

Zebra Nucleus Connector for Android™

User Guide

P1085291-09EN Rev A



Zebra Technologies | 3 Overlook Point | Lincolnshire, IL 60069 USA
zebra.com

2026/06/02

The Zebra wordmark and logo are trademarks of Zebra Technologies Corp., registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners. ©2026 Zebra Technologies Corp. and/or its affiliates.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements.

For further information regarding legal and proprietary statements, please go to:

SOFTWARE: zebra.com/informationpolicy.

COPYRIGHTS: zebra.com/copyright.

PATENTS: ip.zebra.com.

WARRANTY: zebra.com/warranty.

END USER LICENSE AGREEMENT: zebra.com/eula.

Terms of Use

Proprietary Statement

This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

Product Improvements

Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

Liability Disclaimer

Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability

In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Contents

Introduction and Installation.....	7
Target Audience.....	7
Requirements.....	7
Printer Platform.....	7
Firmware Requirements.....	8
Connectivity.....	8
Device Platform.....	8
Feature Overview.....	8
Installing Zebra Nucleus Connector.....	9
Sideload the Zebra Nucleus Connector Application.....	9
Helpful Tips for Using the App.....	10
Security Settings Wizard with EU RED Security Enhancements.....	11
Security Setup Wizard.....	11
Changing Printer Security Settings.....	14
Forgotten Protected Mode Password.....	14
Discovery and Connectivity.....	15
Printer Discovery Methods.....	15
Bluetooth Pairing Through Your Mobile Device's Settings Menu.....	16
Print Touch.....	17
Connecting Using the Print Touch (Tap and Pair) Setup.....	17
Connecting Using the Manual NFC Setup.....	19
Connecting Using the Wi-Fi and Ethernet Network Setup.....	20
Pairing Using Bluetooth Classic and Bluetooth LE.....	21

Pairing a Device to a Printer Using USB.....	21
Zebra Nucleus.....	22
Enrolling your Printer to Nucleus.....	22
Printer Dashboard.....	23
Settings Menu Overview.....	24
Changing Connectivity Settings.....	25
Wireless Settings.....	26
Bluetooth Settings Menu.....	27
Wired Ethernet Settings Menu.....	28
Unpairing a Printer.....	28
Printer Ready State.....	29
Error on Connecting.....	29
Protected Mode.....	29
Disconnecting a Printer.....	29
General Settings.....	31
Enabling Diagnostics on the Printer.....	31
Enabling the FIPS 140-2 Setting.....	31
Media Setup.....	33
Changing Media Settings.....	33
Print Quality.....	35
Manually Adjust Print Quality.....	35
Controlling Darkness.....	36
Using the Print Quality Assistant.....	37
Actions and Files.....	39
Actions.....	39
Sending Files to a Printer.....	40
Device Language Selector and Printer Emulation Management.....	41

Device Language Introduction.....	41
Setting the Device Language.....	41
Printer Emulation Management.....	42
Selecting an Emulation.....	42
Accessing the Printer Emulation Zip File.....	43
Copy Printer Emulation File Methods.....	43
Downloading the Printer Emulation Zip File.....	43
Drag and Drop Using a USB Connection.....	43
Installing the Printer Emulation.....	44
Print Templates.....	46
Using a Print Template.....	46
Adding a Template.....	46
Removing a Template.....	47
Remote Server Settings.....	48
Introduction to Remote Server Settings.....	48
Access the Weblink Server Settings.....	49
Configure the Weblink Connections.....	49
Access the MQTT Server Settings.....	50
Configure the MQTT Server Settings.....	51
Printer Profiles.....	53
Saving a Configuration.....	53
Creating a Printer Profile.....	53
Applying a Printer Profile.....	54
Editing a Printer Profile.....	55
Deleting a Printer Profile.....	55
Saving and Sending a Settings File.....	56
Saving Settings to a File.....	56
Sending a Settings File to a Printer.....	56

Printer and App Information.....58

- Access General Information and Side-Drawer Menu.....58
- Application Settings.....60
- Zebra Assist.....61
 - Contacting Zebra Support via Email.....62
 - Support History.....63
- About.....64

Introduction and Installation

Zebra Nucleus Connector is an Android™ application (app) that assists with the setup and configuration of Zebra printers running Link-OS™. 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 Nucleus Connector is available on Google Play™.

This section provides information about the Zebra Nucleus Connector application, including supported operating systems, connectivity options, printers, and devices.

Target Audience

Zebra Nucleus Connector is intended for all customers and partners. Also, Zebra Nucleus Connector 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 on how to download the application and receive guided support throughout the setup process.

Requirements

This section describes the minimum requirements for using Zebra Nucleus Connector.

Printer Platform

Zebra Nucleus Connector supports the following Zebra printers.

Table 1 Supported Printers

Mobile Printers	Desktop Printers	Industrial Printers	Print Engine
ZQ300 Plus series	ZD200 series	ZT111	ZE5x1
ZQ500 series	ZD400 series	ZT200 series	
ZQ600 series	ZD510-HC series	ZT400 series	
ZQ600 Plus series	ZD600 series	ZT500 series	
	ZD888	ZT600 series	

Firmware Requirements

The application supports printers running Link-OS version 5.2 or later.

Connectivity

The application supports the following types of connectivity.

- Bluetooth® Classic
- Bluetooth® Low Energy (BTLE)
- Wired/Ethernet
- Wireless
- USB On-The-Go

Supported Operating Systems

The application is tested with and supported on the following Android versions.

- 13.x
- 14.x
- 15.x
- 16.x

Device Platform

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.

The application is tested with and supported on the following Android devices.

Table 2 Tested Android Devices

Zebra Handhelds	Consumer Handhelds	Other
ET45 (Android 14, 13)	Google Pixel 6a (Android 15)	Samsung S23 (Android 13)
TC22 (Android 13)	Google Pixel 8 (Android 16)	Samsung S24+ (Android 14)
TC57 (Android 13)	Google Pixel 8a (Android 16)	Samsung Tab S9 (Android 14)
TC52 (Android 14)		Samsung S22 (Android 15)
ET40 Tablet (Android 14)		
TC52 (Android 13)		
TC52 (Android 13)		
TC77 (Android 14)		

Feature Overview

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

- Printer discovery via multiple connectivity methods.

- Support for Bluetooth Low Energy (Bluetooth LE), Bluetooth Classic, Wired and Wireless network, and USB.
- Simple printer to mobile computer pairing, using the Print Touch system.
- 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.

Installing Zebra Nucleus Connector

The Zebra Nucleus Connector app is available on Google Play™.



NOTE: If you download the application from anywhere other than Google Play, your security settings must be enabled to download and install non-market applications. To enable this function:

1. From your mobile device's Settings screen, tap **Security and Privacy**.
2. Tap **Install unknown apps**.
3. Locate the app from the list and tap the **Toggle** button to activate it.



NOTE: If you download the Zebra Nucleus Connector application (.apk) to a laptop/desktop computer instead of directly to the Android device, you will also need a generic utility to transfer the .apk file to the Android device and install it. An example of a generic utility is Android File Transfer from Google, which allows Mac OS X 10.5 and higher users to transfer files to their Android device. You can also sideload the Zebra Nucleus Connector .apk (go to [Sideloadng](#) for more information).

Sideloadng the Zebra Nucleus Connector Application

Sideloadng means installing applications without using the official application stores, such as Google Play, and includes those times when you download the application to a computer.

1. Connect your Android device to the computer using the correct USB (or micro-USB) cable.
2. Open two Windows Explorer windows on your computer: one window for the device and one for the computer.
 - a) One window should display your mobile device as a drive.
 - b) The other window should display the folder that contains the Zebra Nucleus Connector application (.apk) on your computer.

3. Drag and drop the Zebra Nucleus Connector application from the computer to your device.
Because you will need to find the file later, note the location where you placed it on your device.



NOTE: It is recommended to place the file in the root directory of your device rather than inside a folder.

4. Open the file manager application on your device. (For example, on a Samsung Galaxy 5, your file manager is My Files. Alternatively, download a file manager application on Google Play.)
5. Locate the Zebra Nucleus Connector application in the files on your device, and tap it to initiate the installation.

Helpful Tips for Using the App

Follow these helpful tips to ensure a smooth experience using the Zebra Nucleus Connector.

- You can manage your printers via a smartphone or tablet.
- You can view the Zebra Nucleus Connector screens in either portrait or landscape orientation while using a tablet. Your smartphone will only display screens in portrait mode.

Security Settings Wizard with EU RED Security Enhancements

Effective August 1, 2025, Zebra updated its printer products sold in the EMEA region to comply with the cybersecurity standards of the European Radio Equipment Directive (EU RED). Because this update changes the initial setup process, this guide provides step-by-step instructions for configuring your printer's security settings using the Zebra Nucleus Connector.

Security Setup Wizard

Restoring the connectivity and management features typically disabled by EU RED parameters requires an update to the printer's security features. The following procedure details the steps for these changes.

