

# ET80/ET85

Rugged 2-in-1 Tablet



**ZEBRA**

**Product Reference Guide**  
for Microsoft<sup>®</sup> Windows<sup>®</sup> 10

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# About This Document

## Introduction

This guide provides information about using the device 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 of the tablet:

Configuration	Processor	Memory	Display	Radios
ET80 TGL i5 Core w/Vpro WLAN	TGL U42 4 +2 Core I5-1140G7 8MB LLC Gen12 GFX	16 GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 WIFI6E 802.11ax 2x2 MIMO  WPAN: Bluetooth v5.2 Low Energy
ET85 TGL i5 Core w/Vpro WAN	TGL U42 4 +2 Core I5-1140G7 8MB LLC Gen12 GFX	16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 802.11 ax - WIFI6E Qualcomm RM505Q 4x4 MIMO  WPAN: Bluetooth v5.2 Low Energy  WWAN: 5G
ET85 TGL i5 Core w/Vpro WAN	TGL U42 4 +2 Core I5-1140G7 8MB LLC Gen12 GFX	16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 802.11 ax - WIFI6E Qualcomm EM121 Cat 12 2x2 MIMO  WPAN: Bluetooth v5.2 Low Energy  WWAN: LTE

## About This Document

Configuration	Processor	Memory	Display	Radios
ET80 TGL i5 Core WLAN	TGL U42 4 +2 Core i5-1130G7 8MB LLC Gen12 GFX	8 GB or 16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 WIFI6E 802.11ax 2X2 MIMO  WPAN: Bluetooth v5.2 Low Energy
ET85 TGL i5 Core WAN	TGL U42 4 +2 Core i5-1130G7 8MB LLC Gen12 GFX	8 GB or 16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 802.11 ax - WIFI6E Quectel RM505Q 4x4 MIMO  WPAN: Bluetooth v5.2 Low Energy  WWAN: 5G
ET85 TGL i5 Core WAN	TGL U42 4 +2 Core i5-1130G7 8MB LLC Gen12 GFX	8 GB or 16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 802.11 ax - WIFI6E Quectel EM121 Cat12 2X2 MIMO  WPAN: Bluetooth v5.2 Low Energy  WWAN: LTE
ET80 TGL i7 Core w/Vpro WLAN	TGL U42 4 +2 Core I7-1180G7 12MB LLC Gen12 GFX	16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 WIFI6E 802.11ax 2X2 MIMO  WPAN: Bluetooth v5.2 Low Energy
ET85 TGL i7 Core w/Vpro WAN	TGL U42 4 +2 Core I7-1180G7 12MB LLC Gen12 GFX	16GB RAM/ 128 GB or 256 GB or 512 GB PCIe SSD	3:2 Aspect Ratio  12.0 inch 800 Nits	WLAN: Intel Typhoon Peak 2 802.11 ax - WIFI6E Quectel RM505Q 4x4 MIMO  WPAN: Bluetooth v5.2 Low Energy  WWAN: 5G
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## Energy Star



Zebra products that are Energy Star qualified help you save money while improving the quality of the environment. The sleep mode of your tablet is especially adept at saving energy, often up to 80% or more.

ENERGY STAR® is the government-backed symbol for energy efficiency, providing simple, credible, and unbiased information that you can rely on to make well-informed decisions. Thousands of industrial and commercial products deliver cost-saving energy solutions that improve air quality and protect the climate. ENERGY STAR and its partners have helped save families and businesses trillions of kilowatt-hours of electricity and reduced greenhouse gases every year.

You can see more information about Energy Star features at: [energystar.gov](http://energystar.gov)

This PC is ENERGY STAR® compliant. The power management settings enabled by default on this PC have been selected for compliance with the current ENERGY STAR® Requirements. For optimal energy savings, ENERGY STAR® recommends that sleep mode is entered within 30 minutes of user inactivity and the display is turned off within 15 minutes of user inactivity.

The default power management settings on this PC are as follows.

Power Settings	On Battery	On AC
Turn off the display	5 minutes	20 minutes
Computer to sleep	5 minutes	20 minutes

## Notational Conventions

The following conventions are used in this document:

- Tablet refers to the Zebra ET80/ET85 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 (such as those that describe step-by-step procedures) appear as numbered lists.

## Icon Conventions

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

## About This Document



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



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



**CAUTION—EYE INJURY:** Wear protective eyewear when performing certain tasks.



**CAUTION—PRODUCT DAMAGE:** If the precaution is not taken, the product could be damaged.



**CAUTION:** If the precaution is not heeded, the user could receive minor or moderate injury.



**CAUTION—HOT SURFACE:** Touching this area could result in burns.



**CAUTION—ESD:** Observe proper electrostatic safety precautions.



**CAUTION—ELECTRIC SHOCK:** Disconnect the printer power before performing certain procedures to avoid the risk of electric shock.



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



**DANGER!** If danger is not avoided, the user WILL be seriously injured or killed.



**NOTE:** This is an icon for wired networking notes.



**NOTE:** This is an icon for wireless networking notes.

## Service Information

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

When contacting support, please have the following information available:

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

Zebra responds to calls by email, telephone or fax within the time limits 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.

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

## Software Release Information

To check the software release information:

1. Touch the **Start** icon .
2. Select **Settings > System > About**.
  - Device Specifications - Displays the device model number followed by the software release date and serial number.
  - Windows Specifications - Displays the OS version.

# Getting Started

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

## Unpacking

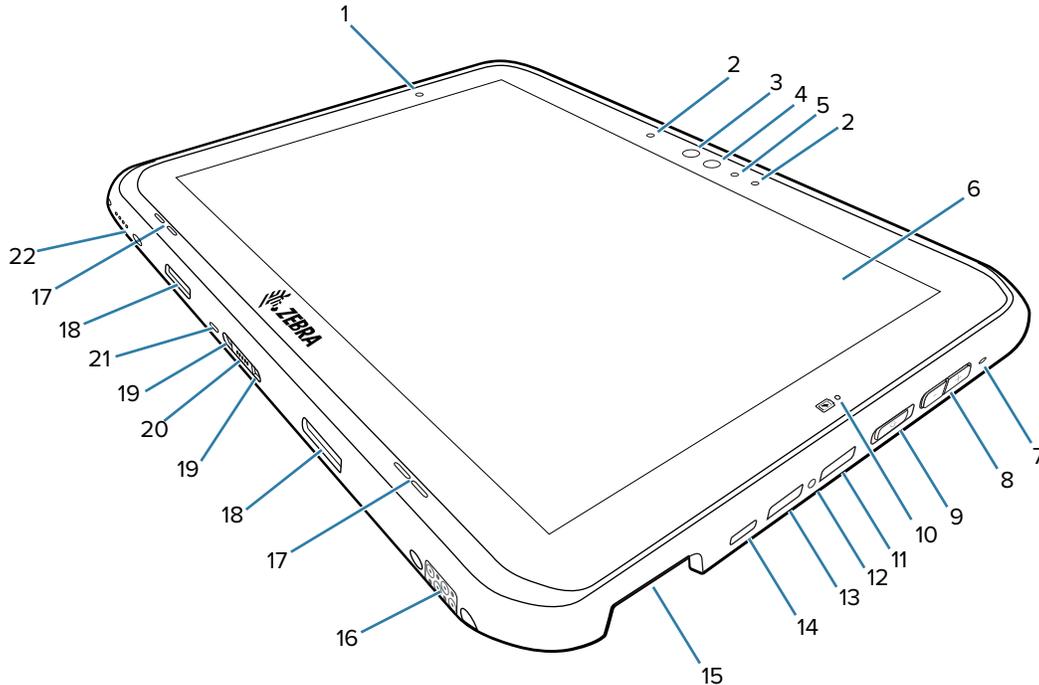
1. Carefully remove all protective material from the device and save the shipping container for later storage and shipping.
2. Verify that the following were received:
  - Rugged 2-in-1 tablet
  - Regulatory guide
  - SIM lock plate with screw (may be available on some ET85 models)
3. Inspect the equipment for damage. If any equipment is missing or damaged, contact the Global Customer Support center immediately.
4. Prior to using the device for the first time, remove the protective shipping film that covers the scan window and display.

## Features



**NOTE:** Some features may not be available on all configurations.

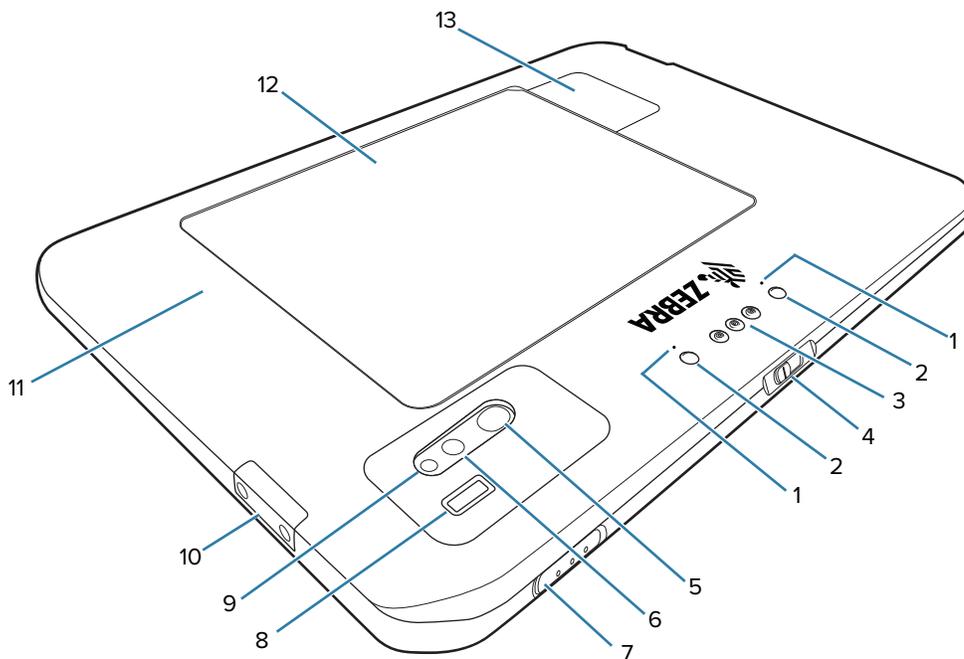
**Figure 1** Front View



1	Light sensor	Determines ambient light for controlling display backlight intensity.
2	Front microphones	Use for voice communications or audio recordings.
3	Windows Hello Infrared Illuminator	Illuminates your face with infrared (IR) light during Windows Hello face authentication.
4	Front camera	Use for video conferencing.
5	Camera indicator LED	Illuminates when the camera is activated. Momentarily lights white when the device boots.
6	Touch screen	Displays all information needed to operate the device.
7	Stylus tether mount	Use to attach a stylus tether mount.
8	Volume up/down button	Increases and decreases audio volume.
9	Power button	Turns the display on and off. Press and release to power on the device. Press and hold to reset the device or power off.
10	Charging indicator LED	Indicates power state and battery charging status while charging and application generated notifications.
11	USB-A port	Provides USB host and client communications.
12	Threaded Insert	Use to restrict access to the USB ports in hazardous locations (requires boot).

13	USB-A port	Provides USB host and client communications.
14	USB-C port	Provides USB host and client communications, and device charging via cables and accessories.
15	Scanner window	Provides data capture using the imager.
16	Dock interface connector	Provides communication to the device from the dock.
17	Speakers	Provides audio output.
18	Keyboard latch slot	Attaches the keyboard to the tablet.
19	Keyboard alignment slot	Assists in aligning the tablet with the keyboard.
20	Keyboard interface connector	Provides power and communication with the keyboard
21	Kensington security slot	Use with a security cable to lock the tablet to the keyboard.
22	Power interface connector	Provides power to the device through the dock.

**Figure 2** Back View



1	Rear microphones	Use for audio recordings.
2	Dock alignment slot	Assists in aligning the tablet with the dock.
3	Pass-through antenna	Use to connect to an external antenna.
4	Front camera privacy cover switch	Use to cover the front camera when not in use.
5	Rear camera privacy cover	Use to cover the rear camera when not in use.
6	Rear camera LED flash	Provides illumination for the camera.
7	Scan button	Initiates barcode data capture when a scan-enabled application is active (programmable).
8	Fingerprint sensor	Provides biometric authentication.
9	Rear camera	Autofocus camera that takes photos.

10	Communication expansion port	For Ethernet and serial communication through the expansion adapter.
11	NFC antenna position	Use to read NFC cards.
12	Battery cover	Provides access to the replaceable battery.
13	Solid State Drive Cover	Provides access to the solid state drive.

