Alpha Tab

To access the alpha keyboard, touch the EN tab.

Figure 32 Alpha Keyboard

NOTE: The Enterprise keyboard supports English (US), English (UK), French, German, Spanish and Italian. When a keyboard language is selected in Settings, the corresponding keyboard language displays.

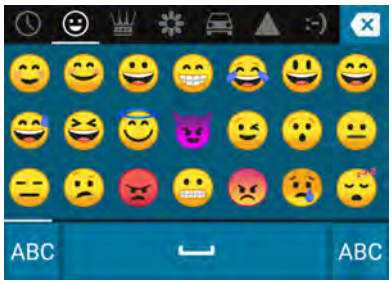
Additional Character Tab

To access additional characters, touch the **#*/** tab.

Figure 33 Symbols Keyboard

Touch ☺ to enter emoji icons in a text message.

Figure 34 Emoji Keyboard

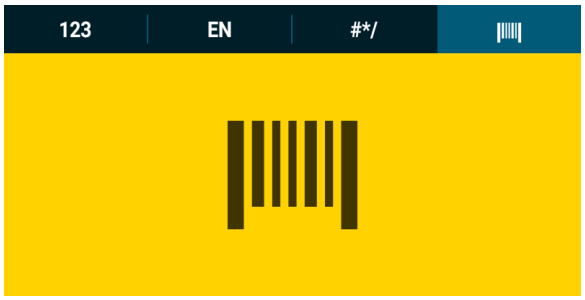


Touch **ABC** to return to the Symbols keyboard.

Scan Tab

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

Figure 35 Scan Keyboard



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 ◯.

Notifications

Setting App Notifications

To set notification settings for a specific app:

1. Go to **Settings**.
2. Touch **Apps & notifications** > **Notifications** > **App notifications.**
3. Select an app.
4. Select an available option:
   - **On** / **Off** - Select to turn all notifications from this app **On** (default) or **Off**.
   - **Allow notification dot** - Do not allow this app to add a notification dot to the app icon.
   - **Allow interruptions** - Do not allow notifications from this app to make sound, vibrate, or pop notifications on the screen.
   - **Override Do Not Disturb** - Allow these notifications to interrupt when Do Not Disturb is set to Priority Only.
   - **Categories** - Do not allow specific types of notifications from this app.
   - **Additional settings in the app** - Open the app settings.

NOTE: To change the notification settings for an app, slide the notification slightly left or right and touch ⚙.

Viewing Notification Settings for All Apps

To view the notification settings for all apps:

1. SGo 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 Setting App Notifications.

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 **On the lock screen** and select one of the following:
   - **Show all notification content** (default)
   - **Don't show notifications at all**.

Blink Light

The Notification LED lights blue when an app, such as email and VoIP, generates a programmable notification or to indicate when the device is connected to a Bluetooth device. By default, LED notifications are enabled.

To change the notification setting:

1. Go to **Settings**.
2. Touch **Apps & notifications > Notifications**.
3. Touch **Blink light** to toggle the notification on or off.

Applications

Apps

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

Table 12 *Apps*

Icon	Description
	Battery Manager - Displays battery information, including charge level, status, health and wear level.
	Bluetooth Pairing Utility – Use to pair the RS507 Hands-free Imager 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.
	Chrome - Use to access the Internet or intranet. GMS devices only
	Chromium - Use to access the Internet or intranet. Non-GMS devices only.
	Clock - Use to schedule alarms for appointments or as a wake-up.

Table 12 *Apps (Continued)*

Icon	Description
	Contacts - Use to manage contact information. See Contacts for more information.
	DataWedge - Enables data capture using the imager.
	Device Central - Use to display detailed information about the device and connected peripherals. See Device Central for more information.
	Diagnostic Tool - Use to diagnose the device.
	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 DataWedge Demonstration for more information.
	Email - Use to send and receive email. Non-GMS devices only.
	Files - Organize and manage files on the device. See Files for more information.
	Gallery - Use to view photos stored on the microSD card. 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
	Hangouts - Use to communicate with friends using text messages and photos. GMS devices only
	Keep- Use to create, edit, and share notes. GMS devices only
	License Manager - Use to manage software licenses on the device.

Table 12 *Apps (Continued)*

Icon	Description
	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
	Music - Play music stored on the microSD card. Non-GMS devices only.
	Notes - Use to take and save notes.Non-GMS devices only
	Photos - Use to sync photos with Google account. For more information, see Photo Settings. GMS devices only
	Play Movies & TV - View movies and video on your device. GMS devices only
	Play Music - Use to listen to music. 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.
	RxLogger Utility - Use to view, backup, and archive RxLogger data.
	Search - Use to search the Web. Requires an Internet connection. Non-GMS devices only.
	Settings - Use to configure the device.
	SimulScan Demo - Use to demonstrate the document capture feature of the device.
	SMARTMU - A diagnostic intelligent app. Use to diagnose surrounding area and display network stats, such as coverage hole detection, or AP in vicinity.

Table 12 *Apps (Continued)*

Icon	Description
	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.
	Velocity - Opens the Ivanti (formerly Wavelink) terminal emulation app.
	Videos - Use to view videos on the device. Non-GMS devices only.
	Voice Search - Use to perform searches by asking questions. GMS devices only
	Worry Free Wifi Analyzer - 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
	Zebra Bluetooth - Use to configure Bluetooth logging.

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. Touch an icon to open the app.

Switching Between Recent Apps

To switch between recent apps:

1. Touch ☐. 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 ◁ to return to the current screen.

Battery Manager

The **Battery Manager** provides detailed information about the battery.

To open Battery Manager, swipe up from the bottom of the Home screen and touch .

Figure 36 Battery Manager Screen

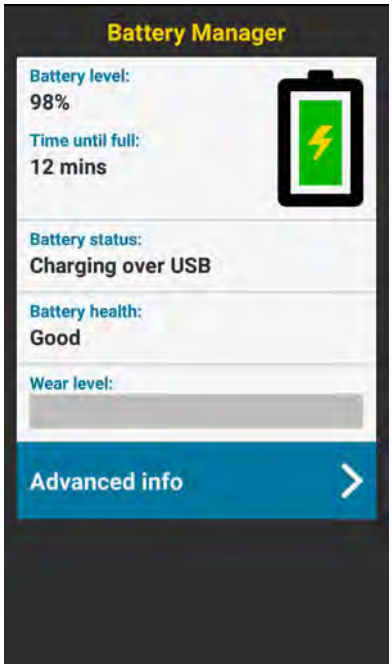


Table 13 Battery Icon Description

Battery Icon	Description
	Battery charge level.
	Battery charging.
	Battery charge level is below 20%.

- **Battery level** - The current battery charge level as a percentage. Displays **-%** when level is unknown.
- **Time until full** - The amount of time until the battery is fully charged.
- **Time since charging** - The amount of time since the device began charging.
- **Time until empty** - The amount of time until the battery is empty.

- **Battery status**
  - **Not charging** - The device is not connected to AC power.
  - **Charging over AC** - The device is connected to AC power and charging.
  - **Charging over USB** - The device is connected to a host computer with a USB cable and charging.
  - **Discharging** - That the battery is discharging.
  - **Full** - That the battery is fully charged.
  - **Unknown** - The battery status is unknown.
- **Battery health** - The health of the battery. If a critical error occurs, appears. Touch to view the error description.
  - **Decommission** - The battery is past its useful life and should be replaced. See system administrator.
  - **Good** - The battery is good.
  - **Charge error** - An error occurred while charging. See system administrator.
  - **Over Current** - An over-current condition occurred. See system administrator.
  - **Dead** - The battery has no charge. Replace the battery.
  - **Over Voltage** - An over-voltage condition occurred. See system administrator.
  - **Below Temperature** - The battery temperature is below the operating temperature. See system administrator.
  - **Failure Detected** - A failure has been detected in the battery. See system administrator.
  - **Unknown** - See system administrator.
- **Wear level** - The health of the battery in graphical form. When the wear level exceeds 80%, the bar color changes to red.
- **Advanced info** - Touch to view additional battery information.
  - **Battery present status** - Indicates that the battery is present.
  - **Battery level** - The battery charge level as a percentage of scale.
  - **Battery scale** - The battery scale level used to determine battery level (100).
  - **Battery voltage** - The current battery voltage in millivolts.
  - **Battery temperature** - The current battery temperature in degrees Centigrade.
  - **Battery technology** - The type of battery.
  - **Battery current** - The average current into or out of the battery over the last second in mAh.
  - **Battery manufacture date** - The date of manufacture.
  - **Battery serial number** - The battery serial number. The number matches the serial number printed on the battery label.
  - **Battery part number** - The battery part number.
  - **Battery rated capacity** - Lists the rated capacity of the backup battery in mAh.
  - **Battery decommission status** - Indicates if the battery is past its life span.
    - **Battery Good** - The battery is in good health.

  - **Decommissioned Battery** - The battery is past its useful life and should be replaced.
- **Base cumulative charge** - Cumulative charge using Zebra charging equipment only.
- **Battery present capacity** - Maximum amount of charge that could be pulled from the battery under the present discharge conditions if the battery were fully charged.
- **Battery health percentage** - With a range from **0** to **100**, this is the ratio of “present_capacity” to “design_capacity” at a discharge rate of “design_capacity”.
- **% decommission threshold** - The default % decommission threshold for a gifted battery as 80%.
- **Battery present charge** - Amount of usable charge remaining in the battery at present under the current discharge conditions.
- **Battery total cumulative charge** - The total accumulated charge in all chargers.
- **Battery time since first use** - The time passed since the battery was placed in a Zebra terminal for the first time.
- **Battery error status** - The error status of the battery.
- **App version** - The application version number.

Camera

This section provides information for taking photos and recording videos using the integrated digital cameras.

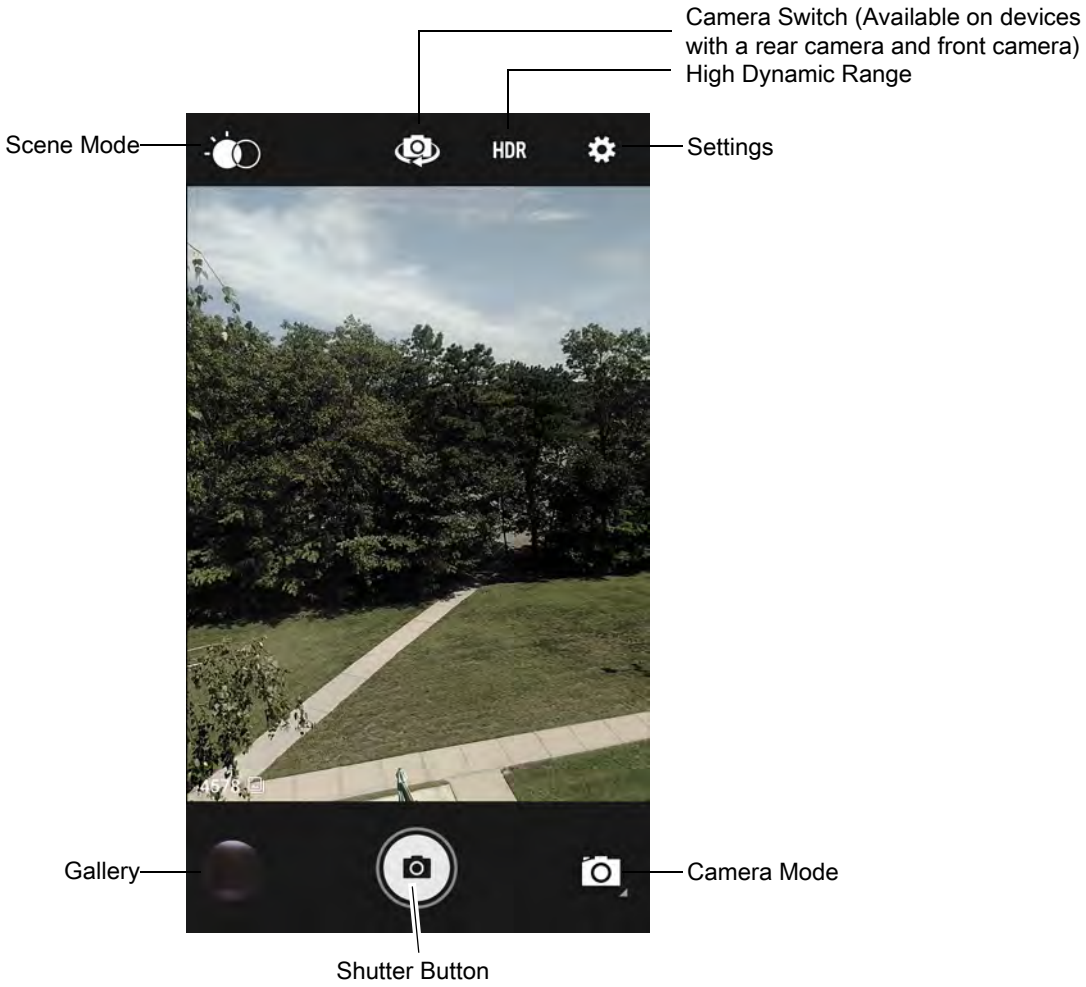
The device saves photos and videos on the microSD card, if installed and the storage path is changed manually. By default, or if a microSD card is not installed, the device saves photos and videos on the internal storage.

