ET51/56

Enterprise Tablet

User Guide
for Microsoft® Windows® 10 IoT Enterprise

ZEBRA

MN-003446-04 Rev. A

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	2/2019	Initial release
-02 Rev. A	4/2019	Add ET56 support. Correct Bluetooth range values.
-03 Rev. A	8/2019	Update cradle graphics and accessory list.
-04 Rev. A	12/2019	Add support for ET51 Enterprise Tablet with Integrated Scanner.

About This Guide

Introduction

This guide provides information about using the tablet and accessories.

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

Configurations

This guide covers the following configurations:

Table 1 Configurations

Configuration	Operating System	Radios	Display	Memory	Data Capture
ET51AE	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth	8.4” color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs
ET51AE with Integrated Scanner	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth	8.4” color	4 or 8 GB RAM/ 64 GB Flash	Integrated scanner, optional RS507, and RS6000
ET56BE	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth WWAN: LTE	8.4” color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs
ET51AT	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth	10.1” color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs

Table 1 Configurations

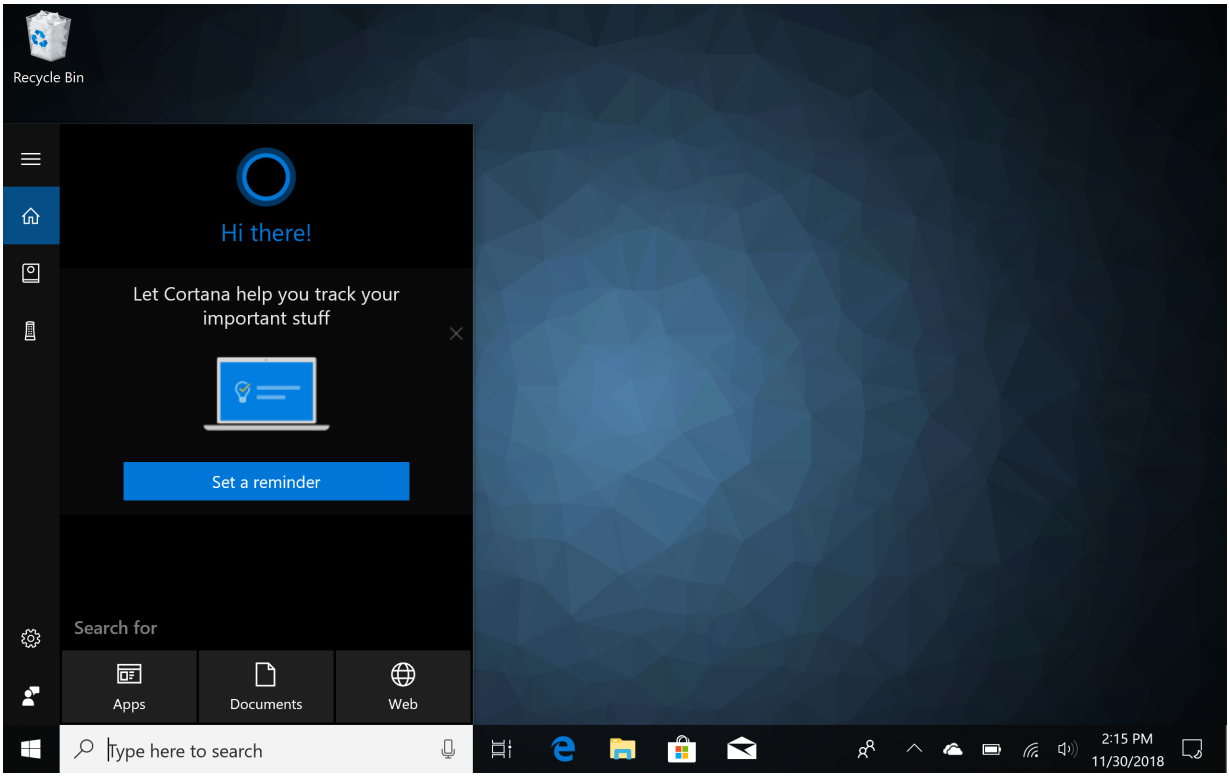
Configuration	Operating System	Radios	Display	Memory	Data Capture
ET56BT	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth WWAN: LTE	10.1" color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs
ET51AT	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth	10.1" color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs
ET56BT	Windows® 10 IoT Enterprise	WLAN: 802.11a/b/g/n/ac/d/h/i/w WPAN: Bluetooth WWAN: LTE	10.1" color	4 or 8 GB RAM/ 64 GB Flash	Optional RS507, RS6000, SE4710 or SE4750 Expansion Backs

Software Release Information

To check the software release information:

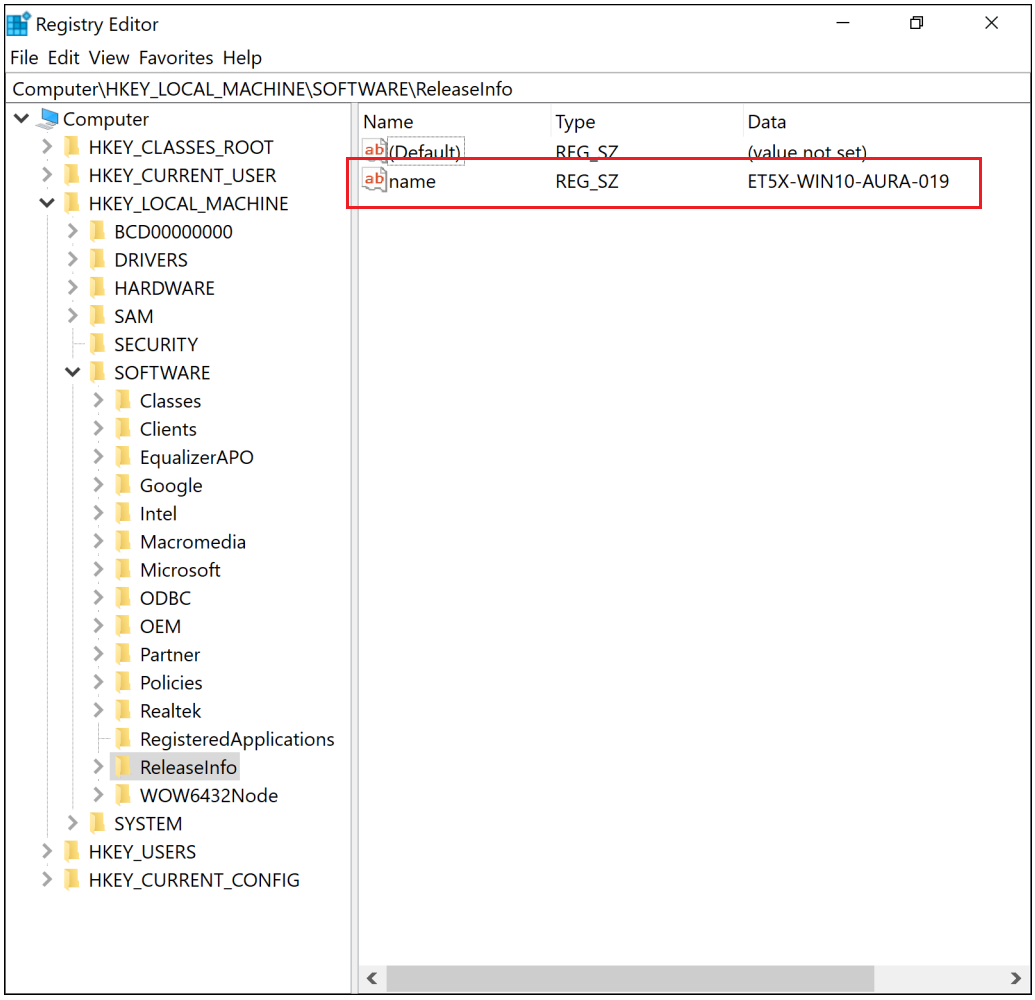
1. Touch the Cortana icon .

Figure 1 Software Release Information



2. In the Search text box, type **`regedit`**.
3. Touch **Run Command**. The **User Account Control** dialog box appears.
4. Touch **Yes**.
5. Navigate to **HKEY_LOCAL_MACHINE > SOFTWARE > ReleaseInfo**. The version appears in the **Data** column.

Figure 2 Regedit Window



Chapter Descriptions

Topics covered in this guide are as follows:

- Getting Started provides information on getting the tablet up and running for the first time.
- Using the Tablet explains how to use the tablet. This includes instructions for powering on and resetting the tablet, entering and capturing data.
- Wireless explains how to perform Bluetooth functionality on the tablet.
- Data Capture explains how to capture data using the optional scanners.
- Accessories describes the accessories available for the tablet and how to use the accessories with the tablet.
- Maintenance and Troubleshooting includes instructions on cleaning and storing the tablet, and provides troubleshooting solutions for potential problems during tablet operation.
- Specifications includes a table listing the technical specifications for the tablet.

Notational Conventions

The following conventions are used in this document:

- “Device” or “tablet” refers to the Zebra ET51/56 tablet
- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Related Documents and Software

The following documents provide more information about the ET51/56 tablets.

- ET51/56 Enterprise Tablet Quick Reference Guide, p/n MN-003332-xx
- ET51 Enterprise Tablet with Integrated Scanner Quick Start Guide, p/n MN-003777-xx
- ET51/56 Integrator Guide for Microsoft Windows 10, p/n MN-003456-xx

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

Service Information

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

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number. See Software Release Information.

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

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

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

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Getting Started

Introduction

This chapter explains how to set up the device for the first time.

Unpacking

Carefully remove all protective material from around the device and save the shipping container for later storage and shipping.

Verify that you received the following:

- Tablet with lithium polymer battery
- Quick Start Guide
- Additional hand strap screws (ET51 Enterprise Tablet with Integrated Scanner only).
- 1-slot cradle pads (ET51 Enterprise Tablet with Integrated Scanner only).

Inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact the Zebra Support Center immediately. See Service Information for contact information.

ET51/56 Features

Figure 1 ET51/56 Front View

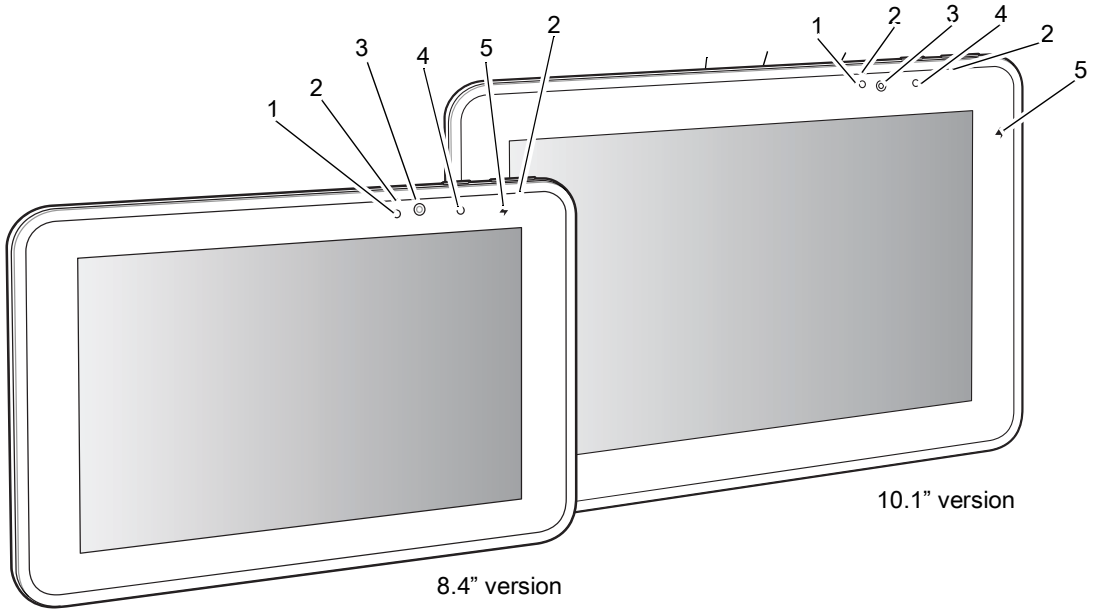


Table 1 Front View

Item	Description
1	Ambient Light Sensor - Recognizes the ambient light and adjusts the display brightness (if enabled).
2	Dual Front-Facing Microphones - Use for voice communications for audio recordings.
3	Front Facing Camera - Use for video conferencing or capturing images and video.
4	Camera Indicator LED - Lights red when the camera is activated. Momentarily lights red when the device boots.
5	Charging Indicator LED - Indicates charging status. • OFF - device is not connected to charger. • ORANGE - device is charging. • GREEN - device is connected and fully charged. • RED - charge error.

Figure 2 ET51/56 Back View

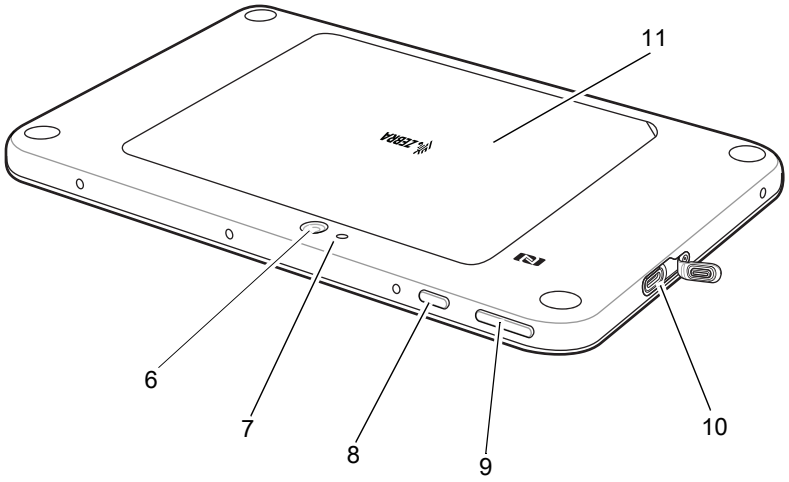


Table 2 ET51/56 Back View

Item	Description
6	Rear Camera - Auto-focus camera for capturing high resolution images and video.
7	Camera LED Flash - Provides illumination for the camera.
8	Power Button - Push once to start the device; push it again to enable sleep mode. Push and hold it to shut down the tablet.
9	Volume Key - Push the left side to reduce the volume. Press the right side to increase the volume.
10	USB-C Interface - Provides communications.
11	Battery Cover

Figure 3 ET51/56 Bottom View

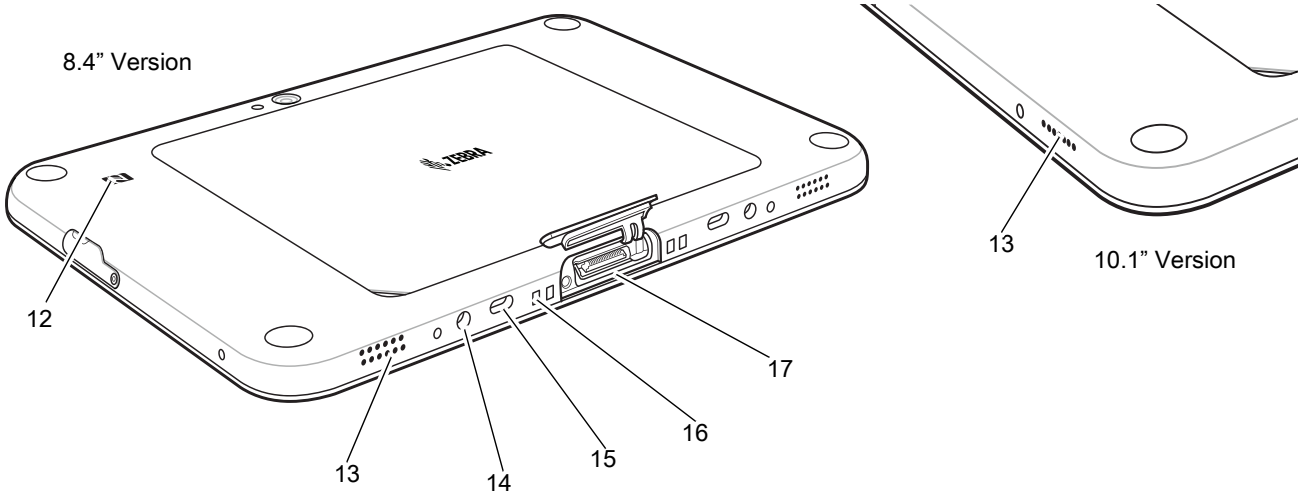


Table 3 ET51/56 Bottom View

Item	Description
12	NFC Antenna Position - Use to read NFC cards.
13	Stereo Speakers - Provides audio playback.
14	Alignment Holes - Use to align tablet with cradle.
15	Latching Slots - Insertion point for Communication and Charging cradle locks.
16	Charging Pins - Contact point for cradle charging.
17	Docking Connector - Interfaces with the cradle.

ET51 with Integrated Scanner Features

Figure 4 ET51 with Integrated Scanner Front View

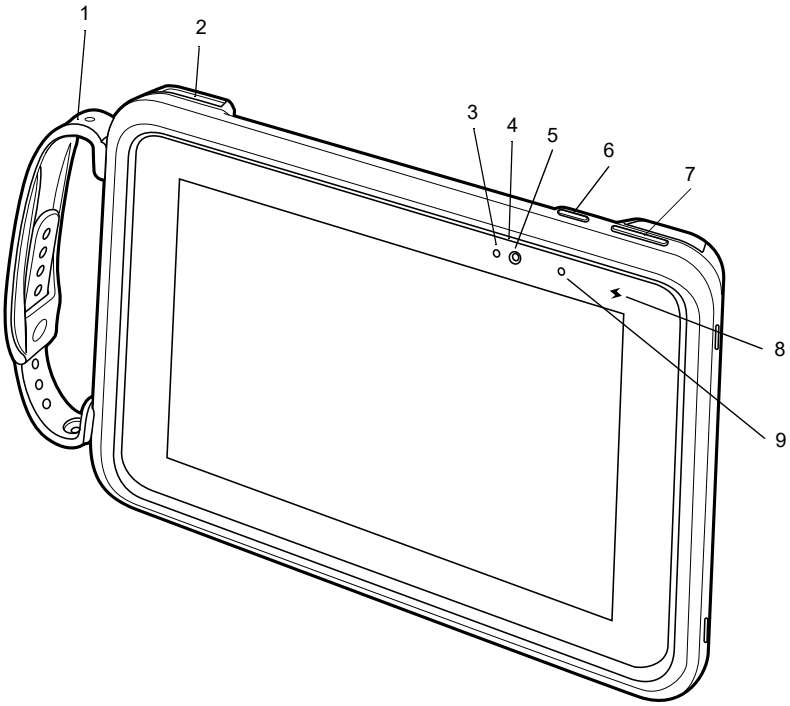


Table 4 ET51 with Integrated Scanner Front View

Item	Description
1	Adjustable Hand Strap - Use to securely hold the device in your hand.
2	Exit Window - Provides data capture using the imager.
3	Ambient Light Sensor - Recognizes the ambient light and adjusts the display brightness (if enabled).
4	Dual Front-Facing Microphones - Use for voice communications for audio recordings.
5	Front Facing Camera - Use for video conferencing or capturing images and video.
6	Power Button - Push once to start the device; push it again to enable sleep mode. Push and hold it to shut down the device.
7	Volume Key - Press the left side to reduce the volume. Press the right side to increase the volume.
8	Charging Indicator LED - Indicates charging status. • OFF - device is not connected to charger. • ORANGE - device is charging. • GREEN - device is connected and fully charged. • RED - charge error.
9	Camera Indicator LED - Lights red when the camera is activated. Momentarily lights red when the device boots.

Figure 5 ET51 with Integrated Scanner Back View

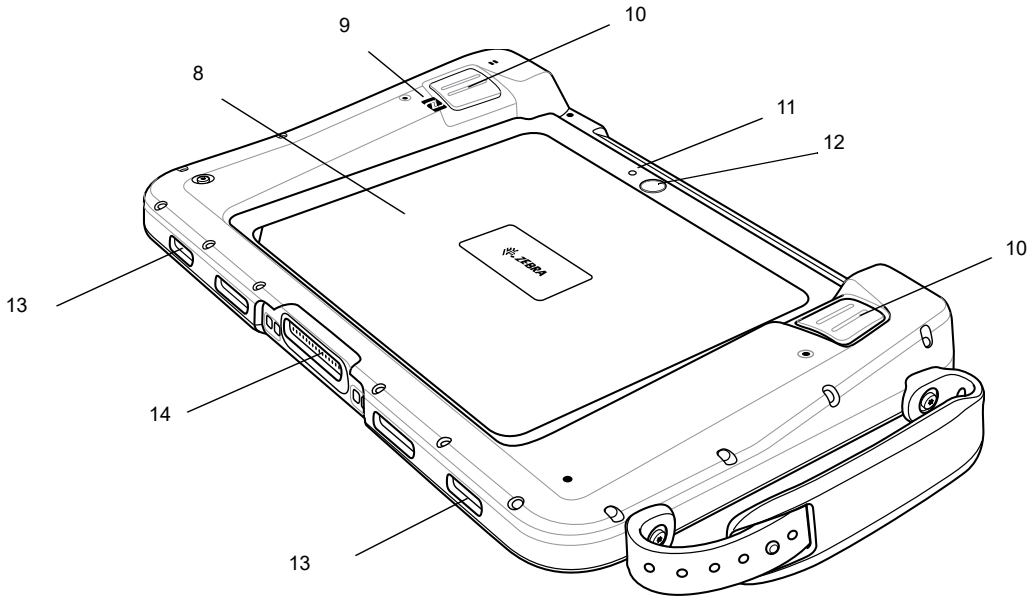


Table 5 ET51 with Integrator Scanner Back View

Item	Description
10	Back Cover - Covers the service replaceable battery.
11	NFC Antenna Position - Use to read NFC cards.
12	Scan Button - Initiates barcode data capture when a scan-enabled application is active.
13	Rear Camera - Use for high resolution images and video.
14	Camera LED Flash - Provides illumination for the camera.
15	Stereo Speakers - Provides audio playback.
16	Docking Connector - Interfaces with the cradle.

Getting Started

In order to start using the device for the first time:

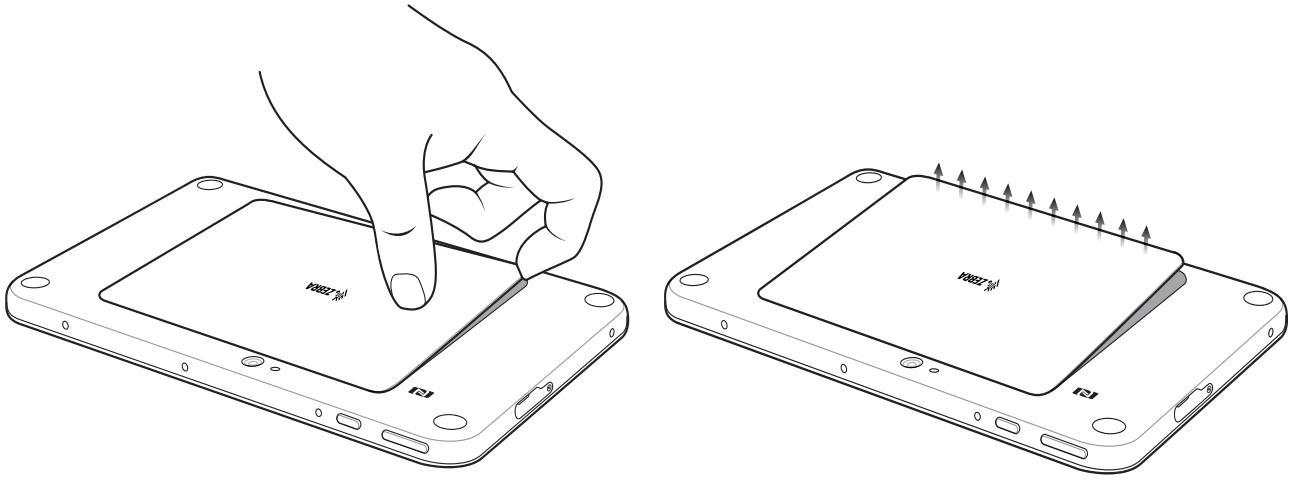
- Install microSD card
- Install nano SIM Card (ET56 only)
- Charge the device
- Perform basic configuration.

