PAUSE Self Test

This self test can be used to provide the test labels required when making adjustments to the printer's mechanical assemblies or to determine if any printhead elements are not working. Figure 5 shows a sample printout.

To perform a PAUSE self test, complete these steps:

1. Turn off (**O**) the printer.
2. Press and hold **PAUSE** while turning on (**I**) the printer. Hold **PAUSE** until the first control panel light turns off.
   - The initial self test prints 15 labels at the printer's slowest speed, and then automatically pauses the printer. Each time **PAUSE** is pressed, an additional 15 labels print. Figure 5 shows a sample of the labels.

Figure 5 • PAUSE Test Label

   - While the printer is paused, pressing **CANCEL** alters the self test. Each time **PAUSE** is pressed, 15 labels print at 6 in. (152 mm) per second.
   - While the printer is paused, pressing **CANCEL** again alters the self test a second time. Each time **PAUSE** is pressed, 50 labels print at the printer's slowest speed
   - While the printer is paused, pressing **CANCEL** again alters the self test a third time. Each time **PAUSE** is pressed, 50 labels print at 6 in. (152 mm) per second.
   - While the printer is paused, pressing **CANCEL** again alters the self test a fourth time. Each time **PAUSE** is pressed, 15 labels print at the printer's maximum speed.
3. To exit this self test at any time, press and hold **CANCEL**.

Sensor Profile

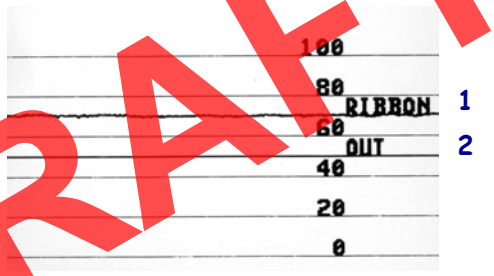
Tap Diagnostics > Printer Information > Print Sensor Profile to Label to print a sensor profile image (which will extend across several actual labels or tags). Use the sensor profile image to troubleshoot the following situations:

- The printer experiences difficulty in determining gaps (web) between labels.
- The printer incorrectly identifies preprinted areas on a label as gaps (web).
- The printer cannot detect ribbon.

Compare your results to the examples shown in this section. If the sensitivity of the sensors must be adjusted, calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 92).

Ribbon Sensor Profile (Figure 6) The line labeled RIBBON (**1**) on the sensor profile indicates the ribbon sensor readings. The ribbon sensor threshold setting is indicated by OUT (**2**). If the ribbon readings are below the threshold value, the printer does not acknowledge that ribbon is loaded.

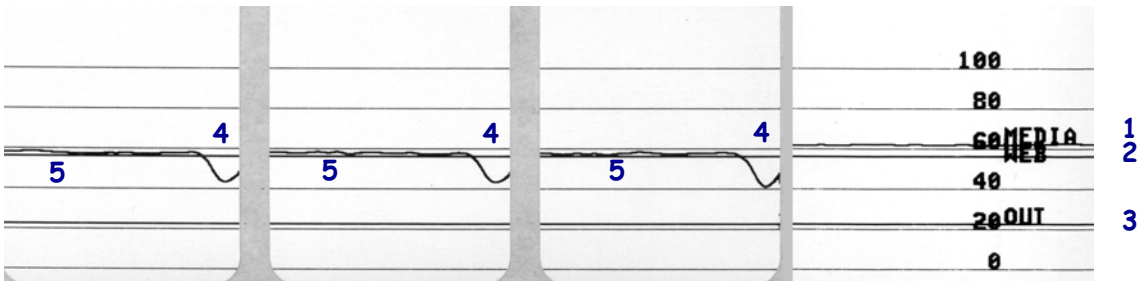
Figure 6 • Sensor Profile (Ribbon Section)



Media Sensor Profile (Figure 7) The line labeled MEDIA (**1**) on the sensor profile indicates the media sensor readings. The media sensor threshold settings is indicated by WEB (**2**). The media out threshold is indicated by OUT (**3**).The downward spikes (**4**) indicate gaps between labels (the web), and the lines between the spikes (**5**) indicate where labels are located.

If you compare the sensor profile printout to a length of your media, the spikes should be the same distance apart as the gaps on the media. If the distances are not the same, the printer may be having difficulty determining where the gaps are located.

Figure 7 • Sensor Profile (Media Section)

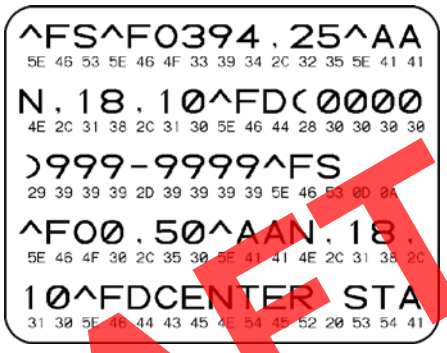


Communication Diagnostics Mode

The communication diagnostics test is a troubleshooting tool for checking the interconnection between the printer and the host computer. When the printer is in diagnostics mode, it prints all data received from the host computer as straight ASCII characters with the hex values below the ASCII text. The printer prints all characters received, including control codes such as CR (carriage return). Figure 8 shows a typical test label from this test.

Note • The test label prints upside-down.

Figure 8 • Sample Communications Diagnostics Mode Label



To use communications diagnostics mode, complete these steps:

1. Set the label width equal to or less than the actual media width being used for the test. Tap Settings > Media Settings to access the label width setting.
2. Tap the Diagnostics icon, and set the Diagnostic Mode option to ENABLED.

   The printer enters diagnostics mode and prints any data received from the host computer on a test label.
3. Check the test label for error codes. For any errors, check that your communication parameters are correct.

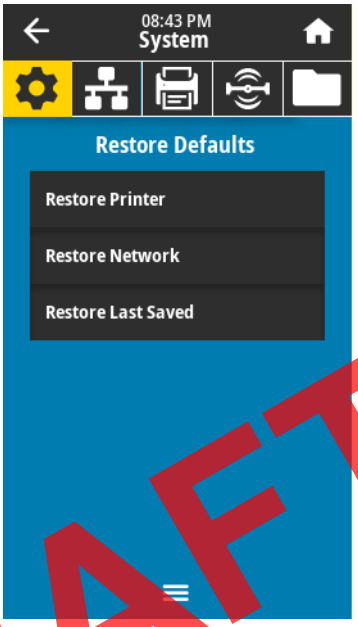
   Errors show on the test label as follows:

   - FE indicates a framing error.
   - OE indicates an overrun error.
   - PE indicates a parity error.
   - NE indicates noise.
4. To exit this self test and return to normal operation, power cycle the printer or set the Diagnostic Mode option to DISABLED.

Load Defaults or Last Saved Values

Restoring the printer to default values or to the last saved values can help if things are not working as expected.

Touch **Menu > Settings > Restore Defaults** to see the available options.

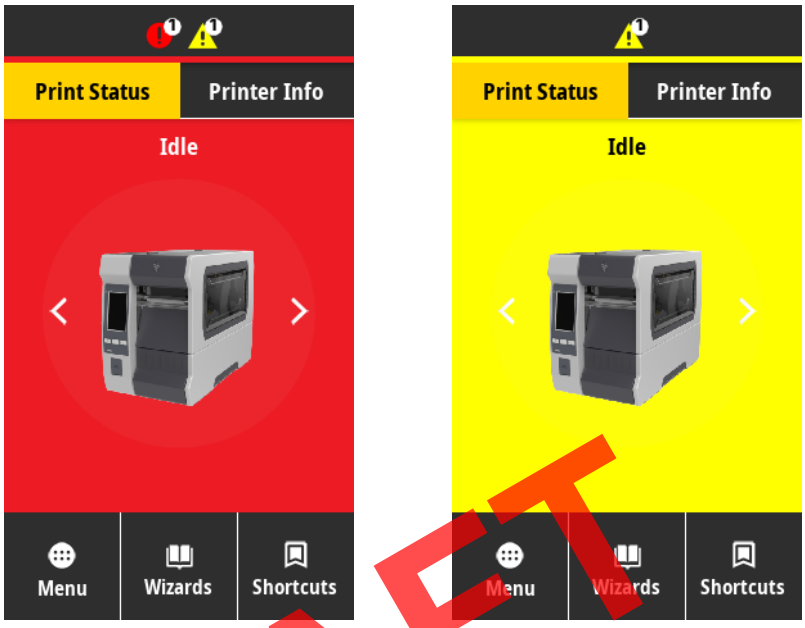


- PRINTER—Restores all printer settings other than the network settings back to the factory defaults. Use care when loading defaults because you will need to reload all settings that you changed manually.
- NETWORK—Reinitializes the printer's wired or wireless print server. With a wireless print server, the printer also reassociates with your wireless network.
- LAST SAVED—Loads settings from the last permanent save.

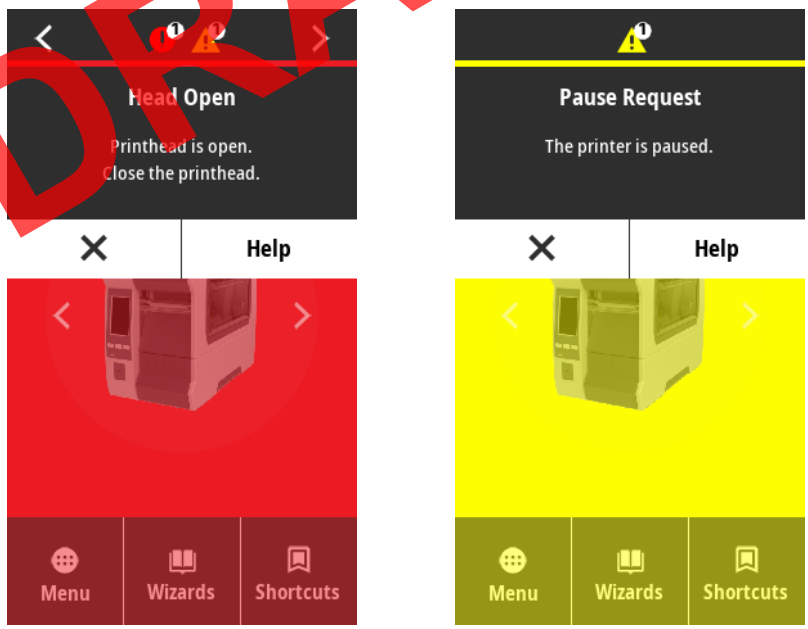
See *System > Settings > Restore Defaults* on page 62 for additional ways to restore these values.

Alert and Error States

If the background color of the Home screen is red or yellow, you will need to take an action to restore the printer to a Ready status.



Touch the icons in the bar at the top of the Home screen to view the error or alert message. See *Alerts and Error Messages* on page 126 for recommended actions.



Alerts and Error Messages

Display/ Indicator Lights	Possible Causes	Recommended Solutions
Head Open STATUS light steady red PAUSE light steady yellow	The printhead is not fully closed.	Close the printhead completely.
	The printhead open sensor is not working properly.	Call a service technician to replace the sensor.
Media is Out **Please Load Media** STATUS light steady red SUPPLIES light steady red	The media is not loaded or is loaded incorrectly.	Load media correctly. See *Load the Media* on page 17.
	Misaligned media sensor.	Check the position of the media sensor.
	The printer is set for noncontinuous media, but continuous media is loaded.	1. Install the proper media type, or reset printer for the current media type. 2. Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
Ribbon In STATUS light steady yellow SUPPLIES light flashing yellow	Ribbon is loaded, but the printer is set for direct thermal mode.	Ribbon is not required with direct thermal media. If you are using direct thermal media, remove the ribbon. This error message will not affect printing.
		If the message persists with no ribbon in the printer, Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
		If you are using thermal transfer media, which requires ribbon, set the printer for Thermal Transfer mode. See *Determine the Label Collection Method* on page 14.
PH NOT AUTHENTICATED **REPLACE PRINTHEAD** STATUS light steady red PAUSE light steady red DATA light steady red	The printhead was replaced with one that is not a genuine Zebra™ printhead.	Install a genuine Zebra™ printhead.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
Ribbon Is Out **Please Replace Ribbon** STATUS light steady yellow SUPPLIES light flashing yellow	In thermal transfer mode: • ribbon is not loaded • ribbon is loaded incorrectly • the ribbon sensor is not detecting ribbon • media is blocking the ribbon sensor	1. Load ribbon correctly. See *Load the Ribbon* on page 43. 2. Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
	In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.	Calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 92) or load printer defaults by touching **Menu > System > Settings > Restore Defaults > Restore Printer**.
	If you are using direct thermal media, the printer is waiting for ribbon to be loaded because it is incorrectly set for thermal transfer mode.	Set the printer for Direct Thermal mode. See *Print > Print Quality > Print Type* on page 76.
PRINTHEAD OVERTEMP **PRINTING HALTED** STATUS light steady yellow	**Caution** • The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead is over temperature.	Allow the printer to cool. Printing automatically resumes when the printhead elements cool to an acceptable operating temperature. If this error persists, consider changing where the printer is located or using a slower print speed.
HEAD COLD **PRINTING HALTED** **THERMISTOR** **REPLACE PRINTHEAD** STATUS light steady yellow The printer shows one of these messages or cycles between them.	**Caution** • An improperly connected printhead data or power cable can cause these error messages. The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead data cable is not properly connected.	Call a service technician to hook up the printhead properly.
	The printhead has a faulty thermistor.	Call a service technician to replace the printhead.

Display/ Indicator Lights	Possible Causes	Recommended Solutions
HEAD COLD PRINTING HALTED STATUS light flashing yellow	**Caution** • An improperly connected printhead data or power cable can cause this error message. The printhead may be hot enough to cause severe burns. Allow the printhead to cool.	
	The printhead temperature is approaching its lower operating limit.	Continue printing while the printhead reaches the correct operating temperature. If the error remains, the environment may be too cold for proper printing. Relocate the printer to a warmer area.
	The printhead data cable is not properly connected.	Call a service technician to hook up the printhead properly.
	The printhead has a faulty thermistor.	Call a service technician to replace the printhead.
CUT ERROR STATUS light steady red PAUSE light steady yellow	**Caution** • The cutter blade is sharp. Do not touch or rub the blade with your fingers.	
	The cutter blade is in the media path.	Turn off the printer power and unplug the printer. Inspect the cutter module for debris and clean as needed following the cleaning instructions in *Clean and Lubricate the Cutter Module* on page 110.
OUT OF MEMORY STORING GRAPHIC OUT OF MEMORY STORING FORMAT OUT OF MEMORY STORING BITMAP OUT OF MEMORY STORING FONT	There is not enough memory to perform the function specified on the second line of the error message.	Free up some of the printer's memory by adjusting the label format or printer parameters. One way to free up memory is to adjust the print width to the actual width of the label instead of leaving the print width set to the default.
		Ensure that the data is not directed to a device that is not installed or is unavailable.
		If the problem persists, call a service technician.

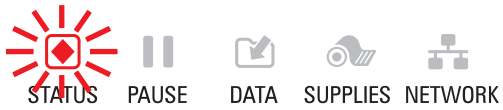
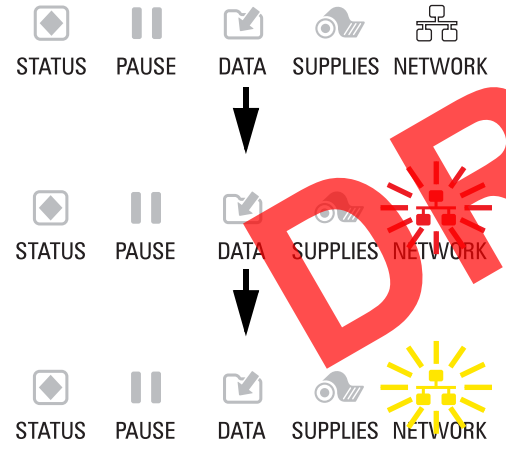
Indicator Lights

The indicator lights located above the printer's display also communicate the printer's status.

Table 5 • Status of Printer As Shown by Indicator Lights

	*STATUS light steady green (other lights steady yellow for 2 seconds during printer power-up)* The printer is ready.
	*PAUSE light steady yellow.* The printer is paused.
	*STATUS light steady red* *SUPPLIES light steady red* The media supply is out. The printer needs attention and cannot continue without user intervention.
	*STATUS light steady red* *SUPPLIES light flashing red* The ribbon supply is out. The printer needs attention and cannot continue without user intervention.
	*STATUS light steady yellow* *SUPPLIES light flashing yellow* The printer is in Direct Thermal mode, which does not require ribbon; however, ribbon is installed in the printer.
	*STATUS light steady red* *PAUSE light steady yellow* The printhead is open. The printer needs attention and cannot continue without user intervention.
	*STATUS light steady yellow* The printhead is over temperature. **Caution •** The printhead may be hot and could cause severe burns. Allow the printhead to cool.
	*STATUS light flashing yellow* This indicator light flashing indicates one of the following: • The printhead is under temperature. • The power supply is over temperature. • The main logic board (MLB) is over temperature.
	*STATUS light steady red* *PAUSE light steady red* *DATA light steady red* The printhead was replaced with one that is not a genuine Zebra™ printhead. Install a genuine Zebra™ printhead to continue.

Table 5 • Status of Printer As Shown by Indicator Lights (Continued)

	*STATUS light flashing red* The printer is unable to read the dpi setting of the printhead.
Printers with a ZebraNet wired Ethernet option	
	*NETWORK light off* No Ethernet link is available.
	*NETWORK light steady green* A 100 Base link was found.
	*NETWORK light steady yellow* A 10 Base link was found.
	*NETWORK light steady red* An Ethernet error condition exists. The printer is not connected to your network.
Printers with a ZebraNet wireless option	
	*NETWORK light off* A radio was found during power-up. The printer is attempting to associate with the network. The light flashes red while the printer associates with the network. The light then flashes yellow while the printer is authenticating with the network.
	*NETWORK light steady green* The radio is associated with your network and authenticated, and the WLAN signal is strong.
	*NETWORK light flashing green* The radio is associated with your network and authenticated, but the WLAN signal is weak.
	*NETWORK light steady red* A WLAN error condition exists. The printer is not connected to your network.

Troubleshooting

Printing or Print Quality Issues

Barcode Does Not Scan		
Issue	*Possible Cause*	*Recommended Solution*
The barcode printed on a label does not scan.	The barcode is not within specifications because the printer is set at an incorrect darkness level.	1. Perform the steps in *Run the Print Wizard and Print a Test Label* on page 49. 2. If necessary, manually adjust the darkness or print speed settings. • Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely. • Slower print speeds typically yield better print quality. Access the darkness and print speed settings from the Home screen by touching **Menu > Print > Print Quality**. 3. If the issue is not resolved, check the printhead pressure and toggle position. See *Adjust the Printhead Pressure* on page 93
	There is not enough blank space around the barcode.	Leave at least 1/8 in. (3.2 mm) between the barcode and other printed areas on the label and between the barcode and the edge of the label.

Poor Print Quality		
Issue	*Possible Cause*	*Recommended Solution*
Smudge marks on labels	The media or ribbon is not designed for high-speed operation.	Replace supplies with those recommended for high-speed operation. For more information, see http://www.zebra.com/supplies.
Poor results with thick labels	The print line is not at an optimal position for your media.	Refer to the *Maintenance Manual* for instructions on how to adjust the print line for thick media.

Print Consistently Too Light or Too Dark

Issue	*Possible Cause*	*Recommended Solution*
Printing is too light or too dark over the entire label	The media or ribbon is not designed for high-speed operation.	Replace supplies with those recommended for high-speed operation. For more information, see http://www.zebra.com/supplies.
	The printer is set at an incorrect darkness level.	For optimal print quality, set the darkness to the lowest possible setting for your application. 1. Perform the steps in *Run the Print Wizard and Print a Test Label* on page 49. 2. If necessary, manually adjust the darkness or print speed settings. • Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely. • Slower print speeds typically yield better print quality. Access the darkness and print speed settings from the Home screen by touching **Menu > Print > Print Quality**.
	You are using an incorrect combination of media and ribbon for your application.	1. Switch to a different type of media or ribbon to try to find a compatible combination. 2. If necessary, consult your authorized Zebra reseller or distributor for information and advice.
	Incorrect printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See *Adjust the Printhead Pressure* on page 93.
Printing is too light or too dark on one side of the label	Uneven printhead pressure.	Adjust the printhead pressure as needed for good print quality. See *Adjust the Printhead Pressure* on page 93.