Taking Photos

NOTE: See Photo Settings for camera setting descriptions.

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

Figure 37 Camera Mode



2. If necessary, touch the Camera Mode icon and touch .
3. To switch between the rear camera and front camera (if available), touch .
4. Frame the subject on the screen.

5. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.
6. Touch an area on the screen to focus. The focus circle appears. The two bars turn green when in focus.
7. Touch .

   The camera takes a photo and a shutter sound plays.

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

Taking a Panoramic Photo

Panorama mode creates a single wide image by panning slowly across a scene.

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

Figure 38 Panoramic Mode

2. Touch the Camera Mode icon and touch .
3. Frame one side of the scene to capture.
4. Touch and slowly pan across the area to capture. A small white square appears inside the button indicating the capture is in progress.

   If you are panning too quickly, the message **Too fast** appears.
5. Touch to end the shot. The panorama appears immediately and a progress indicator displays while it saves the image.

Recording Videos

1. Swipe up from the bottom of the Home screen and touch **Camera**.
2. Touch the camera mode menu and touch .

Figure 39 Video Mode

3. To switch between the rear camera and front camera (if available), touch .
4. Point the camera and frame the scene.
5. To zoom in or out, press two fingers on the display and pinch or expand fingers. The zoom controls appear on the screen.
6. Touch to start recording.

   The video time remaining appears in the top left of the screen.
7. Touch to the end recording.

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

Photo Settings

In Photo mode, photo settings appear on screen. Touch ⚙ to display the photo settings options.

Rear Camera

- **Flash** - Select whether the camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** - Disable flash.
  - **Auto** - Adjust flash automatically depending upon light meter (default).
  - **On** - Enable flash upon taking a photo.
  - **Torch** - Turn flash on continuously.
- **Picture size** - The size (in pixels) of the photo to: **13M pixels** (default), **8M pixels**, **5M pixels**, **3M pixels**, **HD 1080**, **2M pixels**, **1.3M pixels**, **HD720**, **1M pixels**, **WVGA**, **VGA,** or **QVGA**.
- **Picture quality** - Set the picture quality setting to: **Low**, **Standard** (default) or **High**.
- **Countdown timer** - Select **Off** (default), **2 seconds**, **5 seconds** or **10 seconds**.
- **Storage** – Set the location to store the photo to: **Phone** or **SD Card**.
- **Face Detection** - Select to turn face detection **Off** (default) or **On**.
- **ISO** - Set camera sensitivity to light to: **Auto** (default), **ISO Auto (HJR)**, **ISO100**, **ISO200**, **ISO400**, **ISO800** or **ISO1600**.
- **Exposure** - Set the exposure settings to: **+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.
- **Focus mode** - Set the camera focus to **CAF** (Continuous Auto Focus).
- **ZSL** - Set the camera to immediately take a picture when the button is pressed (default – enabled).

Video Settings

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

Rear Camera

- **Flash** - Select whether Rear-facing Camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Off** - Disable flash (default).
  - **Torch** - Turn flash on continuously.

- **Video quality** - Set video quality to: **HD 1080p** (default), **HD 720p**, **SD 480p**.
- **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.

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.

Figure 40 DataWedge Demonstration Window

Table 14 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.
		AnRS507 or RS6000 Bluetooth imager is connected.
		AnRS507 or RS6000 Bluetooth imager is not connected.

Table 14 DataWedge Demonstration Icons (Continued)

	Icon	Description
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.
		Opens a menu to view the application information or to set the application DataWedge profile.

Scanner Selection

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

See Data Capture for more information.

Either press the programmable button or touch the yellow scan button to capture data. The data appears in the text field below the yellow button.

Device Central

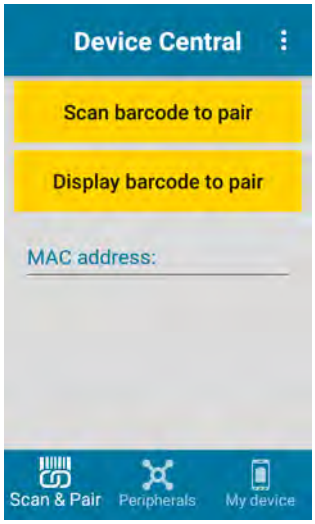
Device Central displays detailed information about the device and connected peripherals and supports the following Zebra devices:

- RS507/RS507X Hands-free Imager
- RS5000 Corded Ring Scanner
- HS3100 Bluetooth Headset
- DS3678 Digital Scanner.

Device Central features include:

- Discovering and pairing with supported peripherals via Bluetooth or corded connection.
- Paging a connected RS6000 Ring Scanner.
- Updating the firmware of supported ring scanners. Refer to the RS5000 Quick Start Guide or RS6000 User Guide for more information.
- Displaying the connection status of peripherals.
- Displaying information for a connected peripheral in the notification bar.

Figure 41 Device Central Screen



Scan and Pair Tab

Pairing to a Bluetooth peripheral is accomplished by one of the following methods:

- Scan and Pair
- Scan to Pair
- Manually Pairing

Scan and Pair

To scan the peripheral Bluetooth barcode to pair:

1. In the **Scan and Pair** tab, touch **Scan barcode to pair**. The peripheral's scan beam illuminates.

2. Ensure that Bluetooth is enabled on the peripheral and is set to discoverable mode. Refer to the peripheral user guide for instructions.
3. Scan the Bluetooth MAC address barcode label on the desired peripheral to pair.

   When pairing is successful, the peripheral displays in the list. A green dot appears next to a Bluetooth scanner when the device is connected, and may be in use. A red dot appears next to other Bluetooth peripherals, such as a Bluetooth headset or printer, while they are connected but not in use.

Scan to Pair

Use Scan and Pair to pair by scanning a barcode displayed on the screen. This applies to peripherals that have scanning capability, such as Bluetooth handheld scanners and ring scanners.

1. In the **Scan and Pair** tab, touch **Display barcode to pair**. A barcode displays.
2. Using the peripheral, scan the barcode on the screen.

   When the pairing is successful, the peripheral displays in the list with a green dot indicating that it is paired.

Manually Pairing

To manually pair a peripheral that is unable to pair via Bluetooth:

1. In the **Scan and Pair** tab, touch the **MAC address** field.
2. Enter the Bluetooth MAC address of the peripheral.
3. Touch **Pair**.

   When pairing is successful, the peripheral displays in the list. A green dot appears next to a Bluetooth scanner when the device is connected, and may be in use. A red dot appears next to other Bluetooth peripherals, such as a Bluetooth headset or printer, while they are connected but not in use.

Peripherals Tab

The **Peripherals** Tab displays all currently connected and previously connected peripherals. Connected peripherals display the length of time (in minutes) that they have been connected.

Touch the connected device icon to display details about the peripheral. The **Device Details** screen appears. When an RS6000 is connected the **Page** button displays at the bottom of the **Device Details** screen. See Paging an RS6000 Ring Scanner.

My Device Tab

The **My Device** Tab displays information about the device.

- **Device Model** - Displays the name assigned to the VC8300.
- **Device Serial Number** - Displays the serial number of the device.
- **OS Version** - Displays the operating system version.
- **Build Number** - Displays the software build number.
- **Battery Level** - The current battery charge level as a percentage.
- **Battery Part Number** - The battery part number.
- **Battery Serial Number** - The battery serial number. The number matches the serial number printed on the battery label.
- **Battery Manufactured Date** - The date of manufacture.

Unpairing a Peripheral

To unpair a Bluetooth peripheral:

1. In the **Scan and Pair** tab, touch **Unpair** for the desired peripheral to unpair.

   A confirmation pop-up message appears.

2. Touch **OK**.

   Once unpaired, a message appears indicating the peripheral has been disconnected, and the peripheral is removed from the list.

Paging an RS6000 Ring Scanner

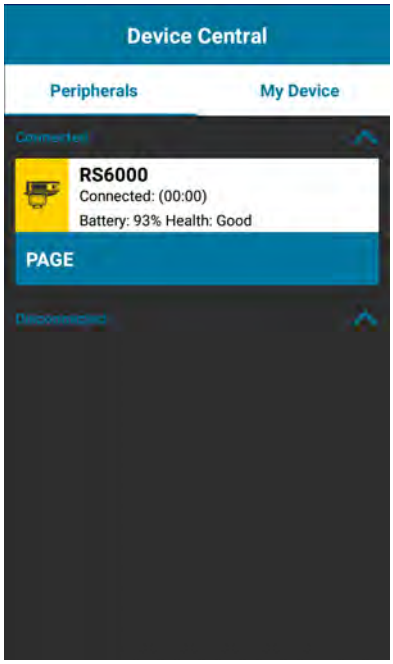
Use **Page** button to easily locate the currently connected RS6000 Ring Scanner:

1. With the RS6000 Ring Scanner connected, swipe up from the bottom of the Home screen, and touch .

NOTE: The RS6000 Ring Scanner must be within 10 m (32 ft) of the device.

2. Under the RS6000 peripheral information, touch **Page** to page the RS6000. The paged RS6000 beeps and vibrates.

Figure 42 Page RS6000



To stop paging, press the scan trigger of the RS6000. On a triggerless RS6000, reset the RS6000 to stop paging. Refer to the RS6000 User Guide.

Diagnostic Tool

The **Diagnostic Tool** is a utility that determines the health of the device. Use the Diagnostic Tool to troubleshoot the device.

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

Figure 43 Diagnostic Tool

2. Touch **RUN TEST**. The app tests all enabled subsystems (by default, only the Battery and System tests). See Settings to enable subsystem tests.

Figure 44 Test Passed Screen

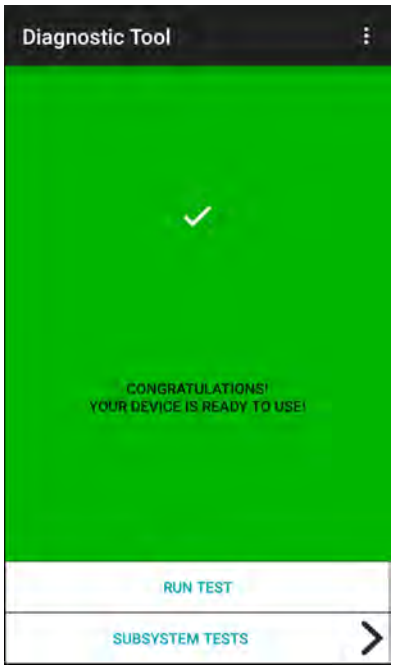
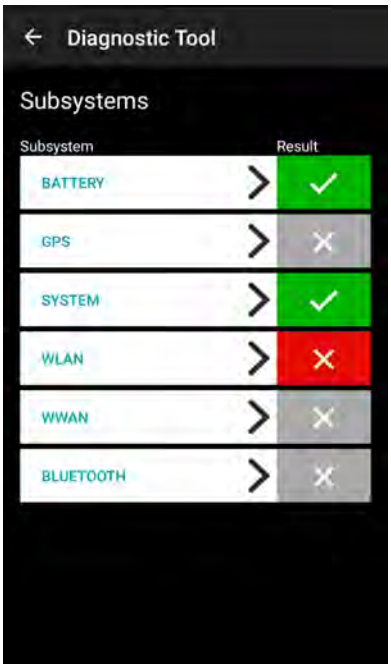


Figure 45 Test Failed Screen

3. To view each subsystem test, touch **Subsystem Tests**.

Figure 46 Subsystem Screen

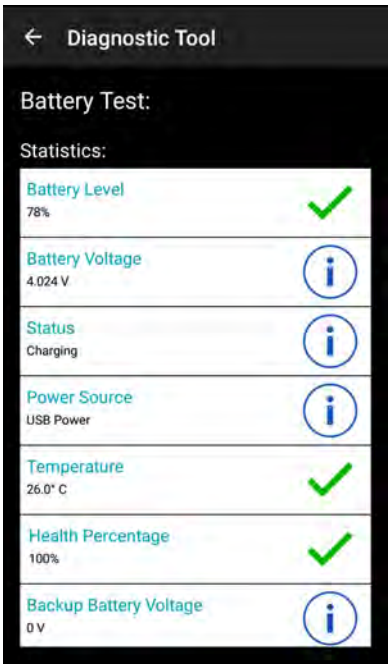


4. Touch one of the subsystems to view details.

Table 15 Subsystem Test Result Indicators

Status Icon	Description
✓	Test passed.
✕	Test failed.
✕	Test not supported or not enabled.

