Application Note: ZSN328121-v1.

Date: November 23rd 2012.

Product(s) Affected: Print Station for Android™.

Task: Installation and application usage.

Overview.

Print Station for Android™ was designed to allow printing labels and receipts from smartphones and tablets to Zebra printers. Label and receipt templates can be designed using ZebraDesigner, a WYSIWYG application for Windows, then stored on the printer, smartphone or tablet.

Application features include:

- Discovering and pairing with Zebra printers via a Bluetooth, WLAN or USB connection.
- Retrieving and displaying a list of document templates (formats), stored either on the Android device or on the printer.
- Using document templates to generate on-screen prompts allowing data entry at print time.
- Using the camera on the device to scan barcodes for data entry.

Supported Zebra Printers

The following printer models using the ZPL command language.

- **Mobile:** QLn series.
- **Desktop:** G-Series, HC100, TLP/LP 2824 Plus.
- **High-Performance/Midrange:** Xi4, XiIIIPlus, PAX4 series, ZM400/ZM600, S4M, 105SL, 105SLPlus ZT series, ZE series.
- **RFID:** RXi, R110PAX4, RZ400/RZ600.
- **Kiosk:** KR403.

Operating System Support

The application is supported on Android 3.2 and later.

Contents

- Installation.
- Using the application.
- Store formats on the Android device.
- USB cable requirements.
- Create formats.
- Design a format.
- Export a format.

Installation

The application can be downloaded and installed using one of two methods.

1. Download it from the Google Play™ Store.
    a. Using the Google Play™ Store app on your device, search for 'Zebra Technologies' or 'Print Station'.
    b. Click on Zebra Technologies Print Station in the search results and install the application.

2. Download and install the application from the Zebra Technologies website.
    a. During January 2013 Print Station will be available from the link below. Until then Print Station can be downloaded from the Google Play™ Store.
    b. Using the web browser on your Android device, go to www.zebra.com/printstationapp and click on the link to download the application to your device.
    c. Browse to where the PrintStation.apk file is and tap it to install it.

Using the application

1. The installation will add an icon on the screen (figure 1). Tap the Print Station icon to launch the application.
2. **Printer Discovery**
    a. The first time the application is used it will automatically search for printers using all communication methods that are enabled on the device, WLAN, Bluetooth and USB (figure 2).
    b. Discovered devices will be listed for selection (figure 3). Note all Bluetooth devices are discovered.
    c. When the application is launched after its initial use it will attempt to retrieve formats from the last connected printer (figure 4). If the printer is not connected an error will be displayed and it is necessary to rediscover printers using the 'Find Printer' option from the menu (figure 5).

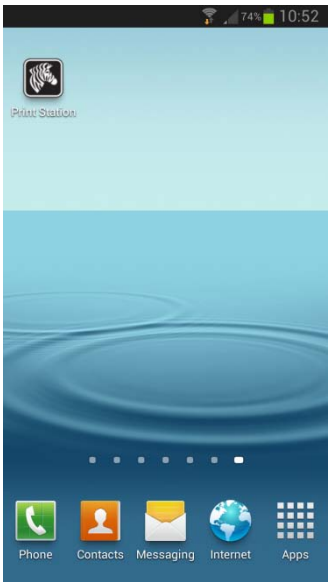


Figure 1

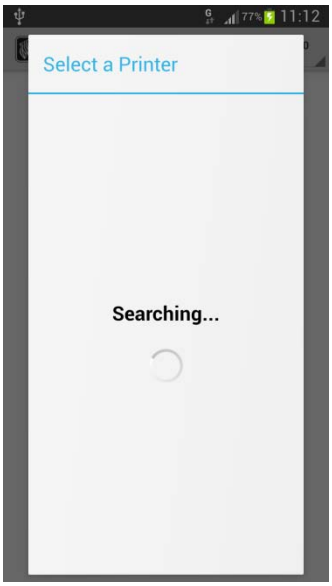


Figure 2

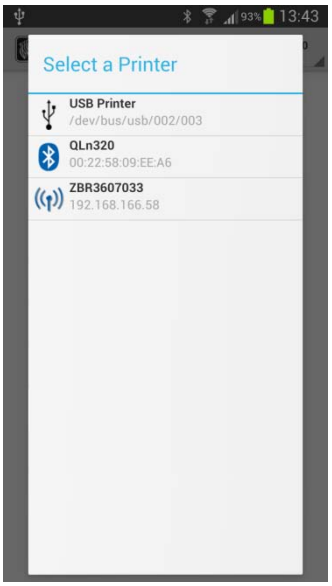


Figure 3

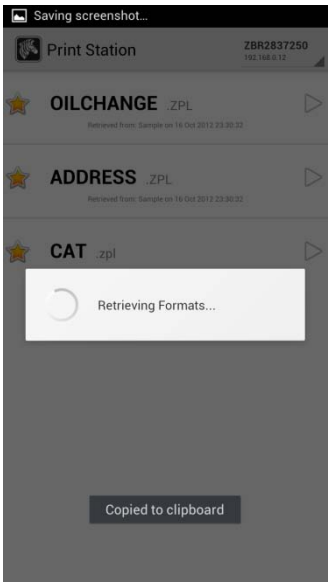


Figure 4

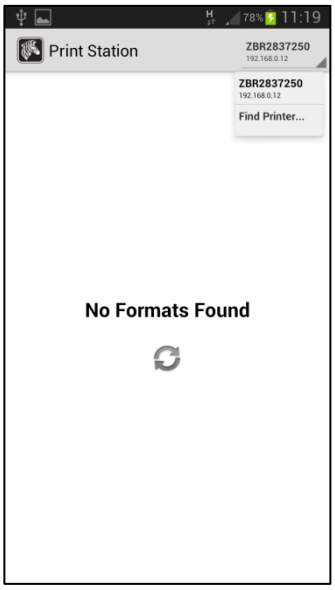


Figure 5

Figure 6

3. **Connect to a printer**
    a. From the list of discovered devices (figure 3), tap one to connect to it.
    b. If it's a network printer, the application will automatically connect to the printer and retrieve a list of available formats stored on the printer and on the Android device.
    c. If it's a Bluetooth printer, you will be prompted to pair the devices. Some Zebra printers must be configured to use a PIN. Refer to the printer's user guide on how to configure a PIN. Once the printer has been successfully paired, the application will complete the connection and retrieve a list of available formats stored on the printer and on the Android device.
    d. If it's a USB printer, a dialog box will be displayed as shown in figure 6. Click OK to complete the connection and retrieve a list of available formats stored on the printer and on the Android device.
4. **Select a format**
    a. After successfully connecting to a printer, the application will display a list of formats for selection (figure 7). Formats next to a gold star indicate the format is stored on the Android device. Formats next to a gray star indicate the format is stored on the printer.
    b. Tap a format name to select it. The application will retrieve any variable fields associated with that format (figure 8). The variable fields will then be displayed ready for data to be entered (figure 9).