Issue	*Possible Cause*	*Recommended Solution*
General print quality issues	The printer is set at an incorrect print speed or darkness level. Keep in mind that printer settings may be affected by the driver or software being used.	For optimal print quality, set the print speed and the darkness to the lowest possible settings for your application. **1.** Perform the steps in *Run the Print Wizard and Print a Test Label* on page 49. **2.** If necessary, manually adjust the darkness or print speed settings. • Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely. • Slower print speeds typically yield better print quality. Access the darkness and print speed settings from the Home screen by touching **Menu > Print > Print Quality**.
	You are using an incorrect combination of labels and ribbon for your application.	**1.** Switch to a different type of media or ribbon to try to find a compatible combination. **2.** If necessary, consult your authorized Zebra reseller or distributor for information and advice.
	The printhead is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller* on page 102.
	Incorrect or uneven printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See *Adjust the Printhead Pressure* on page 93.
	The label format is scaling a font that is not scalable.	Check the label format for font issues.

Angled Gray Lines on Blank Labels

Issue	*Possible Cause*	*Recommended Solution*
Fine, angular gray lines on blank labels	Wrinkled ribbon.	See wrinkled ribbon causes and solutions in *Ribbon Issues* on page 136.

Missing Print		
Issue	*Possible Cause*	*Recommended Solution*
Long tracks of missing print on several labels	Print element damaged.	Call a service technician.
	Wrinkled ribbon.	See wrinkled ribbon causes and solutions in *Ribbon Issues* on page 136.

Loss of Registration		
Issue	*Possible Cause*	*Recommended Solution*
Loss of printing registration on labels. Excessive vertical drift in top-of-form registration.	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller* on page 102.
	Media guides are positioned improperly.	Ensure that the media guides are properly positioned. See *Load the Media* on page 17.
	The media type is set incorrectly.	Set the printer for the correct media type (gap/notch, continuous, or mark).
	The media is loaded incorrectly.	Load media correctly. See *Load the Media* on page 17.
Misregistration/skips labels	The printer is not calibrated.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
	Improper label format.	Check your label format, and correct it as necessary.
Misregistration and misprint of one to three labels	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller* on page 102.
	Media does not meet specifications.	Use media that meets specifications. See *Media Specifications* on page 191.
Vertical drift in top-of-form position	The printer is out of calibration.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller* on page 102.
Horizontal movement in placement of the label image.	The previous labels were torn off incorrectly.	Pull down and to the left when tearing off labels so that the tear-off bar assists in tearing through the label backing. Pulling up or down and to the right can shift the media sideways.

Issue	*Possible Cause*	*Recommended Solution*
Vertical image or label drift	The printer is using non-continuous labels but is configured in continuous mode.	Set the printer for the correct media type (gap/notch, continuous, or mark) and calibrate the printer, if necessary (see *Calibrate the Ribbon and Media Sensors* on page 92).
	The media sensor is calibrated improperly.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
	The platen roller is dirty.	Clean the printhead and platen roller. See *Clean the Printhead and Platen Roller* on page 102.
	Improper printhead pressure settings (toggles).	Adjust the printhead pressure to ensure proper functionality. See *Adjust the Printhead Pressure* on page 93.
	The media or ribbon is loaded incorrectly.	Ensure that the media and ribbon are loaded correctly. See *Load the Ribbon* on page 43 and *Load the Media* on page 17.
	Incompatible media.	You must use media that meets the printer specifications. Ensure that the interlabel gaps or notches are 2 to 4 mm and consistently placed (see *Media Specifications* on page 191).

Ribbon Issues

For videos of some common procedures, go to http://www.zebra.com/zt600-info.

Broken Ribbon		
Issue	*Possible Cause*	*Recommended Solution*
Broken or melted ribbon	Darkness setting too high.	1. Perform the steps in *Run the Print Wizard and Print a Test Label* on page 49. 2. If necessary, manually adjust the darkness or print speed settings. • Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely. • Slower print speeds typically yield better print quality. Access the darkness and print speed settings from the Home screen by touching **Menu > Print > Print Quality**. 3. Clean the printhead thoroughly. See *Clean the Printhead and Platen Roller* on page 102.
	The ribbon is coated on the wrong side and cannot be used in this printer.	Replace the ribbon with one coated on the correct side. For more information, see *Ribbon* on page 11.

Wrinkled Ribbon

Issue	*Possible Cause*	*Recommended Solution*
Wrinkled ribbon	Ribbon was loaded incorrectly.	Load the ribbon correctly. See *Load the Ribbon* on page 43.
	Incorrect burn temperature.	1. Perform the steps in *Run the Print Wizard and Print a Test Label* on page 49. 2. If necessary, manually adjust the darkness or print speed settings. • Set the print darkness to the lowest setting that provides good print quality. If you set the darkness too high, the label image may print unclearly, barcodes may not scan correctly, the ribbon may burn through, or the printhead may wear prematurely. • Slower print speeds typically yield better print quality. Access the darkness and print speed settings from the Home screen by touching **Menu > Print > Print Quality**.
	Incorrect or uneven printhead pressure.	Set the printhead pressure to the minimum needed for good print quality. See *Adjust the Printhead Pressure* on page 93.
	Media not feeding properly; "walking" from side to side.	Make sure that media is snug by adjusting the media guide, or call a service technician.
	The printhead or platen roller may be installed incorrectly.	Call a service technician.

Ribbon Detection Issues

Issue	*Possible Cause*	*Recommended Solution*
The printer does not detect when the ribbon runs out.	The printer may have been calibrated without ribbon or without the ribbon loaded properly.	**1.** Make sure that ribbon is loaded correctly so that it can be detected by the ribbon sensor. Under the printhead, the ribbon should track all the way back, near the printer's firewall. See *Load the Ribbon* on page 43. **2.** Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
In thermal transfer mode, the printer did not detect the ribbon even though it is loaded correctly.		
The printer indicates that ribbon is out, even though ribbon is loaded correctly.	The printer was not calibrated for the label and ribbon being used.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.

RFID Issues

Printer Stops at RFID Inlay		
Issue	*Possible Cause*	*Recommended Solution*
The printer stops at the RFID inlay.	The printer calibrated the label length only to the RFID inlay instead of to the interlabel gap.	1. Tap the Advanced icon and then select FEED for the Power Up and Head Close actions. 2. Manually calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 92).
Voided Labels		
Issue	*Possible Cause*	*Recommended Solution*
Low yields. Too many RFID tags per roll are voided.	The RFID labels are not within specifications for the printer, which means that the transponder is not in an area that can be programmed consistently.	Make sure that the labels meet transponder placement specifications for your printer. See http://www.zebra.com/transponders for transponder placement information. For more information, refer to the *RFID Programming Guide 3*, or contact an authorized Zebra RFID reseller.
	Incorrect read and write power levels.	Change the RFID read and write power levels. For instructions, refer to the *RFID Programming Guide 3*.
	Radio frequency (RF) interference from another RF source.	Do one or more of the following as necessary: • Move the printer away from fixed RFID readers. • Make sure that the media door is closed at all times during RFID programming.
	The printer is using outdated printer firmware and reader firmware versions.	Go to http://www.zebra.com/firmware for updated firmware.

Voided Labels (Continued)

Issue	*Possible Cause*	*Recommended Solution*
The printer voids every label.	The printer is not calibrated for the media being used.	Manually calibrate the printer (see *Calibrate the Ribbon and Media Sensors* on page 92).
	You are using an RFID label with a tag type that is not supported by your printer.	These printers support only Gen 2 RFID labels. For more information, refer to the *RFID Programming Guide 3*, or contact an authorized Zebra RFID reseller.
	The printer is unable to communicate with the RFID reader.	1. Turn off (**O**) the printer. 2. Wait 10 seconds. 3. Turn on (**I**) the printer. 4. If the problem persists, you may have a bad RFID reader or a loose connection between the RFID reader and the printer. Contact Technical Support or an authorized Zebra RFID service technician for assistance.
	Radio frequency (RF) interference from another RF source.	Do one or more of the following as necessary: • Move the printer away from fixed RFID readers or other RF sources. • Make sure that the media door is closed at all times during RFID programming.
	The settings are incorrect in your label designer software.	The software settings override the printer settings. Make sure that the software and printer settings match.
	You are using an incorrect programming position, particularly if the tags being used are within printer specifications.	Do one or more of the following as necessary: • Check the RFID programming position or the program position setting in your label designer software. If the position is incorrect, change the setting. • Restore the RFID programming position back to the default value. For more information, refer to the *RFID Programming Guide 3*. For transponder placement details, go to http://www.zebra.com/transponders.
	You are sending RFID ZPL or SGD commands that are incorrect.	Check your label formats. For more information, refer to the *RFID Programming Guide 3*.

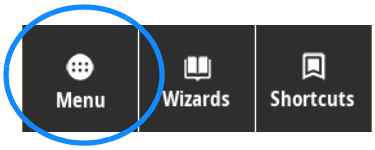
Other RFID Issues

Issue	*Possible Cause*	*Recommended Solution*
RFID parameters do not appear in Setup mode, and RFID information does not appear on the printer configuration label. The printer does not void RFID labels that are not programmed correctly.	The printer was powered off (**O**) and then back on (**I**) too quickly for the RFID reader to initialize properly.	Wait at least 10 seconds after turning the printer power off before turning it back on. **1.** Turn off (**O**) the printer. **2.** Wait 10 seconds. **3.** Turn on (**I**) the printer. **4.** Check for the RFID parameters in Setup mode or for RFID information on a new configuration label.
	An incorrect version of printer or reader firmware was loaded on the printer.	**1.** Verify that the correct firmware version is loaded on your printer. For more information, refer to the *RFID Programming Guide 3*. **2.** Download the correct printer or reader firmware if necessary. **3.** If the problem persists, contact Technical Support.
	The printer is unable to communicate with the RFID subsystem.	**1.** Turn off (**O**) the printer. **2.** Wait 10 seconds. **3.** Turn on (**I**) the printer. **4.** If the problem persists, you may have a bad RFID reader or a loose connection between the RFID reader and the printer. Contact Technical Support or an authorized service technician for assistance.
The DATA light flashes indefinitely after you attempt to download printer or reader firmware.	The download was not successful. For best results, cycle power on the printer before downloading any firmware.	**1.** Turn off (**O**) the printer. **2.** Wait 10 seconds. **3.** Turn on (**I**) the printer. **4.** Attempt to download the firmware again. **5.** If the problem persists, contact Technical Support.

Communications Issues

Label Formats Not Recognized		
Issue	*Possible Cause*	*Recommended Solution*
A label format was sent to the printer but was not recognized. The DATA light does not flash.	The communication parameters are incorrect.	Check the printer driver or software communications settings (if applicable) for your connection. You may wish to reinstall the printer driver following the instructions in *Install the Printer Driver and Connect to a Computer* on page 147.
A label format was sent to the printer but was not recognized. The DATA light flashes but no printing occurs.	The prefix and delimiter characters set in the printer do not match the ones in the label format.	1. Tap Advanced > Print Character Modification. 2. Verify the prefix and delimiter characters.
	Incorrect data is being sent to the printer.	Check the communication settings on the computer. Ensure that they match the printer settings.
		If the problem continues, check the label format.
Labels Stop Printing Correctly		
Issue	*Possible Cause*	*Recommended Solution*
A label format was sent to the printer. Several labels print, then the printer skips, misplaces, misses, or distorts the image on the label.	The serial communication settings are incorrect.	Ensure that the flow control settings match.
		Check the communication cable length. See *Communication Interface Specifications* on page 185 for requirements.
		Check the printer driver or software communications settings (if applicable).

Miscellaneous Issues

Issues with the Display		
Issue	*Possible Cause*	*Recommended Solution*
The control panel display shows a language that I cannot read	The language parameter was changed through the control panel or a firmware command.	1. On the Home screen, touch **Menu**, which is the icon on the bottom-left.  2. Touch the top selection on the screen. 3. Scroll through the language selections under this menu option. The selections for this parameter are displayed in the actual languages to make it easier for you to find one that you are able to read. 4. Touch the language that you want to display to select it. 5. Touch the Home icon to return to the Home screen.
The display is missing characters or parts of characters	The display may need replacing.	Call a service technician.

The USB Host Port Is Not Acknowledging a USB Device		
Issue	*Possible Cause*	*Recommended Solution*
The printer is not acknowledging a USB device or is not reading the files on a USB device that is plugged into the USB host port.	The printer currently supports USB drives only up to 1 TB in size.	Use a USB drive that is 1 TB or smaller.
	The USB device may require its own external power.	If your USB device requires external power, make sure that it is plugged into a working power supply.

Printer Parameters Are Not Set As Expected		
Issue	*Possible Cause*	*Recommended Solution*
Changes in parameter settings did not take effect. OR Some parameters changed unexpectedly.	A firmware setting or command prevented the ability to change the parameter.	Check your label formats or the settings of the software that you use to send formats to the printer. If necessary, refer to the *Programming Guide for ZPL, ZBI, Set-Get-Do, Mirror, and WML* or call a service technician. A copy of the manual is available at http://www.zebra.com/manuals.
	A command in a label format changed the parameter back to the previous setting.	

IP Address Changing		
Issue	*Possible Cause*	*Recommended Solution*
My printer reassigns a new IP address to the print server after the printer has been off for a while.	The settings for your network are causing the network to reassign a new IP address.	If the printer changing IP addresses causes issues for you, follow these steps to assign it a static IP address: 1. Find out what values need to be assigned to the IP address, subnet mask, and gateway for your print server (wired, wireless, or both). 2. Change the appropriate IP protocol value to PERMANENT. 3. Change the values for the IP address, subnet mask, and gateway for the appropriate print server to what you want them to remain. 4. Reset the network by touching **Menu > Connections > Networks > Reset Network** and then touching the check mark to save the changes.

Cannot Connect through Wired or Wireless Connections

Issue	*Possible Cause*	*Recommended Solution*
I manually entered a wireless IP address, subnet, and gateway on my printer, but it won't connect to my wired or wireless network.	The printer's network must be reset after values are changed.	Reset the network by touching **Menu > Connections > Networks > Reset Network** and then touching the check mark to save the changes.
	An ESSID value has not been specified.	1. For a wireless connection, specify the ESSID value that matches the value used by your wireless router using the following Set/Get/Do command: `! U1 setvar "wlan.essid" "value"` where `"value"` is the ESSID (sometimes called a network SSID) for your router. You can look on the back of your router for a sticker with the router's default information. If the information has been changed from the default, check with your network administrator for the ESSID value to use. 2. If the printer still does not connect, reset the network by touching **Menu > Connections > Networks > Reset Network** and then touching the check mark to save the changes, and then power cycle the printer.
	The ESSID or other value was not specified correctly.	1. Print a network configuration label and verify that your values are correct. 2. Make corrections as necessary. 3. Reset the network by touching **Menu > Connections > Networks > Reset Network** and then touching the check mark to save the changes.

Calibration Issues

Issue	*Possible Cause*	*Recommended Solution*
Auto Calibrate failed.	The media or ribbon is loaded incorrectly.	Ensure that the media and ribbon are loaded correctly. See *Load the Ribbon* on page 43 and *Load the Media* on page 17.
	The sensors could not detect the media or ribbon.	Calibrate the printer manually. See *Calibrate the Ribbon and Media Sensors* on page 92.
	The sensors are dirty or positioned improperly.	Ensure that the sensors are clean and properly positioned.
	The media type is set incorrectly.	Set the printer for the correct media type (gap/notch, continuous, or mark).
Non-continuous labels are being treated as continuous labels.	The printer was not calibrated for the media being used.	Calibrate the printer. See *Calibrate the Ribbon and Media Sensors* on page 92.
	The printer is configured for continuous media.	Set the printer for the correct media type (gap/notch, continuous, or mark).

Printer Locks Up

Issue	*Possible Cause*	*Recommended Solution*
All indicator lights are on, nothing is on the display, and the printer locks up.	Internal electronic or firmware failure.	Power cycle the printer. If that does not solve the issue, call a service technician.
The printer locks up while booting up.	Main logic board failure.	

Service the Printer

If you have a problem using the printer, contact your facility's technical or systems support. If there is a problem with the printer, they will contact the Zebra Global Customer Support Center at: http://www.zebra.com/support.

When contacting Zebra Global Customer Support, have the following information available:

- Serial number of the unit
- Model number or product name
- Firmware version number

Zebra responds to calls by e-mail, telephone, or fax within the time limits set forth in service agreements. If your problem cannot be solved by Zebra Global Customer Support, you may need to return your equipment for servicing and will be given specific directions.

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

Ship the Printer

If you must ship the printer:

- Turn off (**O**) the printer, and disconnect all cables.
- Remove any media, ribbon, or loose objects from the printer interior.
- Close the printhead.
- Carefully pack the printer into the original container or a suitable alternate container to avoid damage during transit. A shipping container can be purchased from Zebra if the original packaging has been lost or destroyed.

Zebra is not responsible for any damages incurred during shipment if an approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

5

Install the Printer Driver and Connect to a Computer

In this section, you are shown how to use the Zebra Setup Utilities program to prepare a computer running Microsoft Windows® for the printer driver before connecting the printer to any of the computer's data communication interfaces. Use this section for directions to install this program if you have not already done so. You may connect your printer to your computer using any of the connections that you have available.

Contents

Important • You must use the Zebra Setup Utilities program or the Zebra Printer Setup Utility app for Android devices (available for free from Google Play™ at https://play.google.com/store/apps/details?id=com.zebra.printersetup) before connecting the printer to your computer. Your computer will not install the correct printer drivers if you connect the printer to it without the Zebra Setup Utilities program or the Zebra Printer Setup Utility app.

Install Zebra Setup Utilities

Follow the directions in this section if you do not have Zebra Setup Utilities installed on your computer or if you want to update an existing version of the program. You do not need to uninstall any older versions or any Zebra printer drivers to do so.

To install the Zebra Setup Utilities program, complete these steps:

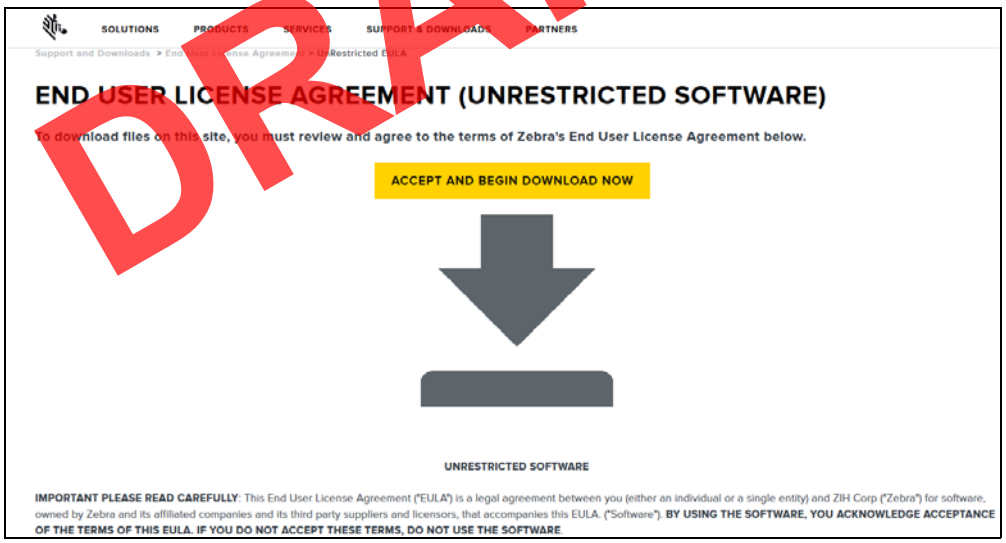
Download the Zebra Setup Utilities Installer

1. Go to http://www.zebra.com/setup.

   The Zebra Setup Utilities page displays.

2. On the DOWNLOADS tab, click Download under the ZEBRA SETUP UTILITIES option.

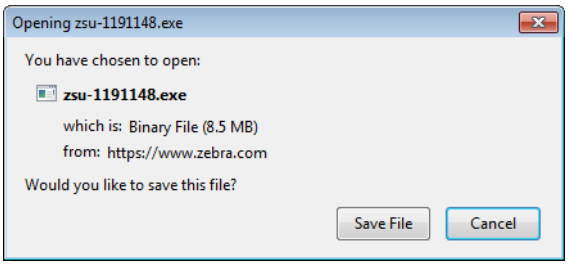
   You are prompted to read and accept the End User License Agreement (EULA).



3. If you agree with the terms of the EULA, click

   ACCEPT AND BEGIN DOWNLOAD NOW

   Depending on your browser, you are given options to run or save the executable file.

