



ZEBRA

User Guide

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Overview

Use this chapter to familiarize yourself with Bluetooth® technology and the various Zebra® printers that are Bluetooth enabled.

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Bluetooth-Enabled Printers

Table 1 • Bluetooth-Enabled Mobile Printers

	Model	LCD	Wireless Options	Capabilities	Apple iOS Support
	EM220II	✗	<ul style="list-style-type: none"> BT 3.0 + EDR (Standard) 802.11b/g (optional) (EDR: Enhanced Data Rate) 	<ul style="list-style-type: none"> 1.89-inch print width 203 dpi/8 dpm 	✓
	iMZ220	✗	<ul style="list-style-type: none"> BT 2.1 (standard) Dual Radio (BT 3.0 + 802.11 a/b/g/n) (optional) 	<ul style="list-style-type: none"> 1.89-inch print width Link-OS[®] 	✓
	iMZ320	✗	<ul style="list-style-type: none"> BT 2.1 (standard) Dual Radio (BT 3.0 + 802.11 a/b/g/n) (optional) 	<ul style="list-style-type: none"> 2.89-inch print width Link-OS[®] 	✓
	P4T/ RP4T	✓	<ul style="list-style-type: none"> BT 2.0 (standard) 802.11b/g (optional) 	<ul style="list-style-type: none"> 4.09-inch print width 203 dpi/8 dpm 	✓
	QLn220	✓	<ul style="list-style-type: none"> BT 2.1 (standard) Dual Radio (BT 3.0 + 802.11 a/b/g/n) (optional) 	<ul style="list-style-type: none"> Supports 1.9-inch width Link-OS[®] 	✓
	QLn320	✓	<ul style="list-style-type: none"> BT 2.1 Dual Radio (BT 3.0 + 802.11 a/b/g/n) 	<ul style="list-style-type: none"> Supports 2.89- inch print width Link-OS[®] 	✓
	QLn420	✓	<ul style="list-style-type: none"> BT 2.1 (optional) Dual Radio (BT 3.0 + 802.11 a/b/g/n) 	<ul style="list-style-type: none"> Supports 3.89-inch print width Link-OS[®] 	✓
	ZQ110	✓	<ul style="list-style-type: none"> BT 3.0 (Standard) 802.11b/g (optional) 	<ul style="list-style-type: none"> Supports 2.28-inch width 	✓
	ZQ320	✓	Outdoor unit (Black) <ul style="list-style-type: none"> BT (Classic, LE 4.0) Indoor unit (Silver/Black shown) <ul style="list-style-type: none"> Dual Radio (BT Classic, LE 4.0 + 802.11ac) 	<ul style="list-style-type: none"> Supports 3.0-inch (76 mm) & 3.15-inch (80 mm) print widths Link-OS[®] 	✓

* Apple iOS support is available with the BT Classic option.

Table 1 • Bluetooth-Enabled Mobile Printers

	Model	LCD	Wireless Options	Capabilities	Apple iOS Support
	ZQ510	✓	<ul style="list-style-type: none">BT 4.0/LE + BT 3.0Dual Radio (BT 3.0 + 802.11 a/b/g/n)	<ul style="list-style-type: none">Supports 2.83-inch print widthLink-OS[®]	✓
	ZQ520	✓	<ul style="list-style-type: none">BT 4.0/LE + BT 3.0Dual Radio (BT 3.0 + 802.11 a/b/g/n)	<ul style="list-style-type: none">Supports 4.09-inch print widthLink-OS[®]	✓



Apple iOS support and **Made for iPod, iPhone, iPad** means that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and is certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iOS devices may affect wireless performance.



Note • QLn printers with SKUs QNx-xxNxxMxx-xx and QNx-xxCxxMxx-xx support Made for iPod iPhone iPad (MFi).



* Apple iOS support is available with the BT Classic option.

Table 2 • Bluetooth-Enabled Desktop and Industrial Printers

	Model	LCD	Wireless Options	Capabilities	Apple iOS Support
	GX420t	✓	<ul style="list-style-type: none"> BT 2.0 (standard) BT 2.1 (optional) 802.11 a/b/g/n (optional) 	<ul style="list-style-type: none"> XML enabled printing 	✗
	GX430t	✓	<ul style="list-style-type: none"> BT2.0 (standard) BT 2.1 (optional) 802.11 a/b/g/n (optional) 	<ul style="list-style-type: none"> XML enabled printing 	✗
	GX420d	✓	<ul style="list-style-type: none"> BT 2.0 Standard) BT 2.1 (optional) 802.11 a/b/g/n (optional) 	<ul style="list-style-type: none"> XML enabled printing 	✗
	ZD410	✗	<ul style="list-style-type: none"> BLE (standard) BT 4.0 (Classic + BLE) + 802.11a/b/g/n/ac (Optional) 	<ul style="list-style-type: none"> XML enabled printing Link-OS[®] 	✗ *
	ZD420 Series	✗	<ul style="list-style-type: none"> BLE (standard) BT 4.0 (Classic + BLE) + 802.11a/b/g/n/ac (optional) 	<ul style="list-style-type: none"> XML enabled printing Link-OS[®] 	✗ *
	ZD500 Series	✓	<ul style="list-style-type: none"> BT 2.0 Standard Dual Radio (BT 3.0 + 802.11 a/b/g/n) (optional) 	<ul style="list-style-type: none"> XML enabled printing Link-OS[®] 	✗
	ZD500R Series	✓	<ul style="list-style-type: none"> BT 200 (standard) Dual Radio (BT 3.0 + 802.11 a/b/g/n) (optional) 	<ul style="list-style-type: none"> XML enabled printing RFID module Link-OS[®] 	✗
	ZD620 Series	✓	<ul style="list-style-type: none"> BLE (optional) BT 4.0 (Classic + BLE) + 802.11a/b/g/n/ac (optional) 	<ul style="list-style-type: none"> XML enabled printing Link-OS[®] 	✗ *
	ZT400 Series	✓	<ul style="list-style-type: none"> BT 2.1+ EDR (standard) 802.11 a/b/g/n (optional) (EDR: Enhanced Data Rate) 	<ul style="list-style-type: none"> XML enabled printing Wired Ethernet (Built-in) 4 in.- & 6 in. print widths Link-OS[®] 	✓

* Apple iOS support is available with the BT Classic option.

Table 2 • Bluetooth-Enabled Desktop and Industrial Printers

	Model	LCD	Wireless Options	Capabilities	Apple iOS Support
	ZT510	✓	<ul style="list-style-type: none"> • BLE (standard) • BT 4.0 (Classic + BLE) + 802.11a/b/g/n/ac (optional) 	<ul style="list-style-type: none"> • XML enabled printing • Wired Gigabit Ethernet (Built-in) • 4 in.-print widths • Link-OS[®] 	✓
	ZT600 series	✓	<ul style="list-style-type: none"> • BT 4.0 (standard) • 802.11ac (optional) 	<ul style="list-style-type: none"> • XML enabled printing • RFID Capable • Wired Gigabit Ethernet (Built-in) • 4 in.- & 6 in.-print widths • Link-OS[®] 	✓



Apple iOS support and Made for iPod, iPhone, iPad means that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and is certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iOS devices may affect wireless performance.

* Apple iOS support is available with the BT Classic option.

Bluetooth FAQ's



Note • Apple iOS support and Made for iPod, iPhone, iPad means that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and is certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iOS devices may affect wireless performance.

What is Bluetooth?

Bluetooth technology is the global wireless standard for enabling low energy, small range, secure connectivity for Bluetooth-enabled devices without the use of cables or wires. Bluetooth devices send and receive data over short distances using radio transmissions.

What is Classic Bluetooth (BT)?

Classic Bluetooth is a wireless small range network technology for streaming data applications such as voice communications. Classic Bluetooth provides a robust connection between devices such as headsets, cars, industrial sensors, an medical sensors.

What is Bluetooth LE (BLE)?