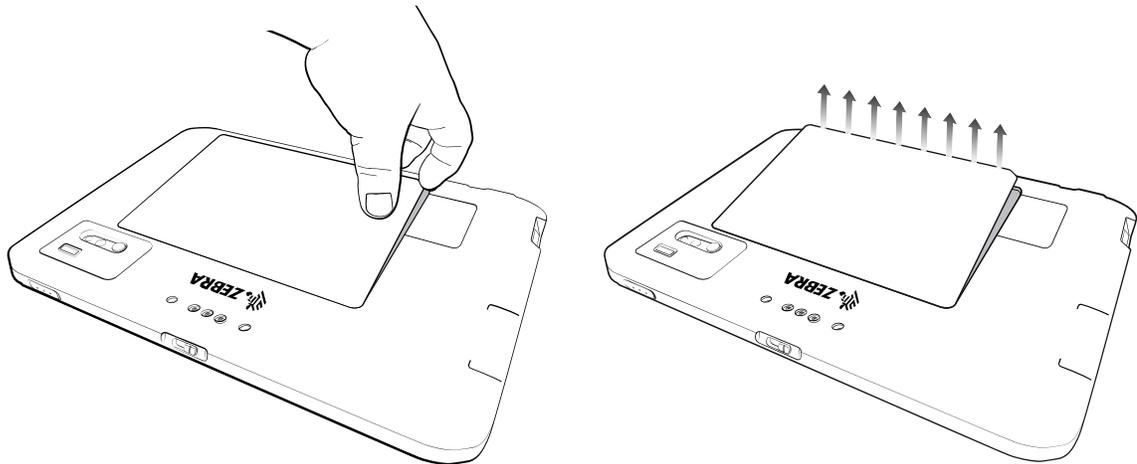
## Setting Up the Device

To start using the device for the first time:

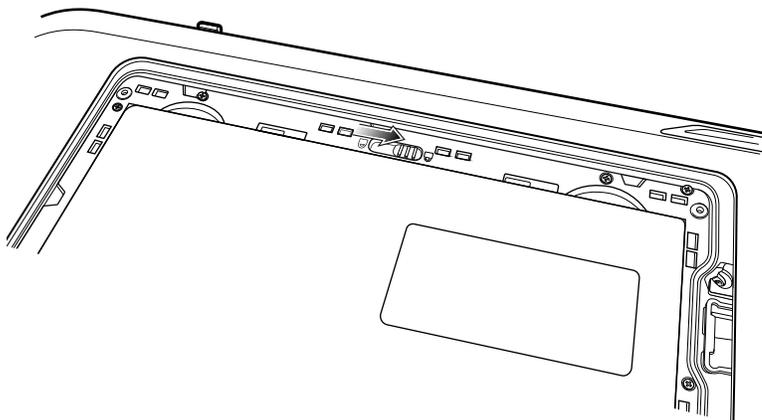
1. Install a nano SIM card (optional for ET85 only).
2. Charge the device.
3. Power on the device.

### Installing a nano SIM Card

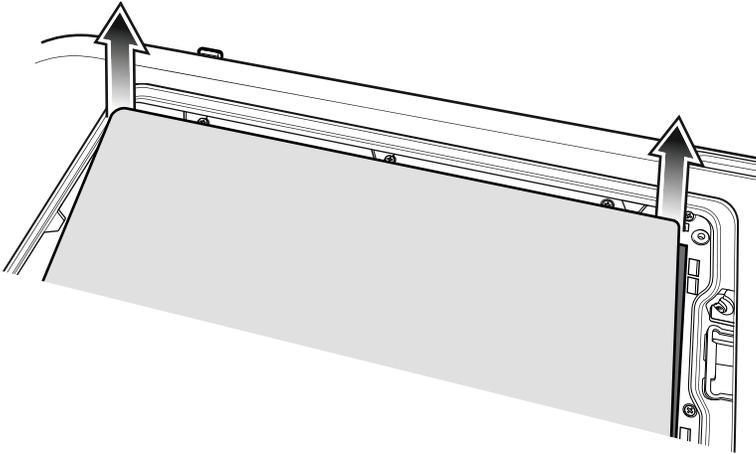
1. Ensure the tablet is powered off.
2. Lift the notched corner of the battery cover and carefully lift the battery cover off the device.



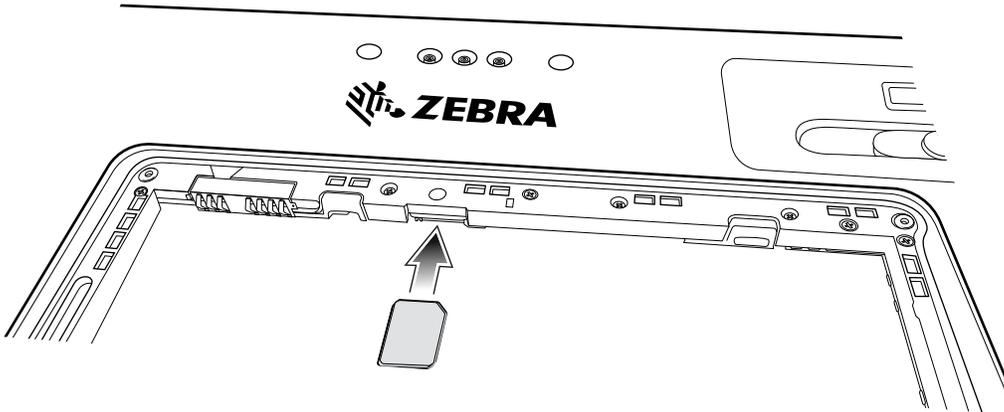
3. Slide the battery lock switch to the unlock position.



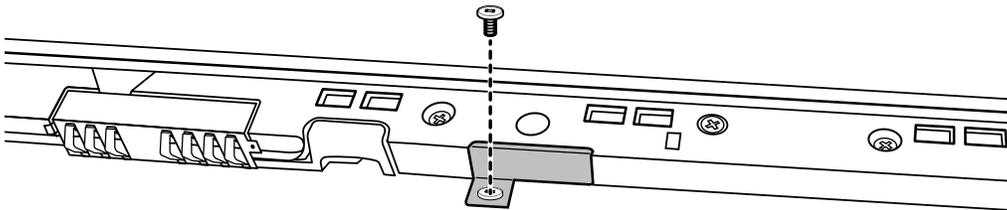
- Using index fingers, lift the battery up.



- Insert the nano SIM card with the contacts facing up.

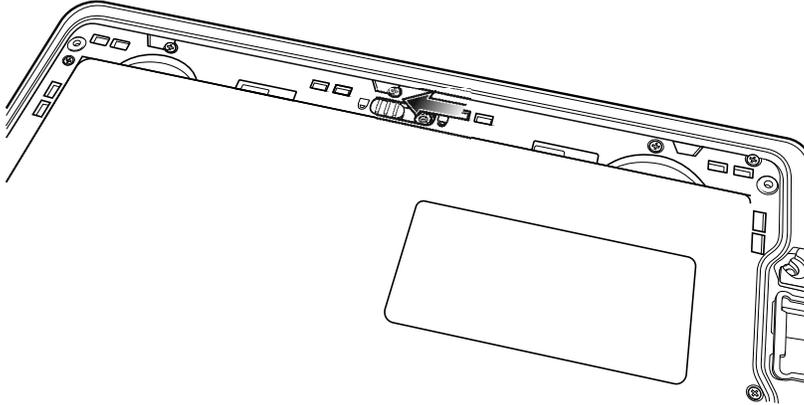


- Push the SIM card in and ensure that it locks into place.
- If required, install the SIM lock plate and secure with the M1.4 x 2 mm screw using a Phillips #0 screwdriver. The maximum torque for the screw is 1 kg/m (7 lb/ft).



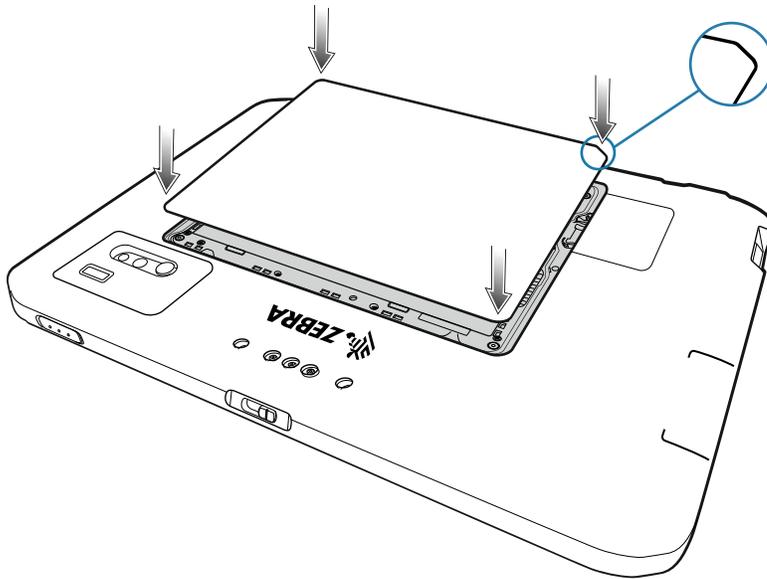
- Replace the battery, ensuring it is seated properly.

- Slide the battery lock switch to the lock position.

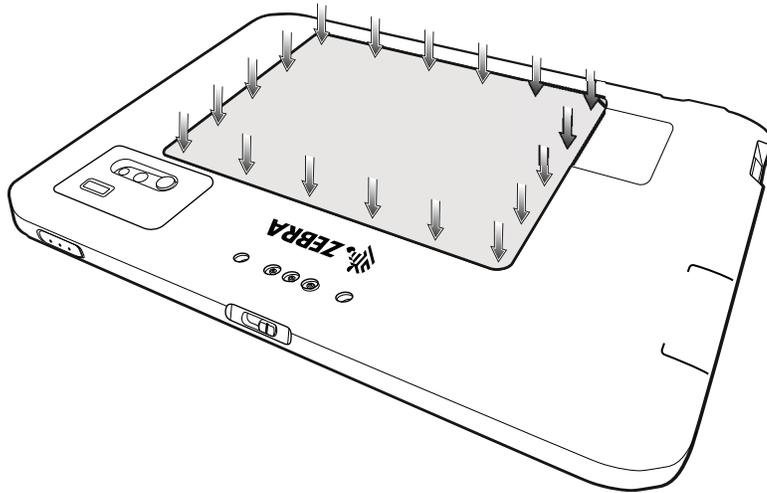


**CAUTION:** Be aware of the orientation of the battery cover. Failure to replace the battery cover properly may cause damage.

- Align the tabs on the underside of the cover with the slot around the battery well.
- Ensure that the chamfer on the battery cover is at the bottom left corner of the device.



12. Carefully press down around the edges of the cover. Make sure that the cover is seated properly.



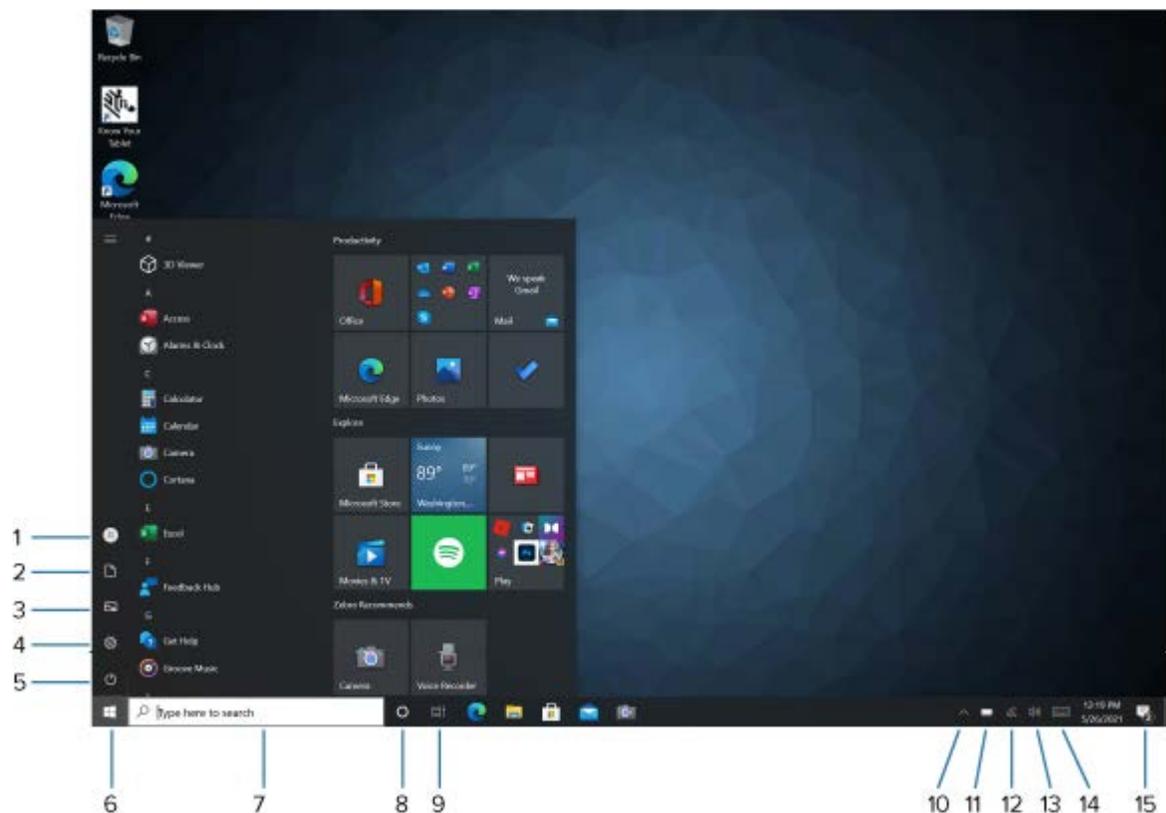
# Using the Tablet

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

## Start Screen

By default, the Start screen displays in Desktop mode.

**Figure 3** Start Screen in Desktop Mode



1	Users	Opens user account window, locks screen or logs user off the device.
2	Documents	Opens documents folder.
3	Pictures	Opens pictures folder.
4	Settings	Opens the <b>Settings</b> window.
5	Power	Touch to place the device in sleep mode, shutdown or restart.

