WEP, WPA3-Personal**, or **WPA/WPA2-Personal**, enter the required password and then touch **Save**.

9. If the network security is **WPA/WPA2/WPA3-Enterprise**:
   - Touch the **EAP method** drop-down list and select one of the following:
     - **PEAP**
     - **TLS**
     - **TTLS**
     - **PWD**
     - **LEAP**.
   - Touch the **Phase 2 authentication** drop-down list and select an authentication method.
   - If required, touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
   - If required, touch **User certificate** and select a user certificate. Note: User certificates are installed using the **Security** settings.
   - If required, in the **Identity** text box, enter the username credentials.
   - If desired, in the **Anonymous** identity text box, enter an anonymous identity username.
   - If required, in the **Password** text box, enter the password for the given identity.

10. If the network security is **WPA3-Enterprise 192-bit**:
    - Touch **CA certificate** and select a Certification Authority (CA) certificate. Note: Certificates are installed using the **Security** settings.
    - Touch **User certificate** and select a user certificate. Note: User certificates are installed using the **Security** settings.
    - In the **Identity** text box, enter the username credentials.

NOTE: By default, the network Proxy is set to **None** and the IP settings is set to **DHCP**. See Configuring for a Proxy Server on page 89 for setting connection to a proxy server and see Configuring the Device to Use a Static IP Address on page 90 for setting the device to use a static IP address.

11. Touch **Save**. To connect to the saved network, touch and hold on the saved network and select **Connect to network**.

12. Touch the Home button.

Configuring for a Proxy Server

A proxy server is a server that acts as an intermediary for requests from clients seeking resources from other servers. A client connects to the proxy server and requests some service, such as a file, connection, web page, or other resource, available from a different server. The proxy server evaluates the request according to its filtering rules. For example, it may filter traffic by IP address or protocol. If the request is validated by the filter, the proxy provides the resource by connecting to the relevant server and requesting the service on behalf of the client.

It is important for enterprise customers to be able to set up secure computing environments within their companies, making proxy configuration essential. Proxy configuration acts as a security barrier ensuring that the proxy server monitors all traffic between the Internet and the intranet. This is normally an integral part of security enforcement in corporate firewalls within intranets.

1. Go to **Settings**.

2. Touch **Network & internet > Wi-Fi**.

3. Slide the Wi-Fi switch to the **On** position.

4. In the network dialog box, select and touch a network.

5. Touch ✏ to edit the network details.

6. Touch the down arrow to hide the keyboard.

7. Touch **Advanced options**.

8. Touch **Proxy** and select **Manual**.

9. In the **Proxy hostname** text box, enter the address of the proxy server.

10. In the **Proxy port** text box, enter the port number for the proxy server.

11. In the **Bypass proxy for** text box, enter addresses for web sites that are not required to go through the proxy server. Use a comma "," between addresses. Do not use spaces or carriage returns between addresses.

12. Touch **Save**.

13. Touch **Connect**.

14. Touch the Home button.

Configuring the Device to Use a Static IP Address

By default, the device is configured to use Dynamic Host Configuration Protocol (DHCP) to assign an Internet protocol (IP) address when connecting to a wireless network.

1. Go to **Settings**.

2. Touch **Network & internet > Wi-Fi**.

3. Slide the Wi-Fi switch to the **On** position.

4. In the network dialog box, select and touch a network.

5. Touch ✏ to edit the network details.

6. Touch the down arrow to hide the keyboard.

7. Touch **Advanced options**.

8. Touch **IP settings** and select **Static**.

9. In the **IP address** text box, enter an IP address for the device.

10. If required, in the **Gateway** text box, enter a gateway address for the device.

11. If required, in the **Network prefix length** text box, enter the prefix length.

12. If required, in the **DNS 1** text box, enter a Domain Name System (DNS) address.

13. If required, in the **DNS 2** text box, enter a DNS address.

14. Touch **Save**.

15. Touch **Connect**.

16. Touch the Home button.

Wi-Fi Preferences

Use the **Wi-Fi preferences** to configure advanced Wi-Fi settings. From the Wi-Fi screen scroll down to the bottom of the screen and touch **Wi-Fi preferences**.

- **Turn on W-Fi automatically** - When enabled, Wi-Fi automatically turns back on when near high quality saved networks.
- **Open network notification** - When enabled, notifies the user when an open network is available.
- **Advanced** - Touch to expand options.
    - **Additional settings** - See Additional Wi-Fi Settings.
    - **Install Certificates** – Touch to install certificates.
    - **Network rating provider** - To help determine what constitutes a good Wi-Fi network, Android supports external Network rating providers that provide information about the quality of open Wi-Fi networks. Select one of the providers listed or **None**. If none are available or selected, the Connect to open networks feature is disabled.
    - **Wi-Fi Direct** - Displays a list of devices available for a direct Wi-Fi connection.
    - **MAC address** - Displays the Media Access Control (MAC) address of the device when connecting to Wi-Fi networks.
    - **IP address** - Displays the IP address of the device when connecting to Wi-Fi networks.

Additional Wi-Fi Settings

NOTE: Additional Wi-Fi settings are for the device, not for a specific wireless network.

Use the **Additional Settings** to configure additional Wi-Fi settings. To view the additional Wi-Fi settings, scroll to the bottom of the **Wi-Fi** screen and touch **Wi-Fi Preferences** > **Advanced** > **Additional settings.**

- **Regulatory**
    - **Country Selection** - Displays the acquired country code if 802.11d is enabled, else it displays the currently selected country code.
    - **Region code** - Displays the current region code.
- **Band and Channel Selection**
    - **Wi-Fi frequency band** - Set the frequency band to: **Auto** (default), **5 GHz only** or **2.4 GHz only**.
    - **Available channels (2.4 GHz)** - Touch to display the **Available channels** menu. Select specific channels and touch **OK**.
    - **Available channels (5 GHz)** - Touch to display the **Available channels** menu. Select specific channels and touch **OK**.
- **Logging**
    - **Advanced Logging** – Touch to enable advanced logging or change the log directory.
    - **Wireless logs** - Use to capture Wi-Fi log files.
        - **Fusion Logger** - Touch to open the **Fusion Logger** application. This application maintains a history of high level WLAN events which helps to understand the status of connectivity.

- **Fusion Status** - Touch to display live status of WLAN state. Also provides information about the device and connected profile.
- **About**
  - **Version** - Displays the current Fusion information.

Wi-Fi Direct

Wi-Fi Direct devices can connect to each other without having to go through an access point. Wi-Fi Direct devices establish their own ad-hoc network when required, letting you see which devices are available and choose which one you want to connect to.

1. Go to **Settings**.

2. Touch **Wi-Fi > Wi-Fi preferences** > **Advanced** > **Wi-Fi Direct**. The device begins searching for another Wi-Fi Direct device.

3. Under **Peer devices**, touch the other device name.

4. On the other device, select **Accept**.

Connected appears on the device. On both devices, in their respective Wi-Fi Direct screens, the other device name appears in the list.

Bluetooth

Bluetooth devices can communicate without wires, using frequency-hopping spread spectrum (FHSS) radio frequency (RF) to transmit and receive data in the 2.4 GHz Industry Scientific and Medical (ISM) band (802.15.1). Bluetooth wireless technology is specifically designed for short-range (10 m (32.8 ft)) communication and low power consumption.

Devices with Bluetooth capabilities can exchange information (for example, files, appointments, and tasks) with other Bluetooth enabled devices such as printers, access points, and other mobile devices.