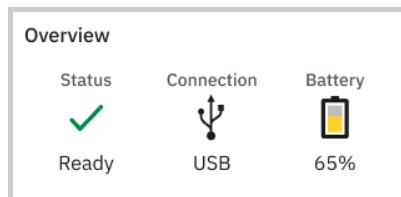


IMPORTANT:

- This procedure applies only to devices in the EMEA region.
- This procedure requires a physical connection between the printer and the mobile device via a USB cable. For USB pairing instructions, go to [USB Pairing](#).
- Once you have restored your printer's connectivity and management features, a physical USB connection to your mobile device is no longer required. For future connections, you can pair via Print Touch (recommended) or Bluetooth on your mobile device. For more information, go to [Print Touch](#) or [Bluetooth Pairing Through Your Mobile Device's Settings Menu](#), respectively.

1. Verify that your mobile device is paired to the printer via a USB cable.

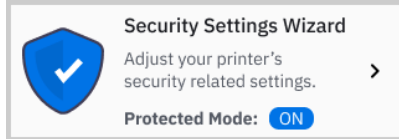
To confirm the connection, examine the Printer Dashboard; ensure Status reads Ready and Connection reads USB. If it does not, go to [USB Pairing](#) for pairing instructions.



2. Tap **Security Settings Wizard**.

By default, Protect Mode is on. If the mode is off, the initial configuration is complete. To change your printer's security settings, go to [Changing Your Printer's Security Settings](#).

Security Settings Wizard with EU RED Security Enhancements



3. Read the Protected Mode prompt, and then tap **Adjust Settings**.
4. Review the information on the screen, and then tap **Begin Security Settings Wizard**.
 - a) You can also choose to **Learn More About EU RED Regulations**.

The Protected Mode Settings screen displays.

5. Create a **Protected Mode** password.



NOTE: Passwords must be a minimum of 14 characters and may include alphanumeric or special characters.

6. Select **Protected Mode Off**, and then tap **Next**.

This configuration can be modified later if needed.

The Additional Security Settings screen displays.

7. Change any additional security settings as needed. By default, the settings are disabled.
 - a) If your printer has a front panel, you will see an option to set a **Front Panel PIN Code**. We recommend creating one.

Security Settings Wizard with EU RED Security Enhancements

Set Front Panel PIN Code (Recommended)

This sets up a 4-digit numeric PIN code for the printer front panel display. The front panel will not allow settings changes until the PIN is set.

Enter 4-Digit PIN

b) Additional security settings include:

- Set a Front Label Panel PIN Code (This feature is hidden on models without a front panel.)
- Allow Firmware Updates
- Enable TCP/IP Raw Ports
- Enable USB Mirror
- Enable WLAN
- Enable FTP
- Enable SNMP v1/v2 (Insecure)
- Enable ZBI
- Enable LPD
- Enable Access to Printer Web Pages
- Enable Webpages Password

Additional Security Settings

Additional Security Settings

This section allows configuration of security related settings for your printer. By default, these settings are disabled unless you enable them with the toggles below.

- Allow Firmware Updates**
Enabling this setting allows firmware updates.
- Enable TCP/IP Raw Ports**
This setting enables the unencrypted TCP Raw data ports (9100, 9200, 9300) used by PPME and other software applications.
- Enable USB Mirror**
Enables mirroring using a USB device, e.g., a flash drive.
- Enable WLAN**
Enables WLAN functionality and allows for further network configurations, (ESSID, password, etc.) using Zebra Setup Utilities.
- Enable FTP**
Enables FTP service (port 21)
- Enable SNMP v1/v2 (Insecure)**
Enables SNMP v1/v2 service (port 161)

Additional Security Settings (Continued)

- Enable ZBI**
Enables Zebra Basic Interpreter (ZBI) capability in the printer.
- Enable LPD**
This setting enables LPD (Line Printer Daemon), a network printing protocol used to manage and process print jobs (port 515).

Set Front Panel PIN Code

This sets a 4-digit numeric PIN code, required for printers with a front panel display.

Enter Front Panel PIN

Printer Webpages

Sets up the access to printer web pages for printer status and configuration. A password will be required to set in order to make changes on the web pages.

- Enable Access to Printer Web Pages**
This setting enables access to the printer's web pages via HTTPS (port 443).

Printer Webpages Password

Maximum 25 characters.

Enter Password

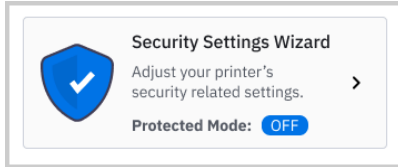
c) Tap **Next** to proceed.

8. Review your security settings and tap **Apply Settings** to proceed.

a) If you wish, you may also check **Save settings to file**.

Your file is saved to your mobile device.

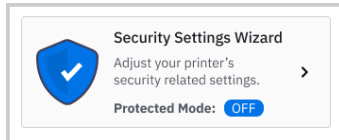
Your settings are applied to the printer, and you are returned to the Printer Dashboard screen, where Printer Mode is now set to Off.



Changing Printer Security Settings

You can modify your security configurations at any time after the initial setup. The following procedures describe how to update these settings.

1. From the Printer Dashboard, tap **Security Settings Wizard**.



2. Review the EU RED information on the following screen, and then tap **Begin Security Settings Wizard**.

3. Enter your password, and then tap **Next**.

If you have forgotten your password, go to [Forgotten Protected Mode Password](#).

4. Navigate through the Protected Mode Settings screens and change any security settings as needed. Tap **Apply Settings** when finished.



NOTE: Options to change the password and PIN (for devices with front panel) are now available.

Your updated settings are applied to the printer, and you are returned to the Printer Dashboard screen.

Forgotten Protected Mode Password

A forgotten Protected Mode password requires the printer to be formally decommissioned, as no recovery option is available.

When you decommission a printer (using ~PM command via USB connection):

- The printer remains secure by default, as required by the EU Radio Equipment Directive (RED).
- Protected Mode remains enabled to protect critical network settings.
- Insecure services (such as FTP, HTTP, and SNMP) remain disabled.
- Firmware download remains disabled until re-enabled via authentication.
- You can set a new Protected Mode password upon reboot as part of the post-decommission setup.

For decommissioning instructions, refer to your printer's user guide and the ZPL II, ZBI2, Set-Get-Do, Mirror, WML Programming Guide.

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

Select a printer discovery type from the following options to discover your printer and connect to it.

- Print Touch (Recommended) - Tap your NFC-enabled device to the printer to effortlessly pair and discover it using this NFC-based feature.
- Discover Printers - Discover your printer without using Print Touch.
 - Wi-Fi and Ethernet Network
 - Bluetooth Classic ✂
 - Bluetooth Low Energy ✂
 - USB
- Bluetooth Classic ✂ or Bluetooth Low Energy ✂ pairing via your mobile device's Settings menu.

For successful network discovery, ensure your mobile device is connected to the same subnet as your printer. For Bluetooth communications, ensure that Bluetooth is enabled on both your device and printer. NFC must be enabled to use the Print Touch feature. Refer to the user documentation for your device or printer for further details on configuring the printer and device.



NOTE:

- Bluetooth discovery can only retrieve the Friendly Name and MAC Address.
- If you encounter issues with printer discovery (and at times when Zebra Nucleus Connector 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 you encounter an issue when trying to pair the printer using Bluetooth Classic connection, try manually pairing the printer using your mobile device's Bluetooth Setting's first. Go to [Bluetooth Pairing Through Your Mobile Device's Settings Menu](#) for more information.

- If your printer has both Bluetooth and network connections enabled, Zebra Nucleus Connector will prioritize pairing with the network first. 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.
- 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 establishes connections with a previously paired remote device.



TIP: Enable discoverable mode only while pairing to a remote device. When paired, discoverable mode is disabled. Starting with Link-OS v6, a new feature was introduced to enable limited discovery. Holding down **FEED** for 5 seconds enables 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, 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 activates Bluetooth Pairing Mode.

Bluetooth Pairing Through Your Mobile Device's Settings Menu

You can pair your mobile device with your printer using the settings menu on your mobile device.

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

1. On your device, go to the **Settings** menu.
2. Select **Connected Devices**.
3. Tap **+Pair new device**.
4. Tap on the device you wish to pair with.
5. Confirm the pairing code is the same on both your device and 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.

Print Touch

The simplest way to establish a connection between your NFC-enabled device and a printer is by utilizing the Print Touch feature. Printers equipped with Print Touch can be recognized by this icon on their exterior:



The Near Field Communication (NFC) tag on the Zebra printer enables your smartphone or tablet to communicate with the printer via radio signals. You can choose between two NFC pairing methods to connect your device to the printer:

1. Print Touch (Tap and Pair) - Pair the devices by tapping the smartphone or tablet against the printer, or by bringing them into close proximity (approximately 4 cm or 1.5 in).
2. Manual NFC Connection Setup - Establish the connection by opening the application and selecting the NFC button within it.

Zebra Nucleus Connector acknowledges the start of the Print Touch process, the pairing, any associated errors, and the successful discovery of the printer.