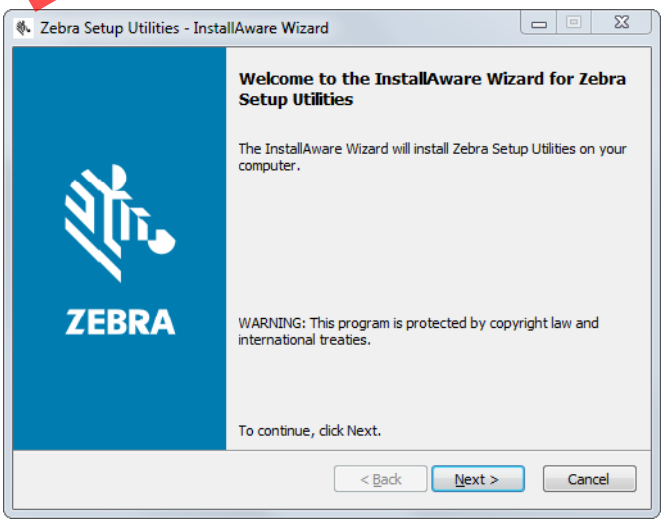


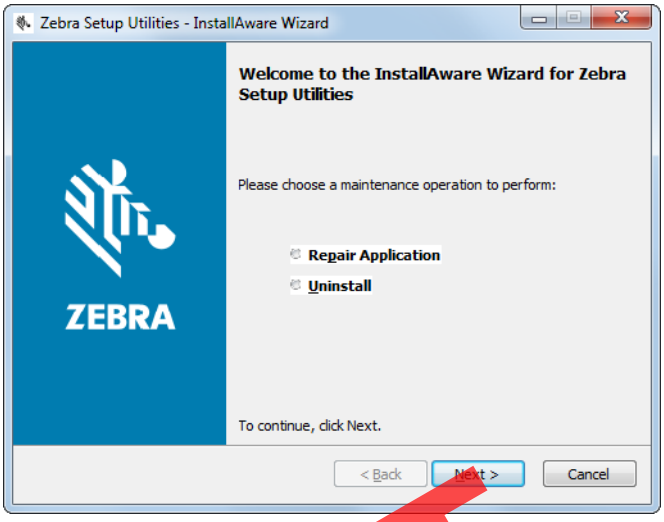
Run the Zebra Setup Utilities Installer

4. Save the program to your computer. (Optional if your browser gave you the option to run the program instead of saving it.)

5. Run the executable file. If your computer prompts you for permission to run the file, click the appropriate button to allow it to run.

   What the computer displays next depends on whether Zebra Setup Utilities was already installed. Follow the instructions based on what your computer prompts you to do.

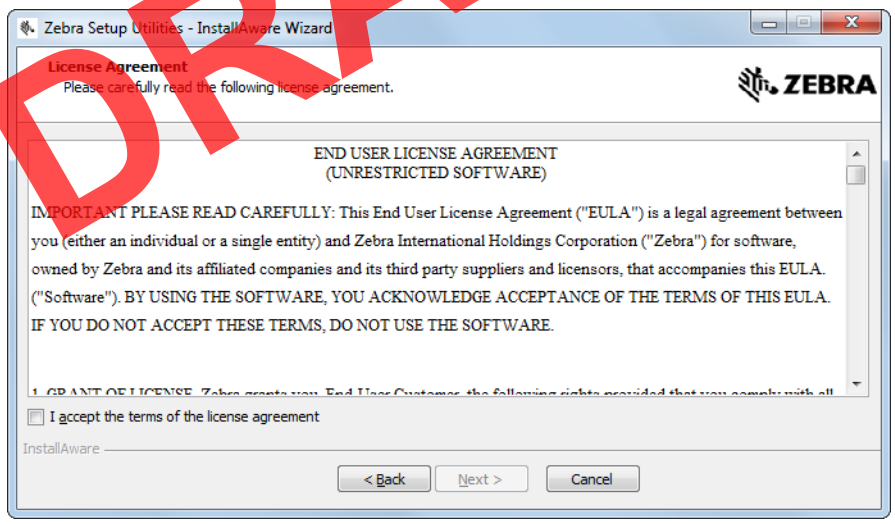
If your computer...	Then...
Did not previously have the Zebra Setup Utilities installed	**a.** The Zebra Setup Utilities - InstallAware Wizard displays the following.  **b.** Go to *New Installations of Zebra Setup Utilities* on page 150.

If your computer...	Then...
Did previously have the Zebra Setup Utilities installed	**a.** The Zebra Setup Utilities - InstallAware Wizard displays the following.  **b.** Go to *Updating Existing Installations of Zebra Setup Utilities* on page 152.

New Installations of Zebra Setup Utilities

6. Click Next.

   You are prompted again to read and accept the End User License Agreement (EULA).

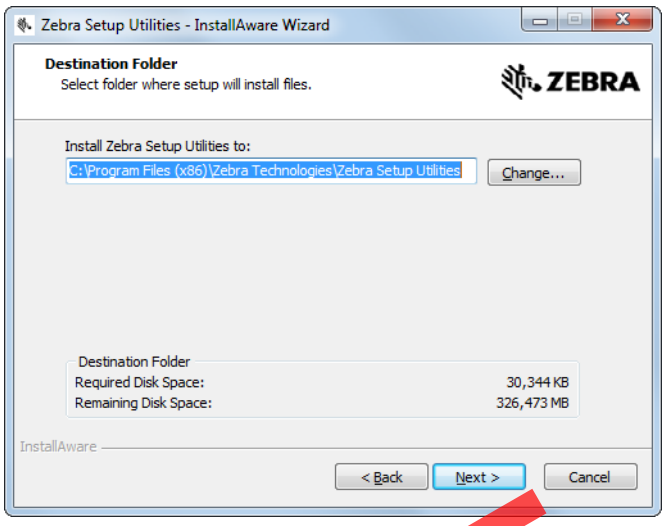


7. If you agree with the terms of the EULA, check the box that says

   I accept the terms of the license agreement

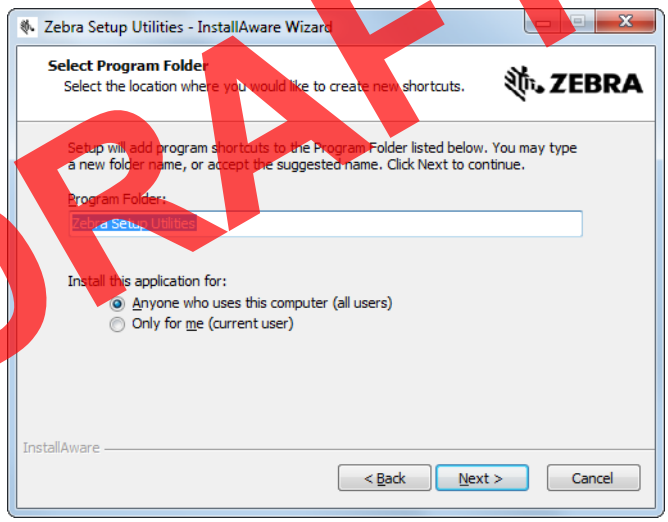
8. Click Next.

   You are prompted to select where the files will be installed.



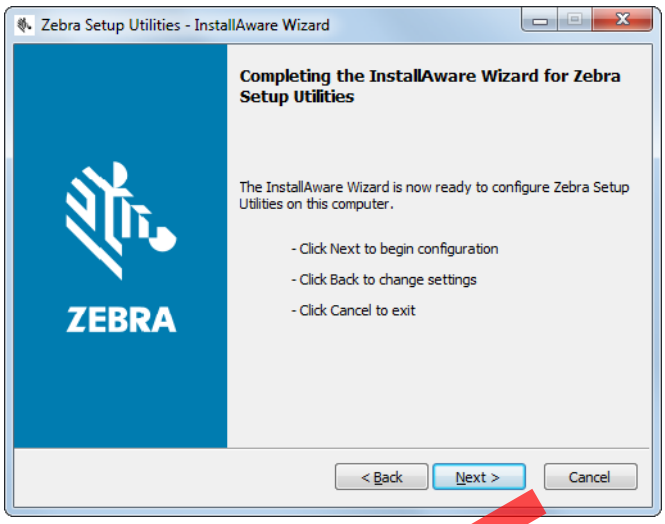
9. Change the destination folder, if necessary, and then click Next.

   You are prompted to select a location for program shortcuts.



10. Change the location, if desired, and then click Next.

    You are prompted to complete the InstallAware wizard.

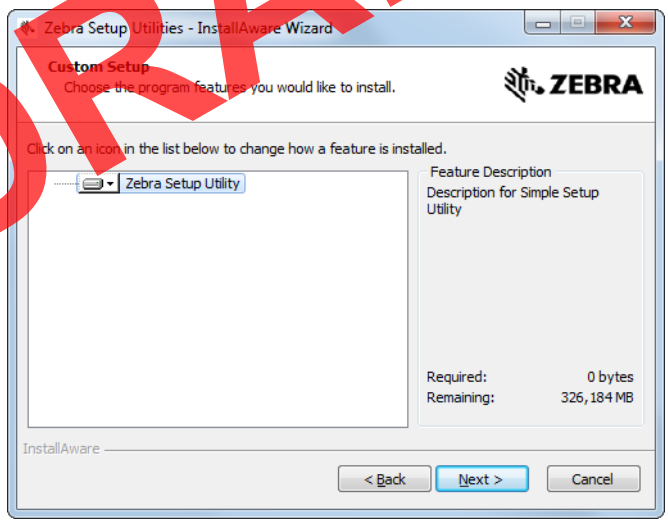


11. Skip to *Continuing with New or Updated Installations* on page 153.

Updating Existing Installations of Zebra Setup Utilities

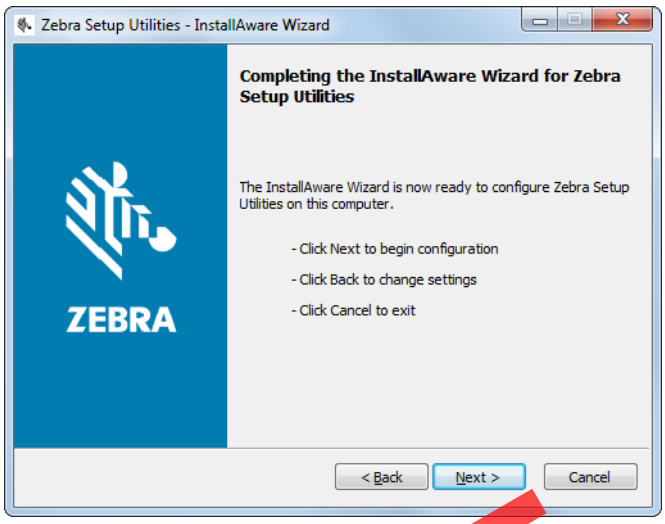
12. Click Next.

    You are prompted to choose the features that you would like to install.



13. Click Next.

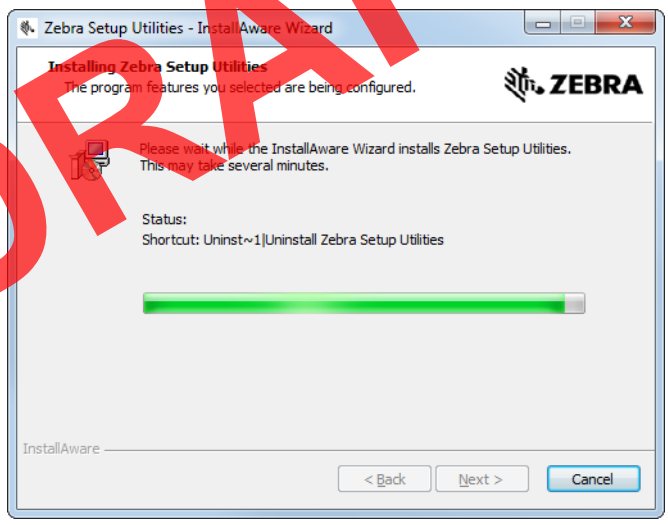
    You are prompted to complete the InstallAware wizard.



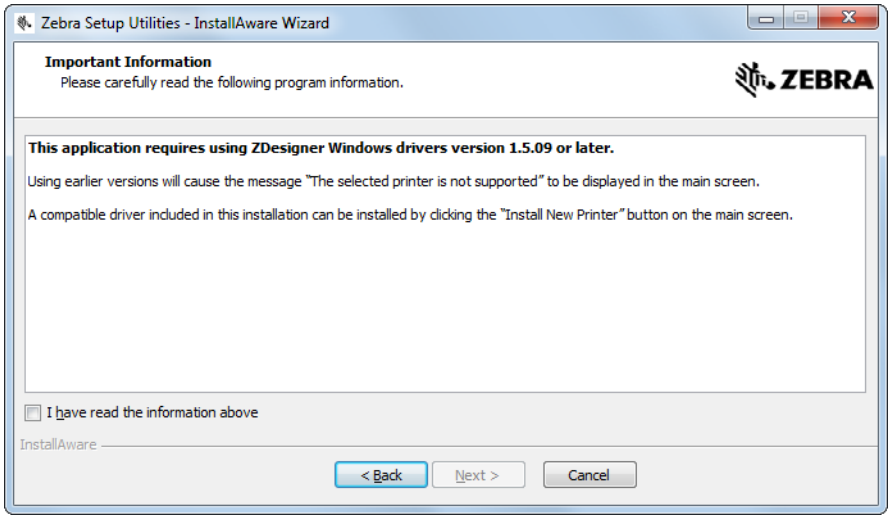
Continuing with New or Updated Installations

14. Click Next.

    Installation begins.



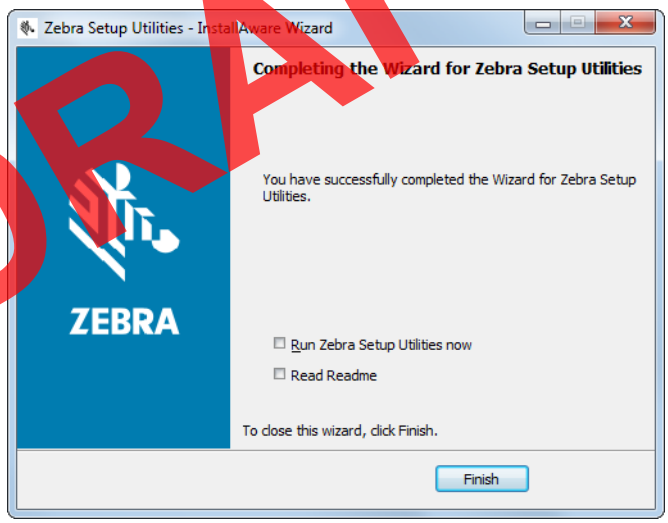
During installation, you are presented with information about drivers.



15. Read the information, and then check the box that says "I have read the information above".

16. Click Next.

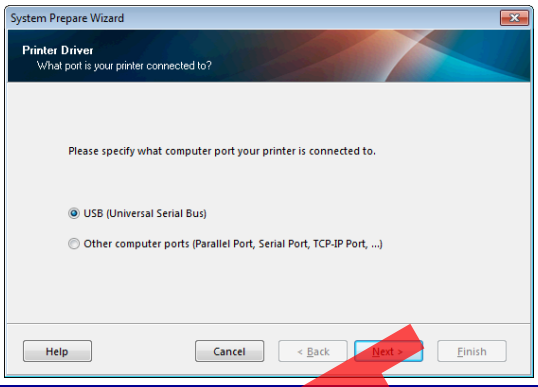
    You are shown options that can take place when the wizard exits the installation.



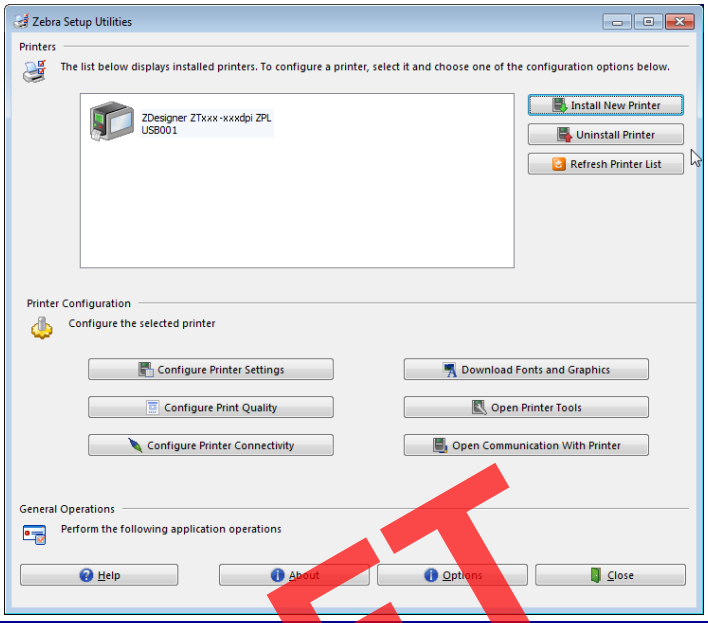
17. Check the box that says "Run Zebra Setup Utilities now."

18. Click Finish.

What the computer displays next depends on whether any Zebra printer drivers are already installed on your computer. Follow the instructions based on what your computer displays.

<table>
<tr><th>If your computer...</th><th>Then...</th></tr>
<tr><td>Did not previously have any Zebra printer drivers installed</td><td>The System Prepare Wizard displays.
 

<table>
<tr><th>To connect by...</th><th>Then...</th></tr>
<tr><td>USB port</td><td>Continue with Connect a Computer to the Printer’s USB Port on page 157.</td></tr>
<tr><td>Serial or optional parallel port</td><td>Continue with Connect a Computer to the Printer’s Serial or Parallel Port on page 161.</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>If your computer...</th><th>Then...</th></tr>
<tr><td>Did previously have any Zebra printer drivers installed</td><td>The Zebra Setup Utilities screen displays.
 

<table>
<tr><th>To connect by the...</th><th>Then...</th></tr>
<tr><td>USB port</td><td>Continue with Connecting the printer to a USB port on your computer on page 158.</td></tr>
<tr><td>Serial or optional parallel port</td><td>Continue with Adding a Printer from the Zebra Setup Utilities Screen on page 164.</td></tr>
</table>
</td></tr>
</table>

Connect a Computer to the Printer's USB Port

Complete the steps in this section only after you have installed the Zebra Setup Utilities program. If necessary, complete the steps in *Install Zebra Setup Utilities* on page 148 before continuing.

Important • You must install the Zebra Setup Utilities program before connecting the printer to your computer. Your computer will not install the correct printer drivers if you connect the printer to it without the Zebra Setup Utilities program.

Caution • Ensure that the printer power is off (**O**) before connecting data communications cables. Connecting a data communications cable while the power is on (**I**) may damage the printer.

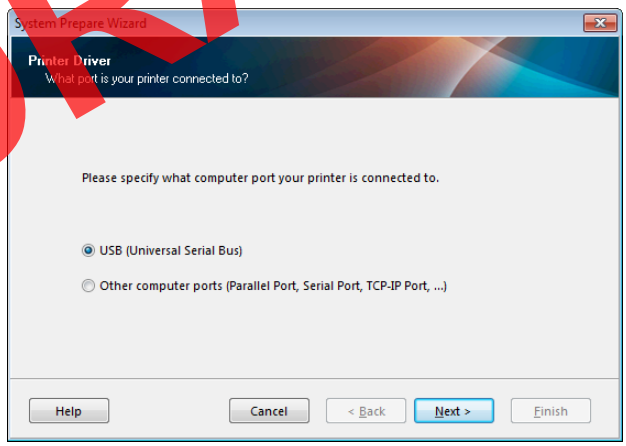
To connect the printer to your computer by USB, complete these steps:

Running the System Prepare Wizard

If you are at the Zebra Setup Utilities screen, you do not need to complete this section. Continue with *Connecting the printer to a USB port on your computer* on page 158.

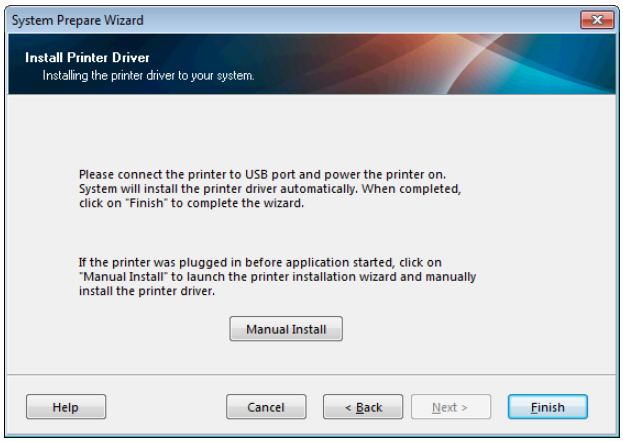
The first time that you install the Zebra Setup Utilities program and printer drivers, you are prompted to follow the System Prepare Wizard.