Bluetooth Low Energy (Bluetooth LE, BLE, or Bluetooth Smart) is a wireless short range network technology created for the healthcare, fitness, security, and home entertainment industries.

Bluetooth Low Energy is intended to provide considerably reduced power consumption compared to Bluetooth Classic, while maintaining a similar range of communications. Bluetooth low energy is a low power consumption device that operates in sleep mode most of the time and wakes up when a connection is initiated.



Note • It is recommended that only configuration functions should be performed over a BLE connection. Printer configuration functions via BLE can be performed using Zebra's Printer Setup for Android.

Zebra Bluetooth Radio Range

Bluetooth technology (BT) operates in the unlicensed industrial, scientific, and medical (ISM) band using spread spectrum, frequency hopping, full-duplex signal at a nominal rate of 1600 hops/sec. The 2.4 GHz ISM band is available and unlicensed in most countries.

	Classic Bluetooth	Bluetooth Low Energy
Range	100 m (328 ft)	25 m (82 ft)
Throughput	2 Mbps	100 kbps

Zebra Radios and BT Specifications

The Bluetooth radio inside Zebra printers complies with BT 2.0 Specification or BT Specification 2.1 (B-radio) or the BT Specification 3.0 (C-radio, or Dual Radio) or BT specification 4.0 and supports the SPP (Serial Port Profile). All print jobs sent to the printer will be done through the ZPS (Zebra Parser Service), which is basically a BT emulation of an RS-232 serial communication.

What is Bluetooth used for?

Bluetooth capability is built into electronic devices and adapters. Bluetooth is a direct device-to-device connection which allows the user to wirelessly share data and other information between paired devices. A Bluetooth radio is designed to replace cables by taking the information normally carried by the cable and transmitting it over a radio frequency to a receiving Bluetooth radio device.

Is Bluetooth technology hardware or software?

It's a combination of both. In products that contain Bluetooth, a small computer chip containing the Bluetooth radio is installed in the product. But it also needs software to connect to other products.

What devices can communicate with Zebra's Bluetooth printers?

Any computer or hand-held device that has a Bluetooth radio inside and supports the SPP (Serial Port Profile) of the Bluetooth specification can communicate with Zebra Bluetooth printers.



Note • BLE-only printers can only communicate with hand-held devices supporting BLE.

What information can be transmitted via Bluetooth to Zebra printers?

All data that can be transmitted over a serial cable can be sent over Bluetooth. The practical and intended uses are data that has been formatted for printing of receipts, labels, and bar codes. Zebra provides a label creation utility called ZebraDesigner to facilitate the formatting of labels or text. For more information about ZebraDesigner, visit www.zebra.com/software.

To view the Zebra Programming Guide, visit www.zebra.com/support.

Independent Software Vendors

Zebra partners with Independent Software Vendors (ISVs) to develop software and mobile applications for use with Zebra printers. The Zebra ISV program is designed to provide ISVs with access to the sale, marketing, and technical support that they will need to develop, integrate, and promote solutions in new markets around the globe. You can download a sample mobile application called Zebra Utilities from the App Store on an iOS® service or from the Google Play store on an Android™ device. See [Connecting Mobile Devices on page 40](#) for instructions on setting up Zebra Utilities on your mobile device.

Figure 1 • Zebra Utilities on Apple iPhone



To become a Zebra ISV Partner, please visit <http://www.zebra.com/us/en/partners/become-a-partner.html>.

To find an ISV Partner, please visit <http://www.zebra.com/findisv.html>.

What is a master device and what is a slave device?

The master device refers to the device that initiates the connection with other Bluetooth devices. The slave device refers to the Bluetooth device that listens for and receives the connection information from the master device. Link-OS[®] enabled printers now support role-switching, allowing iOS[®] master devices to automatically reconnect.

What is Link-OS[®]?

Link-OS[®] was developed by Zebra Technologies to be a core set of applications that are supported across a wide range of smart phones, tablets, and other computer systems to help customers manage printers, connect devices and applications, in a building or across the globe. To learn more about Link-OS[®], visit www.zebra.com/linkos.

What type of security does Bluetooth support?

The Bluetooth specification supports authentication and encryption. For the authentication algorithm, the size of the key used is always 128 bits. For the encryption algorithm, the key size may vary between 1 and 16 octets (8-128 bits).

See [Security on page 15](#) for more information.



Notes • _____

Security

This section explains the various security features included in Zebra® Bluetooth® enabled printers.

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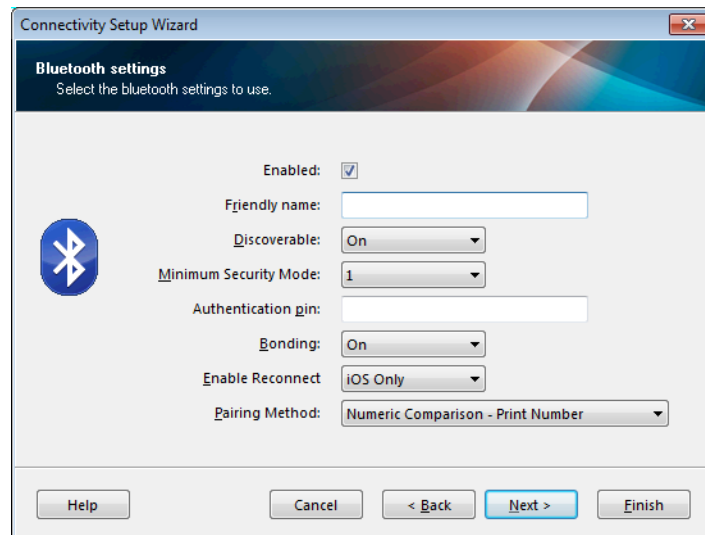
Minimum Security Mode

Minimum Security Mode sets the minimum security mode at which the printer connects. The master device dictates the security mode and the printer will agree to connect at a higher security. Security Mode levels are as follows:

Table 3 • Minimum Security Mode

If the master device is Bluetooth 2.0 or older:					If the master device is Bluetooth 2.1 or newer:	If the master device uses Bluetooth LE:
	Encryption Level	PIN	MITM	Description	Secure Simple Pairing will always be used if both devices are Bluetooth 2.1 or newer. See Bluetooth Pairing on page 18.	
Security Mode 1 (default)	Unencrypted	NO PIN required	Not required	No data is encrypted		Neither encryption nor MITM protection is required to send/receive label data.
Security Mode 2	Profile-level	PIN required	Not required	All user data is encrypted		Encryption, but not MITM protection is required to send/receive label data (i.e., Just Works is allowed).
Security Mode 3	Link-level	PIN required	Required	All user data and Bluetooth management commands are encrypted		Encryption and MITM protection are required to send/receive label data (i.e., Just Works is NOT allowed).
Security Mode 4	Not Applicable	Not Applicable	Required	Printer will not connect to Bluetooth 2.0 master device		

1. To change the **Minimum Security Mode**, (the mode the printer connects to the master device), in Zebra Setup Utilities (ZSU), refer to the table above and click the desired level: 1, 2, 3, or 4 on the Bluetooth settings screen.



Bluetooth Pairing

Secure Simple Pairing

Bluetooth 2.1 introduced Secure Simple Pairing. SSP improves the security of Bluetooth by not using a static PIN and requires that all data be encrypted. SSP replaces the older Minimum Security Mode model for devices with Link-OS[®] compatible printers. SSP supports two modes:

- **Numeric Comparison** displays a 6-digit number on both the master device and the printer that must be confirmed on both devices.
- **Just Works** requires no printer confirmation when in pairing mode.

The printers automatically decide whether to use **Numeric Comparison** or **Just Works** based on the features of the printer and the master device. If both devices have a way of displaying a 6-digit number, the printer will use Numeric Comparison.

The printing behavior for printers without a display is controlled by the Set/Get/Do command and its values. See [Table 4 on page 19](#) for more information.

Bluetooth LE

Bluetooth LE supports three pairing modes:

- **Numeric Comparison** displays a 6-digit number on both, the master device and the printer, that must be confirmed on both devices.