The device supports Bluetooth Low Energy. Bluetooth Low Energy is targeted at applications in the healthcare, fitness, security, and home entertainment industries. It provides reduced power consumption and cost while maintaining standard Bluetooth range.

Adaptive Frequency Hopping

Adaptive Frequency Hopping (AFH) is a method of avoiding fixed frequency interferers, and can be used with Bluetooth voice. All devices in the piconet (Bluetooth network) must be AFH-capable in order for AFH to work. There is no AFH when connecting and discovering devices. Avoid making Bluetooth connections and discoveries during critical 802.11b communications. AFH for Bluetooth consists of four main sections:

- Channel Classification - A method of detecting an interference on a channel-by-channel basis, or pre-defined channel mask.
- Link Management - Coordinates and distributes the AFH information to the rest of the Bluetooth network.
- Hop Sequence Modification - Avoids interference by selectively reducing the number of hopping channels.
- Channel Maintenance - A method for periodically re-evaluating the channels.

When AFH is enabled, the Bluetooth radio "hops around" (instead of through) the 802.11b high-rate channels. AFH coexistence allows enterprise devices to operate in any infrastructure.

The Bluetooth radio in this device operates as a Class 2 device power class. The maximum output power is 2.5 mW and the expected range is 10 m (32.8 ft). A definition of ranges based on power class is difficult to obtain due to power and device differences, and whether in open space or closed office space.

NOTE: It is not recommended to perform Bluetooth wireless technology inquiry when high rate 802.11b operation is required.

Security

The current Bluetooth specification defines security at the link level. Application-level security is not specified. This allows application developers to define security mechanisms tailored to their specific need. Link-level security occurs between devices, not users, while application-level security can be implemented on a per-user basis. The Bluetooth specification defines security algorithms and procedures required to authenticate devices, and if needed, encrypt the data flowing on the link between the devices. Device authentication is a mandatory feature of Bluetooth while link encryption is optional.

Pairing of Bluetooth devices is accomplished by creating an initialization key used to authenticate the devices and create a link key for them. Entering a common personal identification number (PIN) in the devices being paired generates the initialization key. The PIN is never sent over the air. By default, the Bluetooth stack responds with no key when a key is requested (it is up to user to respond to the key request event). Authentication of Bluetooth devices is based-upon a challenge-response transaction. Bluetooth allows for a PIN or passkey used to create other 128-bit keys used for security and encryption. The encryption key is derived from the link key used to authenticate the pairing devices. Also worthy of note is the limited range and fast frequency hopping of the Bluetooth radios that makes long-distance eavesdropping difficult.

Recommendations are:

• Perform pairing in a secure environment
• Keep PIN codes private and do not store the PIN codes in the device
• Implement application-level security.

Bluetooth Profiles

The device supports the Bluetooth services listed.

Table 12 Bluetooth Profiles

Profile	Description
Service Discovery Protocol (SDP)	Handles the search for known and specific services as well as general services.
Serial Port Profile (SPP)	Allows use of RFCOMM protocol to emulate serial cable connection between two Bluetooth peer devices. For example, connecting the device to a printer.
Object Push Profile (OPP)	Allows the device to push and pull objects to and from a push server.
Advanced Audio Distribution Profile (A2DP)	Allows the device to stream stereo-quality audio to a wireless headset or wireless stereo speakers.

Table 12 Bluetooth Profiles (Continued)

Profile	Description
Audio/Video Remote Control Profile (AVRCP)	Allows the device to control A/V equipment to which a user has access. It may be used in concert with A2DP.
Personal Area Network (PAN)	Allows the use of Bluetooth Network Encapsulation Protocol to provide L3 networking capabilities over a Bluetooth link. Only PANU role is supported.
Human Interface Device Profile (HID)	Allows Bluetooth keyboards, pointing devices, gaming devices and remote monitoring devices to connect to the device.
Headset Profile (HSP)	Allows a hands-free device, such as a Bluetooth headset, to place and receive calls on the device.
Hands-Free Profile (HFP)	Allows car hands-free kits to communicate with the device in the car.
Phone Book Access Profile (PBAP)	Allows exchange of Phone Book Objects between a car kit and a mobile device to allow the car kit to display the name of the incoming caller; allow the car kit to download the phone book so the user can initiate a call from the car display.
Out of Band (OOB)	Allows exchange of information used in the pairing process. Pairing is completed using the Bluetooth radio, but requires information from the OOB mechanism. Using OOB with NFC enables pairing when devices simply get close, rather than requiring a lengthy discovery process.
Symbol Serial Interface (SSI)	Allows for communication with Bluetooth Imager.
File Transfer Profile (FTP)	Provides the capability to browse, manipulate and transfer files in file system of another system. Uses GOEP as a basis.
Generic Attribute Profile (GATT)	Provides profile discovery and description services for Bluetooth Low Energy protocol. It defines how attributes are grouped together into sets to form services.
HID Over GATT Profile (HOGP)	Defines the procedures and features used by Bluetooth low energy HID Devices using GATT and Bluetooth HID Hosts using GATT.
Scan Parameters Profile (ScPP)	Provides devices with information to assist them in managing their connection idle timeout and advertising parameters to optimize for power consumption and/or reconnection latency.
Message Access Profile (MAP)	Defines the features and procedures used by devices that exchange message objects.
Dial Up Networking (DUN)	Provides a standard to access the Internet and other dial-up services over Bluetooth.
Generic Access Profile (GAP)	Use for device discovery and authentication.
OBject EXchange (OBEX)	Facilitates the exchange of binary objects between devices.
Generic Object Exchange Profile (GOEP)	Provides a basis for other data profiles. Based on OBEX.
Generic Audio/Video Distribution Profile (GAVDP)	Provides the basis for A2DP and VDP, the basis of the systems designed for distributing video and audio streams using Bluetooth technology.

Bluetooth Power States

The Bluetooth radio is off by default.

- Suspend - When the device goes into suspend mode, the Bluetooth radio stays on.
- Airplane Mode - When the device is placed in Airplane Mode, the Bluetooth radio turns off. When Airplane mode is disabled, the Bluetooth radio returns to the prior state. When in Airplane Mode, the Bluetooth radio can be turned back on if desired.

Bluetooth Radio Power

Turn off the Bluetooth radio to save power or if entering an area with radio restrictions (for example, an airplane). When the radio is off, other Bluetooth devices cannot see or connect to the device. Turn on the Bluetooth radio to exchange information with other Bluetooth devices (within range). Communicate only with Bluetooth radios in close proximity.

Enabling Bluetooth

1. Swipe down from the Status bar to open the Notification panel.
2. Touch ✳ to turn Bluetooth on.
3. Touch the Home button.

Disabling Bluetooth

1. Swipe down from the Status bar to open the Notification panel.
2. Touch ✳ to turn Bluetooth off.
3. Touch the Home button.

Discovering Bluetooth Device(s)

The device can receive information from discovered devices without pairing. However, once paired, the device and a paired device exchange information automatically when the Bluetooth radio is on.

1. Ensure that Bluetooth is enabled on both devices.
2. Ensure that the Bluetooth device to discover is in discoverable mode.
3. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
4. Swipe down from the Status bar to open the Quick Access panel.
5. Touch and hold **Bluetooth**.
6. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.
7. Scroll through the list and select a device. The Bluetooth pairing request dialog box appears.
8. Touch **Pair** on both devices.
9. The Bluetooth device is added to the **Paired devices** list and a trusted ("paired") connection is established.

Changing the Bluetooth Name

By default, the device has a generic Bluetooth name that is visible to other devices when connected.

1. Go to **Settings**.

2. Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3. If Bluetooth is not on, move the switch to turn Bluetooth on.