Figure 9 • System Prepare Wizard



1. Click Next.

   The System Prepare Wizard prompts you to connect the printer to the USB port on your computer.



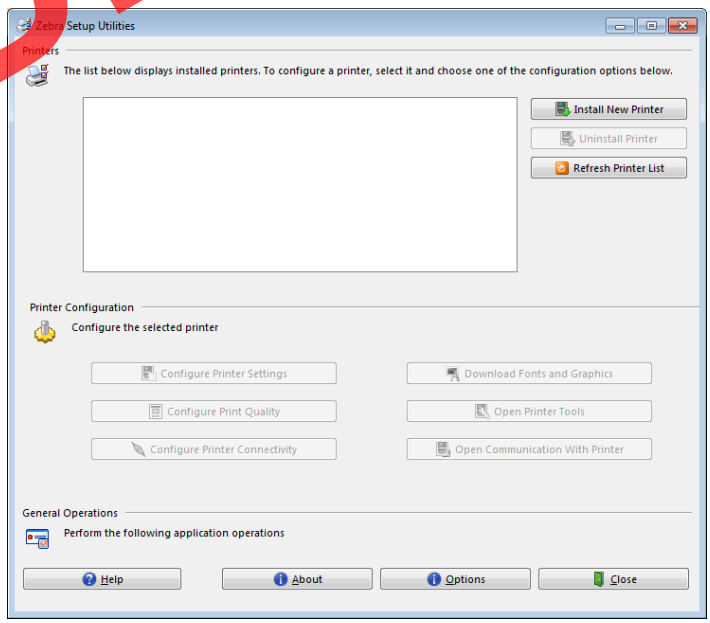
2. Click Finish.

   The Zebra Setup Utilities screen displays.

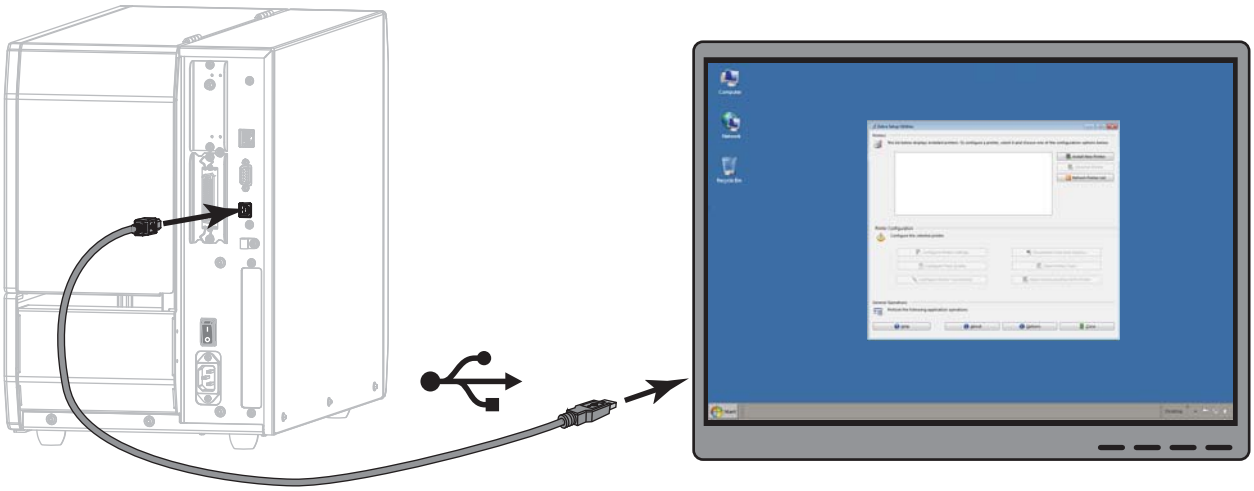
Connecting the printer to a USB port on your computer

Complete the steps in this section only after the System Prepare Wizard prompts you to do so or after you have opened the Zebra Setup Utilities program. If necessary, complete the steps in *Install Zebra Setup Utilities* on page 148 before continuing.

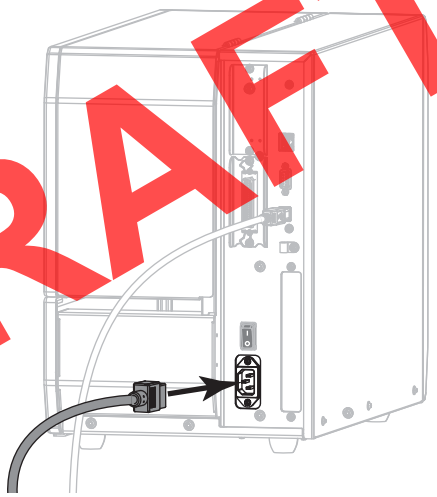
Figure 10 • Zebra Setup Utilities Screen



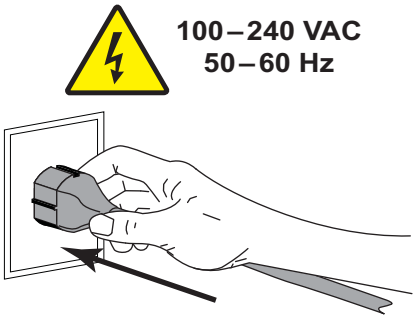
3. Connect one end of the USB cord to the USB port on your printer and the other end to your computer.



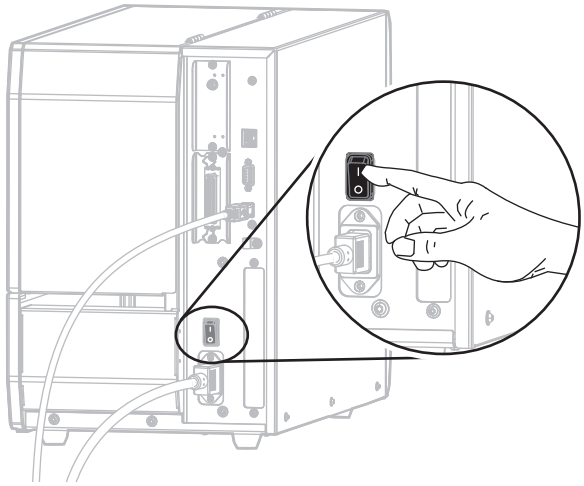
4. Plug the female end of the A/C power cord into the A/C power connector on the back of the printer.



5. Plug the male end of the A/C power cord into an appropriate power outlet.



6. Turn on (**I**) the printer.



As the printer boots up, your computer completes the driver installation and recognizes your printer.

The installation for the USB connection is complete.

Connect a Computer to the Printer's Serial or Parallel Port

Complete the steps in this section only after you have installed the Zebra Setup Utilities program. If necessary, complete the steps in *Install Zebra Setup Utilities* on page 148 before continuing.

Important • You must install the Zebra Setup Utilities program before connecting the printer to your computer. Your computer will not install the correct printer drivers if you connect the printer to it without the Zebra Setup Utilities program.

Caution • Ensure that the printer power is off (**O**) before connecting data communications cables. Connecting a data communications cable while the power is on (**I**) may damage the printer.

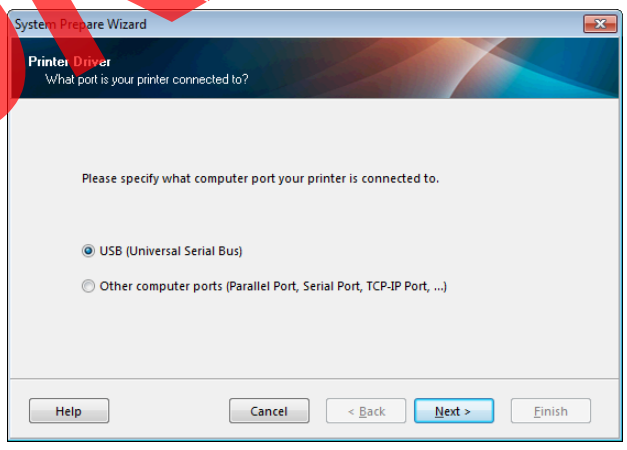
To connect the printer to your computer by USB, complete these steps:

If you are at the Zebra Setup Utilities screen, you do not need to complete this section. Continue with *Adding a Printer from the Zebra Setup Utilities Screen* on page 164.

Running the System Prepare Wizard

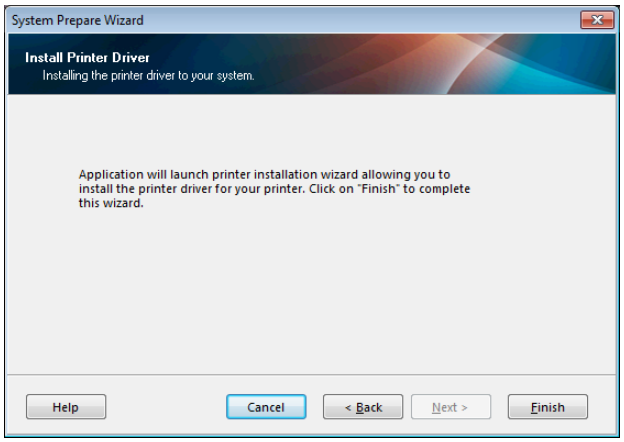
The first time that you install the Zebra Setup Utilities program and printer drivers, you are prompted to follow the System Prepare Wizard.

Figure 11 • System Prepare Wizard



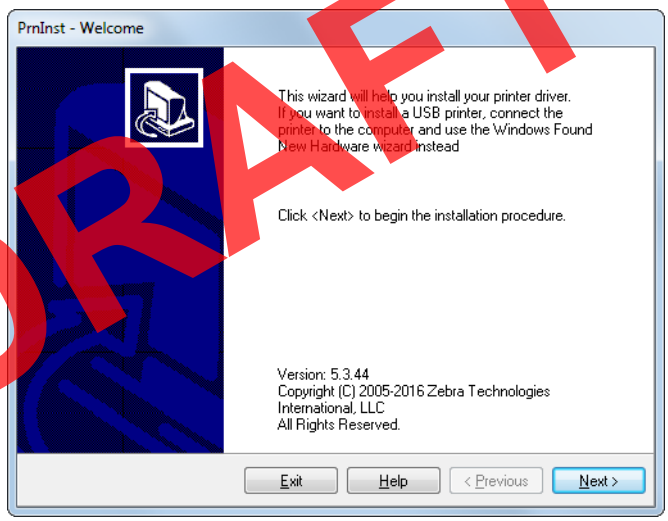
1. Select "Other computer ports (Parallel Port, Serial Port, TCP-IP Port, ...), and then click Next.

   The new printer wizard prompts you to begin the installation procedure.



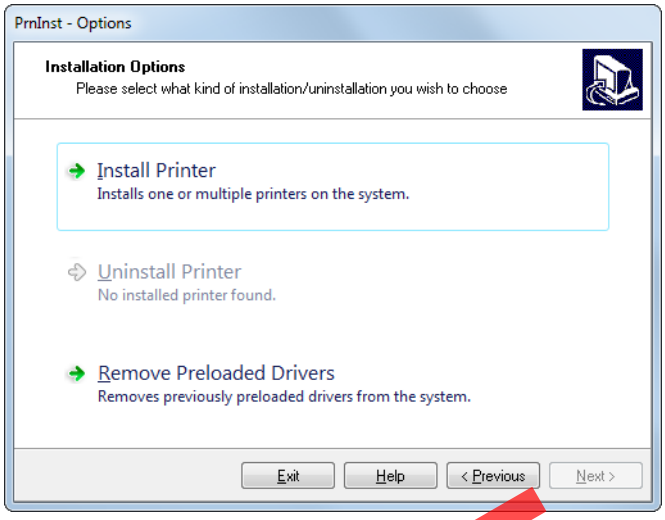
2. Click Finish.

   The printer driver wizard displays.



3. Click Next.

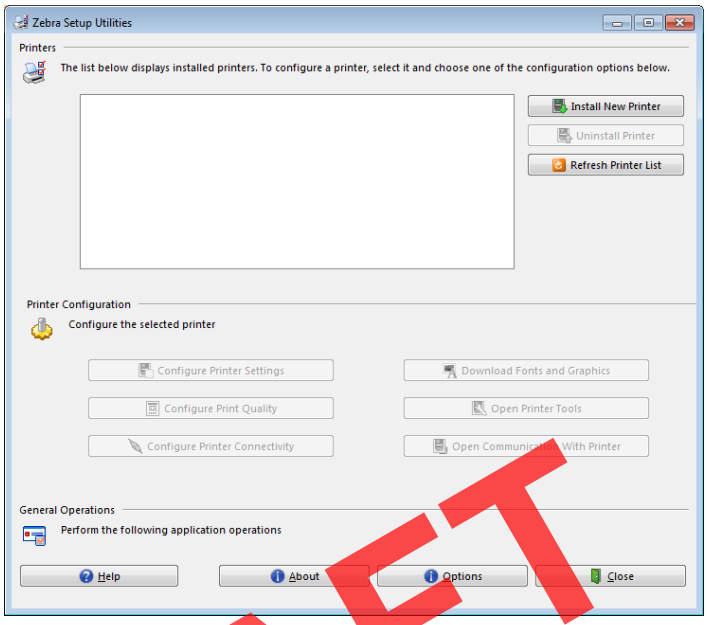
   You are prompted to select an installation option.



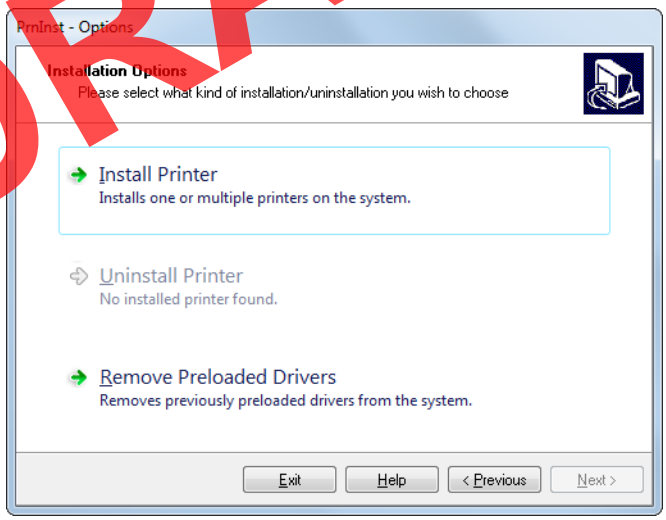
4. Continue with step 6 on page 165.

Adding a Printer from the Zebra Setup Utilities Screen

Figure 12 • Zebra Setup Utilities Screen

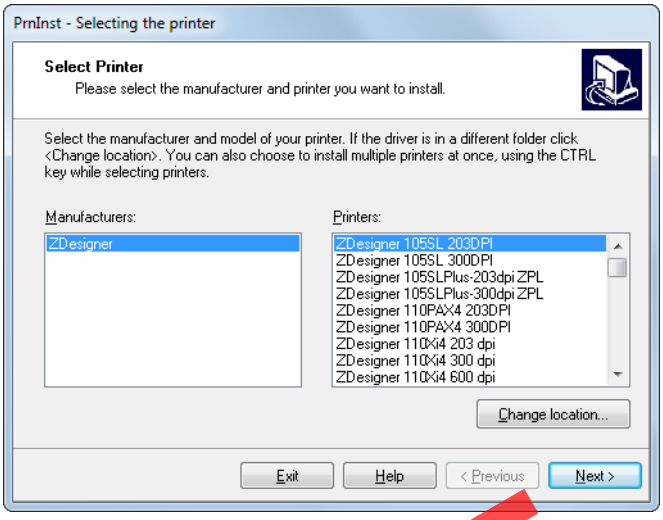


5. On the Zebra Setup Utilities screen, click Install New Printer.
   You are prompted to select an installation option.



6. Click Install Printer.

   You are prompted to select a printer type.



7. Select your printer model and resolution.

   The model and resolution are on a part number sticker on the printer, usually located below the media spindle. The information will be in the following format:

   `Part Number: XXXXXxY – xxxxxxxx`

   where

   XXXXX = the printer model

   Y = the printer resolution (2 = 203 dpi, 3 = 300 dpi)

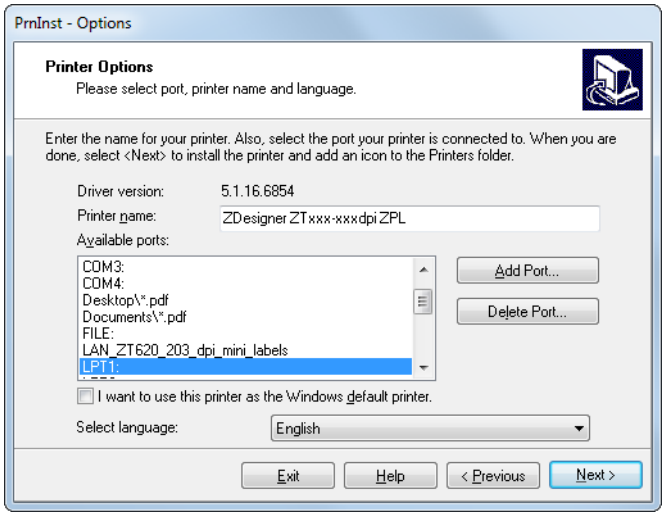
   For example, in the part number ZT**510**x**3** – xxxxxxxx

   ZT510 indicates that the printer is a ZT510 model

   3 indicates that the printhead resolution is 300 dpi

8. Click Next.

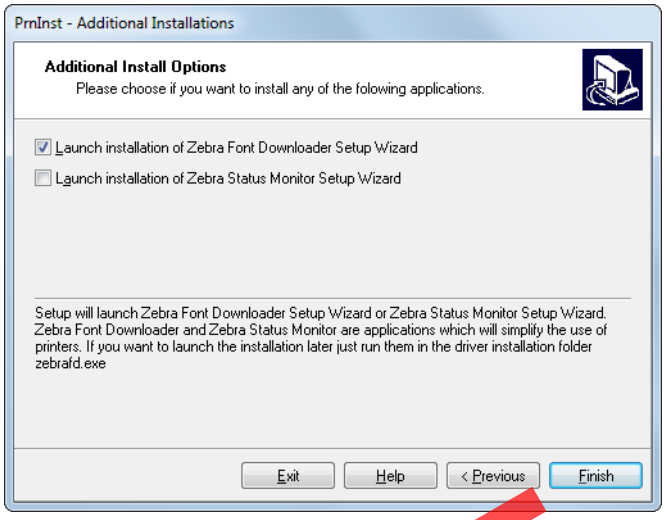
   You are prompted for a printer name, the port to which the printer will be connected, and the language for the program.



9. Change the printer name (if desired), and select the appropriate port and language.

10. Click Next.

You are prompted to launch other setup wizards.

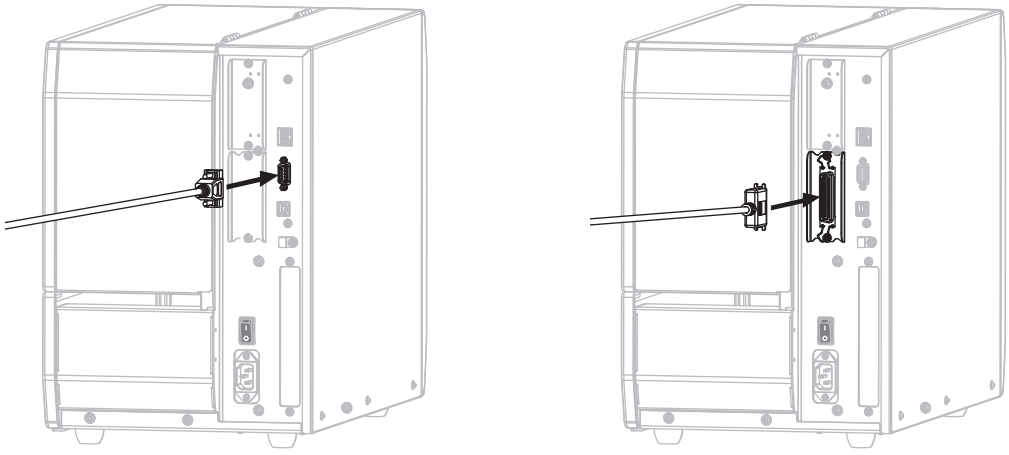


11. Check the desired options, and then click Finish.

The printer driver is installed. If you are prompted that other programs might be affected, click Next.