Figure 47 Battery Subsystem Details



Settings

By default only the Battery and System tests are enabled. To enable other tests:

1. Touch ⋮ > **Settings**.
2. Touch to the left of the test name. A green box with a checkmark appears.
3. Touch **SAVE**.
4. Touch **Yes** to confirm.
5. Touch ◁.

Battery Test Information

The Battery Test obtains the following information:

- **Battery Level** - Current battery charge level
- **Battery Voltage** - Current battery voltage
- **Status** - Whether the battery is charging (on AC power) or discharging (on battery power)
- **Power Source** - Whether the device is receiving power from the battery or from an external source
- **Temperature** - Current battery temperature
- **Health Percentage** - Indicates the ratio of present capacity to design capacity at a discharge rate of design capacity.
- **Backup Battery Voltage** - Backup battery voltage.
- **Manufacture Date** - Manufacture date of the battery.

GPS Test Information

Not supported on this device.

System Test Information

Use the System Test to determine if the CPU or memory loads are too high, there are too many processes running on the device, or storage on the device is almost full.

The System Test obtains the following information:

- **CPU Load** - Amount of CPU being used
- **Free Physical Memory** - Amount of RAM available
- **Free Storage** - Amount of internal Flash memory available
- **Process Count** - Number of processes currently running.

WLAN Test Information

If the WiFi radio is not present or disabled, skip this test. This test determines if the device's WLAN configuration is correct or whether there is any connection with an access point or network.

The WLAN test obtains the following information:

- **WLAN Enabled** - WLAN radio is enabled or disabled
- **WLAN Status** - Current status of association with the access point
- **ESSID** - Name of the wireless network
- **BSSID** - MAC address of the connected access point
- **MAC Address** - Device's MAC address
- **Signal** - Strength of the Wi-Fi signal (in dBm)
- **IP Address** - IP address of the device.

WWAN Test Information

Not supported on this device.

Bluetooth Test Information

The Bluetooth Test obtains the following information:

- **Enabled** - Whether the Bluetooth radio is enabled or disabled
- **Status** - Whether the device is paired to another Bluetooth device
- **Connectable/Discoverable** - Whether the device is discoverable or able to connect
- **Address** - Bluetooth radio MAC address
- **Name** - Bluetooth name for the device.

PTT Express Voice Client

NOTE: 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 voice communication server.

- **Group Call**: Press and hold the PTT (Talk) button to start communicating with other voice client users.
- **Private Response**: Double-press the PTT button to respond to the originator of the last broadcast or to make a Private Response.

PTT Express User Interface

Figure 48 PTT Express Default User Interface

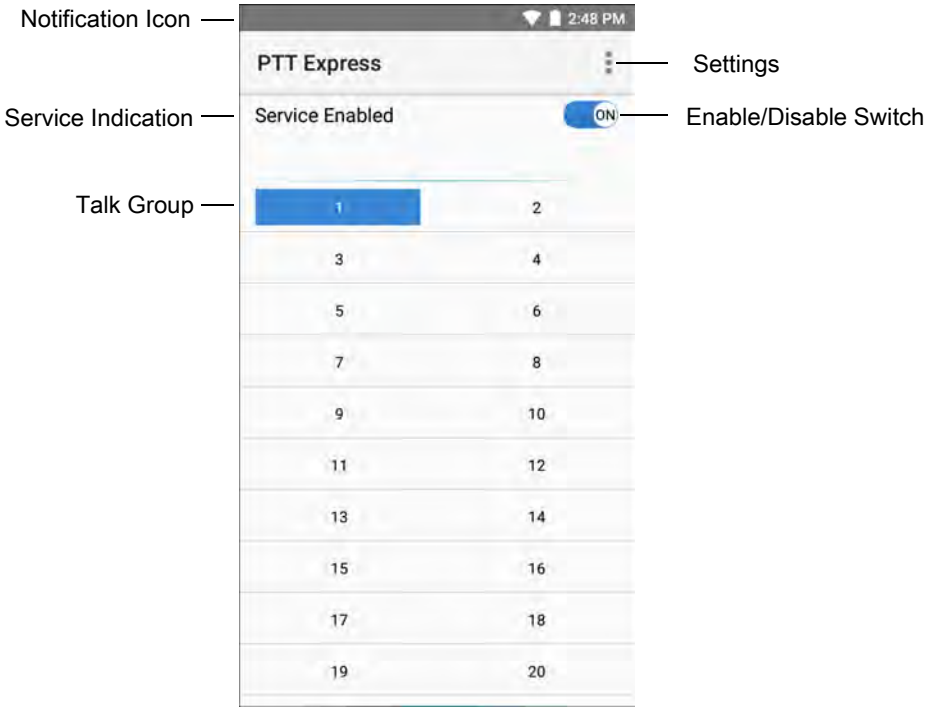


Table 16 PTT Express Default User Interface Descriptions

Item	Description
Notification Icon	Indicates the current state of the PTT Express client.
Service Indication	Indicates the status of the PTT Express client. Options: **Service Enabled**, **Service Disabled** or **Service Unavailable**.
Talk Groups	Lists all 32 Talk Groups available for PTT communication.
Settings	Opens the PTT Express Settings screen.
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 17 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.
	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.

In order to use a PTT Key with PTT Express, remap BUTTON_L2 key to any available physical key, such as LEFT_TRIGGER_1, RIGHT_TRIGGER_1, SCAN, P1 or P2. By default, a PTT button is not assigned. When the wired headset is used, Group Calls can also be initiated using the headset Talk button. For information on how to remap a key, see Remapping a Button in Settings.

PTT communication may be established as a Group Call.

Creating a Group Call

1. Press and hold the PTT 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. Wait for an access tone.
2. Within 10 seconds, double-press the PTT button, and listen for the talk tone.
3. 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.
4. Start talking after the talk tone plays.
5. Release the button when finished talking.

Disabling PTT Express Voice Client 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 .

RxLogger

RxLogger is a comprehensive diagnostic tool that provides app and system metrics. Create custom plug-ins that work seamlessly with this tool. RxLogger diagnoses device and application issues, and tracks information for: CPU load, memory load, memory snapshots, battery consumption, power states, wireless logging, TCP dumps, Bluetooth logging, GPS logging, logcat, ANR dumps, etc. All logs and files generated are saved in 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. The included plug-ins are described below.

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 .

Disabling Logging

To disable logging:

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

Extracting Log Files

To extract 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.

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 in the App View or the Overlay View.

App View

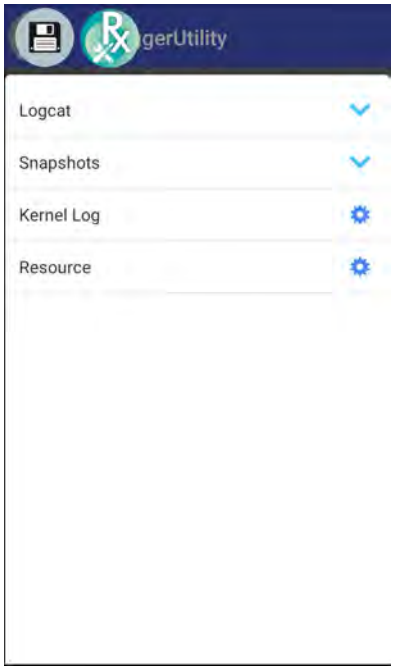
In the App View, the user views logs in the RxLogger Utility.

Viewing Logs

To view logs:

1. Touch the Main Chat Head icon. The Overlay View screen appears.

Figure 49 Overlay View Screen



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.

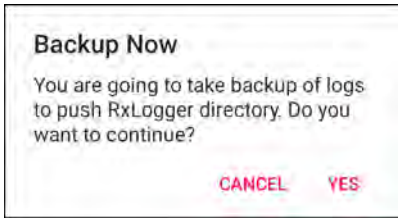
Figure 50 Log File

Backup

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 **BACKUP > Yes**.

Figure 51 Backup Message



Archive Data

View all the RxLogger logs stored in the default **RxLogger** directory. Logs viewed in the Archive window are not live.

Figure 52 Archive

To view the log files, touch **ARCHIVE DATA** and then touch a log file.

Overlay View

Use Overlay View to display RxLogger information while using other apps or on the home screen. Overlay View is accessed using the 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:

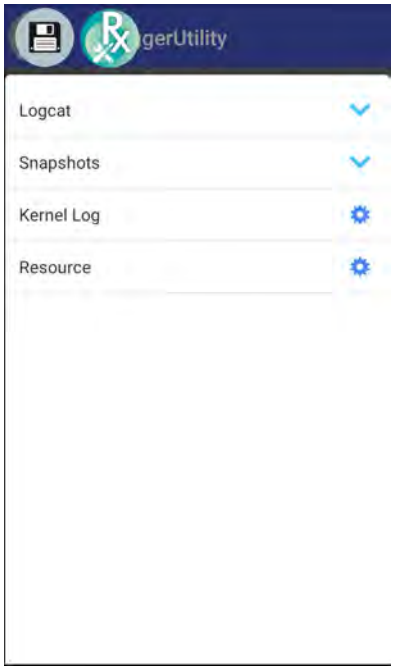
1. Touch and drag the icon. A circle with an X appears.
2. Move the icon over the circle and then release.

Viewing Logs

To view logs:

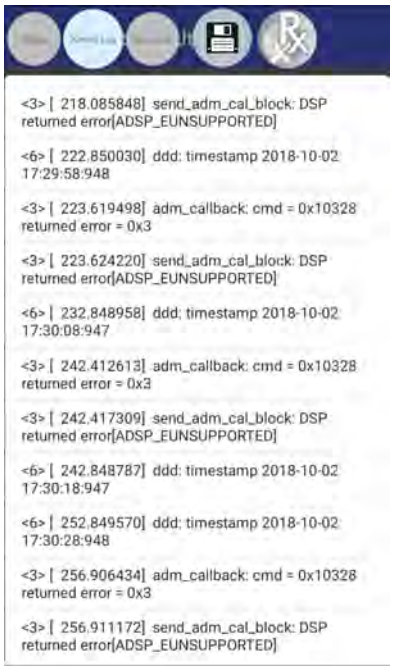
1. Touch the Main Chat Head icon. The Overlay View screen appears.

Figure 53 Overlay View Screen



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.

Figure 54 Log File



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.

SimulScan Demo

The SimulScan Demo app is an out of the box demonstration app, included on devices that support SimulScan.

The SimulScan Demo app includes the following:

- Postal, Transportation and Logistics Example - Demonstrate the Optical Character Recognition (OCR) and Optical Mark Recognition (OMR) features.
- Manufacturing Example - Demonstrate the MultiCode 20 feature.
- Demo Customization - Create a template using the Template Builder or use a default template. Test templates on the device.

Figure 55 SimulScan Demo Home Screen

Printing the Sample Forms

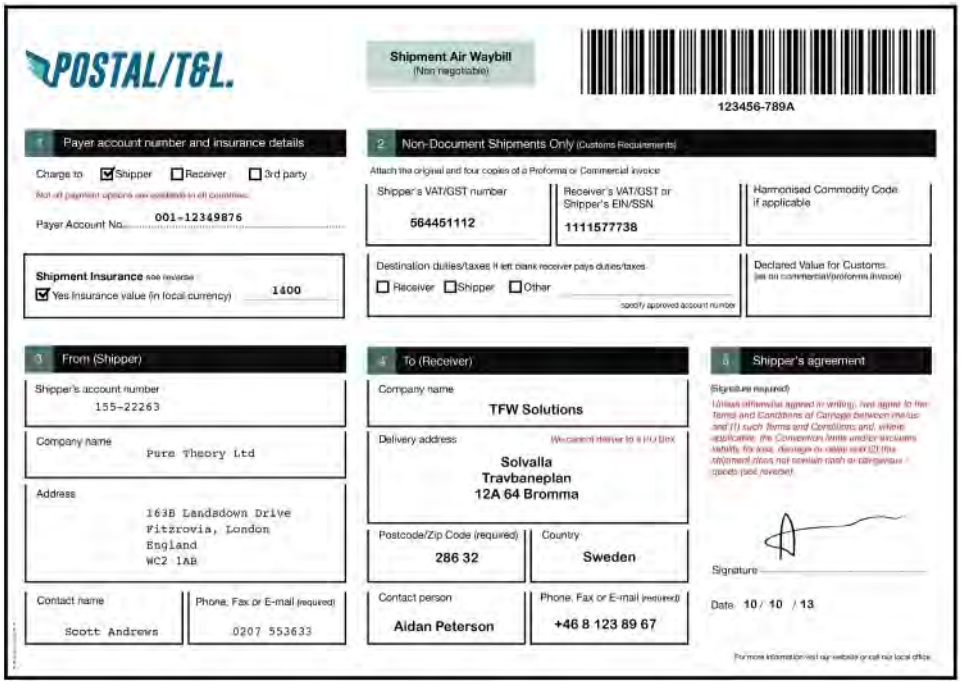
In order to perform the Postal, Transportation & Logistics or Manufacturing demonstrations, print the example forms stored on the device.