6	Start	Access the Home screen from any window.
7	Search	Search apps, settings, and files on your tablet or perform a web search.
8	Cortana	Opens voice activated search window.
9	Recent Applications	Displays all open applications.
10	More Settings	Includes Bluetooth, Intel Graphics, and Windows Defender.
11	Battery	Displays current battery status.
12	Network	Opens network settings.
13	Sound	Use to control audio volume level.
14	Keyboard	Opens the virtual keyboard.
15	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.

## Know Your Tablet

You can access information about your tablet by touching **Know Your Tablet** on the desktop.

This app has icons that provide access to PC information and Support. The Support page includes information about drivers, BIOS, accessories, and documentation.

## Tablet Information

The System Information window displays information about the BIOS, the battery, the network adapters, the hard disk. This information is stored on the solid-state drive (SSD) in your tablet.

## Support

Select **Support** to open the Zebra web site, where you can access these sites and pages:

- Product support
- User documentation
- Software, Firmware/BIOS, and driver downloads
- Knowledge base articles
- Repair request and status and RMA status
- Warranty information
- Registration
- TPM notification for security advisory

## Battery Management

Follow these tips to optimize battery life.

- 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.

### Optimizing Battery Life or Performance

Optimize the battery life when running the tablet on battery power, or optimize performance when the tablet is connected to a power source.

1. In the taskbar, touch the battery icon and use the slider to adjust for battery life or performance.
2. Touch **Battery settings** to display battery saver options.

### 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**.

### Manually Activate Sleep Mode

Manually activate sleep mode to conserve battery power when you are not actively using the tablet.

1. It is recommended to first save your files.
2. Touch the **Start** icon  and then the **Power** icon  just above it.  
A small menu pops up.
3. Touch **Sleep**.  
The screen goes dark and the computer enters sleep mode.
4. You can wake up the tablet by pressing the **Power** button

### Battery Health Monitor

Use the Battery Health Monitor app to view battery health and information.

- Battery Health - The health of the battery.
- Manufacture Date - The date of manufacture.
- Serial Number - Serial number of the device.

A warning message appears if the battery is past its useful life and should be replaced.

### Viewing Battery Health

1. In the taskbar, select .
2. Select .

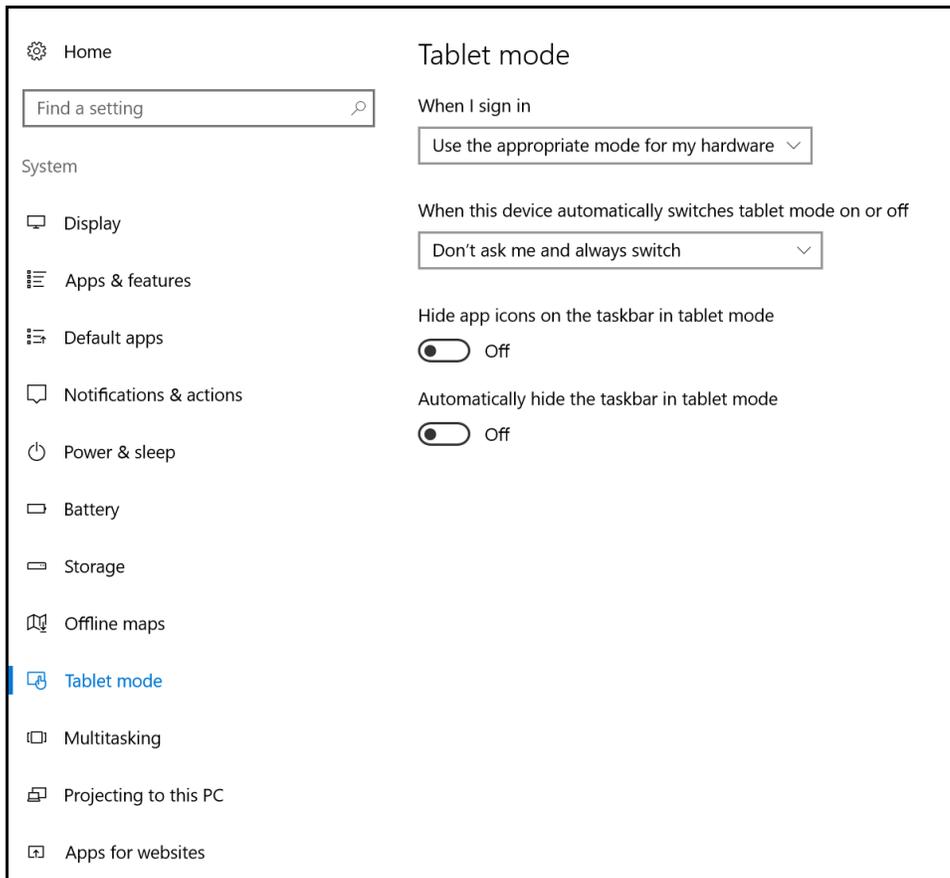
## Tablet Mode

This section describes how to configure and use tablet mode.

### 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.

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



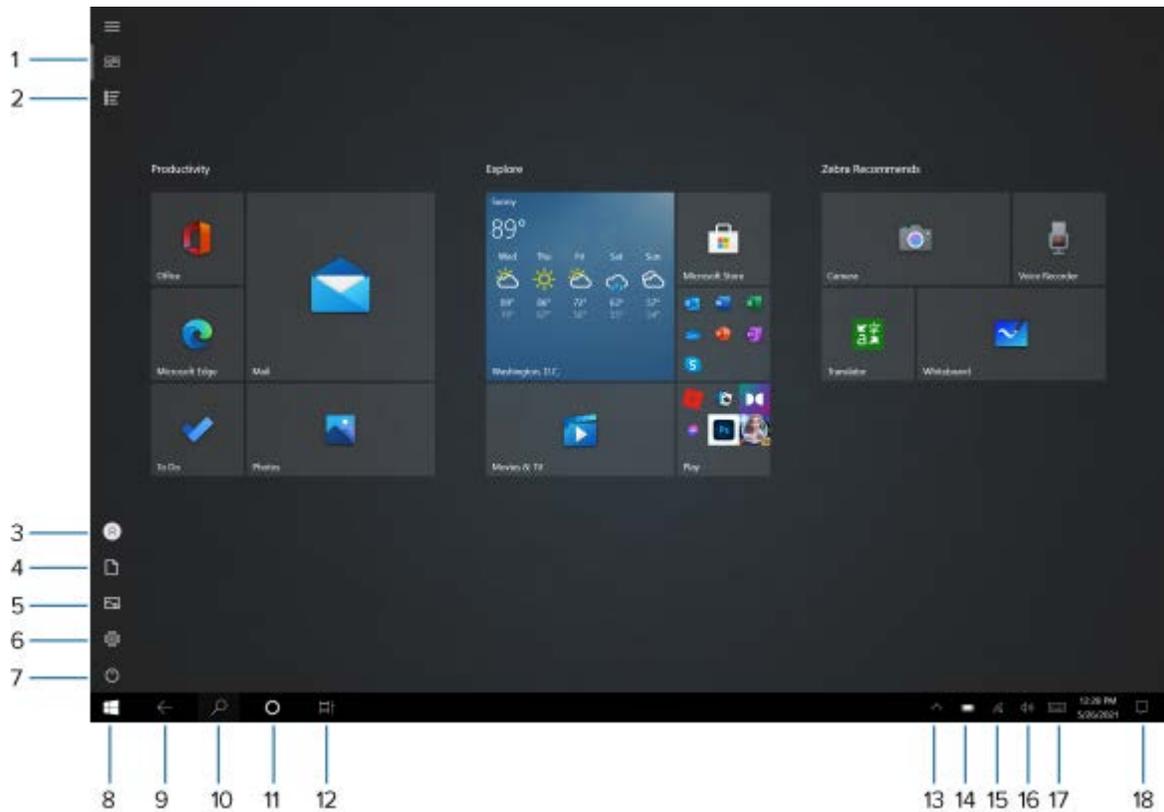
- **When I sign in:**
  - **Use tablet mode** - set to tablet mode after signing in.
  - **Use desktop mode** - set to desktop mode after signing in.
  - **Use the appropriate mode for my hardware** - let the tablet determine if it is.
- When this device automatically switches tablet mode on or off
  - 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.

## Tablet Mode Start Screen

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 [Know Your Tablet](#) for information.

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

**Figure 4** Start Screen in Tablet Mode



1	Pinned tiles	Places the Home screen in Tile view.
2	All apps	Lists all applications alphabetically.
3	Users	Opens user account window, locks screen or logs user off the device.
4	Documents	Opens documents folder.
5	Pictures	Opens pictures folder.
6	Settings	Opens the <b>Settings</b> window.
7	Power	Touch to place the device in sleep mode, shutdown or restart.
8	Start	Access the Home screen from any window.
9	Back	Displays the previous screen.
10	Search	Search apps, settings, and files on your tablet or perform a web search.
11	Cortana	Opens voice activated search window.
12	Recent Applications	Displays all open applications.
13	More Settings	Includes Bluetooth, Intel Graphics, and Windows Defender.
14	Battery	Displays current battery status.
15	Network	Opens network settings.

16	Sound	Use to control audio volume level.
17	Keyboard	Opens the virtual keyboard.
18	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.

## Multi-Touch Gestures

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.

## Configuring Touch Settings

1. Touch the **Search** 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 Mode**.

2. When prompted to allow device changes, touch **Yes**. The **Touch Mode** window displays with the current mode indicated.



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

## On-Screen 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.

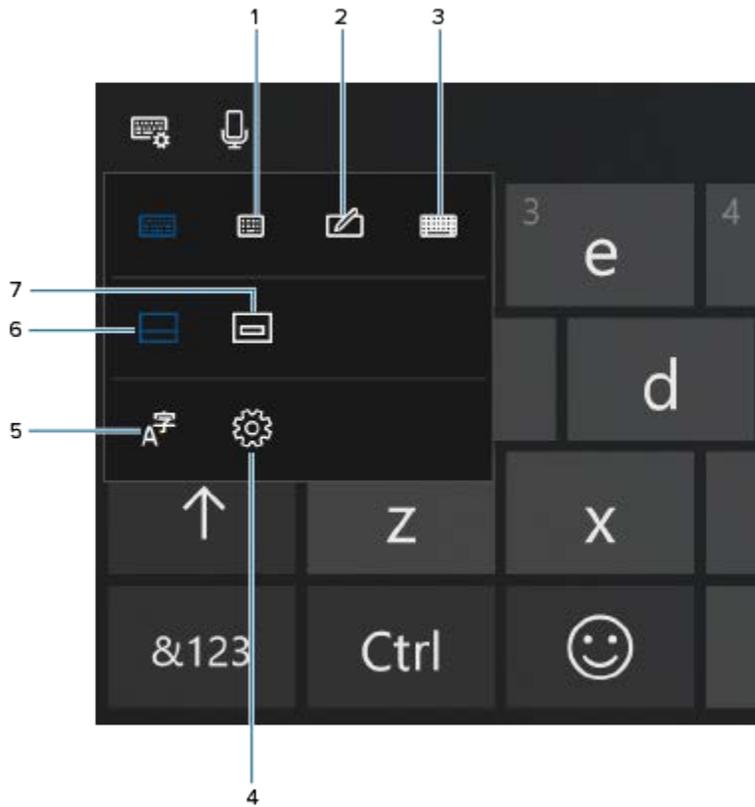
### Opening the On-Screen Keyboard

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

### Opening the 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.



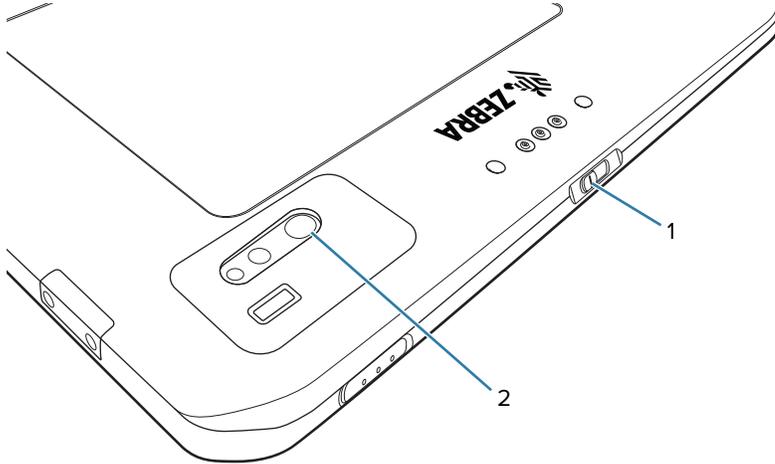
1	Small keyboard
2	Handwriting panel
3	Alternate keyboard layout
4	All settings
5	Region and language
6	Small keyboard
7	Change keyboard width

## Active Stylus

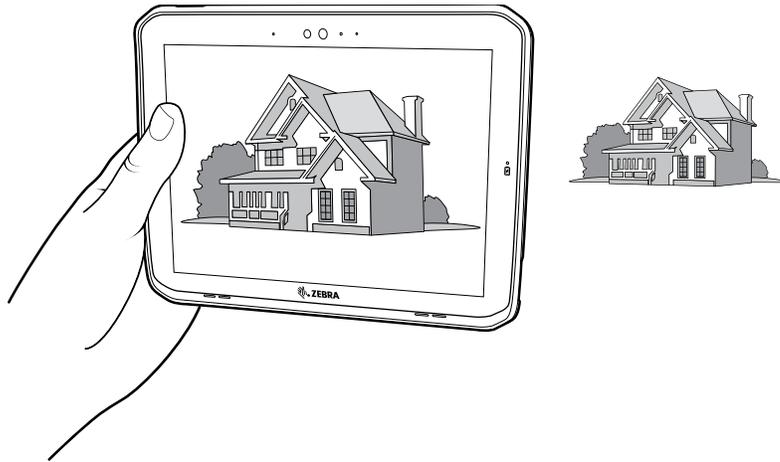
The tablet supports stylus pens with Microsoft pen protocol MPP 2.0 technology, including the ET80/ET85 active stylus.