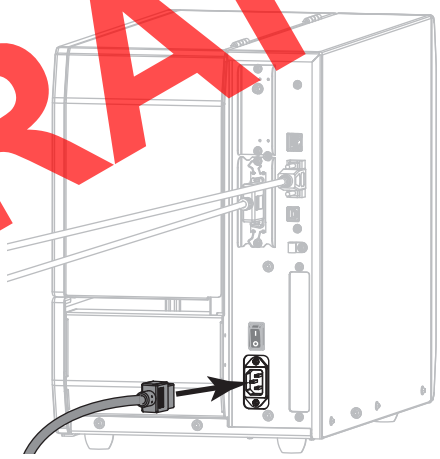
Connecting the printer to a serial or parallel port on your computer

12. Connect one or both cords to the appropriate ports on your printer.

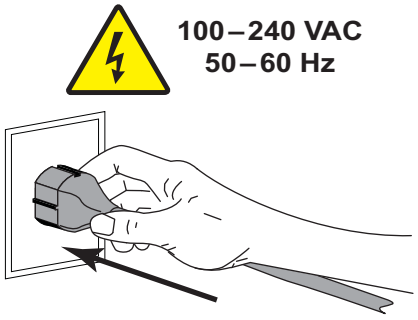


13. Connect the other end of the cord to the appropriate port on your computer.

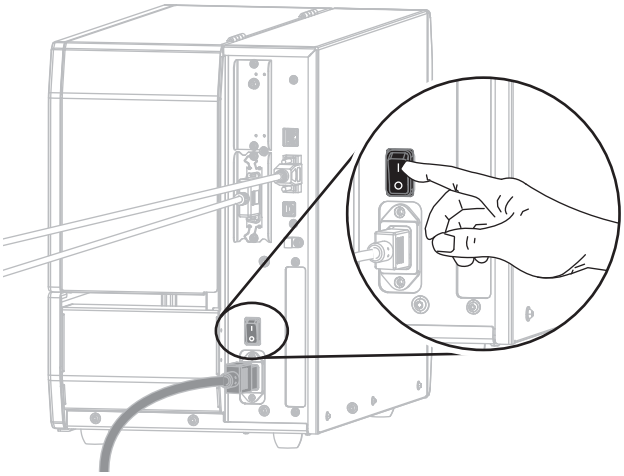
14. Plug the female end of the A/C power cord into the A/C power connector on the back of the printer.



15. Plug the male end of the A/C power cord into an appropriate power outlet.



16. Turn on (**I**) the printer.



The printer boots up.

Configuring the printer (if necessary)

17. If necessary, adjust the printer's port settings to match those of your computer. See the *Zebra Programming Guide* at http://www.zebra.com/manuals for more information.

The installation for serial or parallel connections is complete.

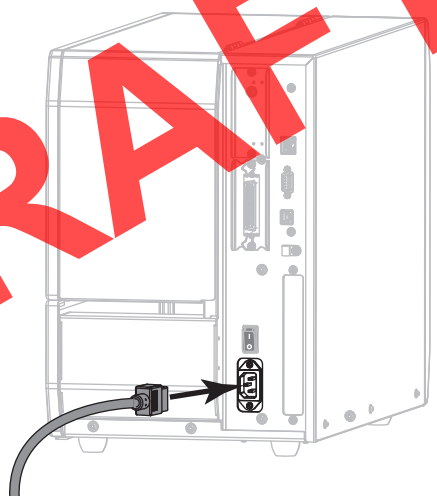
Connect to Your Network through the Printer's Ethernet Port

If you wish to use a wired print server (Ethernet) connection, you may need to connect the printer to your computer using one of the other available connections. While the printer is connected via one of those connections, you would configure the printer to communicate with your Local Area Network (LAN) through the printer's wired print server.

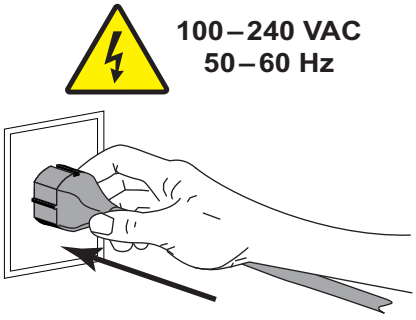
For additional information about Zebra print servers, refer to the *ZebraNet Wired and Wireless Print Server User Guide*. To download the latest version of this guide, go to http://www.zebra.com/zt500-info.

To connect the printer to your computer by a wired print server, complete these steps:

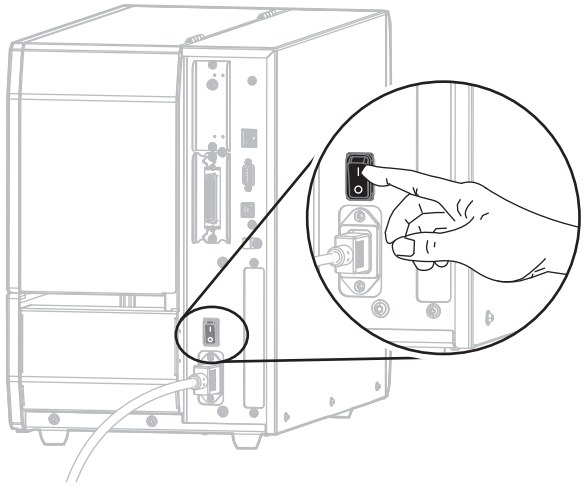
1. Install Zebra Setup Utilities as instructed in *Install Zebra Setup Utilities* on page 148.
2. Plug the female end of the A/C power cord into the A/C power connector on the back of the printer.



3. Plug the male end of the A/C power cord into an appropriate power outlet.



4. Turn on (**I**) the printer.



The printer boots up.

5. Connect the printer to an Ethernet cable that is connected to your network.

The printer attempts to communicate with your network. If it is successful, it fills in your LAN's gateway and subnet values and gets an IP address. The printer display will alternate between the printer's **firmware version and its IP address.**

6. **Tap Menu > Connection > Wired**. Check the display to see if an IP address was assigned to the printer. See *Connection > Wired > Wired IP Address* on page 68.

If the printer's IP address is...	Then...
0.0.0.0 **or** **000.000.000.000**	Continue with *Configuring the printer with your LAN information (if necessary)* on page 171.
any other value	Continue with *Adding a Printer from the Zebra Setup Utilities Screen* on page 172.

Configuring the printer with your LAN information (if necessary)

If your printer connected to your network automatically, you do not need to complete this section. Continue with *Adding a Printer from the Zebra Setup Utilities Screen* on page 172.

7. Connect the printer to your computer using a USB, serial, or optional parallel port as instructed in *Connect a Computer to the Printer's USB Port* on page 157 or *Connect a Computer to the Printer's Serial or Parallel Port* on page 161.

8. Configure the following printer settings. You can change the values through the Zebra Setup Utilities (click Configure Printer Connectivity on the Zebra Setup Utilities screen) or by the ways listed at the following links. Contact your network administrator for the proper values for your network.

   - *Connection > Wired > Wired IP Protocol* on page 67 (change the value from ALL to PERMANENT)
   - *Connection > Wired > Wired IP Address* on page 68 (assign a unique IP address to the printer)
   - *Connection > Wired > Wired Subnet* on page 68 (match the subnet value of your LAN)
   - *Connection > Wired > Wired Gateway* on page 68 (match the gateway value of your LAN)

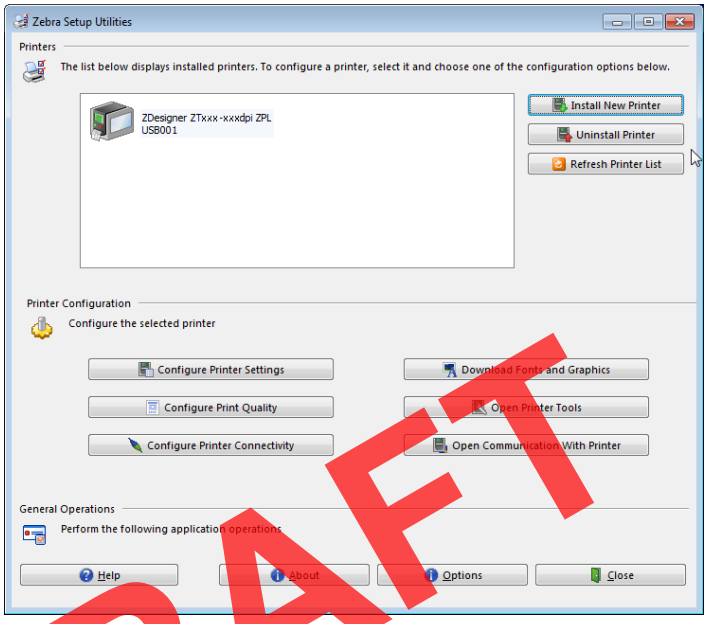
9. After the print server settings have been configured, reset the network to apply the changes. See *Connection > Networks > Reset Network* on page 64.

Adding a Printer from the Zebra Setup Utilities Screen

10. If necessary, open the Zebra Setup Utilities program.

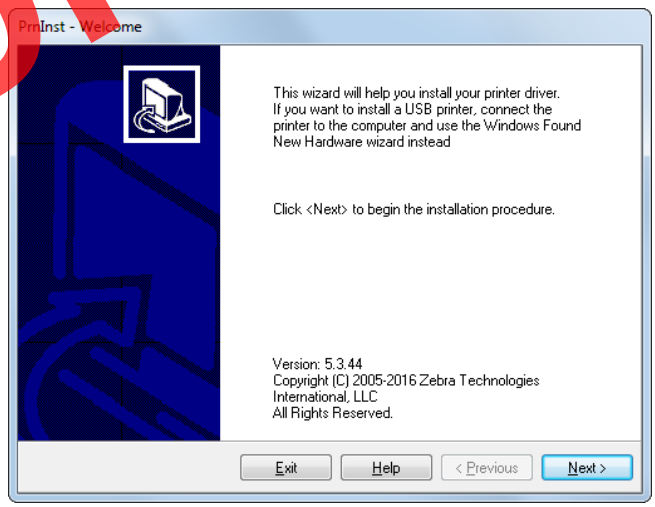
The Zebra Setup Utilities screen displays.

Figure 13 • Zebra Setup Utilities Screen



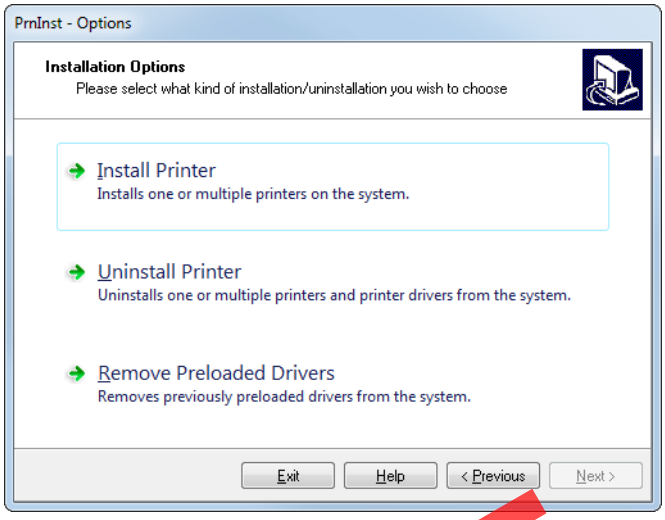
11. Click Install New Printer.

The printer driver wizard displays.



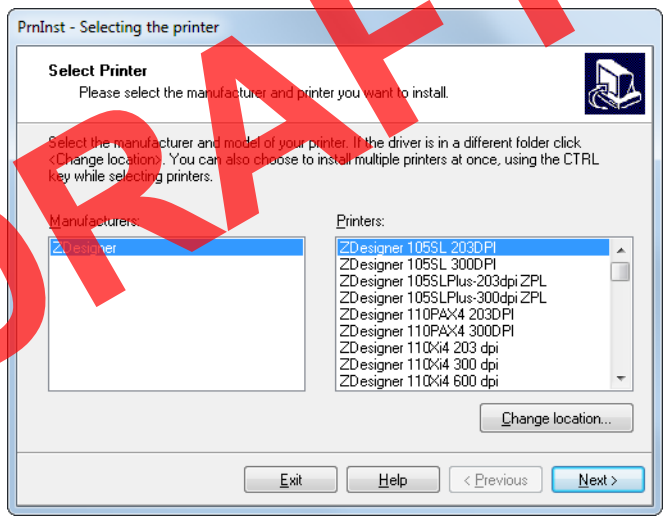
12. Click Next.

You are prompted to select an installation option.



13. Click Install Printer.

You are prompted to select a printer type.



14. Select your printer model and resolution.

The model and resolution are on a part number sticker on the printer, usually located below the media spindle. The information will be in the following format:

`Part Number: XXXXXxY – xxxxxxxx`

where

XXXXX = the printer model

Y = the printer resolution (2 = 203 dpi, 3 = 300 dpi)

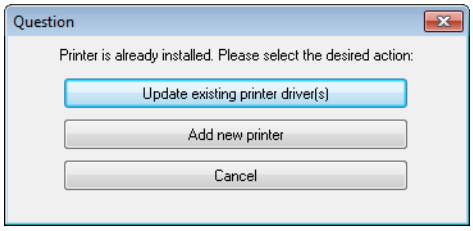
For example, in the part number **ZT510x3** – xxxxxxxx

ZT510 indicates that the printer is a ZT510 model

3 indicates that the printhead resolution is 300 dpi

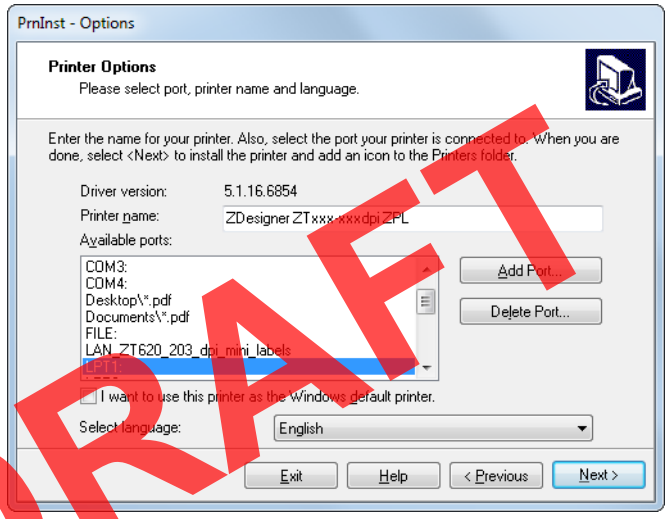
15. Click Next.

You are notified that the printer is already installed.



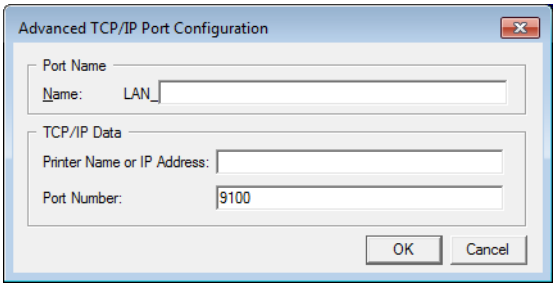
16. Click Add new printer.

You are prompted for a printer name, the port to which the printer will be connected, and the language for the printer display.



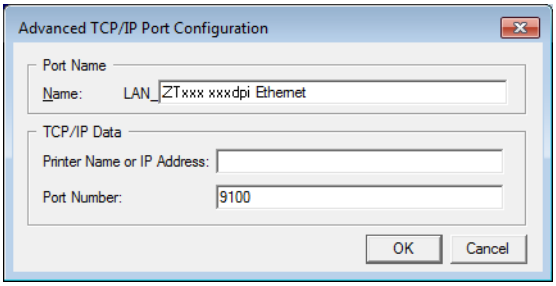
17. Click Add Port.

The wizard prompts you for a name for the port and the IP address of your printer.



Note • If you have other applications open, you may be prompted that the driver is locked by another process. You may click Next to continue or Exit to allow you to save your work before continuing with this installation.

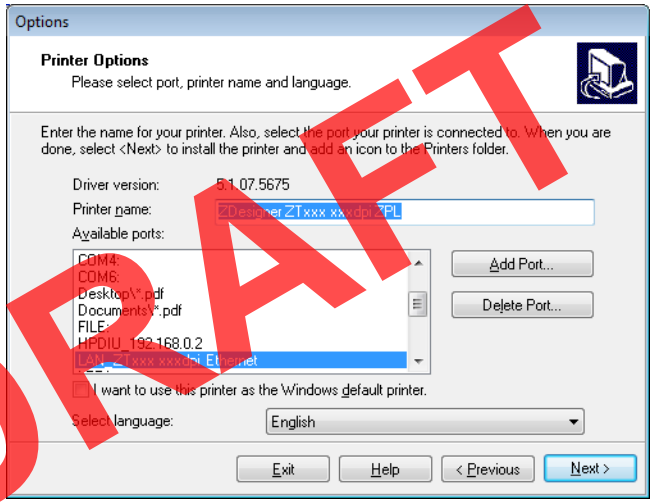
18. Give the port a name that you can recognize when it appears in the list of available ports.



19. Enter the printer's IP address. This could be one that was assigned automatically or one that you specified manually in the previous section.

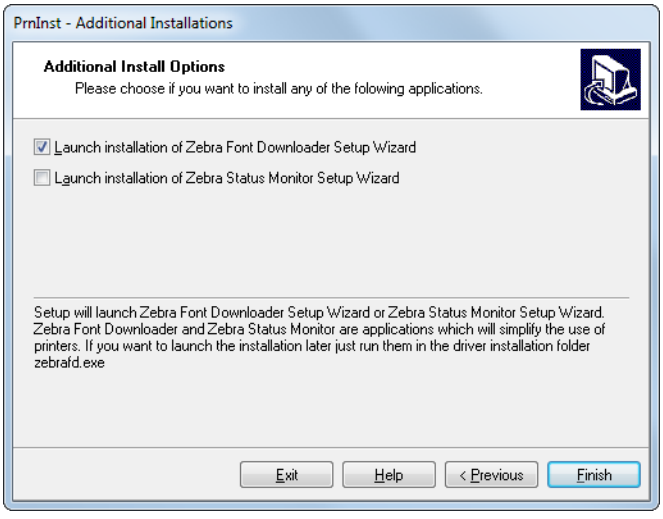
20. Click OK.

A printer driver is created with the port name that you assigned. The new printer port appears in the list of available ports.



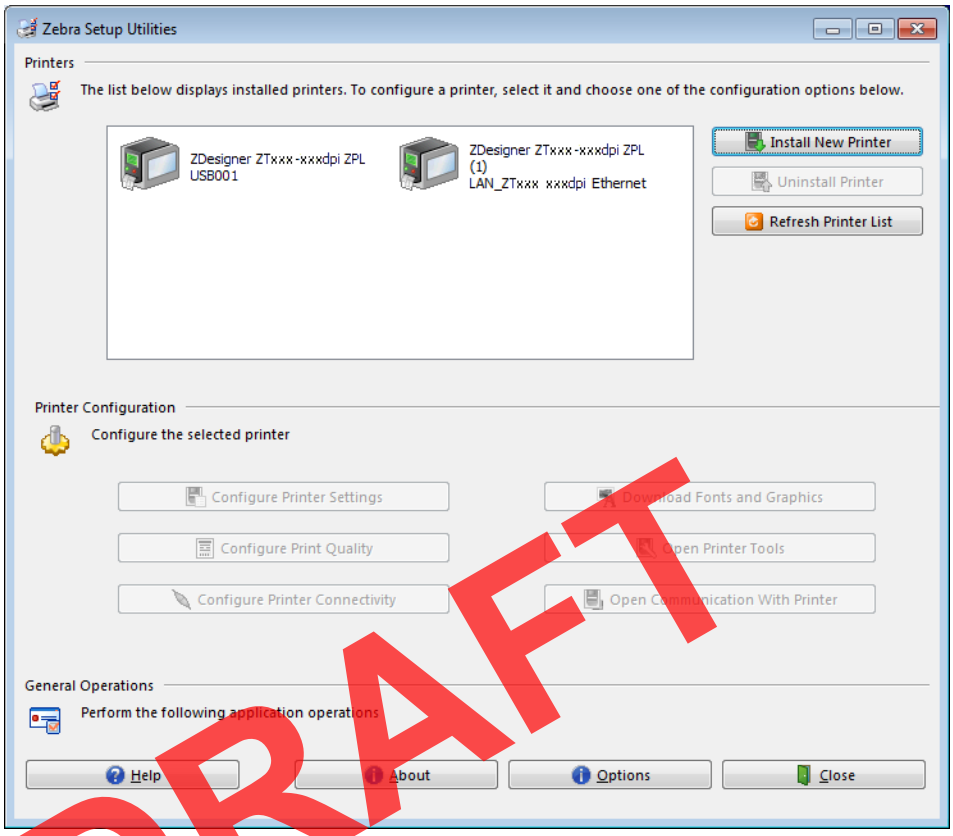
21. Click Next.