IMPORTANT:

- NFC must be enabled on your mobile device to use the Print Touch feature. If you do not know where the NFC location on your device is, refer to your device's documentation. The NFC location is often at one of the device's corners, but could be elsewhere.
- Certain Android phones may not be compatible with Print Touch for pairing. Use one of the other connection methods.
- When you scan an NFC tag, the Zebra Nucleus Connector performs a search for connection types in the following order, and connects to the first one that is successful:
 - a. Network
 - b. Bluetooth Classic
 - c. Bluetooth LE

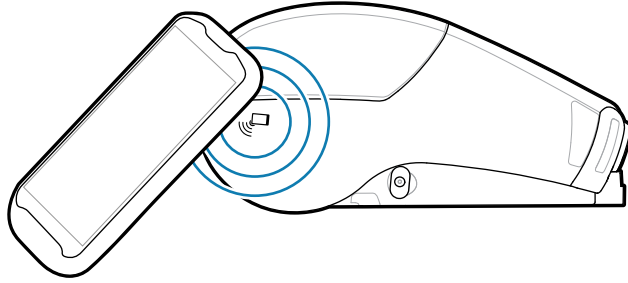


NOTE: If you encounter issues with printer discovery (for example, Zebra Nucleus Connector may not discover your printer), manually enter your printer's IP address. Having your printer and Android device on the same subnet will give you the greatest chance of successfully discovering the printer.

Connecting Using the Print Touch (Tap and Pair) Setup

The following procedure describes how to pair the printer using Print Touch.

1. Tap your device's NFC location against the Print Touch icon on the printer.



If you are unable to connect to your printer, try putting your printer in Limited Pairing Mode using the following procedure.



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

- a) Press and hold **FEED** until either the Bluetooth/Bluetooth Low Energy icon or the data light flashes.

This puts the printer in a discoverable mode.

- b) Tap your device's NFC location against the Print Touch icon on the printer.

Zebra Nucleus Connector finds and connects to the printer.

2. On the Tap NFC Icon screen, tap the **NFC** icon.

The application searches for available printers.

3. Based on your connection:

If your connection is by...	Then...
Network	Follow the prompts until you reach the Diagnostic mode prompt, and then tap Disable .
Bluetooth (First time and unpaired)	Tap Pair to connect the devices. If your device's Bluetooth was off, tap Allow at the prompt, and then tap Pair on the next screen.
Bluetooth (Previously paired)	The pairing will establish the connection automatically.

The printer dashboard displays.

Connecting Using the Manual NFC Setup

The following procedure outlines the steps to manually connect the printer using NFC.




NOTE: If your printer fails to connect at any time and an error message appears, follow the guidance provided in the message to resolve the issue.

1. Launch the Zebra Nucleus Connector application on your device.
2. Tap **Connect New Printer**.
3. Tap **NFC**.

If you 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.

- a) Press and hold  **FEED** until either the Bluetooth/Bluetooth Low Energy icon or the data light flashes.
This puts the printer in a discoverable mode.
 - b) Tap your device's NFC location against the Print Touch icon on the printer.
4. On the Tap NFC Icon screen, tap the **NFC** icon.
The application searches for available printers.
 5. Based on your connection:

If your connection is by...	Then...
Network	Follow the prompts until you reach the Diagnostic mode prompt, and then tap Disable .
Bluetooth (First time and unpaired)	Tap Pair to connect the devices. If your device's Bluetooth was off, tap Allow at the prompt, and then tap Pair on the next screen.
Bluetooth (Previously paired)	The pairing will establish the connection automatically.

The printer dashboard displays.

Connecting Using the Wi-Fi and Ethernet Network Setup

The following procedure outlines the steps to connect the printer via Wi-Fi or an Ethernet network.

1. Launch the **Zebra Nucleus Connector** application on your device.
2. Tap **Connect New Printer**.
3. Tap **Wi-Fi and Ethernet Network**.

If connecting to your printer via Wi-Fi is unsuccessful, it might be due to your Wi-Fi being turned off. In this case, you will be directed to the Confirm Network is Enabled screen.


- a) Tap **Open Settings** to navigate to your mobile device's settings.
- b) Enable Wi-Fi on your mobile device.
4. At the Check Network Connection prompt, confirm that both your printer and device are on the same network or subnet before searching for the printer.
5. Select your preferred method to find the printer.

If you want to find your printer by...	Then...
Search By Network	<ol style="list-style-type: none"> a. Tap Search Printers. b. Select the printer you wish to connect to from the Available Printers list. <ol style="list-style-type: none"> a. If Diagnostic Mode is detected, a prompt will display, giving you the option to disable it.
Connect Manually	Enter your printer's IP or DNS address, and then tap Connect Printer .

The printer dashboard displays.

Pairing Using Bluetooth Classic and Bluetooth LE

This section describes how to pair your mobile device with your printer using Bluetooth pairing.

1. Launch the Zebra Nucleus Connector application on your device.
2. Tap **Connect New Printer**.
3. Tap **Bluetooth** or **Bluetooth LE** from the Choose a Printer Communication screen.
 - a. If a Location Permission prompt appears, select either **While using the app** or **Only this time**.
If you select **Don't Allow**, you are asked to enable both location and nearby device permissions in your device's App Settings.
 - a. Tap **App Settings** in the Zebra Nucleus Connector application.
Your mobile device's settings open.
 - b. Tap **Permissions**.
 - c. Tap **Nearby Devices** and **Location** individually, and set them to **Allow Only while using the app**.
 - b. If prompted by Zebra Nucleus Connector to turn on Bluetooth, tap **Allow**.
4. On the Enable Bluetooth Pairing Mode screen, tap and hold  **FEED** on your printer for five seconds until the light starts flashing to activate Bluetooth pairing mode, and then tap **Search Printers**.
 - Alternatively, for Bluetooth Classic devices, choosing **Pair In Bluetooth Settings** redirects you to open the app's settings. When there, you can connect to the printer through your device's Bluetooth settings, making the printer visible in the app.
5. Select the printer you wish to connect to from the Available Printers list.
Zebra Nucleus Connector searches for and displays a list of discovered Bluetooth and network-connected printers. At the completion of discovery, the Discovered Printers group is updated. Progress dialogs are displayed during the discovery process.
6. Tap **Pair** at the Bluetooth pairing code prompt.
7. This is a test.
 - a) This should be a, b, c.
 1. This should be i.
 2. This should be ii

The printer dashboard displays.

Pairing a Device to a Printer Using USB

This section describes how to pair your mobile device to the printer via USB.

1. Launch the Zebra Nucleus Connector application on your device.
2. Tap **USB**.
3. Connect the USB cable from the printer to your mobile device, and then tap **Search Printers**.
4. Select the printer you wish to connect to from the Available Printers list.
 - a) If prompted by your device's operating system (OS) to allow printer handling, confirm by tapping **OK**.

- b) If a Diagnostic Mode Detected prompt appears, tap **Disable**.

The Printer Dashboard displays.

Zebra Nucleus

Nucleus is a unified software platform for staging and managing all Zebra devices. This centralized platform provides complete visibility and control, enabling you to effortlessly connect, configure, and update your printers, mobile computers, and scanners from a single location. You can use Zebra Nucleus Connector to enroll printers into Nucleus.

Refer to the Zebra Nucleus User Guide for more information.

Enrolling your Printer to Nucleus

Enrolling your printer to Nucleus is a two-step process:

1. You must log into Nucleus and create a printer setup.
2. After the printer setup is made, the setup guide in Nucleus takes you through the process of enrolling your printer using Zebra Nucleus Connector.

This guide walks you through the enrollment procedure.



IMPORTANT: You must have access to Nucleus and Zebra Nucleus Connector before proceeding. For more information on Nucleus, refer to the Zebra Nucleus User Guide.

1. Locate the QR code in Nucleus using one of the following options:
 - Complete the Printer Setup Wizard until you reach the Setup Guide screen. Select **Via Nucleus Connector (Mobile App)** to display the QR code.
 - From New Printer Setup, click **Open Setup Guide**. This opens the Printer Setup Wizard directly at the Setup Guide screen. Select **Via Nucleus Connector (Mobile App)** to display the QR code.
2. Scan the QR code using your mobile phone's camera to open Zebra Nucleus Connector.
Zebra Nucleus Connector opens at the Begin Enrollment screen.
3. Tap **Begin Enrollment**.
4. Select a discovery method to find and connect your printer. Go to [Printer Discovery Methods](#) on page 15 for instructions on pairing your device.

After pairing, your printer will appear as Connected on the Enroll Printers screen.