Note • This mode is not supported by all LE printers and/or master devices.

- **Passkey**, similar to **Numeric Comparison**, displays or prints a 6-digit number. Unlike **Numeric Comparison**, this number must be typed in on the master device.
- **Just Works** requires no printer confirmation when in pairing mode.

[Table 4](#) also applies to printers using Bluetooth LE. Depending on the version(s) of LE supported by the printer and/or master device, the 6-digit pairing code will be confirmed by the master (**Numeric Comparison**) or entered by the master (**Passkey**).

Table 4 • Set/Get/Do for Printers Without a Display

Set/Get/Do Command		Description	Notes
bluetooth.non_display_numeric_comparison			
Default Value:	print	Prints the 6-digit number	<p>If the printer does not have an LCD, the printer will print the 6-digit number, and you must confirm the number on the master device.</p> <p> Note • The printed code will use 1-2 inches of media. Printing the code is only necessary the first time the printer pairs with each device.</p>
Other Values:	noprint	The 6-digit number is not printed	<p>The master device will display the 6-digit code, and you must confirm it on the master device.</p> <p> Important • There is no way to know if a third party device has established a MITM attack because the code cannot be displayed on the printer!</p>
	off	Disables Numeric Comparison	Security Modes 3 and 4 will result in a pairing failure. “Just Works” (no MTIM protection) is supported.

Man-In-The-Middle Protection

MITM (Man-In-The-Middle) refers to an attack between two devices. This MITM Protection guards against a third party intercepting a connection between two devices. Just Works pairing mode does not support MITM protection. Numeric Comparison and Passkey modes support MITM protection. During Numeric Comparison and Passkey modes pairing, both devices specify if they require MITM protection. If either device requires MITM protection, Just Works pairing mode cannot be used.

If one device requires MITM protection and the other device only supports Just Works pairing mode, this may cause the pairing to fail.

The printer does not require MITM protection in Minimum Security Mode 1 and 2. The printer does require MITM protection for Minimum Security Mode 3 and 4.

For more advanced security settings and to customize security settings with Set/Get/Do commands, refer to the Zebra Programming Guide on zebra.com/manuals.

Connectivity

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Configuring the Printer

This guide assumes that you have installed the proper drivers (if necessary) on the master device and then the device is Bluetooth compatible. A master device is any Bluetooth radio enabled device that can initiate a connection with a Bluetooth radio enabled printer. These instructions include connecting your Bluetooth printer to:

- desktop Microsoft® Windows® PCs and mobile computers
- Apple iOS® devices (iPhone, iPad, iPod Touch)
- Android™ devices
- Microsoft Windows-based mobile devices

Print a Network Configuration Label

Verify that your Zebra printer has the Bluetooth radio installed. You can verify this by printing a network configuration label (see [Figure 2 on page 23](#) and [Figure 3 on page 24](#) for sample labels). Zebra printers with the Internal Bluetooth option installed print a configuration label with information needed to establish and troubleshoot printing from a network. Refer to your printer's user guide for instructions on how to print a configuration label.

The printer's Bluetooth settings help identify the printer for installation, print operations, and network connectivity.

1. Depending on the model of your printer, make sure the printer is plugged into a proper power source or the battery is installed. If your printer uses a battery as the power source, you may need to charge the battery before you can continue setting up your printer.
2. Load media into the printer. For more information regarding loading media into your printer, refer to your printer's User Guide.
3. Turn on (I) the printer. Ensure Bluetooth Discovery is turned ON by referring to the network configuration label.
4. Print a network configuration label. For instructions, refer to your printer's User Guide.
5. Looking at the network configuration label, ensure that Bluetooth discover mode is ON. If not, change the setting. Refer to Changing the Bluetooth Settings on Your Printer, on page 21 for instructions.

Figure 2 • An example of a network configuration label (Two-Key)

Network Configuration	
Zebra Technologies ZTC GX420d	
Bluetooth	
2.1.8.....	FW VERSION
04/25/08.....	DATE
.....	LOCAL NAME
OFF.....	AUTHENTICATION
ON.....	DISCOVERABLE
???.....	RADIO VERSION
ON.....	ENABLED
OFF.....	AFH MODE
ii "\$.....	ADDRESS
.....	CURRENT AFH MAP
FIRMWARE IN THIS PRINTER IS COPYRIGHTED	

Figure 3 • An example of a network configuration label (ZPL)

Network Configuration	
Zebra Technologies ZTC ZD500R-203dpi ZPL XXXXXX-XX-XXXX	
PrintServer.....	LOAD LAN FROM?
UNKNOWN.....	ACTIVE PRINTSRVR
Wired	
ALL.....	IP PROTOCOL
000.000.000.000....	IP ADDRESS
255.255.255.000....	SUBNET
000.000.000.000....	GATEWAY
000.000.000.000....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
300.....	TIMEOUT VALUE
000.....	ARP INTERVAL
9100.....	BASE RAW PORT
9200.....	JSON CONFIG PORT
Wireless	
ALL.....	IP PROTOCOL
000.000.000.000....	IP ADDRESS
255.255.255.000....	SUBNET
000.000.000.000....	GATEWAY
000.000.000.000....	WINS SERVER IP
YES.....	TIMEOUT CHECKING
300.....	TIMEOUT VALUE
000.....	ARP INTERVAL
9100.....	BASE RAW PORT
9200.....	JSON CONFIG PORT
INSERTED.....	CARD INSERTED
02dfH.....	CARD MFG ID
9118H.....	CARD PRODUCT ID
00:00:00:00:00:00..	MAC ADDRESS
YES.....	DRIVER INSTALLED
INFRASTRUCTURE.....	OPERATING MODE
125.....	ESSID
100.....	TX POWER
ALL.....	CURRENT TX RATE
OPEN.....	WEP TYPE
NONE.....	WLAN SECURITY
1.....	WEP INDEX
000.....	POOR SIGNAL
LONG.....	PREAMBLE
NO.....	ASSOCIATED
ON.....	PULSE ENABLED
15.....	PULSE RATE
OFF.....	INTL MODE
not available.....	REGION CODE
no region code.....	COUNTRY CODE
0x3FFFFFFFFF.....	CHANNEL MASK
Bluetooth	
4.2.0.....	FIRMWARE
04/20/2012.....	DATE
on.....	DISCOVERABLE
3.0.....	RADIO VERSION
on.....	ENABLED
AC:3F:A4:05:E7:F9..	MAC ADDRESS
XXXXXX-XX-XXXX....	FRIENDLY NAME
No.....	CONNECTED
1.....	MIN SECURITY MODE
nc.....	CONN SECURITY MODE
FIRMWARE IN THIS PRINTER IS COPYRIGHTED	

Change Bluetooth Settings on Your Printer

If your network configuration label indicated that Bluetooth discovery is OFF, enable the option using the Microsoft Windows-based Zebra Setup Utilities or by sending the following Set/Get/Do command:

```
! U1 setvar "bluetooth.discoverable" "on"
```