## Using the Camera

1. Ensure the front camera privacy cover (1) or rear camera privacy cover (2) is open.



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



## Fingerprint Reader

You can use the fingerprint reader to log on to the tablet by reading your fingerprint instead of entering a password. This feature provides an additional level of security for the tablet.



**NOTE:** The fingerprint reader is available only on some configurations.

These instructions assume that you have a password for logging into your tablet.

### Setting Up a PIN



**IMPORTANT:** To use the fingerprint reader, you need to set up a PIN. If you already have a PIN, then you can skip these steps and go to [Setting Up the Fingerprint Reader on page 29](#).

1. Touch the Windows **Start** icon  and touch the **Settings** icon. 

The Settings window appears.

2. Touch the **Accounts** icon.



The Accounts window appears.

3. In the left pane, touch **Sign-in options**.
4. In the right pane of the Sign-in options, under **Windows Hello PIN**, touch **Add**.
5. Enter your PIN and touch **OK**.

Now you can set up the fingerprint reader.

### Setting Up the Fingerprint Reader

After you have a PIN, the Windows Hello section of the Sign-in Options is enabled and you can set up your fingerprint.

1. Touch the Windows **Start** icon  and touch the **Settings** icon  above it.

The Windows Settings menu appears.

2. Touch the **Accounts** icon.



3. Touch **Sign-in options** in the left pane.
4. Touch **Windows Hello Fingerprint > Set up**.

A welcome window appears.

5. In this window, touch **Get started**.
6. Enter your PIN.
7. Decide which finger to use.
8. The setup asks you to place your finger on the fingerprint reader a few times for it to map your finger.
9. It prompts you to touch the sensor multiple times and from different angles. Follow the instructions as you are registering your fingerprint.

10. When successful, touch **Close**.

11. Next time you log in, you can use your PIN or you can use your finger on the fingerprint reader.



**NOTE:** You can register more than one finger to use with this reader. Keep in mind which fingers you have established with the reader and use only those fingers.

## Logging In with Your Fingerprint

When you start the tablet or wake it up from sleep mode, put your finger on the fingerprint scanner and press it for a brief time.

It will either recognize your print and open up Windows or it will ask you to try again.

## Fingerprint Reader Tips

- Be consistent. Press the finger to the scanner and hold it there for a moment and scan at the same angle each time. For example, if you register your finger with your hand open, hold your hand the same way each time you scan.
- Read the prompts carefully and ensure that you wait for the prompt before you swipe.
- When scanning, press hard enough to fully contact the sensor.
- Wipe dirt or debris off your finger before scanning it so nothing interferes with the scan. Rub your fingers together to stimulate the natural skin oils so your fingerprint is easier to detect.
- If you are having trouble registering a specific finger, try to register a different finger.
- If you are repeatedly having trouble getting a good scan, you might need to clean the sensor. See [Cleaning the Fingerprint Reader on page 73](#).



**NOTE:** Be sure to press your finger to the scanner in the same way each time.

## Windows Hello Face

You can use the front camera to log on to your tablet using Windows Hello Face Authentication instead of entering a password.

### Setting Up Windows Hello Face

To use Windows Hello Face, you need to set up a PIN. For steps on how to set up a PIN, see [Setting Up a PIN on page 29](#).

1. Touch the Windows **Start** icon  and touch the **Settings** icon. 

The Settings window appears.

2. Touch the **Accounts** icon.



The Accounts window appears.

3. In the left pane, touch **Sign-in options**.
4. Touch **Windows Hello Face > Set up > Get Started**.
5. Enter your PIN.
6. Hold your face steady until the image is captured.

### Logging In with Windows Hello Face

When you start the tablet or wake it up from sleep mode, make sure your face is in view of the front camera.

If your face is not recognized, the Sign-in screen displays. Log in with your PIN or touch **Sign-in options** for more options.

# Software

This chapter provides instructions on initial setup, how to reset the tablet, and how to reinstall Windows.

## Initial Windows Setup

After performing a factory reset or updating the tablet firmware or operating system, the Windows setup process begins.

The welcome screen appears and then a series of windows prompt you for information regarding your preferences including Keyboard Layout, Network Setup, Account Name, Security, and Privacy.

Next, a short configuration process occurs after which the Windows home screen displays.

Any apps that you installed from the Windows Store prior to reset, are automatically reinstalled using your mobile broadband or Wi-Fi internet connection when connected; apps installed from other sources are not. After the process is complete a list of apps removed during reset is created on the desktop.

## Factory Reset

Restores Windows to original factory settings. To reset the device:

1. Connect the device to a power source.
2. Touch **Settings > Update and security > Recovery**.
3. Under **Reset this PC**, touch **Get started**.
4. Touch **Keep my files** to remove all apps and settings but keep all personal files or **Remove everything** to remove all personal files, apps, and settings.



**CAUTION:** Removing everything erases all data, including your account configuration, applications, music, pictures and files. Make sure that you back up all the required data before you proceed.

5. Touch **Next** until the reset process begins. The process can take an hour or longer.
6. When the reset is complete the Windows setup process begins.

## Reinstall Windows

Create an installation USB flash drive to reinstall the operating system on the device.



**CAUTION:** All data on the tablet is erased upon installation.

### Creating an Installation USB Flash Drive

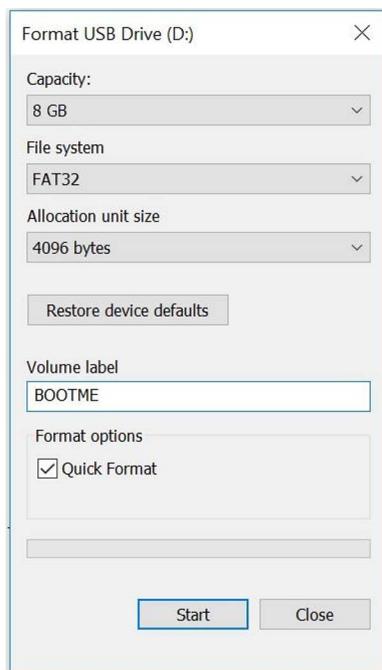
Before you begin, request software for your tablet by visiting Zebra Support and Downloads at [zebra.com/support](http://zebra.com/support) and download the software to a host computer.



**NOTE:** Make sure the entire file downloads completely. Partial downloads may corrupt the device.

1. Insert a 16 GB or larger USB flash drive into a host computer.
2. From **Windows Explorer** right click on the USB flash drive and select **Format**.

**Figure 5** Format Dialog Box



3. In the **File system** drop down, select **FAT32**.



**CAUTION:** Only FAT32 format is recognized by the system BIOS.

4. In the **Volume label** text box, enter **BOOTME**.
5. Click **Start**. A warning appears; click **OK** to proceed.
6. Click **OK** when the format complete and confirmation dialogs appear.
7. Using **Windows Explorer**, extract the software file you downloaded into a folder.
8. Copy the entire contents of the folder to the formatted flash drive.
9. Ensure that all the files copied successfully and then safely unmount the USB drive.

## Reinstalling Windows

Before you begin, connect either the ET80/ET85 keyboard or any standard USB keyboard to the tablet. A physical keyboard is required to complete the setup.

1. Connect the tablet to a power source.
2. Plug the bootable USB flash drive into the tablet USB port.
3. Re-boot the device.
4. When the Zebra loading screen appears, select **BBS** from the top right corner.
5. Select **USB**. The tablet boots to WinPE and installs the operating system and BIOS updates. Installation takes approximately 9 minutes.
6. When complete, press Alt + F4 on the keyboard. The device reboots and the Windows setup process initiates. See [Initial Windows Setup](#).
7. After Windows setup is complete, in the taskbar, touch , then touch , then touch **Eject (drive name)**.
8. After the message **Safe To Remove Hardware** message appears, remove the flash drive from the tablet.

## Check Versions

You may check the versions for:

- BIOS Version
- Operating system Version

### Checking BIOS Version

To check the current version of the BIOS:

1. In the search field, type `cmd`, then touch **Command Prompt Desktop App** to open.
2. In the Command window, type `msinfo32`.
3. Press Enter key. The **System Information** window appears. The BIOS version displays in the **BIOS Version/Date** field.

### Checking Operating System Version

To check the current operating system version, see [Software Release Information on page 11](#).

## Enter the BIOS

Enter the BIOS to make system changes such as managing your hardware and changing the boot sequence.

### Entering the BIOS with a Keyboard

1. Connect a keyboard to the tablet.
2. Start or restart the tablet.
3. Before the boot screen appears, repeatedly press the F2 key on the keyboard.

### Entering the BIOS without a Keyboard

1. Start or restart the tablet.
2. When the boot screen appears, repeatedly tap the screen above the Zebra logo.
3. Select **Enter Setup**.

### Entering the BIOS without a Keyboard from Windows

Enter the BIOS without a keyboard from Windows.

1. From Windows, touch the **Start** icon .
2. Touch  **All Settings** > **Update & Security** > **Recovery**.
3. Under Advanced startup, touch **Restart Now**. Windows shuts down.
4. Touch **Troubleshoot**.
5. Touch **Advanced options**.
6. Touch **UEFI Firmware Settings**.

7. Touch **Restart**.

## Zebra Barcode Scanning Resources

To obtain Zebra scanning resources such as applications, SDKs, drivers, and RFID software see the Zebra Barcode Scanning Software web page at:

[zebra.com/us/en/products/software/scanning-systems.html](https://zebra.com/us/en/products/software/scanning-systems.html).

## Application Installation

Install programs and apps from the Internet, or a local network. Make sure you trust the publisher of the app and the website.

In your web browser, tap or click the link to the app. To install it now, tap **Open** or **Run**, and then follow the instructions on your screen. To install the app later, tap **Save** or **Save as** to download it.

## Getting Apps from the Windows Store

To obtain apps from the Windows Store, select the Store tile  from the Start menu or taskbar.

# Data Capture

The device supports data capture using an integrated scanner and Windows compatible Zebra Bluetooth and USB scanners.

For information on pairing and scanning using Zebra scanners, go to the Product Reference Guide for your scanner.



**NOTE:** When using 123Scan to configure the ET80/85 on-board scan engine, a mouse is required. 123Scan does not support touch screen use.

## Imaging

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

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

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

## Digital Camera

The device with an integrated camera based barcode scanning solution has the following features:

- Omnidirectional reading of a variety of barcode symbologies, including the most popular linear, postal, QR, PDF417, and 2D matrix code types.
- Cross-hair reticle for easy point-and-shoot operation.
- Picklist mode to decode a particular barcode from many in the field of view.

The solution uses the advanced camera technology to take a digital picture of a barcode, and executes state-of-the-art software decoding algorithms to extract the data from the image.

## Scanning Considerations

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

- **Range:** Scanners decode best over a particular working range — minimum and maximum distances from the barcode. This range varies according to barcode density and scanning device optics. Scan within range for quick and constant decodes; scanning too close or too far away prevents decodes. Move the scanner closer and further away to find the right working range for the barcodes being scanned.
- **Angle:** Scanning angle is important for quick decodes. When the illumination/flash reflects directly back into the imager, the specular reflection can blind/saturate the imager. To avoid this, scan the barcode so that the beam does not bounce directly back. Do not scan at too sharp an angle; the scanner needs to collect scattered reflections from the scan to make a successful decode. Practice quickly shows what tolerances to work within.
- Hold the device farther away for larger symbols.
- Move the device closer for symbols with bars that are close together.

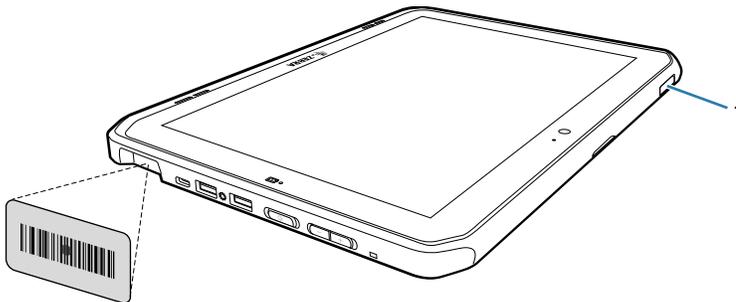


**NOTE:** Scanning procedures depend on the app and device configuration. An app may use different scanning procedures from the one listed above.