Installing a microSD Card

To install a microSD card:

1. Press and hold the Power button until the menu appears.
2. Touch **Power off**.
3. Lift the notched corner of the battery cover and carefully lift the battery cover off the device.

Figure 6 Lifting the Battery Cover



4. On the 8.4” version, push the two locking tabs up, then pull up on the tab to remove battery.
   On the 10.1” version, push the two locking tabs up (1), then, using index fingers, lift the battery up (2).

Figure 7 Removing the Battery - 8.4”

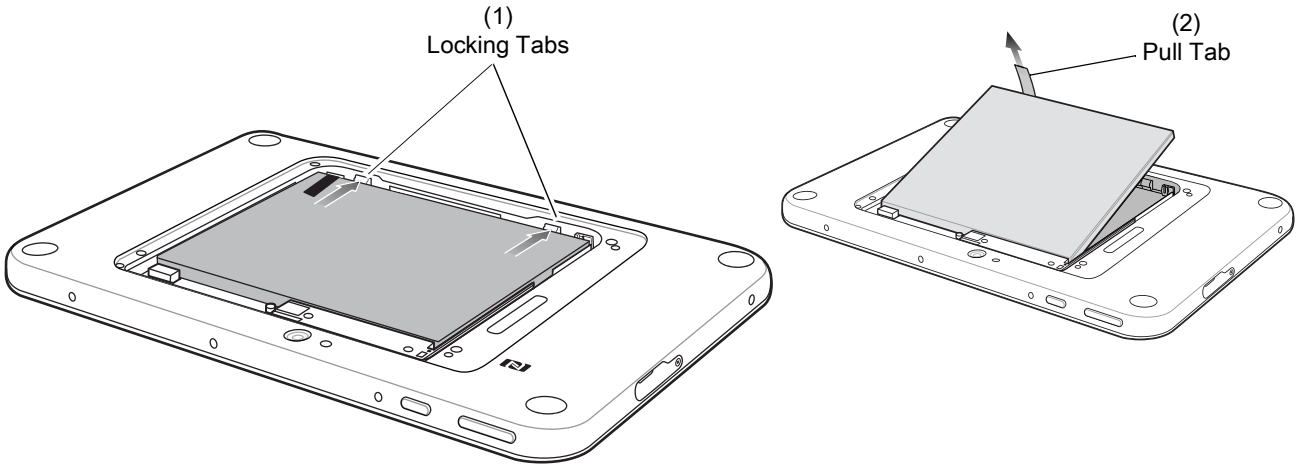
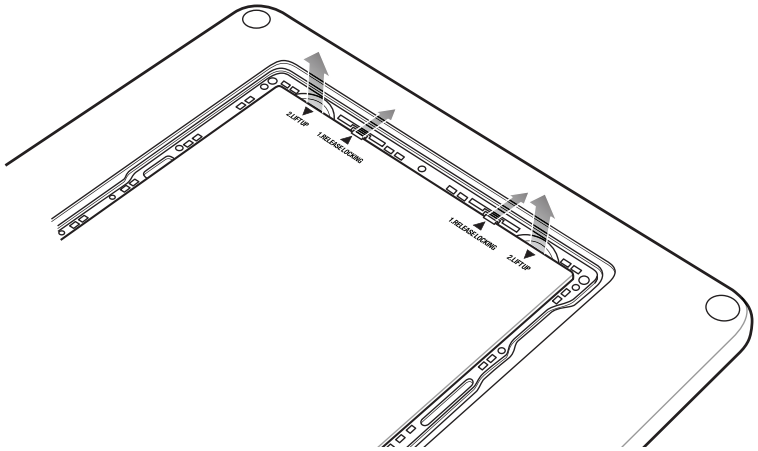


Figure 8 Removing the Battery - 10.1”

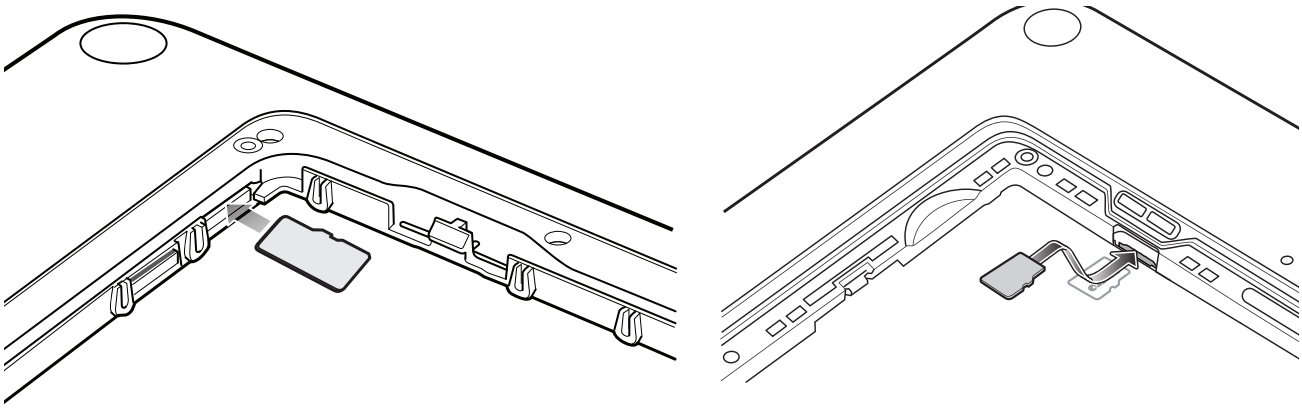


Install the microSD card

To install a microSD card:

1. Insert the microSD card with contacts facing down; 8.4” version shown here.

Figure 9 Inserting microSD Card



8.4" Version

10.1” Version

2. Push the micro SD card in and ensure that it locks into place.

Install the nano SIM Card

To install the nano SIM card:

1. Insert the nano SIM card with contacts facing down.

Figure 10 Inserting the nano SIM Card - 8.4”

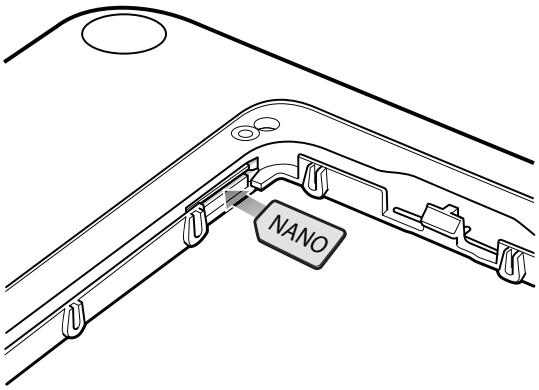
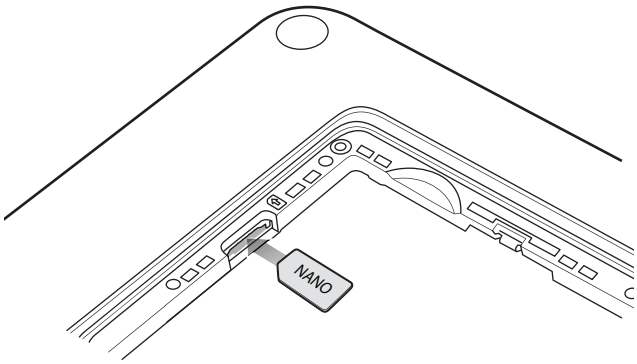


Figure 11 Inserting the nano SIM Card - 10.1”

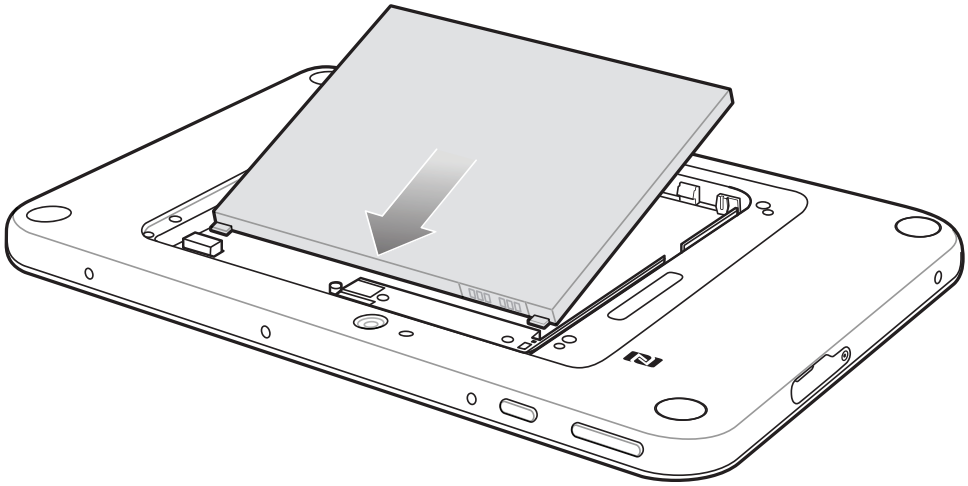


2. Push the SIM card in and ensure that it locks into place.

Replace the Battery

1. Replace the battery.
   On the 10” version, ensure the two battery latches engage.

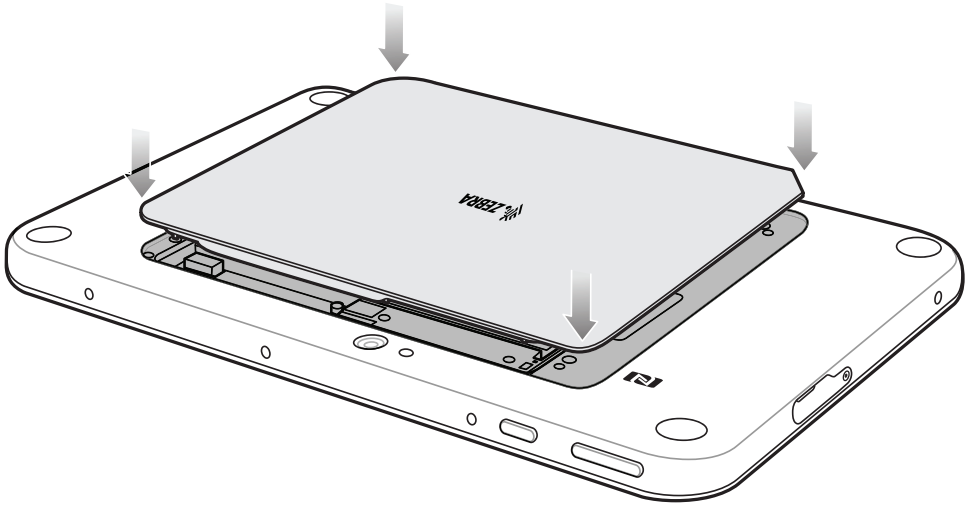
Figure 12 Inserting the Battery



CAUTION: Be aware of the orientation of the battery cover. Failure to replace the battery cover properly may damage the battery cover.

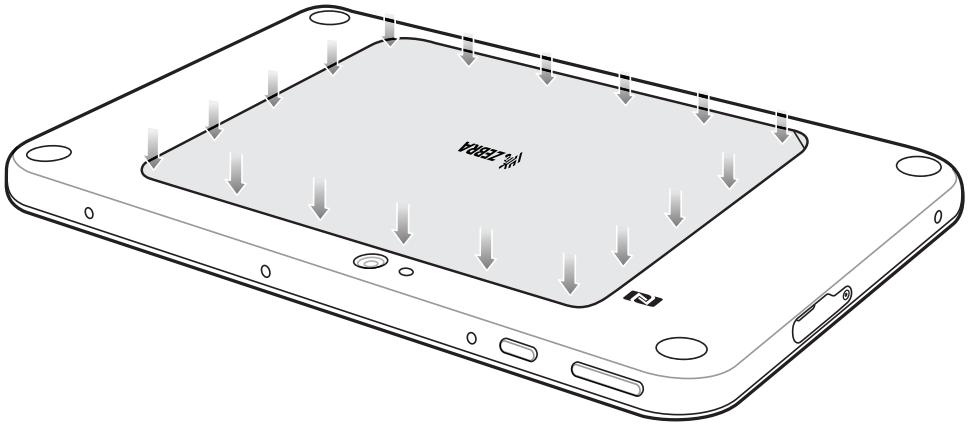
2. Align the tabs on the underside of the cover with the slot around the battery well. Make sure that the notch on the battery cover is at the bottom left cover of the device.

Figure 13 Aligning the Battery Cover



3. Carefully press down around the edge of the cover. Make sure that the cover is seated properly.

Figure 14 Pressing Down on the Battery Cover



4. Press Power button to turn on the device.

Charging the Battery

Use one of the cradles to charge the main battery installed in the device. See the chapter Accessories for charging accessories. See Battery Status and Battery Management for additional details.

The 8.4” tablet main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

The 10.1” tablet main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

NOTE: The Charging indicator only illuminates when the tablet is connected to AC power.

Replacing the SIM Card

NOTE: ET56 only.

CAUTION: To avoid damage to the SIM slot, do not pull the SIM card out of the SIM slot. Push the SIM card in to eject it.

To replace the SIM card:

1. Press and hold the Power button until the menu appears.
2. Touch **Power off**.
3. Lift the notched corner of the battery cover and carefully lift the battery cover off the device.
4. On the 8.4" version, push the two locking tabs up, then pull up on the tab to remove battery.
   On the 10.1” version, push the two locking tabs up, then lift the battery up.
5. Push in the SIM card and release. The card ejects slightly.
6. Remove the SIM card from the card slot. The card should easily slide out. If not, the card was not ejected correctly. Repeat step 5.
7. Insert the replacement nano SIM card with contacts facing down.

8. Push the nano SIM card in and ensure that it locks into place.
9. Replace the battery.
10. Press the battery down to ensure the two battery latches engage.
11. Replace the battery cover.

Replacing the microSD Card

CAUTION: To avoid damage to the microSD card slot, do not pull the microSD card out of the microSD Card slot. Push the microSD card in to eject it.

To replace the microSD card:

1. Press and hold the Power button until the menu appears.
2. Touch **Power off**.
3. Lift the notched corner of the battery cover and carefully lift the battery cover off the device.
4. On the 8.4" version, push the two locking tabs up, then pull up on the tab to remove battery.
   On the 10.1” version, push the two locking tabs up, then lift the battery up.
5. Push in the microSD card and release. The card ejects slightly.
6. Remove the microSD card from the card slot. The card should easily slide out. If not, the card was not ejected correctly. Repeat step 5.
7. Insert the replacement microSD card with contacts facing down.
8. Push the microSD card in and ensure that it locks into place.
9. Replace the battery.
10. Press the battery down to ensure the two battery latches engage.
11. Replace the battery cover.

Turning Off the Device or Display

To turn off the device:

1. Touch **Power > Update and shutdown**.

Alternatively:

1. Press and hold the power button until the message appears **Slide to shut down your PC**.
2. Swipe display downwards to turn off.

To turn off the display:

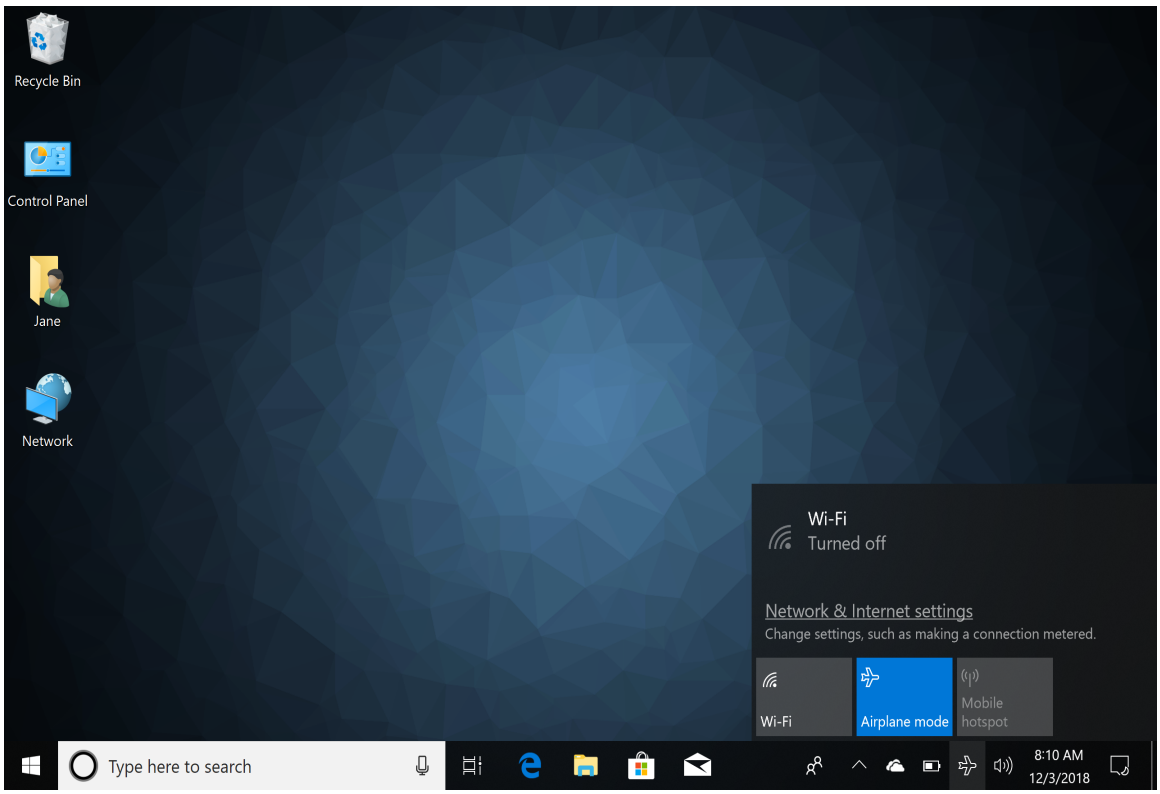
1. Press and release the power button.

Turning on Airplane Mode

When Airplane mode is on, the Wi-Fi, Bluetooth, Global Navigation Satellite System (GNSS) and Near-field communication (NFC) radios are turned off. This is useful when traveling on an airplane or when you don't need Wi-Fi or Bluetooth for a while. Airplane mode extends the amount of time before the battery needs recharging. To place the device in Airplane mode:

1. In the taskbar, touch the network icon .
2. Touch the **Airplane mode** option. The option box turns blue and the airplane icon appears in the taskbar.

Figure 15 Airplane Mode



To turn on radios in Airplane Mode (without turning on WAN):

1. In the taskbar, touch the airplane icon.
2. Touch **Wi-Fi** option. The option box turns blue indicating that Wi-Fi is on.

Restarting the Device

If the device is running slow or some applications are not functioning properly, restart the device:

1. Touch Start .
2. Touch Power > **Update and restart.**
3. If software updates are pending, these install and then the device restarts.

Performing a Cold Boot

If the device does not respond to any input, perform a cold boot:

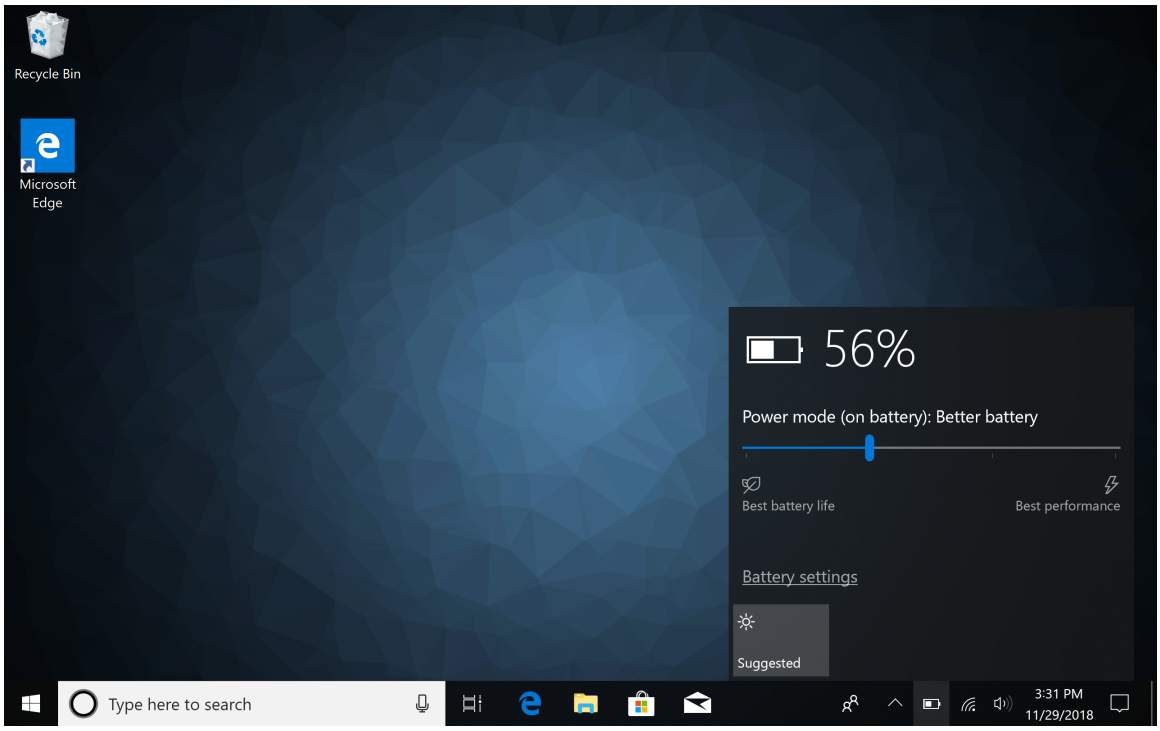
1. Press and hold the power button for at least 10 seconds. The device shuts down.
2. Press the Power button again to turn on the device.

Battery Status and Battery Management

To check the charge level of the main battery:

- Battery status appears on the taskbar. Tap the battery icon to see the percentage remaining. See Accessories for information about charging cradles.

Figure 16 Battery Status

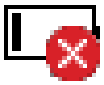


When a low battery warning displays, dock the device into a cradle. If you don't recharge the battery, eventually, the device saves your work and shuts down.

Table 6 Battery Status

Icon	Description
	Device is connected to external power and the main battery is fully charged.
	Device is connected to external power and the main battery is charging.

Table 6 Battery Status (Continued)

Icon	Description
	Device is on battery power and the main battery is discharging.
	Device is on battery power and the main battery charge is low.
	Device is on battery power and the main battery charge is critically low.

IMPORTANT: When the Power Pack is installed and charging the device main battery, the Battery Status icon does not indicate charging. This is normal behavior.

Checking Power Pack Status

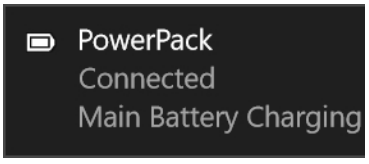
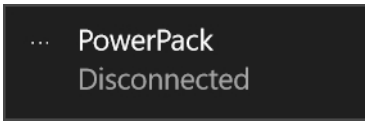
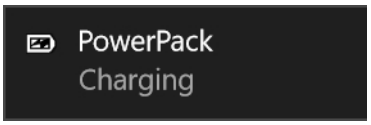
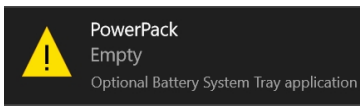
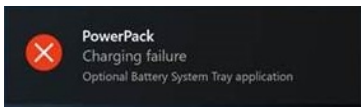
The optional Power Pack provides additional power to charge the main battery.