1. Launch **SimulScan Demo** application.
2. On the **SimulScan Demo** home screen, touch **HOW TO USE THIS DEMO**.
3. Scroll down and touch **Export sample forms** button. The device copies the forms to the `\simulscan\samples` folder in Internal Storage.
4. Connect the device to a computer using the USB Charging cable.
5. Copy the files from the `\simulscan\samples` folder in Internal Storage to the computer.
6. Print the forms.

Using the Postal, Transportation and Logistics Example

1. Print the Postal, Transportation and Logistics form. See Printing the Sample Forms.

Figure 56 Postal, Transportation and Logistics Form


POSTAL/T&L.

Shipment Air Waybill
(Non negotiable)

123456-789A

1 Payer account number and insurance details

Charge to ☑ Shipper ☐ Receiver ☐ 3rd party

Payer Account No. 001-12349876

Shipment Insurance see reverse
☑ Yes Insurance value (in local currency) 1400

2 Non-Document Shipments Only (Customs Requirements)

Attach the original and four copies of a Proforma or Commercial invoice

Shipper's VAT/GST number: 564451112

Receiver's VAT/GST or Shipper's EIN/SSN: 1111577738

Harmonised Commodity Code if applicable

Destination duties/taxes If left blank receiver pays duties/taxes
☐ Receiver ☐ Shipper ☐ Other
specify approved account number

Declared Value for Customs (as on commercial/proforma invoice)

3 From (Shipper)

Shipper's account number: 155-22263

Company name: Pure Theory Ltd

Address: 163B Landsdown Drive
Fitzrovia, London
England
WC2 1AB

Contact name: Scott Andrews

Phone, Fax or E-mail (required): 0207 553633

4 To (Receiver)

Company name: TFW Solutions

Delivery address: We cannot deliver to a P.O. Box
Solvalla
Travbaneplan
12A 64 Bromma

Postcode/Zip Code (required): 286 32

Country: Sweden

Contact person: Aidan Peterson

Phone, Fax or E-mail (required): +46 8 123 89 67

5 Shipper's agreement

(Signature required)

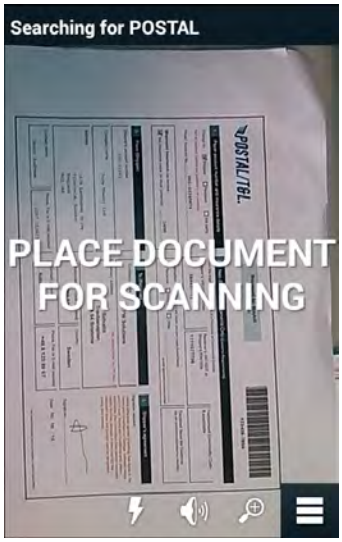
Signature

Date 10 / 10 / 13

For more information visit our website or call our local office.

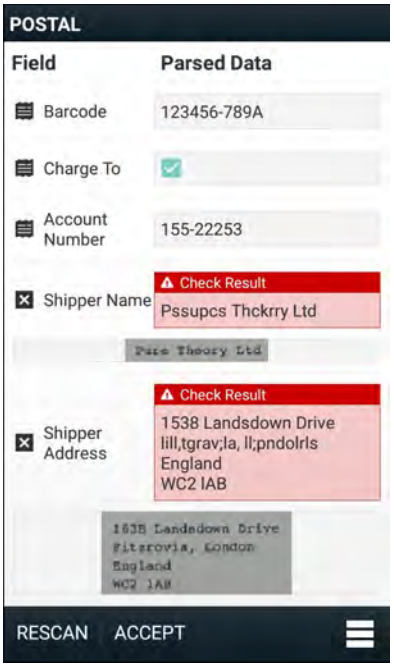
2. Place the form on a flat surface.
3. On the device, launch **SimulScan Demo** app.
4. Touch the **Menu** icon in the top right corner of the screen.
5. Touch **Postal, Transportation & Logistics**.
6. Touch **Start SimulScan**.
7. Use the image control at the bottom of the screen to control the flash, audio and zoom level.

Figure 57 Image Controls



8. Position the camera over the form. Ensure that the complete border of the form is visible on the screen.
9. Hold the device steady.
10. Once the device detects the form **Tap Screen to Scan** appears on the screen.
11. Tap the screen to start the data capture. When completed, the device beeps and the data from the form displays.

Figure 58 Postal Data Screen



12. Touch the text boxes to correct any errors. Note: if there are too many errors, touch **Rescan** to perform the capture again.
13. Touch **Accept** to confirm the data is correct. The **Results summary** screen appears.
14. Touch **OK**.

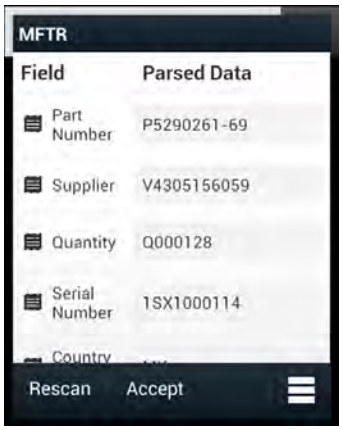
Using the Manufacturing Example

1. Print the Manufacturing form. See Printing the Sample Forms.

Figure 59 Manufacturing Form

2. Place the form on a flat surface.
3. On the device, launch **SimulScan Demo** app.
4. Touch the **Menu** icon in the top right corner of the screen.
5. Touch **Manufacturing**.
6. Touch **Start SimulScan**.
7. Point the top of the device at the document and center the target on the document.
8. Hold the device steady.
9. The device starts the data capture. When completed, the device beeps and the data from the document displays.

Figure 60 Manufacturing Data

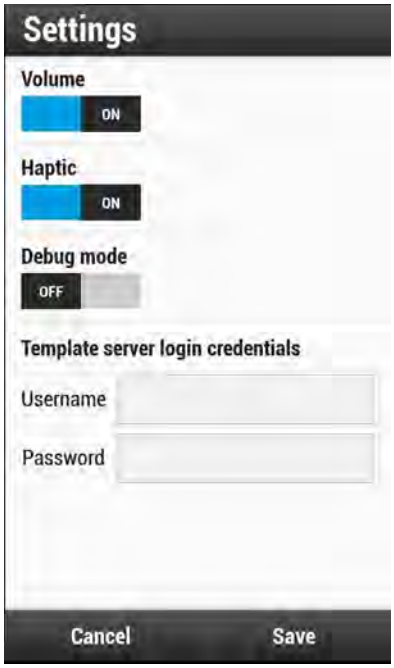


10. Touch the text boxes to correct any errors. If there are too many errors, touch **Rescan** to perform the capture again.
11. Touch **Accept** to confirm the data is correct. The **Results summary** screen appears.
12. Touch **OK**.

Settings

To set the settings for the **SimulScan Demo** application touch **Menu** icon > **Settings**.

Figure 61 Settings Screen

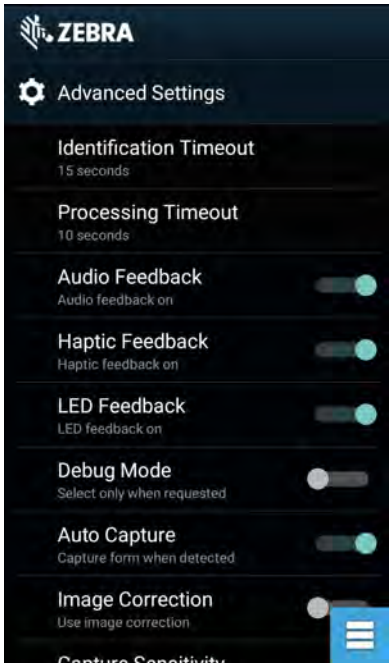


- **Volume** - Toggle switch to turn audible notification on and off.
- **Haptic** - Toggle switch to turn vibration notification on and off.
- **Debug mode** - Toggle switch to enable or disable debug mode.
- **Template server login credentials** - enter credentials for accessing the template server.

Advanced Settings

Use the Advanced setting to configure data capture options. In the data capture screen, touch in the bottom right corner of the screen.

Figure 62 Advanced Settings Screen



- **Identification Timeout** - Set the amount of time to wait before timing out identifying the target document. Options: **2 seconds**, **5 seconds**, **10 seconds**, **15 seconds**, **20 seconds** or **25 seconds**.
- **Processing Timeout** - Once the target document is identified, amount of time to wait before timing out processing.
- **Audio Feedback** - Turn on or off audio feedback on successful parse.
- **Haptic Feedback** - Turn on or off haptic (vibration) feedback on successful parse.
- **LED Feedback** - Turn on or off LED feedback on successful parse.
- **Debug Mode** - If enabled, allows a session to write form capture, region images, region values, and other data to storage. Use only when directed by administrator.
- **Auto Capture** - Set to **On** to automatically capture forms when detected. Set to **Off** to manually capture forms when user taps screen or presses a trigger button.
- **Image Correction** - Turn on when document is crumpled or curved and requires advanced image correction.
- **Capture Sensitivity** - Increase sensitivity for increased document identification accuracy before processing.
- **About** - Displays the SimulScan Engine version number.
- **Quit Scanner** - Exit Advanced Settings screen.

Creating a Demo Customization

Before creating a customized demo, first:

- Create a template using the Template Builder tool.

- Copy a company logo and image to the device storage location.

1. Touch **Menu** icon.
2. Touch **Setup Custom Demo**.

Figure 63 Custom Demo Setup Screen

3. In the **Name** text box, enter a name for the custom demo that appears in the drop-down menu.
4. In the **Custom Demo Setup** text box, enter a title for the demo that appears in the demo screen title box.
5. Touch the **Image** field to select an image from the SD card.
6. Touch the **Logo** field to select the logo image from the SD card.
7. In the **Introduction** text box, enter text that appears on the demo screen.
8. In the **Header color** text box, enter the hex color value for the header.
9. In the **Icon color** text box, enter the hex color value for Menu icon and button text.
10. In the **Key Features** text box, enter text that appears in bullet format under the Key Feature heading.
11. Touch one of the **SimulScan Document Capture Template** fields to select a template
    a. **Browse external storage** - select a template loaded on the device.
    b. **Default templates** - select one of the default templates.
    c. **Select from server** - select a template from the SimulScan server.
12. Touch **Done**. The customized example appears on the screen.
13. Touch **Start SimulScan** to begin the demonstration.

Default Templates

The following templates are available:

- **Default - BankCheck.xml** – Reads the MICR E-13B font (length between 19 and 40 characters) on bank checks.
- **Default - Barcode 1.xml** – Reads a single supported bar code.
- **Default - Barcode 10.xml** – Reads up to 10 supported bar codes.
- **Default - Barcode 2.xml** – Reads two supported bar codes.
- **Default - Barcode 4.xml** – Reads up to supported four bar codes.
- **Default - Barcode 5.xml** – Reads up to supported five bar codes.
- **Default - BookNumber.xml** – Reads the OCR-B ISBN 10 or 13 digit book numbers.
- **Default - DocCap + Optional Barcode** – Captures a full page image and decode any supported bar codes that are in the form. The captured area is the largest rectangular region in the field of view defined by the solid border or contrast of background. Any OCR or OMR content will not be decoded in this mode. The captured area is further processed to correct, de-skew and sharpen and returned as a picture.
- **Default - DocCap + Required Barcode** – Captures a full page image and decode of any supported bar codes that are present in the form. The captured area is the largest rectangular region in the field of view defined by the solid border or contrast of background. Any OCR or OMR content will not be decoded in this mode. The captured area is further processed to correct, de-skew and sharpen and returned as a picture.
- **Default - TravelDoc.xml** – Reads passport and Visa travel documents with OCR-B types A and B fonts.
- **Default - Unstructured Multi-Line** – Reads up to seven lines of text.
- **Default - Unstructured Single Line** – Reads a single line of text.

