Printer Setup Utility for iPhone® and iPad® with Security Assessment Wizard

User Guide

ZEBRA

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Introduction and Installation

This section provides information about Zebra Printer Setup Utility Application and includes supported operating systems, connectivity, printers, and devices.

Zebra Printer Setup Utility is an iOS ® application (app) that assists with the set up and configuration of a Zebra printer running. This application is particularly useful for printers that do not have LCD displays as the application provides an improved method to connect to a printer, configure, and determine its status via a mobile device.

 IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Zebra Printer Setup Utility is available for download only through the Apple ® App Store. Locate the application in the App Store and tap **GET** to install it.

Target Audience

Zebra Printer Setup Utility is intended for all customers and partners. Moreover, Zebra Printer Setup Utility may be used by Zebra Technical Support as part of a fee-based service called Install-Configure-Assist (ICA). As part of the service, customers are instructed how to download the application and receive guided support throughout the set up process.

Requirements

Printer Platform

Zebra Printer Setup Utility supports the following Zebra printers:

Mobile Printers	Desktop Printers	Industrial Printers	Print Engines
• iMZ series	• ZD200 series	• ZT111	• ZE500 series
• QLn series	• ZD400 series	• ZT200 series	
• ZQ112 and ZQ120	• ZD500 series	• ZT400 series	
• ZQ210 and ZQ220	• ZD600 series	• ZT500 series	
• ZQ300 series	• ZD888	• ZT600 series	
• ZQ300 Plus series			
• ZQ500 series			
• ZQ600 series			
• ZQ600 Plus series			
• ZR100 series			
• ZR300 series			
• ZR628 and ZR638			
• ZR300 Plus series			
• ZR600 Plus series			

Firmware Requirements

The application supports printers running Link-OS 3 through Link-OS 6.7.

Printer models ZQ112, ZQ210, ZQ220, ZR118, ZQ120, ZR128 and ZR138 require a minimum printer OS version of 88.01.04.

Printer models ZD220, ZD230, and ZD888 require a minimum printer OS version of 89.21.16.

Connectivity

The application supports the following types of connectivity:
- Bluetooth Classic
- Bluetooth Low Energy (Bluetooth LE)
- Wired/Ethernet
- Wireless

Operating Systems

The application is tested with and supported on the following Apple iOS versions:
- iOS 14.x
- iOS 15.x
- iOS 16.x

Device Platform

The application is tested with and supported on the following Apple iOS devices:

- iPhone 12 mini
- iPhone 11
- iPad Air
- iPad Pro
- iPad mini
- iPhone XR
- iPhone 12 Pro
- iPhone 12
- iPad Mini
- iPad Air
- iPod Touch 7
- iPad Pro

The amount of viewable information on a given device varies by screen size, and may require you to scroll to access all of the information.

Feature Overview

The features listed below are explained in detail in other areas of this guide.

- Printer discovery via multiple connectivity methods.
- Support for Bluetooth Low Energy (BTLE), Bluetooth Classic, and Wired and Wireless network.
- Connectivity Wizard for configuring connection settings.
- Media Wizard for configuring key Media settings.
- Print Quality Wizard for optimizing output legibility.
- Access to extensive printer status information including details on the printer's serial number, battery status, media settings, connectivity options, and odometer values.
- Connectivity to popular file sharing services.
- Ability to retrieve and send files stored on the mobile device or on a cloud storage provider.
- File transfer – used to send file contents or OS updates to the printer.
- Easy to use Printer Actions, including calibrate media, print a directory listing, print a configuration label, print a test label, and restart the printer.
- Install, enable, and disable Printer Emulation languages.
- Printer Security Assessment Wizard to assess printer security posture, compare your settings against security best practices, and make changes based on your conditions to increase protection.

Discovery and Connectivity

This section describes the discovery methods and using the Connectivity Wizard.

(!) **IMPORTANT:** Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Printer Discovery Methods

The following methods describe how to use Zebra Printer Setup Utility to discover and connect to your printer.

- Discover Printers

- Manually select your printer

- Bluetooth Classic ✳ pairing via your device Settings menu

For successful network discovery, your mobile device should be connected to the same subnet as your printer. For Bluetooth communications, Bluetooth must be enabled on your device and printer. Refer to the user documentation for your device or printer for further details on configuring the printer and device.

✎ **NOTES:**

- Bluetooth discovery can only retrieve the Friendly Name and MAC Address. Bluetooth Classic devices running iOS will show the correct, physical MAC Address while Bluetooth Low Energy devices show a randomized MAC Address due to updated privacy settings.

- If you encounter issues with printer discovery (and at times when Zebra Printer Setup Utility may not be able to discover your printer), you may need to manually enter your printer's IP address. Having your printer and mobile device on the same subnet gives you the greatest chance of successfully discovering the printer.

- If this is the first time you have connected to any printer (or if you have recently unpaired from this printer), and are pairing via Bluetooth, you are prompted to confirm the pairing request on both the printer and the device (See Bluetooth Pairing via the Settings Menu).

- Starting with Link-OS v6, the bluetooth.discoverable function is now off by default and other devices cannot see or connect to the printer. With discoverability disabled, the printer still makes connections with a remote device that was previously paired.

- Force quitting the Zebra Printer Setup Utility after a successful Bluetooth connection will require you to rediscover and reconnect your printer on the next use.

RECOMMENDATION: Only keep discoverable mode enabled while paring to a remote device. Once paired, discoverable mode is disabled. Starting with Link-OS v6, a new feature was introduced to enable limited discovery. Holding down the FEED button for 5 seconds will enable limited discovery. The printer automatically exits limited discovery mode after 2 minutes have elapsed, or a device has successfully paired with the printer. This enables the printer to operate safely with discoverable mode disabled until a user with physical access to the printer activates it. Upon entering Bluetooth Pairing Mode, the printer provides feedback that the printer is in Pairing Mode using one of these methods:

•   On printers with a Bluetooth Classic or Bluetooth Low Energy screen icon or Bluetooth/Bluetooth Low Energy LED, the printer shall flash the screen icon or LED on and off every second while in pairing mode.

•   On printers without a Bluetooth Classic � or Bluetooth LE ✖ screen icon or Bluetooth Classic or Bluetooth LE LED, the printer shall flash the Data icon or LED on and off every second while in pairing mode.

•   Specifically, on the ZD510 model, the 5 flash LED sequence places the printer into Bluetooth Pairing Mode.

Discover Printers

To discover printers:

1.   See Figure 1. From the Dashboard, tap ☰ Menu.

2.   If no printers have previously been discovered, tap **Discover Printers (1)**. If you have previously discovered printers, tap ↻ Refresh in the Printer Setup side drawer **(2).**

     Zebra Printer Setup Utility searches and displays a list of discovered Bluetooth and network connected printers. At the completion of the discovery, the Discovered Printers group is updated. Progress dialogs are displayed during the discovery process.

NOTE: If this is the first time using Bluetooth to connect to your printer with an iOS device, you must initially pair it using the Settings menu. See Bluetooth Pairing via the Settings Menu below.

3.   Tap the desired printer in the list **(2)**.

     Zebra Printer Setup Utility finds and connects to the printer based on your Bluetooth or network connection.

4.   If you are unable to connect to your printer, tap **Can't connect to your printer? (2).**

Figure 1 Discovering the Printer

(1) Printer Setup   **(2) Side Drawer**   **(3) Limited Pairing Mode**
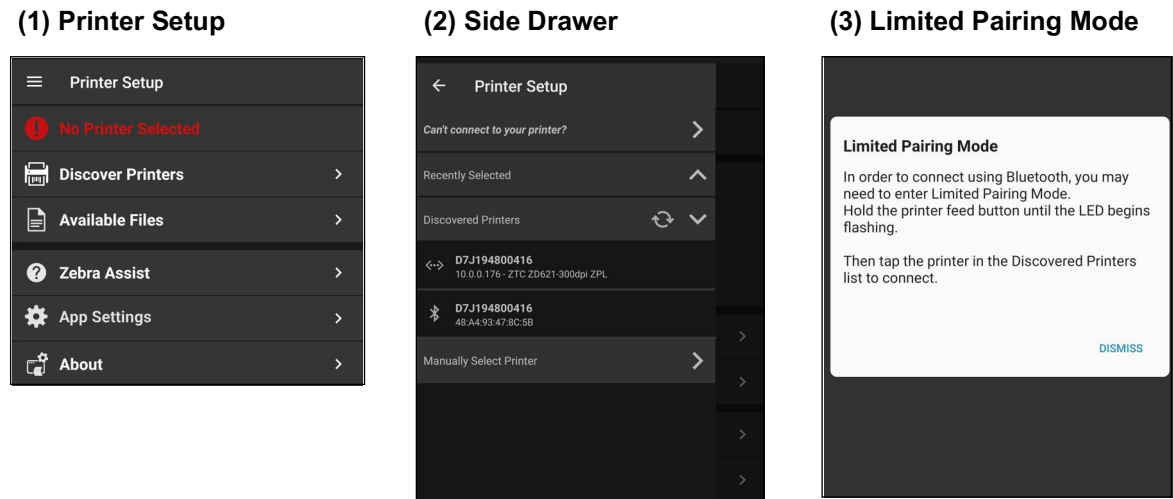
Bluetooth Pairing via the Settings Menu

You may pair your mobile device with your printer using the device's Settings menu.

IMPORTANT: On iOS devices, this is required the first time you connect, or the Printer Setup Utility will not be able to Discover it. Once you have initially paired, the printer will be available via discovery in the future.

To pair with a printer using the Settings menu on your device:

1. On your device, go to the **Settings** menu.

2. Select **Bluetooth**.

   A list of paired devices will appear, as well as a list of unpaired devices.

3. Tap on the device you wish to pair with.

4. Confirm the pairing code is the same on both your device and on the printer.

   A new scan discovers and shows the paired devices, as well as other available devices. You may pair with another printer on this screen, initiate a new scan, or exit the menu.

Manually Select Printer

To add a printer using Manually Select Printer:

1. Open the Dashboard.

2. Tap ☰ Menu to open the Side Drawer.

3. See Figure 2. Tap **Manually Select Printer**.

4. Enter the printer's **DNS/IP address**, and then tap **Search** to begin the discovery.

Figure 2   Manually Select a Printer

Side Drawer

Manually Select the Printer
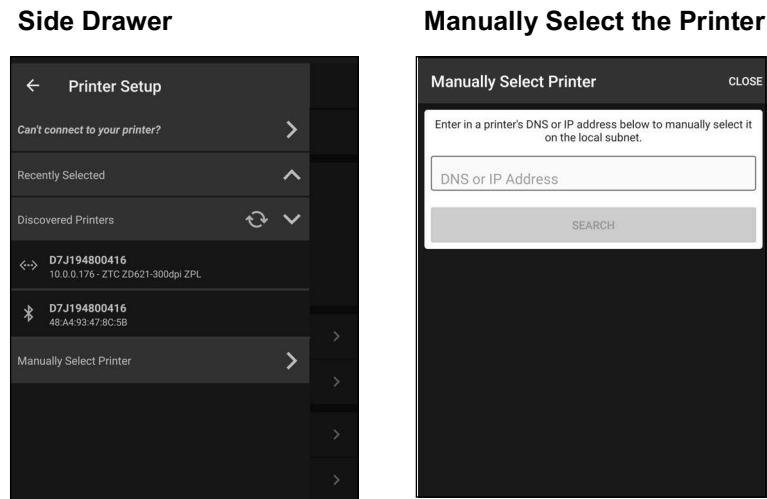
Bluetooth and Limited Pairing Mode

If you are using Bluetooth and are unable to connect to your printer, try putting your printer in Limited Pairing Mode.

NOTE: Limited Pairing Mode applies to printers running Link-OS 6 and later.

1. See Figure 3. Tap **Can't connect to your printer?** in the Printer Setup side drawer **(1).**

2. Follow the instructions **(2)** on the screen to put your printer in Limited Pairing Mode.

Figure 3   Limited Pairing Mode

(1) Side Drawer

(2) Limited Pairing Mode
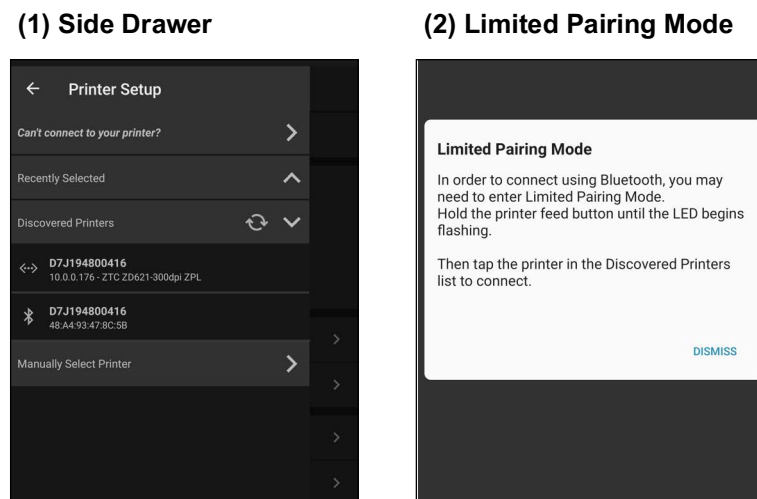
Connectivity Wizard

The Connectivity Settings screen is where you can adjust the connection settings on the printer for wired/Ethernet, wireless, or Bluetooth.

To change your Connectivity Settings:

1. See Figure 4. From the Dashboard, tap **Connectivity Settings (1)**.

    • ✅ indicates the printer is connected and ready to print.
    • ➖ indicates there is a communication error with the printer.
    • If the printer is not connected the background is grayed out.