Power Pack status appears on the desktop taskbar. See Accessories for information about power pack usage.

NOTE: The Power Pack Status icon appears when it issues a notification. To always display the icon, select ^ > **Customize**. In the **Notification Area Icons** window, check the **Always show all icons and notifications on the taskbar** and then select **OK**.

Tap the Power Pack icon to see the status.

Table 7 Power Pack Status

Icon	Message Box	Description
		Power Pack is connected to the device.
		Power Pack is removed from to the device.
		Power Pack is connected to the device and the device is in the dock changing.
		Power Pack is fully discharged.
		Power Pack is experiencing charging failure.

To view the Power Pack charge level:

1. Remove the Power Pack from the Expansion Back.

2. Press the **Charge Status** button. The **Charge Status LED**s light to indicate the charge level.

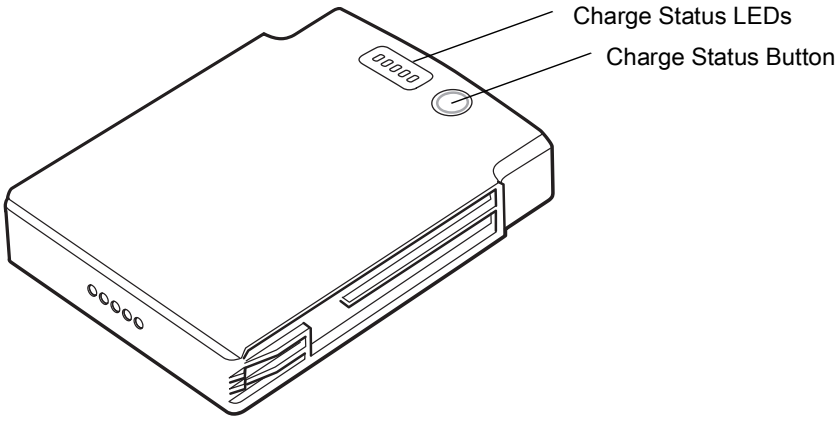


Table 8 Power Pack Charge Status Indicators

Power Pack Indicators	Description
	Charge level is 100%.
	Charge level is 80%.
	Change level is 60%.
	Charge level is 40%.
	Charge level is 20%.
Blinking	Charge level is below 20%.

Battery Saving Tips

- Set the device to turn off after a short period of non-use.
- Set the display to turn off or dim backlight.
- Turn off all wireless radio activity when not in use.

Changing the Power Settings

To set the device or display to turn off after a short period of non-use:

1. In the taskbar, touch the **Action Center** icon.
2. Touch **All Settings > System > Power and sleep**.
3. Under **Sleep**, choose when you want the device/screen to go to sleep (on battery power and when plugged in).

Manually Changing the Display Brightness

To manually change the display brightness:

1. In the taskbar, touch **Action Center** icon.
2. Touch **All Settings > System > Display**.
3. Under **Change brightness**, move the slider to adjust the brightness.

Automatically Changing the Display Brightness

To toggle automatic brightness:

1. In the taskbar, **Action Center** icon.
2. Touch **All Settings > System > Display**.
3. Check the box to enable **Change brightness automatically when lighting changes**.

Adjusting the Volume

To adjust the volume:

- Use the volume-up / volume-down button on the top of the device, or
- Touch on the taskbar and adjust the slider.

Adjusting the Screen Orientation

For optimal viewing experience, the screen orientation changes automatically to portrait or landscape depending on how you hold the device. You can disable automatic screen rotation and lock the screen in portrait or landscape mode.

NOTE: Some applications may not support automatic screen rotation and are designed to work only in one orientation.

To lock the screen orientation:

1. In the taskbar, touch **Action Center** icon.
2. Touch **All Settings > System > Display**.
3. Rotate the screen to the desired orientation.
4. Under **Rotation lock**, slide the switch to the **On**.
5. Rotate the screen to the desired position.

Using the Tablet

Introduction

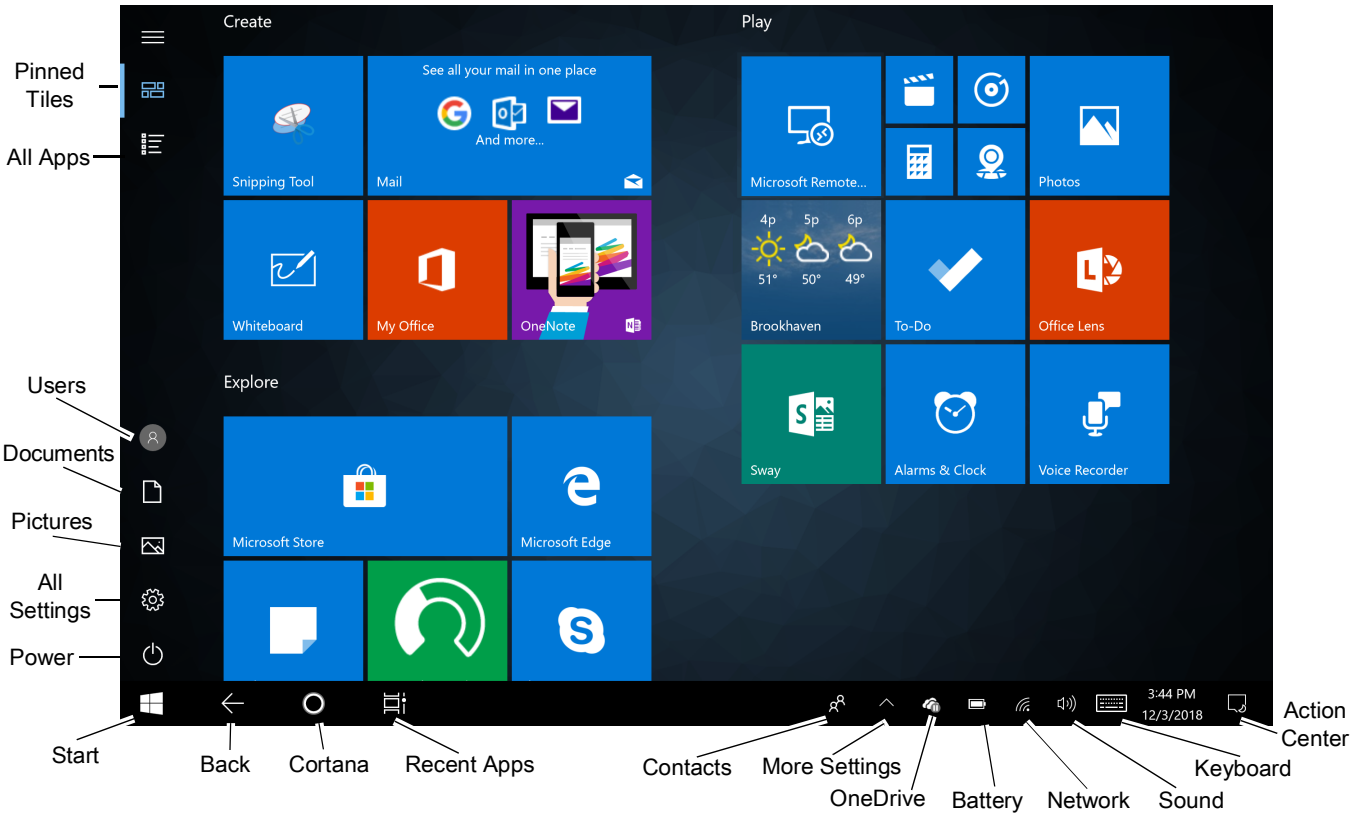
This chapter provides instructions on how to use some basic applications and key features.

Start Screen

By default, the Start screen displays in Tablet mode. The tile-based interface allows direct access to recently used applications, emails, photos, contacts, and frequently viewed websites. You may pin favorite apps as tiles to customize the Start screen. See Customizing the Start Screen for information.

Live Tiles, such as news, sports, weather, social-networking sites, etc. update in real time.

Figure 17 Start Screen in Tablet Mode



- **Pinned tiles** - Places the Home screen in Tile view.

- **All apps** - Lists all applications alphabetically.
- **Users** - Opens user account window, locks screen or logs user off the device.
- **Documents** - Opens documents folder.
- **Pictures** - Opens pictures folder.
- **Settings** - Opens the **Settings** window.
- **Power** - Touch to place the device in sleep mode, shutdown or restart.
- **Start** - Access the Home screen from any window.
- **Back** - Displays the previous screen.
- **Cortana** - Opens voice activated search window.
- **Recent Applications** - Displays all open applications.
- **Contacts** - Use to pin contacts to the task bar.
- **More Settings** - Includes Bluetooth, Intel Graphics, and Windows Defender.
- **OneDrive** - Opens cloud-based file hosting app.
- **Battery** - Displays current battery status.
- **Network** - Opens network settings.
- **Sound** - Use to control audio volume level.
- **Keyboard** - Opens the virtual keyboard.
- **Action Center** - Provides easy access to some frequently used settings and notifications. Touch the icon to open the Action Center. The first row of setting option boxes display and any notifications. Touch Expand to view all setting option boxes. See Action Center for more information.

Customizing the Start Screen

Choose a background photo or pin a favorite app to the Start screen.

Moving Tiles

To move a tile to a different location on the Start screen:

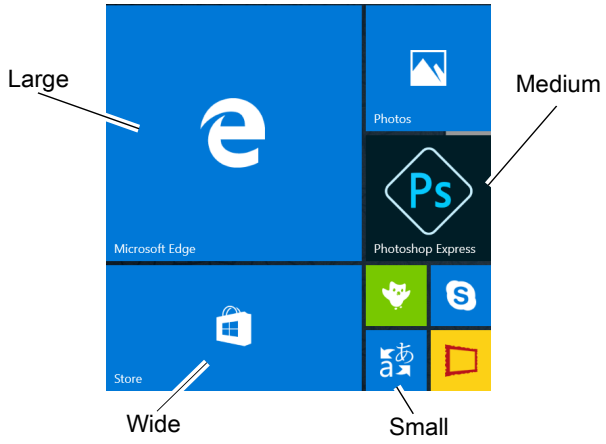
1. Touch and hold a tile. The tiles float on the screen.
2. Drag the tile to a new location. Other tiles move as the floating tile move over them.
3. Lift finger and drop the tile and then touch the screen.

Resizing Tiles

To resize a tile:

1. Touch and hold the tile and then touch ···.
2. Touch **Resize > Small**, **Medium**, **Wide** or **Large**.

Figure 18 Tile Sizes

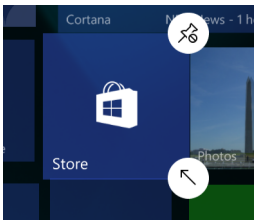


Unpinning a Tile

To unpin the tile and remove it from the Start screen:

1. Touch and hold the tile and then touch the pushpin icon.

Figure 19 Unpin Tile



2. The Tile no longer appears in the Start screen.

Pinning an App to the Start Screen

To pin an app onto the Start screen:

1. Touch the **All app** icon to go to the All Apps screen.
2. Touch and hold the app until the menu appears.
3. Touch **Pin to Start**. The app tile appears on the Start screen.

Changing Start Screen Background

To change the Start screen background image:

1. Touch **All settings** > **Personalization** > **Backgrounds**.
2. In the **Background** drop-down list, select **Picture**.
3. Choose a picture or touch **Browse** to locate a picture on the device.
4. Select a photo and touch **Choose picture**.
5. In **Choose a fit** section, select either **Fill, Fit, Stretch**, **Tile**, **Center** or **Span**.

6. Touch the **Start** icon.

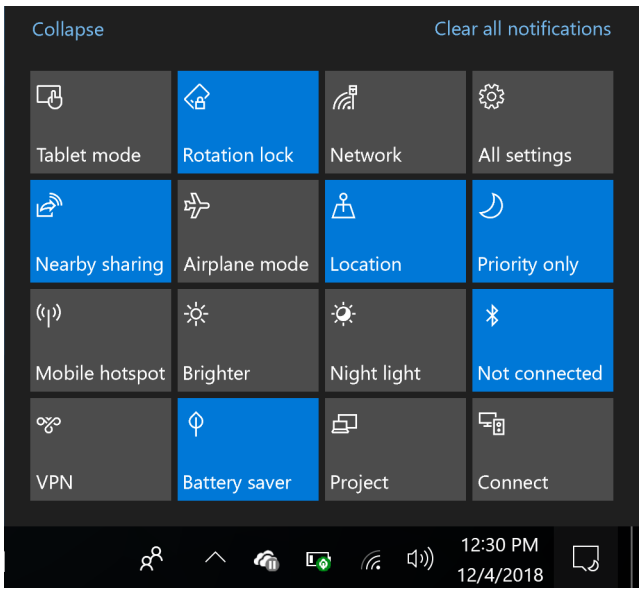
Action Center

The Action Center provides easy access to some frequently used settings and notifications.

To open the Action Center, touch the **Action Center** icon. The first row of setting option boxes display and any notifications.

Touch **Expand** to view all setting option boxes and **Collapse** to view only the first row.

Figure 20 Action Center Expanded



The Action Center settings:

- **Tablet Mode** - Turns tablet mode on or off.
- **Rotation lock** - Touch to lock the screen in the current orientation.
- **Network -** Indicates Wi-Fi network connection status. Touch to turn Wi-Fi on or off.
- **All settings** - Opens the Settings screen.
- **Nearby sharing** - Allows file sharing with nearby devices using Bluetooth
- **Airplane Mode** – Displays the Airplane mode status. Touch to toggle Airplane mode on and off. Turn on Airplane mode to turn off all the radios.
- **Location** - Displays the current state of the Location settings. Touch to enables or disables locationing. Default - Enabled.
- **Quiet hours** - Enable to hide notifications. Requires Cortana to set quiet hours.
- **Mobile Hotspot** - Share internet connection with other devices (ET56 only).
- **Cellular** - Turns cellular connection on or off (ET56 only).
- **Screen Brightness** - Touch to change settings to Suggested (default), Brighter, Brightest, Darkest, Darker.
- **Night Light** - Allows for adjustment of blue light emission.
- **Bluetooth** – Displays the current state of the Bluetooth radio. Touch to turn Bluetooth on or off.
- **VPN** - Opens the VPN settings screen to add or connect to a VPN.
- **Battery Saver** - Places the device in battery saver mode.

- **Project** - Use to project the tablet screen onto a projector or monitor.
- **Connect** - Connects the device to Bluetooth audio devices and wireless displays.

To close the Action Center, touch the icon or touch **Start**.

Notifications

Notification icon reports the arrival of new messages, calendar events, and alarms. When a notification occurs, the icon turns white.

- To view a list of all notifications, open the **Action Center**.
- To respond to a notification, open the **Action Center** and then touch a notification. The **Action Center** closes and the subsequent activity is dependent on the notification.
- To delete a notification, swipe the notification to the right.
- To close the **Action Center**, touch the icon or touch the back arrow.

Customizing the Action Center

To customize the Action Center:

1. Touch **All settings** > **System** > **Notifications & actions**.
2. Press and hold a quick action. and drag to rearrange. The top four options appear in Collapse view.

To select which notifications to receive and how:

1. In the **Notification** section, touch the switches to turn off or on the particular notification.

Tablet Modes and Interaction

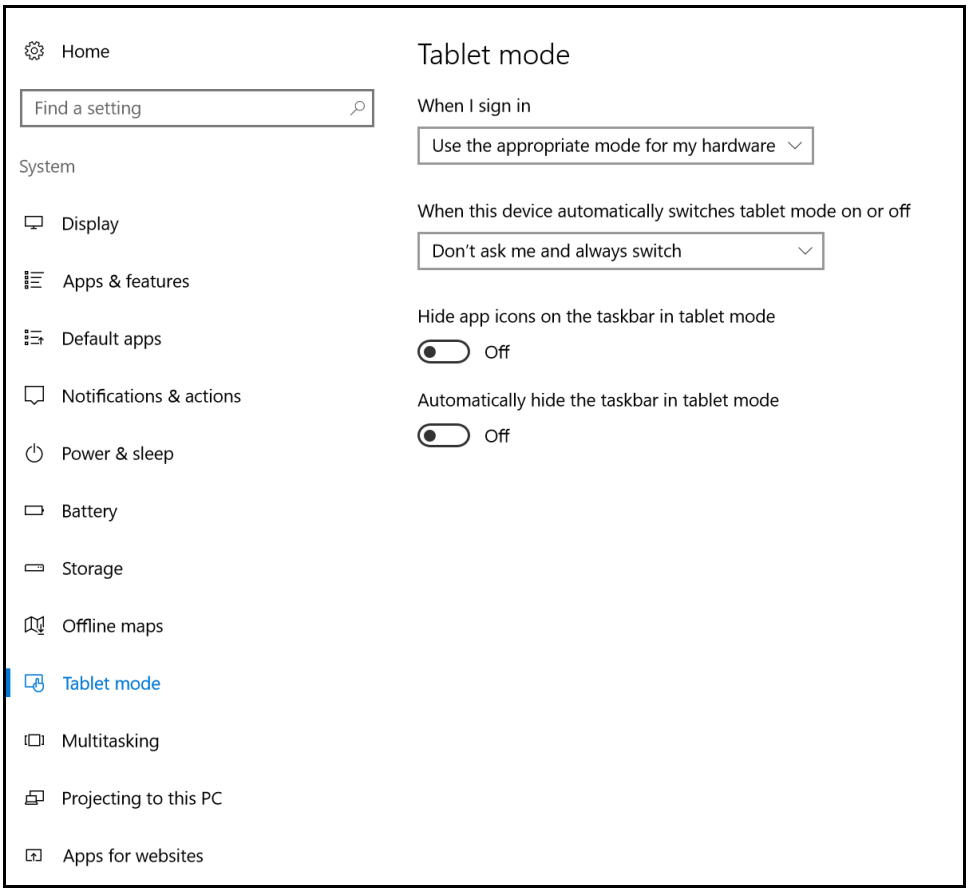
Configuring Tablet Mode

You may configure how the tablet Start screen displays depending upon if it is being used as a tablet or docked in a cradle.

To configure tablet mode:

1. Touch **All Settings** > **System** > **Tablet mode**.

Figure 21 Tablet Mode Settings



- **When I sign in**:
  - **Use tablet mode** - set to tablet mode after signing in.
  - **Use desktop mode** - set to desktop mode after signing in.
  - **Use the appropriate mode for my hardware** - let the tablet determine if it is.
- **When this device automatically switches tablet mode on or off**
  - **Don't ask me and don't switch**
  - **Always ask me before switching**
  - **Don't ask me and always switch**
- **Hide app icons on the taskbar in tablet mode** - enable to hide application icons in the taskbar.
- **Automatically hide the taskbar in tablet mode** - enable to hide the taskbar when in tablet mode.

Using the Multi-Touch Screen

Depending on the application, some gestures might not be available.

- **Touch**: Open an application or perform an action on an open application, such as copy, save and delete, depending on the application.
- **Touch and hold**: Open a menu.
- **Slide**: Scroll through items, such as lists, pages, and photos.
- **Drag**: Move an object.

- **Move two fingers closer together**: Zoom out.
- **Move two fingers farther apart**: Zoom in.
- **Put two or more fingers on an item and then rotate your fingers clockwise or counterclockwise**: Rotate an item.
- **Swipe in from the right edge**: Display the Action Center.
- **Swipe in from the left edge**: Displays open applications.
- **Swipe in from the top edge to the bottom on an open application**: Close the current application.

To configure touch settings:

1. Touch the **Cortana** icon to search for **Control Panel.**
2. Open **Control Panel**.
3. Touch **Hardware and Sound > Pen and Touch.**
4. Select Touch action and then **Settings**.
5. After making changes touch **Apply**.

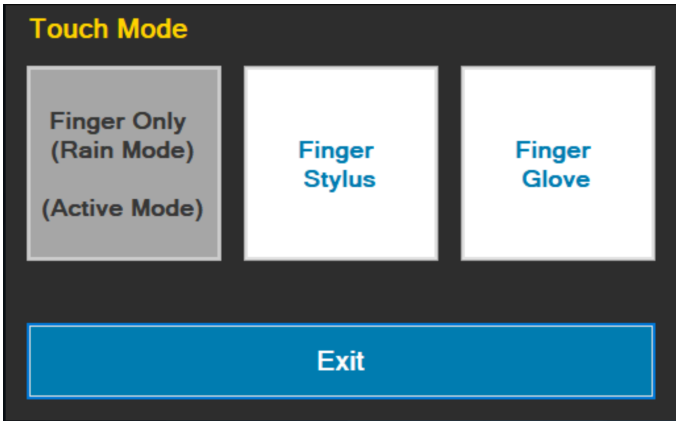
Changing Touch Mode

The device display is able to detect touch using a finger, glove, or stylus; also included is support for using the device in the rain.

NOTE: The glove may be made of medical latex, leather, cotton, or wool. For optimal performance use a Zebra certified stylus.

1. Touch **All apps > Touch Manager**
2. When prompted to allow device changes, touch **Yes**. The **Touch Mode** window displays with current mode indicated.

Figure 22 Touch Mode



3. Touch the desired option to change mode, then touch **Exit**.

Using the Keyboard

Use the On-Screen Keyboard to type text, numbers, symbols, and other characters. The touch keyboard and handwriting panel also can be used to perform handwriting.

When you rotate the device the On-Screen Keyboard or the touch keyboard and handwriting panel automatically rotates to the corresponding portrait or landscape view.

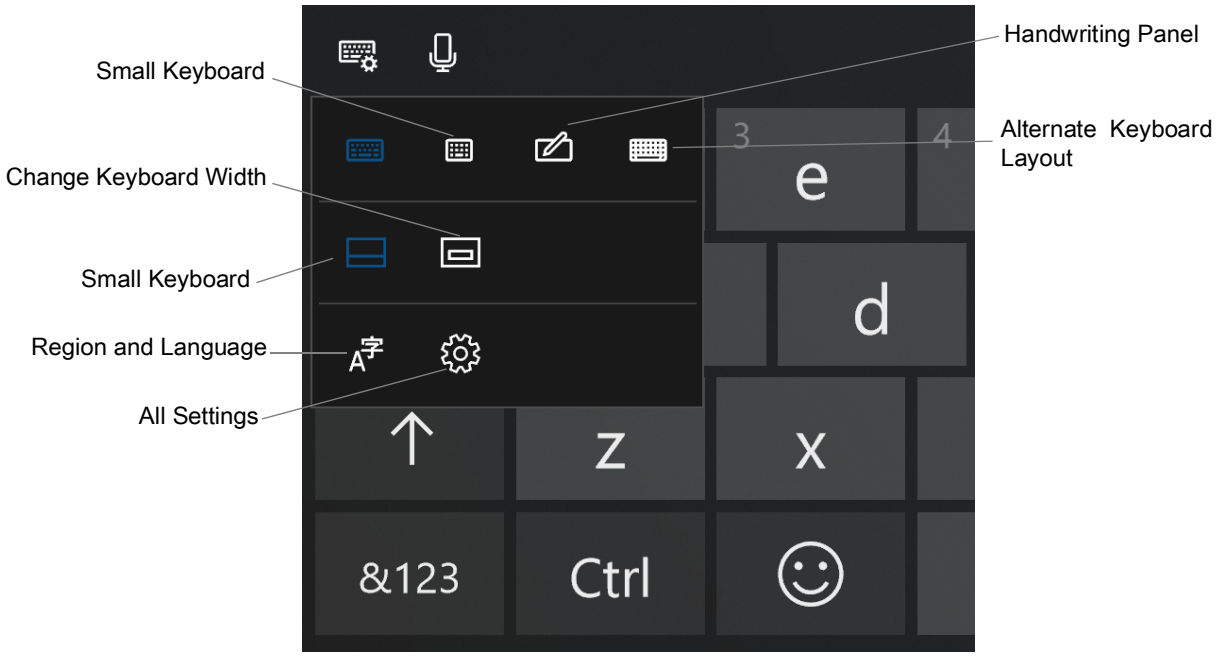
To open the On-Screen Keyboard:

1. Touch the **Cortana** icon to search for **Keyboard,** and then tap **On-Screen Keyboard.**
2. Touch the **Keyboard** icon in the Task bar.