Installing and Using Zebra Setup Utilities

Minimum System Requirements

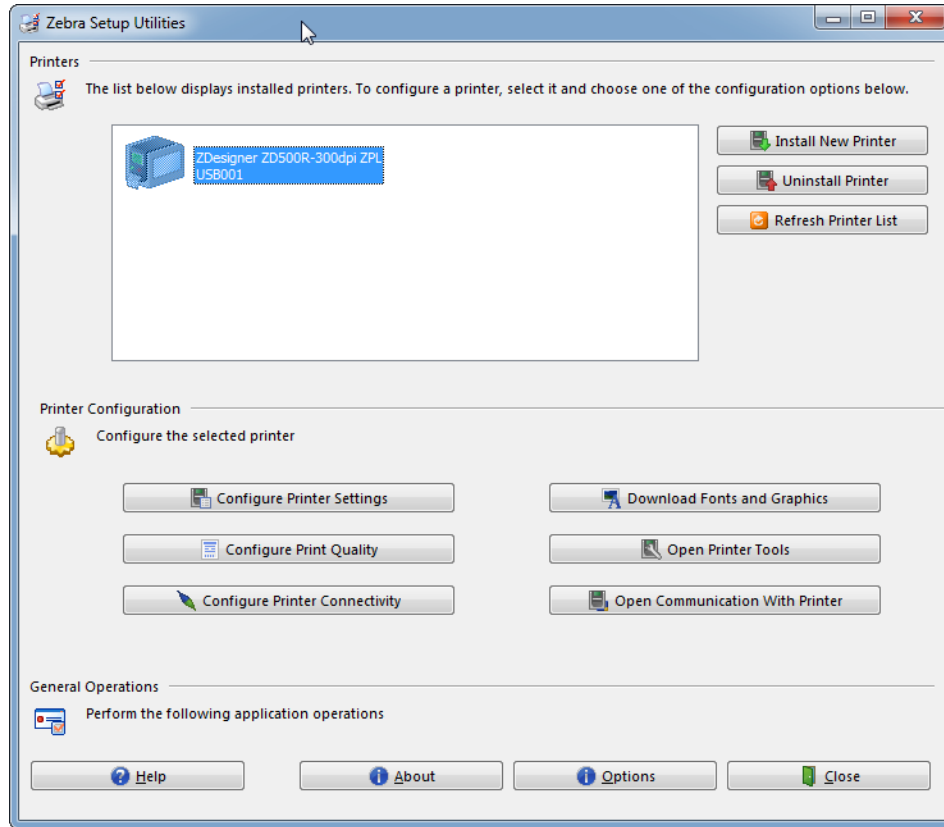
- Windows Vista
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008 R2
- Windows Server 2012 R2
- Windows Server 2016

In the Windows environment, the printer requires the ZebraDesigner driver installed on the computer to allow printing after establishing a Bluetooth connection. Use the Zebra Setup Utilities configuration wizard to configure your Bluetooth settings.

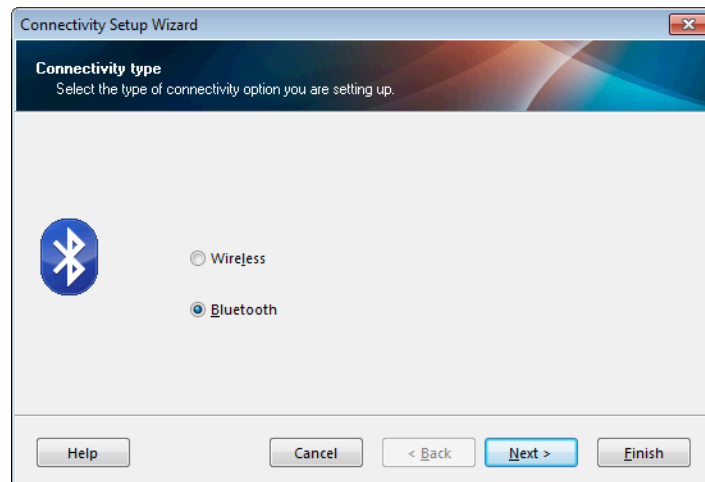
1. Download and install Zebra Setup Utilities (ZSU) from your printer's User CD or visit www.zebra.com/setup/ to download the latest version. Double-click the .exe file and the wizard will guide you through the installation process.
2. Connect the printer to your PC using a USB, serial, or parallel cable.
3. Launch ZSU by going to the Start menu, and click **Zebra Technologies > Zebra Setup Utilities > Zebra Setup Utilities**.

The Zebra Setup Utilities screen displays.

4. In the list of printers displayed, select your printer.

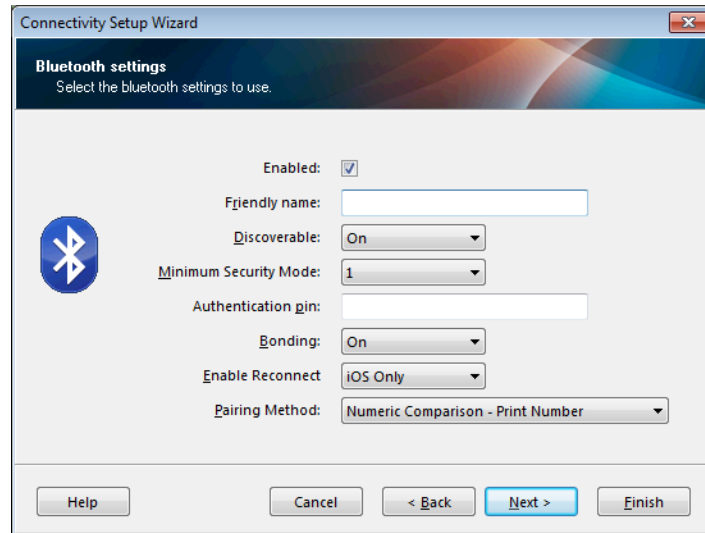


5. Click **Configure Printer Connectivity**.
6. On the **Connectivity Type** screen, select Bluetooth.



7. Click **Next**.

8. On the Bluetooth settings screen, click in the check box next to Enabled.



By default, a Zebra Bluetooth printer comes with the following settings:

- **Bluetooth Enabled:** All QLn printers with dual radio, Bluetooth = Disabled. All other printers, Bluetooth = Enabled.
- **Friendly Name:** The Friendly Name is part of the printer local name (a combination of the printer model name and an alphanumeric string of characters). The alphanumeric string of characters is the Friendly Name of the device. This is the name provided by the printer during service discovery. The Friendly Name is a string of up to 20 characters long that is unique to each printer.
- **Discoverable:** Discoverable = ON.
- **Minimum Security Mode:** 1. See [Table 3 on page 16](#) for further information.

9. Next to **Discoverable**, if it is not already chosen, select **ON**.

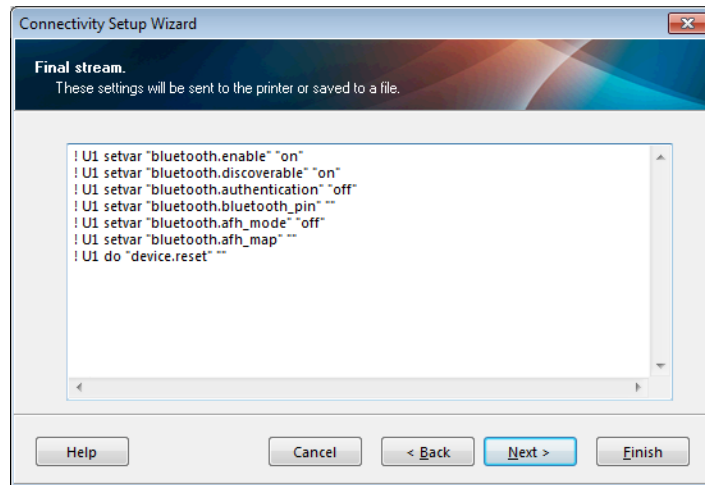
This option sets whether the device will appear in a Bluetooth inquiry on another device, typically, a master device.

10. Leave **Authentication PIN** blank. The **PIN** (bluetooth.bluetooth_pin) is necessary for pairing if the master device is BT2.0 or older.

11. Click Next.

The Final Stream screen displays with the Set/Get/Do command settings to send to your printer or save to a file.