2. Select your method (Wired Ethernet, Wireless, or Bluetooth) to connect to the printer, and follow the prompts.

Figure 4   Dashboard Screen and Connectivity Settings
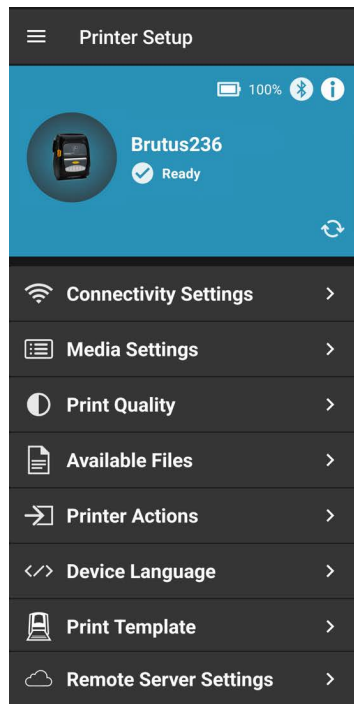
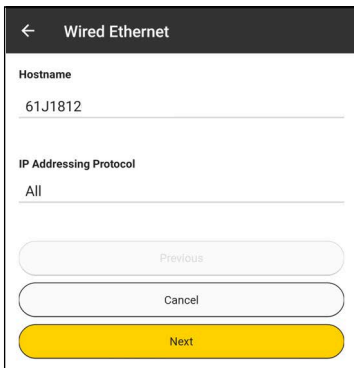**(1) Dashboard Screen**   **(2) Connectivity Screen**
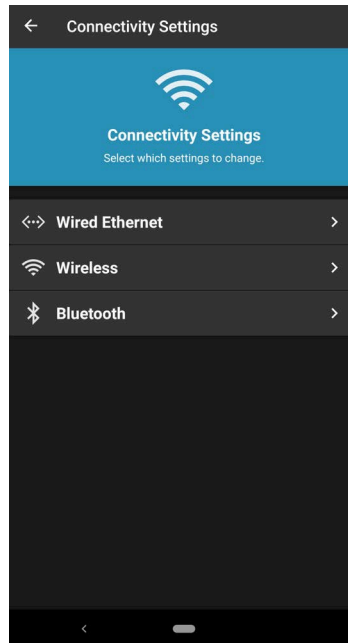
Wired Ethernet

Wired Ethernet is used when a printer is connected to your LAN using an Ethernet cable. The advantage of a wired connection is that it is generally faster than a wireless (WiFi) or Bluetooth connection.

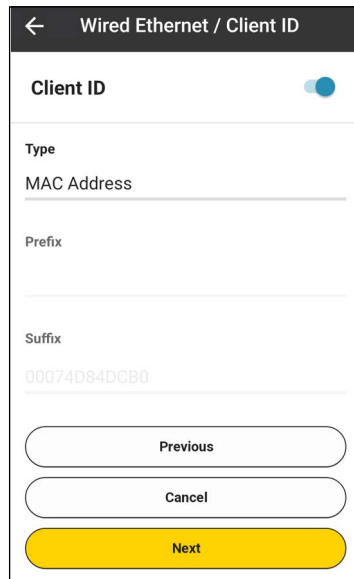See Figure 5. Within the Wired/Ethernet Settings menu, you may change, save, and apply the following elements:

*   **Hostname (1)**
*   **IP Addressing Protocol (1)**
*   **Client ID (2)**
*   **Client ID Type (2)**
*   **Save settings to file (3)**. Follow the prompts to save the file to your preferred location.
*   **Apply (3)** settings on the printer
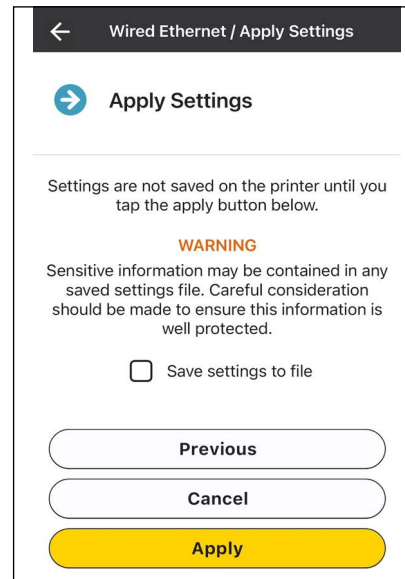
Figure 5   Wired Settings Screens

(1) Hostname and IP   **(2) Client ID Screen**   **(3) Apply Settings Screen**

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Wireless

Wireless is the term used to describe any computer network where there is no physical wired connection between sender and receiver. Rather, the network is connected by radio waves and/or microwaves to maintain communications. Within the Wireless Settings (see Figure 6) menus, you may change, save, and apply the following elements:

- **Wireless Menu (1)**
  - Hostname
  - Turn Wireless on/off
  - IP Addressing Protocol
  - Power Save Mode

- **Wireless / Client ID Menu (2)**
  - Client ID
  - Client Type
  - IP Address, Subnet Mask, Default Gateway (applicable when Permanent IP Addressing protocol is selected)

- **Wireless / Details Screen (3)**
  - ESSID
  - Security Mode
  - Wireless Band
  - Country
  - Channel List

NOTE: WEP security mode has been removed from Link-OS v6 firmware, but is still applicable in Link-OS v5.x and earlier.

- **Wireless / Apply Settings Screen (4)**
  - Save settings to file. Follow the prompts to save the file to your preferred location.
  - Apply settings on the printer

Figure 6   Wireless Settings Screens

(1) Hostname and IP

(2) Client ID Screen

(3) Details Screen

(4) Apply Settings Screen

Bluetooth

Bluetooth is a method where devices such as cell phones, computers, and printers can be easily interconnected using a short-range wireless connection. The transceiver operates on a frequency band of 2.45 GHz that is available globally (with some variation of bandwidth in different countries).

Within the Bluetooth Settings menus, you may change, save, and apply the following elements:
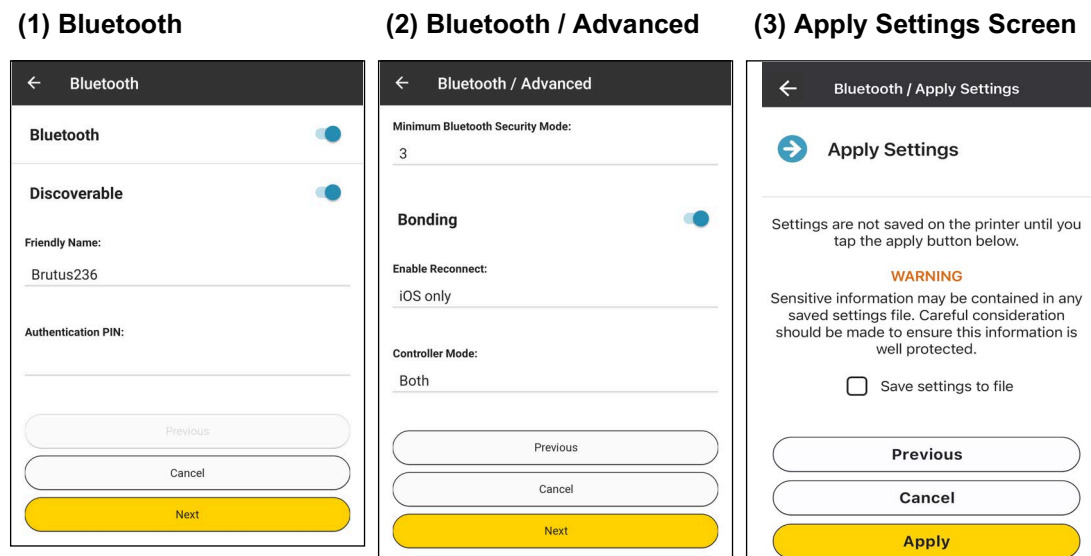
- **Bluetooth Menu (1)**
    - Enable/Disable Bluetooth
    - Discoverable
    - Friendly Name
    - Authentication PIN

- **Bluetooth / Advanced Menu (2)**
    - Minimum Bluetooth Security Mode
    - Bonding
    - Enable Reconnect
    - Controller Mode

NOTE: When Enable Reconnect is set to off, the printer will not automatically reconnect to the mobile device after a restart. You must manually reconnect to the printer through the mobile device Bluetooth settings (see Bluetooth Pairing via the Settings Menu on page 11). Set this option to iOS only to allow the printer to automatically reconnect after restarting.

- **Bluetooth / Apply Settings Screen (3)**
    - Save settings to file. Follow the prompts to save the file to your preferred location.
    - Apply Settings

Figure 7   Bluetooth Settings Screens

(1) Bluetooth   **(2) Bluetooth / Advanced**   **(3) Apply Settings Screen**

Unpair a Printer

If you must unpair a Bluetooth-connected printer (for example, for troubleshooting purposes), do so using the Settings menu, not inside the Zebra Printer Setup Utility application. If you prefer to deselect a printer, see .

To unpair a Bluetooth-connected printer:

1. On your device, go to the **Settings** menu.

2. Select **Bluetooth**.

   A list of paired devices will appear.

3. Tap on the **Info** icon beside the printer to be unpaired.

4. Tap on **Forget This Device**.

   A new scan discovers and shows the available devices. You may pair with a printer on this screen, initiate a new scan, or exit the menu.

Printer Ready State

The ready state of the printers are checked at specific times. A pop-up box displays a warning if any of the printers are offline or not ready to print. Ready states are checked:

- Upon start-up of the application

- When the application gets focus back

- At the end of the discovery process

- When a printer is selected

Error on Connecting

Certain printer/device combinations may experience a delay when an error dialog appears or when trying to reconnect. Allow up to 75 seconds for the process to complete.

Protected Mode

You may view, but not change, the settings of a printer in Protected Mode. If your printer is in Protected Mode, you will receive a notification upon connection. Tap **DISMISS** to close the window, and then click ↻ **Refresh** on the dashboard to retrieve the settings.


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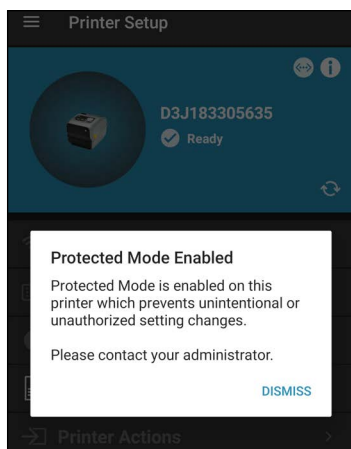
Deselect a Printer

To disconnect the Printer Setup Utility from a printer, choose **Deselect printer**. This is a good option if you only need to step away for a short time and want an easy way to reconnect with the same printer.
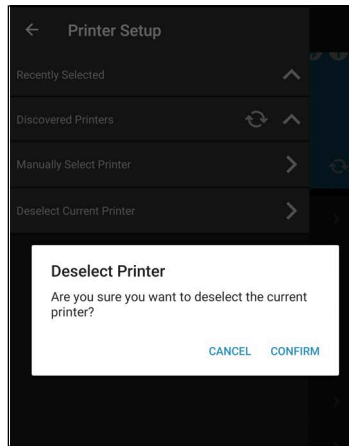
To deselect a printer:

1. See Figure 8. From the Dashboard, tap ☰ Menu to open the Side Drawer.

2. Tap **Deselect Current Printer (1)**.

   • Tap **CONFIRM** to deselect the printer.
     The printer will remain available in the Recently Selected menu.

   • Tap **CANCEL** to cancel the operation.

Figure 8   Manually Deselect a Printer
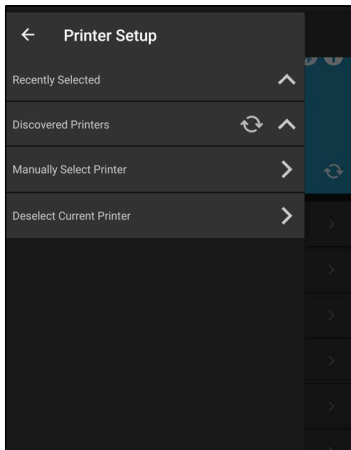
 (1) Side Drawer   **(2) Confirm Deselection**

Media Setup

This section describes the steps to set up the media parameters and calibrate the sensors.

! **IMPORTANT:** The options shown under Media Settings depend on the printer model to which you are connected. Features that are unavailable are grayed out or not shown on the menus.
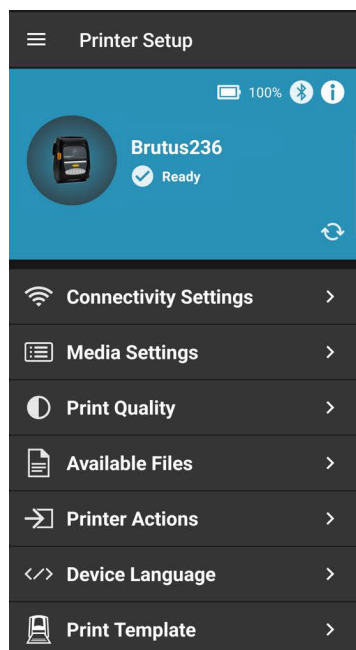
Media Settings

The Media Settings menu provides details on the current media, including width and length, and the media type. From this menu, you may change the media type, width, length, and orientation.
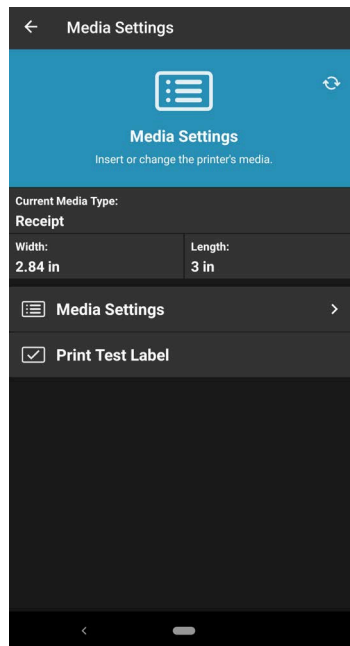
To change your Media Settings:

1. See Figure 9. From the Dashboard, tap **Media Settings (1)**. From this screen, you can see the current media settings.

    • Tap **Media Settings (2)** again to change **Media Type**, **Width**, or **Length**.

    • Tap **Print Test Label** to print test labels with the current settings.

**Figure 9**   Dashboard and Media Settings Screens

(1) Dashboard Screen   **(2) Media Settings Screen**

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2. Tap **Media Settings** again to enter a series of detailed menus. See Figure 10. Within the Media Settings menus, you may adjust, apply, and save the following elements:

- **Media Screen (1)**
    - Adjust the **Media Type** (label/tag or receipt)
    - Adjust the **Width**
    - Adjust the **Length**
    - Adjust the **Orientation**
- **Media Details Screen (2)**
    - Adjust the **Media Type** (continuous, gap, or black mark)
    - Adjust the **Type of Transfer** (direct thermal or thermal transfer)
    - Adjust the **Media Handling** (rewind, tear off, cutter, etc.)
- **Media / Apply Settings Screen (3)**
    - **Save settings to file**.
    - **Apply** settings on the printer.