To open the touch keyboard and handwriting panel:

1. Touch the **Keyboard** icon in the Task bar. The Keyboard displays.
2. In the top left of the keyboard tap the **Keyboard** icon to display a **Keyboard and Handwriting Options** window.
3. Select from desired options.

Figure 23 Keyboard and Handwriting Options



Changing the System Language

To configure the input language:

2. Tap **Settings** > **Time and Language**.
3. Tap **Region and Language**.
4. Follow the instructions on the screen to configure the input language.

If the Windows display language does not change correctly:

1. Go to **Settings** > **Time & Language** > **Region & language**.
2. Ensure that **Windows display language** option is set to the desired language.
3. In the installed languages list below, select the language that has problems.

4. Touch **Options**.
5. If the language options include a Download-button with text **Download language pack**, press it to download the language pack. The button is not shown if the language pack has already been installed.
6. Open **Microsoft Store** app.
7. Select **. . .** in the top right corner and then select **Settings**.
8. Verify that the **Update apps automatically** switch is grayed out and locked to off-position. If it is, then the following steps should help:
   a. Close the **Microsoft Store** app.
   b. Run **`regedit`**.
   c. Navigate to **HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\WindowsStore**.
   d. Select the **AutoDownload** item and press the Delete key to remove it.
   e. Confirm removal.
   f. Re-open the **Microsoft Store** app.
   g. Select **. . .** in the top right corner and then select **Settings**.
   h. Ensure that the **Update apps automatically** is still in the off position. If not, change it to off position.
   i. Reboot the device. The display language should be correct without further actions.

Using the Passive Stylus

The optional Passive Stylus provides easy writing, drawing, and navigation and accuracy with the thin tip. The stylus is designed to work on the tablet as an alternative to finger touch input. Use the stylus to select objects, drawing, taking notes, and signing documents.

- To perform a mouse left click, press the tip of the stylus on the object to click.
- To drag and select multiple objects or text on the screen, press the tip against the screen and drag.
- To perform a mouse right click, place the tip of the stylus on the object, hold down until a circle appears and then release.
- To switch from stylus to touch mode, lift the pen off the screen and wait about 1.5 seconds before touching the screen.

Using the Camera

To take photos or videos:

1. Open the Camera application. The Camera Indicator LED lights red.
2. Point the camera at an object.
3. Touch the on-screen shutter button to take a photo or record a video.

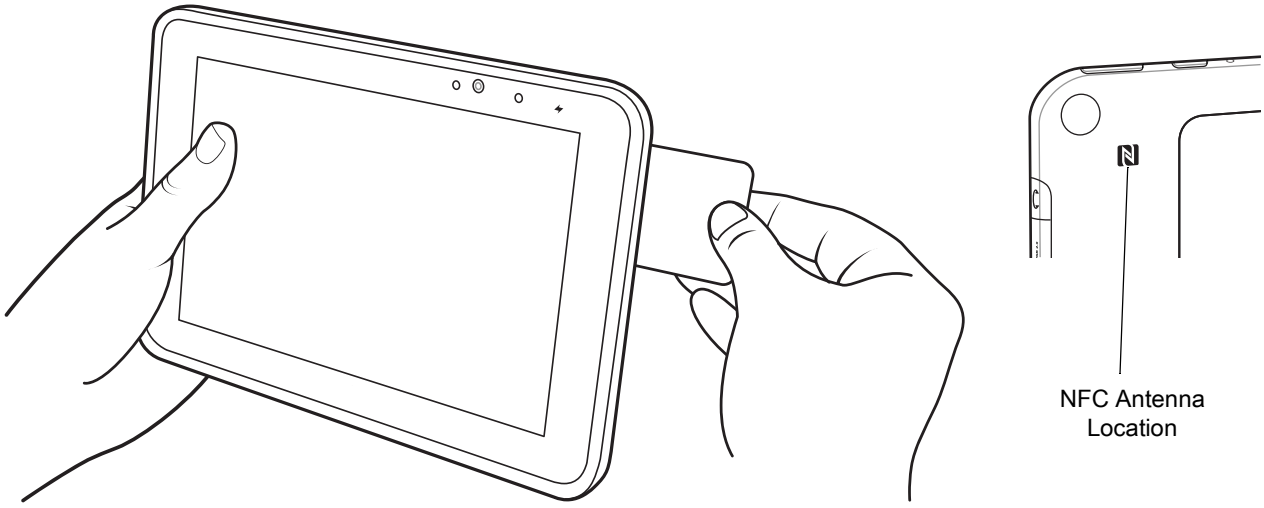
Figure 24 Taking Photos

Reading NFC Cards

The device supports reading NFC cards. The NFC antenna is located on the back of the device under the NFC logo.

With an NFC enabled application open, bring the NFC card toward the antenna. Depending upon the application, an audio or visual indication indicates successful reading of the card.

Figure 25 Reading NFC Card



Taking a Screenshot

To take a screenshot of the device's screen, press the power key and volume key at the same time.

To view or manage the screenshots taken, touch **Photos** > **Albums** > **Screenshots**.

Wireless

This section provides information on the wireless features:

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

Wireless Local Area Networks

Wireless local area networks (WLANs) allow the device to communicate wirelessly inside a building that has the appropriate WLAN infrastructure. Both the infrastructure and the device must both configured properly to enable this communication.

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

The device supports the following WLAN security options:

Table 9 WLAN Security Options

Security Type	Encryption	EAP Method	Authentication Method
Open Network	None/WEP	N/A	N/A
WPA2-Personal	AES	N/A	N/A
WPA2-Enterprise	AES	Protected EAP (PEAP)	Secured password (EAP-MSCHAPv2) Smart card or other certificate
		Smart Card or other Certificate	
		EAP-TTLS	Unencrypted password (PAP) CHAP Microsoft CHAP (MS-CHAP) Microsoft CHAP v2 (MS-CHAPv2) Smart card or other certificate Secured password (EAP-MSCHAPv2)
		EAP-SIM	N/A
		EAP-AKA	N/A
		EAP-AKA’	N/A

Table 9 WLAN Security Options (Continued)

Security Type	Encryption	EAP Method	Authentication Method
802.1x	WEP	PEAP	Secured password (EAP-MSCHAPv2) Smart Card or other Certificate
		EAP-TTLS	Unencrypted password (PAP) CHAP MS-CHAP MS-CHAPv2 Smart Card or other Certificate Secured password (EAP-MSCHAPv2)
		EAP-SIM	N/A
		EAP-AKA	N/A
		EAP-AKA'	N/A

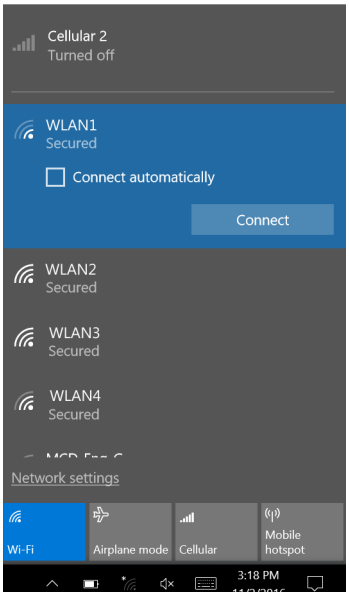
NOTE: To extend the battery, turn off Wi-Fi when not in use.

Connecting to a Wi-Fi Network

To establish a Wi-Fi network connection:

1. In the taskbar, touch the network icon. A list of available Wi-Fi networks displays.
2. Touch the network to connect.

Figure 26 Available Networks



3. Touch the **Connect automatically** checkbox to allow the tablet to connect automatically to this network whenever the device is on.
4. Touch **Connect**.
5. If required, enter security key and then touch **Next**.

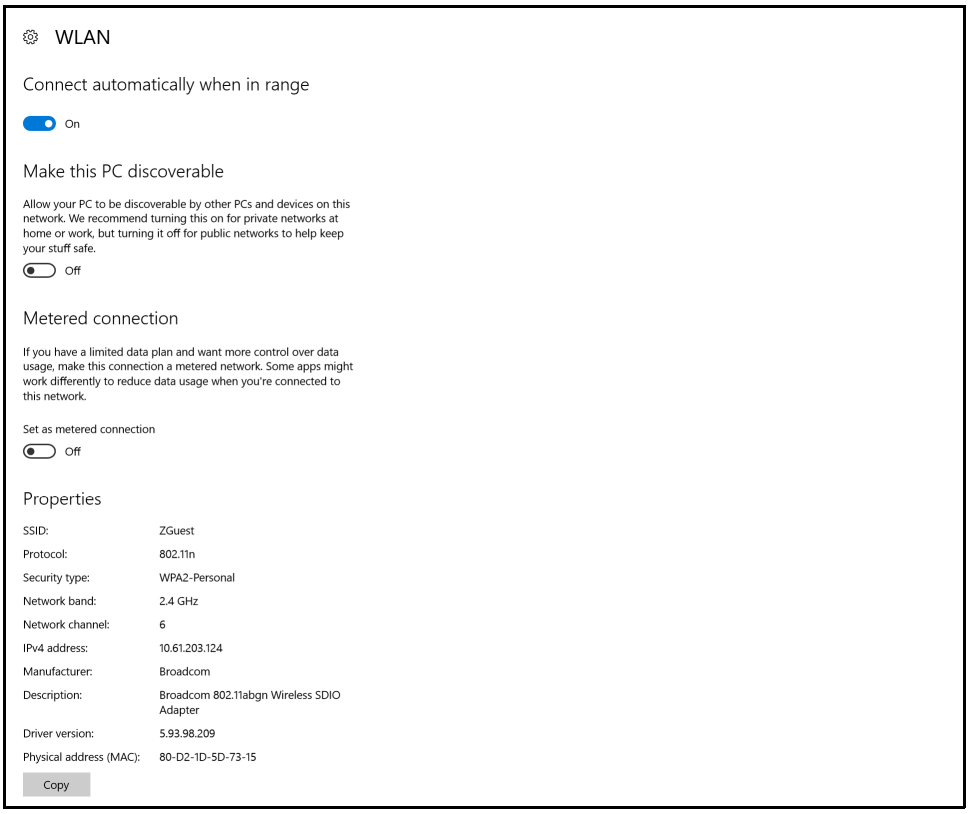
6. Touch **Yes** to find PCs and devices on the network or **No** to not find these devices. Once connected, **Connected** appears under the network name.

Viewing Network Information

To view security, address, and other information about the connected Wi-Fi network:

1. In the taskbar, touch the network icon. A list of available Wi-Fi networks display.
2. Touch the Wi-Fi network name.
3. Touch **Properties**.

Figure 27 Network Information

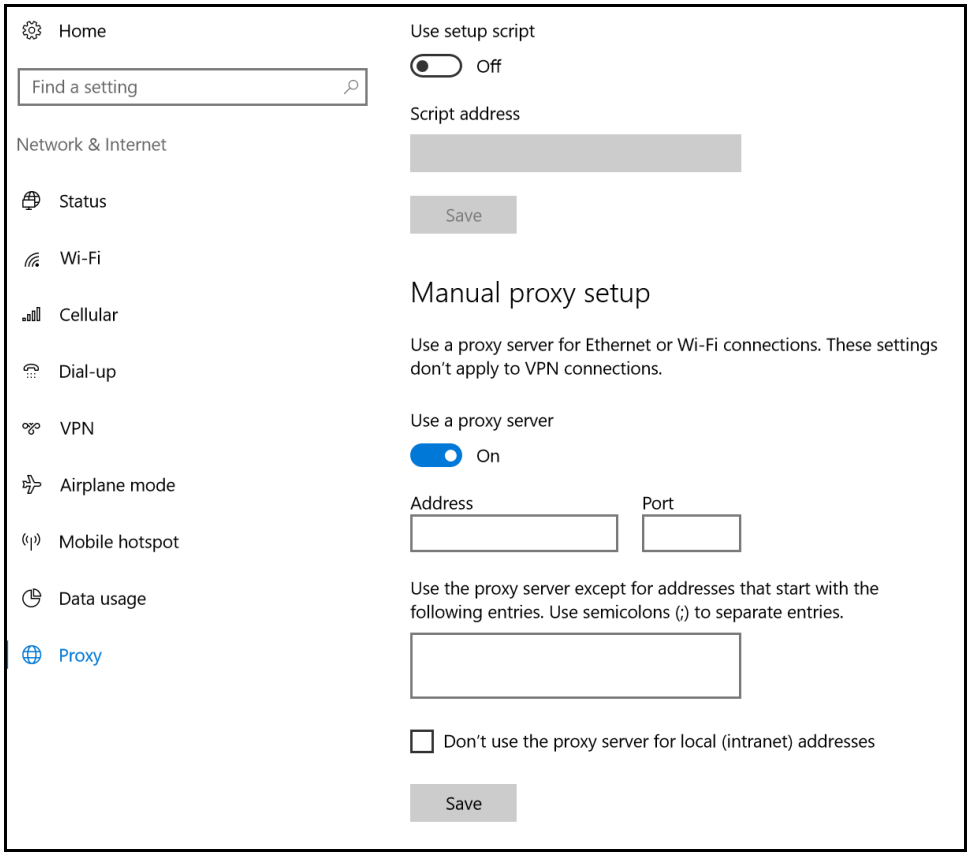


Configuring Proxy Settings

The device supports the proxy feature for Wi-Fi connections. The proxy feature enables access to more Web-based source and browse the Internet more securely. To configure the proxy settings when connecting to a Wi-Fi network:

1. In the taskbar, touch Action Center.
2. Touch **All Settings**.
3. Touch **Network & internet**, then touch **Proxy**.

Figure 28 Proxy Setup



4. In the **Manual proxy setup** section, touch the **Use proxy server** switch to turn on.
5. In the **Address** text box, enter the address of the proxy server.
6. In the **Port** text box, enter the port number for the proxy server.
7. In the text box, enter addresses for web sites that do not require to go through the proxy server. Use the semicolons between addresses but no spaces and do not use the carriage return.
8. Touch **Save**.

Adding a Wi-Fi Network

To access a Wi-Fi network that does not broadcast its network name (SSID), you must add that Wi-Fi network before you can connect to it. To add a Wi-Fi network:

1. In the taskbar, touch the network icon. A list of available Wi-Fi networks display.
2. Scroll to the bottom of the list and touch **Hidden network**.
3. Follow the instructions on the screen to add a Wi-Fi network.

Wireless Wide Area Networks

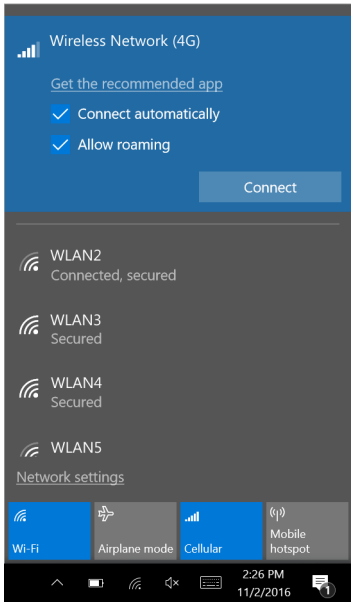
NOTE: ET56 only.

A Wireless wide area network is a mobile cellular network that allows you to browse the Internet, check email, or connect to a virtual private network (VPN) from anywhere within the regional boundaries of the cellular service. A micro SIM card is required to connect to a mobile network.

Connecting to a Cellular Data Network

1. Ensure that an activated SIM card is installed.
2. Touch in the taskbar.
3. Touch the **Cellular** option to turn on the WAN radio if required.
4. Touch the Cellular network in the list.

Figure 29 Cellular Connection



5. Touch **Connect automatically** to automatically connect to the cellular data network when it is available. Clear the check box to manually connect each time you want to use the cellular data connection.
6. Touch **Allow roaming** to allow the cellular data connection to stay on when outside of the mobile operator's network. Leaving the check box cleared can help prevent data roaming charges.
7. Touch **Connect**.
8. The name of the mobile operator appears next to the Cellular network icon.
9. If prompted, type your user name and password and the access point name (APN).

NOTE: If the Cellular quick action is turned off, select it to turn it on. When off, the cellular radio is turned off, and you cannot connect to a cellular network.

Adding an Internet APN

The Internet access point name (APN) is the address the tablet uses to connect to the Internet when using a cellular data connection. Usually, the Internet APN is set automatically. If your cellular data connection is not working, try entering a new Internet APN based on the mobile operator.

To add an Internet APN, type an address in the APN box. The other settings are optional and depend on the mobile operator.

1. Touch **Settings** > **Network & Internet** > **Cellular**.
2. Touch **Advanced options**.
3. Under the **APN settings** section, touch **Add an APN**.
4. Update one or more of the following:
   - In the **Profile name** box, type a name for the APN profile.
   - In the **APN** box, type the address for the APN to use.
   - In the **User name** box, type the user name for your mobile account.
   - In the **Password** box, type the password for your mobile account.
   - Select **Type of sign-in info** drop-down list and then select the authentication method.
   - Select **IP type** drop-down list and then select the type of IP address.
5. Touch the **Apply this profile** check box if you want the APN profile to be used right after you save it.
6. Touch **Save** > **OK**.

Setting Up a SIM PIN

A SIM PIN helps prevent other people from using your cellular data connection. To set up a SIM PIN:

1. Touch **Settings** > **Network & Internet** > **Cellular**.
2. Touch the cellular connection name.
3. Touch **Advanced options**.
4. Under the **Security** section, touch **Use SIM PIN**.
5. Enter the SIM PIN.

   If this is the first time using it, type the default SIM PIN. If you don't know the default SIM PIN, visit your mobile operator's website to see if it is listed. Restart the tablet to lock the cellular data connection with the SIM PIN.

   If you already set up a PIN for the SIM, type the SIM PIN when prompted, and then select **OK**.

Removing a SIM PIN

If you are using a SIM PIN and want to remove it:

1. Touch **Settings** > **Network & Internet** > **Cellular**.
2. Touch the cellular connection name.
3. Touch **Advanced options**.

4. Under the **Security** section, touch **Remove SIM PIN**.
5. Enter the current SIM PIN.
6. Touch **OK**.

Changing a SIM PIN

To change the SIM PIN:

1. Touch **Settings** > **Network & Internet** > **Cellular**.
2. Touch the cellular connection name.
3. Touch **Advanced options**.
4. Under the **Security** section, touch **Change SIM PIN**.
5. In the **Current SIM PIN** box, enter the current SIM PIN.
6. In the **New SIM PIN** box, enter a new SIM PIN.
7. In the **Confirm new SIM PIN** box, enter the same new SIM PIN.
8. Touch **OK**.

Unblocking a SIM PIN

If you enter an incorrect SIM PIN, the SIM is blocked and cannot be used until you unblock it. Contact your mobile operator for the PIN Unblocking Key (PUK), then select proceed as follows:

To find this setting if your SIM is blocked,

1. Touch **Settings** > **Network & Internet** > **Cellular**.
2. Touch the cellular connection name.
3. Touch **Advanced options** > **Unblock SIM PIN** under the **Security** section.
4. Type the PUK code. If an incorrect PUK code is entered too many times, your SIM card will be blocked permanently, and you will need to obtain a new SIM card from your mobile operator.

Bluetooth

Bluetooth-equipped 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 (100 meters (328 feet)) communication and low power consumption.

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

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 Bluetooth network (piconet) 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 and other 2.4G WLAN 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 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 and other 2.4G WLAN high-rate channels. AFH coexistence allows Enterprise devices to operate in any infrastructure.

The Bluetooth radio in this device operates as a Class 1 device power class. The maximum output power is 9mW and the expected range is 100 meters (328 feet). A definition of ranges based on power class is difficult to obtain due to power and device differences, and whether one measures open space or closed office space.

NOTE: Use of Bluetooth wireless technology is not recommended when high rate 802.11b operation using 2.4G channel 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 following Bluetooth services:

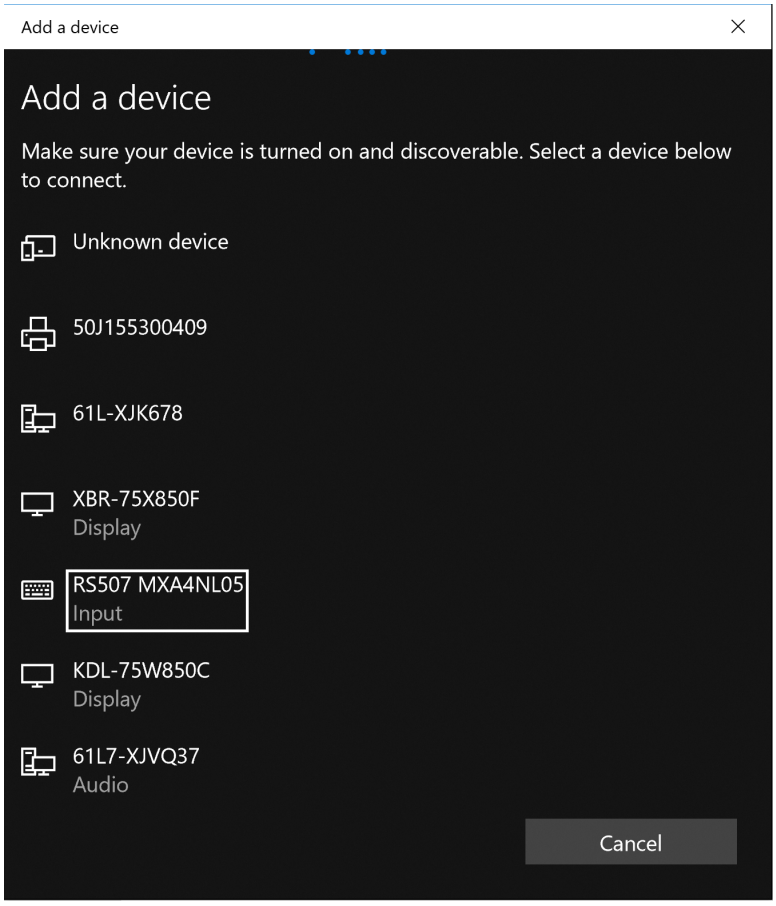
- Advanced Audio Distribution Profile (A2DP) - Allows the device to stream stereo-quality audio to a wireless headset or wireless stereo speakers.
- Audio/Video Remote Control Profile (AVRCP) - Allows the device to control A/V equipment to which a user has access. It may be used in concert with A2DP.
- Device ID Profile (DIP) - allows a device to be identified above and beyond the limitations of the Device Class already available in Bluetooth. It enables identification of the manufacturer, product id, product version, and the version of the Device ID specification being met.
- Generic Access Profile (GAP) - Allows the device to be visible to other Bluetooth devices and determines their interaction.
- Generic Attribute Profile (GATT) - Provides profile discovery and description services for Bluetooth Low Energy protocol.
- Hands Free Profile (HFP) - Allow car hands-free kits to communicate with the device and lets the headset control the device.
- Hard Copy Cable Replacement Profile (HCRP) - Provides a simple wireless alternative to a cable connection between a device and a printer.
- Headset Profile (HSP) - Provides a simple audio connection between the device and the headset.
- HID Over GATT Profile (HOGP) - Connects human interface devices such as keyboards and mice to a host device.
- Human Interface Device Profile (HID) - Allows Bluetooth keyboards, pointing devices, gaming devices and remote monitoring devices to connect to the device.
- Object Push Profile (OPP) - Allows the device to push and pull objects to and from a push server.
- Out of Band (OOB) and Near Field Communications (NFC) - Allows for pairing of a Bluetooth device such as headsets and scanners by touching the devices together (NFC tap to pair).
- Personal Area Network User (PANU) - Allows the use of Bluetooth Network Encapsulation Protocol to provide L3 networking capabilities over a Bluetooth link. Only PANU role is supported.
- Radio Frequency (RF) Kill - All RF activities are terminated and device goes into low power mode.
- 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.
- Service Discovery Profile (SDP) - Allows applications running on different Bluetooth-enabled devices to discover each other's existence, and exchange information to determine their characteristics.