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).

Figure 64 Sound Recorder Application

Data Capture

The device supports data capture using:

- Imager (SE4720 2D, SE4770 2D, and SE4850-ER 2D).
- Internal Laser Scanner (SE965 1D).
- RS507/RS507X Bluetooth Hands-free imager
- RS6000 Bluetooth Ring Scanner
- DS3678 Digital Barcode Scanner.

Integrated Imager

The device with an integrated 2D imager has the following features:

- Omnidirectional reading of a variety of barcode symbologies, including the most popular linear, postal, PDF417, Digimarc, and 2D matrix code types.
- The ability to capture and download images to a host for a variety of imaging applications.
- Advanced intuitive laser aiming cross-hair and dot aiming for easy point-and-shoot operation.

The imager uses imaging technology to take a picture of a barcode, stores the resulting image in memory, and executes state-of-the-art software decoding algorithms to extract the barcode 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 - The device attempts to locate and decode enabled barcodes within its field of view. The imager remains in this mode as long as you hold 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 - Selectively decode a barcode when more than one barcode is in the device's field of view by moving the aiming crosshair or dot over the required barcode. Use this feature for pick lists containing multiple barcodes and manufacturing or transport labels containing more than one barcode type (either 1D or 2D).

Laser Scanner

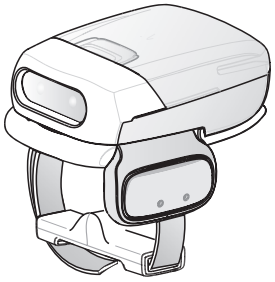
The device with a laser scanner has the following features:

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

RS507/RS507X Hands-Free Imager

The RS507/RS507X Hands-free Imager is a wearable barcode scan solution for both 1D and 2D barcode symbologies.

Figure 65 RS507/RS507X Hands-Free Imager

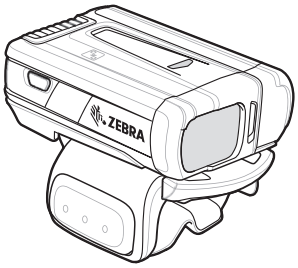


Refer to the RS507/RS507X Hands-free Imager Product Reference Guide for more information.

RS6000 Bluetooth Ring Scanner

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

Figure 66 RS6000 Bluetooth Ring Scanner

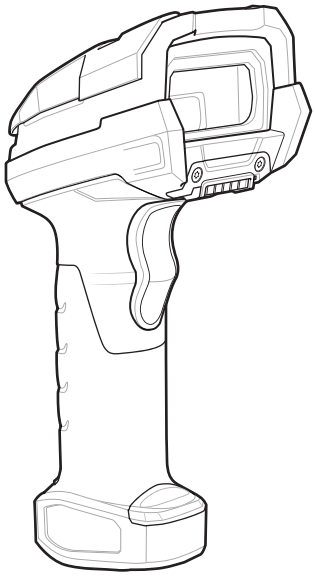


Refer to the RS6000 Bluetooth Ring Scanner Product Reference Guide for more information.

DS3678 Digital Scanner

The cordless DS3678 combines superior 1D and 2D omnidirectional barcode scanning performance and advanced ergonomics in a lightweight design. See the DS36X8 Product Reference Guide for more information.

Figure 67 DS3678 Digital Scanner



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 capture barcode data:

1. Ensure that an application is open on the device and a text field is in focus (text cursor in text field).
2. Point the top of the device at a barcode.

Figure 68 Barcode Scanning – MC3300x–G

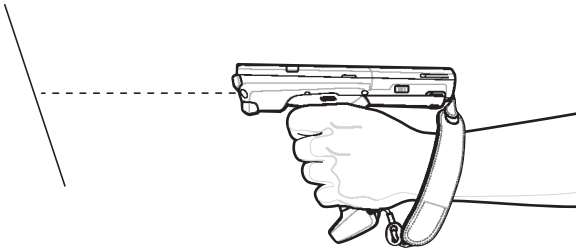
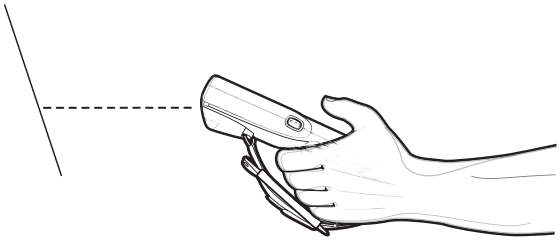


Figure 69 Bar Code Scanning – MC3300x–S



3. Press and hold the Scan button or Trigger.

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

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

   The Scan LEDs light green and a beep sounds, by default, to indicate 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 crosshair touches the barcode.

Figure 70 Aiming Pattern: Standard and Extended Range

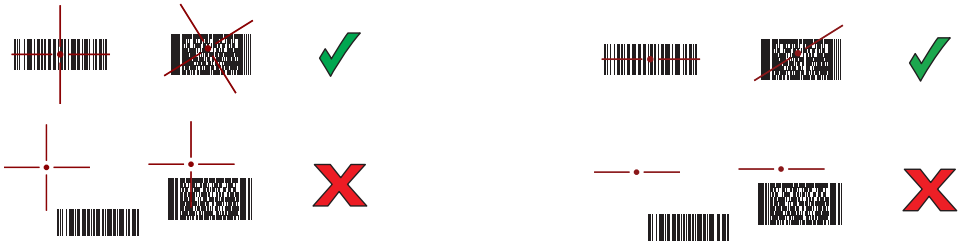


Figure 71 Pick List Mode with Multiple Barcodes in Aiming Pattern: Standard and Extended Range

5. Release the scan button or Trigger.

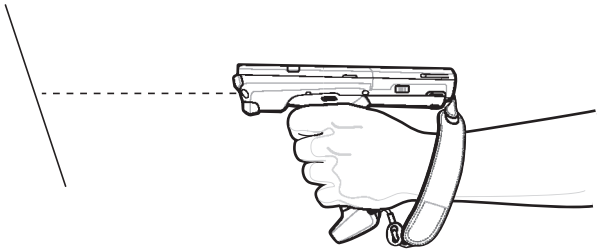
6. The barcode content data appears in the text field.

Scanning with Laser Scanner

To capture barcode data:

1. Ensure that an application is open on the device and a text field is in focus (text cursor in text field).
2. Point the top of the device at a barcode.
3. On the MC3300x–R, rotate the Turret for optimal scanning position.
4. Point the scan exit window at a barcode.

Figure 72 Barcode Scanning – MC3300x-G

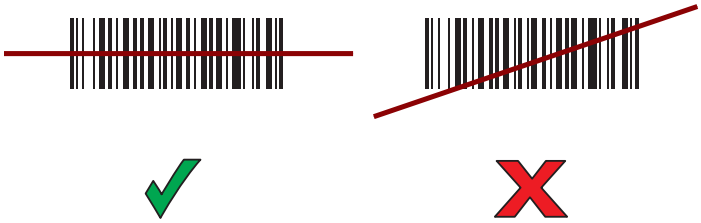


5. Press and hold the Scan button.

   The red scan line turns on to assist in aiming. Ensure that the scan line crosses every bar and space of the barcode.

   The Scan LEDs light green and a beep sounds, by default, to indicate the barcode was decoded successfully.

Figure 73 Linear Scanner Aiming Pattern



6. Release the scan button.
7. The captured data appears in the text field.

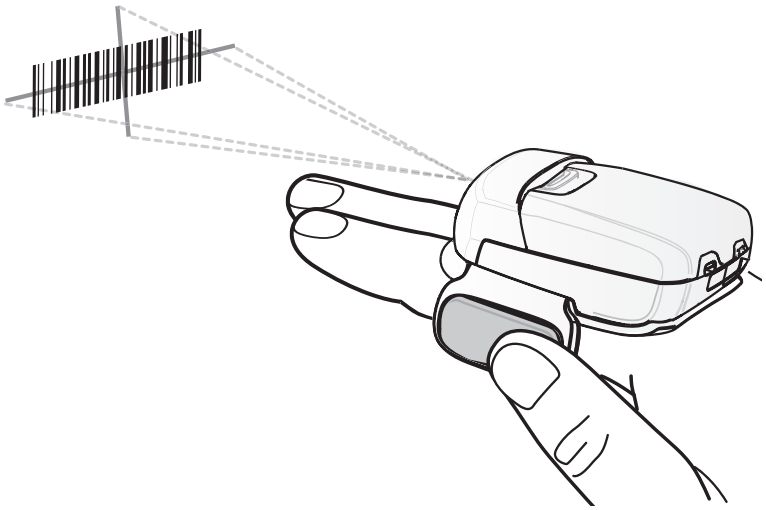
Scanning with RS507/RS507X Hands-Free Imager

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 Simple Serial InterfacePairing Bluetooth Scanners or Pairing Using Bluetooth Human Interface Device 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 74 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 75 RS507/RS507X Aiming Pattern

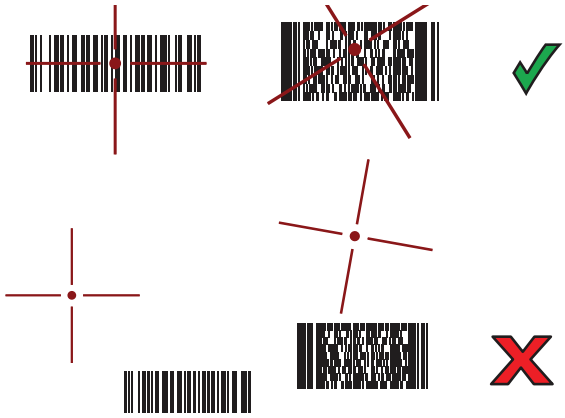


Figure 76 RS507/RS507X Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.

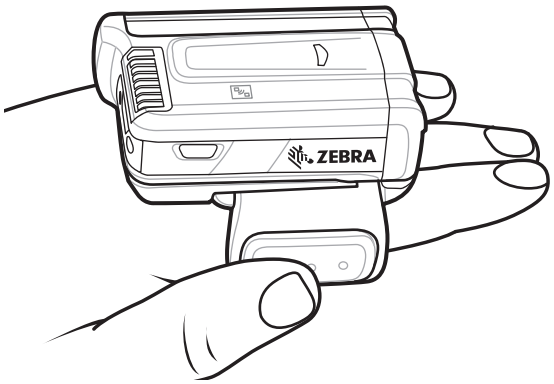
Scanning with RS6000 Bluetooth Ring Scanner

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 Using Bluetooth Human Interface Device 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 RS6000 at a barcode.

Figure 77 Barcode Scanning with RS6000



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 78 RS6000 Aiming Pattern

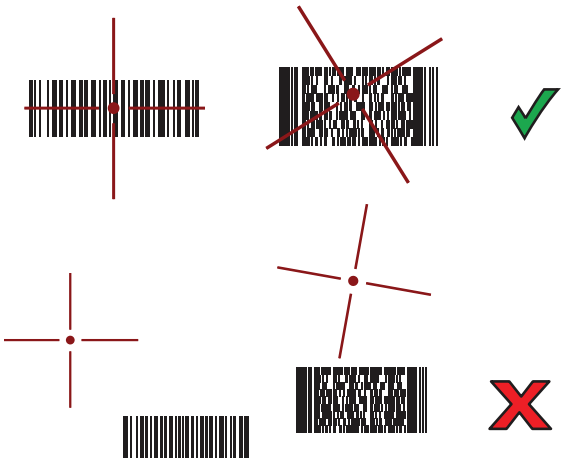


Figure 79 RS6000 Pick List Mode with Multiple Barcodes in Aiming Pattern

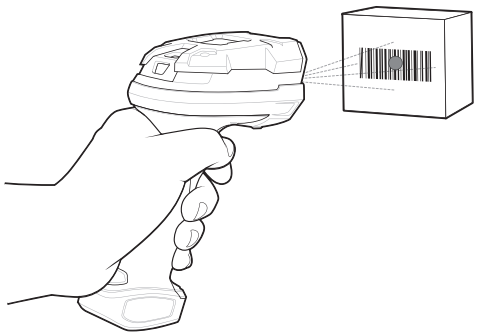
5. The captured data appears in the text field.