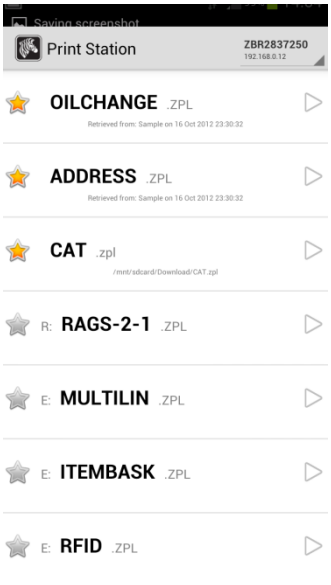


Figure 7

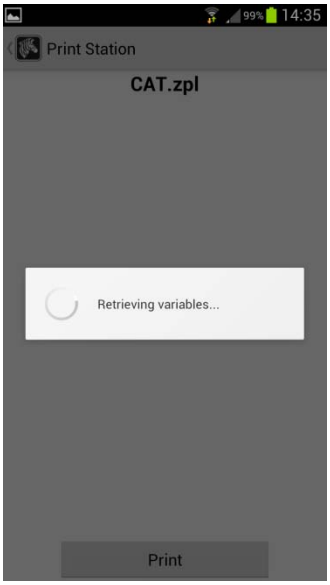


Figure 8

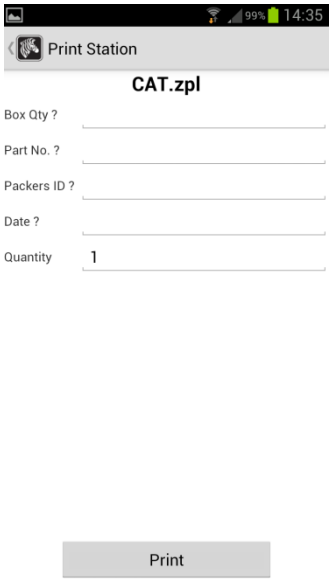


Figure 9

Figure 10

5. **Enter Data**
   a. Data for each field can be entered using the onscreen keyboard or by scanning a barcode using the camera on the device. Tap next to the field prompt to enter data for that field. The onscreen keyboard will appear and an icon will be displayed to the right of the field (figure 10).

      i. **Keyboard Method**: Use the onscreen keyboard to type in data. To allow input of international characters, additional keyboard input languages must be enabled on the Android device. This can be done via the '**Language and input**' section under '**Settings**' in the Android OS. See the manual for your device for further details. Printing the international characters can be achieved using a Unicode compliant font and a ZPL format containing the ^CI28 command.

      ii. **Scan Method:** Tap the icon to activate the camera on the device (figure 11). To scan a barcode, place the barcode within the rectangular viewfinder (figure 12). The barcode will be scanned automatically.
      The following barcodes are supported:-

- UPC-A and UPC-E
- EAN-8 and EAN-13
- Code 39
- Codabar
- RSS-14 (all variants)
- QR Code
- Code 93
- Code 128
- ITF
- Data Matrix
- Aztec
- PDF 417

   b. Repeat step (a) above as necessary for each field.
   c. Change the print quantity if required and tap the Print button.

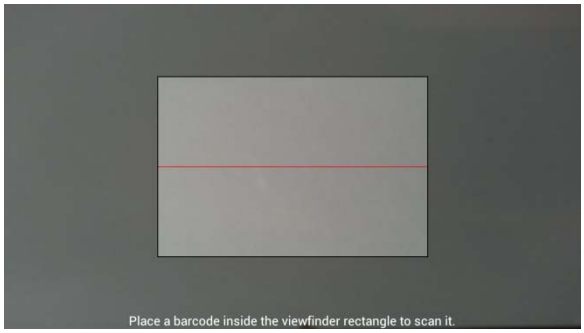


Figure 11

Figure 12

6. **Store formats on the Android device.**
    a. To enable formats stored on the Android device to be listed for selection, they should be copied to the Downloads folder on the Android device. The path is typically /storage/sdcard0/Download.

7. **USB Cable Requirements**
    a. USB On-The-Go (OTG) is a specification that allows USB devices including tablets and smartphones to act as a host. Print Station utilizes this technology and with an appropriate cable allows printing from an Android device to a Zebra printer via USB.
    b. A connection can be made directly between the Android device and Zebra printer (figure 13) or a USB hub can be connected to the Android Device. In this case other USB peripherals such as a keyboard and mouse can be connected to the hub along with the Zebra printer (figure 14). The keyboard and mouse could then be used to navigate and enter data within the Print Station application.
    c. The simplest method to achieve either scenario described above is to acquire an adapter cable to plug into the Android device. A common USB cable can then be used to connect between the adapter cable and printer ***or*** adapter cable and USB hub. Use a second common USB cable to connect the printer to the USB hub. See the following table for cable and connection information. Note Zebra Technologies does not supply adapter cables.