Pairing with a Bluetooth Device

To connect and exchange data with another Bluetooth device, pair the tablet with another Bluetooth device:

1. In the taskbar, touch the Action Center icon.
2. Touch **All Settings**, then touch **Devices > Bluetooth**.
3. Slide the control to the right to turn it on.
4. Touch the plus sign to select **Add Bluetooth or other device** then in the **Add a Device window**, touch **Bluetooth**.
5. Discoverable Bluetooth devices populate the window.

Figure 30 Add Bluetooth Device



6. When the scanner you want to pair is found, touch the ID. After a few minutes a notification appears that the devices are paired.

Unpairing a Bluetooth Device

To unpair a Bluetooth device:

1. In the taskbar, touch Action Center.
2. Touch **All Settings**.

3. Touch **Devices** > **Bluetooth**.
4. Touch the ID of the Bluetooth device to unpair.
5. Touch **Remove device**. A notification prompt displays.
6. Touch **Yes**.

Data Capture

The device supports data capture using:

- integrated scanner (ET51 Enterprise Tablet with Integrated Scanner only)
- SE4710 and SE4750 Expansion Back
- RS507 and RS507X Hands-free Imager
- RS6000 Ring Scanner
- DS3768 Bluetooth scanner
- DS3608 USB scanners.

Expansion Back

The Expansion Backs are barcode scanning solutions for both 1D and 2D bar code symbologies that attach to the tablet. Expansion Backs are available in the following configurations:

- SE4710 Expansion Back for 8.4” and 10.1” tablet
- SE4750 Expansion Back for 8.4” and 10.1” tablet

Install the Expansion Back prior to use. Refer to the ET51/56 Integration Guide for installation instructions.

Integrated Scanner

The ET51 Enterprise Tablet with Integrated Scanner contains a built-in 2D scan engine for both 1D and 2D bar code symbologies.

RS507/RS507X Hands-Free Imager

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

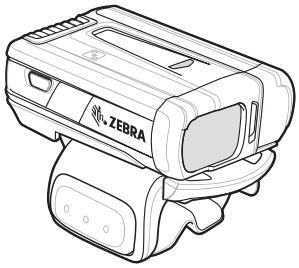
Figure 31 RS507/RS507X Hands-Free Imager

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 32 RS6000 Bluetooth Ring Scanner

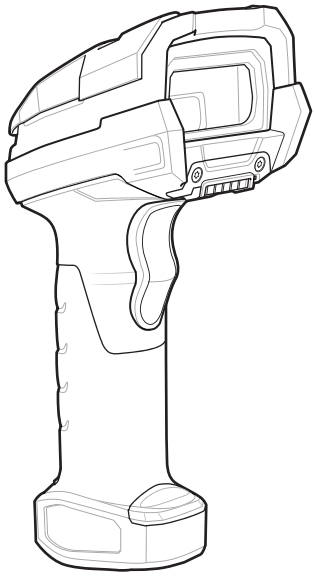


Refer to the RS6000 Bluetooth Ring Scanner Product Reference Guide for more information.

DS3678 Digital Scanner

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

Figure 33 DS3678 Digital Scanner



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

Imaging

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

The device with a 2D imager has the following features:

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

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.

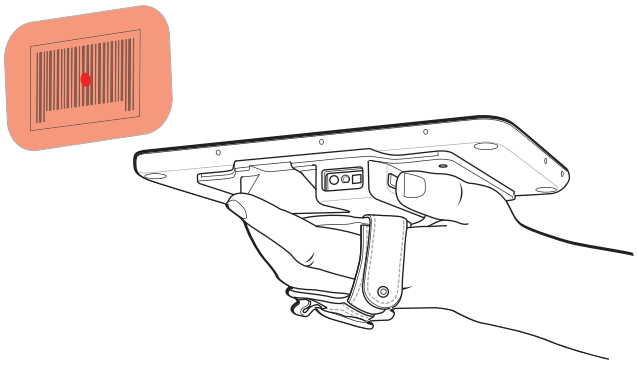
NOTE: Scanning procedures depend on the app and device configuration. An app may use different scanning procedures from the one listed above.

Scanning with the SE4710 Expansion Back

To read a bar code, a scan-enabled application is required.

1. Launch a scanning application.
2. Point the Expansion Back exit window at a bar code.

Figure 34 Bar Code Scanning with SE4710 Expansion Back

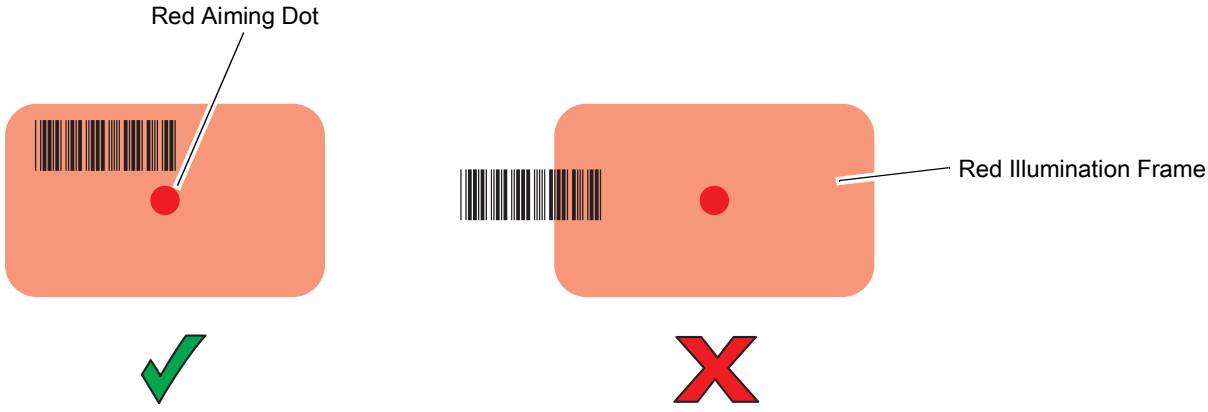


3. Press and hold the Scan button.

   The red illumination frame and laser aiming dot turns on to assist in aiming. Ensure the bar code is within the area formed by the red illumination frame. The aiming dot is used for increased visibility in bright lighting conditions.

   The Expansion Back beeps to indicate the bar code was decoded successfully.

Figure 35 SE4710 Expansion Back Aiming Pattern



Release the **Scan** button. The bar code data displays on the screen.

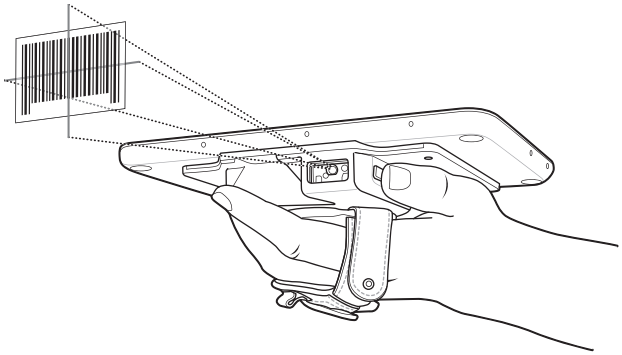
Scanning with SE4750 Expansion Back

To read a barcode, a scan-enabled app is required.

To scan with the SE4750 Expansion Back:

1. Ensure that an app is open on the device and a text field is in focus (text cursor in text field).
2. Point the Expansion Back exit window at a bar code.

Figure 36 Bar Code Scanning with Expansion Back with SE4750

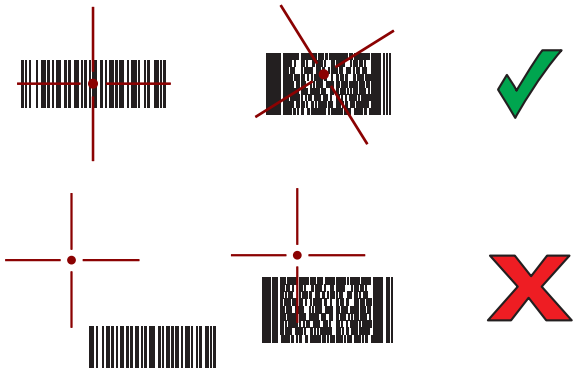


3. Press and hold the Scan button.

   The red laser aiming pattern turns on to assist in aiming. Ensure the bar code 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 Expansion Back beeps to indicate the bar code was decoded successfully.

Figure 37 SE4750 Expansion Back Aiming Pattern



Release the Scan button. The bar code data displays on the screen.

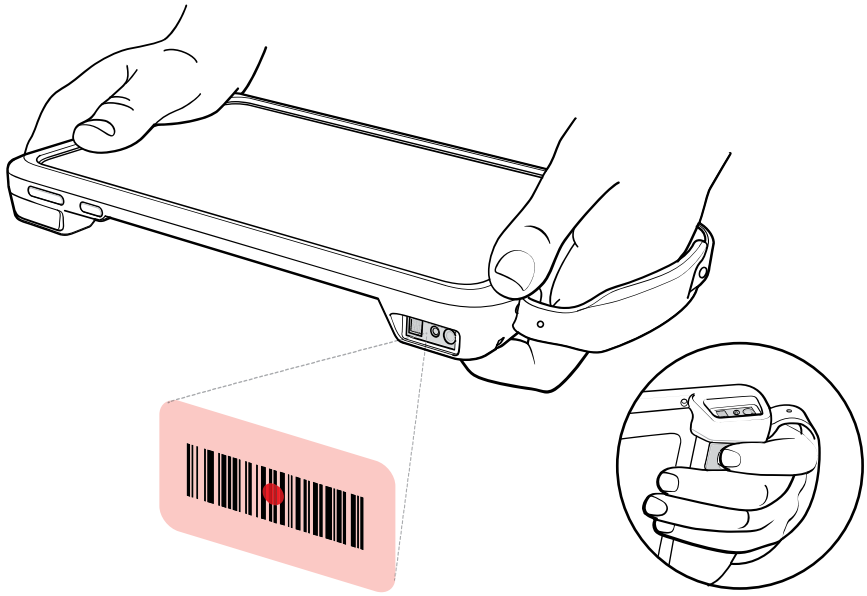
Scanning with the Integrated Scanner

To read a barcode, a scan-enabled app is required.

To scan with the integrated scanner:

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

Figure 38 Barcode Scanning with Integrated Scanner

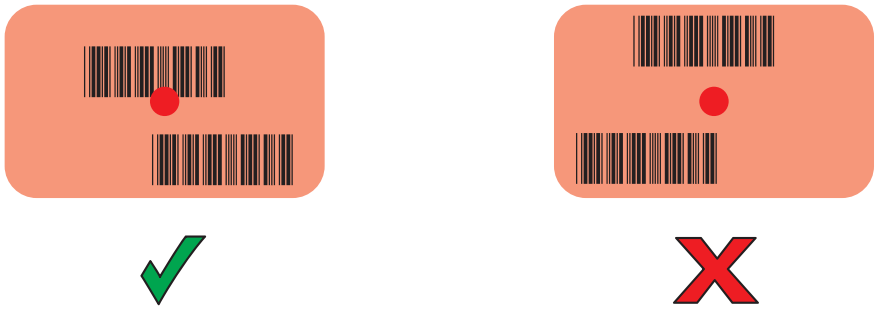


3. Press and hold one of the triggers.
4. Ensure the barcode is within the area formed by the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

   A beep sounds to indicate the barcode was decoded successfully. When the Integrated Scanner is in Pick List mode, the device does not decode the barcode until the aiming dot touches the barcode.

Figure 39 Integrated Scanner Aiming Pattern

Figure 40 Integrated Scanner Pick List Mode with Multiple Barcodes in Aiming Pattern



5. The captured data appears in the text field.

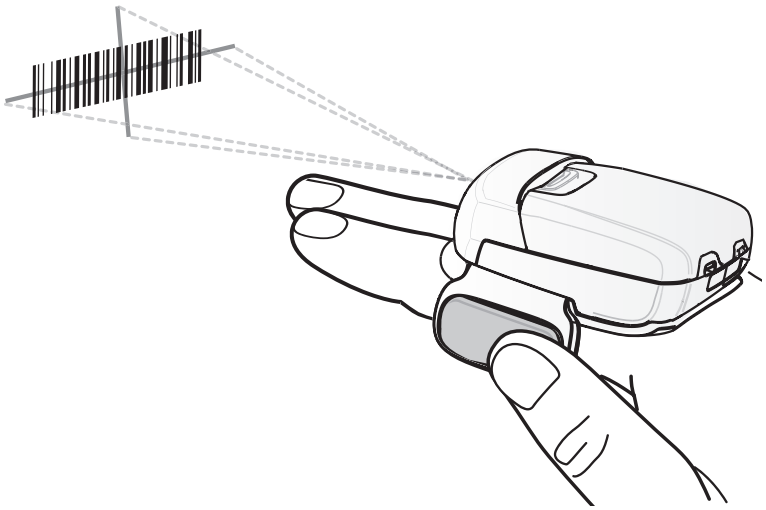
Scanning with RS507/RS507X Hands-Free Imager

To read a barcode, a scan-enabled app is required.

To scan with the RS507/RS507X:

1. Pair the RS507/RS507X with the device. See Pairing Bluetooth Scanners for more information.
2. Ensure that an app is open on the device and a text field is in focus (text cursor in text field).
3. Point the RS507/RS507X at a barcode.

Figure 41 Barcode Scanning with RS507/RS507X



4. Press and hold the trigger.

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

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

Figure 42 RS507/RS507X Aiming Pattern

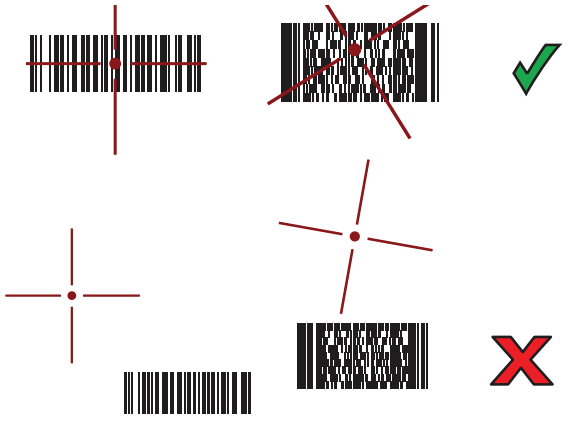


Figure 43 RS507/RS507X Pick List Mode with Multiple Barcodes in Aiming Pattern

5. The captured data appears in the text field.

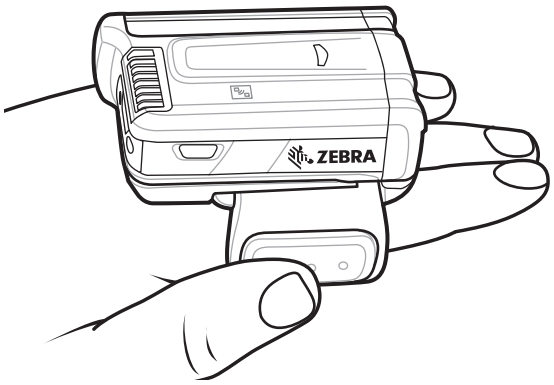
Scanning with RS6000 Bluetooth Ring Scanner

To read a barcode, a scan-enabled app is required.

To scan with the RS6000:

1. Pair the RS6000 with the device. See Pairing Bluetooth Scanners 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 44 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 cross-hair touches the barcode.

Figure 45 RS6000 Aiming Pattern

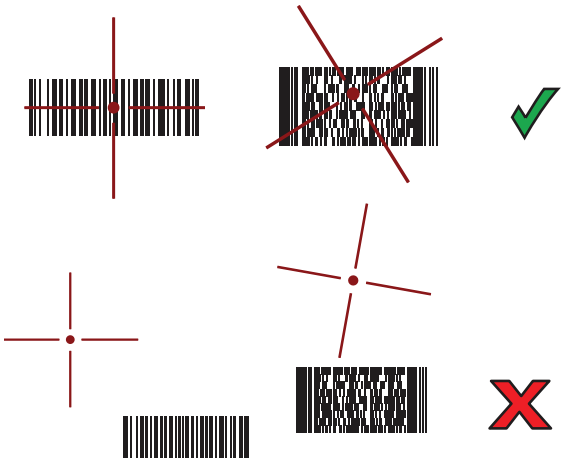


Figure 46 RS6000 Pick List Mode with Multiple Barcodes in Aiming Pattern

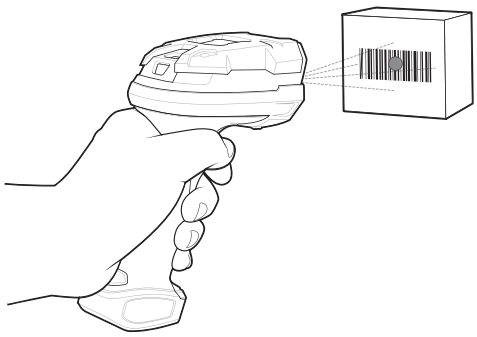
5. The captured data appears in the text field.

Scanning with 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 47 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 48 DS3608/DS3678 Aiming Pattern

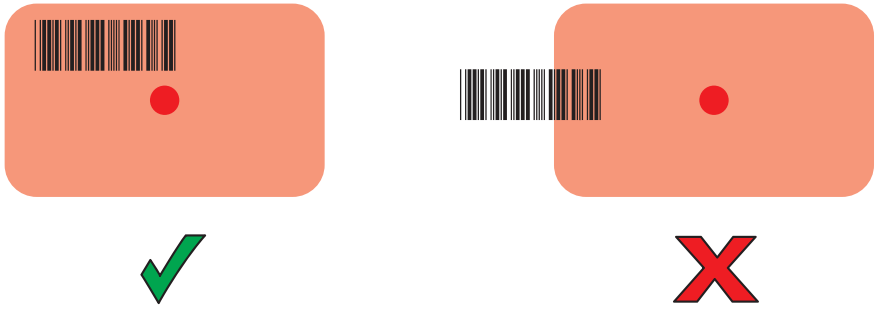
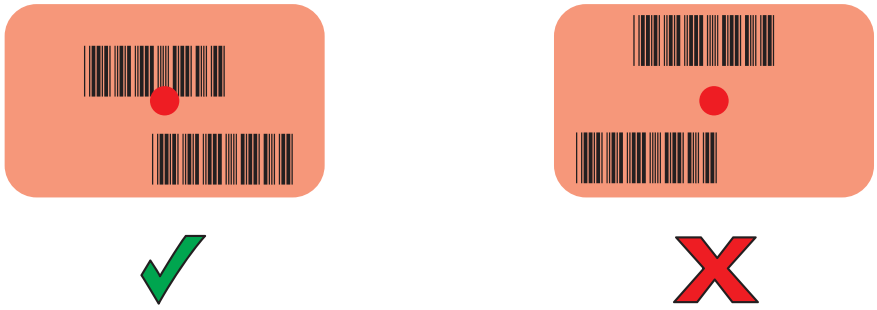


Figure 49 DS3608/DS3678 Pick List Mode with Multiple Barcodes in Aiming Pattern



5. The captured data appears in the text field.

Pairing Bluetooth Scanners

To pair the RS507/RS507X, RS6000, or DS3678:

1. Enable Bluetooth on both devices.
2. Ensure that the Bluetooth device you are pairing is in discoverable mode.
3. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
4. Follow the appropriate instruction below.

RS507/RS507X or RS6000 in HID Mode

To pair the RS507/RS507X or the RS6000 scanner with the tablet using Human Interface Device (HID) mode:

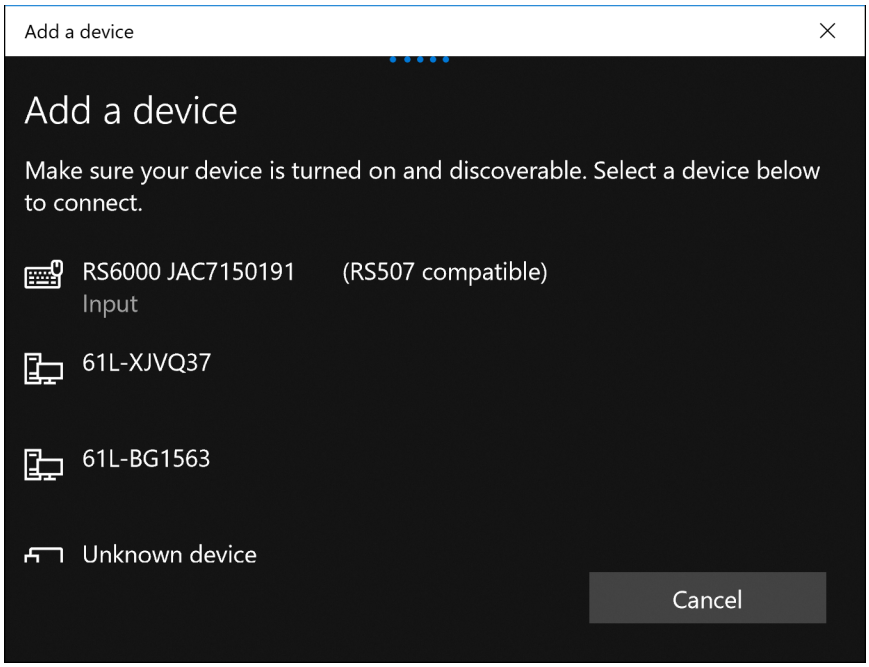
1. Place the scanner in HID mode using steps “a” through “e” below. If the scanner is already in HID mode, skip to step 2.
   a. Remove the battery from the scanner.
   b. Press and hold the Restore key.
   c. Install the battery onto the scanner.
   d. Keep holding the Restore key for about five seconds until a chirp is heard and the Scan LEDs flash green.
   e. Scan the appropriate barcode below to place the scanner in HID mode.

Figure 50 RS507 Bluetooth HID Barcode

Figure 51 RS6000 Bluetooth HID Barcode

2. Perform a Cold Boot by removing and re-installing the battery onto the scanner. The device starts to operate and is discoverable as a Bluetooth serial device.
3. In the taskbar, touch the Action Center icon.
4. Touch **All Settings** > **Devices** > **Bluetooth & other devices**.
5. Touch the plus sign to select **Add Bluetooth or other device** then in the **Add a Device window**, touch **Bluetooth**.
6. Discoverable Bluetooth devices populate the window.

