

```

GetDriverName
Description: Retrieves the printer name from the printer driver.
Syntax: void GetDriverName(
Parameters: deviceName string
Returns: driverName out string
          none [in ]serial number of ZXP Printer
           [out] name of ZXP Printer assigned to deviceName

GetJobCountInfo
Description: Returns selected information regarding a printer.
Syntax: short GetJobCountInfo(
Parameters: jobsPending out int jobsPending,
             jobsActive out int jobsActive,
             jobsComplete out int jobsComplete,
             jobErrors out int jobErrors,
             jobsTotal out int jobsTotal)
Returns: jobsPending [out]number of pending jobs
          jobsActive [out]number of active jobs
          jobsComplete [out]number of completed jobs
          jobErrors [out]number of jobs with errors
          jobsTotal [out]total number of jobs
          error code (see Appendix A)

GetJobList
Description: Returns a list of the printer's jobs.
Syntax: short GetJobList( out object jobList )
Parameters: jobList [out]string array containing current
               jobs each string item will be form
               "actionID, uuid, status"
Returns: error code (see Appendix A)

GetJobStatus
Description: Returns a job's status.
Syntax: short GetJobStatus(
Parameters: int
             out string
             out int
             out int
             out int
             out string
             out string
             out string
             actionID,
             printingStatus,
             errorCode,
             copiesCompleted,
             copiesRequested,
             magStatus,
             contactStatus,
             contactlessStatus)

```

ZXP Series 1 and ZXP Series 3

Ubuntu Driver User's Manual



Copyright Notice

© 2014 ZIH Corp.

This document contains information proprietary to Zebra Technologies Corporation. This document and the information contained within is Copyrighted by Zebra Technologies Corporation and may not be duplicated in full or in part by any person without written approval from Zebra.

While every effort has been made to keep the information contained within current and accurate as of the date of publication, no guarantee is given that the document is error-free or that it is accurate with regard to any specification. Zebra Technologies Corporation reserves the right to make changes, for the purpose of product improvement, at any time.

Trademarks

ZXP Series 1 and ZXP Series 3 are trademarks, and Zebra is a registered trademark of Zebra Technologies Corporation. All other trademarks or registered trademarks are marks of their respective holders.

Product Disposal



Product Disposal Information • 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 our web site at:
www.zebra.com/environment

Contents

1 • Getting Started	3
Introduction	3
Overview	3
Prerequisite	3
Installation Procedure	3
Extracting files using GUI	4
Installation Wizard	4
Prerequisite	4
Installing Ethernet ZXPS3 Driver	8
Extracting files using Terminal	9
Uninstall	10
2 • Setup	13
Printing Preferences	13
Device Settings	14
Card Setup	17
Encoding	19
About	20
Printer Properties	21
3 • Magnetic Encoding	25
Introduction	25
Magnetic Encoding Using Printer Properties	25
Prerequisite	25
Direct Encoding	28
Magnetic Encoding Using Open Office	28
Magnetic Encoding Using Libre Office	29
4 • Worldwide Support	33



Getting Started

Introduction

The document provides information on installation of ZXP Series 1 and ZXP Series 3 Printer on Ubuntu 32-bit and 64-bit operating systems.

Overview

The Zebra ZXP Series 1 and ZXP Series 3 printer driver for Linux can support color printing, dual side printing, magnetic encoding, error scenarios, and provides information about the printer and ribbon details. It can also provide direct communication with the printer through the **Printer Properties** page and **Tools** dialog.

Prerequisite

The Zebra ZXP Series 1 and ZXP Series 3 printer driver for Linux supports, and has been tested on, the following distributions of Linux:

- Ubuntu 12.04 32 bit
- Ubuntu 12.04 64 bit

Extracting files using GUI

To install this Zebra ZXP Series 3 Printer Driver 0.0.0.xx for Linux by means of GUI, the user needs to be a root user.

- Click on the Zebra ZXP3 Series Card Printer Driver-0.0.0.xx-Linux-x86-Install.tar archive file to untar the setup for installation of the driver to a desired directory location.
[In the Firefox web browser the setup will be downloaded inside the download. Right click on *Open Containing folder*; Right click on *Open with Archive Manager*; Right click on *Extract* or click *Extract*; select the desired location; click *Extract*]
- Switch to the directory location where the setup has been un-tared and double click on the binary to install the driver.