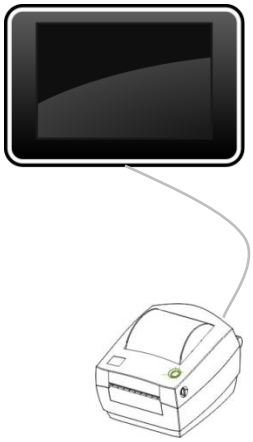


Figure 13. Scenario 1

Figure 14. Scenario 2

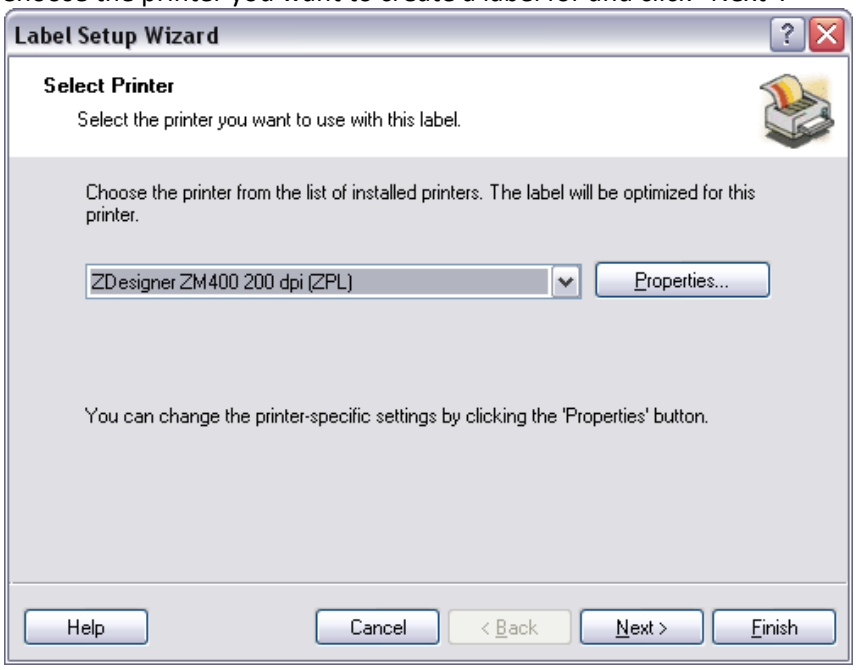
Common USB Cables		
Type-A Plug	Type-B Plug	Mini Type-B Plug
Scenario 1		
Connect to the adapter cable.	Connect to the printer (Tabletop/Desktop printer)	Connect to the printer (Mobile printer)
Scenario 2		
Cable 1: Connect to the adapter cable. Cable 2: Connect to the USB hub.	Cable 1: Connect to the USB hub. Cable 2: Connect to the printer. (Tabletop/Desktop printer)	Cable 2: Connect to the printer. (Mobile printer)
Adapter Cable		
Type-A Receptacle	Micro Type-B Plug	

8. **Create Formats**
    a. Using the free ZebraDesigner™ label design application it's easy to create, and deploy application specific labeling solutions. There are three steps to get started :–
        - **Design a label**
        - **Export the label**
        - **Print from Print Station application.**
    b. Click here to visit our website for further information and to download the software.

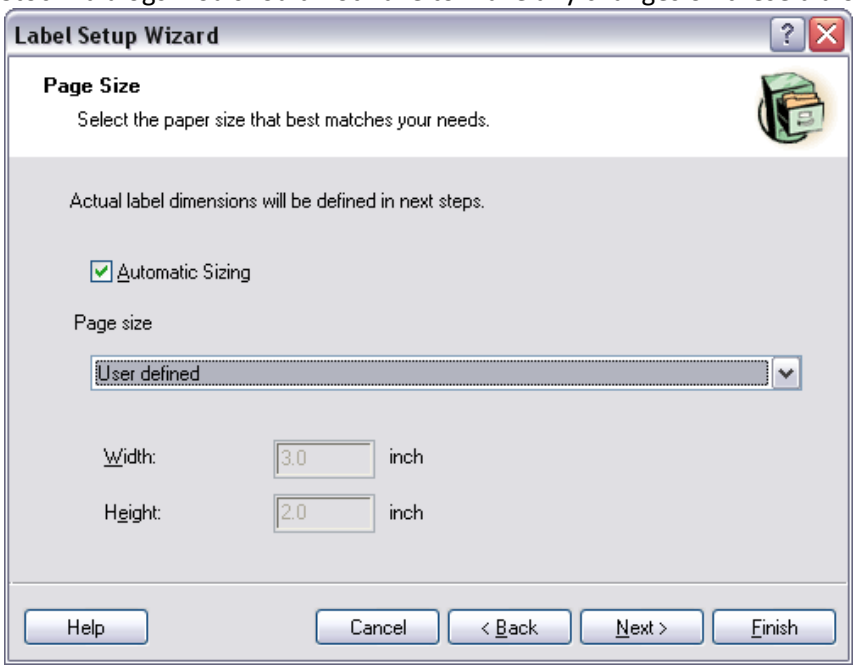
9. **Design a Format**
    a. The example shown here creates a label using both fixed and variable fields.
    b. First, install the ZebraDesigner™ (or ZebraDesigner Pro™) label design software. During the installation, you will be requested to install a printer driver – choose a driver that matches the printer model you'll be printing to. See the ZebraDesigner User Guide for more information on installing and using the software.
    c. Once the label design software and driver are installed run the software. The package will display the "Welcome Wizard".

    d. Click the "Create a new label" radio button, and then click "Finish".

e. Choose the printer you want to create a label for and click “Next”.

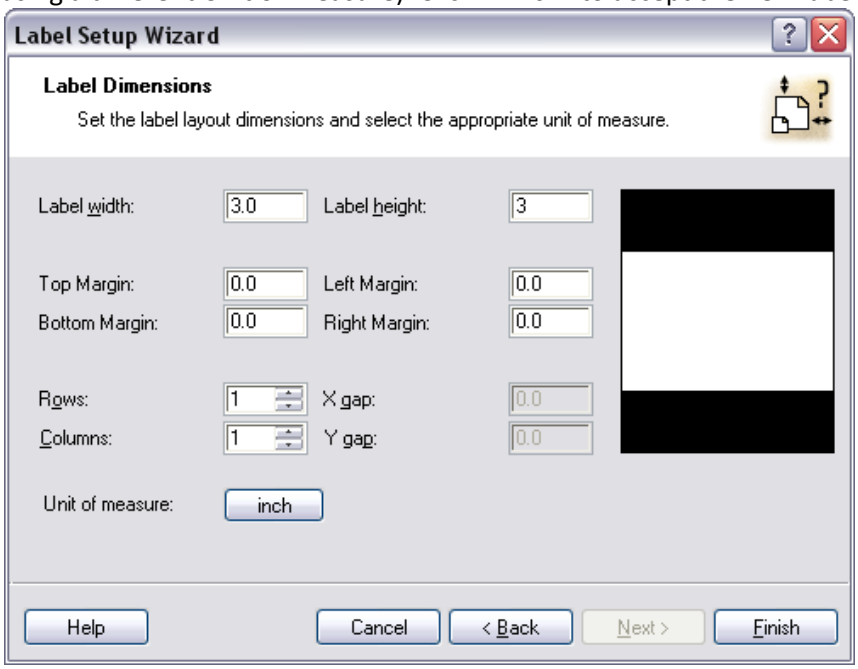


f. Click “Next “to define the label size. Click “Next” to move through the “Page Size” and “Select Stock” dialogs. You should not have to make any changes on these dialogs.