4. Touch **Device name**.

5. Enter a name and touch **RENAME**.

6. Touch the Home button.

Connecting to a Bluetooth Device

Once paired, connect to a Bluetooth device.

1. Go to **Settings**.

2. Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3. In the list, touch the unconnected Bluetooth device.
   When connected, **Connected** appears below the device name.

Selecting Profiles on the Bluetooth Device

Some Bluetooth devices have multiple profiles.

1. Go to **Settings**.

2. Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3. In the **Paired Devices** list, touch ✿ next to the device name.

4. Turn on or off a profile to allow the device to use that profile.

5. Touch the Home button.

Unpairing a Bluetooth Device

Unpairing a Bluetooth device erases all pairing information.

1. Go to **Settings**.

2. Touch **Connected devices** > **Connection preferences** > **Bluetooth**.

3. In the **Paired Devices** list, touch ✿ next to the device name.

4. Touch **FORGET**.

5. Touch the Home button.

Cast

Use **Cast** to mirror the device screen on a Miracast enabled wireless display.

1. Go to **Settings**.

2. Touch **Connected devices** > **Connection preferences** > **Cast**.

3. Touch **⋮** > **Enable wireless display**. The device searches for nearby Miracast devices and lists them.

4. Touch a device to begin casting.

5. Touch the Home button.

Near Field Communications (CC6000 Only)

NFC/HF RFID is a short-range wireless connectivity technology standard that enables secure transaction between a reader and a contactless smartcard. The technology is based on ISO/IEC 14443 type A and B (proximity), ISO/IEC 15693 (vicinity), and FeliCa standards, using the HF 13.56 MHz unlicensed band.

The device supports the following operating modes:

• Reader mode
• Peer-to-Peer communication
• Card Emulation mode.

Using NFC, the device can:

• Read contactless cards such as contactless tickets, ID cards and ePassport.
• Read and write information to contactless cards such as SmartPosters and tickets, as well as devices with NFC interface such as vending machines.
• Read information from supported medical sensors.
• Pair with supported Bluetooth devices such as printers, ring scanners (ex. RS6000), and headsets (ex. HS3100).
• Exchange data with another NFC device.
• Emulate contactless card such as payment, ticket, or SmartPoster.
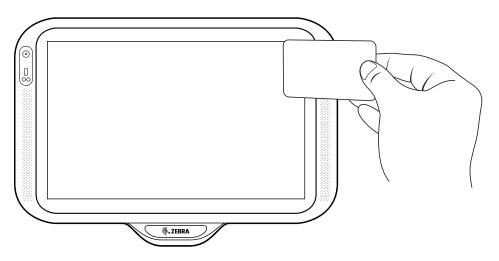
The device NFC antenna is positioned to read NFC cards from the top of the device while the device is being held.

Reading NFC Cards

Read contactless cards using NFC.

Figure 65 Reading Cards

1. Launch an NFC enabled application.

2. Move a valid NFC card close to the device until the card is detected.

3. Hold the card steadily until the transaction is complete (usually indicated by the application).

Sharing Information Using NFC

You can beam content like a web page, contact cards, pictures, YouTube links or location information from your screen to another device by bringing the devices together back to back.
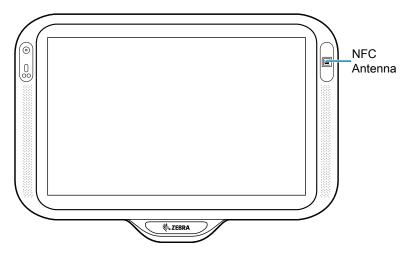
Make sure both devices are unlocked, support NFC, and have both NFC and Android Beam turned on.

1. Open a screen that contains a web page, video, photo or contact.

2. Align the NFC logo on the device with the NFC antenna on the other device.

When the devices connect, a sound emits, the image on the screen reduces in size, the message **Touch to beam** displays.

Figure 66 NFC Antennas

3. Touch anywhere on the screen.

The transfer begins.

Enterprise NFC Settings

Improve NFC performance by selecting which NFC features to use on the device.

- **Card Detection Mode** - Select a card detection mode.
  - **Low**
  - **Hybrid** (default)
  - **Standard**.
- **Supported Card Technology** - Select an option to detect only one NFC tag type.
  - **All (Default)** - Detects all NFC tag types. This provides the best detection speed.
  - **ISO 14443 Type A/B**
  - **FeliCa**
  - **ISO15693**
- **Other NFC settings available with Zebra administrator tools (CSP)** - Allows configuration of additional Enterprise NFC Settings through staging tools and Mobile Device Management (MDM) solutions with an MX version that supports the Enterprise NFC Settings Configuration Service Provider (CSP). For more information on using the Enterprise NFC Settings CSP, refer to techdocs.zebra.com.

Accessories

Introduction

This chapter provides information for using the accessories for the device.

Accessories

This table lists the accessories available for the device.

Table 13   Accessories

Accessory	Part Number	Description
Mounting Plates		
CC600 Wall Mount	21-118517-01R	CC600 Wall Mounting Kit
CC600 Pole Mount	21-118517-02R	CC600 Pole Mounting Kit
CC6000 Wall Mounting Kit	KT-152097-03	CC6000 Wall Mounting Kit with Power Supply Storage
CC6000 Wall Mounting Kit	KT-152097-01	100 mm VESA
CC6000 Wall Mounting Kit	KT-152098-03	Slimmer, CC6000 specific mount
CC6000 Pole Mounting Kit	KT-152096-03	100 mm VESA Includes additional storage shelf to hold power supply. Modified over KT0152096-02 to better hold Level VI power supply.
CC6000 Pole Mounting Kit	KT-152096-01	100 mm VESA
Communication Cables		
USB-C Cable	CBL-TC2X-USBC-01	Used to communicate with the device via the USB OTG port.
USB-C Cable	CBL-TC5X-USBC2A-01	Used to communicate with the device via the USB OTG port.

Table 13   Accessories (Continued)
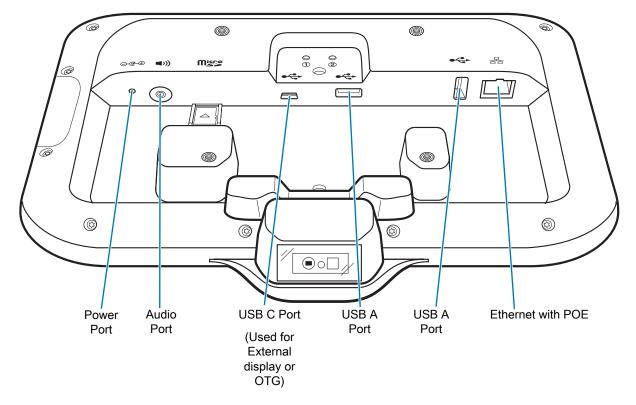
Accessory	Part Number	Description
Power Supplies		
DC Line Cord	CBL-DC-383A1-01	Used with Power Supply (PWR-BUA5V16W0WW) Cable length is 6 ft.
Power Supply	PWR-BUA5V16W0WW	100-240 VAC, 5.4 V, 3 A, 16 W Meets US DOE Level VI efficiency standard. Replaces PWRS-14000-249R.
AC Line Cord	50-16000-182R	Used with 50-14000-147R/50-14000-249R/PWRS-14000-249R/PWR-BUA5V16W0WW

Headset (CC6000 Only)

Connect the 3.5 mm connector plug of the headset to the 3.5 mm audio port (see Figure 67).