Scanning with the DS3608 USB Scanner or DS3678 Bluetooth Scanner

To scan with the DS3608 or DS3678:

1. Pair the scanner with the device. For more information, see Connecting a USB Scanner for the DS3608 or Pairing Bluetooth Scanners for the DS3678.
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 80 Barcode Scanning (DS3678 shown)

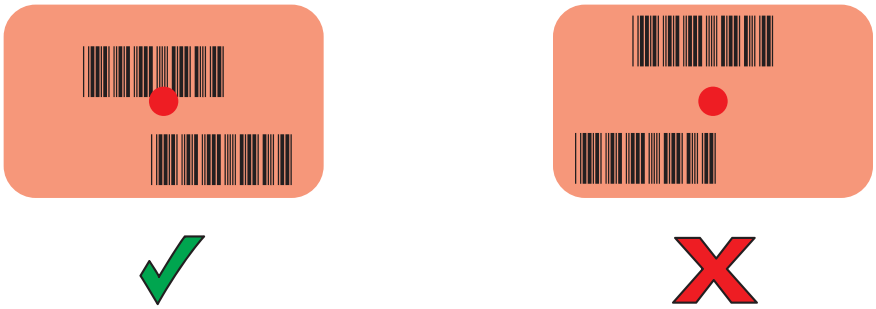


4. Press and hold the trigger.

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

Figure 81 DS3608/DS3678 Aiming Pattern

Figure 82 DS3608/DS3678 Pick List Mode with Multiple Barcodes in Aiming Pattern



5. The captured data appears in the text field.

Pairing the RS507/RS507X/RS6000 Hands-Free Imager

To connect the RS507/RS507X or RS6000 imager to the device, use one of the following methods:

- Near Field Communication (NFC) (RS6000 only)
- Simple Serial Interface (SSI)
- Bluetooth Human Interface Device (HID) Mode.

Pairing Using Near Field Communication

NOTE: NFC is supported on the premium and premium + configurations of the device and only with the RS6000.

The MC3300x provides the ability to pair the RS6000 using NFC.

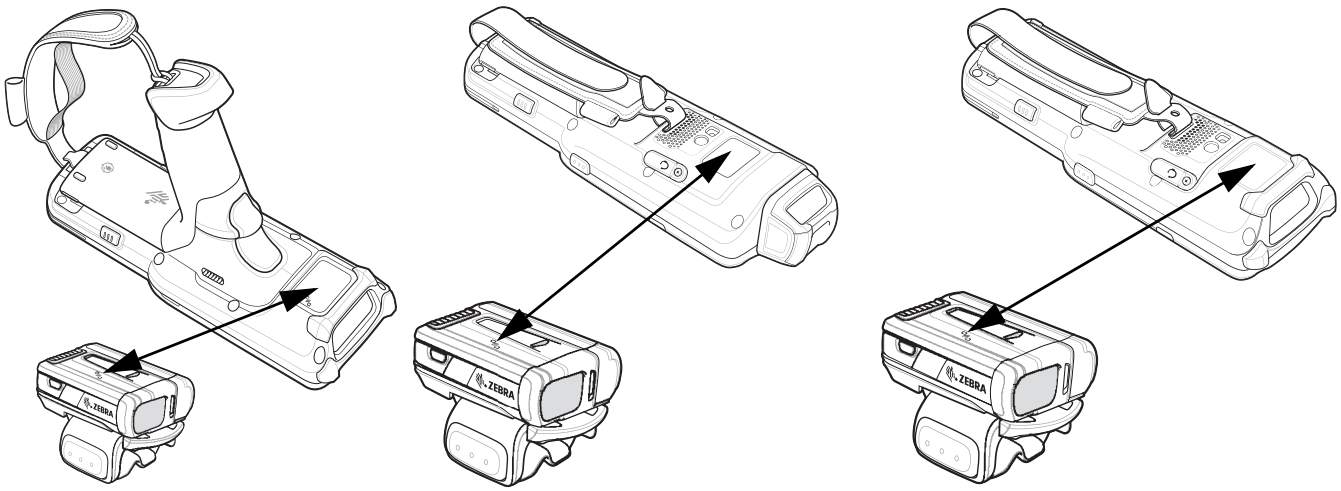
1. Ensure that the RS6000 is in SSI mode. Refer to the RS6000 User Guide for more information.
2. Ensure that NFC is enabled on the MC3300x.
3. Align the NFC icon on the RS6000 with the NFC icon on the back of the MC3300x.

   The Status LED blinks blue indicating that the RS6000 is attempting to establish connection with the MC3300x. When connection is established, the Status LED turns off and the RS6000 emits a single string of low/high beeps.

   A notification appears on the MC3300x screen.

   The icon appears in the Status bar.

Figure 83 Align NFC Antennas



The MC3300x pairs with the RS6000 and appears in the Status bar.

NOTE: Not all Zebra devices support NFC readers and the Tap-to-Pair feature.

Pairing in HID Mode Using Near Field Communication

The MC3300x provides the ability to pair the RS6000 in HID Mode using NFC.

NOTE: NFC is supported on the premium and premium + configurations of the device and only with the RS6000.

1. Ensure that NFC is enabled on the MC3300x.
2. Ensure that Bluetooth is enabled on both devices.
3. Ensure that the Bluetooth device to discover is in discoverable mode.
4. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
5. Place the RS6000 in Human Interface Device (HID) mode. If the RS6000 is already in HID mode, skip to step 6.
   a. Remove the battery from the RS6000.
   b. Press and hold the Restore key.
   c. Install the battery onto the 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 RS6000 in HID mode.

Figure 84 Bluetooth HID Barcode

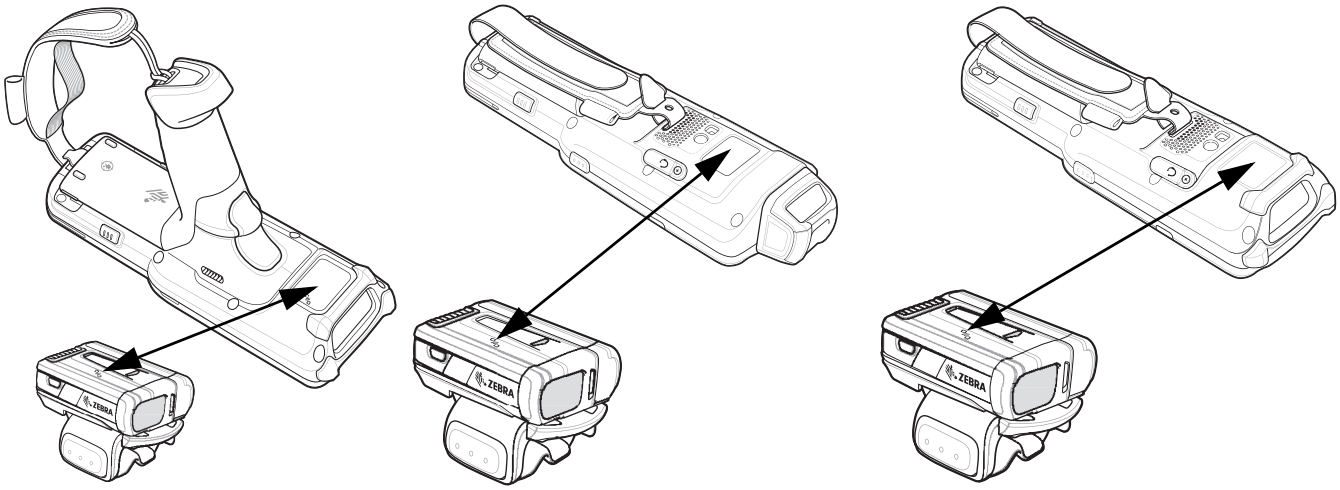
6. Remove the battery from the RS6000.
7. Re-install the battery into the RS6000.
8. Align the NFC icon on the RS6000 with the NFC icon on the MC3300x.

   The Status LED blinks blue indicating that the RS6000 is attempting to establish connection with the MC3300x. When connection is established, the Status LED turns off and the RS6000 emits a single string of low/high beeps.

   A notification appears on the MC3300x screen.

   The icon appears in the Status bar.

Figure 85 Align NFC Antennas



The MC3300x pairs with the RS6000 and appears in the Status bar.

NOTE: Not all Zebra devices support NFC readers and the Tap-to-Pair feature.

Pairing Using Simple Serial Interface

To pair the RS507/RS507X or RS6000 with the device using SSI.

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

Figure 86 Bluetooth Pairing Utility

2. Using the RS507/RS507X or RS6000, scan the barcode on the screen.

   The RS507/RS507X or RS6000 emits a string of high/low/high/low beeps. The Scan LED flashes green indicating that the RS507/RS507X or RS6000 is attempting to establish connection with the device. When connection is established, the Scan LED turns off and the RS507/RS507X or RS6000 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 RS507/RS507X or RS6000 with the device using Human Interface Device (HID):

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. Place the RS507/RS507X or RS6000 in HID mode. If the RS507/RS507X or RS6000 is already in HID mode, skip to step 5.
   a. Remove the battery from the RS507/RS507X or RS6000.
   b. Press and hold the Restore key.
   c. Install the battery onto the RS507/RS507X 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 RS507/RS507X or RS6000 in HID mode.

Figure 87 RS507 Bluetooth HID Barcode

Figure 88 RS6000 Bluetooth HID Barcode

5. Remove the battery from the RS507/RS507X or RS6000.
6. Re-install the battery into the RS507/RS507X or RS6000.
7. Swipe down from the Status bar to open the Quick Access panel and then touch ⚙.
8. Touch **Bluetooth**.
9. Touch **Pair new device**. The device begins searching for discoverable Bluetooth devices in the area and displays them under **Available devices**.
10. 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 A 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 Bluetooth Human Interface Device

To pair the scanner with the device using HID:

1. Remove the battery from the scanner.
2. Replace the battery.
3. After the scanner reboots, scan the barcode below to place the scanner in HID mode.

Figure 89 Bluetooth HID Classic Barcode

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

5. Touch **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 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 typed on the keypad.

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

Enabling DataWedge

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 ◯.

Disabling DataWedge

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

Decoders

Configures which barcode decoders are enabled or disabled. For best performance disable all unnecessary decoders.

Touch **Decoders**. The **Barcode input** screen appears. A check in the checkbox indicates that the decoder is enabled. By default the most commonly used decoders are enabled (shown below with an asterisk). The supported decoders are:

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

Table 18 Supported Decoders

Decoders	Internal 1D Laser Scanner SE965	Internal Imager SE4720	Internal Imager SE4770 & SE4850-ER	RS507/RS507X	RS6000	DS2278	DS3678	LI3678
Australian Postal	--	O	O	O	O	O	O	--
Aztec	--	X	X	X	X	X	X	--
Canadian Postal	--	O	O	--	O	--	--	--
Chinese 2 of 5	O	O	O	O	O	O	O	O
Codabar	X	X	X	X	X	X	X	X
Code 11	O	O	O	O	O	O	O	O
Code 128	X	X	X	X	X	X	X	X
Code 39	X	X	X	X	X	X	X	X
Code 93	O	O	O	O	O	O	O	O
Composite AB	--	O	O	O	O	O	O	--
Composite C	--	O	O	O	O	O	O	--
Discrete 2 of 5	O	O	O	O	O	O	O	O
Datamatrix	--	X	X	X	X	X	X	--
Dutch Postal	--	O	O	O	O	O	O	--
DotCode	O	O	X	O	O	O	O	O
EAN13	X	X	X	X	X	X	X	X
EAN8	X	X	X	X	X	X	X	X
GS1 DataBar	X	X	X	X	X	X	X	X
GS1 DataBar Expanded	X	X	X	X	X	X	X	X
GS1 DataBar Limited	O	O	O	O	O	O	O	O
GS1 Datamatrix	--	O	O	--	O	O	O	--
GS1 QRCode	--	O	O	--	O	O	O	--
HAN XIN	--	O	O	--	O	O	O	--
Interleaved 2 of 5	O	O	O	O	O	O	O	O

Table 18 Supported Decoders (Continued)

Decoders	Internal 1D Laser Scanner SE965	Internal Imager SE4720	Internal Imager SE4770 & SE4850-ER	RS507/RS507X	RS6000	DS2278	DS3678	LI3678
Japanese Postal	--	O	O	O	O	O	O	--
Korean 3 of 5	O	O	O	O	O	O	O	O
MAIL MARK	--	X	X	--	X	X	X	--
Matrix 2 of 5	O	O	O	O	O	O	O	O
Maxicode	--	X	X	X	X	X	X	--
MicroPDF	--	O	O	O	O	O	O	--
MicroQR	--	O	O	O	O	O	O	--
MSI	O	O	O	O	O	O	O	O
PDF417	--	X	X	X	X	X	X	--
QR Code	--	X	X	X	X	X	X	--
Decoder Signature	--	O	O	O	O	O	--	--
TLC 39	O	O	O	O	O	O	O	O
Trioptic 39	O	O	O	O	O	O	O	O
UK Postal	--	O	O	O	O	O	O	--
UPCA	X	X	X	X	X	X	X	X
UPCE0	X	X	X	X	X	X	X	X
UPCE1	D	O	O	O	O	O	O	O
US4state	--	O	O	O	O	O	O	--
US4state FICS	--	O	O	O	O	O	O	--
US Planet	--	O	O	O	O	O	O	--
US Postnet	--	O	O	O	O	O	O	--

Wireless

This section provides information on the wireless features:

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

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:

- Open
- Wireless Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)/WPA2 Personal (PSK)
- Extensible Authentication Protocol (EAP).
  - LEAP
  - Protected Extensible Authentication Protocol (PEAP) - with MSCHAPV2 and GTC authentication
  - Transport Layer Security (TLS)
  - TTLS - with Password Authentication Protocol (PAP), MSCHAP and MSCHAPv2 authentication.
  - EAP-FAST - with MSCHAPV2 and GTC authentication.