Figure 10   Media Settings Screens

(1) Media Screen   **(2) Media / Details Screen**   **(3) Apply Settings Screen**
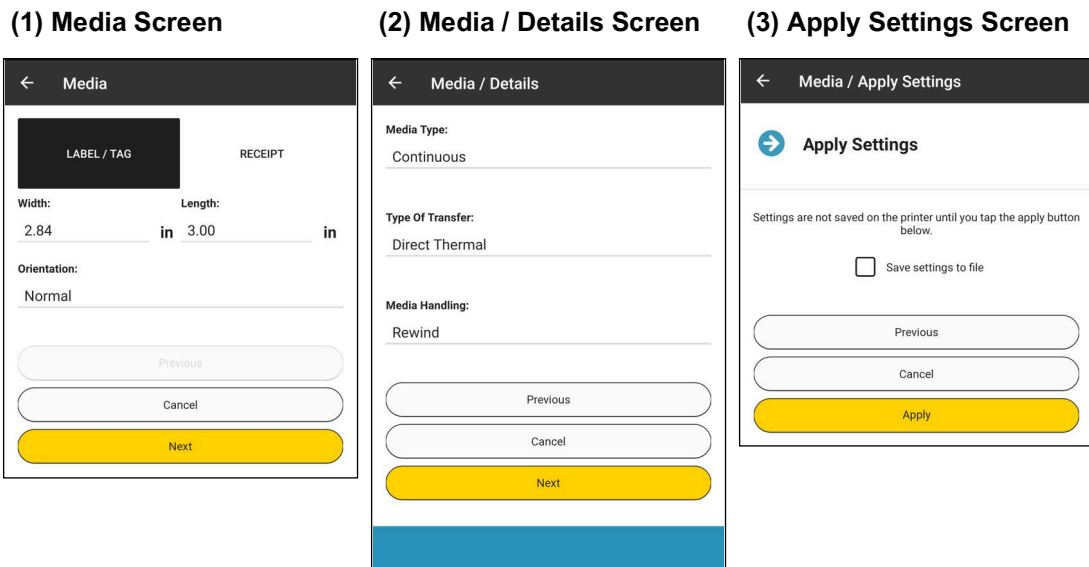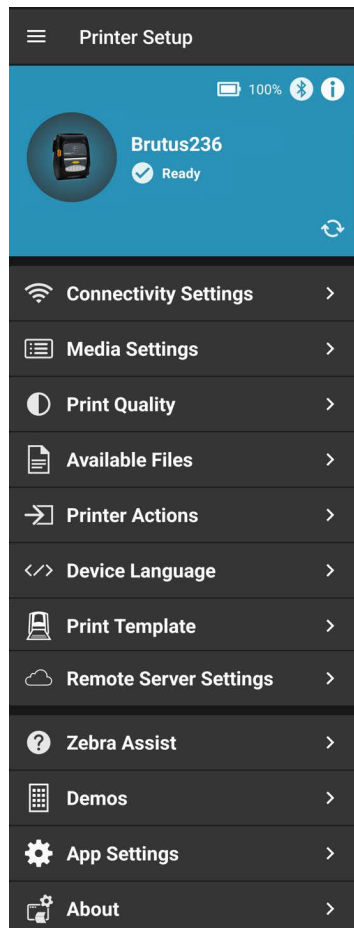
Print Quality

This section provides instructions to view and adjust the print quality of your printer.

IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Figure 11   Dashboard Screen and Print Quality Settings

(1) Dashboard Screen

(2) Print Quality Screen
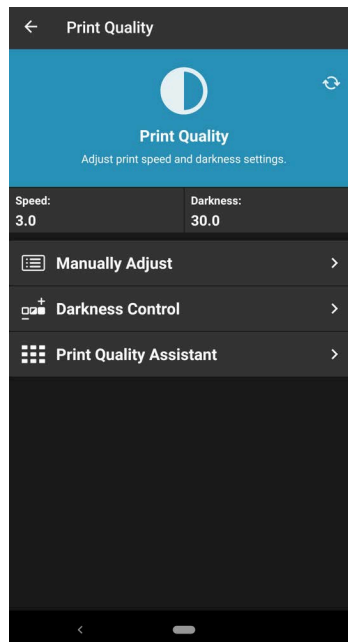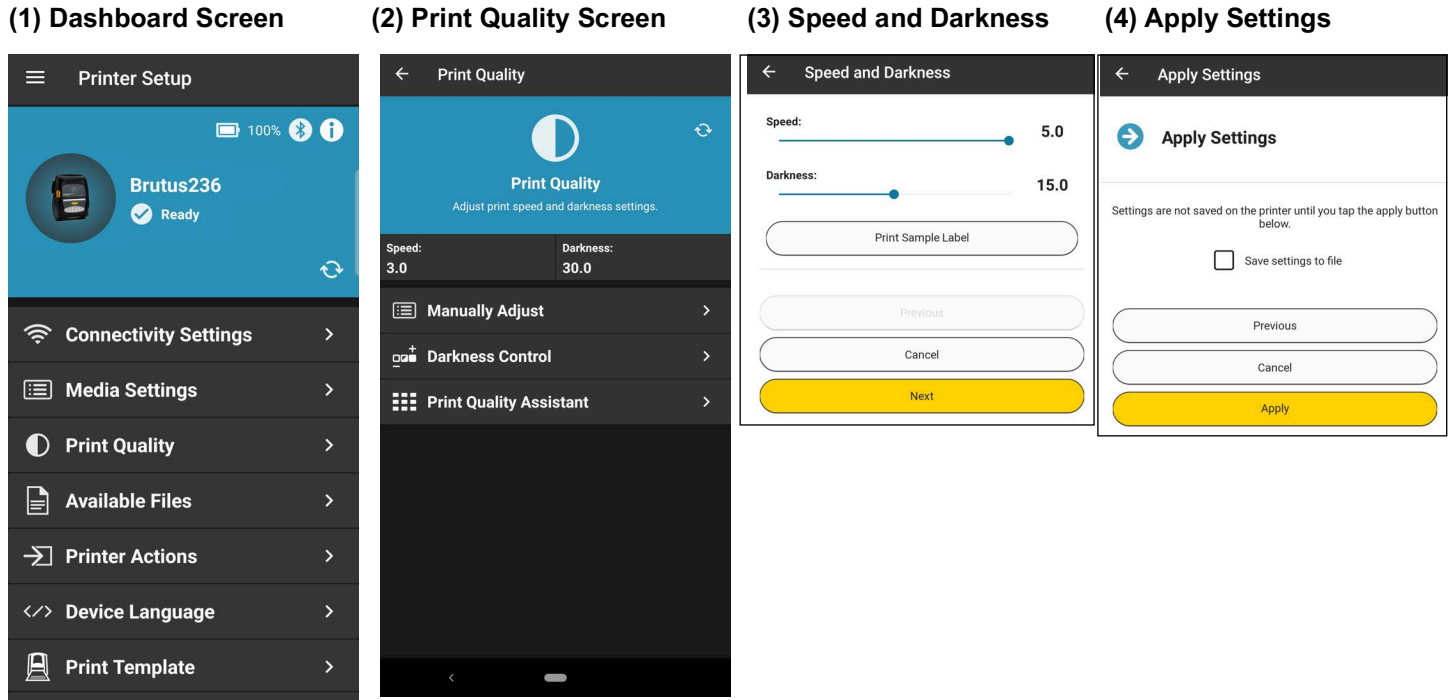
Manually Adjust Print Quality

You may manually adjust the print quality of your printer.

To manually adjust print quality:

1. See Figure 12. From the Dashboard, tap **Print Quality (1)**.

2. Tap **Manually Adjust (2)**.

Figure 12   Dashboard, Print Quality, Speed and Darkness, and Apply Settings Screens

(1) Dashboard Screen   **(2) Print Quality Screen**   **(3) Speed and Darkness**   **(4) Apply Settings**

3. Within the **Manually Adjust menu,** you may adjust and apply the following elements:

   • **Speed and Darkness Screen (3)**
     Move the slider to change each setting.

   • **Apply Settings Screen (4)**

      • **Save settings to file**. Follow the prompts to save the file to your preferred location.

      • **Apply** settings on the printer.

NOTE: When using a ZQ112, ZQ210 or ZR118, the displayed darkness value is the ZPL value converted from the CPCL darkness value.

Darkness Control

The Darkness Control setting replicates a hardware switch found on certain older models of printers, and is used to increase the darkness level by preset amounts.
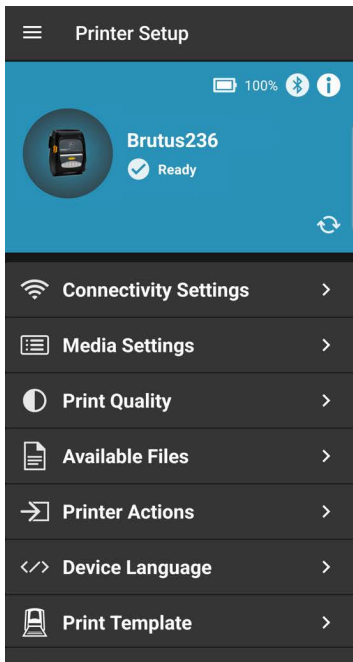
NOTE: The Darkness Control option will not show for all printers. The preferred method is to use the Print Quality Assistant to set speed and darkness.
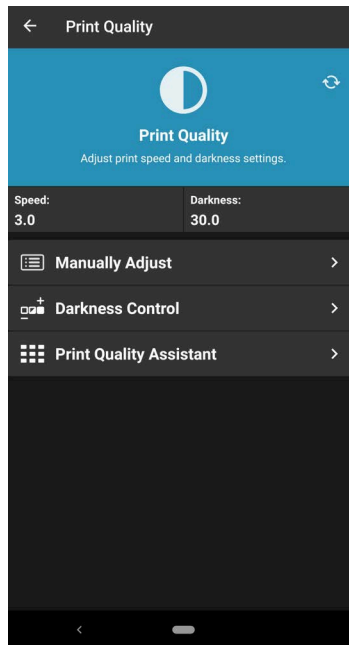
To adjust the darkness control:

1. See Figure 13. From the Dashboard, tap **Print Quality (1)**.

2. Tap **Darkness Control (2)**.

Figure 13   Dashboard Screen, Print Quality Settings, and Darkness Control Screens
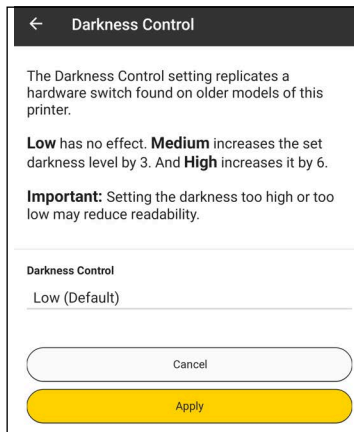
(1) Dashboard Screen   **(2) Print Quality Screen**   **(3) Darkness Control**

3. Tap **Darkness Control** to change the setting.

   • Low (Default) - has no effect on the darkness level.

   • Medium - increases the darkness level by 3.

   • High - increases the darkness level by 6.

4. Tap **Apply** to save the settings on the printer.

IMPORTANT: Setting the darkness too high or too low may reduce readability on your printed labels.

Print Quality Assistant

The Print Quality Assistant permits you to print preset speed and darkness settings on labels, save and apply these values, and ultimately fine-tune your printed labels.

IMPORTANT: The ZD510 printer speed and darkness settings are determined by the printer cartidge that is installed. The Print Quality Assistant will not change any values on this printer.
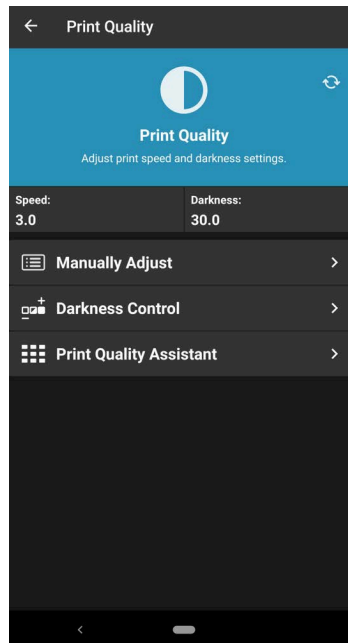
To open Print Quality Assistant:

1. See Figure 14. From the Dashboard, tap **Print Quality (1)**.

2. Tap **Print Quality Assistant (2)** to enter a series of detailed menus.

Figure 14   Dashboard Screen and Print Quality Settings
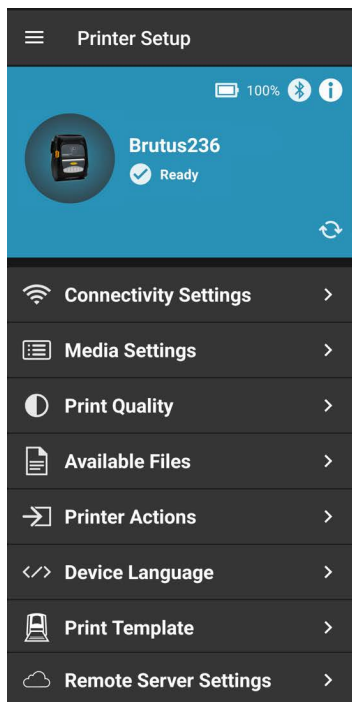
(1) Dashboard Screen   **(2) Print Quality Screen**

See Figure 15. Within the **Print Quality Assistant** menus, you may adjust and apply the following elements:

- **Sample Labels Screen (1)**

  Adjust the **No. of Labels to Print.** You may pick from 4, 9, 16, or 25 labels.

- **Generate Test Labels (2)**

  The numbers of labels printed is determined by the entry in the previous screen.