Figure 67   CC6000 Power and Cable Ports

Power Port   Audio Port   USB C Port (Used for External display or OTG)   USB A Port   USB A Port   Ethernet with POE

USB cable

The USB cable plugs into the port at the back of the device. When attached to the device the cable allows transferring data to a host computer, and connecting USB peripherals.

USB Communication

To connect the device to a host computer:

1. Connect the USB cable to the device.

2. Connect the USB connector of the cable to a host computer.

Application Deployment

Security

The device implements a set of security policies that determine whether an application is allowed to run and, if allowed, with what level of trust. To develop an application, you must know the security configuration of the device, and how to sign an application with the appropriate certificate to allow the application to run (and to run with the needed level of trust).

NOTE: Ensure the date is set correctly before installing certificates or when accessing secure web sites.

Secure Certificates

If the VPN or Wi-Fi networks rely on secure certificates, obtain the certificates and store them in the device's secure credential storage, before configuring access to the VPN or Wi-Fi networks.

If downloading the certificates from a web site, set a password for the credential storage. The device supports X.509 certificates saved in PKCS#12 key store files with a .p12 extension (if key store has a .pfx or other extension, change to .p12).

The device also installs any accompanying private key or certificate authority certificates contained in the key store.

Installing a Secure Certificate

Install a secure certificate.

1. Copy the certificate from the host computer to the root of the microSD card or the device's internal memory. See for information about connecting the device to a host computer and copying files.

2. Go to **Settings**.

3. Touch **Security > Encryption & credentials**.

4. Touch **Install from storage**.

5. Navigate to the location of the certificate file.

6. Touch the filename of the certificate to install.

7. If prompted, enter the password for credential storage. If a password has not been set for the credential storage, enter a password for it twice and then touch **OK**.

8. If prompted, enter the certificate's password and touch **OK**.

9. Enter a name for the certificate and in the Credential use drop-down, select **VPN and apps** or **Wi-Fi**.

10. Touch **OK**.

   The certificate can now be used when connecting to a secure network. For security, the certificate is deleted from the microSD card or internal memory.

Configuring Credential Storage Settings

1. Go to **Settings**.

2. Touch **Security > Encryption & credentials**.
   - **Trusted credentials** - Touch to display the trusted system and user credentials.
   - **User credentials** - Touch to display user credentials.
   - **Install from storage** - Touch to install a secure certificate from the microSD card or internal storage.
   - **Clear credentials** - Deletes all secure certificates and related credentials.

Development Tools

Development tools for Android include Android Studio, EMDK for Android, and StageNow.

Android Application Development

Development Workstation

Android development tools are available at developer.android.com.

To start developing applications for the device, download Android Studio. Development can take place on a Microsoft® Windows®, Mac® OS X®, or Linux® operating system.

Applications are written in Java or Kotlin, but compiled and executed in the Dalvik virtual machine. Once the Java code is compiled cleanly, the developer tools make sure the application is packaged properly, including the AndroidManifest.xml file.

Android Studio contains a full featured IDE as well as SDK components required to develop Android applications.

Enabling Developer Options

The **Developer options** screen sets development related settings. By default, the Developer Options are hidden.

1. Go to **Settings**.

2. Touch **About phone**.

3. Scroll down to **Build number**.

4. Tap **Build number** seven times. The message **You are now a developer!** appears.

5. Touch the Back button.

6. Touch **System** > **Advanced** > **Developer options**.

7. Slide the **USB debugging** switch to the **ON** position.

EMDK for Android

EMDK for Android provides developers with tools to create business applications for enterprise mobile devices. It is designed for use with Google's Android Studio and includes Android class libraries such as Barcode, sample applications with source code, and the associated documentation.

EMDK for Android allows applications to take full advantage of the capabilities that Zebra devices have to offer. It embeds Profile Manager technology within Android Studio IDE, providing a GUI-based development tool designed specifically for Zebra devices. This allows fewer lines of code, resulting in reduced development time, effort, and errors.

For more information go to: techdocs.zebra.com.

StageNow

StageNow is Zebra's next-generation Android Staging Solution built on the MX platform. It allows quick and easy creation of device profiles, and can deploy to devices simply by scanning a barcode, reading a tag, or playing an audio file.

The StageNow Staging Solution includes the following components:

• The StageNow Workstation tool installs on the staging workstation (host computer) and lets the administrator easily create staging profiles for configuring device components, and perform other staging actions such as checking the condition of a target device to determine suitability for software upgrades or other activities. The StageNow Workstation stores profiles and other created content for later use.

• The StageNow Client resides on the device and provides a user interface for the staging operator to initiate staging. The operator uses one or more of the desired staging methods (print and scan a barcode, read an NFC tag or play an audio file) to deliver staging material to the device.

For more information go to: techdocs.zebra.com.

GMS Restricted

GMS Restricted mode deactivates Google Mobile Services (GMS). All GMS apps are disabled on the device and communication with Google (analytics data collection and location services) is disabled.

Use StageNow to disable or enable GMS Restricted mode. After a device is in GMS Restricted mode, enable and disable individual GMS apps and services using StageNow. To ensure GMS Restricted mode persists after an Enterprise Reset, use the Persist Manager option in StageNow. For more information on StageNow, refer to techdocs.zebra.com.

ADB USB Setup

To use the ADB, install the USB driver. This assumes that the development SDK has been installed on the host computer. Go to developer.android.com/sdk/index.html for details on setting up the development SDK.

ADB driver for Windows and Linux are available on the Zebra Support Central web site at
zebra.com/support. Download the ADB and USB Driver Setup package. Follow the instructions with the
package to install the ADB and USB drivers for Windows and Linux.

Enabling USB Debugging

By default, USB debugging is disabled.

1. Go to **Settings**.

2. Touch **About phone**.

3. Scroll down to **Build number**.

4. Tap **Build number** seven times. The message **You are now a developer!** appears.

5. Touch Back button.

6. Touch **System** > **Advanced** > **Developer options**.

7. Slide the **USB debugging** switch to the **ON** position.

8. Connect the device to the host computer using the USB Cable.

   The **Allow USB debugging?** dialog box appears on the device.

   If the device and host computer are connected for the first time, the **Allow USB debugging?** dialog box
   with the **Always allow from this computer** check box displays. Select the check box, if required.

9. On the device, touch **OK** or **Allow**.

10. On the host computer, navigate to the `platform-tools` folder.

11. Type `adb devices`.

    The following displays:
    `List of devices attached`

    `XXXXXXXXXXXXXX device` (where XXXXXXXXXXXXXXX is the device number).

> **NOTE:** If device number does not appear, ensure that ADB drivers are installed properly.

12. Touch the Home button.

Application Installation

After an application is developed, install the application onto the device using one of the following
methods:

- USB connection, see Installing Applications Using the USB Connection on page 107.
- Android Debug Bridge, see Installing Applications Using the Android Debug Bridge on page 107.
- microSD Card, see Installing Applications Using a microSD Card on page 108.
- Mobile device management (MDM) platforms that have application provisioning. Refer to the MDM
  software documentation for details.

Installing Applications Using the USB Connection

1. Connect the device to a host computer using the USB cable.

2. Pull down the Notification panel and touch **Connect this device via USB**.

3. Touch **File Transfer**.

4. On the host computer, open a file manager application.

5. On the host computer, copy the application .apk file from the host computer to the device.

6. Disconnect the device from the host computer.

7. Swipe the screen up and select 🔵 to view files on the Internal Storage.

8. Locate the application .apk file.

9. Touch the application file.

10. Touch **Continue** to install the app or **Cancel** to stop the installation.

11. To confirm installation and accept what the application affects, touch **Install** otherwise touch **Cancel**.

12. Touch **Open** to open the application or **Done** to exit the installation process. The application appears in the App list.