Figure 52 Add Bluetooth Device



7. When the scanner appears, touch the ID. After a few minutes a notification appears that the devices are ready.

RS507/RS507X or RS6000 in SPP Mode

To pair the RS507/RS507X or RS6000 scanner with the tablet using or Serial Port Profile (SPP) mode:

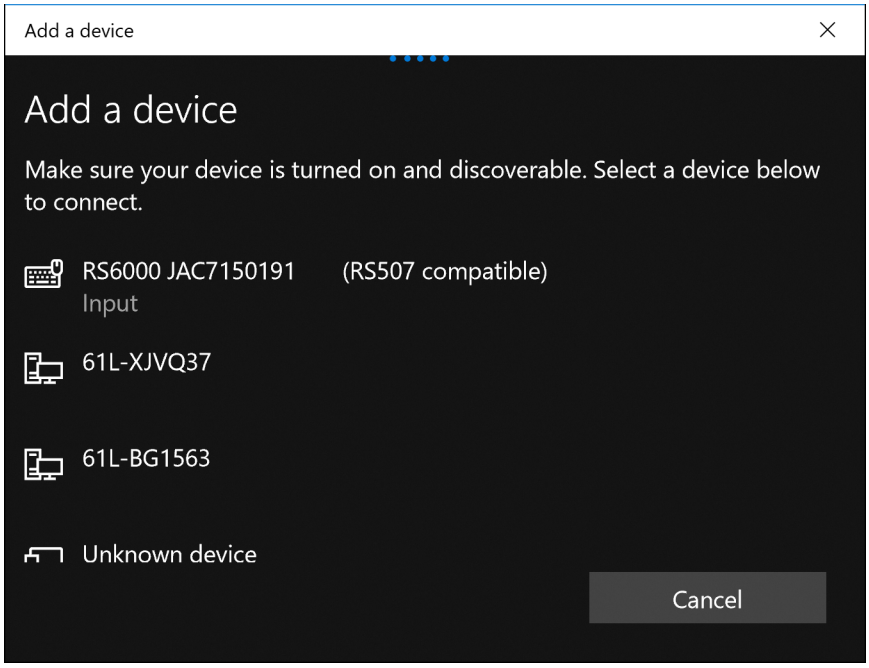
1. Place the scanner in SPP mode using steps “a” through “e” below. If the scanner is already in SPP mode, skip to step 2.
   a. Remove the battery from the scanner.
   b. Press and hold the Restore key.
   c. Install the battery onto the scanner.
   d. Keep holding the Restore key for about five seconds until a chirp is heard and the Scan LEDs flash green.
   e. Scan the appropriate barcode below to place the scanner in SPP mode.

Figure 53 RS507 Bluetooth SPP Barcode

Figure 54 RS6000 Bluetooth SPP Barcode

2. Perform a Cold Boot by removing and re-installing the battery onto the scanner. The device starts to operate and is discoverable as a Bluetooth serial device.
3. In the taskbar, touch the Action Center icon.
4. Touch **All Settings** > **Devices** > **Bluetooth & other devices**.
5. Touch the plus sign to select **Add Bluetooth or other device** then in the **Add a Device window**, touch **Bluetooth**.
6. Discoverable Bluetooth devices populate the window.

Figure 55 Add Bluetooth Device



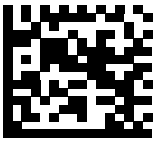
7. Select **RS507x** or **RS6000**. Wait for the connection and setup to complete.
8. Touch **Done**.
9. Scroll down to **Related settings** and touch **More Bluetooth options**.
10. Select the **COM Port** tab.
11. Note the **Outgoing COM port** set for the scanner for use in the scanning application.

DS3678 in HID Mode

To pair the DS3678 scanner with the tablet using either Human Interface Device (HID) mode:

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.

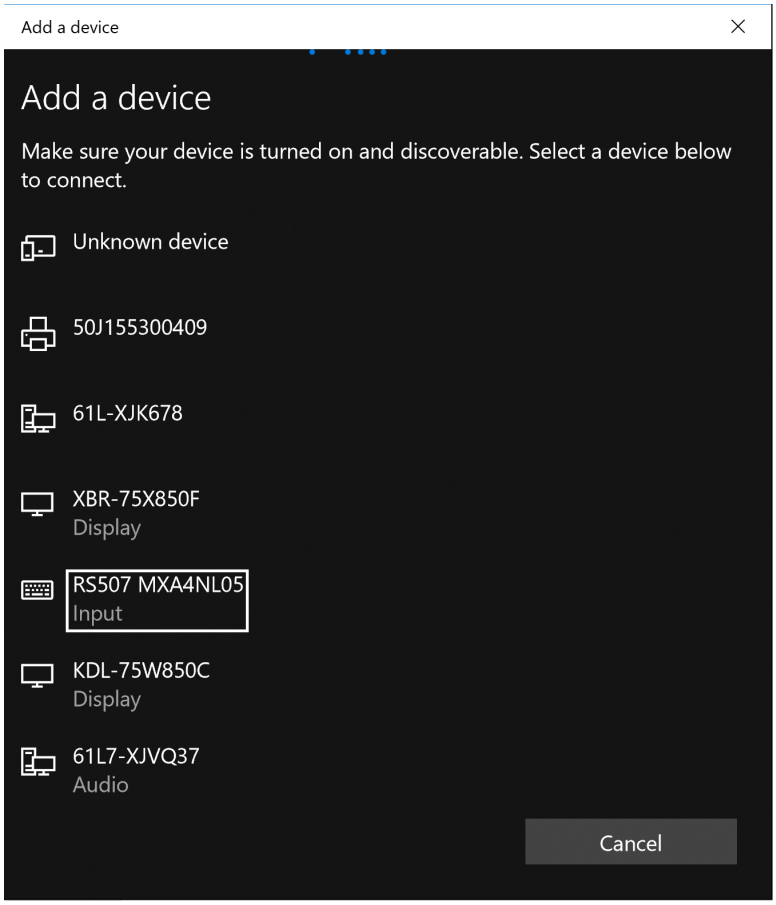
Figure 56 DS3678 Bluetooth HID Classic Barcode



4. In the taskbar, touch the Action Center icon.
5. Touch **All Settings > Devices > Bluetooth & other devices**.
6. Slide the control to the right to turn it on.
7. Touch the plus sign to select **Add Bluetooth or other device** then in the **Add a Device window**, touch **Bluetooth**.

8. Discoverable Bluetooth devices populate the window.

Figure 57 Add Bluetooth Device



9. When the scanner appears, touch the ID. After a few minutes a notification appears that the devices are ready.

DS3678 in SPP Mode

To pair the DS3678 scanner with the tablet using either Serial Port Profile (SPP) mode:

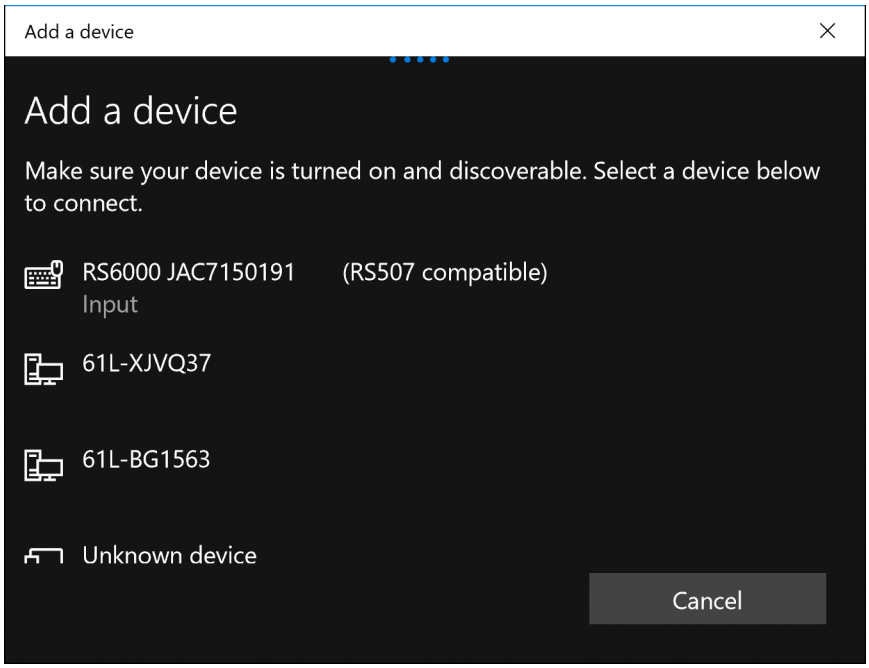
1. Remove the battery from the scanner.
2. Replace the battery.
3. After the scanner reboots, scan the barcode below to place the scanner in SPP mode.

Figure 58 DS3678 Bluetooth SPP Classic Barcode

4. In the taskbar, touch the Action Center icon.
5. Touch **All Settings** > **Devices** > **Bluetooth & other devices**.

6. Touch the plus sign to select **Add Bluetooth or other device** then in the **Add a Device window**, touch **Bluetooth**.
7. Discoverable Bluetooth devices populate the window.

Figure 59 Add Bluetooth Device



8. Select **DS3678**. Wait for the connection and setup to complete.
9. Touch **Done**.
10. Right click on the Bluetooth icon and select **Open Settings**.
11. Scroll down to **Related settings** and touch **More Bluetooth** options.
12. Select the **COM Port** tab.
13. Note the **Outgoing COM port** set for the scanner for use in the scanning application.

Connecting a USB Scanner

To connect a DS3608 USB scanner, use one of the following methods:

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

Connecting Using Simple Serial Interface

To connect a USB scanner using SSI mode:

1. Connect the scanner cable USB connector to the USB port of a vehicle cradle. The scanner beeps.
2. Ensure that the scanner is in SSI mode. Refer to the Refer to the DS36X8 Product Reference Guide and scan the SSI Over USB CDC barcode.

Connecting Using HID Mode

To connect a USB scanner using HID mode:

1. Connect the scanner cable USB connector to the USB port of a vehicle cradle. The scanner beeps.
2. Ensure that the scanner is in HID mode. Refer to the Refer to the DS36X8 Product Reference Guide and scan the HID Keyboard barcode or perform a factory reset.

Accessories

Introduction

The device accessories provide a variety of product support capabilities.

Table 10 *Device Accessories*

Accessory	Part Number	Description
Cradles		
Charge Only Cradle	CRD-ET5X-1SCG2	Charges the main battery and optional Power Pack installed in the Expansion Back. Requires power supply PWR-BGA12V50W0WW, DC line cord CBL-DC-388A1-01 and country-specific AC line cord.
Communication and Charging Cradle	CRD-ET5X-1SCOM2	Charges the main battery and optional Power Pack installed in the Expansion Back. Requires power supply PWR-BGA12V50W0WW, DC line cord CBL-DC-388A1-01, and country-specific AC line cord.
Rugged Communication and Charging Cradle	CRD-ET5X-1SCOM2R	Charges the main battery and optional Power Pack installed in the Expansion Back. Supports rugged frame and rugged IO Adapter. Requires power supply PWR-BGA12V50W0WW, DC line cord CBL-DC-388A1-01, and country-specific AC line cord.
4-Slot Charge Only Cradle	CRD-ET5X-SE4CO2-01	Charges up to four main batteries and optional Power Pack installed in the Expansion Back and up to four Power Packs in the optional 4-Slot Battery Charger. Requires power supply PWR-BGA12V108W0WW, DC line cord CBL-DC-382A1-01, and country-specific AC line cord.
Chargers		
Power Supply	PWR-BGA12V50W0WW	Provides power to the Charge Only Cradle, Communication and Charging Cradles, Rugged Charge Connector, and 4-Slot Battery Charger for Optional Battery Power Pack.
Power Supply	PWR-BGA12V108W0WW	Provides power to the 4-Slot Charge Only Cradle.

Table 10 *Device Accessories (Continued)*

Accessory	Part Number	Description
4-Slot Battery Charger	SAC-ET5X-4PPK1-01	Chargers up to four Power Packs. Requires power supply PWR-BGA12V50W0WW, DC Line cord CBL-DC-388A1-01, and country-specific AC line cord.
Rugged Charge Connector	CHG-ET5X-CBL2-01	Charges the main battery and optional Power Pack installed in the Expansion Back. Requires power supply PWR-BGA12V50W0WW, DC Line Cord CBL-DC-388A1-01 and country-specific AC line cord.
Miscellaneous		
Replacement 8.4" Internal Battery	BTRY-ET5X-8IN3-01	Replacement battery for 8.4" device.
Replacement 10.1" Internal Battery	BTRY-ET5X-10IN3-01	Replacement battery for 10.1" device.
Replacement 8.4" Battery Cover	KT-ET5X-8BTDR2-01	Replacement battery cover for 8.4" device.
Replacement 10.1" Battery Cover	KT-ET5X-10BTDR2-01	Replacement battery cover for 10.1" device.
8.4” Rugged Frame with IO Adapter	SG-ET5X-8RCSE2-02	Add extra protection for the 8.4" device and IO Adapter for connection to the Rugged Communication and Charging Cradle.
10.1” Rugged Frame with IO Adapter	SG-ET5X-10RCSE2-01	Add extra protection for the 10.1" device and IO Adapter for connection to the Rugged Communication and Charging Cradle.
Replacement Rugged IO Connector	SG-ET5X-RGIO2-01	Replacement rugged IO connector for the Rugged Frames.
8.4" SE4750 Expansion Back	ZBK-ET5X-8SCN5-01	Provides data capture using the SE4750 scan engine, rotating hand strap and slot for optional Power Pack.
8.4" SE4710 Expansion Back	ZBK-ET5X-8SCN1-01	Provides data capture using the SE4710 scan engine, rotating hand strap and slot for optional Power Pack.
8.4" Expansion Back	ZBK-ET5X-8RH1-01	Provides rotating hand strap and slot for optional Power Pack.
10.1" SE4750 Expansion Back	ZBK-ET5X-10SCN5-01	Provides data capture using the SE4750 scan engine, rotating hand strap and slot for optional Power Pack.
10.1" SE4710 Expansion Back	ZBK-ET5X-10SCN1-01	Provides data capture using the SE4710 scan engine, rotating hand strap and slot for optional Power Pack.
10.1" Expansion Back	ZBK-ET5X-10RH1-01	Provides rotating hand strap and slot for optional Power Pack.
Power Pack	BTRY-ET5X-PRPK2-01	Provides additional power for charging the device battery using an Expansion Back.

Table 10 *Device Accessories (Continued)*

Accessory	Part Number	Description
Replacement Expansion Back Hand Strap	SG-ET5X-RHTP1-01	Replacement hands strap for Expansion Backs.
Passive Stylus	SG-TC7X-STYLUS-03	Provides easy writing, drawing, and navigation and accuracy with the thin tip and hovering capabilities.
Coiled Stylus Tether	SG-ET5X-SLTETR-01	Secures a stylus to the hand strap.
8.4" Operations Case	SG-ET5X-8HLST-01	Provides carrying solution for 8.4" device.
10.1" Operations Case	SG-ET5X-10HLST-01	Provides carrying solution for 10.1" device.
Universal Shoulder Strap	58-40000-007R	Use with the Operations Case and D-clips to carry device on shoulder.
Breakaway Shoulder Strap	SG-ET5X-SHDRSTP-01	Use with the Operations Case and D-clips to carry device on shoulder. Contains safety feature by the clips that breaks when pulled.

Charge Only Cradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 89.

NOTE: The Charge Only Cradle (CRD-ET5X-1SCG2) comes with two inserts; tall insert and short insert. Install the tall insert when using a device without a Rugged Frame or Expansion Back. Install the small insert when using with an Expansion Back and without a Rugged Frame.

The Charge Only Cradle does not support the ET51 Enterprise Tablet with Integrated Scanner.

This section describes how to use a Charge Only Cradle with the device.

The Charge Only Cradle:

- Provides power for operating the device.
- Charges the device's battery and optional Power Pack installed in an Expansion Back.

Figure 60 Charge Only Cradle - Front View

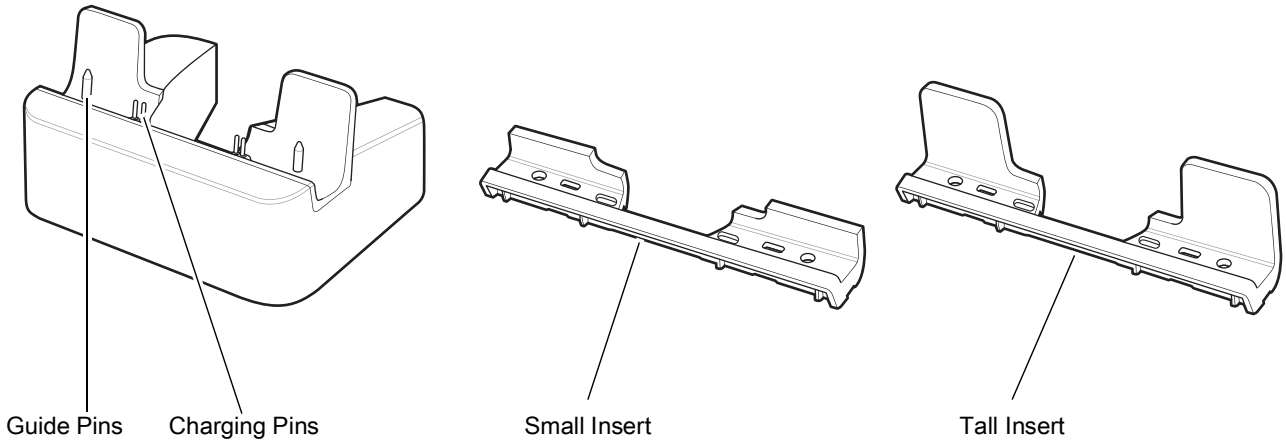
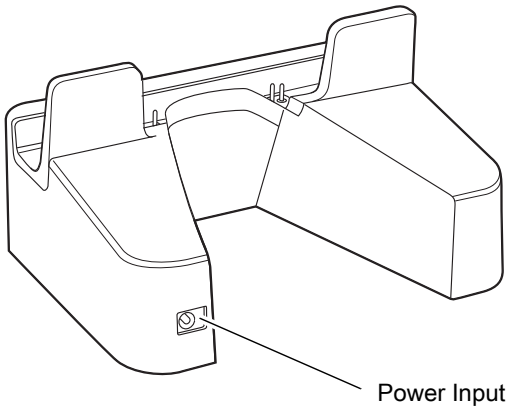


Figure 61 Charge Only Cradle - Rear View

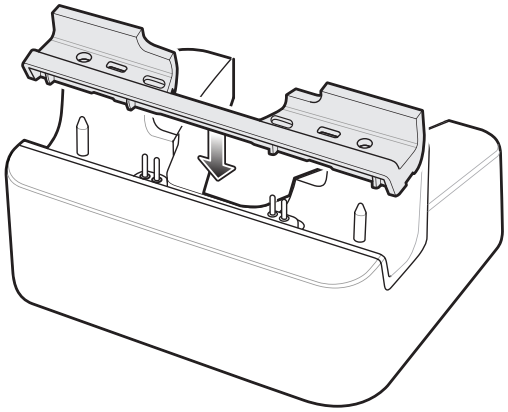


Installing the Insert

Install the tall insert when using a device without a Rugged Frame or Expansion Back. Install the small insert when using an device with an Expansion Back and without a Rugged Frame.

1. Align the insert over the pins.

Figure 62 Align Insert with Cradle



2. Press the insert down until it seats flush in the cradle.

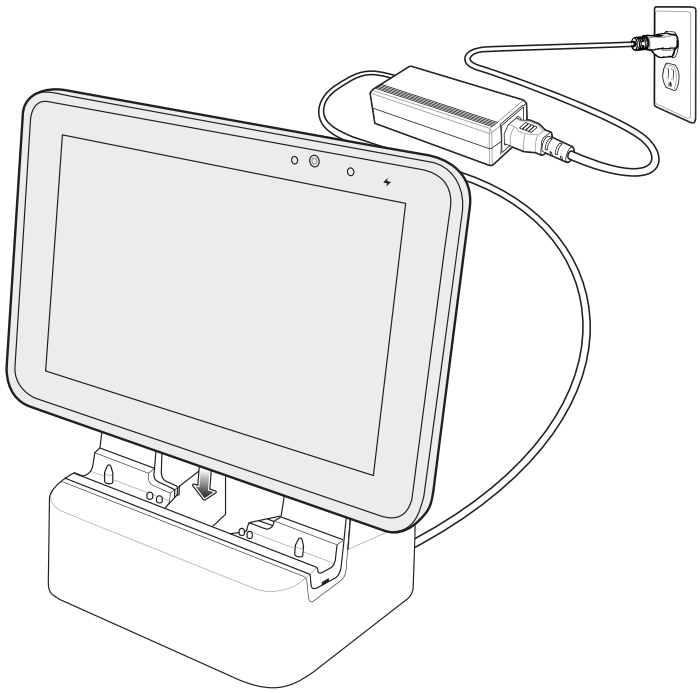
Charging the Device

To charge the device in the Charge Only Cradle:

1. Align the device with the alignment pins on the cradle.
2. Insert the device into the cradle.

NOTE: Ensure the device is flat on the cradle and all charging contacts are touching the charging base.

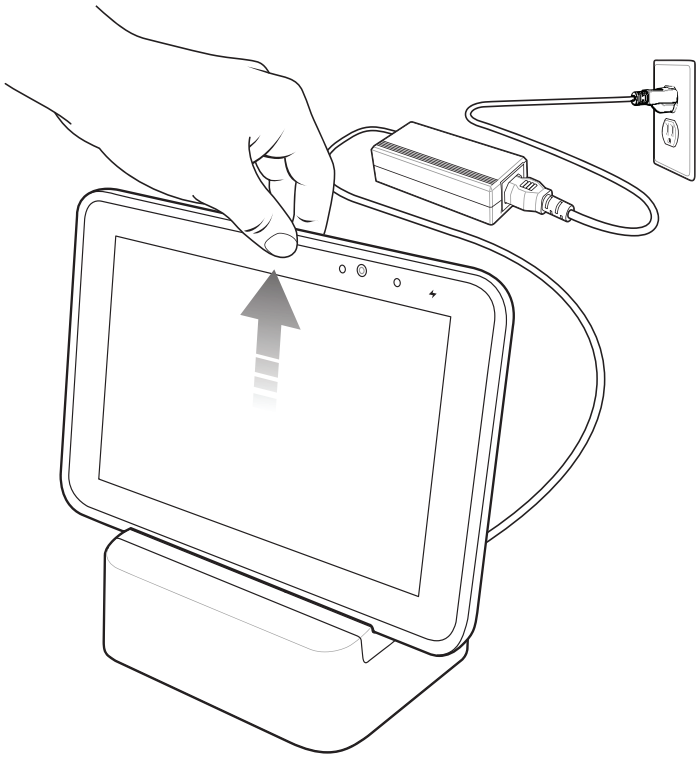
Figure 63 Insert device into Charge Only Cradle



3. The device Charging LED indicates charging.

4. To remove the device from the Charge Only Cradle, hold the cradle down with one hand and lift the device.

Figure 64 Remove device from Charge Only Cradle



Charge batteries in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the battery. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

The 8.4" main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

The 10.1" main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

NOTE: The Charging indicator only illuminates when the device is connected to AC power.

Table 11 *Charging Indicator*

LED	Indication
Off	Device is not in cradle; not seated properly; or cradle is not powered.
Orange	Device is charging.
Green	Charging complete.
Red	Error in charging; check placement of the device.

Communication and Charging Cradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 89.

NOTE: The Communication and Charging Cradle (CRD-ET5X-1SCOM2) comes with two inserts; tall insert and short insert. Install the tall insert when using without a Rugged Frame or Expansion Back. Install the small insert when using with an Expansion Back and without a Rugged Frame.