- **Select a Label Screen (3)**

  a. Adjust the **Label Identifier**

  b. Tap the Label Identifier to select one of the preset Speed and Darkness options.
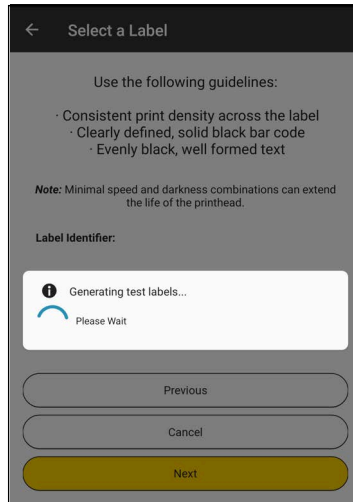
    i. AA - Speed 2.0, Darkness 15.0

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        ii. AB - Speed 4.0, Darkness 15.0

        iii. BA - Speed 2.0, Darkness 30.0

        iv. BB - Speed 4.0, Darkness 30.0

- **Apply Settings Screen (4)**
  - **Save settings to file**. Follow the prompts to save the file to your preferred location.
  - **Apply** settings on the printer.
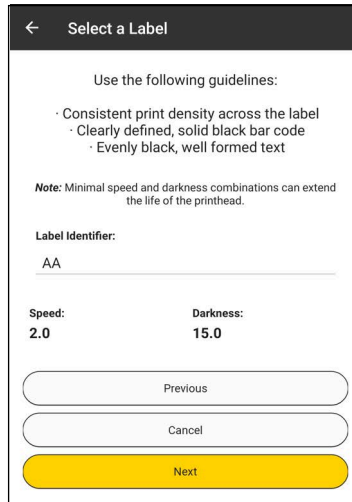
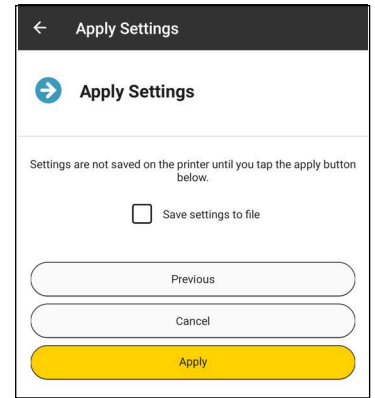**Figure 15**   Print Quality Settings Screens
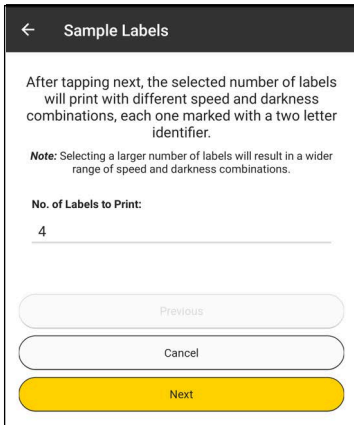
(1) Sample Labels Screen   **(2) Generating Test Labels**   **(3) Select a Label**   **(4) Apply Settings**

Available Files and Printer Actions

This section describes the Available Files and Printer Actions features in the Zebra Printer Setup Utility. It also includes information about FIPS 140-2 and the Security Assessment Wizard.

> **(!) IMPORTANT:** Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Available Files

If you tap on **Available Files**, a list of files is displayed. From this list, if you tap on a file name, a dialog is displayed with the option to send the file to the printer. This feature is used to send files containing ZPL, SGD commands, or printer operating system files to the printer.

After installing a firmware file, you may need to reconnect the printer. See Discovery and Connectivity on page 9 for more information.

Printer Actions

All actions on this menu except for the Security Assessment Wizard are performed immediately. For example, if you select **Calibrate Media**, the printer performs that function immediately after you select that action, and you will see the printer feeding media out during the calibration. For the Security Assessment Wizard, enter a set of supplemental screens.

1. See Figure 16. From the Dashboard, tap **Printer Actions (1)**.

2. Select the desired action.

Figure 16   Dashboard and Printer Actions Screens

(1) Dashboard Screen

(2) Printer Actions Screen
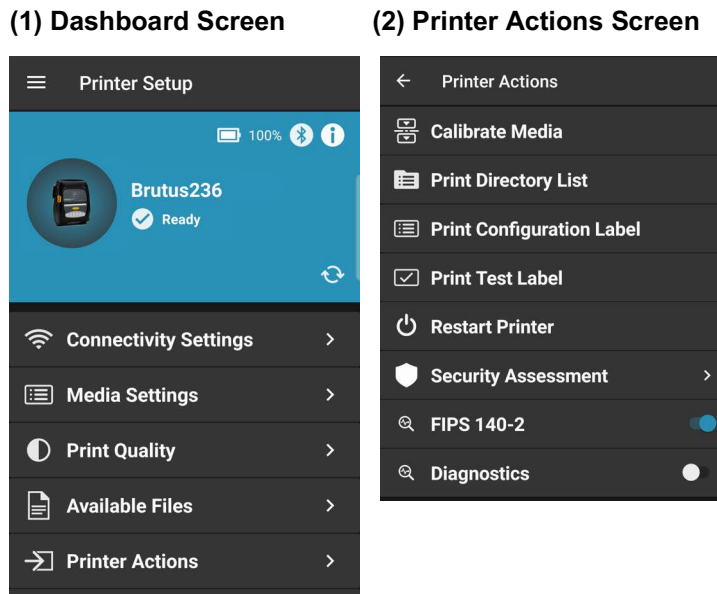
Printer Actions Elements

Within the **Printer Actions** Settings menu, you may choose from the following elements:

- **Calibrate Media -** automatically starts a media calibration on the printer.
- **Print Directory List -** automatically prints a list of files stored on the printer.
- **Print Configuration Label -** automatically prints a configuration label.
- **Print Test Label -** automatically prints a test label.
- **Restart Printer -** automatically restarts the printer.
- **Security Assessment -** accesses the Security Assessment wizard.
- **FIPS 140-2 -** controls FIPS 140-2 compliance mode, which will disable Bluetooth on the printer.

NOTE: The FIPS option will not show for all printers.

- Enable **Diagnostics -** enables Diagnostic mode, which should only be used for advanced troubleshooting.

IMPORTANT: If you are using a Bluetooth LE connection, you must power cycle the printer to exit diagnostics mode.

Enable FIPS 140-2 Setting

FIPS stands for Federal Information Processing Standards. It was developed to validate and record certain requirements for a range of cybersecurity matters, and define which are acceptable. Enable this option to comply with FIPS 140-2.
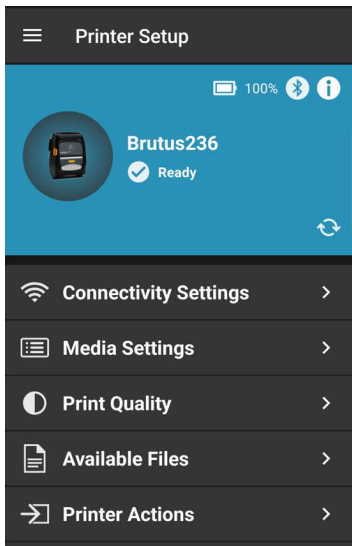
NOTE: The FIPS option will only show for printers that support it.
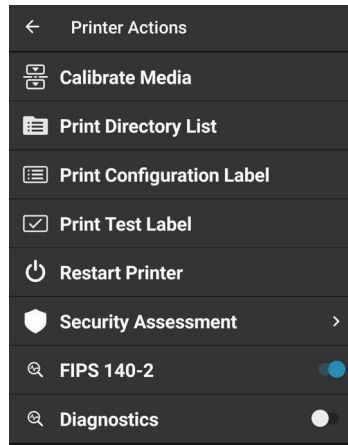
To enable FIPS 140-2:

1. See Figure 17. From the Dashboard, tap **Printer Actions (1)**.

2. Tap **FIPS 140-2 (2)**.

3. Tap **Enable (3)** at the prompt.

4. Restart the printer.

Figure 17　Dashboard and Printer Actions Screens

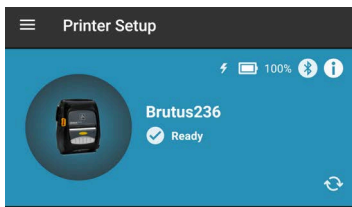**(1) Dashboard Screen**　　**(2) Printer Actions Screen**　　**(3) Enable FIPS Screen**
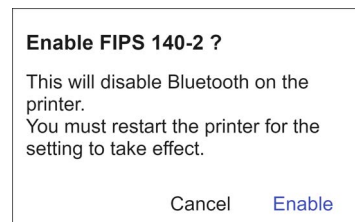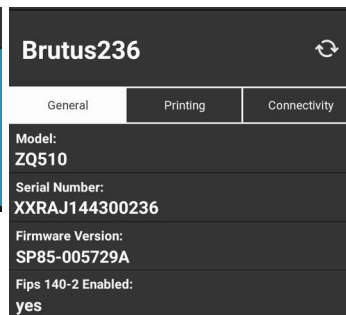

When FIPS is enabled, the setting is displayed in the General Tab. See Figure 18.

Figure 18　Information Icon and General Tab Screens

(1) Information Icon　　**(2) General Tab**

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Security Assessment Wizard

IMPORTANT: Before implementing any recommended changes from the Security Assessment Wizard, you should verify them in a test environment before implementing across your printer network.

1. See Figure 19. From the Dashboard, tap **Printer Actions (1)**.

2. Tap **Security Assessment (2)**. Tap **About the Assessment (3)** for more information **(4)**.

3. Tap **Scan Now (3)** to start the Security Assessment scan.

4. Tap the communication interface (**Bluetooth**, **Wireless**, or **Local**) which you use for normal printer operations **(5)**.

NOTE: There is only a single menu option for Bluetooth; if selected, it will use either the Bluetooth Classic or Bluetooth LE option you chose for your connectivity.

The Security Assessment wizard starts scanning for risks **(6)**. Once the scan is finished, the **Scan Results (7)** are displayed.

- ✅ indicates there is no risk.

- ⚠️ indicates a moderate risk that may need to be addressed.

- ❌ indicates a high-level risk that should be addressed.

- NA indicates that there is no risk associated because the feature is not in use or enabled on your printer.

5. From the **Scan Results** page, tap on a risk to display the **Risk Details** (8).

6. From the **Scan Results** page, tap **Get Full Report** to have a full report sent to your email address (9). Once you enter your email and submit, you will then have the option to select an email client.
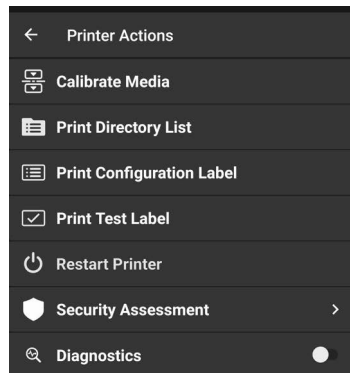
NOTE: An email account is required to be setup on your device to email the security report. The default email application for your mobile device is used to send the report.

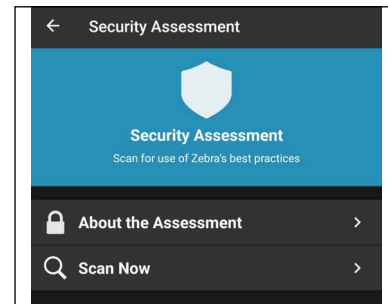**Figure 19**   Security Assessment Screens
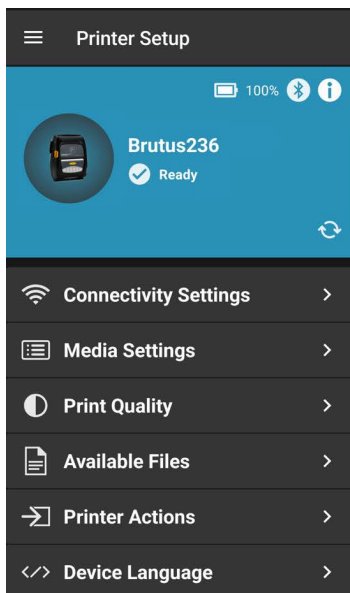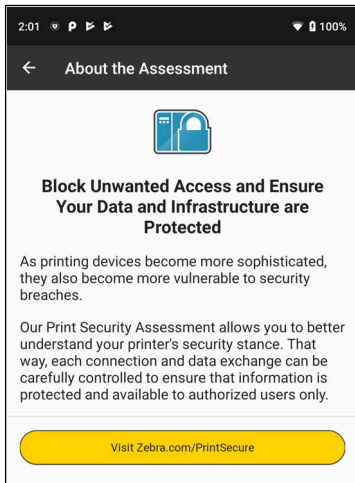
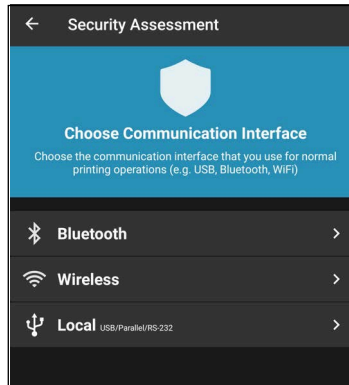**(1) Dashboard Screen**   **(2) Printer Actions Screen**   **(3) Security Assessment**
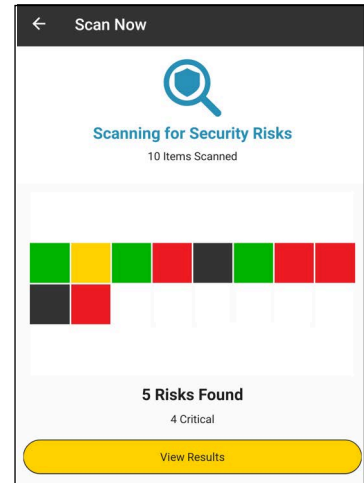
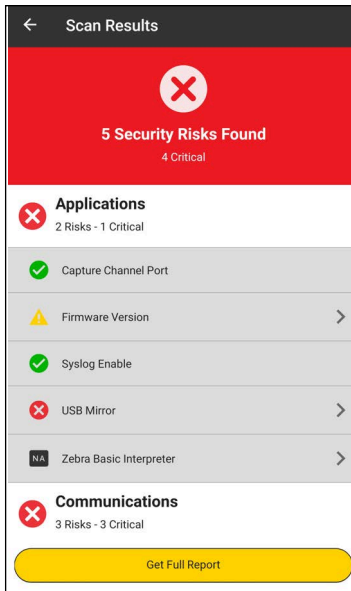

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(4) About Screen

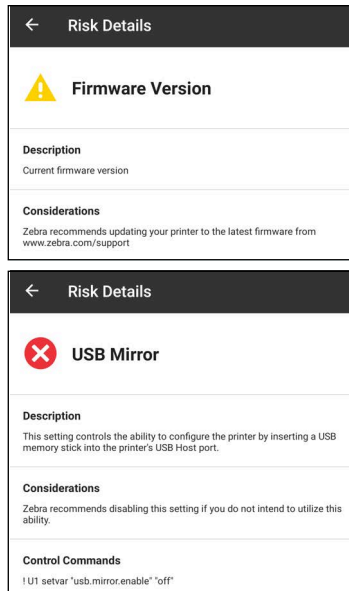## (5) Communication Interface
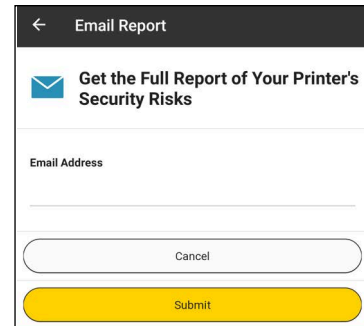

(6) Scanning for Risks

(7) Scan Results

(8) Risk Details

(9) Email Report

Device Language Selector and Printer Emulation Management

This section provides information about Device Language Selector and Printer Emulation Management in Zebra Printer Setup Utility.

IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

NOTE: Printer Emulation was formerly known as Virtual Device.

Introduction

A device language is a language that is native to Zebra printers and is factory installed. These languages send commands to the printer to perform specific functions. To select and apply a device language, see Device Language Selector on page 31.

A printer emulation is an application which emulates another company's printer language. Generally, a printer emulation includes a subset of their printer commands. Unlike device languages, Printer Emulations are not native to Zebra printers and must be installed on printers.

Most printer emulation apps are delivered via zip file; contain a small script file and a text file; and can be installed quickly. There are two exceptions:

- Virtual Device-I
- Virtual Device-D

IMPORTANT: These printer emulations are complete firmware downloads. These are very large files, will take a substantial amount of time to download and install on the printer, and will reboot your printer twice. These two printer emulations are also mutually exclusive, so only one is installed on the printer at a time.

To install a printer emulation, see Printer Emulation Management on page 32.

Device Language Selector

Device Language includes native Zebra supported languages (and printer emulators previously loaded) on the printer. Only those languages (or printer emulators) loaded on the printer are displayed on the Set Device Language screen. See Figure 20.

The Device Language Selector permits you to change the device language used to communicate with the Zebra printer. Device Languages change depending on the printer to which you want to send commands. For example, Line Print will only appear as a native Device Language for certain mobile printers such as the ZQ210 or the ZQ510 printers, and will not appear as a native Device Language for the ZD410 printer.

Set the Device Language

To set the Device Language:

1. See Figure 20. From the Dashboard, tap **Device Language (1)**.

    The Device Language currently in use is indicated **(2)**.

2. Tap **</> Set Device Language (2)** to make a change.

3. On the **Set Device Language** screen **(3)**, tap the language you wish to use, and then tap **Apply**.
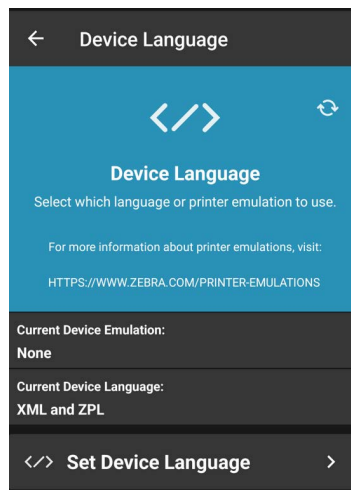
NOTE: The currently active device language is selected by default.

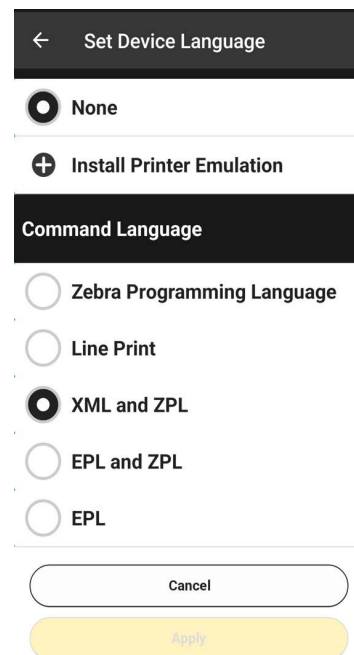**Figure 20**   Dashboard and Device Languages Screens

(1) Dashboard Screen
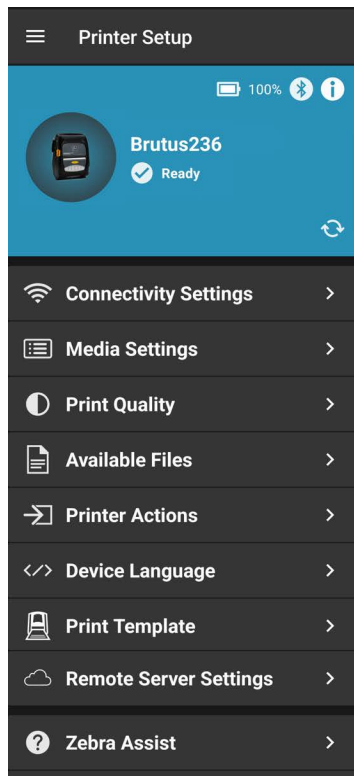
(2) Device Languages Screen

(3) Set Device Language

Printer Emulation Management

Printer Emulations are on-printer applications that allow printers running Link-OS to use legacy languages normally associated with other printer brands. Multiple Printer Emulations (except for Virtual Device-I and Virtual Device-D as noted previously) can be downloaded to a single printer. It is not necessary (or possible) to remove Printer Emulations from printers; users simply choose between command languages as needed.

Printer Emulation Management is performed using the Device Language option on the Dashboard. To install the Printer Emulation, you must download a zip file to your mobile device.

There are two ways to install the printer emulation via Zebra Printer Setup Utility:

1. Download a zip file to your mobile device.

2. Store and download the zip file from your Cloud storage provider.

Download the Printer Emulation Zip File

To download the Printer Emulation, complete the following steps from your computer or your mobile device.

1. Open a web browser and navigate to:

   zebra.com/printer-emulations

2. Locate your printer type in the list of printers and tap **Download Now,** or scroll to Request Information if support for your printer cannot be found.

3. Fill out the information on the Printer Emulation Download Request form.

4. Click **Submit**.

5. Read the End User License Agreement.

6. Click **Accept and Begin Download Now**.

   Your browser prompts you to open or save the zip file containing the Printer Emulation.

7. Save and store the Printer Emulation zip file to your computer or storage location (Box, DropBox, iCloud,etc.).

   The zip file contains the following files:

   • The Printer Emulation .**NRD** (or .**ZPL**) file to be downloaded to a Zebra printer.

   • Text files (.**txt**) with the SGD commands to enable and disable the printer emulation.

   • A sample test format that can be sent to the printer once the printer emulation is enabled.

Install the Printer Emulation

This section will disable the current device language or printer emulation, install, and enable the new printer emulation all within this single feature. When you install a printer emulation, you are sending the .**NRD** (or .**ZPL**) file to the printer.

After the files are sent to the printer, the Printer Emulation appears in the Set Device Language screen. When you install the printer emulation for the first time, a browser opens and you can select the printer emulation zip file.

IMPORTANT: Once you have completed a firmware update, or a firmware and printer emulation update, you may need to reconnect your mobile device to the printer. You are prompted to do so if necessary.

To install the printer emulation:

1. See Figure 21. From the Dashboard, tap **Device Language** (1).

2. From the Device Language screen, tap **Set Device Language** (2).

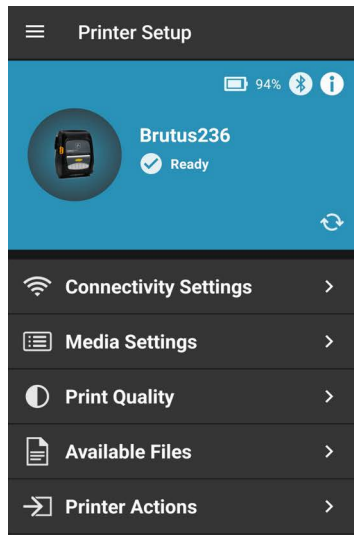   If this is the first time you are installing a printer emulation, it will not appear in the list.

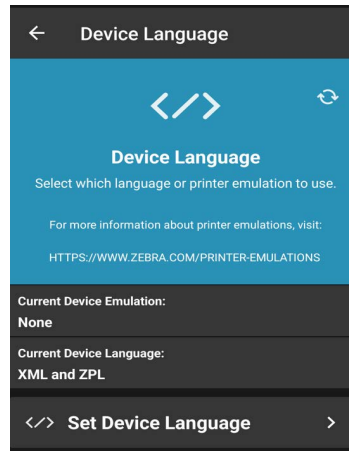3. Tap **+ Install Printer Emulation** (3).

NOTE: If you are using Bluetooth LE, the option to install a Printer Emulation is disabled.

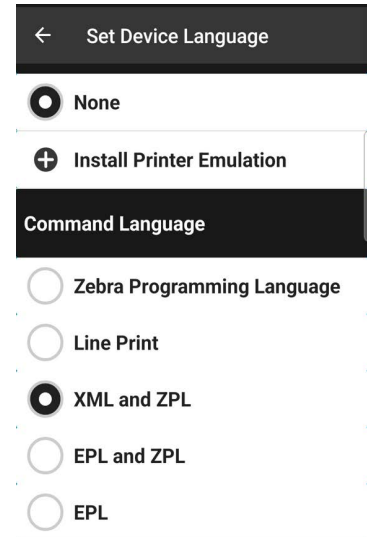**Figure 21**   Dashboard and Device Languages Screens

(1) Dashboard Screen

(2) Device Languages Screen

(3) Set Device Language

1. Navigate to the zip file, tap it, and tap **Install**.

NOTE: Do not change the name of the Printer Emulation zip file.

Click **Cancel** to exit and return to the Set Device Language screen.
If you already have an active printer emulation, you are prompted to disable it before proceeding.

- Tap **Disable** to disable the Printer Emulation.
- Tap **Cancel** to exit and return to the Set Device Language screen.

2. The printer device language is set to **XML and ZPL** in this example. Now, the printer is ready to install a new printer emulation.

NOTE: If you are connected via USB cable and are also installing a firmware-based Printer Emulation from either of the following:

- Virtual Device-I
- Virtual Device-D

You must perform an additional step.

- Click **OK** to close the dialog and to begin downloading the Printer Emulation.
- Click **Cancel** to close the dialog.

After installing a firmware-based Printer Emulation, you must enable the Printer Emulation.

If required, reconnect the printer and select the Printer Emulation in **Set Device Language** option.

NOTE: The Print Test Label option may not be available if the virtual device was not installed from the device currently being used.
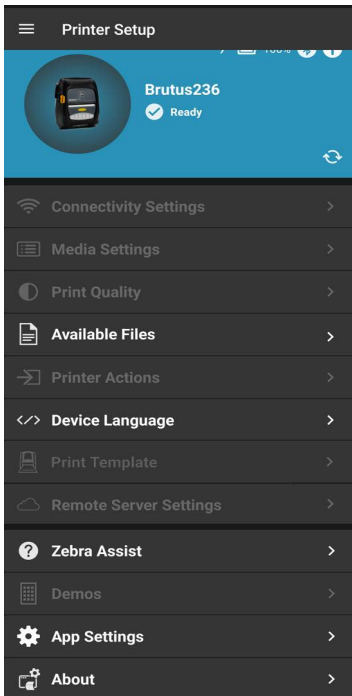
NOTE: When you return to the Device Language screen, Current Device Language displays the specific Printer Emulation language enabled for your printer.

IMPORTANT: After enabling a printer emulation, the printer reboots, the application reconnects, and most menu options are disabled.

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**Figure 22**   Dashboard after Printer Emulation Installation

Print Templates

This section provides instructions on how to print customized templates from the Print Template feature. Print templates are recognized by the .zpl file extension.
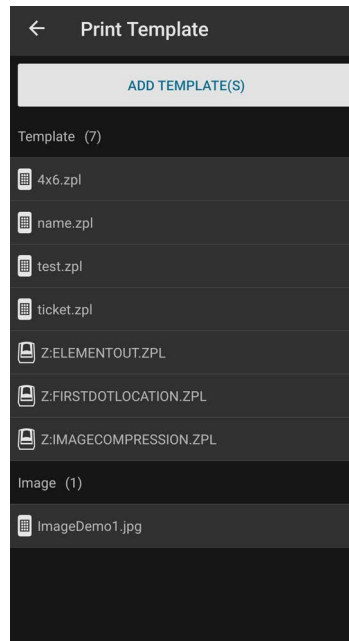
IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Figure 23   Dashboard Screen and Print Template Screen

(1) Dashboard Screen
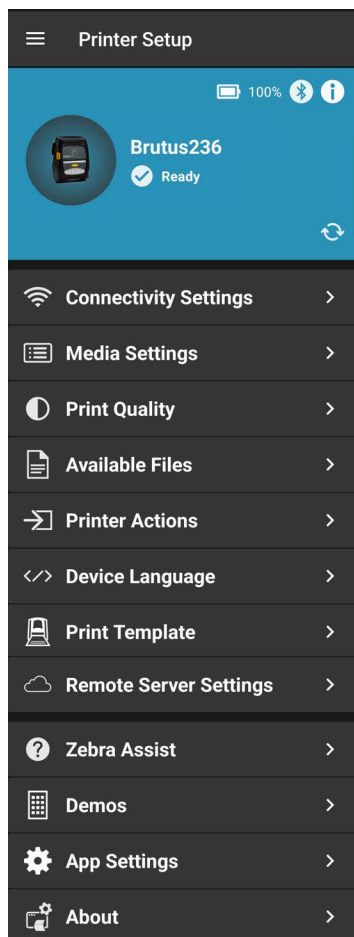
(2) Print Template Screen

Using a Print Template

Several sample templates are included in the application.