Installing Applications Using the Android Debug Bridge

Use ADB commands to install application onto the device.

1. Ensure that the ADB drivers are installed on the host computer. See .

2. Connect the device to a host computer using USB. See .

3. Go to **Settings**.

4. Touch **System > Advanced > Developer options**.

5. Slide the switch to the **ON** position.

6. Touch **USB Debugging**. A check appears in the check box. The **Allow USB debugging?** dialog box appears.

7. Touch **OK**.

8. On the host computer, open a command prompt window and use the adb command:
   ```
   adb install <application>
   ```
   where: <application> = the path and filename of the apk file.

9. Disconnect the device from the host computer. See .

Installing Applications Using a microSD Card

⚠️ **CAUTION:** When connecting the device to a host computer and mounting its microSD card, follow the host computer's instructions for connecting and disconnecting USB devices, to avoid damaging or corrupting files.

1. Copy the apk file to the root of the microSD card.
   - Copy the apk file to a microSD card using a host computer and then installing the microSD card into the device (see Inserting the microSD Card (Optional) on page 18 for more information).
   - Connect the device with a microSD card already installed to the host computer, and copy apk file to the microSD card. See USB Communication on page 32 for more information. Disconnect the device from the host computer.

2. Press and hold the Reset button until the Restart option appears. Release the Reset button when the option appears. The device restarts if the button is held down for longer than 3 seconds.

3. Touch **Restart**.

4. Touch Home button, then Swipe the screen up and select 🔵 to view files on the microSD card.

5. Touch ≡ > **SD card**.

6. Locate the application .apk file.

7. Touch the application file.

8. Touch **Continue**. to install the app or **Cancel** to stop the installation.

9. To confirm installation and accept what the application affects, touch **Install** otherwise touch **Cancel**.

10. Touch **Open** to open the application or **Done** to exit the installation process. The application appears in the App list.

Uninstalling an Application

1. Go to **Settings**.

2. Touch **Apps & notifications**.

3. Touch **See all apps** to view all apps in the list.

4. Scroll through the list to the app.

5. Touch the app. The **App info** screen appears.

6. Touch **Uninstall**.

7. Touch **OK** to confirm.

Performing a System Update

System Update packages can contain either partial or complete updates for the operating system. Zebra distributes the System Update packages on the Zebra Support & Downloads web site. Perform a system update using either a microSD card or using ADB.

Downloading the System Update Package

1. Go to the Zebra Support & Downloads web site, zebra.com/support.

2. Download the appropriate System Update package to a host computer.

Performing a System Update Using microSD Card

1. Copy the System Update zip file to the root of the microSD card.
   - Copy the zip file to a microSD card using a host computer and then installing the microSD card into the device (see Inserting the microSD Card (Optional) on page 18 for more information).
   - Connect the device with a microSD card already installed to the host computer, and copy zip file to the microSD card. See USB Communication on page 32 for more information. Disconnect the device from the host computer.

2. Press and hold the Reset button until the Restart option appears. Release the Reset button when the option appears. The device restarts if the button is held down for longer than 3 seconds.

3. Touch **Restart**.

4. Press and hold the Number 1 button. The System Recovery screen appears.

5. Press the Number 2 button to navigate to **Apply upgrade from SD card** or **Apply downgrade from SD card**.

6. Press the Number 1 button.

7. Press the Number 2 button to navigate to **Full OTA Package** or **Diff OTA Package**.

8. Press the Number 1 button.

9. Use the Number 2 buttons to navigate to the System Update file.

10. Press the Number 1 button.

    The System Update installs and then the device returns to the Recovery screen.

11. Press the Number 1 button to reboot the device.

Performing a System Update Using ADB

1. Connect the device to a host computer using a USB cable.

2. Go to **Settings**.

3. Touch **System > Advanced > Developer options**.

4. Slide the switch to the **ON** position.

5. Touch **USB Debugging**. The **Allow USB debugging?** dialog box appears.

6. Touch **OK**.

7. On the host computer, open a command prompt window and use the adb command:

   `adb devices`

   The following displays:

   `List of devices attached`

   `XXXXXXXXXXXXXXX device` (where XXXXXXXXXXXXXXX is the device number).

NOTE: If device number does not appear, ensure that ADB drivers are installed properly.

8. Type:

   `adb reboot recovery`

9. Press Enter. The System Recovery screen appears on the device.

10. Press the Number 2 button to navigate to **Apply upgrade from adb** or **Apply downgrade from adb**.

11. Press the Number 1 button.

12. Press the Number 2 button to navigate to **Full OTA Package** or **Diff OTA Package**.

13. Press the Number 1 button.

14. On the host computer command prompt window type:

    `adb sideload <file>`

    where: <file> = the path and filename of the zip file.

15. Press Enter.

    The System Update installs (progress appears as percentage in the Command Prompt window) and then the System Recovery screen appears on the device.

16. Press the Number 1 button to reboot the device.

17. Disconnect the USB cable from the device.

Verifying System Update Installation

1. Go to **Settings**.

2. Touch **About phone**.

3. Scroll down to **Build number**.

4. Ensure that the build number matches the new system update package file number.

Performing an Enterprise Reset

An Enterprise Reset erases all user data in the `/data` partition, including data in the primary storage locations (`/sdcard` and emulated storage).

Before performing an Enterprise Reset, provision all necessary configuration files and restore after the reset.

Perform Enterprise Reset from the device settings, using a microSD card, or using ADB.

Performing an Enterprise Reset from Device Settings

1. Go to **Settings**.

2. Touch **System** > **Reset options** > **Erase all data (enterprise reset)**.

3. Touch **Erase all data** twice to confirm the Enterprise Reset.

Downloading the Enterprise Reset Package

1. Go to the Zebra Support & Downloads web site, zebra.com/support.

2. Download the Enterprise Reset file to a host computer.

Performing an Enterprise Reset Using microSD Card

1. Copy the Enterprise Reset zip file to the root of the microSD card.
   - Copy the zip file to a microSD card using a host computer and then installing the microSD card into the device (see Inserting the microSD Card (Optional) on page 18 for more information).
   - Connect the device with a microSD card already installed to the host computer and copy zip file to the microSD card. See USB Communication on page 32 for more information. Disconnect the device from the host computer.

2. Press and hold the Reset button until you get Restart option, release Reset button as you get option.

3. Touch Restart.

4. Press and hold the Number 1 button. System Recovery screen appears.

5. Press the Number 2 button to navigate to **Apply upgrade from SD card** or **Apply downgrade from SD card**.

6. Press the Number 1 button.

7. Use the Number 2 button to navigate to **Full OTA Package**.

8. Press the Number 1 button.

9. Use the Number 2 button to navigate to the Enterprise Reset file.

10. Press the Number 1 button. The Enterprise Reset occurs and then the device returns to the Recovery screen.

11. Press the Number 1 button to reboot the device.

Performing an Enterprise Reset Using ADB

1. Connect the device to a host computer using the USB cable.

2. Go to **Settings**.

3. Touch **System** > **Advanced** > **Developer options**.

4. Slide the switch to the **ON** position.

5. Touch **USB Debugging**. The **Allow USB debugging?** dialog box appears.

6. Touch **OK**.

7. On the host computer, open a command prompt window and type:

   `adb devices.`

   The following displays:

   `List of devices attached`

   `XXXXXXXXXXXXXX device` (where XXXXXXXXXXXXXXX is the device number).

> **NOTE:** If device number does not appear, ensure that ADB drivers are installed properly.