### Scanning with Internal Imager

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

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

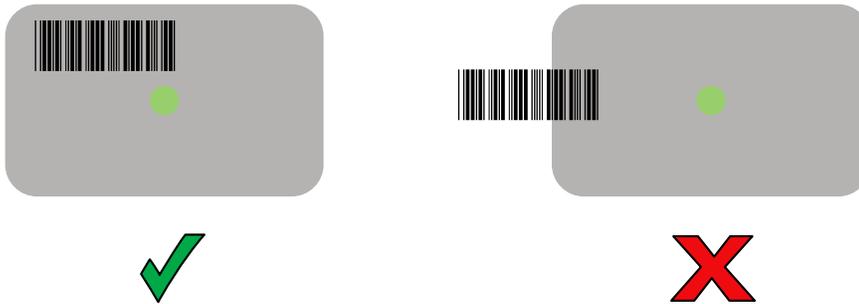


3. Press and hold the Scan button (1). The aiming pattern turns on to assist in aiming.

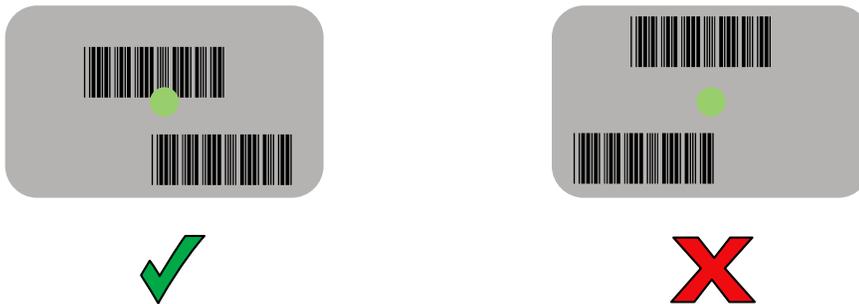
4. Ensure the barcode is within the area formed by the aiming pattern. The aiming dot increases visibility in bright lighting conditions.

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

**Figure 6** Internal Scanner Aiming Pattern



**Figure 7** Internal Scanner Pick List Mode with Multiple Barcodes in Aiming Pattern



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

# 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 be 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 1** 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

**Table 1** WLAN Security Options (Continued)

Security Type	Encryption	EAP Method	Authentication Method
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
		802.1x	WEP
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.
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**.

## 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**.
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:** ET85 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.
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.
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**.

## 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.

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.

## Near Field Communications

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

### Enabling NFC

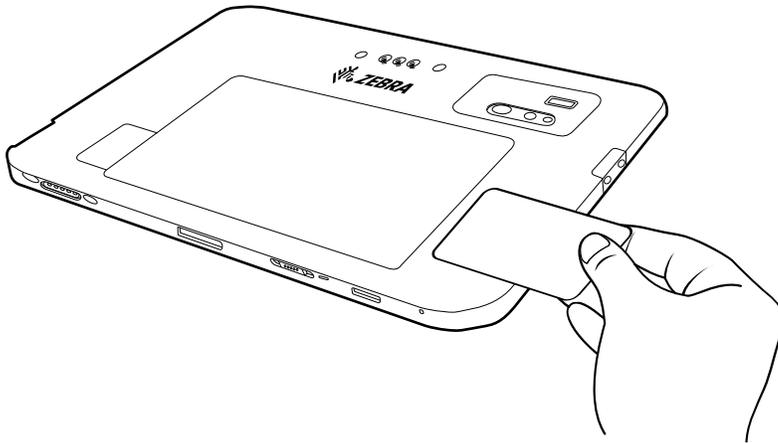
NFC is disabled by default. Before using NFC, you must enable it in the BIOS and then in Windows.

1. Enter the BIOS setup. See [Enter the BIOS on page 35](#).
2. From the BIOS setup screen, select the **Advanced** tab.
3. Select **NFC Controller > Enabled**.
4. Select the **Save & Exit** tab.
5. Select **Exit Saving Changes > Yes**.
6. After Windows loads, go to **Settings > Network & Internet > Airplane mode**. Under **Wireless devices**, select the NFC slider to turn it on.

### Reading NFC Cards

The tablet supports reading NFC cards. The NFC antenna is located on the back of the tablet 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.



# Accessories

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

This following table lists the accessories available for the device.

**Table 2** Accessories

Accessory	Part Number	Description
<b>Docks</b>		
Vehicle Dock	CRD-ET8X-VEHDK1-01	Provides tablet charging, USB communication, and Ethernet communication. Includes set of 10-32 nuts (4), screws (4), and washers (4). Mount not included. Supports VESA 100 x 100, 100 x 50, and 75 x 75.
Power Dock	CRD-ET8X-PWRDK1-01	Provides tablet charging only. Requires power supply (PWR-BGA15V45W-UC-WW) with country specific AC line cord. Includes set of 10-32 nuts (4), screws (4), and washers (4). Mount not included. Supports VESA 100 x 100, 100 x 50, and 75 x 75.
Office Dock	CRD-ET8X-OFFDK1-01	Provides tablet charging, USB communication, Ethernet communication, and HDMI. Includes stand. Requires power supply (PWR-BGA15V45W-UC-WW) with country specific AC line cord.
<b>Communication Cables</b>		
RS232 Serial Cable	CBL-ET8X-SER1-01	Provides Serial communication to the device. Includes tool-less and screw attachment options.
Ethernet RJ45 Cable	CBL-ET8X-E1-01	Provides Ethernet communication to the device. Includes tool-less and screw attachment options.
<b>Audio Accessories</b>		
Bluetooth Headset	HS3100-OTH	Rugged Bluetooth Headset. Includes HS3100 Boom Module and HSX100 OTH Headband Module.

**Table 2** Accessories (Continued)

Accessory	Part Number	Description
<b>Carrying Solutions</b>		
Soft Handle	SG-ET8X-HANDLE1-01	Use with the boot to carry the tablet.
Shoulder Strap	SG-ET8X-SHLDR1-01	Use with the boot to carry the tablet on your shoulder.
<b>Miscellaneous</b>		
Boot	SG-ET8X-BOOT1-01	Adds extra protection for the tablet.
Expansion Module	CRD-ET8X-M-7PEM1-01	Provides USB communication and Ethernet communication.
Expansion Module with HDMI	CRD-ET8X-M-9PEM1-01	Provides USB communication, Ethernet communication, and HDMI.
Pass Through Antenna Module	CRD-ET8X-M-PTA1-01	Provides access to WWAN, GPS, and WLAN antenna signals when the tablet is docked.
Keyboard Support Bracket	CRD-ET8X-M-KBBK1-01	Provides support for an attached keyboard.
Expansion Module Cover	CRD-ET8X-M-PEM1-01	Provides protection for the expansion module ports.
Dock Fan Module	CRD-ET8X-M-FAN1-01	Provides cooling for the tablet when docked.
Replacement Battery	BTRY-ET8X-12IN1-01	Replacement battery for the tablet.
Passive Stylus	SG-TC7X-STYLUS-03	Provides easy writing, drawing, and navigation and accuracy.
Active Stylus	SG-ET8X-STYLUS1-01	Provides easy writing, drawing, and navigation and accuracy with the thin tip and hovering capabilities.
Stylus Coil Tether	SG-ET5X-SLTETR-01	Secures a stylus to the hand strap.
Stylus Holder	SG-ET8X-PENLOOP1-01	Secures a stylus to the tablet.
Expansion Back with Handstrap	ZBK-ET5X-10RH1-01	Provides rotating hand strap and slot for optional Power Pack.
Expansion Back with Smart Card CAC Reader	ZBK-ET8X-SMARTCARD-01	Provides Smart Card CAC reader and slot for optional Power Pack.
Kickstand for Expansion Back	ZBK-ET8X-KICKSTAND-01	Provides a kickstand for Expansion Backs.
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.
Power Pack	BTRY-ET8X-PRPK1-01	Provides additional power for charging the tablet using an Expansion Back.
Replacement Expansion Back Hand Strap	SG-ET5X-RHTP1-01	Replacement hands strap for Expansion Backs.
Forklift Mount	350025	Allows installation of the device on a roll bar or square surface of a forklift.

## Accessories

**Table 2** Accessories (Continued)

Accessory	Part Number	Description
<b>Charge Cables and Power Supplies</b>		
Cigarette Lighter Adapter (CLA) cable	450143	Provides power to the vehicle dock for vehicles providing 12V.
Cigarette Lighter Adapter (CLA) cable	450019	Provides power to the vehicle dock for vehicles providing 12V to 32V.
Direct Wire Power Cable	450134	Use with CLA cable (450019) to connect directly to vehicle power.
Direct Wire Power Cable Kit to Vehicle Docks	300039	Provides power to the vehicle dock for vehicles providing 12V to 14V. Vehicles providing more than 14V require an additional power converter (450083 or 450084).
LXE/Honeywell Power Adapter Cable	ACC-PWRCBL01	Allows ET8X docks to be powered from a legacy LXE/Honeywell power cable. Converts forklifts wired for LXE/HON VX8, VX9, VM1, VM2, and VM3 to support ET8X without re-wiring the forklift. Requires Vehicle Power DC Converter (450083) and Direct Wire Power Cable Kit (300039).
Vehicle Power DC Converter (9V to 60V)	450083	Accepts 9V to 60V (9A maximum) vehicle power and converts it to 13.2V output. Requires Direct Wire Power Cable Kit (300039).
Vehicle Power DC Converter (50V to 150V)	450084	Accepts 50V to 150V (2A maximum) vehicle power and converts it to 13.2V output. Requires Direct Wire Power Cable Kit (300039).
USB to AC Adapter	PWR-BGA15V45W-UC-WW	Provides power to the tablet. Requires country specific AC adapter. 450020.
US AC Line Cord	450040	Provides power to the USB to AC Adapter.
Australia/New Zealand AC Line Cord	450047	Provides power to the USB to AC Adapter.
EU AC Line Cord	450042	Provides power to the USB to AC Adapter.
UK AC Line Cord	450041	Provides power to the USB to AC Adapter.
India AC Line Cord	ACC-L10LINECORD-IN	Provides power to the USB to AC Adapter.
Taiwan AC Line Cord	ACC-L10LINECORD-TW	Provides power to the USB to AC Adapter.
Japan AC Line Cord	ACC-L10LINECORD-JP	Provides power to the USB to AC Adapter.
China AC Line Cord	ACC-L10LINECORD-CN	Provides power to the USB to AC Adapter.
Power Supply	PWR-BGA12V50W0WW	Provides power to the 4-Slot Battery Charger.

## Device Charging

Before using the tablet for the first time, connect it to an external power source. Keep the tablet connected to the external power source until it is fully charged. The Charging Indicator LED turns green when the tablet is fully charged. You may use the tablet while it is charging.

For the best charging experience, Zebra recommends using the ET80/ET85 dock or the Zebra USB-C to AC adapter.

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

## Charging Indicators

The Charging Indicator LED illuminates and changes color to indicate battery status.

State	Indication
Off	Device is not charging. Device is not inserted correctly in the cradle or connected to a power source. Charger/cradle is not powered.
Amber	Device is charging.
Green	Connected to external power and the tablet is fully charged.
Red	Charging error. For example: <ul style="list-style-type: none"> <li>• Temperature is too low or too high.</li> <li>• Charging has gone on too long without completion (typically 8 hours).</li> <li>• Battery is not installed.</li> </ul>

## Charging Temperatures

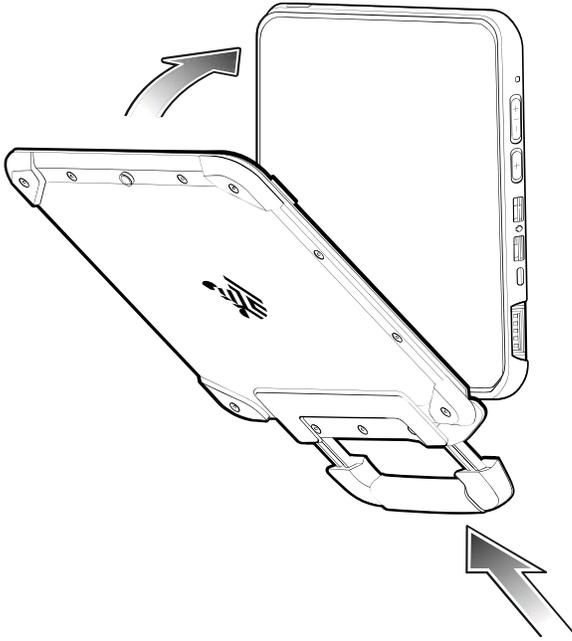
Charge batteries in ambient temperatures from 0°C to 45°C (32°F to 113°F). The tablet or dock always performs battery charging in a safe and intelligent manner. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures.

## Charging Using the Dock

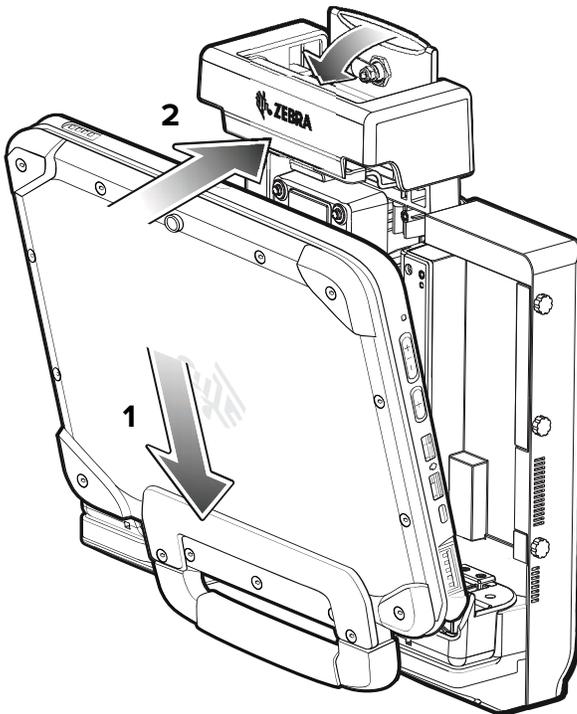
When the tablet is docked and charging, the charging indicator LED illuminates amber.