You are prompted to launch other setup wizards.



22. Check the desired options, and then click Finish.

The printer driver is installed. If you are prompted that other programs might be affected, click the appropriate option to continue.



The installation for wired (Ethernet) connections is complete.

Connect the Printer to Your Wireless Network

If you wish to use the printer's optional wireless print server, you must first connect the printer to your computer using one of the other available connections. While the printer is connected via one of those connections, you configure the printer to communicate with your Wireless Local Area Network (WLAN) through the wireless print server.

For additional information about Zebra print servers, refer to the *ZebraNet Wired and Wireless Print Server User Guide*. To download the latest version of this guide, go to http://www.zebra.com/zt500-info.

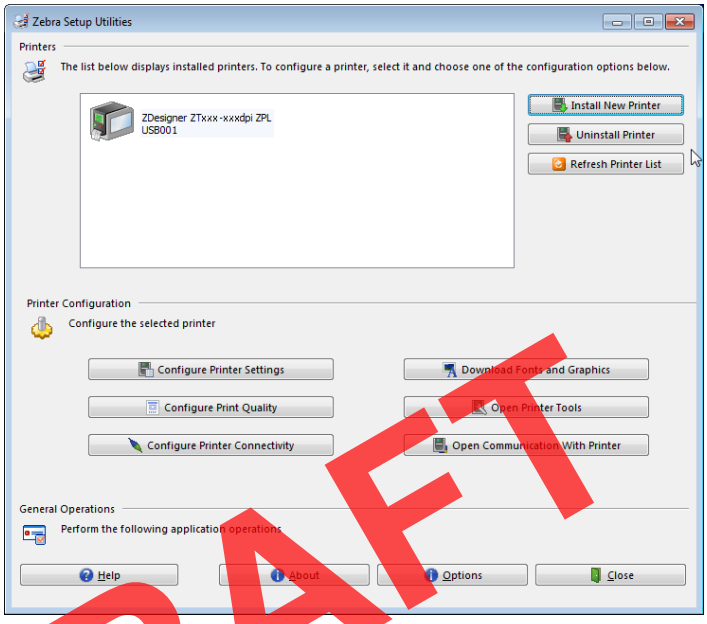
To connect the printer to your computer by an optional wireless print server, complete these steps:

1. Install Zebra Setup Utilities as instructed in *Install Zebra Setup Utilities* on page 148.
2. Connect the printer to your computer using a USB, serial, or optional parallel port as instructed in *Connect a Computer to the Printer's USB Port* on page 157 or *Connect a Computer to the Printer's Serial or Parallel Port* on page 161.
3. Configure the following printer settings. You can change the values through the Zebra Setup Utilities (click Configure Printer Connectivity on the Zebra Setup Utilities screen) or by the ways listed at the following links. Contact your network administrator for the proper values for your network.
   - *Connection > WLAN > WLAN IP Protocol* on page 69 (change the value from ALL to PERMANENT)
   - *Connection > WLAN > WLAN IP Address* on page 70 (assign a unique IP address to the printer)
   - *Connection > WLAN > WLAN Subnet* on page 70 (match the subnet value of your WLAN)
   - *Connection > WLAN > WLAN Gateway* on page 70 (match the gateway value of your WLAN)
4. After the print server settings have been configured, reset the network to apply the changes. See *Connection > Networks > Reset Network* on page 64.

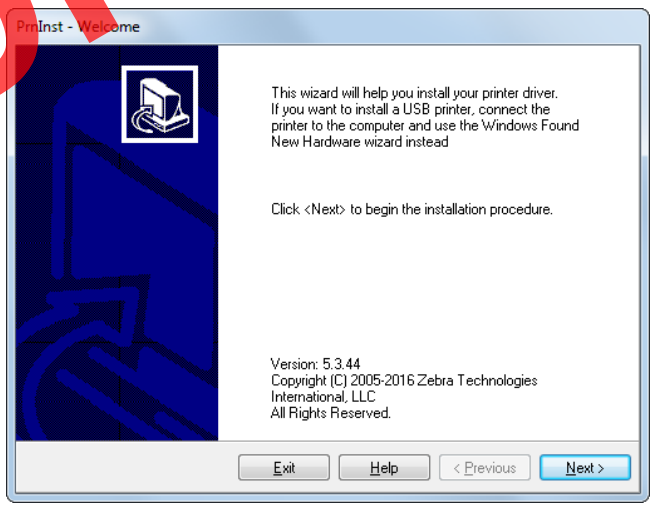
Adding a Printer from the Zebra Setup Utilities Screen

5. If necessary, open the Zebra Setup Utilities program.
   The Zebra Setup Utilities screen displays.

Figure 14 • Zebra Setup Utilities Screen

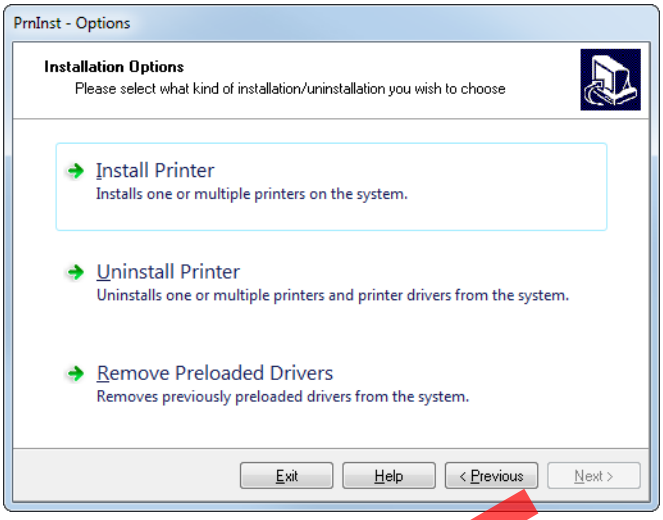


6. Click Install New Printer.
   The printer driver wizard displays.



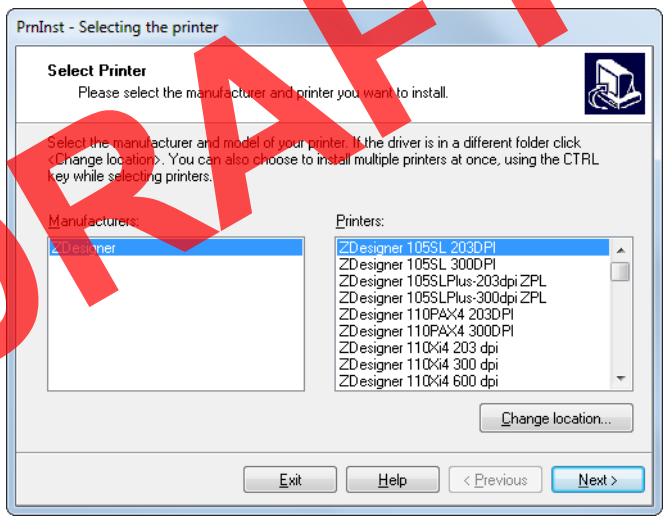
7. Click Next.

   You are prompted to select an installation option.



8. Click Install Printer.

   You are prompted to select a printer type.



9. Select your printer model and resolution.

   The model and resolution are on a part number sticker on the printer, usually located below the media spindle. The information will be in the following format:

   `Part Number: XXXXXxY – xxxxxxxx`

   where

   XXXXX = the printer model

   Y = the printer resolution (2 = 203 dpi, 3 = 300 dpi)

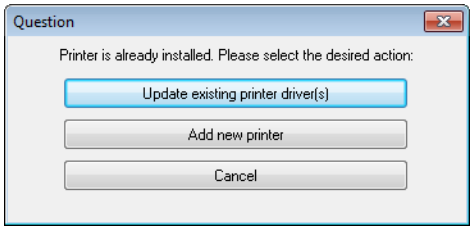
   For example, in the part number **ZT510x3** – xxxxxxxx

   ZT510 indicates that the printer is a ZT510 model

   3 indicates that the printhead resolution is 300 dpi

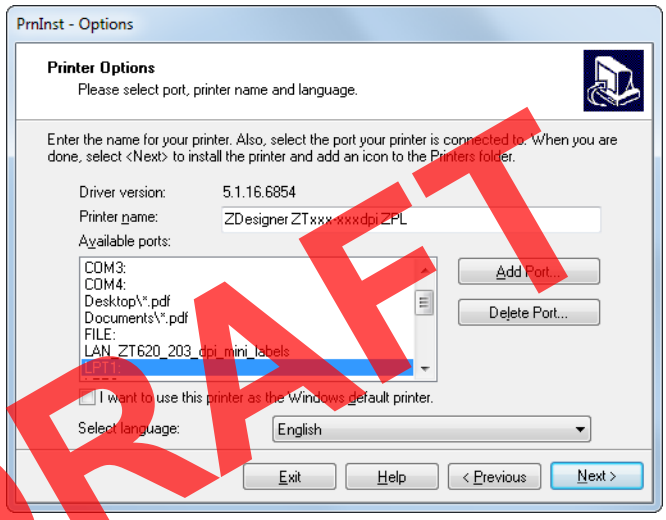
10. Click Next.

You are notified that the printer is already installed.



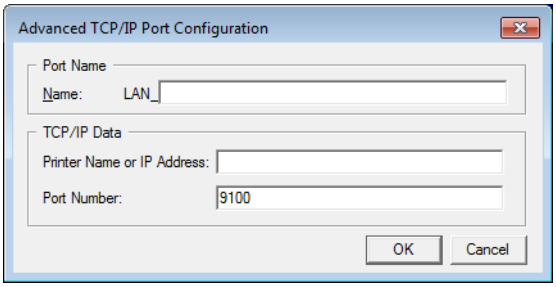
11. Click Add new printer.

You are prompted for a printer name, the port to which the printer will be connected, and the language for the printer display.



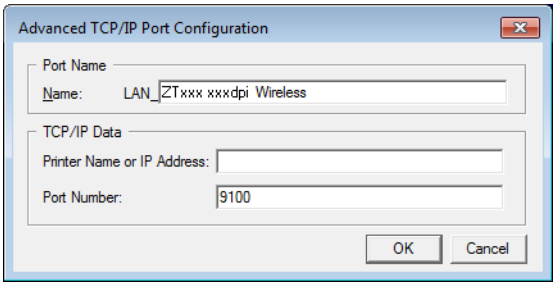
12. Click Add Port.

The wizard prompts you for a name for the port and the IP address of your printer.



Note • If you have other applications open, you may be prompted that the driver is locked by another process. You may click Next to continue or Exit to allow you to save your work before continuing with this installation.

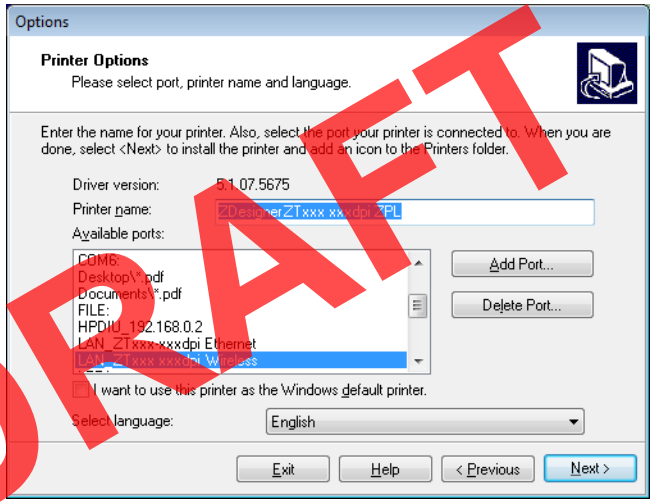
13. Give the port a name that you can recognize when it appears in the list of available ports.



14. Enter the printer's IP address. This could be one that was assigned automatically or one that you specified manually in the previous section.

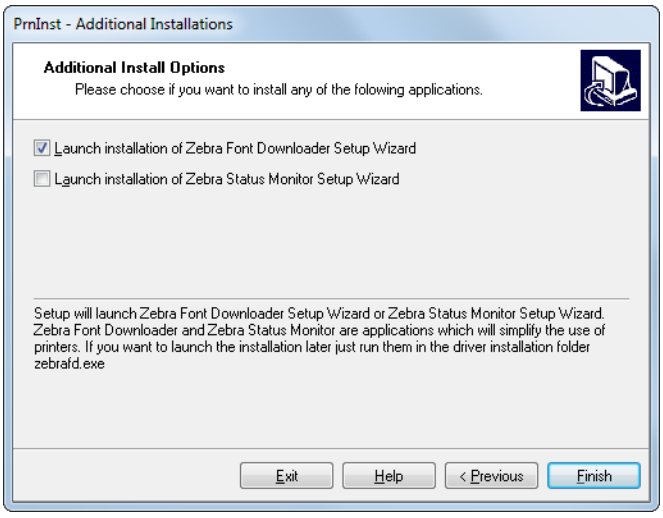
15. Click OK.

A printer driver is created with the port name that you assigned. The new printer port appears in the list of available ports.



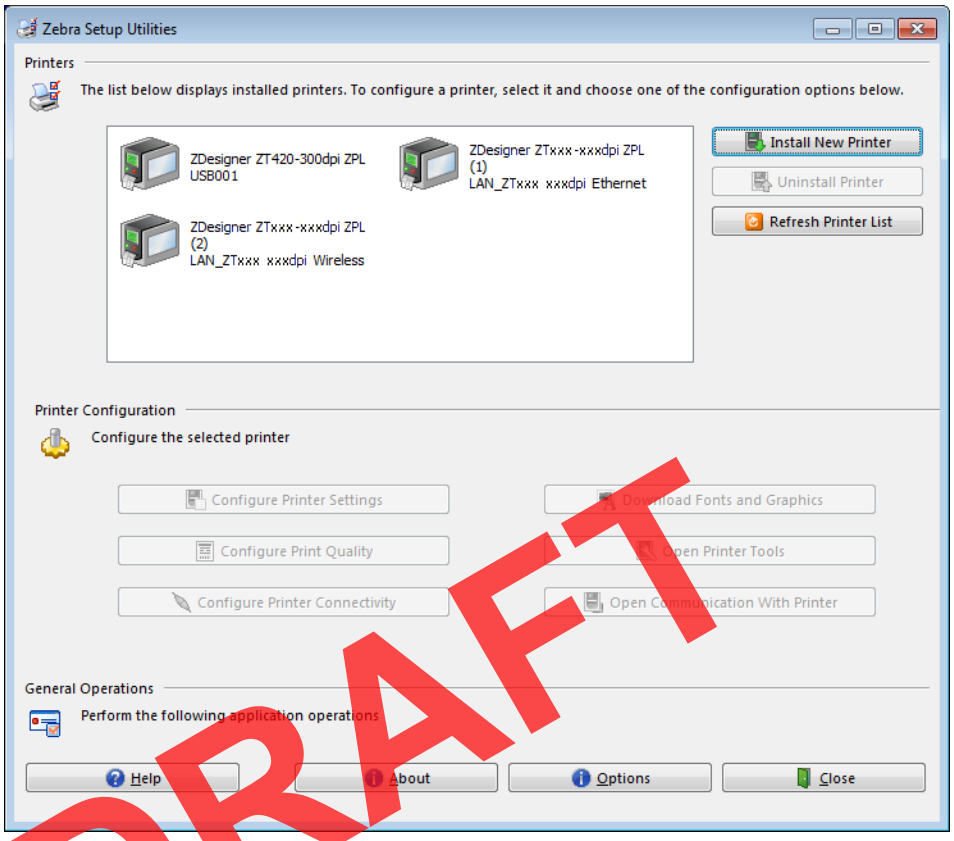
16. Click Next.

You are prompted to launch other setup wizards.



17. Check the desired options, and then click Finish.

    The printer driver is installed. If you are prompted that other programs might be affected, click the appropriate option to continue.



The installation for wireless communication is complete.

6

Specifications

This section lists general printer specifications, printing specifications, ribbon specifications, and media specifications.

Contents

General Specifications

Model		ZT410	ZT420
Height		12.8 in.(325 mm)	12.8 in. (325 mm)
Width		10.7 in. (272 mm)	13.2 in. (335 mm)
Depth		19.7 in. (500 mm)	19.7 in. (500 mm)
Weight		36 lb (16 kg)	40 lb (18 kg)
Electrical		90–265 VAC, 48-62 Hz	90–265 VAC, 48-62 Hz
Power consumption Printing PAUSE test at slowest speed		118.7 W	220.0 W
Power consumption Printer idle		<7 W	<7 W
Fuses		5A	5A
Temperature	Operating	Thermal Transfer: 41° to 104°F (5° to 40°C) Direct Thermal: 32° to 104°F (0° to 40°C)	
	Storage	–40° to 140°F (–40° to 60°C)	
Relative Humidity	Operating	20% to 85%, non-condensing	
	Storage	5% to 85%, non-condensing	

Model		ZT410	ZT420
Communication Interface Specifications	Standard	**Bluetooth®** Bluetooth Classic + Low Energy (LE) (standard with all printers that do not have the ac wireless print server option) • 2.4GHz • FHSS (BDR/EDR), DSSS (Bluetooth LE) • RF power 9.22 dBm (EIRP) • FHSS (BDR/EDR), DSSS (Bluetooth LE) • RF power 9.22 dBm (EIRP) Bluetooth 4.1 + Low Energy (LE) (part of the 802.11 a/b/g/n/ac wireless print server option) • 2.4GHz • FHSS (BDR/EDR), GFSK (Bluetooth Low Energy) • RF power 9.22 dBm (EIRP) Limitations and Requirements Many mobile devices can communicate with the printer within a 10-foot radius of the printer. Connections and Configuration Refer to the *Zebra Bluetooth User Guide* for specific instructions for configuring your printer to use a Bluetooth interface. A copy of this manual is available at http://www.zebra.com/manuals.	
		USB host port (single or dual) Limitations and Requirements Only one device can be operated from each USB host port. You cannot use an additional device by plugging it into a USB port on another device, nor can you use an adaptor to split a USB host port on the printer to accept more than one device. Connections and Configuration No additional configuration is necessary.	
	(Continued on next page.)		

Model		ZT410	ZT420
Communication Interfaces (continued)	Standard (continued)	**Zebra PrintTouch/Near Field Communication (NFC)** Limitations and Requirements NFC communication must be initiated by touching your device to the appropriate location on the printer. Connections and Configuration Some devices may not support NFC communication with the printer until you alter their settings.	
		USB 1.1 Data Interface Limitations and Requirements • Maximum cable length of 16.4 ft (5 m). Connections and Configuration No additional configuration is necessary.	
		Wired 10/100 Internal Ethernet Print Server Limitations and Requirements • The printer must be configured to use your LAN. • A second wired print server can be installed in the bottom option slot. Connections and Configuration Refer to the *ZebraNet Wired and Wireless Print Servers User Guide* for configuration instructions. A copy of this manual is available at http://www.zebra.com/manuals.	
		RS-232/CCITT V.24 Serial Data Interface • 2400 to 115000 baud • parity, bits/character • 7 or 8 data bit • XON-XOFF, RTS/CTS, or DTR/DSR handshake protocol required • 750 mA at 5 V from pins 1 and 9 Limitations and Requirements • You must use a null-modem cable to connect to the printer or a null-modem adaptor if using a standard modem cable. • Maximum cable length of 50 ft (15.24 m). • You may need to change printer parameters to match the host computer. Connections and Configuration The baud rate, number of data and stop bits, the parity, and the XON/XOFF or DTR control must match those of the host computer.	