8. Type:

   `adb reboot recovery`

9. Press Enter. The System Recovery screen appears on the device.

10. Press the Number 2 button to navigate to **Apply upgrade from adb** or **Apply downgrade from adb**.

11. Press the Number 1 button.

12. Use the Number 2 button to navigate to **Full OTA Package**.

13. Press the Number 1 button.

14. On the host computer command prompt window type:

    `adb sideload <file>`

    where: <file> = the path and filename of the zip file.

15. Press Enter. The Enterprise Reset package installs and then the Recovery screen appears.

16. Press the Number 1 button to reboot the device.

17. Disconnect the USB cable from the device.

Performing a Factory Reset

A Factory Reset erases all data in the `/data` and `/enterprise` partitions in internal storage and clears all device settings. A Factory Reset returns the device to the last installed operating system image. To revert to a previous operating system version, re-install that operating system image. See Performing a System Update on page 109 for more information.

Downloading the Factory Reset Package

To download the Factory Reset package:

1. Go to the Zebra Support & Downloads web site, zebra.com/support.

2. Download the appropriate Factory Reset file to a host computer.

Performing a Factory Reset Using microSD Card

1. Copy the Factory Reset zip file to the root of the microSD card.
   - Copy the zip file to a microSD card using a host computer and then installing the microSD card into the device (see Inserting the microSD Card (Optional) on page 18 for more information).
   - Connect the device with a microSD card already installed to the host computer and copy zip file to the microSD card. See USB Communication on page 32 for more information. Disconnect the device from the host computer.

2. Press and hold the Reset button until you get Restart option, release Reset button as you get option.

3. Touch **Restart**.

4. Press and hold the Number 1 button. System Recovery screen appears.

5. Press the Number 2 button to navigate to **Apply upgrade from SD card** or **Apply downgrade from SD card**.

6. Press the Number 1 button.

7. Use the Number 2 button to navigate to **Full OTA Package**.

8. Press the Number 1 button.

9. Use the Number 2 button to navigate to the Enterprise Reset file.

10. Press the Number 1 button. The Enterprise Reset occurs and then the device returns to the Recovery screen.

11. Press the Number 1 button to reboot the device.

Performing a Factory Reset Using ADB

1. Connect the device to a host computer using the USB cable.

2. Go to **Settings**.

3. Touch **System > Advanced > Developer options**.

4. Slide the switch to the **ON** position.

5. Touch **USB Debugging**. The **Allow USB debugging?** dialog box appears.

6. Touch **OK**.

7. On the host computer, open a command prompt window and type:

   `adb devices`.

   The following displays:

   `List of devices attached`

   `XXXXXXXXXXXXXXX device` (where XXXXXXXXXXXXXXX is the device number).

NOTE: If device number does not appear, ensure that ADB drivers are installed properly.

8. Type:

   `adb reboot recovery`

9. Press Enter. The System Recovery screen appears on the device.

10. Press the Number 2 button to navigate to **Apply upgrade from adb** or **Apply downgrade from adb**.

11. Press the Number 1 button.

12. Use the Number 2 button to navigate to **Full OTA Package**.

13. Press the Number 1 button.

14. On the host computer command prompt window type:

    `adb sideload <file>`

    where: <file> = the path and filename of the zip file.

15. Press Enter. The Factory Reset package installs and then the Recovery screen appears.

16. Press the Number 1 button to reboot the device.

17. Disconnect the USB cable from the device.

Storage

The device contains the following types of file storage:

- Random Access Memory (RAM)
- Internal storage
- External storage (microSD card) or (USB drive)
- Enterprise folder.

Random Access Memory

Executing programs use RAM to store data. Data stored in RAM is lost upon a reset. The operating system manages how applications use RAM. It only allows applications and component processes and services to use RAM when required. It may cache recently used processes in RAM, so they restart more quickly when opened again, but it erases the cache if it needs the RAM for new activities.

The screen displays the amount of used and free RAM.

- **Performance** - Indicates memory performance.
- **Total memory** - Indicates the total amount of RAM available.
- **Average used (%)** - Indicates the average amount of memory (as a percentage) used during the period of time selected (default - 3 hours).

- **Free** - Indicates the total amount of unused RAM.
- **Memory used by apps** - Touch to view RAM usage by individual apps.

Viewing Memory

1. Go to **Settings**.

2. Touch **System** > **Advanced** > **Developer options** > **Memory**.

Internal Storage

The device has internal storage. The internal storage content can be viewed and files copied to and from when the device is connected to a host computer. Some applications are designed to be stored on the internal storage rather than in internal memory.

Viewing Internal Storage

1. Go to **Settings**.

2. Touch **Storage**.

If the device has removable storage installed, touch **Internal shared storage** to display a the amount of internal storage used by apps, photos, videos, audio and other files.

External Storage

The device can have a removable microSD card. The microSD card content can be viewed and files copied to and from when the device is connected to a host computer.

Viewing External Storage

1. Go to **Settings**.

2. Touch **Storage**.

Portable storage displays the total amount of space on the installed microSD card or USB drive and the amount used.

To unmount the microSD card, touch ▲.

Touch SD card to view the contents.

Formatting a microSD Card or USB Drive as Portable Storage

1. Touch **SD card or USB drive**.

2. Touch ⋮ > **Storage settings**.

3. Touch **Format**.

4. Touch **ERASE & FORMAT**.

5. Touch **DONE**.

Formatting a microSD Card as Internal Memory

You can format a microSD card as internal memory to increase the actual amount of the device's internal memory. Once formatted, the microSD card can only be read by this device.

1. Touch **SD card**.
2. Touch ⋮ > **Storage settings**.
3. Touch **Format as internal**.
4. Touch **ERASE & FORMAT**.
5. Touch **DONE**.

Enterprise Folder

The Enterprise folder (within internal flash) is a super-persistent storage that is persistent after a reset and an Enterprise Reset. The Enterprise folder is erased during a Factory Reset. The Enterprise folder is used for deployment and device-unique data. The Enterprise folder is approximately 128 MB (formatted). Applications can persist data after an Enterprise Reset by saving data to the enterprise/user folder. The folder is ext4 formatted and is only accessible from a host computer using ADB or from an MDM.

Managing Apps

Apps use two kinds of memory: storage memory and RAM. Apps use storage memory for themselves and any files, settings, and other data they use. They also use RAM when they are running.

1. Go to **Settings**.
2. Touch **Apps & notifications**.
3. Touch **See all XX apps** to view all apps on the device.
4. Touch ⋮ > **Show system** to include system processes in the list.
5. Touch an app, process, or service in the list to open a screen with details about it and, depending on the item, to change its settings, permissions, notifications and to force stop or uninstall it.

App Details

Apps have different kinds of information and controls.

• **Force stop** - Stops an app.
• **Disable** - Disables an app.
• **Uninstall** - Removes the app and all of its data and settings from the device. See Uninstalling an Application on page 108 for information about uninstalling apps.
• **Notifications** - Sets the app notification settings.
• **Permissions** - Lists the areas on the device that the app has access to.
• **Storage & cache** - Lists how much information is stored, and includes buttons for clearing it.
• **Mobile data & Wi-Fi** - Provides information about Wi-Fi consumed by an app.

- **Advanced**
  - **Screen time** - Displays the amount of time the app has displayed on the screen.
  - **Open by default** - If you have configured an app to launch certain file types by default, you can clear that setting here.
  - **Display over other apps** - Allows an app to display on top of other apps.
  - **App details** - Provides a link to additional app details on the Play store.
  - **Additional settings in the app** - Opens settings in the app.
  - **Modify system settings** - Allows an app to modify the system settings.