To use a Print Template:

1. See Figure 24. From the Dashboard, tap **Print Template (1)**.

2. Within the **Print Template Screen (2)**, tap a template to select it from the list.

3. Depending on the template, complete the form by tapping and filling each form field in the **Template Screen (3)**.

4. Tap **Print** to print.

Adding a Template

Customized print templates can be added to the **Print Template** feature. Before templates are added, ensure they are stored somewhere on the device, for example, within a Documents folder. Templates can also be added from Cloud storage providers if accounts are set up on the device.

To add a template to Print Template:

1. See Figure 24. From the Dashboard, tap **Print Template (1)**.

2. Tap **Add Template(s)** from the **Print Template Screen (2)**.

    • Interactive and fillable templates use a .zpl file extension.

    • Images can also be used as templates. The maximum allowable image size is 2MB.

    Your template is added to the Template list and shows an icon.

3. Locate the file within the device and select it.

    • Tap ⬚ to select a template stored on the printer.

    • Tap ⬚ to select a built-in sample template.

    • Tap ⬚ to select a template stored on the device.

Figure 24 Dashboard and Print Template Screens

(1) Dashboard Screen   **(2) Print Template Screen**   **(3) Template Screen**
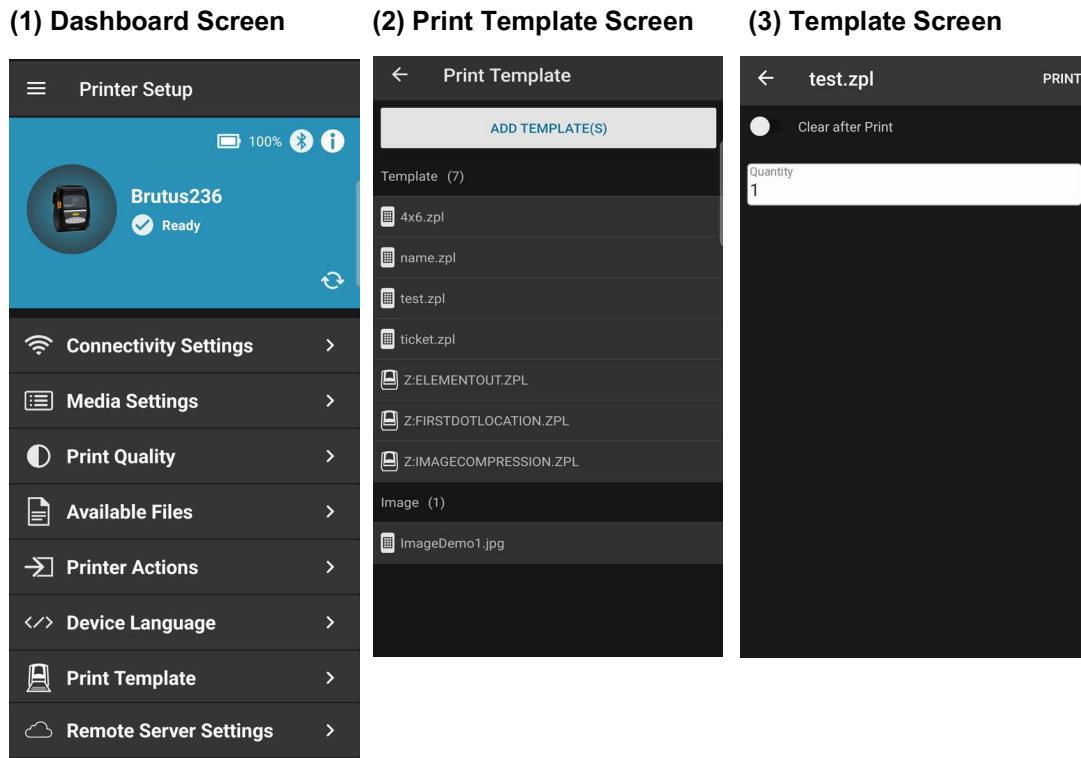
Removing a Template

This section describes how to remove a template from Printer Template. Before removing a template, note that:

- Only a template that has been added can be deleted.
- You cannot delete a built-in template.
- You cannot delete a template that is stored on the printer from the app.

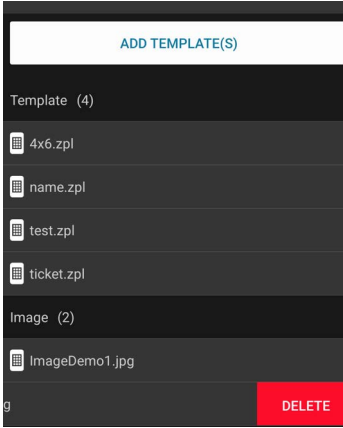**To remove a template from Print Template, follow these steps.**

1. See Figure 25. From the **Print Template Screen (2)**, locate the template you want to remove. The image template **Example.png** is used in this example.

2. Swipe left to reveal **Delete (3)**.

3. Tap **Delete** to remove the template.

Figure 25   Removing a Template
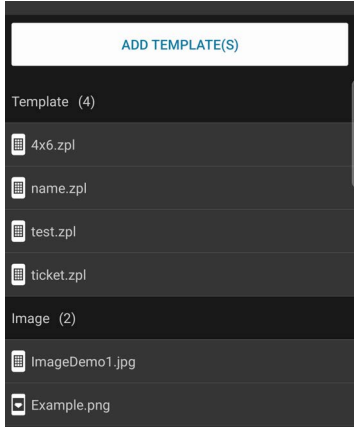
(2) Print Template Screen   **(3) Template Screen**
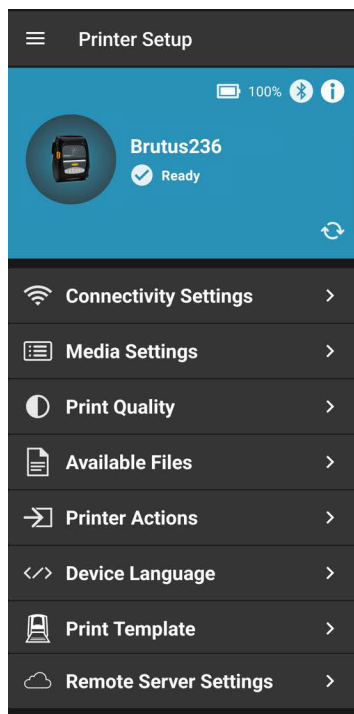
Remote Server Settings

This section provides information about updating Remote Server Settings.
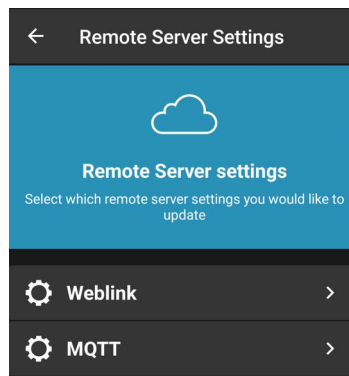
IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Figure 26   Remote Server Settings

(1) Dashboard Screen

(2) Remote Server Settings Screen

Introduction

The Zebra Printer Setup Utility provides users the ability to configure printers to connect to applications using Weblink or MQTT type connections. Example applications that use Weblink and MQTT include:

- Printer Profile Manager Enterprise
- SOTI® MobiControl Connector
- AirWatch Connector

> **NOTE:** The Remote Server Settings menu item is not shown when connected to a printer that doesn't support Weblink or MQTT. The Remote Server Settings menu item will appear gray and disabled when a Printer Emulation is active.

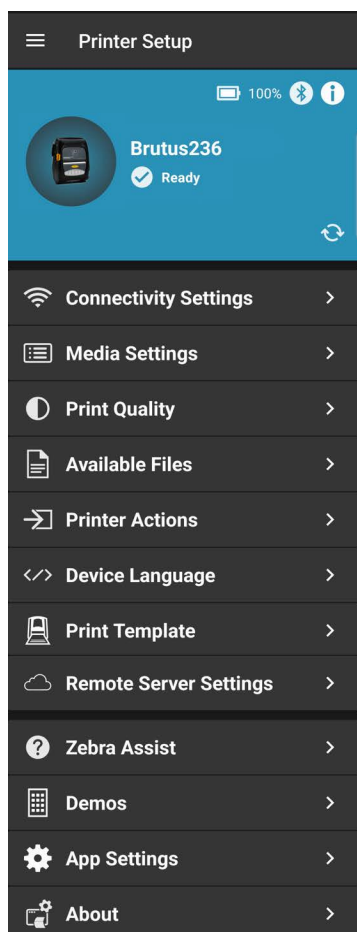## Accessing the Weblink Server Settings

> **IMPORTANT:** The Weblink option will only be visible for printer models that support Weblink.

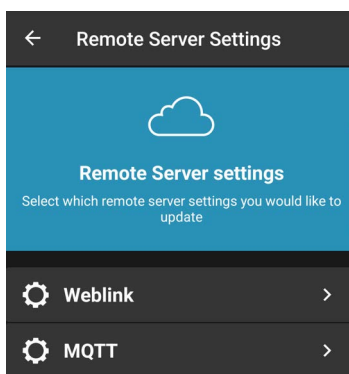**To access Weblink Server Settings:**

1. From the Dashboard, tap **Remote Server Settings (1)**.

2. Tap **Weblink (2)**.

Figure 27   Dashboard, Remote Server Settings, and Weblink Screens

(1) Dashboard Screen   **(2) Remote Server Settings Screen**   **(3) Weblink Settings Screen**

Configuring the Weblink Server Settings

The Weblink settings screen provides configuration options allowing you to adjust the remote settings to your exact needs:

- Maximum Log Entries allows you to enter log entries.

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- You also have the ability to configure two Weblink connections.

NOTE: In addition to configuring the Weblink settings, ensure the time and date are correct on the printer and any required certificate files have been stored on the printer.

Maximum Log Entries

Within the **Maximum Log Entries** field, tap to enter a value:

- The number can range from 1 - 10,000.

- To disable the log entry, enter 0.

Maximum Log Entries
1 - 10,000, 0 to disable

0

Configuring the Weblink Connections

In the Connection 1 section and within the Remote Server HTTPS URL, tap to enter the URL:

- Manually enter up to 2048 characters.

- You may scan a QR code containing a URL into the Remote Server field.

Within the Proxy URL field:

- Manually enter the proxy URL.

- The proxy URL must follow the format: [http|https]://[user:pass@]domain[:port]/[path]

Repeat the steps for Connection 2.

Connection 1

Remote Server HTTPS URL
up to 2048 characters

Proxy URL
Format: [http|https]://[user:pass@]domain[:port]
/[path]

---

3. Tap **Apply** to apply the changes. When prompted, tap **Restart** to restart the printer.

Accessing the MQTT Server Settings

IMPORTANT: The MQTT option will only be visible for printer models that support MQTT.

The MQTT menu option will only be visible if the connected printer is running Link-OS 6.7 or later.
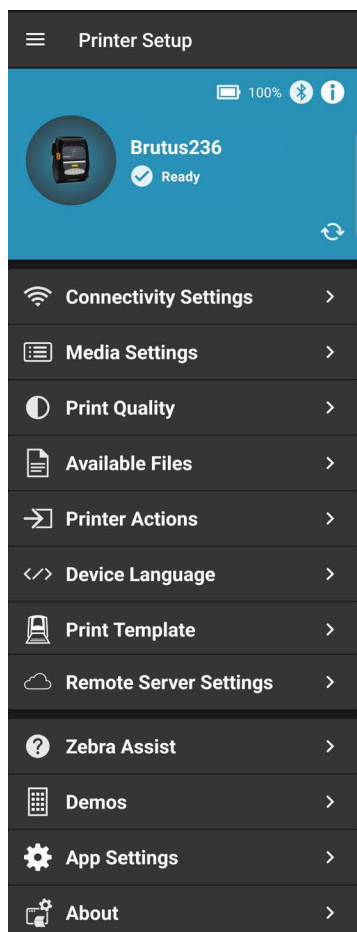
To access MQTT Server Settings:

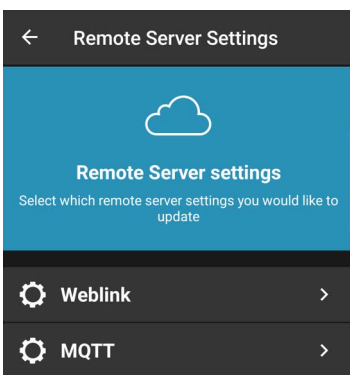**1.** From the Dashboard, tap **Remote Server Settings (1)**.

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2. Tap **MQTT (2)**.

3. Ensure **MQTT Enable** is checked **(3)**.

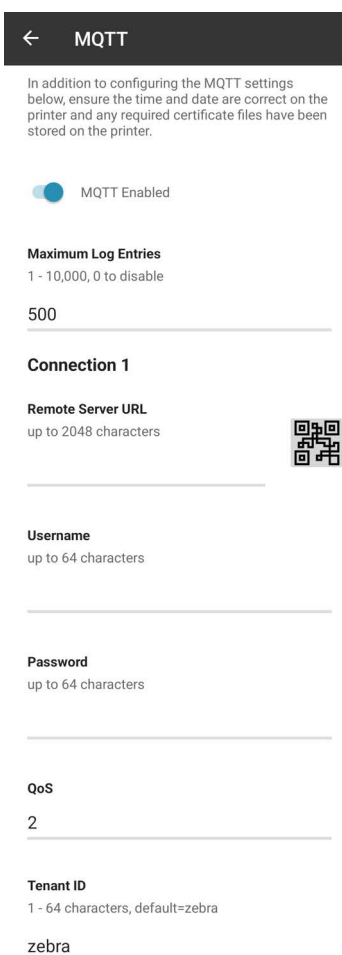**Figure 28**   MQTT Server Settings Screens
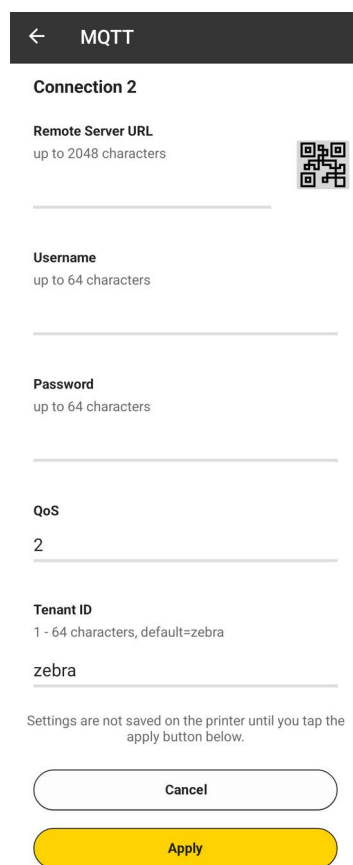
(1) Dashboard Screen | **(2) Remote Server Settings Screen** | **(3) MQTT Settings Screen** | **(4) MQTT Settings Screen Continued**

Configuring the MQTT Server Settings

The MQTT settings screen provides configuration options allowing you to adjust the remote settings to your exact needs:

• Maximum Log Entries allows you to enter log entries.