The Communication and Charging Cradle does not support the ET51 Enterprise Tablet with Integrated Scanner.

This section describes how to use a Communication and Charging Cradle with the device.

The Communication and Charging cradle:

- Provides power for operating the device.
- Provides ports for connecting USB devices to the device, video output and connection to a LAN.
- Charges the device's battery and optional Power Pack installed in an Expansion Back.

Figure 65 Communication and Charging Cradle - Front View

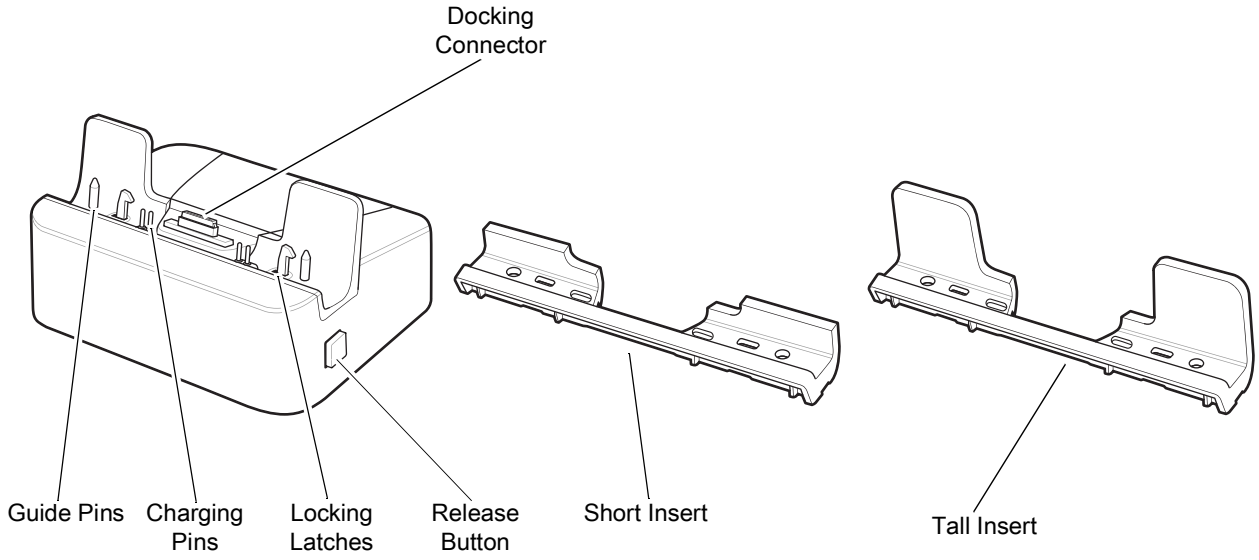
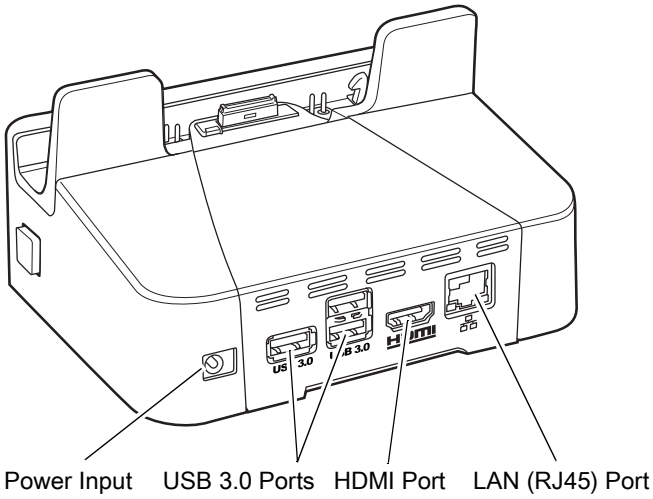


Figure 66 Communication and Charging Cradle - Rear View

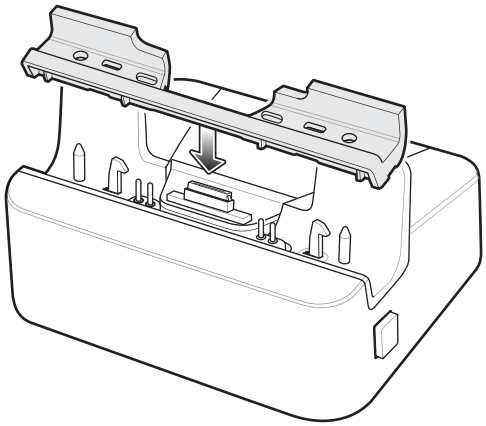


Installing the Insert

Install the tall insert when using a device without a Rugged Frame or Expansion Back. Install the small insert when using a device with an Expansion Back and without a Rugged Frame.

1. Align the insert over the pins.

Figure 67 Align Insert with Cradle



2. Press the insert down until it seats flush in the cradle.

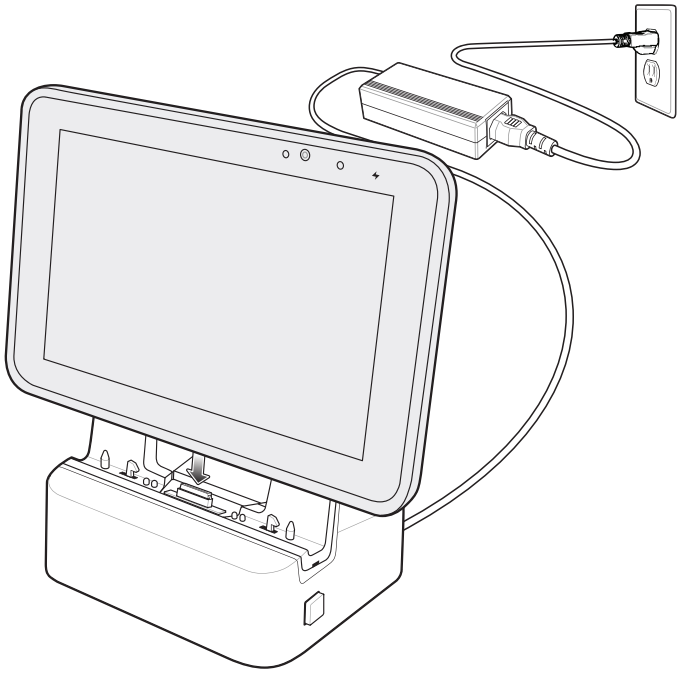
Charging the Device

To charge the device in the Communication and Charging Cradle:

1. Open the bottom access door and hold it to the back of the device.
2. Align the device with the alignment pins on the cradle.
3. Insert the device into the cradle. Note that the Communication and Charging Cradles contains a locking mechanism that locks the device to the cradle.

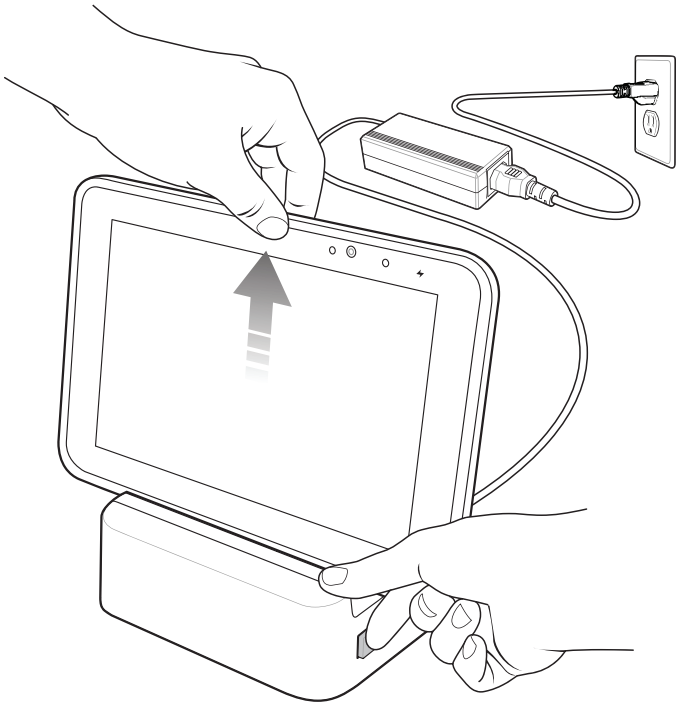
NOTE: Ensure the device is flat on the cradle and all charging contacts are touching the charging base.

Figure 68 Insert device into Communication and Charging Cradle



4. The device Charging LED indicates charging.
5. To remove the device from the Communication and Charging Cradle, press the release button on the right side of the cradle and lift the device. Use thumb to hold down the cradle.

Figure 69 Remove Device from Communication and Charging Cradles



Charge batteries in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the battery. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

The 8.4" main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

The 10.1" main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

NOTE: The Charging indicator only illuminates when the device is connected to AC power.

Rugged Communication and Charging Cradle

CAUTION: Ensure that you follow the guidelines for battery safety described in Battery Safety Guidelines on page 89.

This section describes how to use a Rugged Communication and Charging Cradle with the device.

The Rugged Communication and Charging cradle:

- Provides power for operating the device.
- Provides ports for connecting USB devices, video output and connection to a LAN.
- Charges the device's battery and optional Power Pack installed in an Expansion Back.
- Support the ET51 Enterprise Tablet with Integrated Scanner.

Figure 70 Rugged Communication and Charging Cradle - Front View

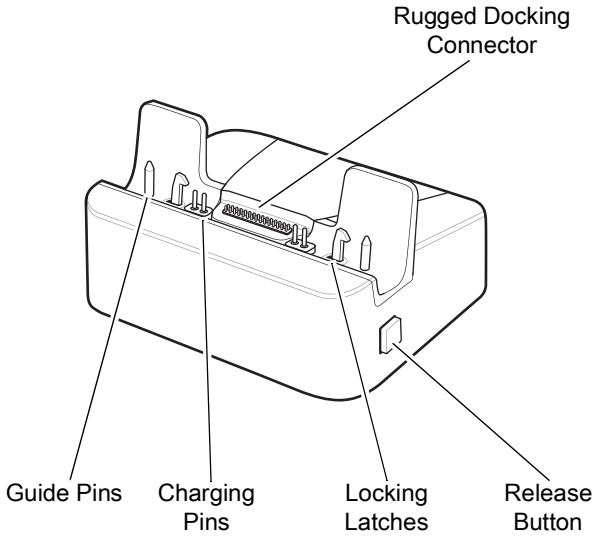
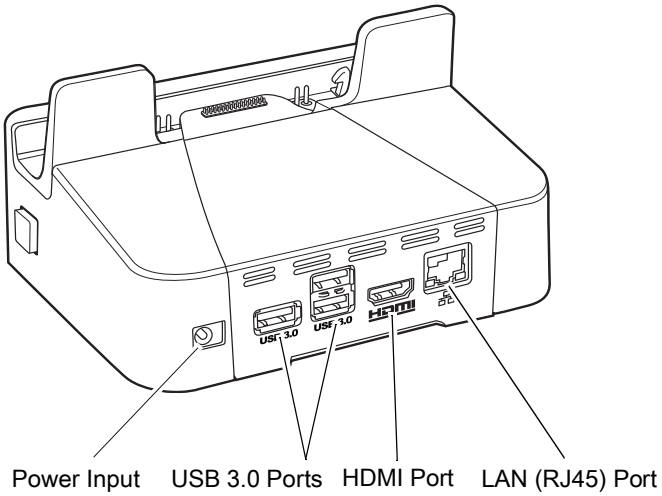
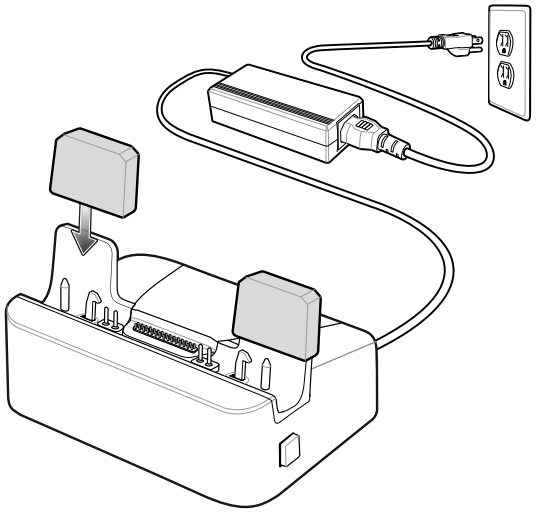


Figure 71 Rugged Communication and Charging Cradle - Rear View



For the ET51 Enterprise Tablet with Integrated Scanner, ensure that the cradle pads are installed prior to inserting the device into the cradle.

Figure 72 Install Pads onto Cradle



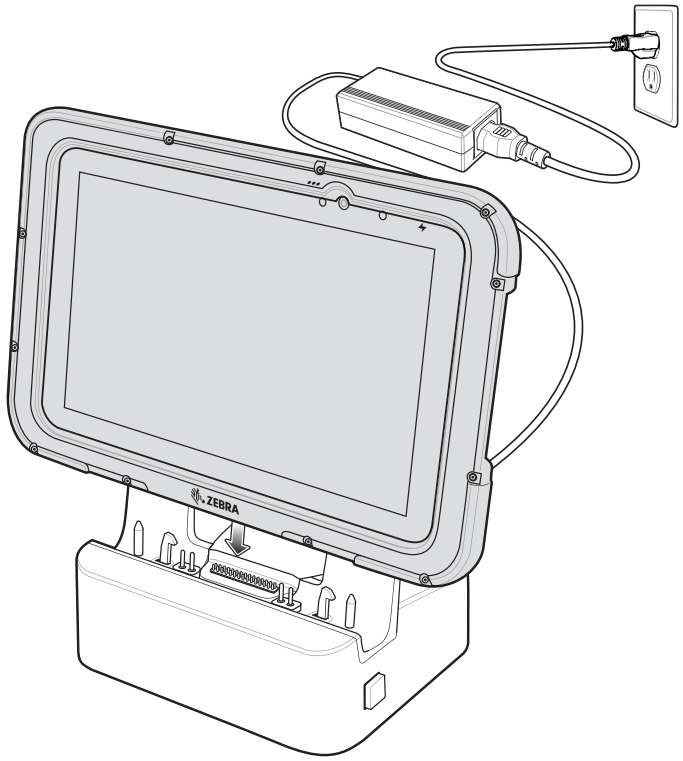
Charging the Device

To charge the device using the Rugged Communication and Charging Cradle:

1. Align the device with the alignment pins on the cradle.
2. Insert the device into the cradle. Note that the Rugged Communication and Charging Cradles contains a locking mechanism that locks the device to the cradle.

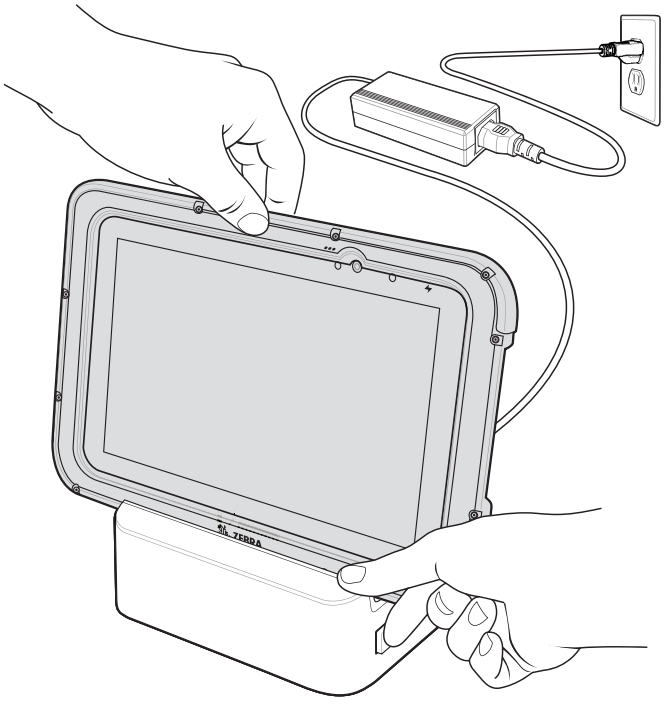
NOTE: Ensure the device is flat on the cradle and all charging contacts are touching the charging base.

Figure 73 Insert Rugged Frame and IO Adapter into Rugged Communication and Charging Cradle



3. The device Charging LED indicates charging.
4. To remove the device from the Rugged Communication and Charging Cradle, press the release button on the right side of the cradle and lift the device. Use thumb to hold down the cradle.

Figure 74 Remove Device from Rugged Communication and Charging Cradles



Charge batteries in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the battery. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

The 8.4" main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

The 10.1" main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

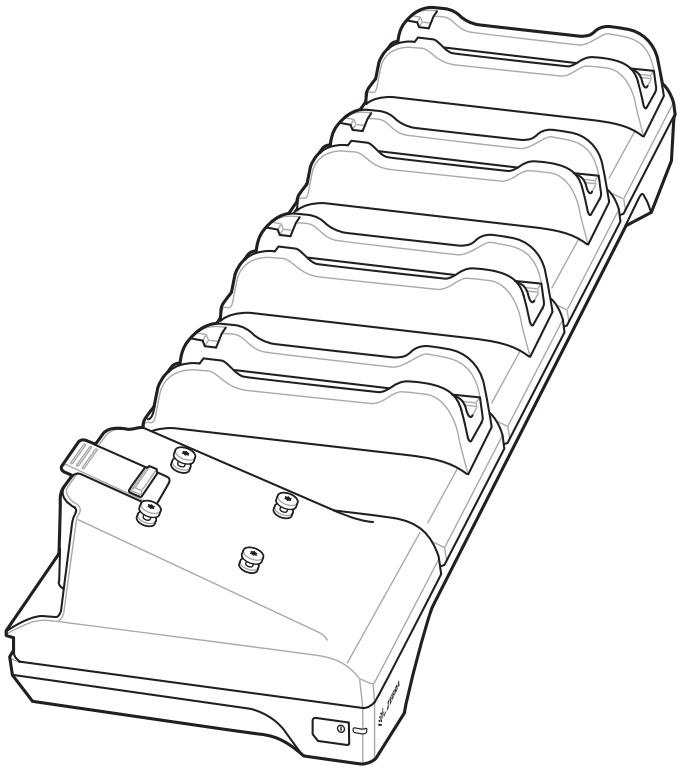
NOTE: The Charging indicator only illuminates when the device is connected to AC power.

4-Slot Charge Only Cradle

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

- Provides 5 VDC power for operating the device.
- Simultaneously charges up to four devices and up to four Power Packs using the optional Battery Charger Adapter. See the ET51/56 Integrator Guide for information on installing the 4-Slot Battery Charger onto the cradle.

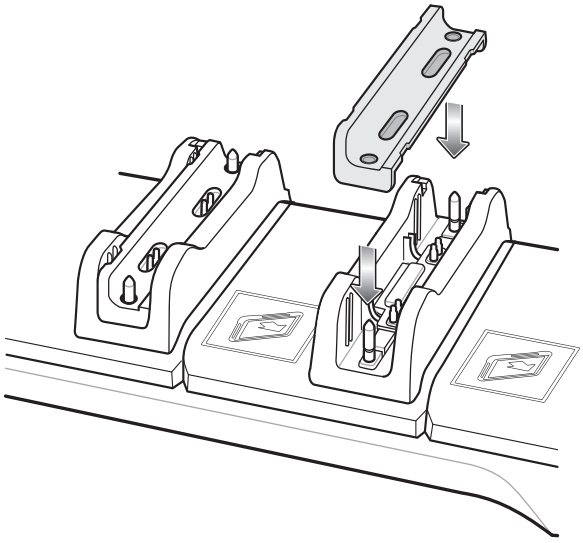
Figure 75 4-Slot Charge Only Cradle



Insert Installation

Install inserts into slots for devices without Rugged Frame, or the ET51 Enterprise Tablet with Integrated Scanner.

Figure 76 Install Insert in Slot

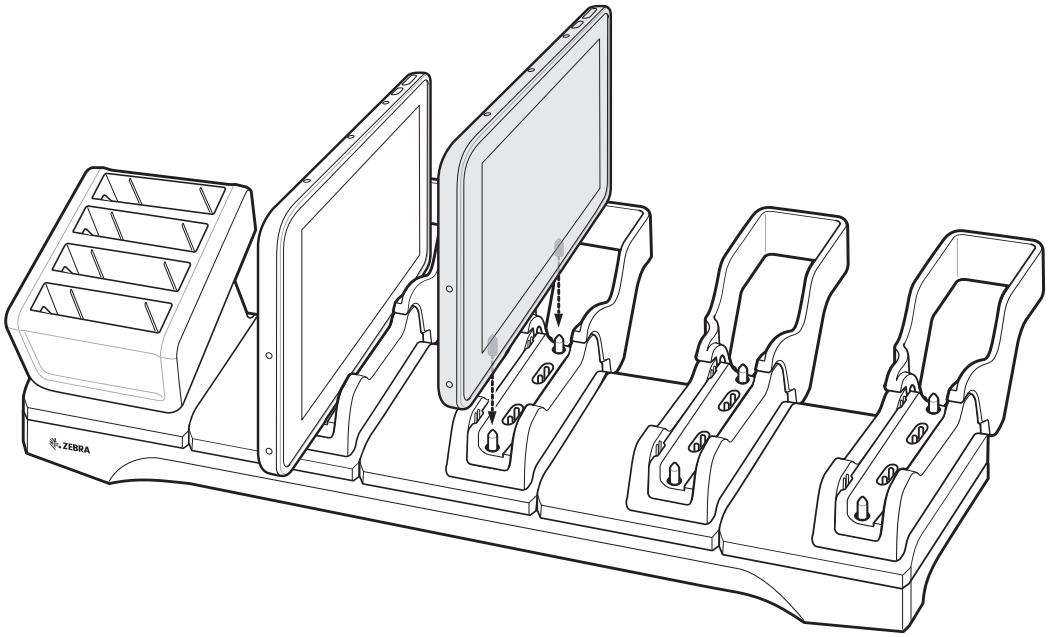


Insert Device into Slot

Device without Rugged Frame

1. Install insert into slot.
2. Align the two alignment holes on the bottom of the device with the two alignment pins in the slot.

Figure 77 Insert Device without Rugged Frame into Slot

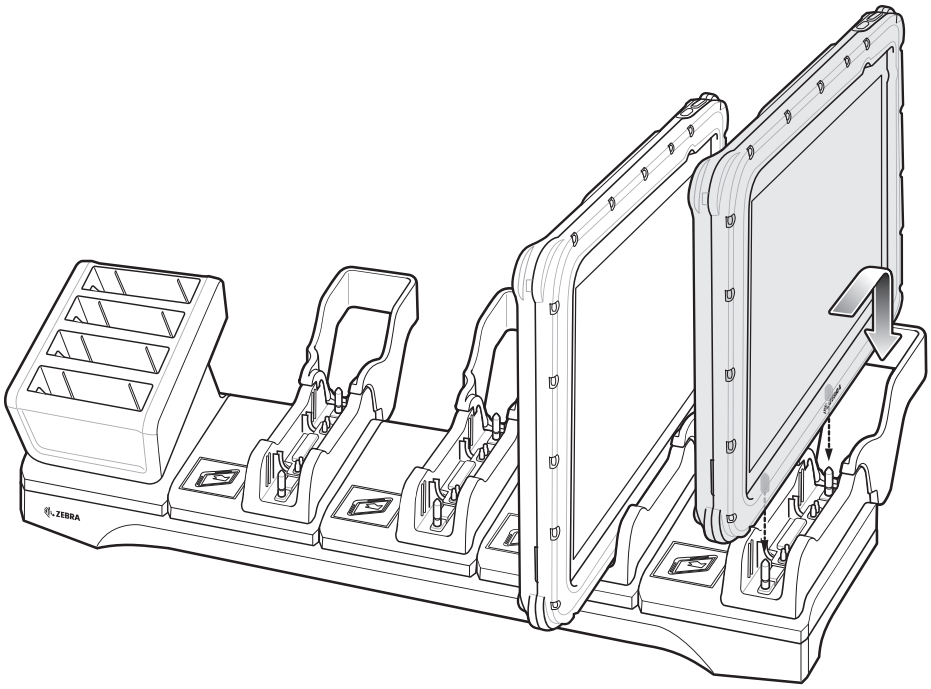


3. Place the device down into the slot with display facing away from Battery Charger.

Device with Rugged Frame

1. If applicable, remove insert from slot.
2. Slide device over slot into it touches the guide.

Figure 78 Insert device with Rugged Frame into Slot



3. Place the device down into the slot with display facing away from Battery Charger.

Charging the Battery

Charge batteries in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the battery. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

The 8.4" main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

The 10.1" main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

NOTE: The Charging indicator only illuminates when the device is connected to AC power.