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

NOTE: To extend the life of the battery, turn off Wi-Fi when not in use.

Accessing Settings

Access Settings in any of the following ways:

- 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 **Settings**.

Connecting to a Wi-Fi Network

To connect to a Wi-Fi network:

1. Swipe down from the Status bar to open the Quick Access panel.
2. Touch **Wi-Fi** to open the **Wi-Fi** screen. The device searches for WLANs in the area and lists them.

Figure 90 Wi-Fi Screen

3. Scroll through the list and select the desired WLAN network.
4. For open networks, touch profile once or press and hold and then select **Connect to network** 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.
5. 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. In the dialog box, touch **FORGET**.
6. Touch ◯.

WLAN Configuration

This section provides information on configuring Wi-Fi settings.

Configuring a Secure Wi-Fi Network

To set up a 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 **Open**, the device automatically connects to the network. For all other network security a dialog box appears.
7. If the network security is **WEP** or **WPA/WPS2 PSK**, enter the required password and then touch **Connect**.
8. If the network security is 802.1x EAP:
   - Touch the **EAP method** drop-down list and select **PEAP**, **TLS**, **TTLS,** or **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.

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

9. Touch **Connect**.
10. Touch ◯.

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**
   - **WEP**
   - **WPA/WPA2 PSK**
   - **802.1x EAP**.
7. If the network security is **None**, touch **Save**.
8. If the network security is **WEP** or **WPA/WPA2 PSK**, enter the required password and then touch **Save**.
9. If the network security is **802.1x EAP**:
   - Touch the **EAP method** drop-down list and select **PEAP**, **TLS**, **TTLS,** or **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.

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

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

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.

To configure the device for a proxy server:

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 **Advanced options**.
6. Touch **Proxy** and select **Manual**.
7. In the **Proxy hostname** text box, enter the address of the proxy server.
8. In the **Proxy port** text box, enter the port number for the proxy server.
9. 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.
10. Touch **Connect**.
11. Touch ◯.

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.

To configure the device to connect to a network using a static IP address:

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 **Advanced options**.
6. Touch **IP settings** and select **Static**.
7. In the **IP address** text box, enter an IP address for the device.
8. If required, in the **Gateway** text box, enter a gateway address for the device.
9. If required, in the **Network prefix length** text box, enter the prefix length.
10. If required, in the **DNS 1** text box, enter a Domain Name System (DNS) address.
11. If required, in the **DNS 2** text box, enter a DNS address.
12. Touch **Connect**.

13. Touch ◯.

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**.

- **Open network notification** - When enabled, notifies the user when an open network is available.
- **Advanced - Touch to expand options.**
  - **Additional settings** - See Additional Settings.
  - **Install Certificates** – Touch to install certificates.
  - **Network rating provider** - Disabled (AOSP devices). 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.
  - **WPS Push Button** - Touch to connect to a network using Wi-Fi Protected Setup (WPS) push button method.
  - **WPS Pin Entry** - Touch to connect to a network using Wi-Fi Protected Setup (WPS) pin entry method.
  - **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**.
5. Connected appears on the device. On both devices, in their respective Wi-Fi Direct screens, the other device name appears in the list.

WPS Push Button

Wi-Fi Protected Setup (WPS) is a feature allowing devices to easily connect to Wi-Fi access points without typing a long password.

To use a wireless router WPS button:

1. Go to **Settings**.
2. Touch **Wi-Fi** > **Wi-Fi preferences** > **Advanced** > **WPS Push Button**. A dialog box displays.
3. On the wireless router, locate the WPS button. The device connects to the wireless router.

WPS Pin Entry

Wi-Fi Protected Setup (WPS) is a feature allowing devices to easily connect to Wi-Fi access points without typing a long password.

To use a PIN to connect to a wireless router:

1. Go to **Settings**.
2. Touch **Wi-Fi** > **Wi-Fi preferences** > **Advanced** > **WPS Pin Entry**.

   A dialog box displays with a Pin number.
3. On the router, enter the Pin number. The device connects to the wireless router.

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 in the table below:

Table 19 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.
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 you can initiate a call from the car display.
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.

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.

NOTE: To achieve the best battery life, turn off radios when not in use.

Enabling Bluetooth

To enable Bluetooth:

1. Swipe down from the Status bar to open the Quick Access panel.
2. Touch to turn Bluetooth on.
3. Touch .

Disabling Bluetooth

To disable Bluetooth:

1. Swipe down from the Status bar to open the Quick Access panel.
2. Touch to turn Bluetooth off.
3. Touch .

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. To find Bluetooth devices in the area:

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 **Bluetooth**.
6. Touch **MORE SETTINGS**. The **Bluetooth** screen appears.
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 a device. The Bluetooth pairing request dialog box appears.
9. Touch **Pair** on both devices.
10. 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** > **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 ◯.

Connecting to a Bluetooth Device

Once paired, connect to a Bluetooth device.

1. Go to **Settings**.
2. Touch **Connected device** > **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. To select a profile:

1. Go to **Settings**.
2. Touch **Connected Devices** > **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 ◯.

Unpairing a Bluetooth Device

To unpair a Bluetooth device and erase all pairing information:

1. Go to **Settings**.
2. Touch **Connected devices** > **Bluetooth**.
3. In the **Paired Devices** list, touch ⚙ next to the device name.
4. Touch **FORGET**.
5. Touch ◯.

Using a Bluetooth Headset

Use a Bluetooth headset for audio communication when using an audio-enabled app. See Bluetooth for more information on connecting a Bluetooth headset to the device. Set the volume appropriately before putting on the headset. When a Bluetooth headset is connected, the speakerphone is muted.

Near Field Communications

NOTE: NFC is supported only on the premium and premium + configuration of the device.

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)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.

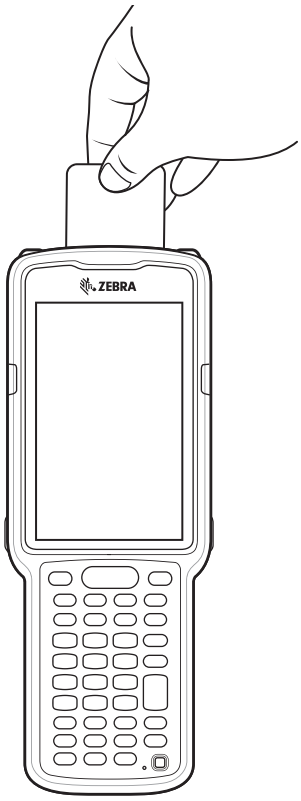
The device NFC antenna is centrally aligned with the back housing directly underneath the regulatory label and is designed for reading a range of NFC tags at distances from contact up to 2 cm from the rear of the device.

Reading NFC Cards

To read NFC cards:

1. Launch an NFC enabled application.
2. Hold device as shown.
3. Move the device close to the NFC card until it detects the card.
4. Hold the card steadily until the transaction is complete (usually indicated by the application).

Figure 91 Reading Cards



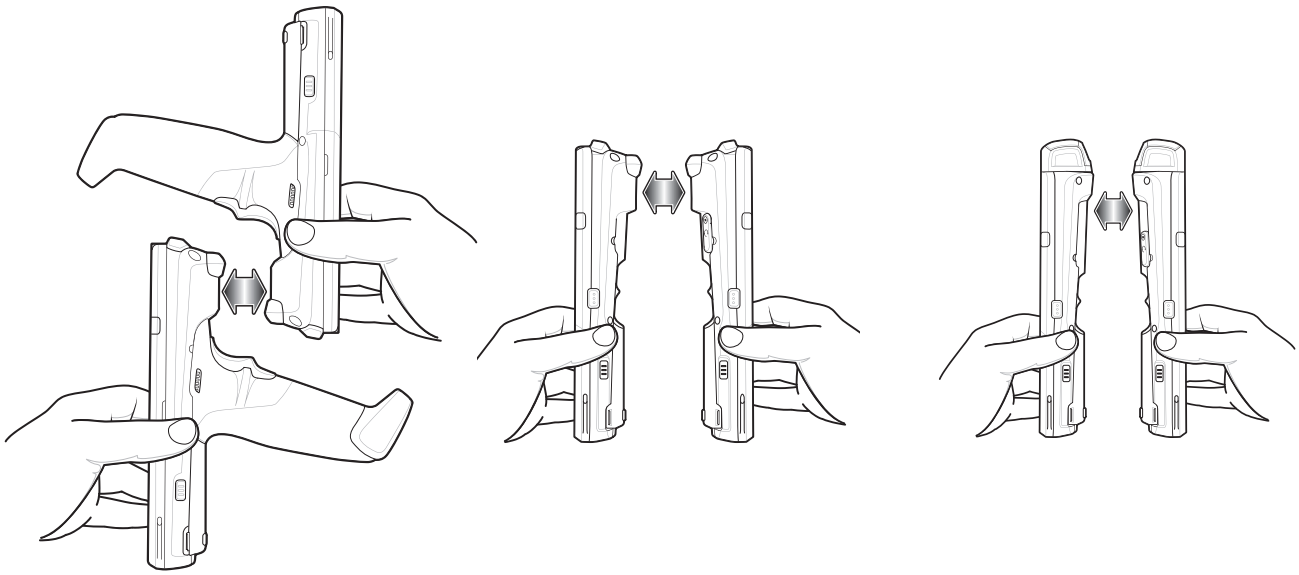
Sharing Information Using NFC

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. Move the back of the device toward the back of the other device.

Figure 92 Sharing Data Using NFC



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

3. Touch anywhere on the screen.

   The transfer begins.

Cast

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

1. Go to **Settings**.
2. Touch **Connected Devices**.
3. Touch **Cast**.
4. Touch ⋮ > **Enable wireless display**. The device searches for nearby Miracast devices and lists them.
5. Touch a device to begin casting.
6. Touch ◯.

Accessories

Introduction

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

MC3300x Accessories

The table below lists the accessories available for the MC3300x.

Table 20 MC3300x Accessories

Accessory	Part Number	Description
Cradles		
1-Slot USB Charge Cradle with Spare Battery Charger	CRD-MC33-2SUCHG-01	Charges the MC3300x main battery and a spare battery, and synchronizes the MC3300x with a host computer through a USB connection. Requires power supply (PWR-BGA12V50W0WW), DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
5-Slot Charge Only ShareCradle	CRD-MC33-5SCHG-01	Charge only. Charges up to five devices. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
5-Slot Ethernet ShareCradle	CRD-MC33-5SETH-01	Charges up to five devices and provides Ethernet communication for up to five devices. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.

Table 20 MC3300x Accessories (Continued)

Accessory	Part Number	Description
5-Slot Charge ShareCradle with 4-Slot Battery Charger	CRD-MC33-4SC4BC-01	Charge only. Charges up to four devices and up to four spare batteries. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
5-Slot Ethernet ShareCradle with 4-Slot Battery Charger	CRD-MC33-4SE4BC-01	Charges up to four devices and up to four spare batteries and provides Ethernet communication for up to four devices. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
Chargers		
4-Slot Spare Battery Charger	SAC-MC33-4SCHG-01	Charges up to four MC3300x spare batteries. Requires power supply (PWR-BGA12V50W0WW), DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
20-Slot Spare Battery Charger	SAC-MC33-20SCHG-01	Charges up to 20 MC3300x spare batteries. Requires power supply (PWR-BGA12V108W0WW), DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.
Power Supply	PWR-BGA12V50W0WW	Level VI power supply. Provides 12 VDC, 2.5A power to the 1-Slot USB Charge Cradle and the 4-Slot Spare Battery Charger. Requires a DC line cord (CBL-DC-388A1-01) and a country specific grounded AC line cord.
Power Supply	PWR-BGA12V108W0WW	Level VI power supply. Provides 12 VDC, 2.5A power to the 5-Slot Charge Only Cradle, 5-Slot Ethernet Cradle, 5-Slot Charge Cradle with 4-Slot Battery Charger, 5-Slot Ethernet Cradle with 4-Slot Battery Charger and 20-Slot Battery Charger. Requires a DC line cord (CBL-DC-381A1-01) and a country specific grounded AC line cord.