Managing Downloads

Files and apps downloaded using the Browser or Email are stored on the USB drive, microSD card, or Internal storage in the Download directory. Use the Downloads app to view, open, or delete downloaded items.

1. Swipe the screen up and touch ⬤.

2. Touch ☰ > **Downloads**.

3. Touch and hold an item, select items to delete and touch 🗑. The item is deleted from the device.

Maintenance and Troubleshooting

Maintaining the Device

For trouble-free service, observe the following tips when using the device:

- In order to avoid scratching the screen, use plastic-tipped pens intended for use with a touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the device screen.
- The touch-sensitive screen of the device is glass. Do not drop the device or subject it to strong impact.
- Protect the device from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- Do not store the device in any location that is dusty, damp, or wet.
- Use a soft lens cloth to clean the device. If the surface of the device screen becomes soiled, clean it with a soft cloth moistened with an approved cleanser. For a list of approved cleansers, see Approved Cleanser Active Ingredients on page 119.

Cleaning Instructions

CAUTION: Always wear eye protection.
Read warning label on alcohol product before using.
If you have to use any other solution for medical reasons please contact the Global Customer Support Center for more information.

WARNING: Avoid exposing this product to contact with hot oil or other flammable liquids. If such exposure occurs, unplug the device and clean the product immediately in accordance with these guidelines.

Approved Cleanser Active Ingredients

100% of the active ingredients in any cleaner must consist of one or some combination of the following: isopropyl alcohol, bleach/sodium hypochlorite[1] **(see important note below)**, hydrogen peroxide, ammonium chloride or mild dish soap.

IMPORTANT: Use pre-moistened wipes and do not allow liquid cleaner to pool.

[1]When using sodium hypochlorite (bleach) based products always follow the manufacturer's recommended instructions: use gloves during application and remove the residue afterwards with a damp alcohol cloth or a cotton swab to avoid prolonged skin contact while handling the device.

Due to the powerful oxidizing nature of sodium hypochlorite the metal surfaces on the device are prone to oxidation (corrosion) when exposed to this chemical in the liquid form (including wipes). In the event that these type of disinfectants come in contact with metal on the device, prompt removal with an alcohol-dampened cloth or cotton swab after the cleaning step is critical.

Harmful Ingredients

The following chemicals are known to damage the plastics on the device and should not come in contact with the device: acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; acqueous or alcoholic alkaline solutions; ethanolamine; toluene; trichloroethylene; benzene; carbolic acid and TB-lysoform.

Many vinyl gloves contain phthalate additives, which are often not recommended for medical use and are known to be harmful to the housing of the device.

Device Cleaning Instructions

Do not apply liquid directly to the device. Dampen a soft cloth or use pre-moistened wipes. Do not wrap the device in the cloth or wipe, but gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Allow the unit to air dry before use.

NOTE: For thorough cleaning, it is recommended to first remove all accessory attachments, if applicable.

Special Cleaning Notes

The device should not be handled while wearing vinyl gloves containing phthalates, or before hands are washed to remove contaminant residue after gloves are removed.

If products containing any of the harmful ingredients listed above are used prior to handling the device, such as hand sanitizer that contain ethanolamine, hands must be completely dry before handling the device to prevent damage to the device.

IMPORTANT: When using cleaning/disinfectant agents on the device, it is important to follow the directions prescribed by the cleaning/disinfectant agent manufacturer.

Cleaning Materials Required

- Alcohol wipes
- Lens tissue
- Cotton-tipped applicators
- Isopropyl alcohol
- Can of compressed air with a tube.

Cleaning Frequency

The cleaning frequency is at the customer's discretion due to the varied environments in which the mobile devices are used and may be cleaned as frequently as required. When dirt is visible, it is recommended to clean the mobile device to avoid build up of particles which make the device more difficult to clean later on.

For consistency and optimum image capture, it is recommended to clean the camera window periodically especially when used in environments prone to dirt or dust.

Cleaning the Device

Housing

Thoroughly wipe the housing, including all buttons and triggers, using an approved alcohol wipe.

Display

The display can be wiped down with an approved alcohol wipe, but care should be taken not to allow any pooling of liquid around the edges of the display. Immediately dry the display with a soft, non-abrasive cloth to prevent streaking.

Camera and Exit Window

Wipe the camera and exit window periodically with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.

Troubleshooting

The following tables provides typical problems that might arise and the solution for correcting the problem.

Table 14   Troubleshooting the Device

Problem	Cause	Solution
During data communication with a host computer, no data transmitted, or transmitted data was incomplete.	Device disconnected from host computer during communication.	Reattach the communication cable and re-transmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software was incorrectly installed or configured.	Perform setup.
During data communication over Wi-Fi, no data transmitted, or transmitted data was incomplete.	Wi-Fi radio is not on.	Turn on the Wi-Fi radio.
	You moved out of range of an access point.	Move closer to an access point.
During data communication over Bluetooth, no data transmitted, or transmitted data was incomplete.	Bluetooth radio is not on.	Turn on the Bluetooth radio.
	You moved out of range of another Bluetooth device.	Move within 10 meters (32.8 feet) of the other device.
No sound.	Volume setting is low or turned off.	Adjust the volume.
Device shuts off.	Device is inactive.	The display turns off after a period of inactivity. Set this period to 15 seconds, 30 seconds, 1, 2, 5, 10 or 30 minutes.
Tapping the window buttons or icons does not activate the corresponding feature.	The device is not responding.	Reset the device.
A message appears stating that the device memory is full.	Too many files stored on the device.	Delete unused memos and records. If necessary, save these records on the host computer (or use an SD card for additional memory).
	Too many applications installed on the device.	Remove user-installed applications on the device to recover memory. Select **✿** > **Storage** > **FREE UP SPACE** > **REVIEW RECENT ITEMS**. Select the unused program(s) and tap **FREE UP**.

Table 14   Troubleshooting the Device (Continued)

Problem	Cause	Solution
The device does not decode with reading barcode.	Scanning application is not loaded.	Load a scanning application on the device or enable DataWedge. See the system administrator.
	Unreadable barcode.	Ensure the symbol is not defaced.
	Distance between exit window and barcode is incorrect.	Place the device within proper scanning range.
	Device is not programmed for the barcode.	Program the device to accept the type of barcode being scanned. Refer to the EMDK or DataWedge application.
	Device is not programmed to generate a beep.	If the device does not beep on a good decode, set the application to generate a beep on good decode.
Device cannot find any Bluetooth devices nearby.	Too far from other Bluetooth devices.	Move closer to the other Bluetooth device(s), within a range of 10 meters (32.8 feet).
	The Bluetooth device(s) nearby are not turned on.	Turn on the Bluetooth device(s) to find.
	The Bluetooth device(s) are not in discoverable mode.	Set the Bluetooth device(s) to discoverable mode. If needed, refer to the device's user documentation for help.
Cannot unlock device.	User enters incorrect password.	If the user enters an incorrect password eight times, the user is requested to enter a code before trying again. If the user forgot the password, contact system administrator.

Technical Specifications

Introduction

This chapter provides technical specifications and decode distances for the CC600 and CC6000.