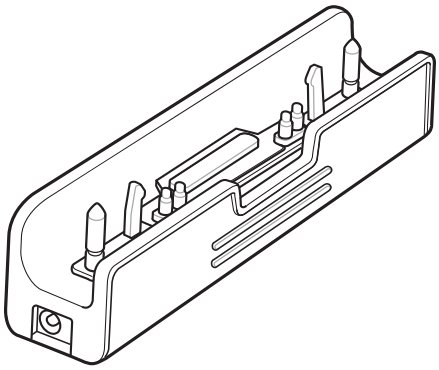
Rugged Charge Connector

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

Use the Rugged Charge Connector to charge an device.

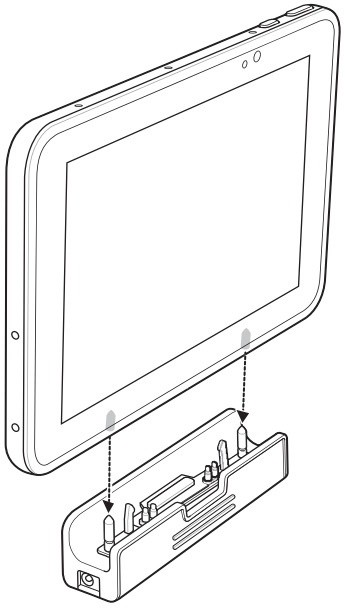
NOTE: The Rugged Charge Connector does not support the ET51 Enterprise Tablet with Integrated Scanner.

Figure 79 Rugged Charge Connector



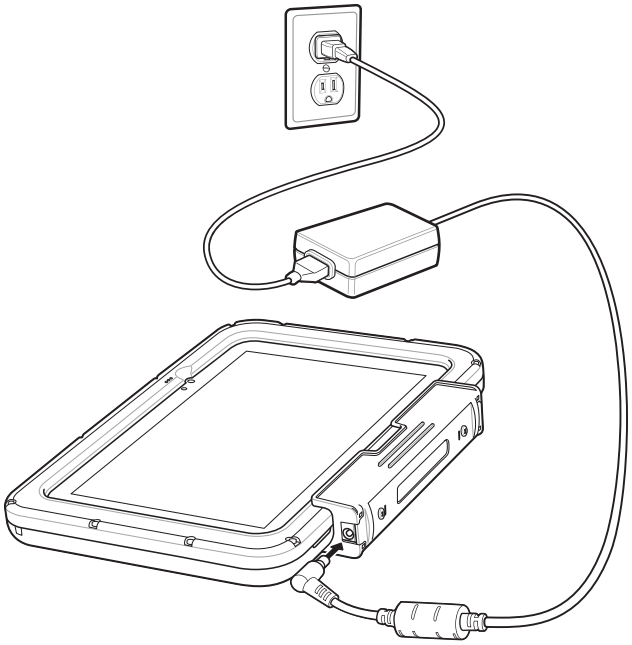
1. Align the pins in the Rugged Charge Connector with the slots in the device.

Figure 80 Insert Device into Rugged Charge Connector



2. Plug the Power Supply connector into the Power Input Port on the Rugged Charge Connector.

Figure 81 Plug Power Supply into Input Power Port



Charge batteries in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the battery. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

The 8.4" main battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours.

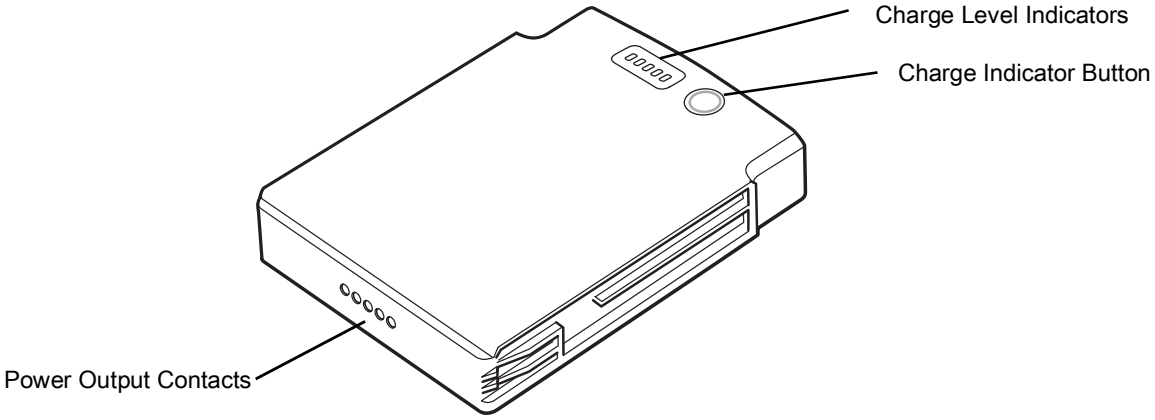
The 10.1" main battery charges from fully depleted to 90% in approximately 3 hours and from fully depleted to 100% in approximately 5 hours.

NOTE: The Charging indicator only illuminates when the device is connected to AC power.

Power Pack

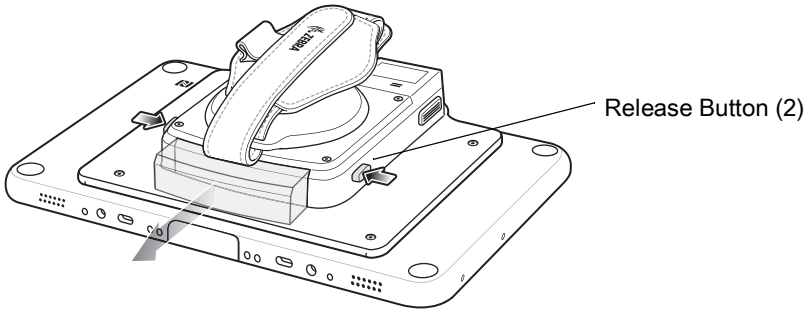
The optional Power Pack provides additional power for charging the main battery.

Figure 82 Power Pack



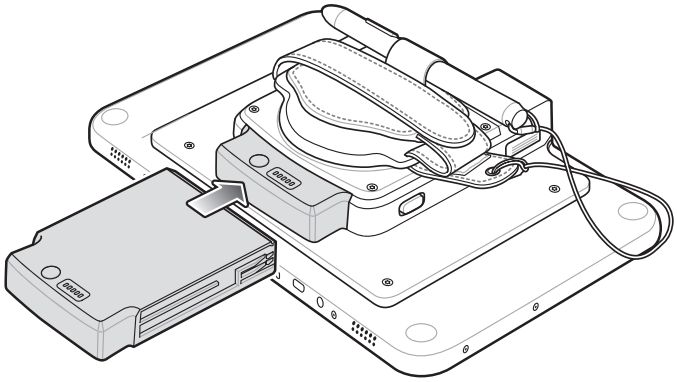
1. Install one of the optional Expansion Backs. See ET51/56 Integrator Guide for more information.
2. Press the two release buttons on the side of the Expansion Back. The dummy battery insert ejects slightly.

Figure 83 Remove Dummy Battery Insert



3. Remove dummy battery insert.
4. Insert Power Pack into slot until it snaps into place.

Figure 84 Install Power Pack



Charging the Power Pack

Charge the Power Pack using:

- A cradle
- 4-Slot Charger.

Using Cradle

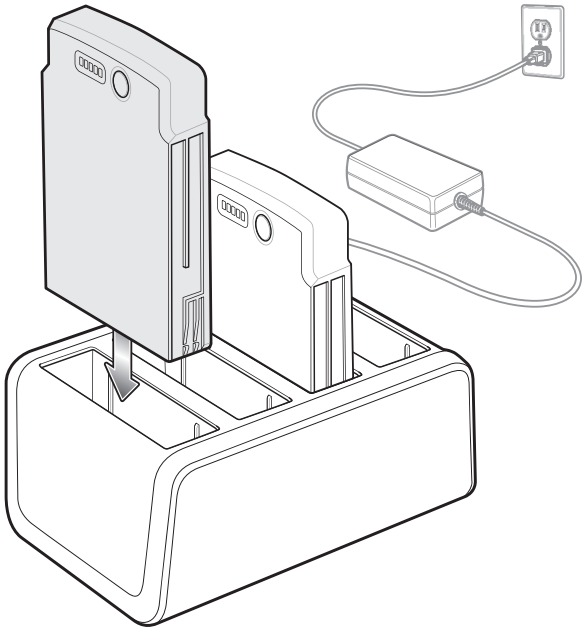
With the Power Pack installed in an Expansion Back, place the device into a cradle. The Power Pack charges in less than 3.5 hours.

Using the 4-Slot Battery Charger

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

Use the 4-Slot Battery Charger to charge up to four Power Packs.

Figure 85 4-Slot Battery Charger



Charging the Power Pack

Charge Power Packs in ambient temperatures from 0°C to +60°C (32°F to 140°F) as reported by the Power Pack. Charging is intelligently controlled by the charger. To accomplish this, for small periods of time, the charger alternately enables and disables Power Pack charging to keep the battery at acceptable temperatures.

The Power Pack charge LED shows the status of the battery charging. The Power Pack charges in less than three hours. When charging, the Charge LEDs indicate the charge level.

Figure 86 Power Pack Charge LEDs

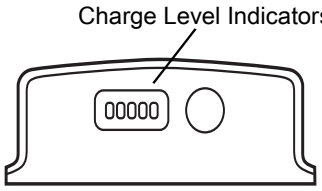


Table 12 *Power Pack Charge Status Indicators*

Power Pack Indicators	Description
	Power not applied to Power Pack.
	Charge level is between 0% and 20%.
	Charge level is between 20% and 40%.
	Change level is between 40% and 60%.
	Charge level is between 60% and 80%.
	Charge level is between 80% and 100%.
	Fully charged.
	Charging error.
	Solid Green LED
	Blinking Green LED
	Blinking Red LED

Maintenance and Troubleshooting

Introduction

This chapter includes instructions on cleaning and storing the tablet, battery maintenance and provides troubleshooting solutions for potential problems during tablet operations.

Maintaining the Device

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

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

Battery Safety Guidelines

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non commercial environment.
- Follow battery usage, storage, and charging guidelines found in this guide.
- Improper battery use may result in a fire, explosion, or other hazard.
- To charge the mobile device battery, the battery and charger temperatures must be between +32ºF and +104ºF (0ºC and +40ºC)
- Do not use incompatible batteries and chargers, including non-Zebra batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact the Global Customer Support Center.
- For devices that utilize a USB port as a charging source, the device shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- Do not disassemble or open, crush, bend or deform, puncture, or shred battery.

- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.
- Battery usage by children should be supervised.
- Please follow local regulations to properly dispose of used re-chargeable batteries.
- Do not dispose of batteries in fire.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with water for 15 minutes and seek medical advice.
- If you suspect damage to your equipment or battery, contact Customer Support to arrange for inspection.

Cleaning Instructions

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

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

Approved Cleanser Active Ingredients

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

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

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

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

Harmful Ingredients

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

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

NOTE: If using the tablet in a healthcare environment, do not use PDI Sani-Hands/ PDI Super Sani Cloth Germicidal Wipes to clean the device.

Device Cleaning Instructions

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

NOTE: For thorough cleaning, it is recommended to first remove all accessory attachments, such as hand straps or cradle cups, from the mobile device and to clean them separately.

Special Cleaning Notes

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

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

IMPORTANT: If the battery connectors are exposed to cleaning agents, thoroughly wipe off as much of the chemical as possible and clean with an alcohol wipe. It is also recommended to install the battery in the terminal prior to cleaning and disinfecting the device to help minimize buildup on the connectors.

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

Cleaning Materials Required

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

Cleaning Frequency

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

Cleaning Battery Connectors

To clean the battery connectors:

1. Remove the main battery from the mobile computer.
2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.

3. To remove any grease or dirt, rub the cotton portion of the cotton-tipped applicator back-and-forth across the connectors on the battery and terminal sides. Do not leave any cotton residue on the connectors.
4. Repeat at least three times.
5. Use a dry cotton-tipped applicator and repeat steps 3 and 4. Do not leave any cotton residue on the connectors.
6. Inspect the area for any grease or dirt and repeat the cleaning process if necessary.

CAUTION: After cleaning the battery connectors with bleach-based chemicals, follow the Battery Connector Cleaning instructions to remove bleach from the connectors.

Cleaning Cradle Connectors

To clean the connectors on a cradle:

1. Remove the DC power cable from the cradle.
2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.
3. Rub the cotton portion of the cotton-tipped applicator along the pins of the connector. Slowly move the applicator back-and-forth from one side of the connector to the other. Do not leave any cotton residue on the connector.
4. All sides of the connector should also be rubbed with the cotton-tipped applicator.
5. Remove any lint left by the cotton-tipped applicator.
6. If grease and other dirt can be found on other areas of the cradle, use a lint-free cloth and alcohol to remove.
7. Allow at least 10 to 30 minutes (depending on ambient temperature and humidity) for the alcohol to air dry before applying power to cradle.

   If the temperature is low and humidity is high, longer drying time is required. Warm temperature and low humidity requires less drying time.

CAUTION: After cleaning the cradle connectors with bleach-based chemicals, follow the Cleaning Cradle Connectors instructions to remove bleach from the connectors.

Troubleshooting

Table 13 *Troubleshooting the Tablet*

Problem	Cause	Solution
Tablet does not turn on.	Battery not charged.	Charge the battery in the tablet.
	Battery not installed properly.	Ensure battery is installed properly.
	System crash.	If the tablet does not turn on, perform a cold boot. See Performing a Cold Boot on page 25.

Table 13 *Troubleshooting the Tablet (Continued)*

Problem	Cause	Solution
Battery did not charge.	Battery failed.	Replace battery. If the tablet still does not operate, try a cold boot. See Performing a Cold Boot on page 25.
	Tablet removed from cradle before charging completed.	Insert the tablet into the cradle and begin charging. The battery fully charges in approximately four hours.
	Ambient temperature of the cradle is too warm or too cold.	The ambient temperature must be between 0 °C and 40 °C (32 °F and 104 °F).
Unable to connect to the wireless network.	SIM card is invalid.	Ensure that the micro SIM card is valid and workable if using a mobile network.
	Not within range of network.	Move within the network's service range and the signal strength is good.
	Tablet is in airplane mode.	Ensure that tablet is not in Airplane mode.
The multi-touch screen responds slowly or improperly.	Finger or screen is wet.	Ensure that your hands are clean and dry when touching the screen. Restart the tablet to try again.
Tablet turns itself off.	Tablet is inactive.	The tablet turns off after a period of inactivity. If the tablet is running on battery power.
	Battery is depleted.	Place the tablet in the cradle to re-charge the battery.
	The tablet's battery is low and it powers down to protect memory content.	Place the tablet in a cradle to re-charge the battery.
After selecting a link in a full-screen app (Tablet mode), a dialog box or app does not display.	The dialog box or app is hidden behind the full-screen app.	Touch in the taskbar to view all running apps and select the dialog box or app.
Tablet clock is not synchronizing with local time after enabling the WAN radio.	Windows Time Services is not set properly.	Open **Control Panel** > **Administrative Tools** > **Services** > **Windows Time**. In the **Startup Type** drop-down list, select **Automatic**. In the **Services status** section, touch **Start**.

Specifications

Technical Specifications

The following tables summarize the device's intended operating environment and general technical hardware specifications.

Table 14 Technical Specifications

Item	Description
Physical and Environmental Characteristics	
Dimensions	**8.4" Configuration**: 228 mm W x 150 mm H x 12.7 mm D (9.0 in. L x 5.9 in. W x 0.5 in. H) **10.1" Configuration**: (269 mm W x 181 mm H x 12.7 mm D) 10.6 in. L x 7.1 in. W x 0.5 in. H **ET51 Enterprise Tablet with Integrated Scanner** 246 mm W x 164 mm H x 27 mm D (8.4 in. L x 9.7 in. W x 1.1 in. H)
Weight	**8.4" Configuration**: 570 g (1.26 lbs) **10.1" Configuration**: 765 g (1.69 lbs) **ET51 Enterprise Tablet with Integrated Scanner** 740 g (1.6 lbs)
Display	**8.4" Configuration**: 8.4 in (diagonal) 2560 x 1600 WQXGA with backlight, 720 NITS **10.1" Configuration**: 10.1 in (diagonal) 1600 x 2560 WQXGA with backlight, 540 NITS
Touch panel	Capacitive 10 point multi-touch
Keyboard Options	**Standard:** Virtual, Bluetooth, or USB **ET51 Enterprise Tablet with Integrated Scanner:** Virtual, or Bluetooth. USB (keyboard) with 1-Slot Rugged Communication and Charging Cradle.
Expansion	Integrated connector to easily add accessories

Table 14 Technical Specifications (Continued)

Item	Description
Connectivity	**Standard:** Docking connector: USB 3.0, charging; rugged connector for use with rugged dock Interfaces. **ET51 with Integrated Scanner:** Rugged connector for use with rugged dock Interfaces.
Notification	LED flash; barcode decode, and camera LED indicator
Audio	Stereo speakers and dual front-facing microphones
Battery	**8.4" Configuration**: 3,300 mAh rechargeable lithium polymer; user replaceable **10.1" Configuration**: 4,950 mAh rechargeable lithium polymer; user replaceable Optional hot swappable secondary battery 3,400 mAh @ 3.6 VDC (24.4 Whr).
Performance Characteristics	
CPU	Intel Atom® 3940 (Quad-core). 1.6 GHz (Turbo Frequency = 1.8 GHz) Frequency supports 64 bit OS.
Operating System	Windows 10 IoT Enterprise
Memory	4GB/8MB LPDDR4 RAM; 64 GB/128 GB eMMC Flash; microSDXC card slot.
Data Capture	
Front Camera	2 MP 1080p full HD optimized for video and low lighting conditions.
Rear Camera	Image capture: 8 MP auto-focus color camera with user controllable LED flash, illumination; photographs, video, signatures and documents.
Video	1080p (Full HD, 1920 x 1080), Frame rate = 30 fps
Scanning	Optional RS507/RS507x Hands-free Imager Integrated scanner (ET51 with Integrated Scanner only) Optional RS600 Ring Scanner Optional SE4710 8.4" and 10.1" Expansion Back Optional SE4750 8.4" and 10.1" Expansion Back
Enterprise Tablet with Integrated Scanner	SE4710 scan engine.
User Environment	
Operating Temperature	-20° C to +50° C (-4° F to 122° F)
Storage Temperature	-20° C to +60° C (-4° F to 140° F)
Battery Charging Temperature	0° C to +60° C (32° F to 113° F)
Humidity	10% to 90% RH (non condensing)

Table 14 Technical Specifications (Continued)

Item	Description
Drop Specification	Standard: 1 m (3.28 ft.) drop to concrete without rugged frame With optional rugged frame: 1.8 m (5.9 ft.) to concrete per MIL STD 810G With optional expansion back: 1 m (3.28 ft.) to plywood per MIL STD 810G With optional expansion back and rugged frame: 1.2 m (4 ft.) to plywood per MIL STD 810G ET51 with Integrated Scanner: 1.2 m (4 ft) drop to concrete or 1.5 m (5 ft) drop to plywood.
Vibration	Random: 0.02²/Hz, 20 Hz to 2 khz 4g RMS 1 hour per axis
Environmental Sealing	IP65
ESD	+/-15kVdc air discharge +/-8kVdc direct discharge +/-8kVdc indirect discharge
WWAN Wireless Data Communications	
	Global LTE North America: AT&T LTE; Verizon LTE
WWAN Security	801.1x (WEP Encryption) with EAP-SIM, EAP-AKA, EAP-AKA’
WLAN Wireless Data Communications	
WLAN radio	802.11 a/b/g/n/ac/r/k/v; dual band 2x2 MIMO for transmit and receive
Output Power	125 mW (max) U.S. and International. Actual power depends on regulatory rules and certification agency
Frequency Bands	2.4G/5G
Operating Channels	Chan 1 - 13 (2412 - 2472 MHz), Chan 36 - 165 (5180 - 5825 MHz) Channel Bandwidth: 20, 40, 80 MHz Actual operating channels/frequencies depend on regulatory rules and certification agency.
Antenna	Dual band antennas for 2x2 MIMO
WLAN Security	WPA-2 Personal (AES Encryption) WPA2-Enterprise (AES Encryption): PEAP, Smart Card, or other Certificate with EAP-MSCHAPv2, Smart Card or Other Certificate, EAP-TTLS with PAP, CHAP, MS CHAP, MS CHAPv2 802.1X (WEP Encryption): PEAP, Smart Card, or other Certificate with EAP-MSCHAPv2, Smart Card or Other Certificate, EAP-TTLS with PAP, CHAP, MS CHAP, MS CHAPv2
WPAN Wireless Data Communications	
Bluetooth	Class 1, Bluetooth v4.2 (Bluetooth LE)

Table 14 Technical Specifications (Continued)

Item	Description
Near Field Communication	P2P: ISO 18092 Reader/Writer: ISO 14443 –A-B, MIFARE, FeliCa®, ISO 15693, NFC Forum Tag Type 1 to 4 Card emulation: ISO 14443 –A-B, MIFARE, FeliCa RF
GNSS	GNSS supports GPS, Galileo, and Glonass.
Sensors	
Gyroscope	Maintains orientation based on principles of conservation of angular momentum
Motion Sensor	3-axis accelerometer that enables motion-sensing applications for dynamic screen orientation.
Ambient Light Sensor	Automatically adjusts display brightness and display backlight to maximize power efficiently.
Electronic Compass	Independent — does not depend on GNSS
Peripherals and Accessories	
Accessories	See Accessories for list of accessories.
Printers	Supports extensive line of Zebra approved printers.

Table 15 Expansion Back Supported Symbologies

Bar Code Type	Symbologies
1D	Bookland EAN, Chinese 2 of 5, Codabar, Code 11, Code 128, Code 32, Code 39, Code 93, Discrete 2 of 5, EAN-8, EAN-13, GS1-128, Interleaved 2 of 5, Inverse 1D, ISBT-128, ISSN EAN, Korean 2 of 5, MSI, Matrix 2 of 5, Trioptic Code 39, UCC Coupon Code, UPCA, UPCE, UPCE1.
2D	Aztec, Aztec Inverse, Composite AB, Composite C, Data Matrix, Data Matrix Inverse, Maxicode, Micro PDF417, Micro QR, PDF417, QR Code, QR Code Inverse, Han Xin, Han Xin Inverse
Postal	Australian Postal, Japan Postal, UK Postal, US Planet, US Postnet, Netherlands KIX Code, USPS 4CB/One Code/Intelligent Mail, UPU FICS Postal

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