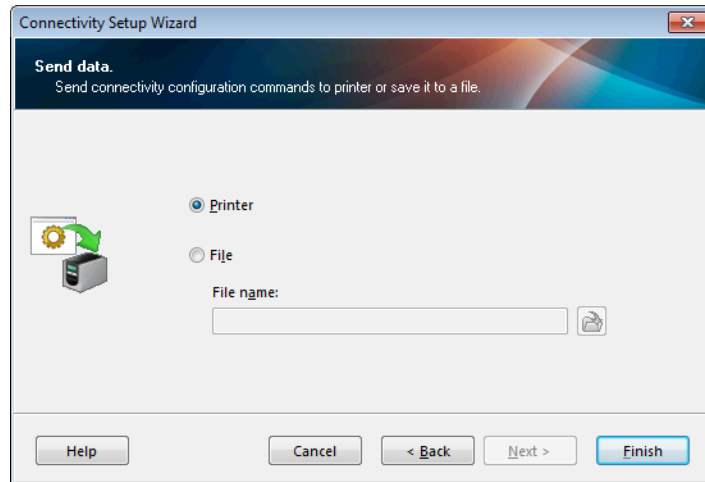
(For more information regarding SGD commands and other Zebra programming languages, go to zebra.com/manuals on-line to download the Zebra Programming Guide.)



12. Click Next.

13. Perform one of the following:

- On the **Send Data** screen, select **Printer** to send your settings directly to the printer.
OR
- Select **File** to save the settings in a file with a destination of your choice.



14. Click Finish to complete the Bluetooth configuration for your printer.

Connecting the Printer to a Windows 7 PC

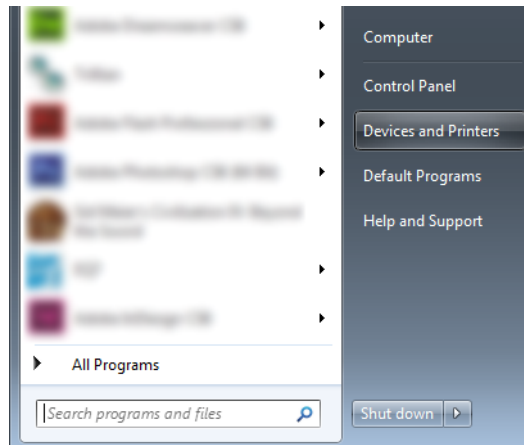


Important • Turn your printer on so it can be discovered by Windows.

The printer must have the factory option Bluetooth installed and enabled. If the printer has an LCD screen, the printer's main menu screen will display Bluetooth connection status. If the printer does not have an LCD, the blue LED light will be solid blue to indicate a Bluetooth connection has been established.



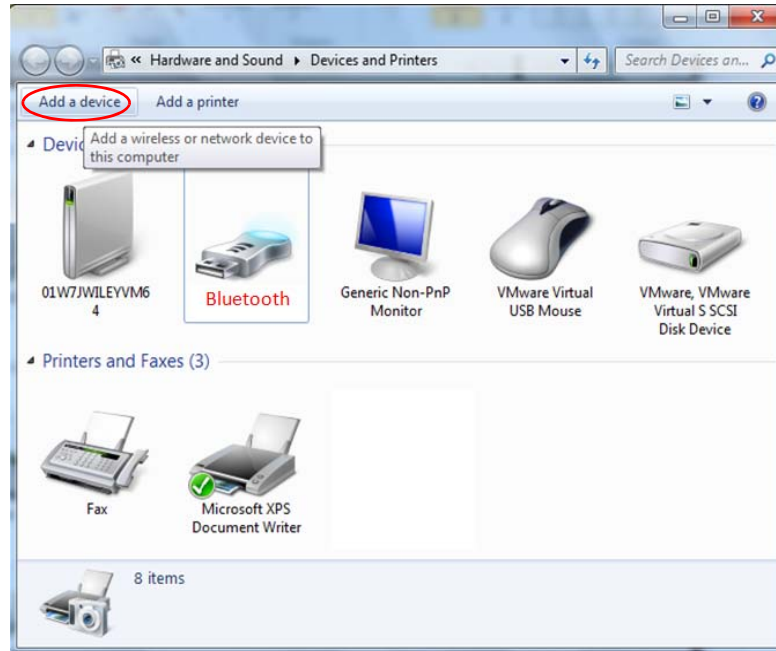
1. In Windows 7, select **Start > Devices and Printers**.



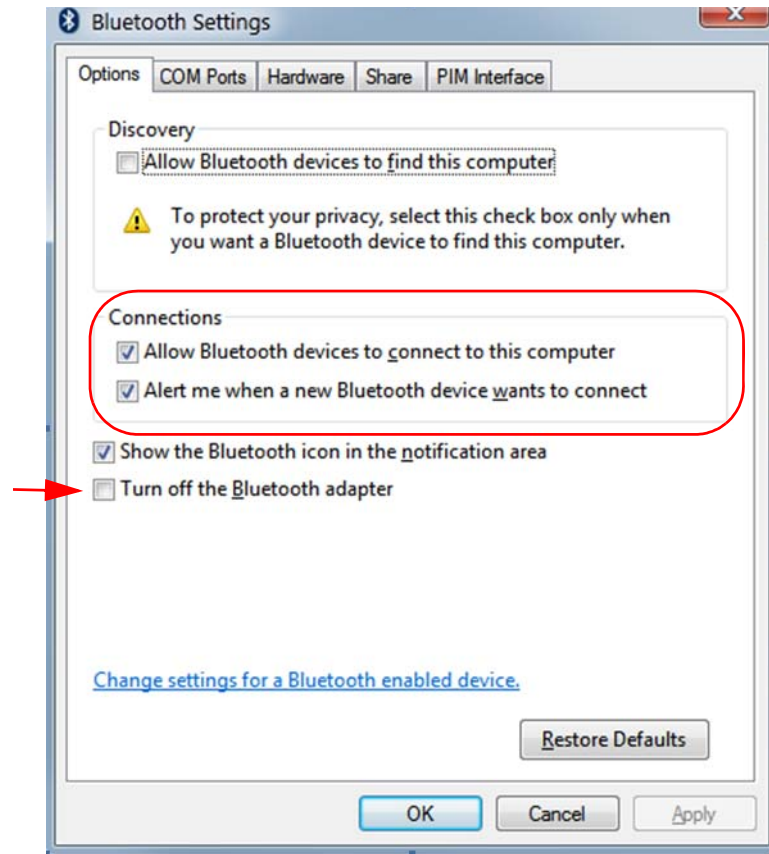
2. Do you have a USB adapter add-on?

	Then...
No	You already have Bluetooth enabled, so skip to step 5 on page 32 .
Yes	Continue with step 3 .

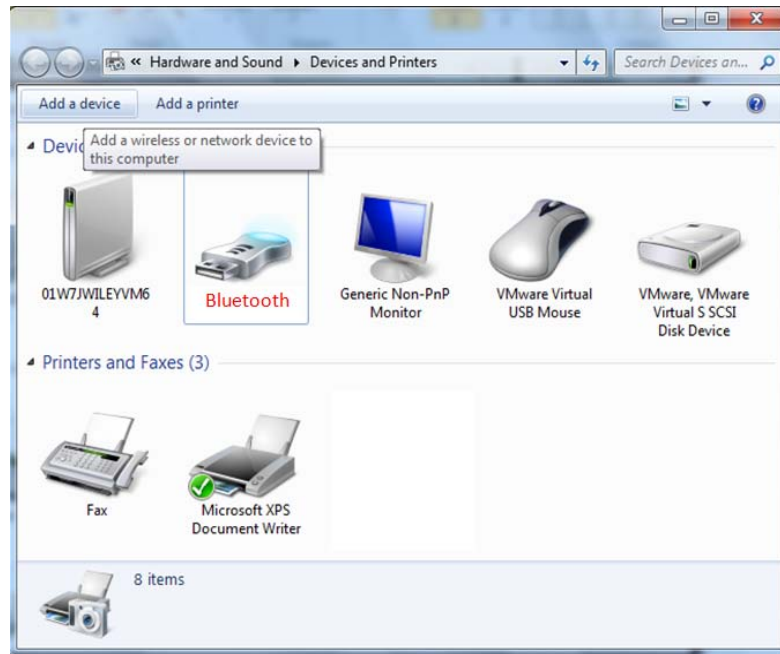
3. If your master device has a USB Bluetooth adapter add-on, confirm that the screen looks similar to the one below.