Technical Specifications

CC6000

Table 15 CC6000 Technical Specifications

Item	Description
Physical Characteristics	
Dimensions	Landscape: 10.9 in. x 7.9 in. x 1.4 in. 27.8 cm x 20.1 cm x 3.6 cm Portrait: 7.2 in. x 11.6 in. x 1.4 in. 18.3 cm x 29.6 cm x 3.6 cm
Weight	2.16 lbs./980g
Display	10.1 inch PCAP multi-touch
Active Screen Area	217 mm W x 136 mm H
Aspect Ratio	16:10
Resolution	1280x800 at 60 Hz
Keypad	Virtual
Connectivity	USB host: 2 Full Size USB 2.0 Type A ports for accessory USB OTG: 1 USB-C OTG Ethernet Gigabit compatible: RJ45 External Audio In: 3.5 mm connector
Audio	Audio Two microphones; two front firing speakers (2W total)
Expansion Capabilities	Micro SD card slot, supports class 2 to class 10 and UHS-1 SD cards
Power	Enterprise grade power supply: 5.4VDC/3A; 110/220V Support for integrated 802.3at Power-over- (PoE)

Table 15 CC6000 Technical Specifications (Continued)

Item	Description
Performance Characteristics	
Display Brightness	300 nits
CPU	Qualcomm Snapdragon ™ 660
OS	Android ^{TM}, Google GMS
Memory	RAM: 4GB Internal Storage: 32GB
User Environment	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	5% to 95% non-condensing
Management	
Management Tools	Integrates with industry standard Mobile Device Management (MDM) solutions to configure settings and provide remote software updates
Data Capture/Output	
Integrated Scanner	1D/2D Zebra SE4710 decoded scanner
Front Camera	5 MP
Video	1080p
Networks	
WLAN	Dual band 802.11 a/b/g/n/ac/d/h/r/k/w/i (2.4 GHz and 5.2 GHz support)
WPAN	Bluetooth 5.0; integrated antenna
Ethernet	Gigabit Ethernet on RJ45 interface, with activity LEDs
Peripherals and Accessories	
Accessories	Country specific AC line cord. Additional accessories can be integrated using USB and Bluetooth interface
Mounting Options	Integrated standard VESA mount; conforms to the VESA 100 mm x 100 mm mounting standard for attachment of third party, off-the-shelf mounting solutions; four (4) M4 x 8 mm max insert distance
2D Imager Engine (SE4710) Specifications	
Field of View	Horizontal - 42.0° Vertical - 28.0°
Image Resolution	1280 horizontal X 800 vertical pixels
Roll	360°
Pitch Angle	+/- 60° from normal
Skew Tolerance	+/- 60° from normal
Ambient Light	Sunlight: 1,000 ft. candles (10,764 lux)
Focal Distance	From front of engine: 19.4 cm (7.6 in.)
Aiming Element	610 nm amber LED dot
Illumination System	Red LED

CC600

Table 16   CC600 Technical Specifications

Item	Description
Physical Characteristics	
Dimensions	6.6 in. x 4.6 in. x 1.4 in.
	16.9 cm x 11.6 cm x 3.5 cm
Weight	0.70 lbs./320 g
Display	5.0 inch PCAP multi-touch
Active Screen Area	110 mm W x 62 mm H
Aspect Ratio	16:10
Resolution	1280x720 at 60 Hz
Keypad	Virtual
Connectivity	USB OTG: 1 USB-C OTG
	Ethernet Gigabit compatible: RJ45
Audio	Two microphones, one front firing speaker (2W total)
Expansion Capabilities	Micro SD card slot, supports class 2 to class 10 and UHS-1 SD cards
Power	Enterprise grade power supply: 5.4VDC/3A; 110/220V
	Support for integrated 802.3at Power-over-Ethernet (PoE)
Performance Characteristics	
Display Brightness	480 nits
CPU	Qualcomm Snapdragon ™ 660
OS	Android Oreo, Google GMS
Memory	RAM: 4GB
	Internal Storage: 32GB
User Environment	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	5% to 95% non-condensing
Management	
Management Tools	Integrates with industry standard Mobile Device Management (MDM) solutions to configure settings and provide remote software updates
Data Capture/Output	
Integrated Scanner	1D/2D Zebra SE2100 scanner
Networks	
WLAN	Dual band 802.11 a/b/g/n/ac/d/h/r/k/w/i (2.4 GHz and 5.2 GHz support)
WPAN	Bluetooth 5.0; integrated antenna
Ethernet	Gigabit Ethernet on RJ45 interface, with activity LEDs

Table 16   CC600 Technical Specifications (Continued)

Item	Description
Peripherals and Accessories	
Accessories	Additional accessories can be integrated using USB and Bluetooth interface
Mounting Options	Integrated standard VESA mount; conforms to the VESA 75 mm x 75 mm mounting standard for attachment of third party, off-the-shelf mounting solutions; four (4) M4 x 8 mm max insert distance
2D Imager Engine (SE2100) Specifications	
Field of View	Horizontal - 41.5° Vertical - 31.7°
Image Resolution	640 horizontal x 480 vertical pixels
Roll	360°
Pitch Angle	+/- 60° from normal
Skew Tolerance	+/- 60° from normal
Ambient Light	Sunlight: 1,000 ft. candles (10,764 lux)
Focal Distance	From front of engine: 10.7 cm (4.2 inches)
Aiming Element	None
Illumination System	Ultra white LED

Table 17   Data Capture Supported Symbologies

Item	Description
1D Barcodes	Code 128, EAN-8, EAN-13, GS1 DataBar Expanded, GS1 128, GS1 DataBar Coupon, UPCA, Interleaved 2 of 5, UPC Coupon Code
2D Barcodes	PDF-417, QR Code, Digimarc, DotCode (CC6000 only)

Decode Distances

CC6000 - SE4710 Scan Engine

Table 18 lists the typical distances for selected barcode densities when scanning with the CC6000. The minimum element width (or "symbol density") is the width in mils of the narrowest element (bar or space) in the symbol.\

Table 18   CC6000 - SE4710 Decode Ranges

Barcode Type	Near Distance	Far Distance
	Typical	Typical
4 mil Code 39	3.3 in / 8.4 cm	8.8 in / 22.4 cm
5 mil Code 128	2.8 in / 7.1 cm	8.2 in / 20.8 cm
5 mil Code 39	2.0 in / 5.08 cm	13.5 in / 34.3 cm
5mil PDF417	3.1 in / 7.9 cm	7.5 in / 19.0 cm
10 mil Data Matrix	2.9 in / 7.4 cm	10.1 in / 25.7 cm
100% UPCA	1.8 in / 4.6 cm*	24.0 in / 60.9 cm
20.0mil Code 39	2.0 in / 5.08 cm*	26 in / 66.0 cm
*Limited by width of barcode in field of view.		
Note: Photographic quality barcode at 15° tilt pitch angle under 30 fcd ambient illumination.		

CC600 - SE2100 Scan Engine

Table 19 lists the typical distances for selected barcode densities when scanning with the CC600. The minimum element width (or "symbol density") is the width in mils of the narrowest element (bar or space) in the symbol.\

Table 19   CC600 - SE2100 Decode Ranges

Barcode Type	Near Distance	Far Distance
	Typical	Typical
5 mil Code 128	2.0 in / 51mm	4.8 in / 122 mm
5 mil Code 39	1.7 in / 43 mm	5.8 in / 147 mm
6.6 mil PDF417	1.6 in / 41 mm	4.9 in / 124 mm
10 mil Data Matrix	1.2 in / 30 mm	4.9 in / 124 mm
100% UPCA	2.0 in / 51 mm	10.6 in / 269 mm
20.0 mil Code 39	2.1 in / 53 mm*	13.6 in / 345 mm
10.0 mil QR Code	1.1 in / 28 mm	5.2 in / 132 mm
*Limited by width of barcode in field of view. **Note: Photographic quality barcode at 15° tilt pitch angle under 30 fcd ambient illumination.**		

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