1. Connect the dock to the appropriate power source.

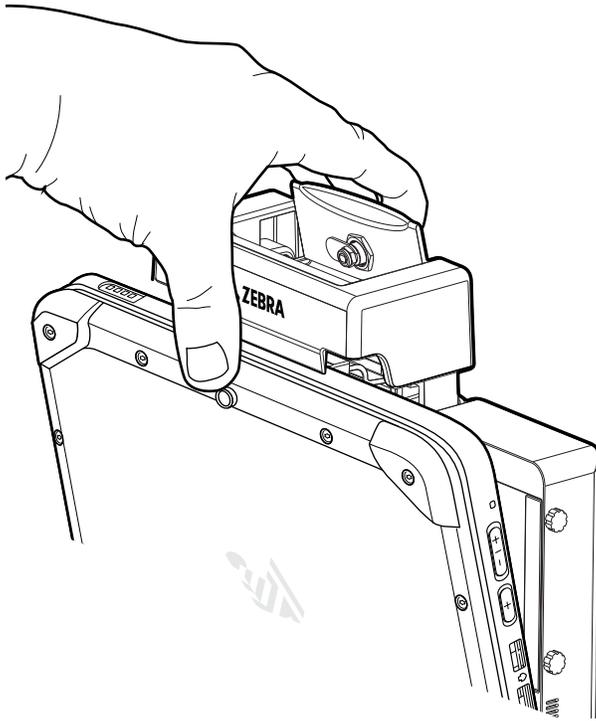
2. If installed, ensure the keyboard and handle are closed.



3. Insert the bottom of the tablet into the bottom of the dock (1), aligning the charging contacts on the tablet with the connector pins on the dock.
4. Rotate the top of the tablet towards the top of the dock (2).



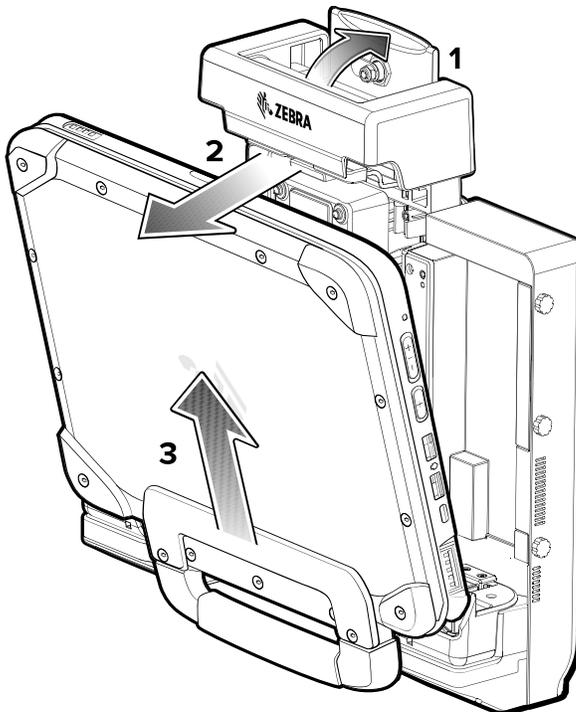
5. Use your thumb to push the tablet into the dock, then push the lever down to secure the tablet.



6. After the tablet is secured in the dock, you can lower the keyboard (optional).

## Removing the Tablet

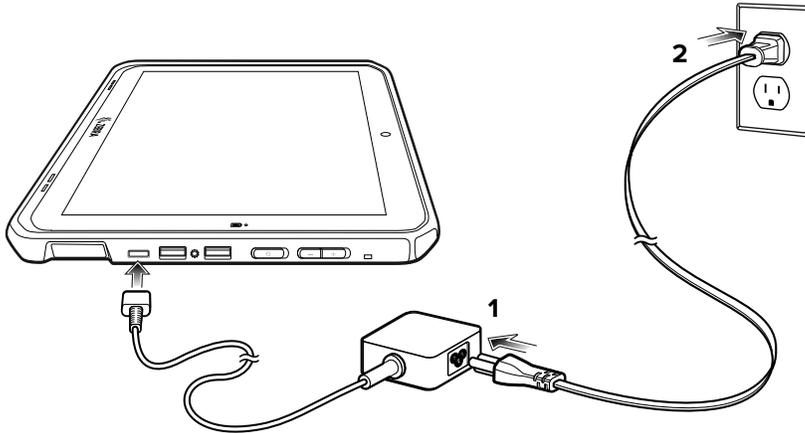
1. If installed, ensure the keyboard is closed.
2. To remove the tablet from the dock, lift the lever on top of the dock (1) to release the tablet, rotate the top of the tablet down (2), then lift the tablet out of the dock (3).



## Charging Using the USB-C to AC Adapter

Use the USB-C to AC adapter to charge the tablet.

1. Plug the AC line cord into the USB-C to AC adapter (1).
2. Plug the AC line cord into the AC wall outlet (2).

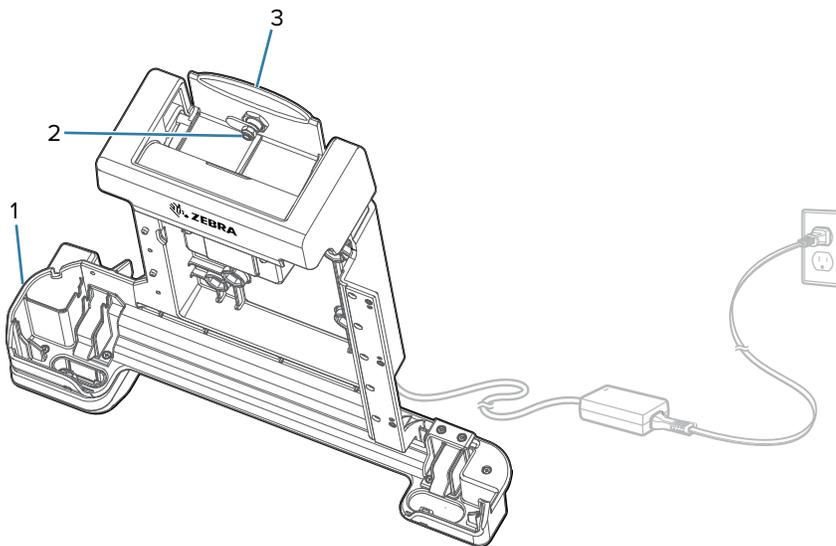


## Power Only Dock

The Power Only Dock provides:

- Power for operating the device.
- Charging for the device's battery and optional Power Pack installed in an Expansion Back.
- Barrel lock and two keys to secure the tablet to the dock.
- Support for VESA 100 x 100, 100 x 50, and 75 x 75.

**Figure 8** Power Only Dock Setup



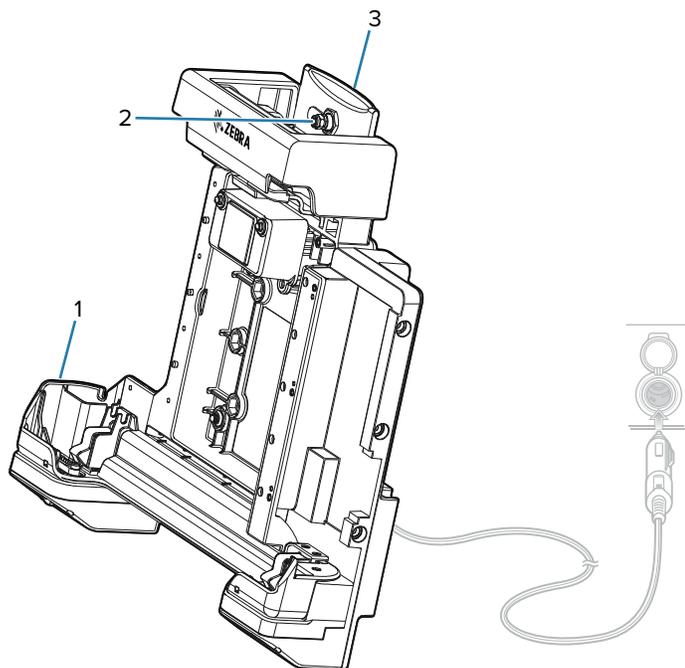
1	Power module
2	Barrel lock (two keys included)
3	Lever

## Vehicle Dock

The Vehicle Dock provides:

- Power for operating the device.
- Charging for the device's battery and optional Power Pack installed in an Expansion Back.
- Ports for connecting USB devices and Ethernet communication.
- Barrel lock and two keys to secure the tablet to the dock.
- Support for VESA 100 x 100, 100 x 50, and 75 x 75.

**Figure 9** Vehicle Dock Setup



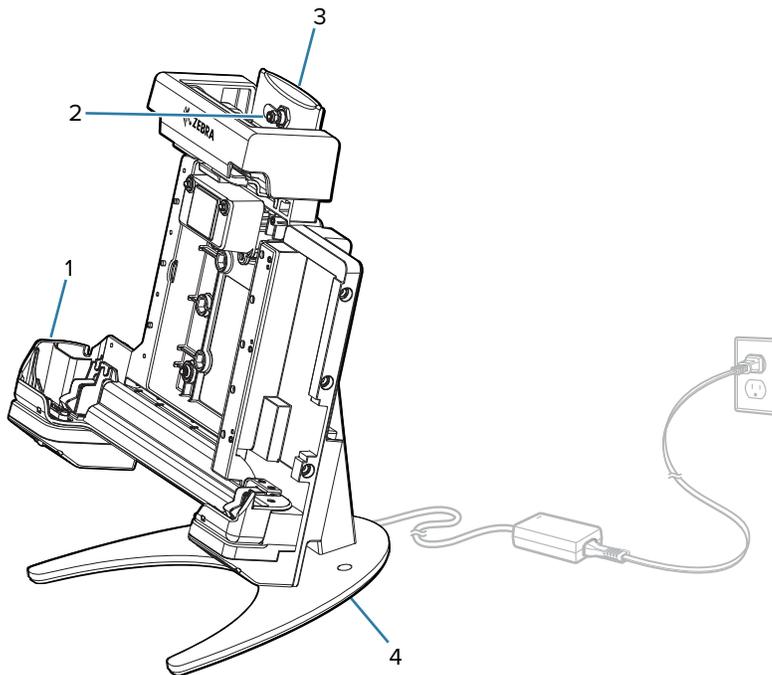
1	Power module
2	Barrel lock (two keys included)
3	Lever

## Office Dock

The Office Dock provides:

- Power for operating the device.
- Charging for the device's battery and optional Power Pack installed in an Expansion Back.
- Ports for connecting USB devices, HDMI video output, and Ethernet communication.
- Barrel lock and two keys to secure the tablet to the dock.
- Desktop mount.

**Figure 10** Office Dock Setup



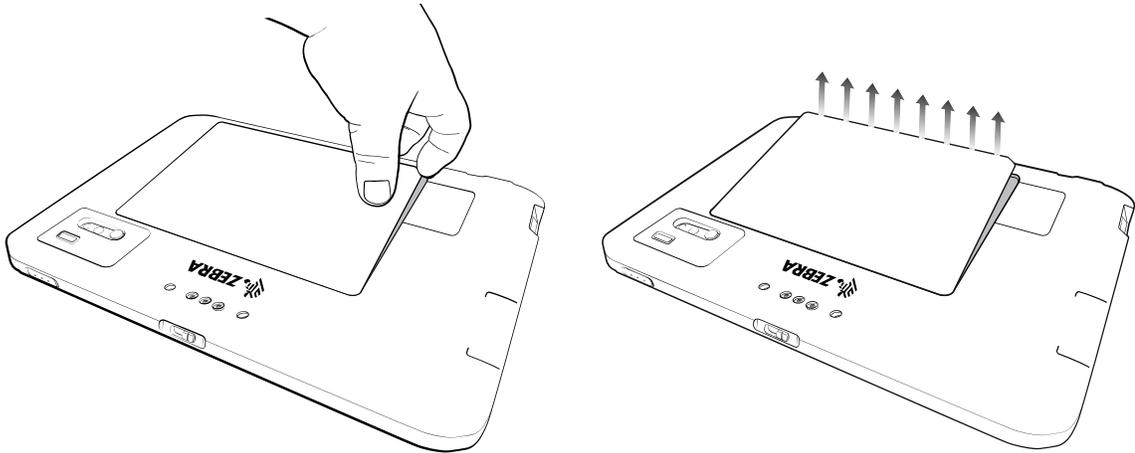
1	Power module
2	Barrel lock (two keys included)
3	Lever
4	Desktop mount

## Expansion Backs

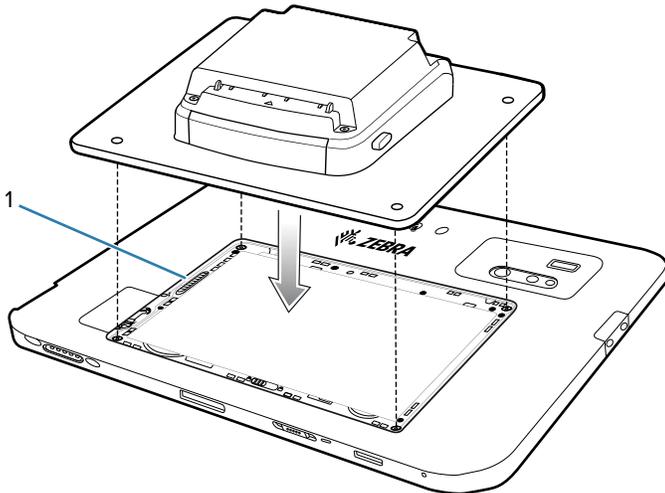
The Expansion Backs provide a Power Pack slot for the device and either a hand strap or Smart Card CAC reader.