Model		ZT410	ZT420
Communication Interfaces (continued)	Optional	**Wireless Print Server** An 802.11 a/b/g/n and an 802.11 a/b/g/n/ac version are available. The 802.11 a/b/g/n/ac version includes Bluetooth 4.1. 802.11 b • 2.4 GHz • DSSS (DBPSK, DQPSK and CCK) • RF power 17.77 dBm (EIRP) 802.11 g • 2.4 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 18.61 dBm (EIRP) 802.11 n • 2.4 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 18.62 dBm (EIRP) 802.11 a/n • 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 17.89 dBm (EIRP) 802.11 ac • 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz • OFDM (16-QAM and 64-QAM with BPSK and QPSK) • RF power 13.39 dBm (EIRP) Limitations and Requirements • Can print to the printer from any computer on your Wireless Local Area Network (WLAN). • Can communicate with the printer through the printer's web pages. • The printer must be configured to use your WLAN. • Can be installed only in the top option slot. Configuration Refer to the *ZebraNet Wired and Wireless Print Servers User Guide* for configuration instructions. A copy of this manual is available at http://www.zebra.com/manuals.	
		8-bit Parallel data interface nibble mode compliant Limitations and Requirements • Maximum cable length of 10 ft (3 m). • Recommended cable length of 6 ft (1.83 m). • No parameter changes required. • Can be installed in either the top or bottom option slot. Connections and Configuration No additional configuration is necessary.	

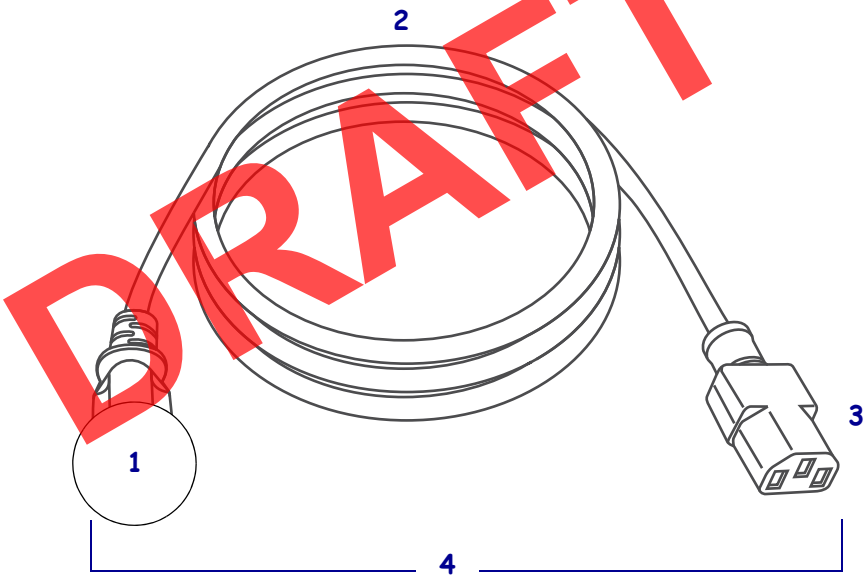
Power Cord Specifications

Caution • For personnel and equipment safety, always use an approved three-conductor power cord specific to the region or country intended for installation. This cord must use an IEC 320 female connector and the appropriate region-specific, three-conductor grounded plug configuration.

Depending on how your printer was ordered, a power cord may or may not be included. If one is not included or if the one included is not suitable for your requirements, see Figure 15 and refer to the following guidelines:

- The overall cord length must be less than 9.8 ft. (3 m).
- The cord must be rated for at least 10 A, 250 V.
- The chassis ground (earth) **must** be connected to ensure safety and reduce electromagnetic interference.

Figure 15 • Power Cord Specifications



1	AC power plug for your country—This should bear the certification mark of at least one of the known international safety organizations (Figure 16).
2	3-conductor HAR cable or other cable approved for your country.
3	IEC 320 connector—This should bear the certification mark of at least one of the known international safety organizations (Figure 16).
4	Length ≤ 9.8 ft. (3 m). Rating 10 Amp, 250 VAC.

Figure 16 • International Safety Organization Certification Symbols

Printing Specifications

Model		ZT410	ZT420
Print resolution		203 dpi (dots/in.)/8 dots/mm	203 dpi (dots/in.)/8 dots/mm
		300 dpi/12 dots/mm	300 dpi/12 dots/mm
		600 dpi/24 dots/mm	N/A
Dot size (nominal) (width x length)	203 dpi	0.0049 in. x 0.0049 in. (0.125 mm x 0.125 mm)	0.0049 in. x 0.0049 in. (0.125 mm x 0.125 mm)
	300 dpi	0.0033 in. x 0.0039 in. (0.084 mm x 0.099 mm)	0.0033 in. x 0.0039 in. (0.084 mm x 0.099 mm)
	600 dpi	0.0016 in. x 0.0016 in. (0.042 mm x 0.042 mm)	N/A
Maximum print width	203 dpi	4.09 in. (104 mm)	6.6 in. (168 mm)
	300 dpi	4.09 in. (104 mm)	6.6 in. (168 mm)
	600 dpi	4.09 in. (104 mm)	N/A
Bar code modulus (X) dimension			
Picket fence (nonrotated) orientation	203 dpi	4.9 mil to 49 mil	5 mil to 50 mil
	300 dpi	3.3 mil to 33 mil	3.3 mil to 33 mil
	600 dpi	1.6 mil to 16 mil	N/A
Ladder (rotated) orientation	203 dpi	4.9 mil to 49 mil	5 mil to 50 mil
	300 dpi	3.9 mil to 39 mil	3.9 mil to 39 mil
	600 dpi	1.6 mil to 16 mil	N/A
Programmable constant print speeds	203 dpi	2.4 in. to 14 in. (61 mm to 356 mm) per second in 1-in. (25.4 mm) increments	2.4 in. to 12 in. (61 mm to 305 mm) per second in 1-in. (25.4 mm) increments
	300 dpi	2.4 in. to 10 in. (61 mm to 254 mm) per second in 1-in. (25.4 mm) increments	2.4 in. to 10 in. (61 mm to 203 mm) per second in 1-in. (25.4 mm) increments
	600 dpi	1.5 in. to 4 in. (38 mm to 102 mm) per second in 1-in. (25.4 mm) increments	N/A

Media Specifications

Model			ZT410	ZT420
Label length	Minimum	Non-RFID		
		Tear-off	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)
		Peel-off	0.5 in (12.7 mm)	0.5 in (12.7 mm)
		Rewind	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)
		Cutter	1.0 in. (25.4 mm)	1.0 in. (25.4 mm)
		RFID	Varies for each transponder type	
	Maximum	200 or 300 dpi	39 in. (991 mm)	39 in. (991 mm)
		600 dpi	20 in. (508 mm)	N/A
Maximum continuous media print length		200 dpi	157 in. (3988 mm)	102 in. (2590 mm)
		300 dpi	73 in. (1854 mm)	45 in. (1143 mm)
		600 dpi	39 in. (991 mm)	N/A
Label width	Minimum	Non-RFID	1.0 in. (25.4 mm)	2 in. (51 mm)
		RFID	Varies for each transponder type	
	Maximum	Tear/Cutter	4.5 in. (114 mm)	7.0 in. (178 mm)
		Peel/Rewind	4.25 in. (108 mm)	6.75 in. (171 mm)
Total thickness (includes liner, if any)		Minimum	0.0023 in. (0.058 mm)	0.0023 in. (0.058 mm)
		Maximum	0.010 in. (0.25 mm)	
Maximum roll outside diameter			8 in. (203 mm) on a 3-in. (76-mm) inside diameter core	
Inter-label gap		Minimum	0.079 in. (2 mm)	
		Preferred	0.118 in. (3 mm)	
		Maximum	0.157 in. (4 mm)	
Ticket/tag notch size (width x length)			0.25 in. x 0.12 in. (6 mm x 3 mm)	
Hole diameter			0.125 in. (3.18 mm)	
Notch or hole position (centered from inner media edge)		Minimum	0.15 in. (3.8 mm)	
		Maximum	2.25 in. (57 mm)	3.5 in. (90 mm)
Density, in Optical Density Units (ODU) (black mark)			> 1.0 ODU	
Maximum media density			≤ 0.5 ODU	
Transmissive media sensor (fixed position)			7/16 in. (11 mm) from inside edge	

Ribbon Specifications

Model		ZT410	ZT420
Ribbon width*	Minimum	2 in.** (51 mm**)	
	Maximum	4.33 in. (110 mm)	6.85 in. (174 mm)
Maximum ribbon length		1476 ft (450 m)	1476 ft (450 m)
Ribbon core inside diameter		1 in. (25 mm)	

* Zebra recommends using ribbon that is at least as wide as the media to protect the printhead from wear.

** Depending on your application, you may be able to use ribbon narrower than 2 in. (51 mm), as long as the ribbon is wider than the media being used. To use a narrower ribbon, test the ribbon's performance with your media to assure that you get the desired results.

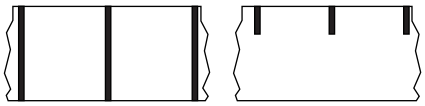
Glossary

alphanumeric Indicating letters, numerals, and characters such as punctuation marks.

backfeed When the printer pulls the media and ribbon (if used) backward into the printer so that the beginning of the label to be printed is properly positioned behind the printhead. Backfeed occurs when operating the printer in Tear-Off and Applicator modes.

barcode A code by which alphanumeric characters can be represented by a series of adjacent stripes of different widths. Many different code schemes exist, such as the universal product code (UPC) or Code 39.

black mark media Media with registration marks found on the underside of the print media that act as start-of-label indications for the printer. The reflective media sensor is typically the best choice for use with black mark media.



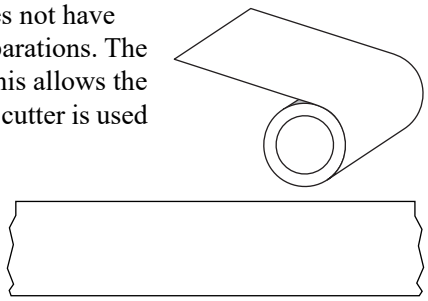
Contrast this with *continuous media* or *gap/notch media*.

calibration (of a printer) A process in which the printer determines some basic information needed to print accurately with a particular media and ribbon combination. To do this, the printer feeds some media and ribbon (if used) through the printer and senses whether to use the direct thermal or thermal transfer print method, and (if using non-continuous media) the length of individual labels or tags.

collection method Select a media collection method that is compatible with your printer options. Selections include tear-off, peel-off, cutter, and rewind. The basic media and ribbon loading instructions are the same for all collection methods with some additional steps necessary for using any media collection options.

configuration The printer configuration is a group of operating parameters specific to the printer application. Some parameters are user selectable, while others are dependent on the installed options and mode of operation. Parameters may be switch selectable, control panel programmable, or downloaded as ZPL II commands. A configuration label listing all the current printer parameters may be printed for reference.

continuous media Label or tag-stock media that does not have gaps, holes, notches, or black marks to indicate label separations. The media is one long piece of material wound into a roll. This allows the image to be printed anywhere on the label. Sometimes a cutter is used to cut apart individual labels or receipts.



Contrast this with *black mark media* or *gap/notch media*.

core diameter The inside diameter of the cardboard core at the center of a roll of media or ribbon.

diagnostics Information about which printer functions are not working that is used for troubleshooting printer problems.

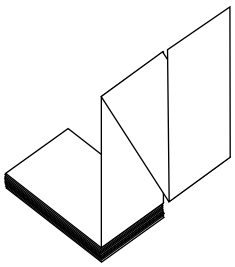
die-cut media A type of label stock that has individual labels stuck to a media liner. The labels may be either lined up against each other or separated by a small distance. Typically the material surrounding the labels has been removed. (See *non-continuous media*.)

direct thermal A printing method in which the printhead presses directly against the media. Heating the printhead elements causes a discoloration of the heat-sensitive coating on the media. By selectively heating the printhead elements as the media moves past, an image is printed onto the media. No ribbon is used with this printing method. Contrast this with *thermal transfer*.

direct thermal media Media that is coated with a substance that reacts to the application of direct heat from the printhead to produce an image.

dynamic RAM The memory devices used to store the label formats in electronic form while they are being printed. The amount of DRAM memory available in the printer determines the maximum size and number of label formats that can be printed. This is volatile memory that loses the stored information when power is turned off.

fanfold media Non-continuous media that comes folded in a rectangular stack. Fanfold media is either gap/notch or black mark media. Contrast this with *roll media*.

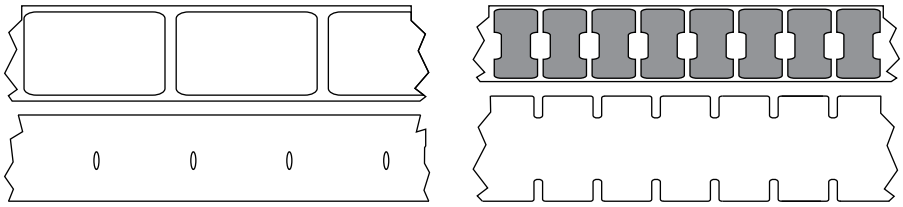


firmware This is the term used to specify the printer's operating program. This program is downloaded to the printer from a host computer and stored in FLASH memory. Each time the printer power is turned on, this operating program starts. This program controls when to feed the media forward or backward and when to print a dot on the label stock.

FLASH memory FLASH memory is non-volatile and maintains the stored information intact when power is off. This memory area is used to store the printer's operating program. In addition, this memory can be used to store optional printer fonts, graphic formats, and complete label formats.

Font A complete set of alphanumeric characters in one style of type. Examples include CG Times™, CG Triumvirate Bold Condensed™.

gap/notch media Media that contains a separation, notch, or hole, indicating where one label/printed format ends and the next one begins.



Contrast this with *black mark media* or *continuous media*.

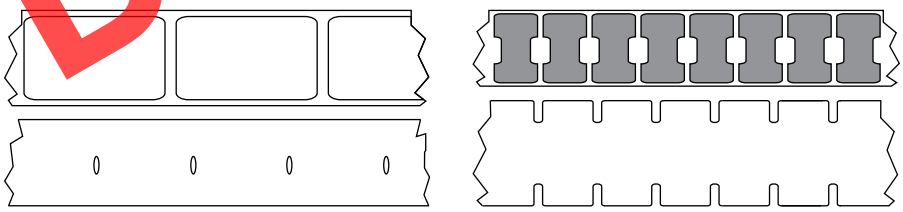
ips (inches-per-second) The speed at which the label or tag is printed. Many Zebra printers can print from 1 ips to 14 ips.

label An adhesive-backed piece of paper, plastic, or other material on which information is printed. A non-continuous label has a defined length, as opposed to a continuous label or a receipt, which can have a varying length.

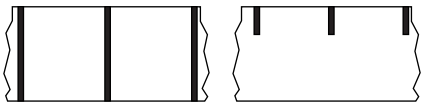
label backing (liner) The material on which labels are affixed during manufacture and which is discarded or recycled by the end-users.

label type The printer recognizes the following label types.

Continuous



Gap/Notch



Mark

light emitting diode (LED) Indicators of specific printer status conditions. Each LED is either off, on, or blinking depending on the feature being monitored.

linerless media Linerless media does not use backing to keep the layers of labels on a roll from sticking to one another. It is wound like a roll of tape, with the sticky side of one layer in contact with the non-sticky surface of the one below it. Individual labels may be separated by perforations, or they can be cut apart. Because there is no liner, more labels can potentially fit on a roll, cutting down the need to change media as often. Linerless media is considered an environmentally friendly option because no backing is wasted, and the cost per label can be considerably less than that of standard labels.

liquid crystal display (LCD) The LCD is a back-lit display that provides the user with either operating status during normal operation or option menus when configuring the printer to a specific application.

mark media See *black mark media*.

media Material onto which data is printed by the printer. Types of media include: tag stock, die-cut labels, continuous labels (with and without media liner), non-continuous media, fanfold media, and roll media.

media sensor This sensor is located behind the printhead to detect the presence of media and, for non-continuous media, the position of the web, hole, or notch used to indicate the start of each label.

media supply hanger The stationary arm that supports the media roll.

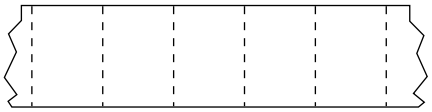
non-continuous media Media that contains an indication of where one label/printed format ends and the next one begins. Gap/notch media and black mark media are types of non-continuous media. Contrast this with *continuous media*.

non-volatile memory Electronic memory that retains data even when the power to the printer is turned off.

notched media A type of tag stock containing a cutout area that can be sensed as a start-of-label indicator by the printer. This is typically a heavier, cardboard-like material that is either cut or torn away from the next tag. See *gap/notch media*.

peel-off A mode of operation in which the printer peels a printed label away from the backing and allows the user to remove it before another label is printed. Printing pauses until the label is removed.

perforated media Media with perforations that allow the labels or tags to be separated from each other easily. The media may also have black marks or other separations between labels or tags.



print type The print type specifies whether the type of media being used requires ribbon to print. Thermal Transfer media requires ribbon while Direct Thermal media does not.

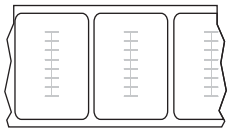
print speed The speed at which printing occurs. For thermal transfer printers, this speed is expressed in terms of ips (inches per second).

printhead wear The degradation of the surface of the printhead and/or the print elements over time. Heat and abrasion can cause printhead wear. Therefore, to maximize the life of the printhead, use the lowest print darkness setting (sometimes called burn temperature or head temperature) and the lowest printhead pressure necessary to produce good print quality. In the thermal transfer printing method, use ribbon that is as wide or wider than the media to protect the printhead from the rough media surface.

receipt A receipt is a variable length printout. One example of a receipt is in retail stores, where each purchased item occupies a separate line on the printout. Therefore, the more items purchased, the longer the receipt.

registration Alignment of printing with respect to the top (vertical) or sides (horizontal) of a label or tag.

Radio frequency identification (RFID) "smart" media



Each RFID label has an RFID transponder (sometimes called an "inlay"), made of a chip and an antenna, embedded between the label and the liner. The shape of the transponder varies by manufacturer and is visible through the label. All "smart" labels have memory that can be read, and many have memory that can be encoded.

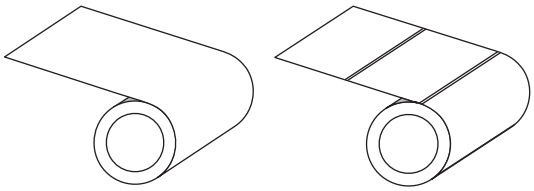
RFID media can be used in a printer that is equipped with an RFID reader/encoder. RFID labels are made from the same materials and adhesives as non-RFID labels.

ribbon Ribbon is a thin film that is coated on one side with wax, resin, or wax resin (usually called "ink"), which is transferred to the media during the thermal transfer process. Ink is transferred onto the media when heated by the small elements within the printhead.

Ribbon is only used with the thermal transfer print method. Direct thermal media does not use ribbon. When ribbon is used, it must be as wide as or wider than the media being used. If the ribbon is narrower than the media, areas of the printhead are unprotected and subject to premature wear. Zebra ribbons have a coating on the back that protects the printhead from wear.

ribbon wrinkle A wrinkling of the ribbon caused by improper alignment or improper printhead pressure. This wrinkle can cause voids in the print and/or the used ribbon to rewind unevenly. This condition should be corrected by performing adjustment procedures.

roll media Media that comes supplied rolled onto a core (usually cardboard). It can be continuous (no separations between labels) or non-contionous (some type of separation between labels).



Contrast this with *fanfold media*.

supplies A general term for media and ribbon.

symbology The term generally used when referring to a barcode.

tag stock A type of media having no adhesive backing but featuring a hole or notch by which the tag can be hung on something. Tags are usually made of cardboard or other durable material and are typically perforated between tags. Tag stock can come on rolls or in a fanfold stack. See *gap/notch media*.

tear-off A mode of operation in which the user tears the label or tag stock away from the remaining media by hand.

thermal transfer A printing method in which the printhead presses an ink or resin coated ribbon against the media. Heating the printhead elements causes the ink or resin to transfer onto the media. By selectively heating the printhead elements as the media and ribbon move past, an image is printed onto the media. Contrast this with *direct thermal*.

void A space on which printing should have occurred, but did not due to an error condition such as wrinkled ribbon or faulty print elements. A void can cause a printed barcode symbol to be read incorrectly or not at all.