4. Perform the following steps to enable Bluetooth connectivity in Windows:
 - a. Right-click on the Bluetooth icon.
 - b. Select Bluetooth Settings from the pop-up menu.
 - c. Verify that both Connections check boxes are checked.
 - d. Verify that the Turn off the Bluetooth Adapter option is not checked.
 - e. Click Apply and then, click OK to close the window.



5. On the **Devices and Printers** windows, click **Add a device**. Add a device window will populate with Bluetooth devices near you and have been configured to allow service discovery.



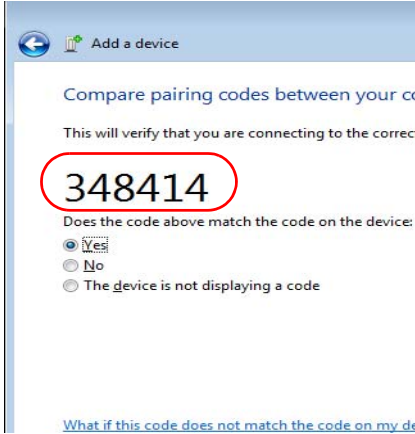
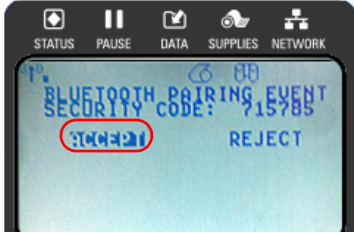

6. In the Add a device window, click on the Zebra printer, and then click **Next**.



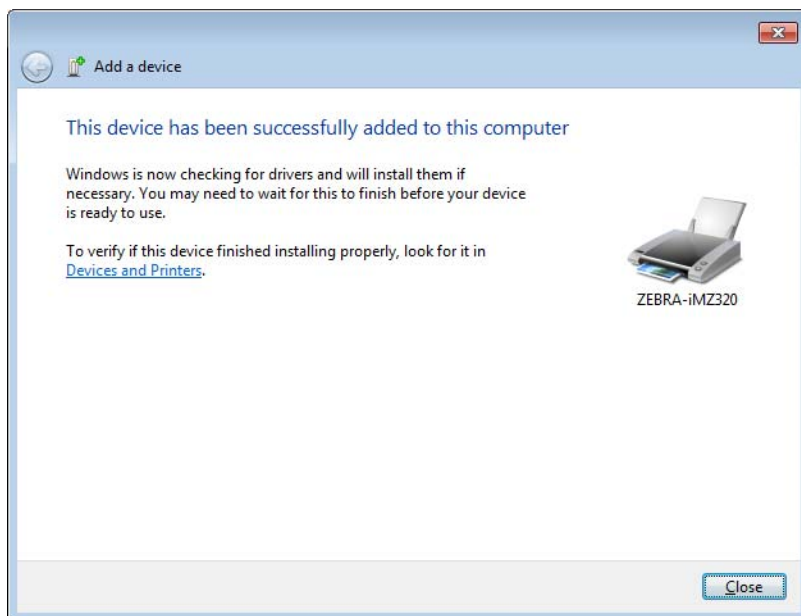
7. Start with the Windows Display and select the column that matches your printer (either with or without a display).
8. Verify that the pairing codes match.



Important • Windows will display the pairing code for only 10 seconds, so complete this step quickly!

Windows Display	Printer Display	Printer Without a Display
<ul style="list-style-type: none"> Windows displays a random pairing code in the Add a Device window. If the code matches the code printed or displayed on the printer, select yes.  <p>The above behavior is if the Windows PC has a BT2.1 or newer radio.</p> <p>If the printer or Windows PC has a BT2.0 radio or older, you will be asked to enter a PIN.</p>	<ul style="list-style-type: none"> Use the printer's control panel arrow buttons to change the highlighted ACCEPT or REJECT options and then press OK on the printer's control panel. The printer displays "Pairing successful". 	<ul style="list-style-type: none"> See Figure 4. If your printer does not have a display screen, the printer will print the pairing code on the loaded media like the example below. If the pairing code numbers match, select YES on the Add a Device window (in Windows) and click Next. <p>Figure 4 • Example of printer without a display</p> 

9. The **Add a Device** window alerts you when the device is added to the computer, click **Close**.



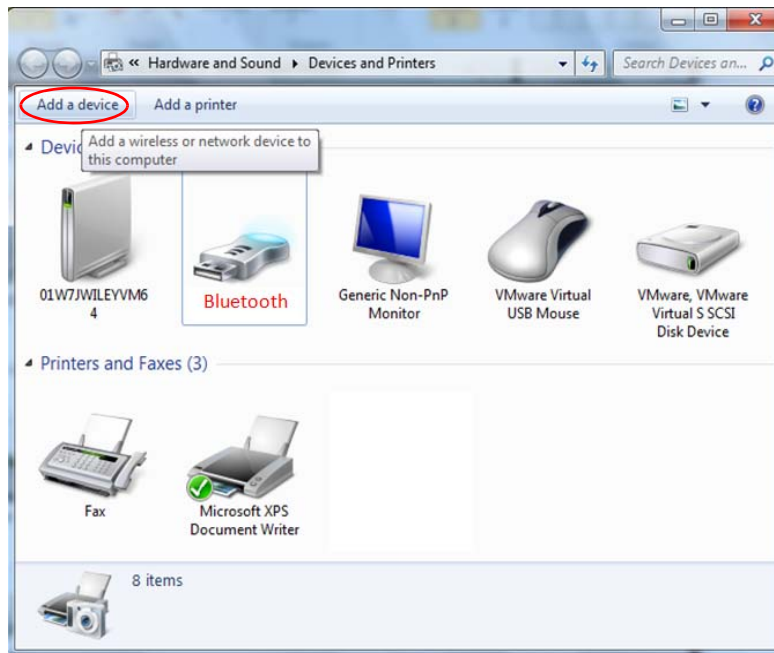
Connecting the Printer to a Windows 8 PC

Before adding (also called pairing) a Bluetooth enabled device, make sure it's turned on and discoverable. Check with your device manufacturer's User Manual for further information.

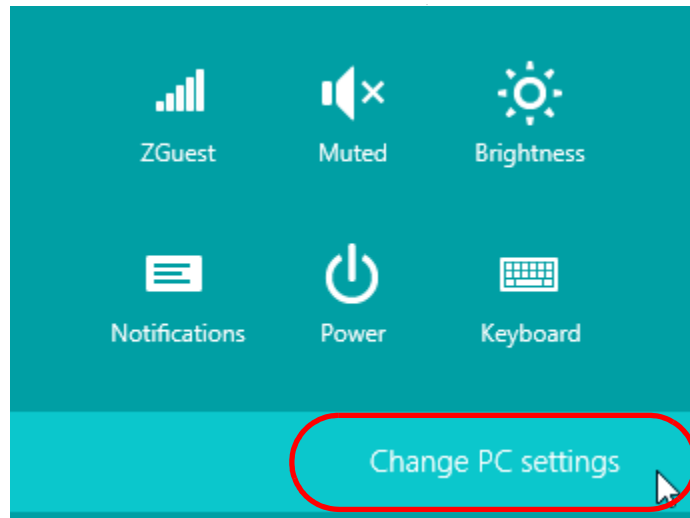
- Do you have a USB adapter add-on?

	Then...
No	You already have Bluetooth enabled, so skip to step 5 on page 32 .
Yes	Continue with step 3 .