### Installing the Expansion Backs

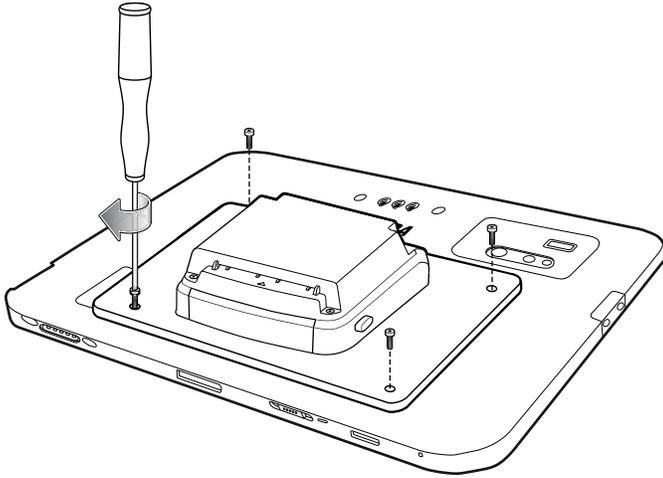
1. Power off the tablet before installing or removing the Expansion Back.
2. Lift the notched corner of the battery cover and carefully lift the battery cover off the device. Store the cover in a safe place.



3. Align the expansion back with the device. Ensure that the power pack slot cover is aligned with the bottom of the device and the interface connector on expansion back aligns with interface connector (1) on device.



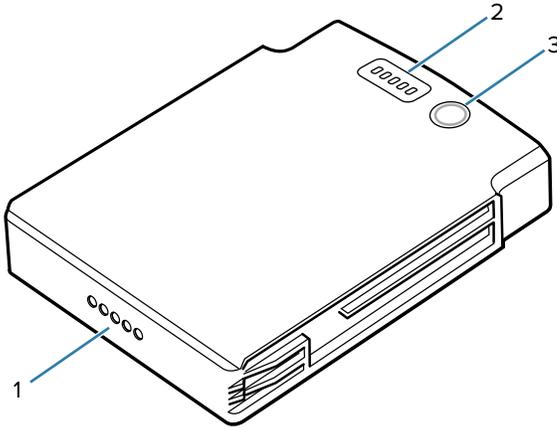
4. Using a T6 Torx screwdriver, secure expansion back to device using four screws. Torque to 14 n-cm.



## Power Pack

The optional Power Pack provides additional power to the tablet.

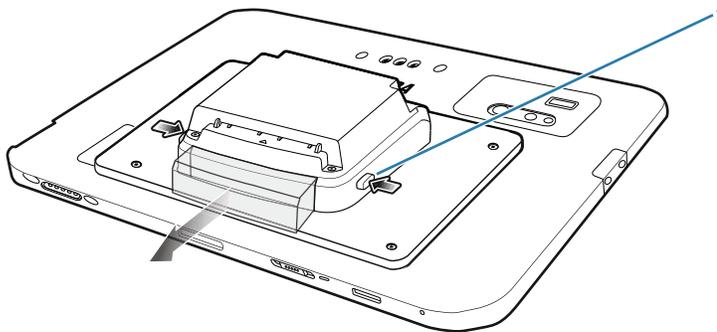
**Figure 11** Power Pack



1	Power output contacts
2	Charge level indicators
3	Charge indicator button

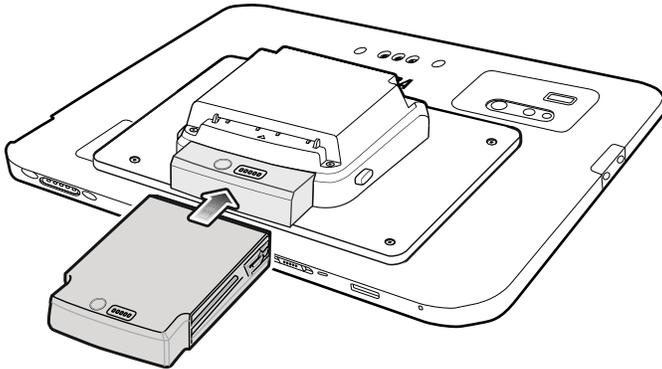
## Installing the Power Pack

1. Install one of the optional Expansion Backs.
2. Press the two release buttons (1) on the side of the Expansion Back. The dummy battery insert ejects slightly.



3. Remove dummy battery insert.

4. Insert Power Pack into slot until it snaps into place.



### Power Pack Charging

Charge Power Packs in ambient temperatures from 0°C to +50°C (32°F to 122°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.

### Charging the Power Pack Using a Dock

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

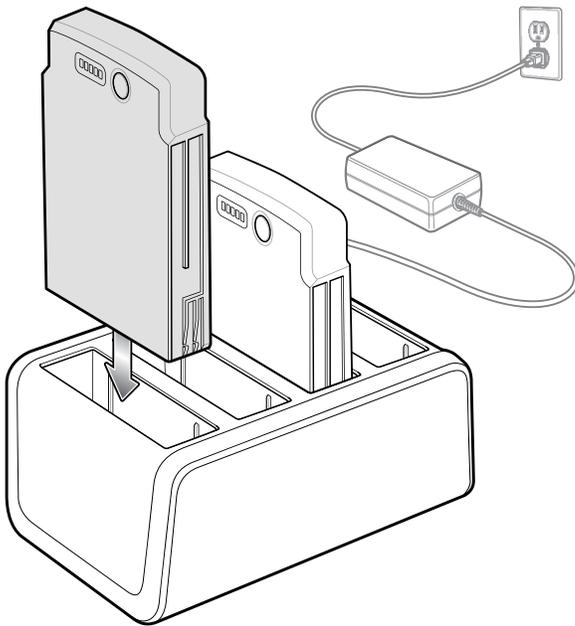
### Charging the Power Pack Using the 4-Slot Battery Charger



**CAUTION:** Ensure that you follow the guidelines for battery safety described in [Battery Safety Guidelines](#).

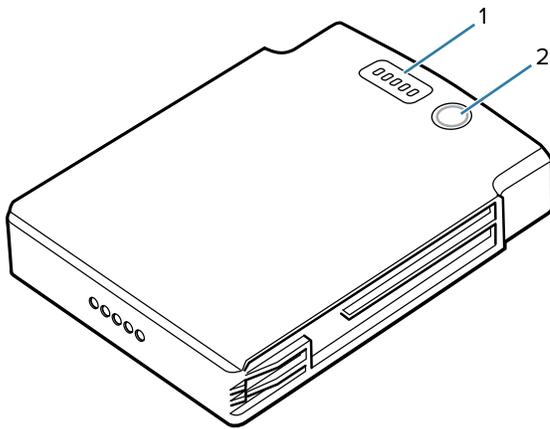
Use the 4-Slot Battery Charger to charge up to four Power Packs.

**Figure 12** 4-Slot Battery Charger



## Viewing the Power Pack Charge Level

1. Remove the Power Pack from the Expansion Back.
2. Press the Charge Status button (2). The Charge Status LEDs (1) light to indicate the charge level.



**Table 3** Power Pack Charge Status Indicators

Power Pack Indicators	Description
	Charge level is 100%.
	Charge level is 80%.
	Charge level is 60%.

**Table 3** Power Pack Charge Status Indicators (Continued)

Power Pack Indicators	Description
	Charge level is 40%.
	Charge level is 20%.
 Blinking	Charge level is below 20%.

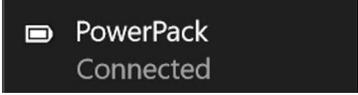
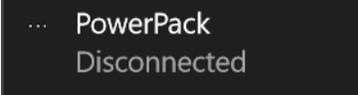
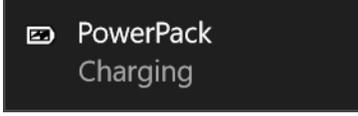
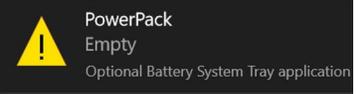
## Checking Power Pack Status

Power Pack status appears on the desktop taskbar.



**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**.

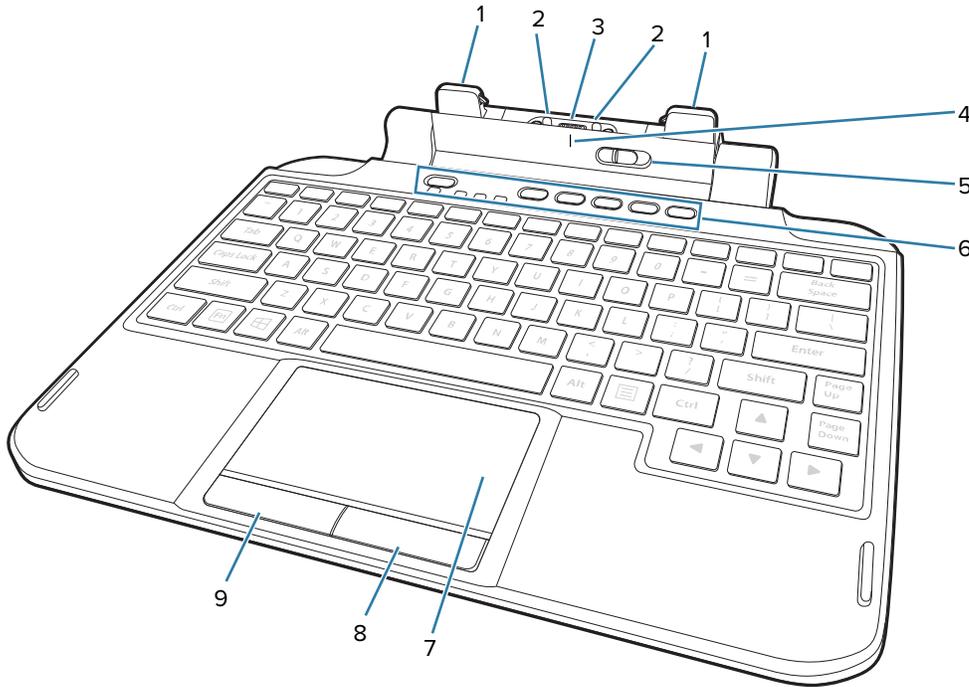
- Tap the Power Pack icon to see the status.

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.

## Keyboard

The ET80/ET85 attachable rugged keyboard is a QWERTY keyboard that provides a multi-color backlight and six programmable keys.

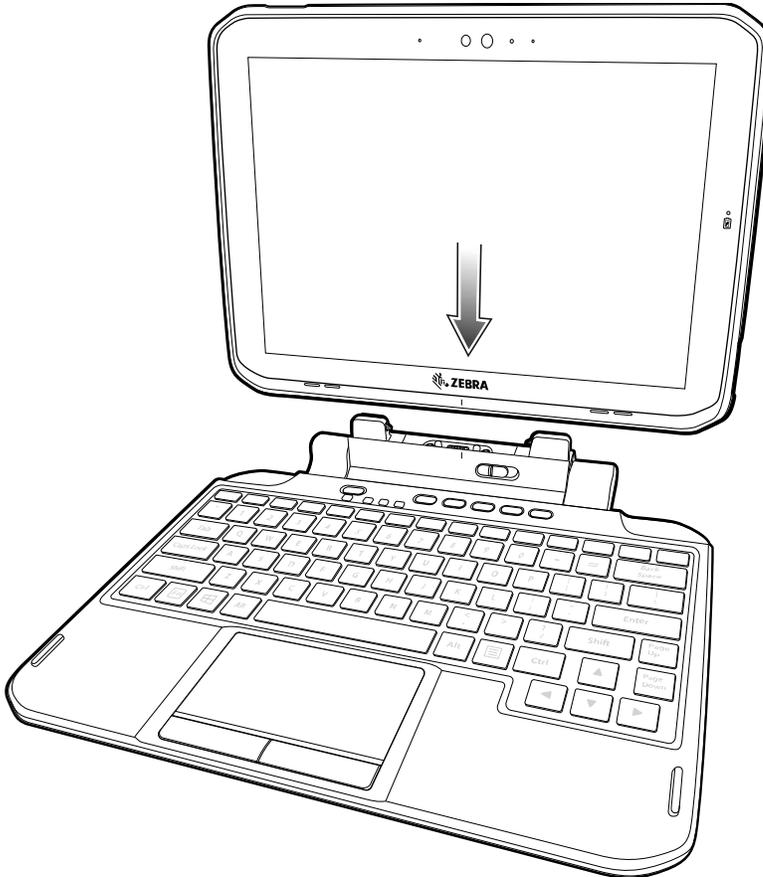
**Figure 13** ET80/ET85 Keyboard Features



1	Keyboard latch	Attaches the keyboard to the tablet.
2	Keyboard alignment pin	Assists in aligning the keyboard with the tablet.
3	Tablet interface connector	Provides power and communication from the tablet.
4	Keyboard alignment marking	Use to assist in aligning the tablet and keyboard.
5	Locking switch	Use to unlock the keyboard from the tablet.
6	Programmable keys	Configure to perform custom actions.
7	Touchpad	Use to move the cursor, scroll, tap, double-tap, drag and drop, and make multiple text selections.
8	Right button	Use to perform right-clicks.
9	Left button	Use to perform left-clicks.