• You also have the ability to configure two MQTT connections.

NOTE: In addition to configuring the MQTT settings, ensure the time and date are correct on the printer and any required certificate files have been stored on the printer.

Maximum Log Entries

Within the **Maximum Log Entries** field, tap to enter a value.

• The number can range from 1 - 10,000.

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- To disable the log entry, enter 0.

Maximum Log Entries
1 - 10,000, 0 to disable

0

Configuring the MQTT Connections

Remote Server URL

In the Connection 1 section and within the Remote Server HTTPS URL, tap to enter the URL.

- Manually enter up to 2048 characters.
- You may scan a QR code containing a URL into the Remote Server field.

Remote Server URL
up to 2048 characters

Username

Enter a username up to 64 characters.

Username
up to 64 characters

Password

Enter a password up to 64 characters.

Password
up to 64 characters

QoS (Quality of Service)

Enter a number in the QoS field. The number represents the level of support for the MQTT connection.

QoS

2

Tenant ID

Enter a Tenant ID up to 64 characters. The number represents the top level of the Topic the printer will subscribe and publish to.

Tenant ID
1 - 64 characters, default=zebra

zebra

Repeat the steps for Connection 2.

3. Tap **Apply** to apply the changes. When prompted, tap **Restart** to restart the printer.

Printer Information

This section describes the printer and Zebra Printer Setup Utility application screen information available.

(!) **IMPORTANT:** Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Zebra Printer Setup Utility Application Screens

This section details the Zebra Printer Setup Utility application screens. Additional items include Deselect Printer, Zebra Assist, Settings, and About. You may manage your printers via smartphone or tablet. You may view Zebra Printer Setup Utility screens in either portrait or landscape orientation on your tablet only. (Your smartphone displays screens in portrait only.)

Once the application is downloaded, the application opens to the Dashboard screen. As this is the first time you have used the application, there is no printer selected. See Printer Discovery Methods on page 9 to establish a printer connection.

**Figure 29** Dashboard (First Time Use)
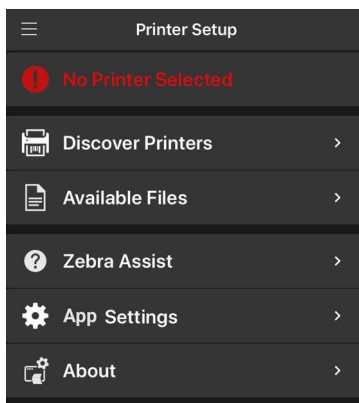
Printer Information

Specific printer information is available by touching the photo of the printer or 🛈 (1) on the Dashboard. There are three tabs providing information about the printer and are listed in Figure 30.

- General tab **(2)**: Displays the model, serial number, firmware version of the printer, battery status, and Advanced Information.

- Printing tab **(3)**: Displays the print status, mode, speed, darkness, media type and dimensions, odometer information, and battery information. You may need to scroll down to see the lower section of the screen.

- Connectivity tab **(4)**: Displays information about the connectivity method (for example, Bluetooth, Wireless, Wired/Ethernet), MAC Address, IP Address, and Region. You may need to scroll down to see the lower section of the screen. Only information applicable to the current connectivity method is shown. In the examples below, the printer is connected via Bluetooth.

- Advanced Information **(5)**: Displays additional printer and battery information.

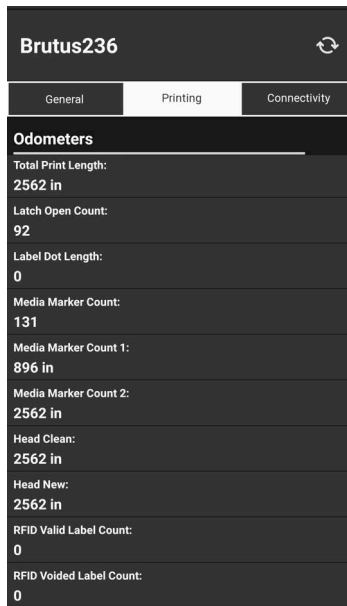**Figure 30** Printer Information Menus and Tabs
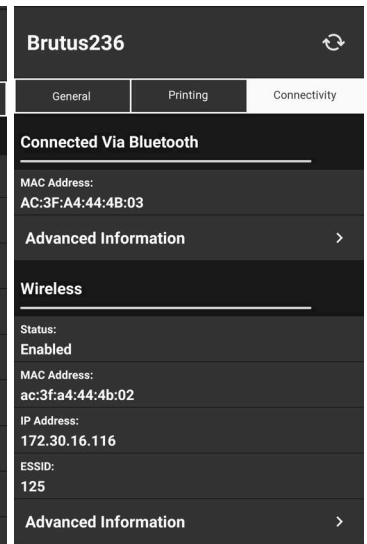
(1) Information Icon
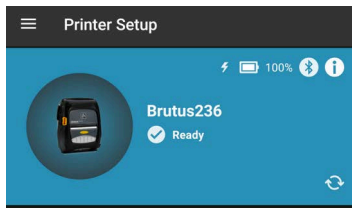
(2) General Tab
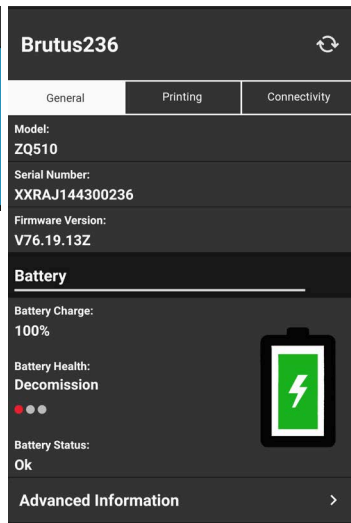
(3) Printing Tab

(4) Connectivity Tab

(5) Advanced Info / Battery Tab

Other Dashboard Menu Items

At the bottom of the Dashboard are three miscellaneous items. These include:

• Zebra Assist

• App Settings

• About

Zebra Assist

Zebra Assist automates the process of collecting your printer's configuration and attaching it to an email ready to send to Zebra Support to assist with troubleshooting.

From this screen, tap to:

• Visit zebra.com

• Send an email to Zebra Support. (For more details, see Send a Settings File to Zebra Assist on page 51.)

• Review a list of previous emails sent to Zebra Support.

Figure 31   Zebra Assist Screen
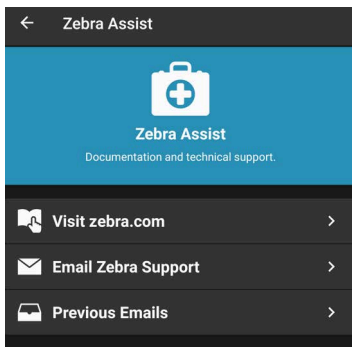
App Settings

See Figure 32. From the Settings page **(1)**, you can change various items such as:

• **Unit of measurement:** set up inches, centimeters, and millimeters

• **Warn on Connect**: set notifications for when some features are not available to connected printer.

• **Anonymous error reporting:** select to send, or not send, error reports to Zebra, and to allow developers to see app navigation statistics. The default is checked/enabled; meaning error reports and app navigation statistics will automatically be sent. To opt out of sending the reports, uncheck the box **(2)**.

NOTE: Zebra recognizes that the security of your personal information is an important part of our partnership and we are not in the business of selling or making it available to others. Zebra maintains its commitment to safeguard and protect the confidentiality, integrity, and availability of information, which is stored, processed, and/or transacted through our products. We also collect data in a form that does not, on its own, permit direct association with specific customers or corporations. We may collect, use, transfer, and disclose non-personal information for any purpose. We conduct our business in compliance with applicable laws on data privacy protection and data security.
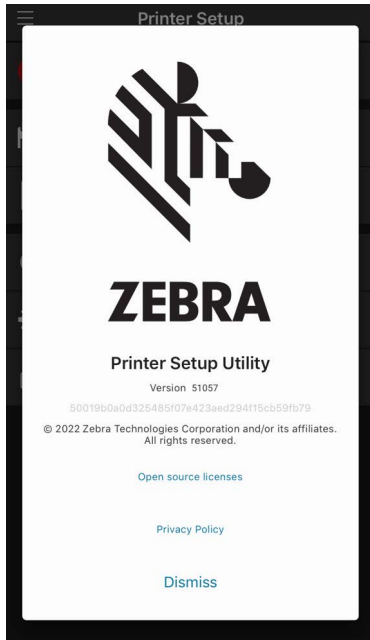
Figure 32   Settings and Error Reporting

(1) Settings

(2) Disable Reporting
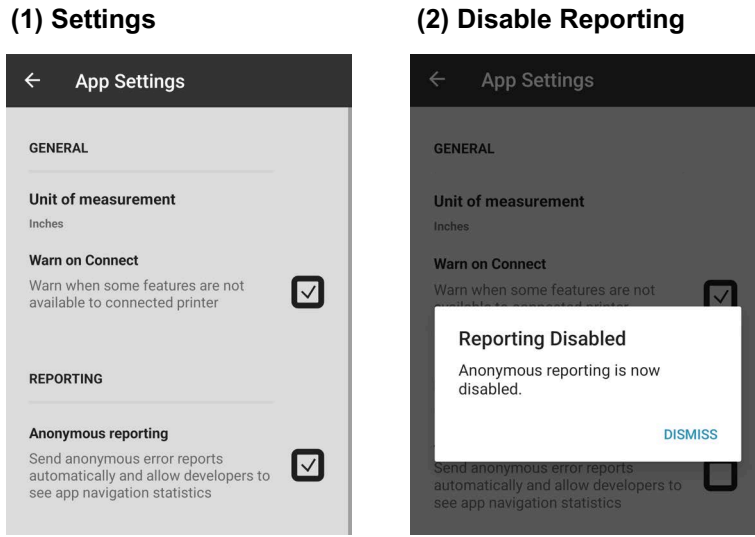
About

The About screen provides various information about the application version, copyright information, open source licensing, and Zebra's privacy policy.

Figure 33   About Screen

Capture and Send a Settings File

This section describes how to capture and send a settings file.

(!) **IMPORTANT:** Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Capture or Save Settings to a File

With Zebra Printer Setup Utility, you can save the printer settings to a file. There are three menus where you can save your settings to a file:

- Connectivity Settings
- Media Settings
- Print Quality

To change your Media Settings, see Media Settings on page 19**. To save your settings:**
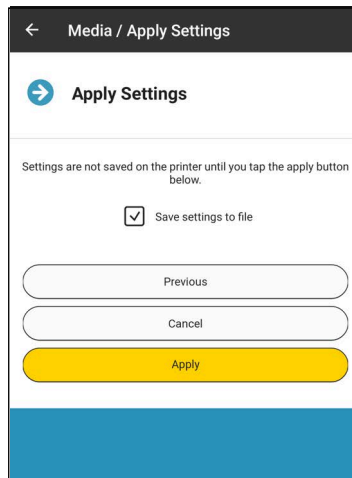
1. From the Dashboard, tap **Media Settings**.

2. Tap **Next** until you get to the **Apply Settings Screen (1)**.

3. Tap the checkbox **Save settings to file (2),** and then tap **Apply**.

Figure 34 Media Settings Screens
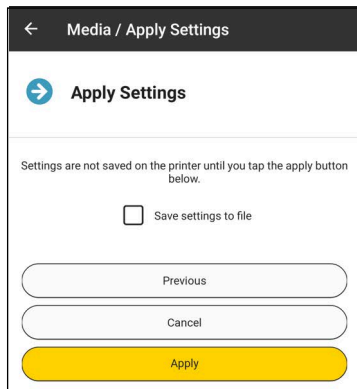
(1) Apply Settings Screen   **(2) Save Settings Checkbox**

4. Follow the prompts to set up your Saved file location.

5. Tap **Apply** to apply your settings to the printer.

   • Tap **Cancel** to quit without saving your settings.

   • Tap **Back** to return to the previous menu screen.

Send Settings File to a Printer

Once you have saved your settings to a file, send your settings file to your printer.

NOTES:

• Sending files over a Bluetooth LE connection is limited to file sizes of 1MB or less.

• The settings files are named by appending a number to the end of the file name. (Default increment is 1; the range is 1-9999.)

To send the settings file to a printer:

1. From the Dashboard, tap **Available Files**.

2. Tap the file you wish to send.

3. Tap **Send To Printer** to send the file or **Close** to quit.

   When the file has been successfully sent, an acknowledgment displays.

Send a Settings File to Zebra Assist

At times, you may want to send your settings file to Zebra Assist. They can help troubleshoot issues with a printer.

**To send a settings file to Zebra Assist, complete these steps.**

1. From the Dashboard, tap **Zebra Assist**.

2. Tap **Email Zebra Support** on the next screen.

3. To select your issue, tap in the issue field to show all of the choices (2). Select the issue you wish to share.

4. Add a Description, if desired.

5. To add an attachment:

   • Tap ⊕ to add a file.

   • Tap 🖼 to add a picture.

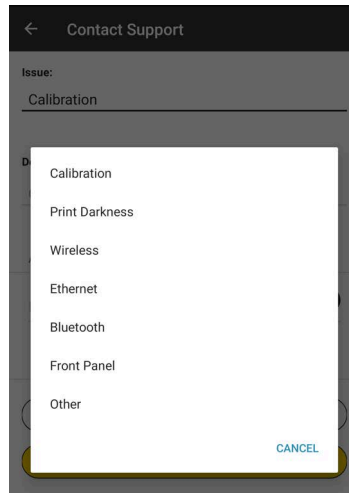   • Tap ⓘ add a printer configuration file.