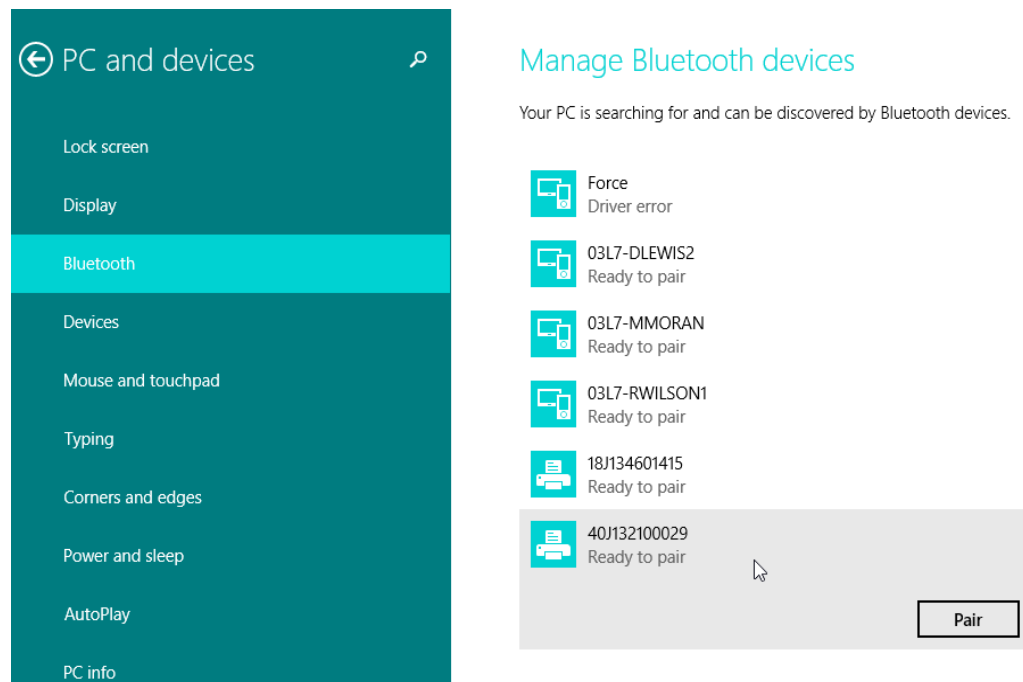
- If your master device has a USB Bluetooth adapter add-on, confirm that the screen looks similar to the one below.



3. Swipe in from the right edge of the screen or move your mouse toward the right edge of the screen, select **Settings**, and then select **Change PC Settings**.



4. Select **PC and devices**, and then select **Bluetooth**. After Windows displays the Bluetooth-enabled devices, select the device and click **Pair**.



Important • Windows will display the pairing code for only 10 seconds, so complete this step quickly!

5. Follow the instructions on your screen to finish pairing your device.

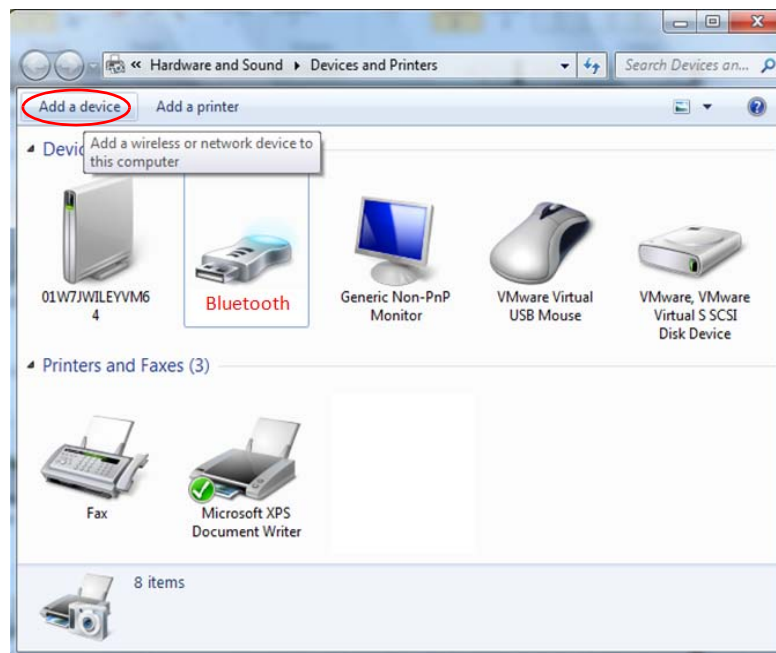
Connecting the Printer to a Windows 10 PC

Before adding (also called pairing) a Bluetooth enabled device, make sure it's turned on (I) and discoverable.

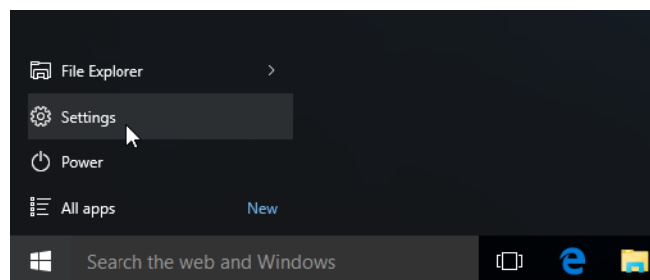
1. Do you have a USB adapter add-on?

	Then...
No	You already have Bluetooth enabled, so skip to step 5 on page 32 .
Yes	Continue with step 3 .

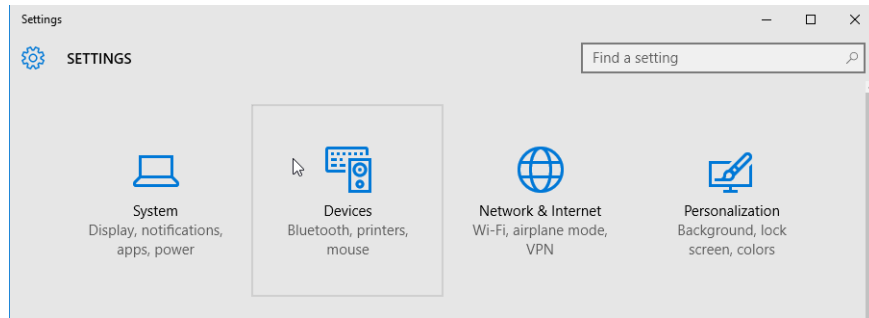
2. If your master device has a USB Bluetooth adapter add-on, confirm that the screen looks similar to the one below.



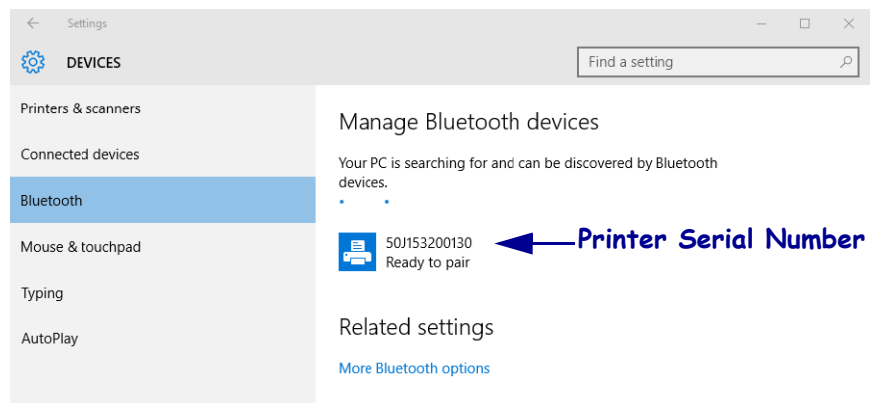
3. Open the Windows Start Menu by clicking on the Windows Start button and select **Settings**.



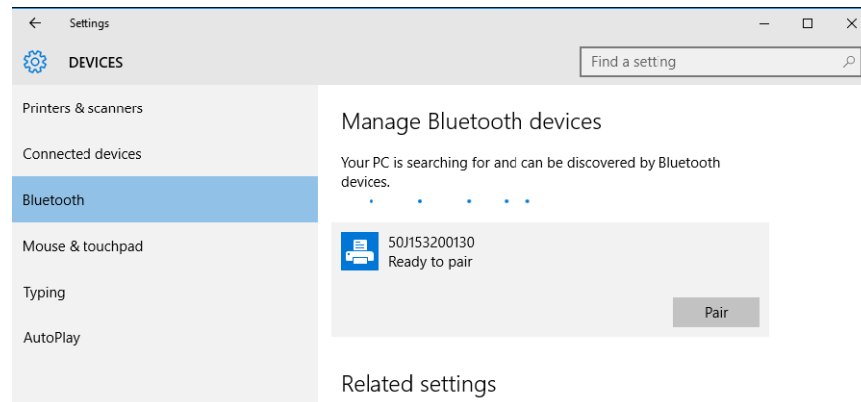
4. Click on the Devices category in the Settings window.