5. Tap **Enroll Printer**.

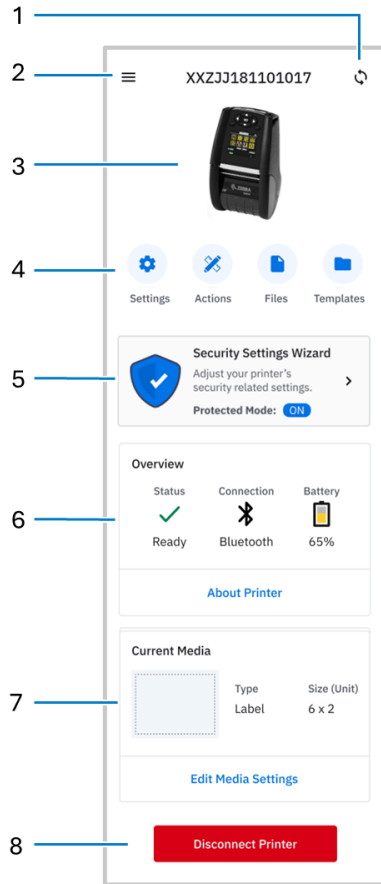
Your printer appears in Nucleus. From here, you can:

- Enroll another printer by tapping **Enroll New Printer**.
- Tap **X** to exit Nucleus printer enrollment. You are taken to the Printer Dashboard.

Printer Dashboard

The Printer Dashboard screen serves as your main landing page and the default screen displayed after connecting your printer. On this screen, you can view and quickly access some of the most important features of the application.

Figure 1 Printer Dashboard Features

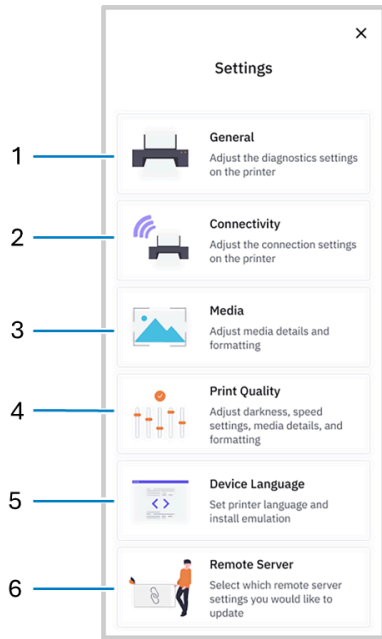


1	Refresh	Refreshes the screen.
2	Side-Drawer Menu	Opens the side-drawer menu.
3	Selected Printer	Displays the name and image of the printer.
4	Printer Options	Provides quick access to four common printer options: Settings, Actions, Files, and Templates.
5	Security Settings Wizard	Provides a step-by-step process to configure your printer's security settings.
6	Overview	Displays three important printer indicators—Status, Connection, and Battery—with access to additional printer data.
7	Current Media	Displays the current media in use, and an option to edit media settings.
8	Disconnect Printer	Select this option to disconnect the printer.

Settings Menu Overview

The Settings menu allows access to key features for configuring your printer. Selecting the Settings icon from the Printer Dashboard opens the Settings menu.

Figure 2 Settings Menu

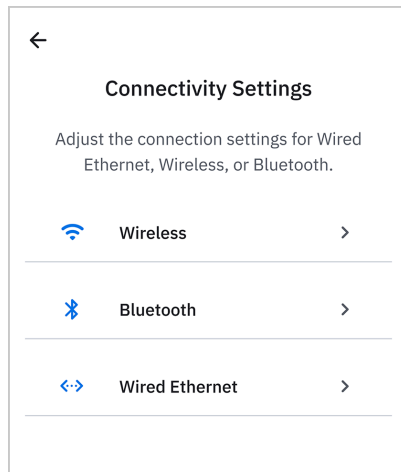


1	General	Refreshes the screen.
2	Connectivity	Opens the side-drawer.
3	Media	Displays the name and image of the printer.
4	Print Quality	Provides quick access to four common printer options: Settings, Actions, Files, and Templates.
5	Device Language	Provides a step-by-step process to configure your printer's security settings.
6	Remote Server	Displays three important printer indicators—Status, Connection, and Battery—with access to additional printer data.

Changing Connectivity Settings

The Connectivity Settings screen allows you to select from Wireless, Bluetooth, or Wired Ethernet connections and customize their settings.

1. From the Printer Dashboard, tap **Settings**.
2. From the Connectivity Settings screen, choose your preferred connection type—Wireless, Bluetooth, or Wired Ethernet—to access its respective settings screen for further adjustments.



Wireless Settings

Wireless is the term used to describe any computer network where there is no physical wired connection between sender and receiver. Instead, the network is connected by radio waves and/or microwaves to maintain communications.

Within the Wireless Settings menus, you can change, save, and apply the following elements:

- Turn Wireless On/Off
- Security Mode
- Hostname
- Wireless Band
- IP Addressing Protocol
- Country
- Power Save Mode
- Channel List
- Client ID
- Save settings to a file.
- Client ID Type
- Apply settings to the printer.
- IP Address, Subnet Mask, Default Gateway (applicable when Permanent IP Addressing protocol is selected).
- ESSID



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

Wireless Settings

←

Wireless Settings

Change, save, and apply the following elements.

Wireless

Hostname

IP Addressing Protocol

All
▼

Power Save Mode

Wireless Settings (Continued 2)

Client ID

Client ID Type

MAC Address
▼

Client ID Prefix

Client ID Suffix

ESSID

Security Mode

None
▼

Wireless Settings (Continued 3)

Wireless Band

All
▼

Country

USA/Canada
▼

Channel List

Only 'all' or specific numbers are accepted. Use commas to separate multiple channels, e.g., 1,2,3

Settings are not saved on the printer until you tap the apply button below.

Warning: Sensitive information may be contained in any saved settings file. Careful consideration should be made to ensure this information is well protected.

Save settings to file

Cancel
Apply

Tap **Apply** to apply the settings. You may also choose to:

- Save the settings to a file by selecting the checkbox.

Bluetooth Settings Menu

Bluetooth is a technology that enables devices such as cell phones, computers, and printers to 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 menu, you can change, save, and apply the following elements:

- Enable/Disable Bluetooth
- Discoverable
- Friendly Name
- Authentication PIN
- Minimum Bluetooth Security Mode
- Bonding
- Enable Reconnect
- Controller Mode
- Save settings to file. Follow the prompts to save the file to your preferred location.
- Apply Settings

Bluetooth Settings

Bluetooth Settings

Change, save, and apply the following elements.

Bluetooth

Discoverable

Friendly Name
Up to 17 characters

XXZUJ231501988

Bluetooth Settings (Continued 2)

Authentication PIN
Up to 16 numerical characters

Minimum Bluetooth Security Mode

3

Bonding

Enable Reconnect

iOS only

Bluetooth Settings (Continued 3)

Controller Mode

Both

Settings are not saved on the printer until you tap the apply button below.

Warning: Sensitive information may be contained in any saved settings file. Careful consideration should be made to ensure this information is well protected.

Save settings to file

Cancel Apply

Tap **Apply** to apply the settings. You may also choose to save the settings to a file by selecting the checkbox.

Wired Ethernet Settings Menu

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 (Wi-Fi) or Bluetooth connection.

Within the Wired Ethernet Settings menu, you may change, save, and apply the following elements:

- Hostname
- IP Addressing Protocol
- Client ID
- Client ID Type
- Save settings to file. Follow the prompts to save the file to your preferred location.
- Apply the setting to the printer.

Wired Ethernet Settings Menu

Wired Ethernet Settings Menu (Continued)

Tap **Apply** to apply the settings. You may also choose to save the settings to a file by selecting the checkbox.

Unpairing a Printer

If you need to unpair a Bluetooth-connected printer, such as for troubleshooting, ensure you use your mobile device's Settings menu rather than the Zebra Nucleus Connector application. If you prefer to deselect a printer, go to [Deselecting a Printer](#).

1. On your mobile device, go to the **Settings** menu.
2. Tap **Connections**.
3. Tap **Bluetooth**.

A list of paired devices appears.

4. Tap the **Settings** icon beside the printer to be unpaired.
5. Tap **Unpair**.

A new scan discovers and displays 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 is checked at specific times. A dialog 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

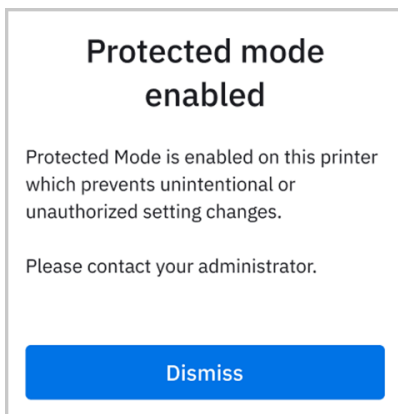
Certain printer/device combinations may experience a delay when an error dialog appears or when trying to reconnect. Allow up to 75 seconds for the process to be completed.

Protected Mode

In Protected Mode, you can view the printer's settings but cannot make any changes. If the printer is in Protected Mode, a notification will alert you upon connection.

Tap **Dismiss** to close the window, and then click **Refresh** on the dashboard to retrieve the settings.

Figure 3 Protected Mode Enabled



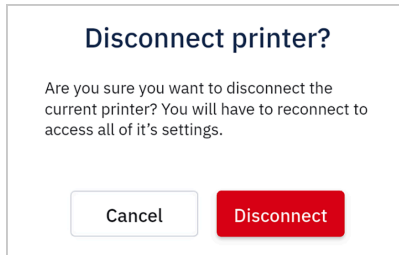
Disconnecting a Printer

This procedure outlines the steps to disconnect a printer from the Zebra Nucleus Connector.