## Attaching the Keyboard

1. Place the keyboard on a flat and level surface.
2. Align the keyboard alignment markings on the tablet and keyboard.

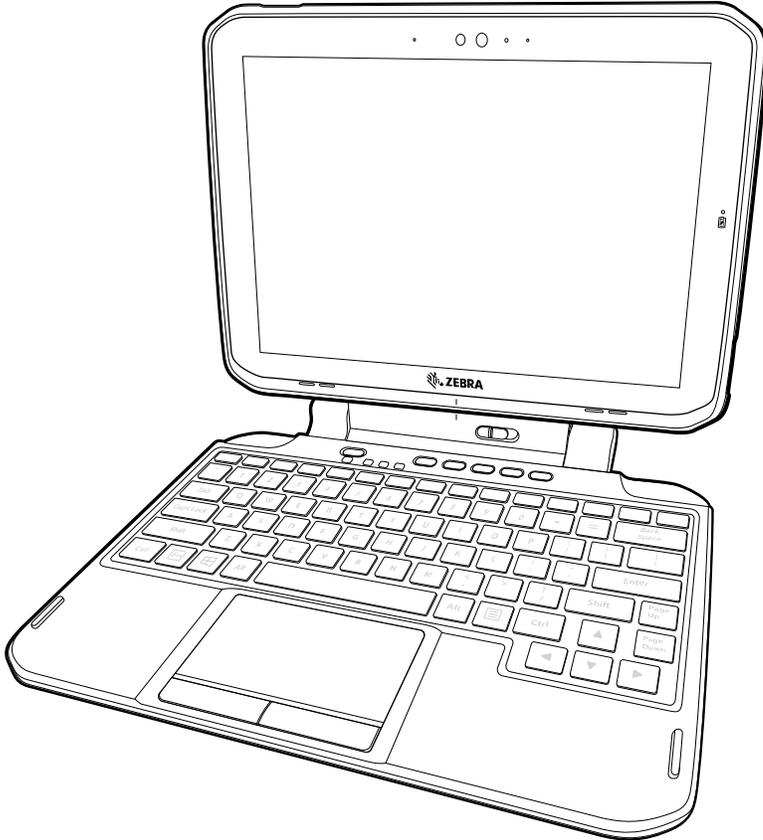


3. Gently press the tablet down onto the keyboard until you hear a click.

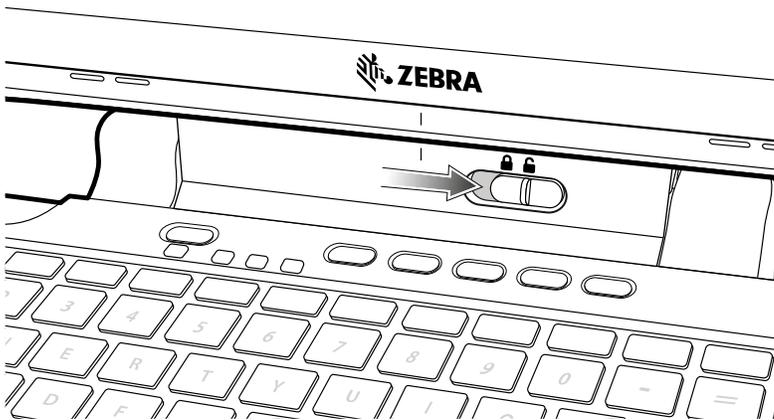
When the keyboard is correctly installed, the keyboard locking switch automatically clicks into the lock position and the orange indicator is hidden under the switch.

## Removing the Keyboard

1. Place the tablet on a flat and level surface.
2. Ensure the keyboard and tablet are in the open position.



3. Move the keyboard locking switch to the Unlock position.  
When in the unlock position, the orange indicator is visible to the left of the switch.



4. Lift the tablet from the keyboard.

## Setting the Backlight Color

Customize the keyboard backlight color.

1. In the taskbar, select  > .
2. Select the desired color.
3. Select **OK**.

## Configuring the Programmable Keys

Customize the programmable keys to start your favorite program or open a web page.

1. In the taskbar, select  > .
2. Select the desired key (P1-P5).
3. Select the type of action.
  - Open Application - Provide a path to the desired application. For example, `C:\Windows\notepad.exe`.
  - Open Web page - Provide a URL. For example, `https://www.zebra.com`.
  - No Action - Select to have the button not perform any action.
4. Select **Apply**.
5. Select **Save**.

# Maintenance and Troubleshooting

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.
- Dock or mount the device vertically to allow air cooling of the front and back surfaces. The tablet does not contain an internal cooling fan. An optional dock fan module provides cooling for the tablet while docked.

## Preventing Image Persistence

When a still image displays on the screen for long time, the image may persist, remaining slightly visible even after another image replaces it.

To prevent image persistence, use one or more of the following methods.

- Set the screen to automatically turn off after a few minutes of idle time.
- Set a screen saver to automatically start after a few minutes of idle time.
- Manually turn off the display when the device is not in use.
- Change the desktop background image every day or every few days.

## Maintaining the Stylus

If you use an active (digitizer) pen with your tablet:

- Store the active (digitizer) pen in the pen holder when not in use.
- Avoid storing the pen vertically on its tip. It can damage the pen-to-digitizer function.
- Keep the pen away from any liquid, because the pen contains electronic components that can be damaged when wet.
- In certain environments, particles or debris can stick to the pen tip or the tablet display. Make sure you wipe off the pen with a soft cloth to avoid scratching the display.

## 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 0°C and +40°C (+32°F and +104°F).
- 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.

## Best Practices for Enterprise Mobile Computing Devices Operating in Hot Environments and Direct Sunlight

Exceeding the operating temperature by external hot environments will cause the device's thermal sensor to notify the user of a shutdown of the WAN modem or shutdown the device until the device's temperature returns to the operational temperature range.

- Avoid direct sunlight to the device - The easiest way to prevent overheating is to keep the device out of direct sunlight. The device absorbs light and heat from the sun and retains it, getting hotter the longer it remains in sunlight and heat.
- Avoid leaving the device in a vehicle on a hot day or hot surface - Similar to leaving the device out in direct sunlight, the device will also absorb the thermal energy from a hot surface or when left on the dashboard of a vehicle or seat, getting warmer the longer it remains on the hot surface or inside the hot vehicle.
- Turn off unused apps on the device. Open, unused apps running in the background can cause the device to work harder, which in turn may cause it to heat up. This will also improve your mobile computer device's battery life performance.
- Avoid turning your screen brightness up - Just the same as running background apps, turning your brightness up will force your battery to work harder and create more heat. Minimizing your screen brightness may extend operating the mobile computer device in hot environments.
- Follow all recommendations for [Preventing Image Persistence](#).

## 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

The approved cleaning and disinfecting agent recommended is 70% isopropyl alcohol solution.

## 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; aqueous 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 boot, from the tablet 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 Recommended

- Lens tissue
- Cotton-tipped applicators
- 70% 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 the Fingerprint Reader

Under normal circumstances, you should clean the fingerprint reader once a month, or whenever necessary.

To clean the fingerprint reader, gently rub the sensor surface with the cloth that is included with the tablet or any microfiber cloth.

You can use a small amount of alcohol or warm soapy water from time to time to clean the reader surface. Dry it off after cleaning.



**CAUTION:** Do not use bleach, solvents, or abrasives to clean the reader.

## Traveling with Your Tablet

Use the following tips when you travel with your Tablet:

- Put the tablet in a case to protect the display.
- Store the pen in the pen bay located on the tablet.
- Pack the tablet securely in a briefcase or hand-carried luggage and keep it separate from toiletries, liquids, and food. Don't pack it in checked luggage.
- Before extended use in the field or long trips away from AC power, adjust the power properties to maximize battery conservation.
- For international travel, you need either a travel plug adapter or the AC power cord that is appropriate for the country that you are visiting. The travel plug adapter can be found in most airports and travel stores.
- You don't need to buy a voltage converter; the AC adapter will automatically adjust to different voltages.
- You might want to carry proof of ownership or a merchandise passport when traveling internationally.
- Consult your insurance and credit card companies to learn about emergency travel assistance in case your tablet becomes lost or disabled.
- Turn off the tablet or place it in airplane mode for takeoff and landing. Check with the airline for rules on using your tablet and Wi-Fi while traveling. You can turn off all of your wireless devices temporarily with airplane mode. See [Turning on Airplane Mode](#) on page 48.



**IMPORTANT:** Don't carry your tablet through a metal detector.



**DANGER!** Don't transport Li-ion batteries in checked baggage. The baggage hold can get very hot, which can cause the Li-ion battery to overheat and result in a possible explosion.

## Troubleshooting

This sections provides information for troubleshooting issues on your tablet.

### 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.

## Troubleshooting the Tablet

This section provides troubleshooting options for the device.

**Table 4** 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 <a href="#">Performing a Cold Boot on page 74</a> .
Battery did not charge.	Battery failed.	Replace battery. If the tablet still does not operate, try a cold boot. See <a href="#">Performing a Cold Boot on page 74</a> .
	Tablet removed from dock before charging completed.	Insert the tablet into the dock and begin charging. The battery fully charges in approximately four hours.
	Ambient temperature of the dock is too warm or too cold.	The ambient temperature must be between 0 °C and 45 °C (32 °F and 113 °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. Ensure that wet touch mode is enabled.
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 dock to re-charge the battery.
	The tablet's battery is low and it powers down to protect memory content.	Place the tablet in a dock 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.

## Troubleshooting the Dock

This section provides troubleshooting options for the dock.

**Table 5** Troubleshooting the Dock.

Problem	Cause	Solution
Battery is not charging.	Battery failed.	Replace battery. If the tablet still does not operate, try a cold boot. See <a href="#">Performing a Cold Boot on page 74</a> .
	Dock was unplugged from power source.	Ensure the dock is receiving power.
	Ambient temperature of the dock is too warm or too cold.	The ambient temperature must be between 0 °C and 45 °C (32 °F and 113 °F).

## Troubleshooting the 4-Slot Battery Charger

This section provides troubleshooting options for the 4-Slot Battery Charger.

**Table 6** Troubleshooting the 4-Slot Battery Charger

Problem	Cause	Solution
Power Pack Charging LED does not light when inserted.	Power Pack is not correctly seated.	Remove and re-insert the spare battery into the charging slot, ensuring it is correctly seated.
Power Pack is not charging.	Power Pack was removed from charger or charger was unplugged from AC power.	Ensure charger is receiving power. Ensure Power Pack is seated correctly. Confirm Power Pack is charging. The Power Pack fully charges in approximately four hours.
	Power Pack is faulty.	Verify that other Power Pack charge properly. If so, replace the faulty Power Pack.
	The Power Pack is not fully seated in the charger.	Remove and re-insert the Power Pack into the charger, ensuring it is firmly seated.
	Ambient temperature of the charger is too warm or too cold.	Move the charger to an area where the ambient temperature is between 0°C and 40°C (32°F and 104°F).

# Specifications

For device technical specifications, go to [zebra.com/support](http://zebra.com/support).

## Data Capture Supported Symbologies

**Table 7** Data Capture Supported Symbologies

Item	Description
1D Bar Codes	Chinese 2 of 5, Codabar, Code 11, Code 128, Code 39, Code 93, Discrete 2 of 5, EAN-13, EAN-8, Interleaved 2 of 5, MSI, UPCA, UPCE, UPCE1, ISBN/Bookland, ISSN, Coupon Code, Matrix 2 of 5
2D Bar Codes	Australian Post, Aztec Code, Canada Postal, Composite AB, Composite C, DataMatrix, Dutch Postal, GS1 DataBar, GS1 Expanded, GS1 Limited, GS1 Datamatrix, Han Xin, Japan Postal, Maxicode, Micro PDF, Micro QR Code, PDF-417, QR Code, TLC-39, PDF-417, UK Postal, US4state, US4State FICS, US Planet, US Postnet

## Decode Distances

The table below lists the typical distances for selected bar code densities. The minimum element width (or “symbol density”) is the width in mils of the narrowest element (bar or space) in the symbol.

**Table 8** SE4107 Decode Distances

Symbol Density/ Bar Code Type	Typical Working Ranges	
	Near	Far
5 mil Code 39	2.4 in. 6.1 cm	9.5 in. 24.1 cm
5.0 mil Code 128	2.8 in. 7.1 cm	9.0 in. 22.9 cm
6.6 mil PDF417	2.4 in. 6.1 cm	8.0 in. 20.3 cm
10 mil Data Matrix	2.9 in. 7.49 cm	9.0 in. 22.9 cm

## Specifications

**Table 8** SE4107 Decode Distances (Continued)

Symbol Density/ Bar Code Type	Typical Working Ranges	
	Near	Far
100% UPCA	1.8 in. 5.1 cm	19.5 in. 26.2 cm
15 mil QR Code	1.2 in. 4.6 cm	12 in. 30.5 cm
20 mil QR Code	1.2 in. 4.6 cm	14 in. 35.6 cm
20 mil Code 39	2.0 in. 5.1 cm*	26.0 in. 66.0 cm
*Limited by width of bar code in field of view. Notes: Photographic quality bar code at 15° tilt pitch angle under 30 fcd ambient illumination. Distances measured from front edge of scan engine chassis.		

## Dock Specifications

**Table 9** Dock Technical Specifications

Item	Description
Input Voltage	12-14 VDC
Power Consumption	60 watts
Operating Temperature Office Dock, 9 port expansion module (PEM)	-20 °C to 40 °C (-4 °F to 104 °F)
Operating Temperature Vehicle Dock, 7 port PEM	-20 °C to 60 °C (-4 °F to 150 °F)
Storage Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Humidity	5% to 95% non-condensing
Electrostatic Discharge (ESD)	+/- 15 kV air +/- 8 kV contact +/- 8 kV indirect discharge