IMPORTANT: When sending file attachments to Zebra Assist, file sizes should not exceed 25MB due to email server limits. 10MB or less is recommended. If necessary, share files using a Cloud storage service and include the link in your message.

Figure 35 Zebra Assist Screens

(1) Contact Support
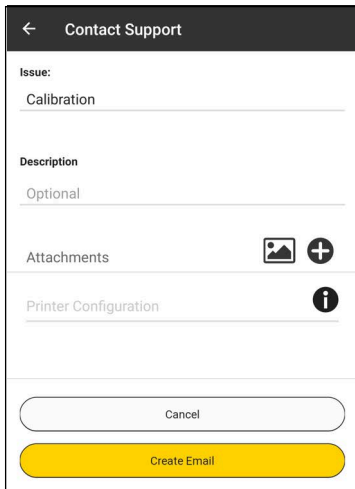
(2) Issue Selector

6. Once you have added all information you have to share, tap **Create Email**.

NOTE: Attachments to emails are compressed, so the size of attachments will change from the original stored size.

7. If prompted, select the **Share with** method and **Just Once** or **Always**.

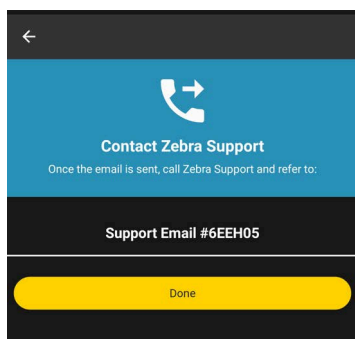   An email opens with your selected settings file attached.

NOTE: The default email application for your mobile device is used to send the report.

8. Tap the **Send icon** the same as any email.

9. Tap **Done**.

Figure 36 Support Email Screen

After you tap **Done**, the Zebra Assist main screen appears.

Demos

This section features the Asset Tag, Traffic Ticket, and Photo Badge demos. The intent of these demos is to show different types of applications where printing from a mobile device is required. Printing support for Zebra printers can be easily added using our MultiPlatform SDK available at zebra.com/sdk.
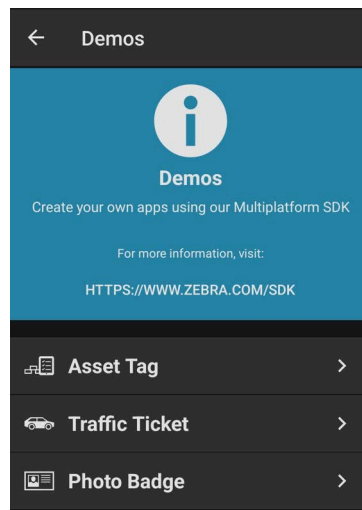
IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Figure 37   Dashboard and Demos Screens

Dashboard Screen
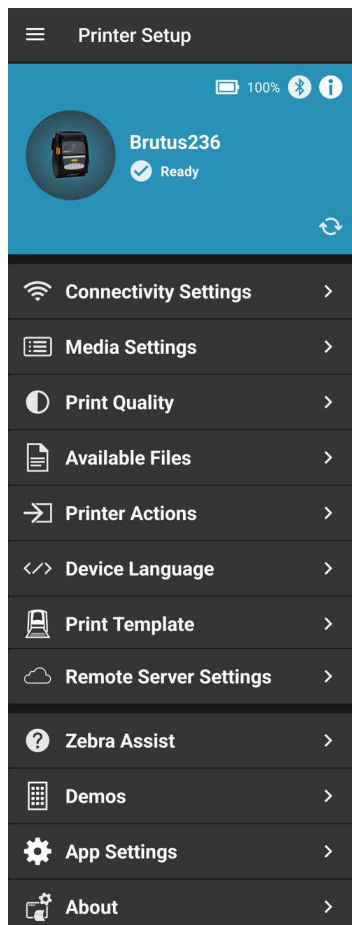
Demos Screen

Using the Asset Tag Demo

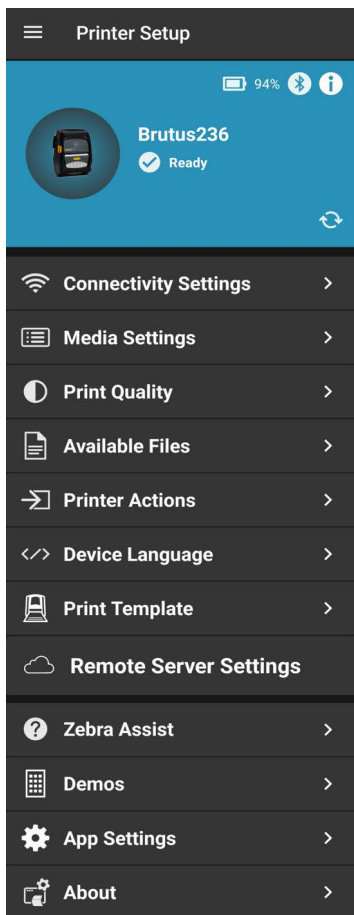The Asset Tag demo is included to demonstrate how unique asset tags may be printed.

NOTE: The demo will not work when mobile printers are set to Line Print. Use the Device Language option in the app to change the language from Line Print.
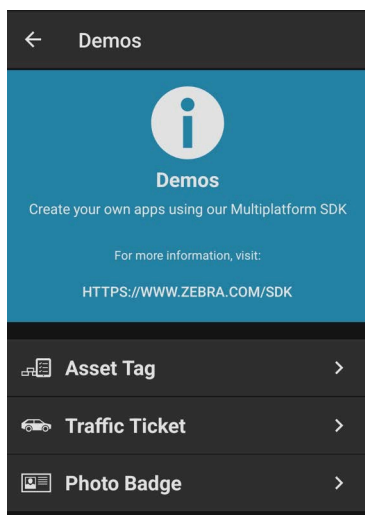
To use the Asset Tag demo:

1. See Figure 38. From the Dashboard, tap **Demos (1)**.

2. Tap **Asset Tag (2)**.

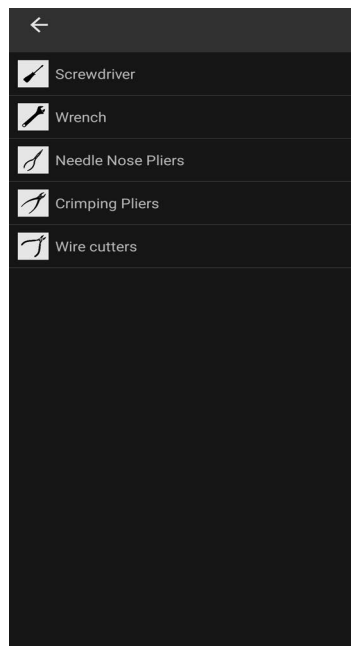**Figure 38**   Dashboard, Demos, and Asset Tag Demo Screens

(1) Dashboard Screen   **(2) Demos Screen**   **(3) Assets Menu Screen**   **(4) Asset Screen**

3. Within the **Assets Menu (3)** screen, tap to select from the following assets:
   - Screwdriver
   - Wrench
   - Needle Nose Pliers

- Crimping Pliers
- Wire Cutters

4. Within the **Asset (4)** screen, tap **Print** to print out the asset.

Using the Traffic Ticket Demo

The Traffic Ticket demo is included to demonstrate how traffic tickets may be printed.
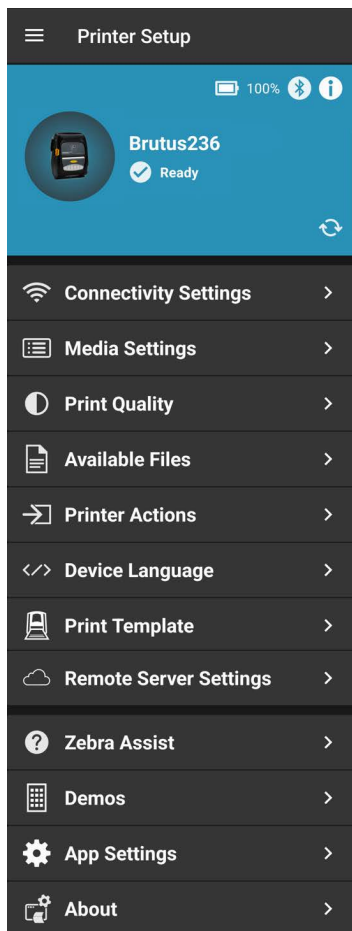
NOTE: The demo will not work when mobile printers are set to Line Print. Use the Device Language option in the app to change the language from Line Print.
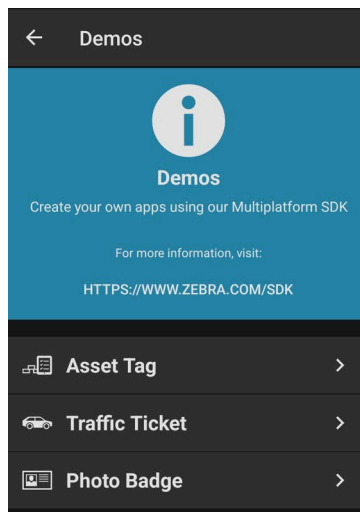
To use the Traffic Ticket demo:

1. See Figure 39. From the Dashboard, tap **Demos (1)**.

2. Tap **Traffic Ticket (2)**.

Figure 39   Dashboard, Demos, and Traffic Ticket Demo Screens
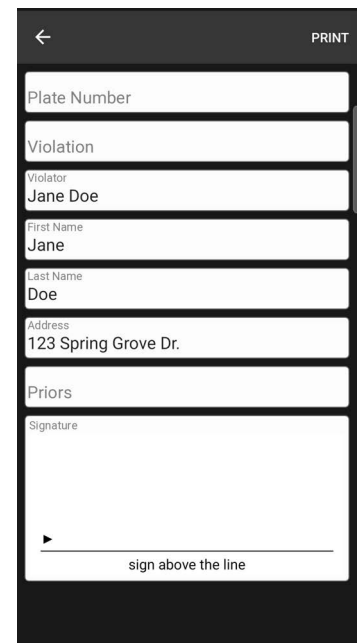
(1) Dashboard Screen

(2) Demos Screen

(3) Traffic Ticket Screen

3. Within the **Traffic Ticket (3)** screen, complete the form by tapping and filling each form field.

- In the **Plate Number** field, use the device's keyboard to enter a plate number up to 10 characters long.

- In the **Violation** and **Violator** fields, select a predefined option from the drop-down menu.

- In the **Signature** panel, use a finger or touch screen pen (stylus) to write a signature.

4. Once complete, tap **Print** to print out the traffic ticket.

Using the Photo Badge Demo

The Photo Badge demo feature is included to demonstrate how users can print out a photo badge using their device's camera or photo gallery.
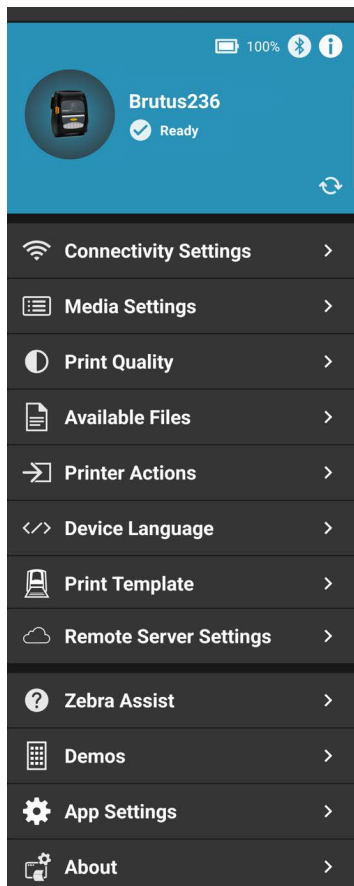
NOTE: The Demo will not work when Mobile printers are set to Line Print. Use the Device Language option in the app to change the language from Line Print.
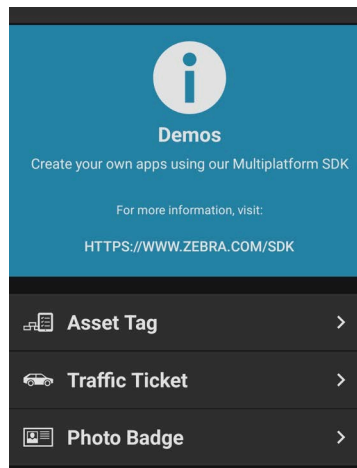
To use the Photo Badge demo:

1. See Figure 40. From the Dashboard, tap **Demos (1)**.

2. Tap **Photo Badge (2)**.

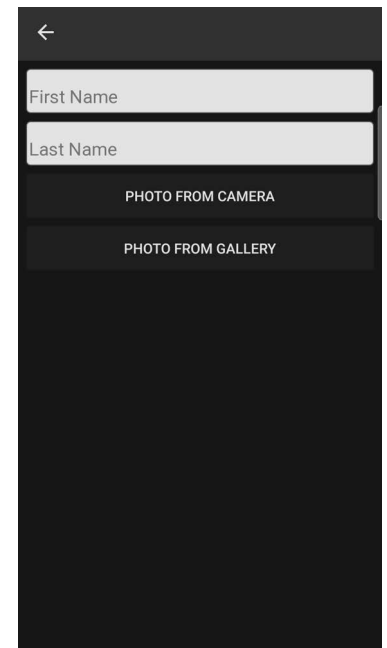**Figure 40** Dashboard, Demos, and Photo Badge Demo Screens

(1) Dashboard Screen   **(2) Demos Screen**   **(3) Photo Badge Screen**

3. Within the **Photo Badge (3)** screen, tap the form fields to enter a first and last name using the device's keyboard.

NOTE: All fields must be entered in order to print.

4. There are two ways to add a photo to a badge:

   a. **Photo from Camera**

      i.   Tap **Photo From Camera** to open the device's camera.

      ii. Tap the camera's shutter button to take a picture. The printer immediately prints the photo badge.

   b. **Photo from Gallery**

      i.   Tap **Photo From Gallery** to open the device's photo gallery.

      ii. Select a photo. The printer immediately prints the photo badge.

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