1. From the Printer Dashboard, tap **Disconnect Printer**.

2. At the prompt, you can either:

- Tap **Disconnect** to deselect the printer.
- Tap **Cancel** to cancel the operation.



Once you have disconnected, you are returned to the Zebra Nucleus Connector welcome screen.

General Settings


This section describes the General Settings area of the app, where printer diagnostics are adjusted, and it outlines the process for enabling FIPS 140-2.

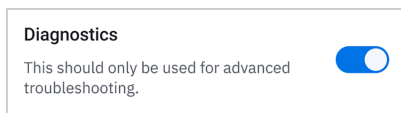
Enabling Diagnostics on the Printer

Enabling Diagnostics activates Dump Mode on the printer, a diagnostic tool specifically designed to help troubleshoot and debug issues with the data sent to the printer. This feature should only be used for advanced troubleshooting.

1. From the Printer Dashboard, tap **Settings**.
2. Tap **General**.

The General Settings screen appears.

3. Tap the  **Toggle** button in Diagnostics to activate this feature. At the prompt, tap **Enable**.



A brief printout is generated by the printer confirming it is now in Dump Mode.

Enabling the FIPS 140-2 Setting

FIPS stands for Federal Information Processing Standards. It was developed to validate and record specific requirements for various cybersecurity matters and define which are acceptable. Enable this option to comply with FIPS 140-2.

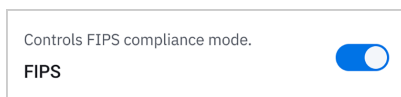


NOTE: The FIPS option will only show for printers that support it.

1. From the Printer Dashboard, tap **Settings**.
2. Tap **General**.

The General Settings screen appears.

3. Tap the  **Toggle** button in FIPS to activate this feature.



4. Restart the printer for the settings to take effect.

When FIPS is enabled, the setting is displayed on the General Information screen. See [General Information Screen](#).

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.

Changing Media Settings

The Media Settings menu offers information about the current media, such as its width, length, and type. It also allows you to modify various attributes, including the media type, width, length, and orientation.

1. From the Settings menu, tap **Media**.

The Media Settings screen displays a series of detailed menus.

- You can also access the Media Settings screen quickly from the Printer Dashboard. Simply tap the **Edit Media Settings** option on the page.

2. Tap within the Media Settings menus to adjust, apply, and save the following elements:

- Media Format
- Width (in.)
- Length (in.)
- Orientation
- Media Type
- Transfer Type
- Media Handling

Media Settings

←

Media settings

Insert or change the printers media.

Media Format

Label / Tag

Width (in)
0.01-2.84

4.1

Length (in)
0.0-157.64

6.5

Orientation

Normal

Media Settings (Continued)

Media Type

Continuous

Transfer Type

Direct Thermal

Media Handling

Rewind

Save settings to file

Cancel **Print Test** Apply

3. Tap **Apply** to apply the settings. You may also choose to:
 - Save the settings to a file by selecting the checkbox.
 - Generate a test print by tapping **Print Test**.

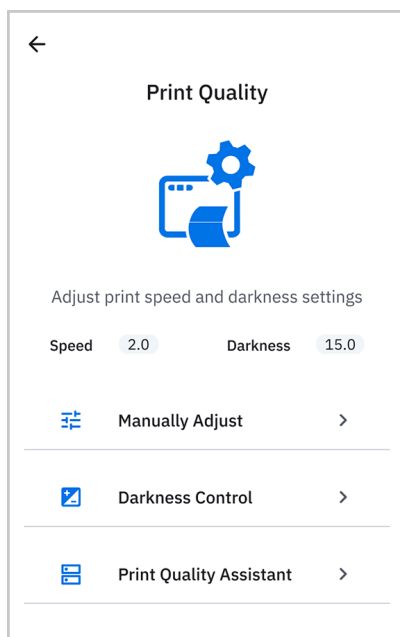
Print Quality

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.

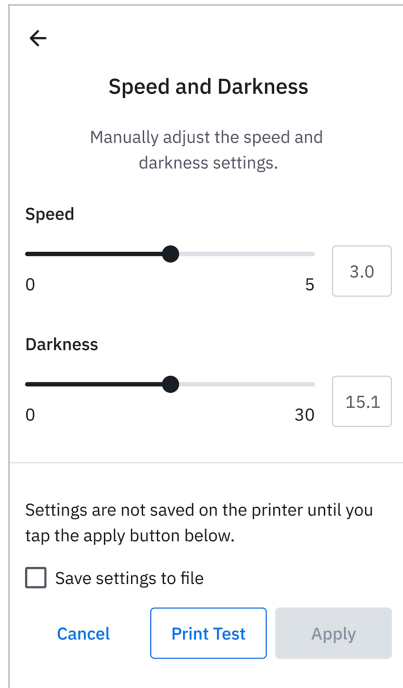
Figure 4 Print Quality



Manually Adjust Print Quality

You can manually adjust the print quality of your printer.

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Print Quality**.
3. Tap **Manually Adjust**.
4. Adjust the **Speed and Darkness** sliders to your desired setting.



5. Tap **Apply** to apply the setting. You may also choose to:
 - Save the settings to a file by selecting the checkbox.
 - Generate a test print by tapping **Print Test**.

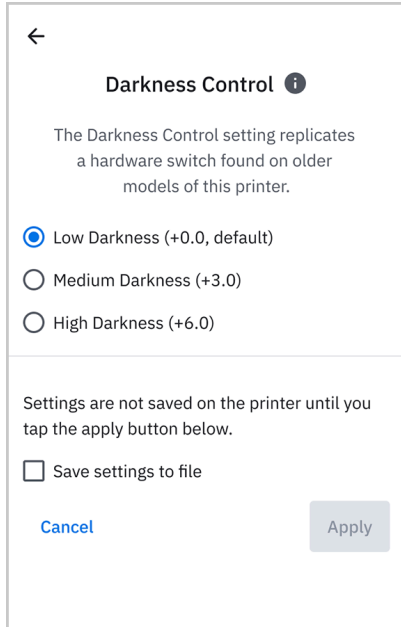
Controlling Darkness

The Darkness Control setting replicates a hardware switch found on certain older printer models 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 features seen in Print Quality Assistant to set the speed and darkness.

1. From the Dashboard, tap **Settings**.
2. Tap **Print Quality**.
3. Tap **Darkness Control**, and then select one of the following options:
 - Low Darkness (+0.0, default)
 - Medium Darkness (+3.0)
 - High Darkness (+6.0)



4. Tap **Apply** to apply the settings. You may also choose to:
 - Save the settings to a file by selecting the checkbox.
 - Generate a test print by tapping **Print Test**.



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

Using the Print Quality Assistant

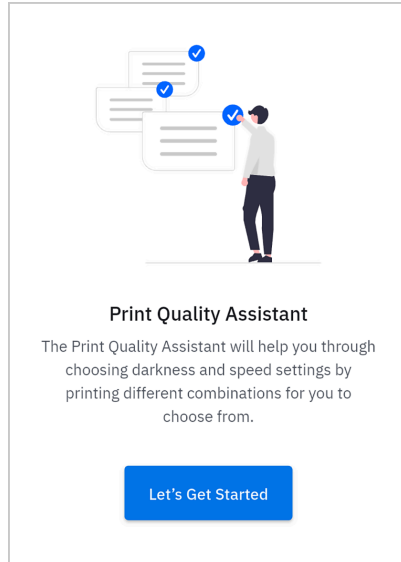
The Print Quality Assistant enables you to print preset speed and darkness settings on labels, save and apply these values, and ultimately fine-tune your printed labels.



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

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Print Quality**.
3. Tap **Print Quality Assistant**.

This brings you to the starting point of the Print Quality Assistant wizard.



4. Tap **Let's Get Started**.
5. Select the number of labels to print. You may choose from **4, 9, 16, and 25 Labels**. Tap **Print** to continue.
6. Select one of the following options from the Label Identifier menu:
 - AA - Speed 2.0, Darkness 15.0
 - AB - Speed 4.0, Darkness 15.0
 - BA - Speed 2.0, Darkness 30.0
 - BB - Speed 4.0, Darkness 30.0
7. Tap **Apply Settings** to apply your selections. You may also choose to:
 - **Save Settings to a File** by selecting the checkbox. Follow the prompts to save the file to your preferred location.

Actions and Files

This section describes the Actions and Files features in Zebra Nucleus Connector.



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.

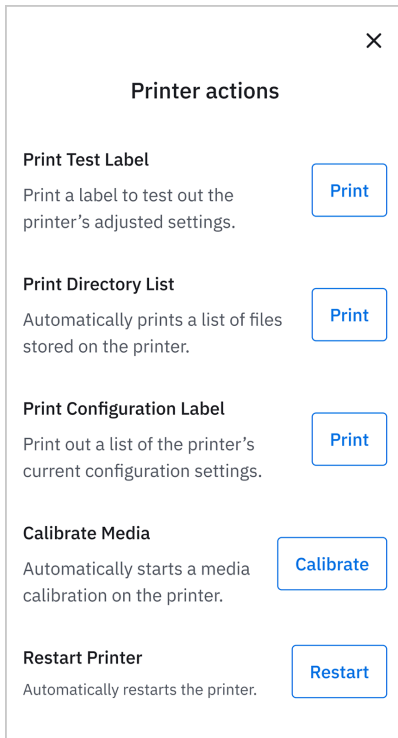
Actions

This menu executes printer actions as soon as they are selected. For example, choosing **Calibrate Media** will cause the printer to start the calibration process immediately, and the media will feed through the printer.