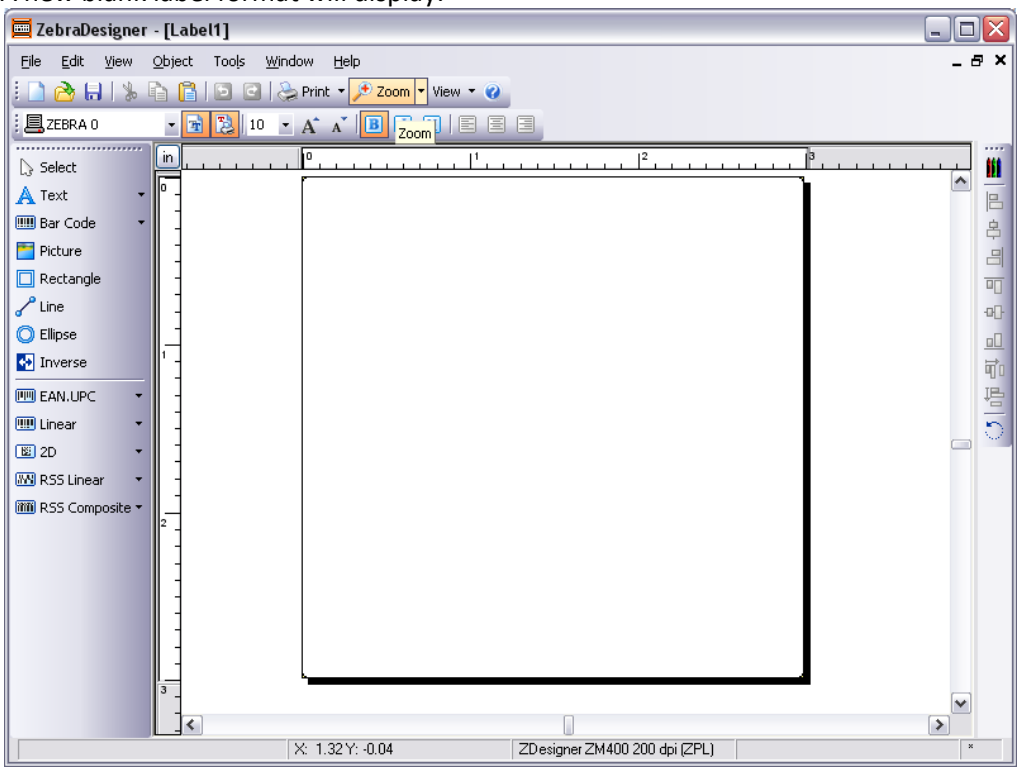


g. Click “Next” to move through the “Label Layout” dialog.

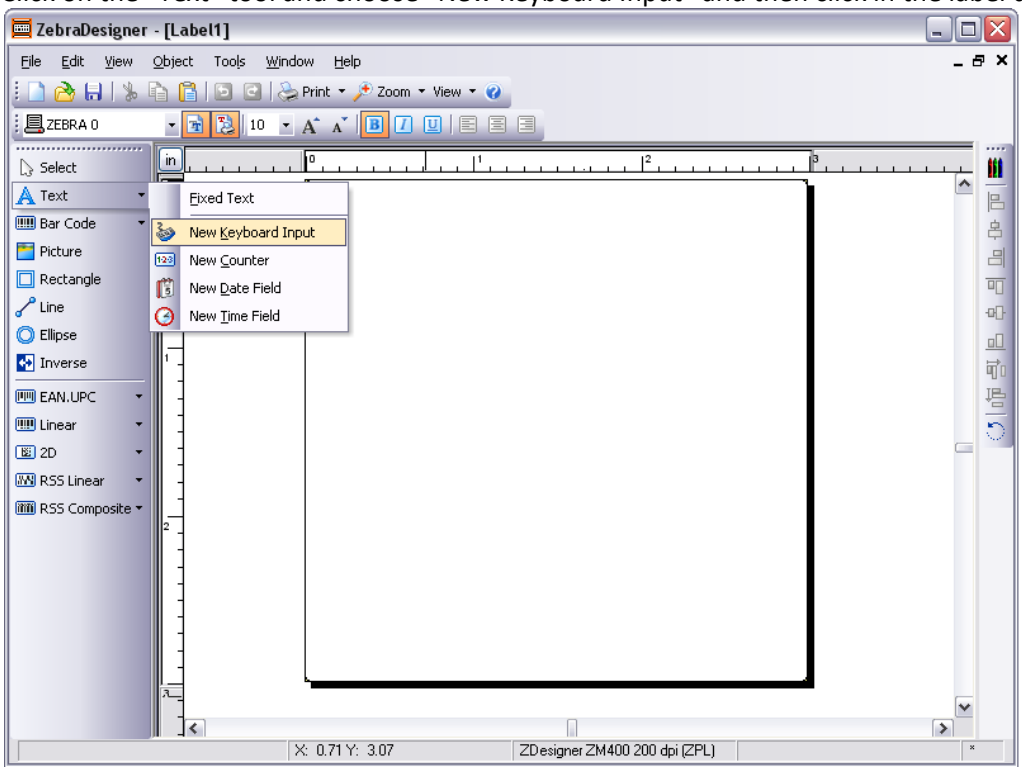
h. On the “Label Dimensions” dialog, change the “Label Height” to 3 (or the equivalent if you are using a different Unit of Measure). Click “Finish” to accept the new label design.