Table 20 MC3300x Accessories (Continued)

Accessory	Part Number	Description
Power Supply	PWR-WUA5V12W0US	Wall adapter; Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the United States.
Power Supply	PWR-WUA5V12W0GB	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the European Union.
Power Supply	PWR-WUA5V12W0EU	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in the United Kingdom.
Power Supply	PWR-WUA5V12W0AU	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in Australia.
Power Supply	PWR-WUA5V12W0CN	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in China.
Power Supply	PWR-WUA5V12W0IN	Provides 12 VDC, 2.5A power to the USB Charge Cable. Includes plug adapter for use in India.
US AC Line Cord	23844-00-00R	Provides power to 3–wire power supplies PWR-BGA12V50W0WW and PWR-BGA12V108W0WW.
DC Line Cord	CBL-DC-381A1-01	Provides power from the power supply (PWR-BGA12V108W0WW) to the 5-Slot Charge Only Cradle, 5-Slot Ethernet Cradle, 5-Slot Charge Cradle with 4-Slot Battery Charger, 5-Slot Ethernet Cradle with 4-Slot Battery Charger and 20-Slot Battery Charger.
DC Line Cord	CBL-DC-388A1-01	Provides power from the power supply (PWR-BGA12V150W0WW) to the 1-Slot USB Charge Cradle and 4-Slot Battery Charger.
Cables		
USB Charge Cable	CBL-MC33-USBCHG-01	Provides power and/or communication over USB to the device. Requires wall adapter/power supply PWR-WUA5V12W0xx.
1-Slot Cradle USB Cable	25-124330-01R	Provides USB communication through the 1-Slot USB cradle to the host computer.
Headset Quick Disconnect Adapter Cable (2.5 mm)	25-124411-03R	Connects an RCH51, HS2100, or third party quick disconnect headset to the MC3300x-R/S.

Table 20 MC3300x Accessories (Continued)

Accessory	Part Number	Description
Miscellaneous		
Cradle Adapter	ADP-MC33-CRDCUP-01	MC3300x Charge Only Adapter for backwards compatibility with MC32 cradles. Works with MC32N0 1-Slot USB Cradle, 4-Slot Charge Only Cradle, and 4-Slot Ethernet Cradles.
2740 mAh Battery (Standard PowerPrecision+)	BTRY-MC33-27MA-01	Replacement standard capacity battery.
	BTRY-MC33-27MA-10	Replacement standard capacity battery (10–pack).
	BTRY-MC33-27MA-IN	Replacement standard capacity battery (India).
5200 mAh Battery (Extended PowerPrecision+)	BTRY-MC33-52MA-01	Replacement extended capacity battery.
	BTRY-MC33-52MA-10	Replacement extended capacity battery (10–pack).
	BTRY-MC33-52MA-IN	Replacement extended capacity battery (India).
MC3300x-G Hand Strap	SG-MC33-HDSTPG-01	Replacement hand strap for the MC3300x-G. Hand strap loop holds an optional stylus (SG-TC7X-STYLUS-03).
MC3300x-R/S Hand Strap	SG-MC33-HDSTPB-01	Replacement hand strap for the MC3300x-R and MC3300x-S.
Lanyard	SG-MC33-LNYDB-01	Optional lanyard for MC33XX-R and MC33XX-S, for securing the device to the user with the cross-body strap or the belt clip (both options included).
Rigid Holster	SG-MC33-RDHLST-01	Provides a clip on holder for the MC3300x-R and MC3300x-S.
MC3300x-G Fabric Holster	SG-MC3021212–01R	Provides a soft, clip on holster and a shoulder strap for the MC3300x–G.
MC3300x-R/S Fabric Holster	SG-MC3X-SHLSTB-01	Provides a soft, clip on holder and a shoulder strap for the MC3300x-R and MC3300x-S.
Shoulder Strap	58-40000-007R	Universal shoulder strap.
Belt	11-08062-02R	Belt for fabric holster.
MC3300x-G Rubber Boot	SG-MC33-RBTG-01	Provides additional protection for wear and tear of the MC3300x-G.
MC3300x-S Rubber Boot	SG-MC33-RBTS-01	Provides additional protection for the MC3300x-S.
MC3300x–R Rubber Boot for Terminal	SG-MC33-RBTRD-01	Provides additional protection for the MC3300x–R (terminal).

Table 20 MC3300x Accessories (Continued)

Accessory	Part Number	Description
MC3300x-R Rubber Boot for Turret Cup	SG-MC33-RBTRT-01	Provides additional protection for the MC3300x-R (turret cup).
Tempered Glass Screen Protector	MISC-MC33-SCRN-01	Provides additional protection for display (5-pack).
Stylus and Tether	SG-TC7X-STYLUS-03	Conductive carbon-filled stylus for capacitive touch panel; includes coiled tether (3-pack).
Un-powered Forklift Mount	MNT-MC33-FLCHKT-01	Un-powered forklift mount. Allows installing the device on a roll bar or square surface of a forklift. Includes: Forklift holder (MNT-MC33-FLCH-01), RAM double socket arm for 1” ball (MNT-RAM-B201U) and RAM forklift clamp 2.5” max width square rail base with 1” ball (MNT-RAM-B247U25).

Compatibility

The table below displays compatibility between MC3300x and MC32N0 mobile computers and accessories.

Table 21 Compatibility

	MC3300x PP+ Batteries	MC32N0 PP Batteries	MC3300x Cradles	MC32N0 Cradles	MC3300x Battery Charger	MC32N0 Battery Charger
MC3300x mobile computer	Yes	Yes	Yes	Yes w/adapter	N/A	N/A
MC32N0 mobile computer	No	Yes	No	Yes	N/A	N/A
MC3300x PP+ Battery	N/A	N/A	Yes	No	Yes	No
MC32N0 PP Battery	N/A	N/A	Yes	Yes	Yes	Yes

- MC3300x mobile computers are compatible with all batteries (MC3300x PowerPrecision+ and MC32N0 PowerPrecision).
- MC3300x mobile computers are compatible with all cradles.

  An additional adapter is needed to use any MC32N0 cradle slot, which provides charge only, no communication.
- MC3300x battery charger slots are compatible with all batteries (MC3300x PowerPrecision+ and MC32N0 PowerPrecision).
- MC32N0 mobile computers are not compatible with MC3300x cradles.

Battery Comparison

The table below displays a comparison of the MC3300x batteries with the MC32N0 batteries.

Table 22 Battery Comparison

Feature	MC32N0	MC3300x
Battery Type	PowerPrecision	PowerPrecision+
Includes Zebra and PowerPrecision+ recessed logos	No	Yes
Back Label	Grey	Blue

Battery Compatibility

- MC3300x PowerPrecision+ batteries are compatible with all MC3300x mobile computers and accessories.
- MC3300x PowerPrecision+ batteries are not compatible with MC32N0 mobile computers and accessories.
- MC32N0 PowerPrecision batteries are compatible with all MC32N0 mobile computers and accessories.
- MC32N0 PowerPrecision batteries are compatible with all MC3300x mobile computers and accessories.
- The MC3300x-G is compatible with MC3300x 5200 mAh PowerPrecision+ extended batteries and MC32N0 5200 mAh PowerPrecision extended batteries.
- The MC3300x-R/S are compatible with MC3300x 2740 mAh PowerPrecision+ standard batteries, MC3300x 5200 mAh PowerPrecision+ extended batteries, MC32N0 2740 mAh PowerPrecision standard batteries, and MC32N0 5200 mAh PowerPrecision extended batteries.

Battery Charging

Main Battery Charging

The device’s Charging/Notification LED indicates the status of the battery charging in the device.

The MC3300x 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC3300x 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Spare Battery Charging

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

Table 23 Spare Battery LED Charging Indicators

Spare Battery LED (on cradle)	Indication
Off	• The battery is not charging. • The battery is not inserted correctly in the cradle or connected to a power source. • Cradle is not powered.
Solid Amber	• Battery is charging.
Solid Green	• Battery charging is complete.
Fast Blinking Red 2 blinks/second	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Solid Red	• Spare battery is charging and battery is at the end of useful life. • Charging complete and battery is at the end of useful life.

The MC3300x 2740 mAh PowerPrecision+ standard battery charges from 0% to 90% in less than 2.2 hours at room temperature.

The MC3300x 5200 mAh PowerPrecision+ extended battery charges from 0% to 90% in less than 3.8 hours at room temperature.

The MC32N0 2740 mAh PowerPrecision standard battery charges from 0% to 90% in less than 3 hours at room temperature.

The MC32N0 5200 mAh PowerPrecision extended battery charges from 0% to 90% in less than 5.5 hours at room temperature.

Charging Temperature

Charge batteries in temperatures from 0 °C to 40 °C (32 °F to 104 °F). The device or cradle always performs battery charging in a safe and intelligent manner. At higher temperatures (e.g. approximately +37 °C (+98 °F)) the device or cradle may for small periods of time alternately enable and disable battery charging to keep the battery at acceptable temperatures. The device and cradle indicates when charging is disabled due to abnormal temperatures via its LED.

1-Slot USB Charge Cradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 214

The 1-Slot USB Charge Cradle:

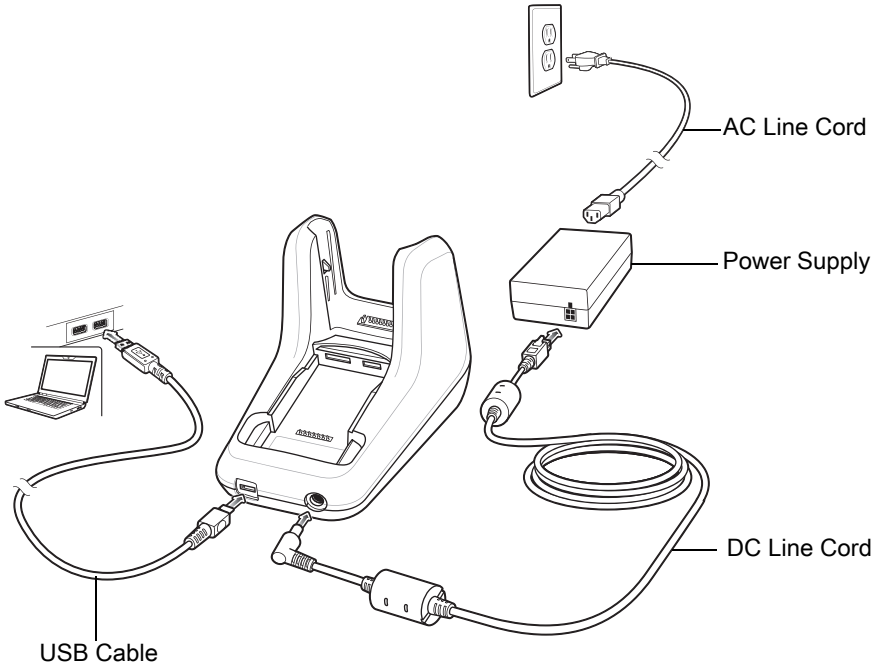
- Provides 9 VDC power for charging the mobile computer and charging the battery.
- Provides 4.2 VDC power to charge the spare battery.

- Provides a USB port for data communication between the mobile computer and a host computer or other USB devices (e.g., a printer).
- Synchronizes information between the mobile computer and a host computer. With customized or third party software, it can also synchronize the mobile computer with corporate databases.
- Compatible with the following batteries:
  - MC3300x 2740 mAh PowerPrecision+ standard battery.
  - MC3300x 5200 mAh PowerPrecision+ extended battery.
  - MC32N0 2740 mAh PowerPrecision standard battery.
  - MC32N0 5200 mAh PowerPrecision extended battery.

Figure 93 1-Slot USB Charge Cradle

Setup

Figure 94 1-Slot USB Charge Cradle Setup



Charging the MC3300x Battery

NOTE: To function properly, remove the entire rubber boot from the device before placing the device in a charging cradle.

1. Ensure that the cradle is connected to power.
2. Slide the mobile computer into the slot in the cradle. The mobile computer Charge LED Indicator, indicates the mobile computer battery charging status.
3. Gently press down on the device to ensure proper contact.
4. When charging is complete, remove the mobile computer from the cradle slot.

Charging an MC3300x Spare Battery

1. Ensure that the cradle is connected to power.
2. Insert the spare battery into the cradle, bottom first, and pivot the top of the battery down onto the contact pins.