In the **Actions** menu, you can choose from the following available options:

- **Print Test Label** - Automatically prints a test label.
- **Print Directory List** - Automatically prints a list of files stored on the printer.
- **Print Configuration Label** - Automatically prints a configuration label.
- **Calibrate Media** - Automatically starts the media calibration on the printer.
- **Restart Printer** - Automatically restarts the printer.

Figure 5 Printer Actions



To execute an action:

1. From the Dashboard, tap **Actions**.
2. Tap an action.



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

Sending Files to a Printer

This feature is designed for sending files such as ZPL scripts, SGD commands, or printer operating system files to the printer.

1. Tap **Files**.
A list of files is shown.
2. Tap a **file** from the list.
A dialog prompt appears, providing the option to send the chosen file to the printer.
3. Tap **Send to Printer**. You may also choose to:
 - Preview the file by tapping **Preview**.
 - Remove the file from your device by tapping **Remove Download**.

After installing a firmware file, you may need to reconnect the printer. Go to [Discovery and Connectivity](#) for more information.

Device Language Selector and Printer Emulation Management

This section provides information about Device Language Selector and Printer Emulation Management in Zebra Nucleus Connector.



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.

Device Language 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, go to [Set the Device Language](#).

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

There are two exceptions:

- Virtual Device-I
- Virtual Device-D



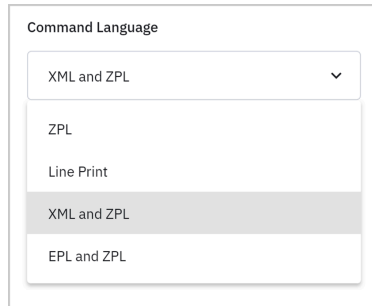
NOTE: These printer emulations are complete firmware downloads. They are very large files, which take a substantial amount of time to download and install on the printer, and require your printer to reboot twice. The two printer emulations are mutually exclusive, so only one can be installed on the printer at a time.

To install a printer emulation, go to [Install the Printer Emulation](#).

Setting the Device Language

You can select and apply a device language. Complete the following steps to make this change.

1. From the Dashboard, tap **Settings**.
2. Tap **Device Language**.
3. From the Command Language dropdown menu, tap on the **language** you wish to use.



4. Tap **Apply** to apply the change.



NOTE: The currently active device language is selected by default.

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.

A Printer Emulation can be accessed via the Emulation drop-down menu located on the Device Language screen. You can select an existing emulation from the list or have one installed. For detailed instructions on selecting an emulation, go to [Select an Emulation](#).

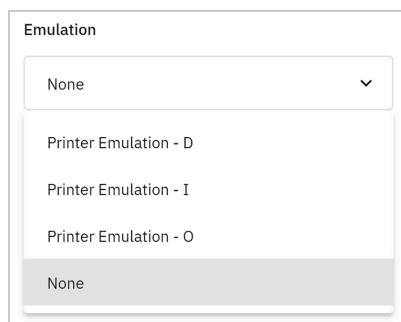
To install a printer emulation, you must download a zip file to your mobile device. There are two ways to install the printer emulation via Zebra Nucleus Connector:

1. Download a zip file to your mobile device. (Go to [Download the Printer Emulation Zip File](#).)
2. Store and download the zip file from your cloud storage provider. (Go to [Download the Printer Emulation Zip File](#).)

Selecting an Emulation

This procedure describes how to select an emulation that is installed on your printer.

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Device Language**.
3. Choose an emulation from the Emulation drop-down menu, and then tap **Apply**.



A prompt to restart the printer appears.

4. Tap **Restart & Apply**.

After the restart, you are taken to the Zebra Nucleus Connector welcome screen.

Accessing the Printer Emulation Zip File

This section describes the process of downloading the Printer Emulation zip file, and transferring it to your device via a USB connection using a drag-and-drop method.

Copy Printer Emulation File Methods

You can transfer a zip file to your mobile device using one of the following methods:

- Download from Browser - Use the browser on your mobile device to download the zip file to your device. For more information, go to [Downloading the Printer Emulation Zip File](#).
- Drag-and-Drop - Drag the zip file from your computer, connected through a USB connection, to your mobile device. For more information, go to [Drag and Drop Using a USB Connection](#).



NOTE: Ensure that your mobile device's USB setting is set to USB for File Transfer. This status is commonly found by swiping down from the top of a mobile device's screen to access settings and notifications.

Downloading the Printer Emulation Zip File

To download the Printer Emulation, follow these steps from either your computer or 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 Contact Support 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**.

To download the Printer Emulation, follow these steps from either your computer or mobile device.

7. Save and store the Printer Emulation zip file to your computer or storage location (Box, DropBox, etc.), or Android device if you want to use the application for installing the printer emulation.

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 when the printer emulation is enabled.

Drag and Drop Using a USB Connection

To download using a USB connection:

1. Connect your smartphone to your computer using a USB cable.

2. Open two Windows Explorer windows.
 - a. One window should display your mobile device as a drive.
 - b. The other window should display the Downloads folder on your computer.
3. Drag the zip file from the Downloads folder (computer) and drop on the mobile device window.



NOTE:

- Drag the entire zip file. (There is no need to extract or unzip the individual files.)
- Do not change the name of the zip file.

Installing the Printer Emulation

This section will disable the current device language or printer emulation, install the new printer emulation, and enable it all within a 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 Emulation drop-down menu.



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.

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Device Language**.

On the Device Language screen, the Emulation drop-down menu displays a list of available emulations. If you are installing a printer emulation for the first time, it will not initially display in the list.

3. Tap **Install**, and then tap **Dismiss** at the Command Language Warning prompt.



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

4. Navigate to the zip file and tap it.



NOTE: Do not change the name of the printer emulation zip file. If you already have an active printer emulation, you are prompted to disable it.

- a. From the Emulation drop-down menu, select **None**, and then tap **Apply**.
- b. Tap **Restart** at the prompt.

The zip file is transferred to the printer, initiating the printer emulation upload. When the upload is complete, the printer restarts automatically. If you receive a Firmware Update prompt, tap **Dismiss** to proceed.

After the restart, you are returned to the Zebra Nucleus Connector landing page.



IMPORTANT: After enabling a printer emulation, most menu options in Zebra Nucleus Connector are disabled.



NOTE:

- When you return to the Device Language screen, the Command Language displays the specific Printer Emulation language enabled for your printer.

- The Print Test option may not be available if the virtual device was not installed from the device currently being used.

Print Templates

In this section, you will learn how to print customized templates through the Print Template feature. These templates are distinguished 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.

Using a Print Template

The application includes several print templates. This section describes how to use a template.

1. From the Dashboard, tap **Templates**.
2. Within the Print Template screen, tap a template to select it from the list.
Depending on the template, complete the form by filling in the form fields on the Template screen.
3. Tap **Print** to print.

Adding a Template




You can add customized print templates to the Print Template feature. Before adding templates, ensure they are saved on your device, such as in a Documents folder. Templates can also be added from cloud storage providers, provided the accounts are configured on the device.

1. From the Printer Dashboard, tap **Templates**.
2. Tap **Add Template(s)**.
 - Interactive and fillable templates use a .zpl file extension.
 - Images can also be used as templates. The maximum allowable image size is 2 MB.



NOTE: A Permissions Required prompt displays if access to the file system is not allowed. Tap **App Settings** to enable the required permissions and continue.

Your template is added to the Print Template list and displays 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.

Removing a Template

You can remove a template from Printer Templates.



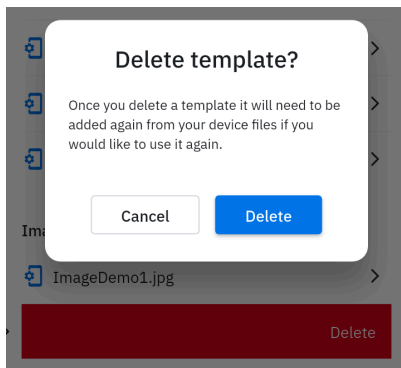
NOTE: Before removing a template, note that:

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

1. From the Print Templates screen, locate the template you want to remove.

The image template Example.jpg is used in this example.

2. Swipe **Left** on the template to open the Delete Template prompt, and then tap **Delete** to remove the template.



Remote Server Settings

This section provides information about updating Remote Server Settings.