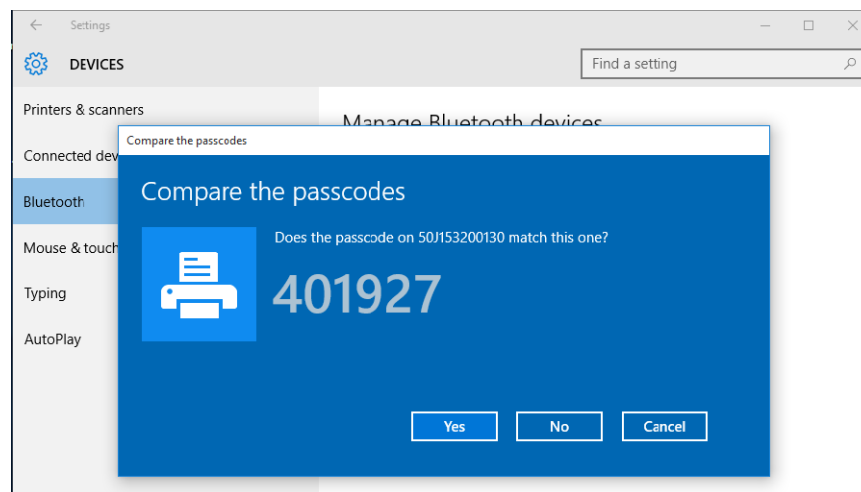
5. Click on Bluetooth. If your PC doesn't have Bluetooth installed, the Bluetooth category will not be displayed in the list of device categories. The printer is identified by the serial number.



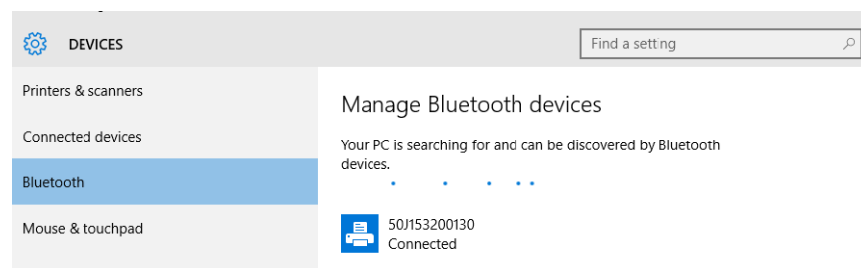
6. Select the printer from the list and then click, Pair.



7. The printer will print a passcode. Compare that with the passcode shown on the screen. Click 'Yes' if they match.



The printer status changes to connected when pairing has completed.



Connecting Mobile Devices

Connecting an Apple iOS device



Note • See [Table 1 on page 6](#) for mobile printers or see [Table 2 on page 8](#) for desktop and tabletop printers with Apple iOS device support.

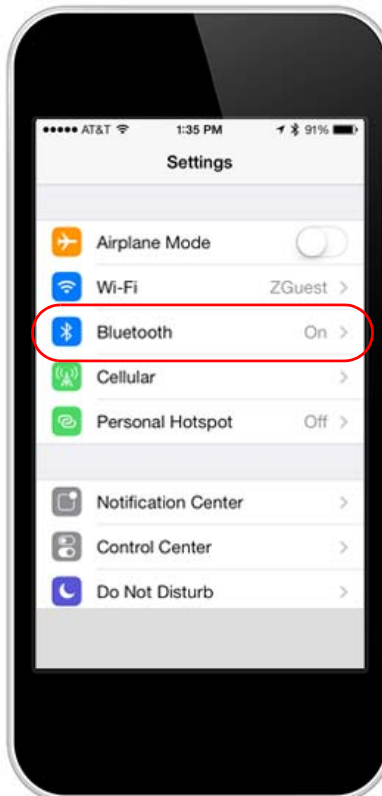


Note • Depending on what version iOS you are running, the icons and screens may look a little different than your screen, but the instructions are the same across all iOS versions.

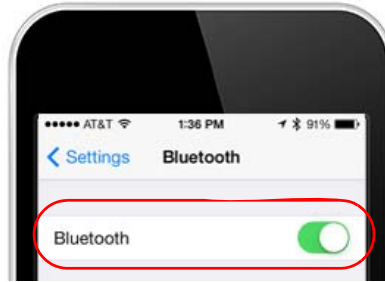
1. Open the **Settings** app on your iPhone.



2. Tap **General** and then tap **Bluetooth**.



3. Make sure **Bluetooth** is turned on. In the **Devices** list, tap your Zebra printer. By default, the printer name is the serial number of the printer.



Note • Only printers using BT Classic will be listed.

4. After the pairing, the iPhone will indicate “Connected”. You can test your connection by downloading the Zebra Utilities free app from the App Store. Zebra Utilities has files for demo purposes and will help you test and diagnose any issues with printing from your mobile device.

Downloading Zebra Utilities from the App Store

Zebra Utilities allows you to print labels, receipts, and encode RFID tags directly from your iPhone, iPad, or iPod touch to a Bluetooth-enabled Zebra printer.

1. Open the App Store on your iOS device. Install and launch the Zebra Utilities app.



2. On the main screen, tap **Files**. Pick one of the files to do a test print and tap it.



3. If you want to change the **Print Quantity**, tap in the text box and type the quantity of copies you want to print. When finished, tap **Print** in the upper right corner.





Notes • _____

Troubleshooting

This section explains common troubleshooting procedures when connecting Bluetooth devices.

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Troubleshooting Steps

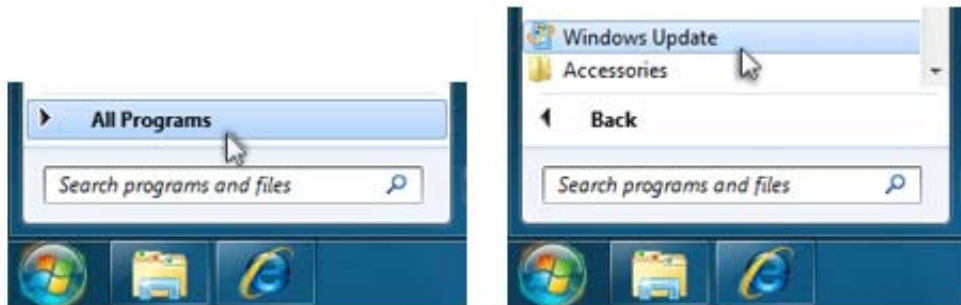
If you are experiencing Bluetooth connectivity issues, first perform the following basic troubleshooting steps that may quickly resolve your issue.

1. If your Bluetooth device uses batteries, make sure that your batteries are charged.
2. If your Bluetooth device uses a Bluetooth adapter that connects to your computer through a USB port, try connecting the adapter to another USB port on your computer.
3. If there are multiple Bluetooth devices connected to your computer, temporarily disconnect them. They can interfere with a Bluetooth adapter.
4. Verify that the Bluetooth device that you are troubleshooting is powered on and that Bluetooth is enabled. If your device has a wireless switch, make sure that the wireless switch is turned on. Check your printer's User Guide that came with your printer or on-line at www.zebra.com/support to locate the wireless switch on your printer.



Important • Make sure your Windows computer is up to date with all the latest service packs and drivers.

5. In Windows 7, use your **Start** menu to check for updates. Click the **Start** button, click **All Programs**, and then click **Windows Update**.



Important • If you are using Windows 8, enter Windows Update in the search box, tap or click Settings, and then tap or click Install optional updates.

6. If any important updates are available for your computer, install them. To do this, click Install updates. If you are prompted to restart your computer after all the updates are installed, restart your computer.
7. If it still does not work go to www.zebra.com/support for assistance.

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