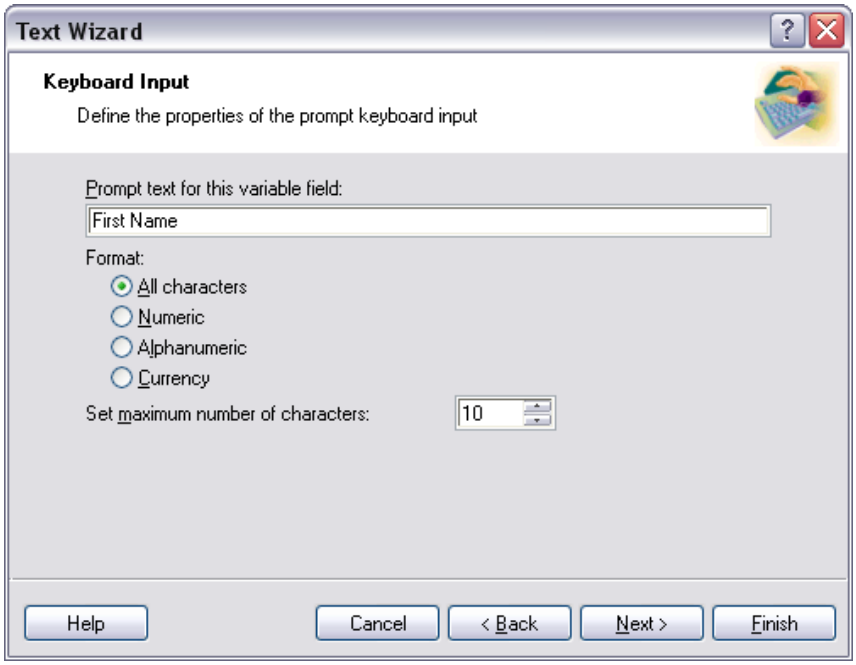
i. A new blank label format will display:



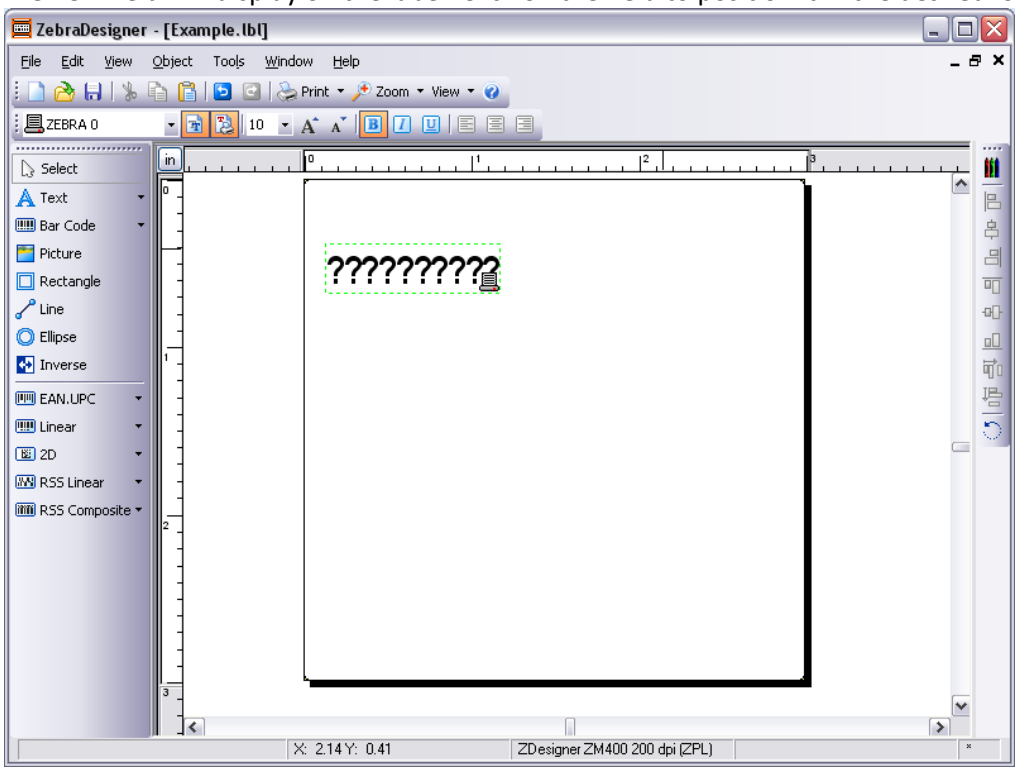
j. Click on the "Text" tool and choose "New Keyboard Input" and then click in the label design area:



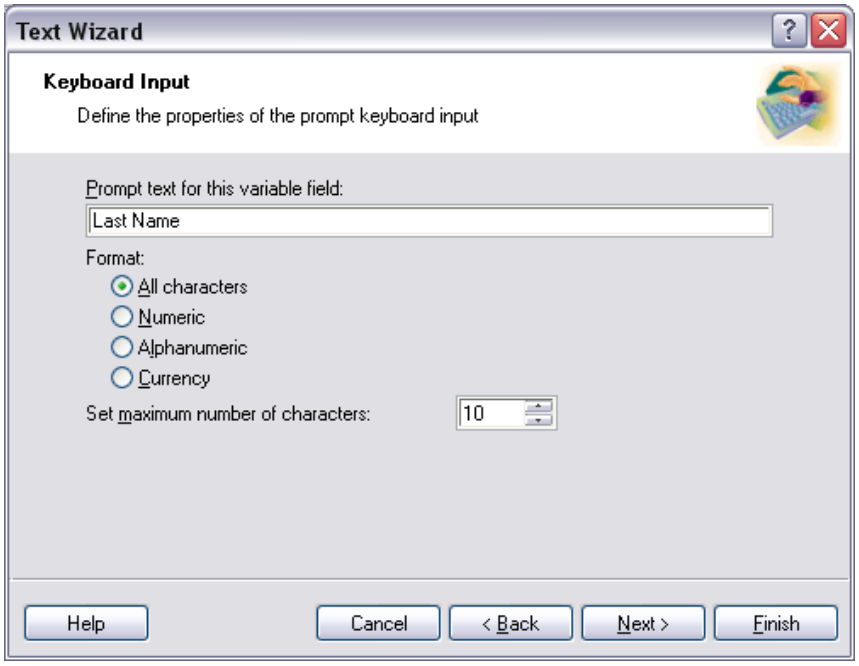
k. The “Keyboard Input” Wizard dialog will appear. Enter “First Name” for the Prompt and click the “Finish” button:



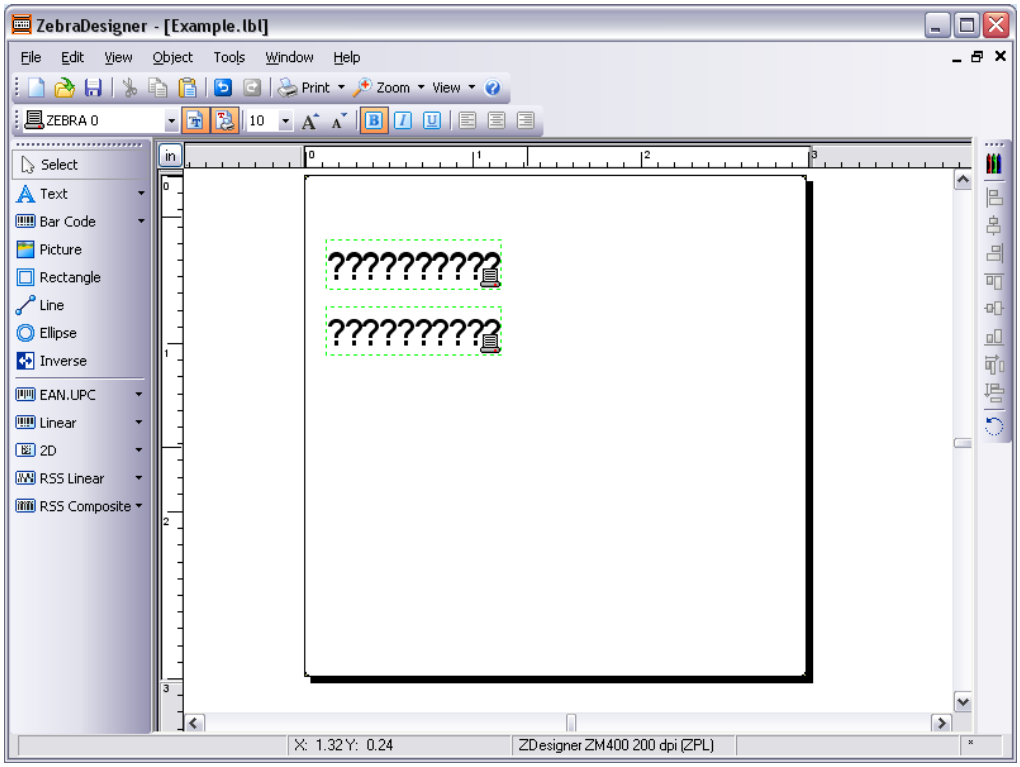
l. The new field will display on the label. Click on the field to position it in the desired location:



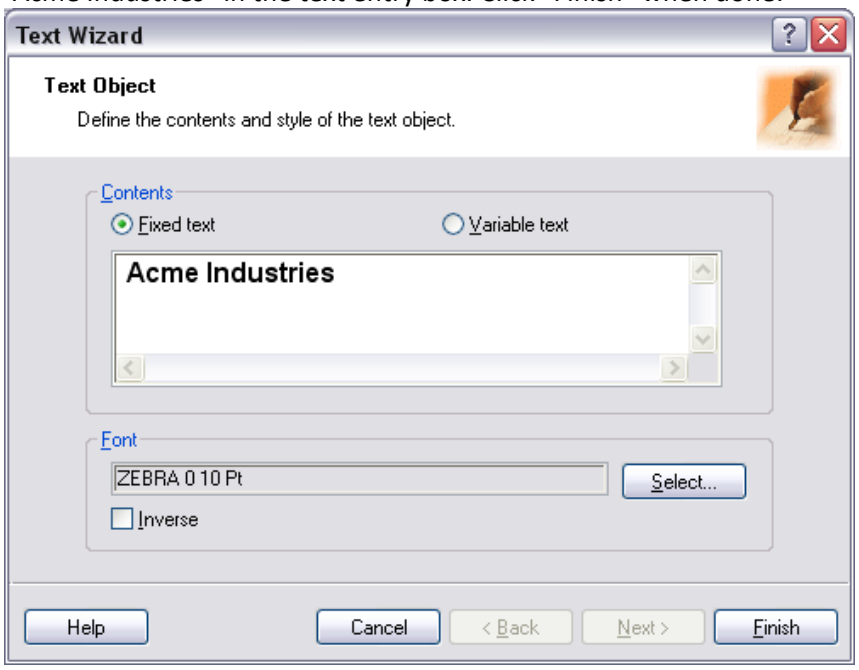
m. Repeat these steps to create a second “Keyboard Input” field, with the prompt being “Last Name”.



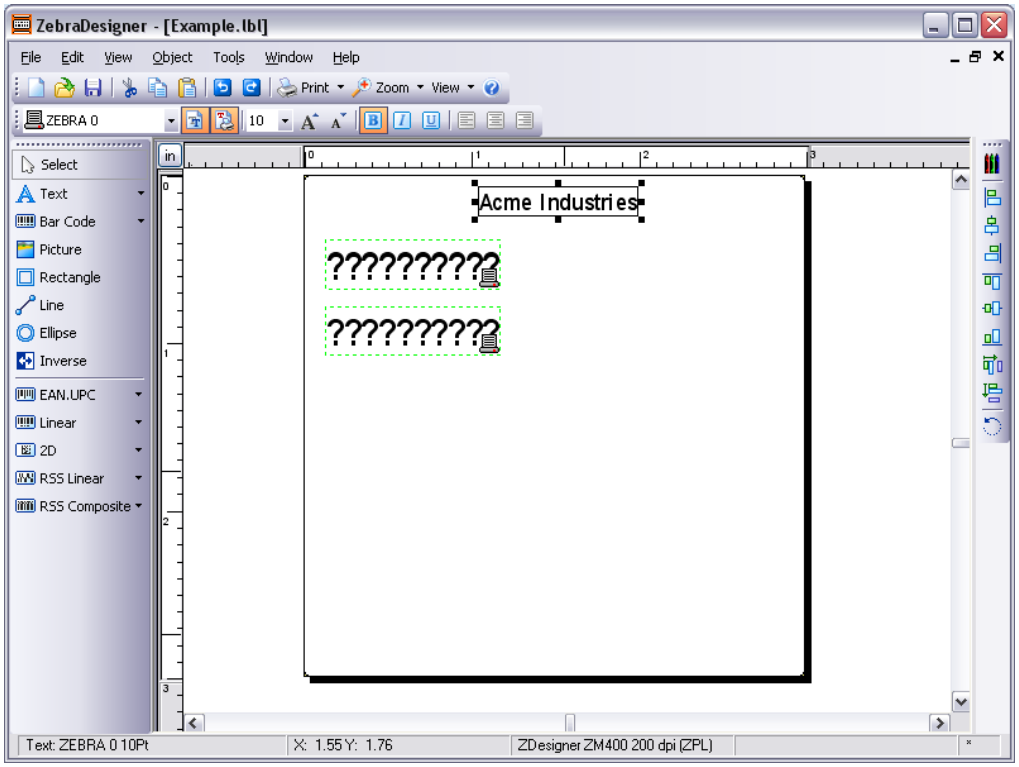
n. Place this second field on the label:



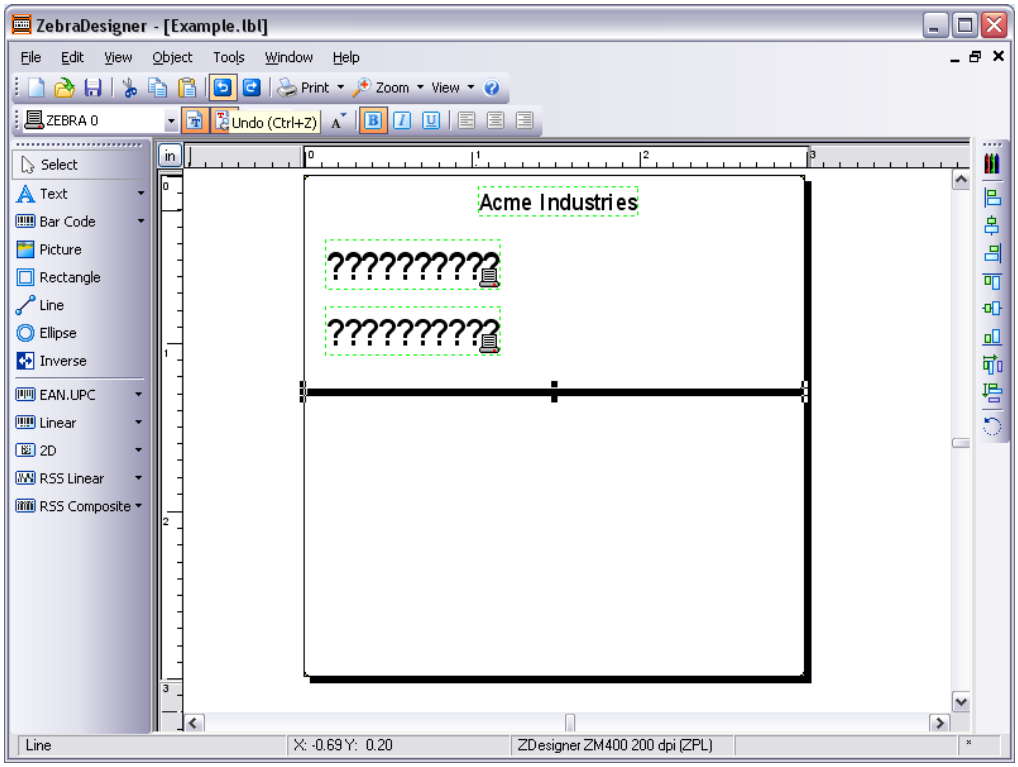
o. Click on the “Text” tool and then on the label to create a static – or fixed field. Type the name “Acme Industries” in the text entry box. Click “Finish” when done:



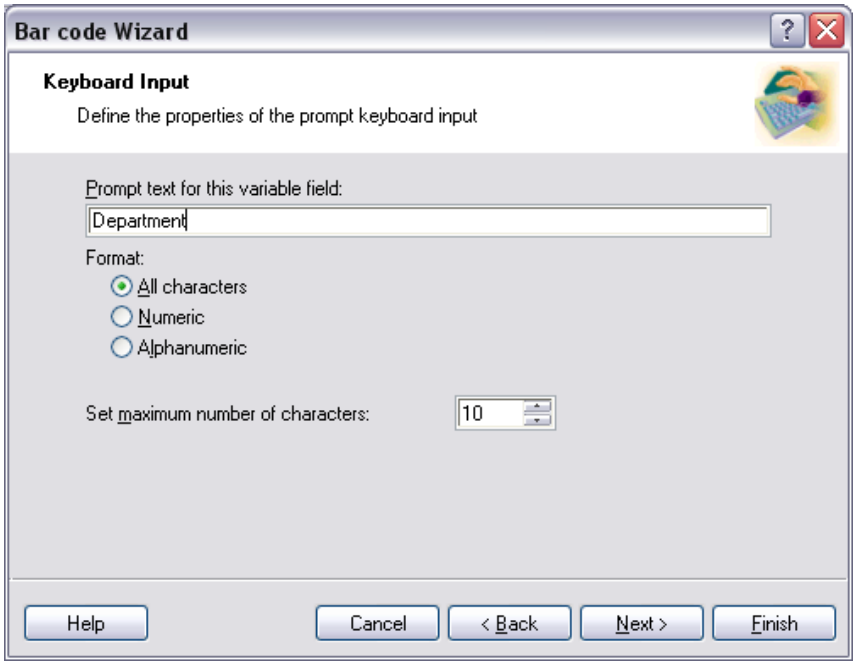
p. Place and center the field on the label.



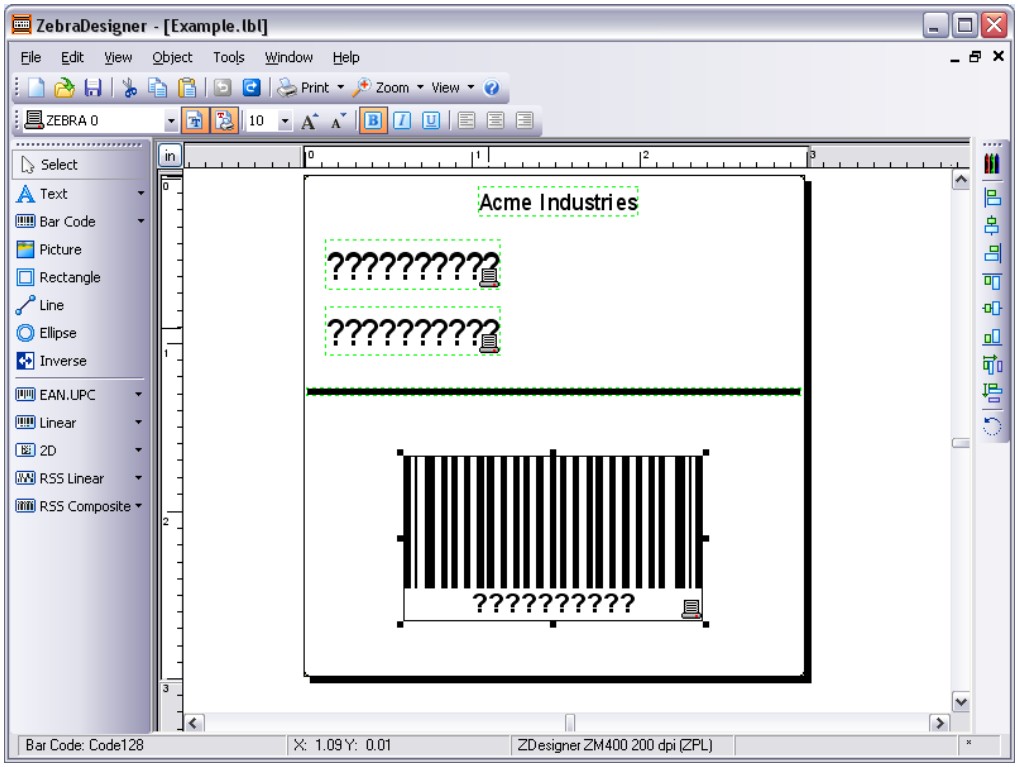
q. Click on the “Line” tool and create a horizontal line across the label.