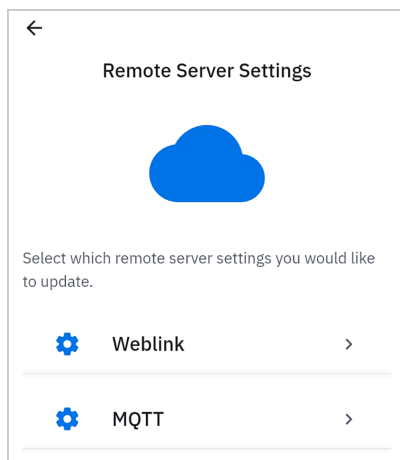


IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Introduction to Remote Server Settings

Zebra Nucleus Connector enables users to configure printers to connect to applications using Weblink or MQTT-type connections.

Figure 6 Remote Server Settings



Example applications that use Weblink and MQTT include:

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



NOTE: If connected to a printer that does not support Weblink or MQTT, the Remote Server Settings menu item is not shown. The Remote Server Settings menu item is gray and disabled when a Printer Emulation is active.

Access the Weblink Server Settings

This section describes how to access the Weblink Server settings.



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

To access the Weblink Server Settings:

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Remote Server**.
3. Tap **Weblink**.

The Weblink screen displays available settings.

Configure the Weblink Connections

The Weblink Settings screen offers configuration options that enable you to customize the remote settings to suit your specific requirements.

Figure 7 Weblink Settings

- Maximum Log Entries allows you to enter log entries.
- You also have the option to configure two Weblink connections.



NOTE: Along with configuring the Weblink settings, verify that the printer's time and date are accurate and that all necessary certificate files have been stored on the printer.

Maximum Log Entries

1. 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.

Configure the Weblink Connections

2. In the Connection 1 section and within the Remote Server HTTPS URL, tap to enter the URL.
 - Manually enter up to 2048 characters.
 - You can scan a QR code containing a URL and enter it into the Remote Server field.
3. Within the Proxy URL field:
 - Manually enter the proxy URL.
 - The proxy URL must follow the format: [http|https]://[user:pass@]domain[:port]/[path]
4. (Optional) Repeat the steps for Connection 2.
5. Tap **Apply** to apply the changes. When prompted, tap **Restart** to restart the printer.

Access the MQTT Server Settings

This section describes how to access 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 the MQTT Server Settings:

1. From the Printer Dashboard, tap **Settings**.
2. Tap **Remote Server Settings**.
3. Tap **MQTT**.
4. Ensure that MQTT Enabled is activated.



Configure the MQTT Server Settings

The MQTT Settings screen provides configuration options to customize the remote settings to your specific needs.

Figure 8 MQTT Settings

←

MQTT


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

MQTT Enabled

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

500

Connection 1

Remote Server HTTPS URL 
Up to 2048 characters

Settings are not saved on the printer until you tap the apply button below.

[Cancel](#) [Apply](#)

- Maximum Log Entries allows you to enter log entries.
- You also have the option to configure two MQTT connections.



NOTE: Along with configuring the MQTT settings, verify that the printer's time and date are accurate and that all necessary certificate files have been stored on the printer.

Maximum Log Entries

1. With 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.

Configuring the MQTT Connections

2. In the Connection 1 section and within the Remote Server HTTPS URL, tap to enter the URL.
 - Manually enter up to 2048 characters.
 - You can scan a QR code containing a URL and enter it into the Remote Server field.
3. Enter a user name up to 64 characters.
4. Enter a password up to 64 characters.

Remote Server Settings

5. Enter a number in the QoS (Quality of Service) field. The number represents the level of support for the MQTT connection.
6. Enter a Tenant ID up to 64 characters. The number represents the top level of the Topic that the printer will subscribe to and publish to.
7. (Optional) Repeat the steps for Connection 2.
8. Tap **Apply** to apply the changes. When prompted, tap **Restart** to restart the printer.

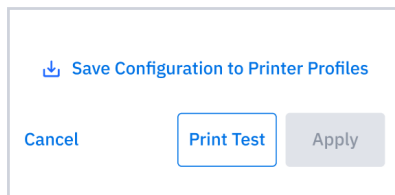
Printer Profiles

The Printer Profiles feature in Zebra Nucleus Connector saves setup time by allowing you to deploy multiple configuration settings to one or more printers simultaneously. This process requires saving a configuration based on your selected printer settings, then applying it to the printer profiles. The following section outlines these steps in detail.

Saving a Configuration

A saved configuration is required to create a Printer Profile. The following procedure details how to establish an initial configuration.

1. Ensure a connection to the printer is established, and then tap **Settings** from the Printer Dashboard.
2. Tap **Media** or **Connectivity** from the Settings menu.
3. Configure the settings as desired, and then tap **Save Configuration to Printer Profiles**.



4. Name the configuration when prompted, and then tap **Save**.

Your configuration is saved and can be applied to a new or existing Printer Profile.

Creating a Printer Profile

The following procedure describes how to create a printer profile.

1. From the Printer Dashboard screen, tap **Printer Profiles**.

If you have not saved a configuration, you will be prompted to create one before proceeding. Go to [Saving a Configuration](#) for more information.

2. Tap **Begin** when prompted.

The Build Printer Profile menu displays.

Build Printer Profile Menu

Build Printer Profile Menu (Continued)

3. Create a unique Profile Name.



NOTE:

- The Profile Name is limited to 50 characters and supports alphanumeric values along with the following special characters: - _ () { } []
- A Profile Name must be created in order to continue.

4. Select the configurations you would like to include in your Printer Profile.
5. When finished, tap **Create Printer Profile**.

Your Printer Profile has been created and is now available to apply to your printer(s).

Applying a Printer Profile

The following procedure describes how to apply a printer profile to a printer.

1. From the Printer Dashboard screen, tap **Printer Profiles**.
2. Tap the **Printer Profile** you wish to apply to other printers.
3. Tap **Apply Profile**.
4. Select a discovery method to find and connect your desired printer. For instructions on how to pair your device, go to [Printer Discovery Methods](#) on page 15.

Zebra Nucleus Connector sends the Printer Profile to your designated printer. A vibration from your mobile device confirms a successful transfer.

Editing a Printer Profile

You can edit an existing Printer Profile.

1. From the Printer Dashboard screen, tap **Printer Profiles**.
2. Tap the **Printer Profile** you wish to edit.
3. Tap **Edit Profile** to open the Build Printer Profile menu.
4. Make your desired changes, and then tap **Create Printer Profile**.

The changes to the Printer Profile are saved.

Deleting a Printer Profile

You can delete an existing Printer Profile.

1. From the Printer Dashboard screen, tap **Printer Profiles**.
2. Tap the **Printer Profile** you wish to delete.
3. Tap **Delete Profile**.
4. At the prompt, tap **Delete**.

The Printer Profile is deleted.

Saving and Sending a Settings File

This section outlines how to save a settings file, along with details on where and how it can be sent.



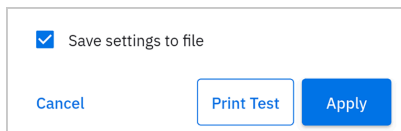
IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Saving Settings to a File

With Zebra Nucleus Connector, 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, and Print Quality.

The following procedure describes how to save settings to a file, using Media Settings as an example.

1. From the Printer Dashboard, tap **Settings** and then tap **Media**.
 - Alternatively, you can quickly access Media Settings by tapping **Edit Media Settings** located on the Printer Dashboard.
2. Adjust the Media Settings as needed.
3. Tap the checkbox **Save settings to file**, and then tap **Apply**.



4. Follow the prompts on your mobile device to set up your Saved file location, and then tap **Save**.

Your file is saved to your mobile device, and your settings are applied to the printer. You are returned to the Media Settings screen.

Sending a Settings File to a Printer

You can transfer a saved settings file to your printer.



NOTE:

- Sending files over a Bluetooth LE connection is limited to file sizes of 1 MB or less.
- The settings files are named by appending a number to the end of the file name. (The default increment is 1 and the range is 1–9999.)

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

2. Locate the desired file and tap it to proceed.
3. Tap **Send To Printer**.
 - To quit without sending, tap **Close**.

After the file has been successfully sent, a notification confirms the action.

Printer and App Information

This section outlines the printer details available in the About Printer section of the Printer Dashboard, along with additional application features accessible through the side-drawer menu.

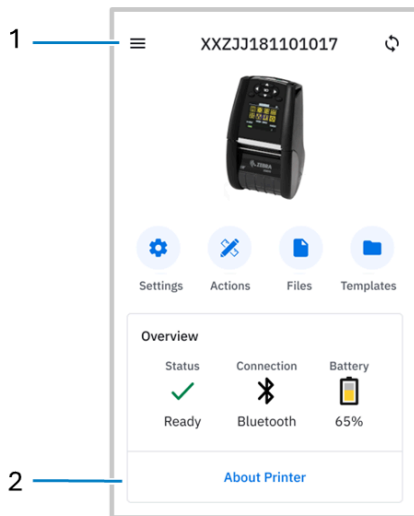


IMPORTANT: Depending on your printer model, this application may have limited functionality. Some application features will not be available for the detected printer model. Features that are unavailable are grayed out or not shown on the menus.