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P1106464-001

Zebra ZT411 / ZT421
Regulatory Guide - DRAFT

P1089907-002

Worldwide

Regulatory Information

All Zebra devices are designed to be compliant with the rules and regulations in locations they are sold and will be labeled as required. For more information about Zebra's compliance with national and international mandates, go to: **www.zebra.com/compliance**

For the latest version of this guide, go to: **www.zebra.com/support**

Any changes or modifications to Zebra equipment, not expressly approved by Zebra, could void the user's authority to operate the equipment.

End User License Agreement

For the complete End User License Agreement, go to **www.zebra.com/eula**

Warranty

For the complete hardware product warranty statement, go to **www.zebra.com/warranty**

Brasil
Aviso da Anatel

ANATEL
Agência Nacional de Telecomunicações

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados pela Resolução 680/2017.

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução 242/2000, e atende aos requisitos técnicos aplicados.

Para maiores informações, consulte o site da ANATEL www.anatel.gov.br

This equipment's operation is of a secondary character; that is, it doesn't have the right to protection against damaging interference, even from stations of the same type, nor can it cause interference to systems with a primary operating character.

Este produto utiliza internamente o modulo de ZBR7BTLE numero de homologação pela ANATEL 1011-15-9600
e o modulo WYSBHVGXG numero de homologação pela ANATEL 0581-16-1530

Canada DOC Compliance

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
This Class B digital apparatus complies with Canadian ICES-003.

Industry Canada (IC) Warning

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: 1) This device may not cause interference., 2) This device must accept any interference, including interference that may cause undesired operation of the device.

European Union (EU)

български (br): С настоящото Zebra Technologies Corporation декларира, че радио оборудването от тип WLAN или Bluetooth е в съответствие с Директива 2014/53/EU. Пълният текст на декларацията за съответствие на ЕС е наличен на следния интернет адрес: **www.zebra.com/compliance**

Čeština (cs): Společnost Zebra Technologies Corporation tímto prohlašuje, že rádiové zařízení typu WLAN nebo Bluetooth splňuje požadavky směrnice 2014/53/EU. Úplné znění prohlášení o shodě EU je k dispozici na následující internetové adrese: **www.zebra.com/compliance**

Dansk (da): Zebra Technologies Corporation erklærer hermed, at radioudstyrstypen WLAN eller Bluetooth er i overensstemmelse med Direktiv 2014/53/EU. EU-overensstemmelseserklæringen er tilgængelig på følgende internetadresse: **www.zebra.com/compliance**

Deutsch (de): Hiermit erklärt Zebra Technologies Corporation, dass die WLAN- oder Bluetooth-Funkausrüstung den Anforderungen der Richtlinie 2014/53/EU entspricht. Die komplette EU-Konformitätserklärung ist unter dem folgenden Link verfügbar: **www.zebra.com/compliance**

ελληνικά (el): Η Zebra Technologies Corporation δηλώνει δια της παρούσης ότι ο ραδιοφωνικός εξοπλισμός τύπου WLAN ή Bluetooth συμμορφώνεται με την Οδηγία της ΕΕ 2014/53/EU. Το πλήρες κείμενο της Δήλωσης Συμμόρφωσης ΕΕ είναι διαθέσιμο στην ακόλουθη διεύθυνση στο ίντερνετ: **www.zebra.com/compliance**

English (en): Hereby, Zebra Technologies Corporation declares that the radio equipment type WLAN or Bluetooth is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **www.zebra.com/compliance**

Español (es): Zebra Technologies Corporation declara por la presente que el tipo de equipo de radio (WLAN o Bluetooth) cumple la Directiva 2014/53/UE. El texto completo de la declaración de conformidad de la UE está disponible a través de la siguiente dirección de Internet: **www.zebra.com/compliance**

Eesti (et): Käesolevaga kinnitab Zebra Technologies Corporation, et WLAN- või Bluetooth-raadiosideseade vastab direktiivile 2014/53/EL. EL-i vastavusdeklaratsiooni terviktekst asub aadressil **www.zebra.com/compliance**

Suomi (fi): Zebra Technologies Corporation täten julistaa, että radiolaitetyyppi WLAN tai Bluetooth noudattaa direktiiviä 2014/53/EU. EU-vaatimustenmukaisuusvakuutuksen täysimittaisen tekstin saa seuraavasta osoitteesta: **www.zebra.com/compliance**

Français (fr): Par la présente, Zebra Technologies Corporation certifie que les équipements radio de type WLAN ou Bluetooth sont conformes à la directive européenne 2014/53/EU. Le texte complet de la déclaration de conformité CE est disponible à l'adresse suivante : **www.zebra.com/compliance**

Hrvatski (hr): Tvrtka Zebra Technologies Corporation ovim putem izjavljuje da je radijska oprema tipa WLAN ili Bluetooth u skladu s direktivom 2014/53/EU. Cjelovit tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: **www.zebra.com/compliance**

Magyar (hu): A Zebra Technologies Corporation ezennel kijelenti, hogy a WLAN vagy Bluetooth típusú rádiófrekvenciás készülékei megfelelnek a 2014/53/EU direktíva előírásainak. Az EU direktíva megfelelőségi előírásainak teljes szövege a következő weblapon található: **www.zebra.com/compliance**

Italiano (it): Con la presente, Zebra Technologies Corporation dichiara che l'apparecchio radio tipo WLAN o Bluetooth è conforme alla Direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo internet seguente: **www.zebra.com/compliance**

Lietuvių (lt): „Zebra Technologies Corporation" pareiškia, kad WLAN arba „Bluetooth" radijo įranga atitinka 2014/53/ES direktyvą. Visą ES atitikties direktyvos tekstą galima peržiūrėti toliau nurodytu interneto adresu: **www.zebra.com/compliance**

Latviešu (lv): Ar šo „Zebra Technologies Corporation" apstiprina, ka WLAN un „Bluetooth" aprīkojums atbilst visām Direktīvas 2014/53/ES prasībām. Pilnu ES atbilstības deklarācijas tekstu varat skatīt šajā tīmekļa vietnē: **www.zebra.com/compliance**

Malti (mt): B'dan, Zebra Technologies Corporation tiddikkjara li t-tagħmir tar-radju tip WLAN jew Bluetooth huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzoni tal-UE dwar il-konformità huwa disponibbli fuq l-indirizz tal-internet li ġej: **www.zebra.com/compliance**

Nederlands (nl): Hierbij verklaart Zebra Technologies Corporation dat het radioapparatuurtype WLAN of Bluetooth in overeenstemming is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op het volgende internetadres: **www.zebra.com/compliance**

Polski (pl): Niniejszym Zebra Technologies Corporation oświadcza, że sprzęt radiowy typu WLAN i Bluetooth jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem WWW: **www.zebra.com/compliance**

Português (pt): A Zebra Technologies Corporation declara que o tipo de equipamento de rádio WLAN ou Bluetooth se encontra em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade UE está disponível no seguinte endereço da Internet: **www.zebra.com/compliance**

Românesc (ro): Prin prezenta, Zebra Technologies Corporation declară că echipamentul radio de tip WLAN sau Bluetooth respectă Directiva 2014/53/UE. Textul complet al declarației de conformitate UE este disponibil la următoarea adresă de internet: **www.zebra.com/compliance**

Slovenčina (sk): Spoločnosť Zebra Technologies Corporation týmto vyhlasuje, že rádiové zariadenie typu WLAN alebo Bluetooth spĺňa požiadavky smernice 2014/53/EU. Úplné znenie vyhlásenia o zhode EÚ je k dispozícii na tejto internetovej adrese: **www.zebra.com/compliance**

Slovenski (sl): Družba Zebra Technologies Corporation izjavlja, da je radijska oprema WLAN ali Bluetooth v skladu z Direktivo 2014/53/EU. Celotno besedilo Izjave EU o skladnosti je na voljo na naslednjem internetnem naslovu: **www.zebra.com/compliance.**

Svenska (sv): Härmed förklarar Zebra Technologies Corporation att radioutrustningen typ WLAN eller Bluetooth överensstämmer med Direktiv 2014/53/EU. Den fullständiga texten i EU-deklarationen om överensstämmelse finns på följande Internet-adress: **www.zebra.com/compliance**

Türkçe (tr): Burada, Zebra Technologies Corporation radyo ekipman tipi WLAN veya Bluetooth'un Direktif 2014/53/EU ile uyumlu olduğunu beyan eder. AB uygunluk beyanının tam metni aşağıdaki internet adresinde mevcuttur: **www.zebra.com/compliance**

Zebra Technologies Europe Limited
Dukes Meadow,
Millboard Road
Bourne End,
Buckinghamshire, SL8 5XF, UK

CE

中华人民共和国 (China)

部件名称 (Part Name)	有害物质 (Hazardous Substances)					
	铅 (PB)	汞 (Hg)	镉 (CD)	六价铬 (CR6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
外壳材料 (Enclosure)	X	O	O	O	O	O
电子组件 (Electronics)	X	O	O	O	O	O
驱动系统 (Drivetrain)	X	O	O	O	O	O
紧固件 (Fasteners)	X	O	O	O	O	O
切削刀 (Cutters)	X	O	O	O	O	O
打印头 (Print Heads)	X	O	O	O	O	O
RFID 收音机 (RFID Radio)	X	O	O	O	O	O
802.11 发射器 (802.11 Radio Card)	X	O	O	O	O	O

本表格依据SJ/T11364编制
This table is compliant with SJ/T11364.

X 表示该有害物质至少在该部件某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求。
(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.)

O 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。
(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.)

Waste Electrical and Electronic Equipment (WEEE)

български (br): Не изхвърляйте този продукт в общински отпадъци, които не се събират разделно. Този продукт е рециклируем и трябва да бъде рециклиран според местните разпоредби. За повече информация, моля, вижте нашия уебсайт на: **www.zebra.com/environment**

Čeština (cs): Tento produkt nevyhazujte do netříděného komunálního odpadu. Produkt je recyklovatelný, a je třeba jej recyklovat v souladu s místními předpisy. Bližší informace naleznete na naší webové stránce na adrese: **www.zebra.com/environment**

Dansk (da): Bortskaf ikke dette produkt i usorteret dagrenovation. Dette produkt kan genbrugs og skal genbruges i henhold til de gældende lokale regler og standarder. Yderligere oplysninger findes på vores websted på: **www.zebra.com/environment**

Deutsch (de): Entsorgen Sie dieses Produkt nicht über den Hausmüll. Das Produkt ist wiederverwertbar, und die Entsorgung sollte über Ihr lokales Recycling-System erfolgen. Weitere Informationen finden Sie auf unserer Website: **www.zebra.com/environment**

Waste Electrical and Electronic Equipment (WEEE)

ελληνικά (el): Μην απορρίψετε αυτό το προϊόν σε μη ταξινομημένα δημοτικά απόβλητα. Αυτό το προϊόν είναι ανακυκλώσιμο και πρέπει να ανακυκλώνεται σύμφωνα με τα τοπικά πρότυπα της περιοχής σας. Για περισσότερες πληροφορίες δείτε την ιστοσελίδα μας στη διεύθυνση:
www.zebra.com/environment

English (en): Do not dispose of this product in unsorted municipal waste. This product is recyclable, and should be recycled according to your local standards. For more information, please see our website at: **www.zebra.com/environment**

Español (es): No tire este producto con el resto de los residuos. Este producto es reciclable, y debería ser reciclado de acuerdo con las normas locales. Para obtener más información, visite nuestro sitio en la Web en: **www.zebra.com/environment**

Eesti (et): Ärge visake seda toodet sortimata olmeprügi hulka. See toode on ringlussevõetav ning see tuleb kohalike nõuete kohaselt ringlusse võtta. Lisateavet leiate meie veebisaidilt: **www.zebra.com/environment**

Suomi (fi): Älä heitä tätä tuotetta sekajätteeseen. Tämän tuotteen voi kierrättää, ja se tulee kierrättää paikallisten säädösten mukaisesti. Lisätietoja saa verkkosivuiltamme osoitteesta **www.zebra.com/environment**

Français (fr): Ne jetez pas ce produit avec les déchets municipaux non triés. Ce produit est recyclable et doit être recyclé selon les normes locales en vigueur. Pour des informations complémentaires, visitez notre site Web à l'adresse suivante : **www.zebra.com/environment**

Hrvatski (hr): Nemojte odlagati ovaj uređaj na mjesta s nesortiranim komunalnim otpadom. Ovaj se uređaj može reciklirati i treba ga reciklirati u skladu s vašim lokalnim standardima. Za detaljnije informacije posjetite naše web mjesto na: **www.zebra.com/environment**

Magyar (hu): Ne dobja ki a terméket a háztartási hulladékkal. A termék újrahasznosítható, és az újrahasznosítást a helyi rendeletek szerint kell végezni. További információt ezen a weblapunkon talál: **www.zebra.com/environment**

Italiano (it): Non smaltire questo prodotto nella raccolta municipale dei rifiuti non differenziati. Il prodotto è riciclabile e deve essere riciclato in base alle norme locali. er ulteriori informazioni, consultare il nostro sito Web: **www.zebra.com/environment**

Lietuvių (lt): Neišmeskite šio gaminio su nerūšiuotomis buitinėmis atliekomis. Šis gaminys yra perdirbamas. Jį reikia perdirbti pagal jūsų vietos standartus. Norėdami daugiau informacijos, žr. mūsų internetinę svetainę:
www.zebra.com/environment

Latviešu (lv): No šī izstrādājuma aizliegts atbrīvoties kā no parastiem nešķirojamiem mājsaimniecības atkritumiem. Šo izstrādājumu var atkārtoti pārstrādāt, un no tā jāatbrīvojas atbilstoši vietējiem noteikumiem. Plašāku informāciju skatiet mūsu tīmekļa vietnē: **www.zebra.com/environment**

Malti (mt): Tarmix dan il-prodott fi skart muniċipali mhux separat Dan il-prodott huwa riċiklabbli, u għandu jiġi rriċiklat skont l-istandards lokali tiegħek. Għal aktar informazzjoni, ara l-websajt tagħna: **www.zebra.com/environment**

Nederlands (nl): Gooi dit product niet weg bij het huishoudelijk afval. Dit product kan worden gerecycled en dient te worden verwerkt volgens de plaatselijke richtlijnen. Ga voor meer informatie naar onze website op: **www.zebra.com/environment**

Polski (pl): Nie należy wyrzucać tego produktu z niesegregowanymi odpadami komunalnymi. Ten produkt nadaje się do recyklingu. Powinno się go poddawać recyklingowi zgodnie z lokalnymi normami. Aby dowiedzieć się więcej, odwiedź naszą witrynę internetową: **www.zebra.com/environment**

Português (pt): Não descarte este produto em lixo comum. Este produto é reciclável e deve ser descartado de acordo com as regulamentações locais. Para obter mais informações, visite o nosso site na Web: **www.zebra.com/environment**

Românesc (ro): Nu aruncați acest produs la deșeuri menajere nesortate. Acest produs este reciclabil și trebuie reciclat în conformitate cu standardele locale. Pentru mai multe informații, consultați site-ul nostru web la: **www.zebra.com/environment**

Slovenčina (sk): Tento produkt nevyhadzujte do netriedeného komunálneho odpadu. Produkt je recyklovateľný a je potrebné ho recyklovať v súlade s miestnymi predpismi. Bližšie informácie nájdete na našej webovej stránke na adrese:
www.zebra.com/environment

Slovenski (sl): Tega izdelka ne odlagajte med nesortirane komunalne odpadke. Izdelek je primeren za reciklažo in ga je treba reciklirati v skladu z lokalnimi standardi. Za več informacij obiščite našo spletno stran na naslovu: **www.zebra.com/environment.**

Svenska (sv): Kasta inte produkten i osorterade kommunala sopor. Produkten kan återvinnas och återvinning bör ske enligt lokala föreskrifter. För mer information, besök vår webbplats på:
www.zebra.com/environment

Türkçe (tr): Bu ürünü ayrıştırılmamış belediye atık konteynerlerine atmayın. Bu ürün geri dönüştürülebilir ve yerel standartlar uyarınca geri dönüştürülmelidir. Daha fazla bilgi için lütfen aşağıdaki adresten web sitemizi ziyaret edin:
www.zebra.com/environment

한국 (Korea)

이 기기는 가정용(B급) 전자파 적합기기 로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

The equipment is for home use (Class B) and has acquired electromagnetic conformity registration, so it can be used not only in residential area but other areas as well.

해당 무선설비기기는 몬용충 전파츈신 가능성이 있으므로 인명 안전과 관련된 서비스는함 수없습니다.

This radio device is not allowed to be used for human safety since it has possibility of radio interference during operation.

United States of America

FCC Compliance

This device complies with Part 15 rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B Digital Devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the product manuals, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, the user is encouraged to do one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced RF service technician for help.

IMPORTANT

1. The radio must be installed with a minimum 20 cm separation between the user and the antenna.
2. The radio must not be co-located or used in simultaneous transmitting condition with another radio.
3. The host system shall have a label to indicate that the system contains a certified module.
4. An example is "Contains FCC ID : XXXXX-XXXXXXXX , IC ID: XXXXX-XXXXXXX".
5. The radio is for indoor use only in the 5150-5250 GHz frequency range.

The user is cautioned that any changes or modifications not expressly approved by Zebra Technologies could void the user's authority to operate the equipment. To ensure compliance, this printer must be used with fully shielded communication cables.

Estados Unidos Mexicanos (Mexico)

Este equipo ha sido diseñado para operar con las antenas que enseguida se enlistan y para una ganancia máxima de antena de [3.66] dBi. El uso con este equipo de antenas no incluidas en esta lista o que tengan una ganancia mayor que [3.66] dBi quedan prohibidas. La impedancia requerida de la antena es de [50] ohms.

Antenna Information:

- Type = Patch
- Gain = 3.66dBi @ 2.4GHz
- Gain = 3.19 dBi @ 5GHz
- Impedance = 50 ohms

WLAN specifications:

802.11 b
- 2.4 GHz
- DSSS (DBPSK, DQPSK and CCK)
- RF power 17.77 dBm (EIRP)

802.11 g
- 2.4 GHz
- OFDM (16-QAM and 64-QAM with BPSK and QPSK)
- RF power 18.61 dBm (EIRP)

802.11 n
- 2.4 GHz
- OFDM (16-QAM and 64-QAM with BPSK and QPSK)
- RF power 18.62 dBm (EIRP)

802.11 a/n
- 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz
- OFDM (16-QAM and 64-QAM with BPSK and QPSK)
- RF power 17.89 dBm (EIRP)

802.11 ac
- 5.15-5.25 GHz, 5.25-5.35 GHz, 5.47-5.725 GHz
- OFDM (16-QAM and 64-QAM with BPSK and QPSK)
- RF power 13.39 dBm (EIRP)

Bluetooth 4.1 + Low Energy (LE)
- 2.4GHz
- FHSS(BDR/EDR), GFSK(Bluetooth Low Energy)
- RF power 9.22 dBm (EIRP)

Bluetooth Classic + Low Energy (LE)
- 2.4GHz
- FHSS(BDR/EDR), DSSS (Bluetooth LE)
- RF power 9.22 dBm (EIRP)
- FHSS(BDR/EDR), DSSS (Bluetooth LE)
- RF power 9.22 dBm (EIRP)

RFID M6e Radio Module
- 865-928 MHz
- FHSS
- RF power 27.893 dBm

Taiwan

一般設備(低功率電波輻射性電機管理辦法第12、14條)

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率，加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信低功率射頻電機需忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

避免電波干擾，本器材禁止於室外使用5.25-5.35秭赫頻帶。 低功率電波輻射性電機管理辦法。

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

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避免電波干擾，本器材禁止於室外使用5.25-5.35秭赫頻帶。

限用物質含有情況標示聲明書

設備名稱：打印機 Equipment name: Printer	型號（型式）：ZT411, ZT421 Model (Type): ZT411, ZT421					
單元 Unit	有毒/有害物质或元素 (Toxic/Hazardous Substances or Elements)					
	铅 (PB)	汞 (Hg)	镉 (CD)	六價 鉻 (CR6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
外殼 (Enclosure)	–	O	O	O	O	O
電路板 (PCBA)	–	O	O	O	O	O
馬達 (Motor)	–	O	O	O	O	O
打印頭 (Print Heads)	–	O	O	O	O	O
配件 (Accessory)	–	O	O	O	O	O

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。
Note 1: "Exceeding 0.1 wt%" and "exceeding 0.01 wt%" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. "O" 係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2: "O" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. " –" 係指該項限用物質為排除項目。
Note 3: The "–" indicates that the restricted substance corresponds to the exemption.

公司資訊
台灣斑馬科技股份有限公司 / 台北市信義區松高路9號13樓

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