r. Click on the “Bar Code” tool and choose “New Keyboard Input” – and then click on the label design area. The “Keyboard Input” Wizard dialog will appear. Enter “Department” for the Prompt and click the “Finish” button:



s. Place the field on the label.

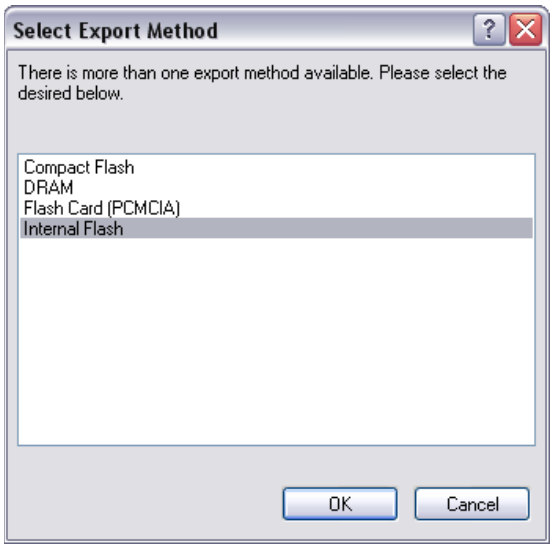


t. The label design is now complete. Click File>Save to save the label- name it “Example” For purposes of this Tutorial, use the name “Example” - in practice you can use any ASCII based 8 character name.

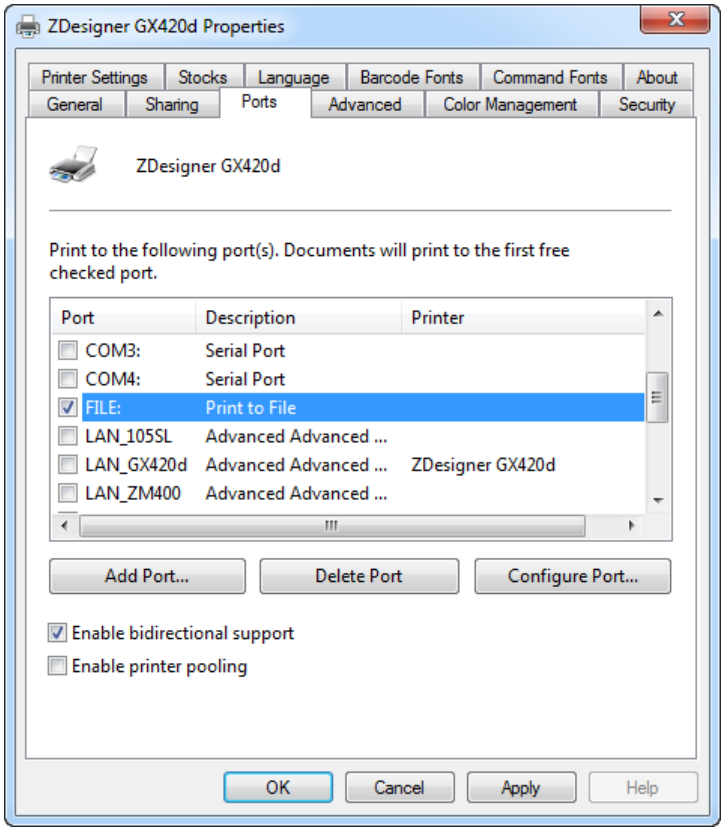
10. **Export the Format**

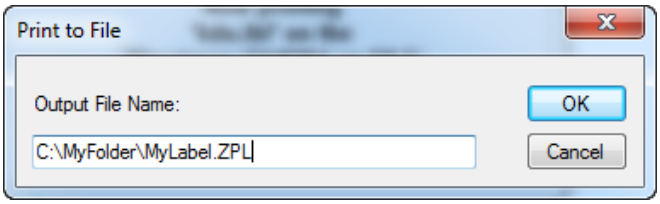
    a. Now the format can be exported to the printer or to a file and then transferred to the Android device.

        i. **To store the format on the printer**: Click File>Export to printer. The "Select Export Method" dialog box will be displayed. Select "Internal Flash" and click "OK". The label format will be exported to the printer and stored in Flash memory.



        ii. **To store the format on the Android Device**: Configure the ZDesigner driver to print to file as shown in the image on the next page. Click File>Export to printer. The "Select Export Method" screen will display. Select "Internal Flash" and click "OK". The print to file dialog box will be displayed as shown in the image on the next page. Enter a path and file name including the .ZPL extension and click "OK". The format will be saved at the specified path. Connect your Android device to the computer and transfer the format to the Downloads folder on the Android device.


ZDesigner GX420d Properties
Printer Settings
Stocks
Language
Barcode Fonts
Command Fonts
About
General
Sharing
Ports
Advanced
Color Management
Security
ZDesigner GX420d
Print to the following port(s). Documents will print to the first free checked port.
Port
Description
Printer
COM3:
Serial Port
COM4:
Serial Port
FILE:
Print to File
LAN_105SL
Advanced Advanced ...
LAN_GX420d
Advanced Advanced ...
ZDesigner GX420d
LAN_ZM400
Advanced Advanced ...
Add Port...
Delete Port
Configure Port...
Enable bidirectional support
Enable printer pooling
OK
Cancel
Apply
Help


Print to File
Output File Name:
C:\MyFolder\MyLabel.ZPL
OK
Cancel