Access General Information and Side-Drawer Menu

After launching Zebra Nucleus Connector and pairing a printer, the application displays the Printer Dashboard screen, which is customized to your specific printer. From this screen, you can access the General Information screen (along with three other information screens) via **About Printer**, and you can access the **Side-Drawer Menu**.

Figure 9 General Information and Side-Drawer Menu Locations

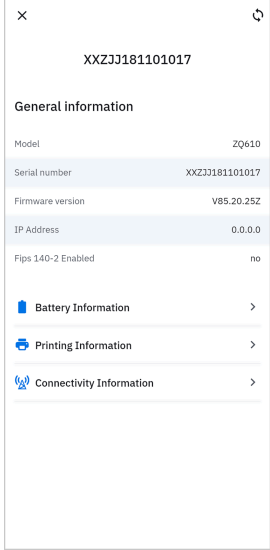
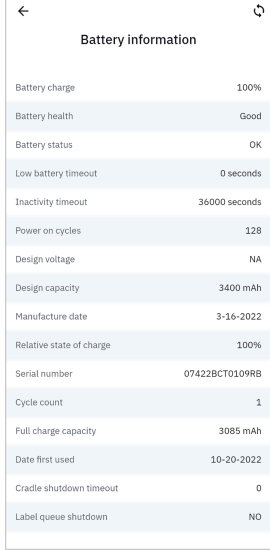
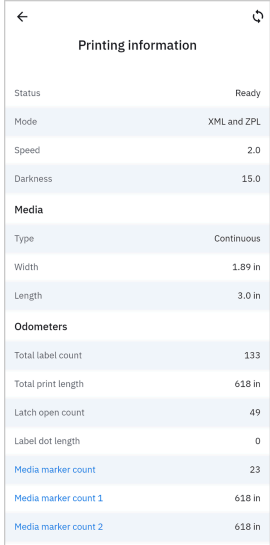
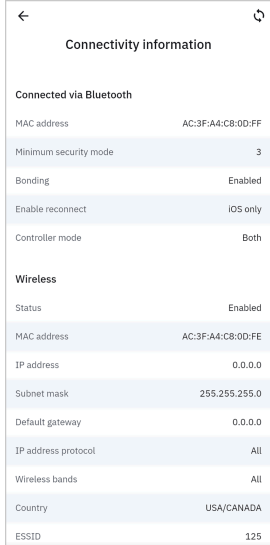


1	Side-Drawer Menu
2	About Printer

General Information and Other Screens

Tap **About Printer** to access the General Information screen, which displays general information about the printer. From this screen, you can also choose to view details of three more information screens.

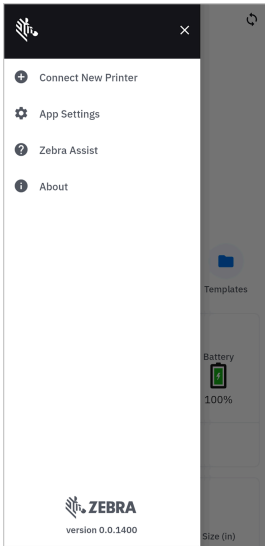
Table 3 Information Screens

<p>General Information - Displays basic printer information.</p> 	<p>Battery Information - Displays information relating to the printer's printing configuration.</p> 
<p>Printing Information - Displays information relating to the printer's printing configuration.</p> 	<p>Connectivity Information - Displays the printer's connectivity setup.</p> 

Side-Drawer Menu

Tap the **Side-Drawer Menu** located on the top-left side of the application to open the side-panel.

Figure 10 Side-Drawer Menu



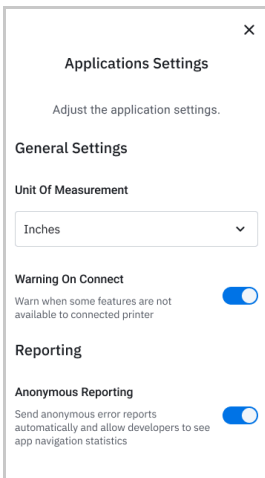
Within this menu, you can select:

- **Connect a New Printer** - Connects a different printer to the application. Selection directs you to the Choose a Printer Communication screen. Go to [Printer Discovery Methods](#) for more information.
- **App Settings** - Adjust the application settings.
- **Zebra Assist** - View Zebra help documentation and technical support.
- **About** - View information about the app.

Application Settings

The Application Settings screen allows you to adjust different aspects of the application.

Figure 11 Application Settings



- **Unit of measurement** - Set up inches, centimeters, and millimeters.

- Warn on Connect - Set notifications for when some features are not available to the 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 are sent automatically. To opt out of sending the reports, deselect the box.



NOTE: Zebra recognizes that the security of your personal information is a crucial aspect of our partnership, and we are not in the business of selling or disclosing it to others. Zebra maintains its commitment to safeguard and protect the confidentiality, integrity, and availability of information 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.

Zebra Assist

Zebra Assist simplifies troubleshooting by collecting your printer's configuration and automatically attaching it to an email, ready to be sent to Zebra Support for assistance. It also allows you to access and review your Zebra support history. You can also go directly to Zebra's support community using a provided link.


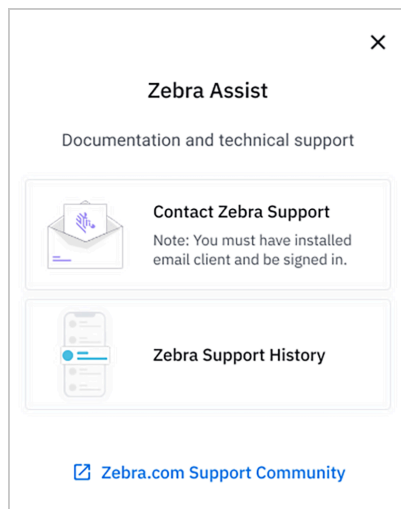
From the Printer Dashboard, tap the  **Side-Drawer Menu**, and then tap **Zebra Assist**.

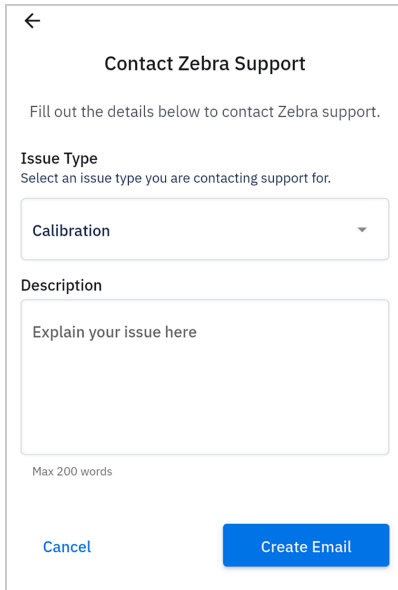
Figure 12 Zebra Assist Menu



Contacting Zebra Support via Email

This section explains the process of using Zebra Assist to send an email to Zebra support for assistance with troubleshooting printer issues.

Figure 13 Contact Zebra Support



NOTE: You must have an email client installed and be signed in.

1. From the Printer Dashboard, tap the **Side-Drawer Menu**.
2. Tap **Zebra Assist**.
3. Tap **Contact Zebra Support**.
4. Tap the **Issue Type** to display all available options, and then select the issue you want to share.
5. Enter a description of your issue, if desired.
6. If you want to include a printer configuration with your support ticket, select the box in the Include Printer Configuration section.
7. Attach additional documents to your support ticket to help provide context, if desired.
 - a) Tap the **Photos** and/or the **Documents** icon and select the documents to attach.



NOTE: A Permission Required prompt displays if access to the file system is not allowed. Tap **App Settings** and enable the required permissions from your mobile device to continue.

8. After you have added all the information to share, tap **Create Email**.

Your email opens, and any configuration and/or documentation files are attached.



NOTE:

- Attachments to emails are compressed, so the size of attachments will change from the original stored size.
- The system sends the report using the default email application for your mobile device.

9. Tap **Send** from your email application.

A prompt appears after sending your email, and a reference number is provided. Refer to this number when calling Zebra Support. Additionally, you can also choose to:

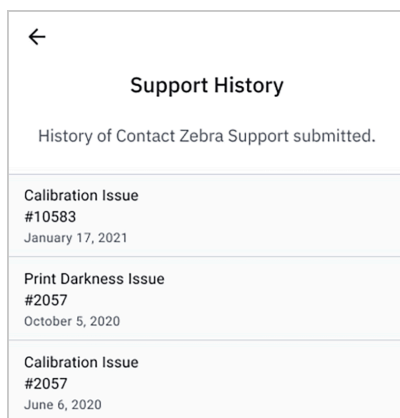
- Tap **Call Zebra Support** to bring up a prompt with Zebra's support number.
- Tap **Dismiss** to close the prompt.

Support History

The Support History screen displays your history of submitted support.

To bring up the screen, tap **Zebra Support History** from the Zebra Assist screen.

Figure 14 Zebra Support History



Support History	
History of Contact Zebra Support submitted.	
Calibration Issue #10583 January 17, 2021	
Print Darkness Issue #2057 October 5, 2020	
Calibration Issue #2057 June 6, 2020	

About

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

Figure 15 About Zebra