Installation Wizard

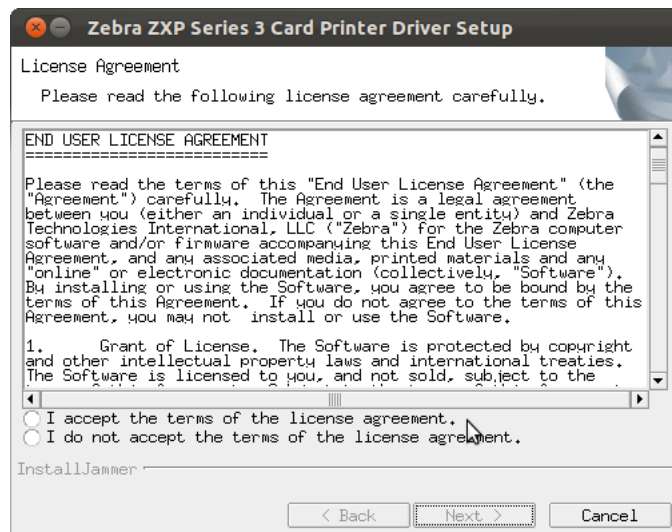
Prerequisite

The installation can be performed only in Administrator mode. Type the Administrator password when prompted.

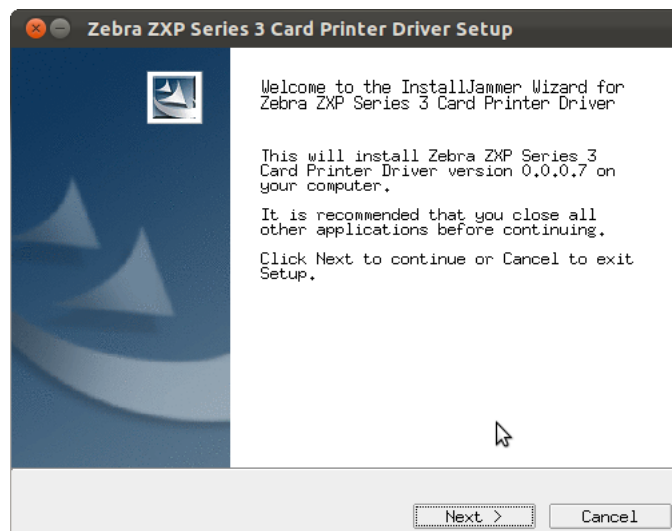
- Double click on the un-tared binary to initiate the installation of the driver.
- To install the driver, click *Yes* in the screen displayed after the user double clicks the driver setup. On clicking *Yes*, the Zebra Printer Driver Setup Wizard License Agreement page appears. Click *No* on the same screen to cancel the installation.



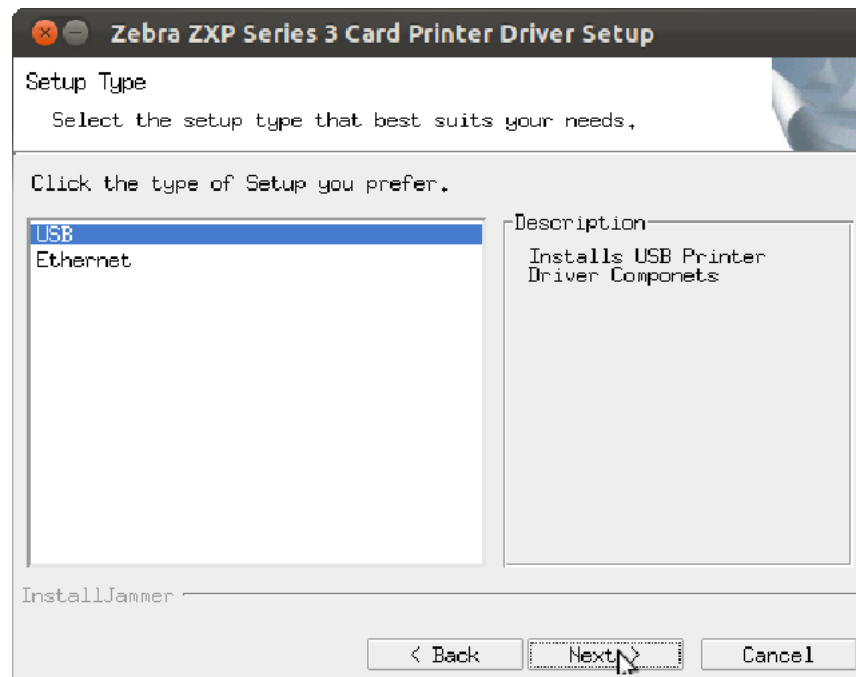
- In the license agreement screen there are two radio buttons which are not selected by default. To proceed with installation, click on the radio button next to "I accept the terms of the license agreement."
- Click *Next*.



- In the Zebra Printer Welcome Page, click *Next* to continue with the installation, click *Cancel* to cancel the installation.



- The printer can be connected to the PC via a USB interface, or through Ethernet.

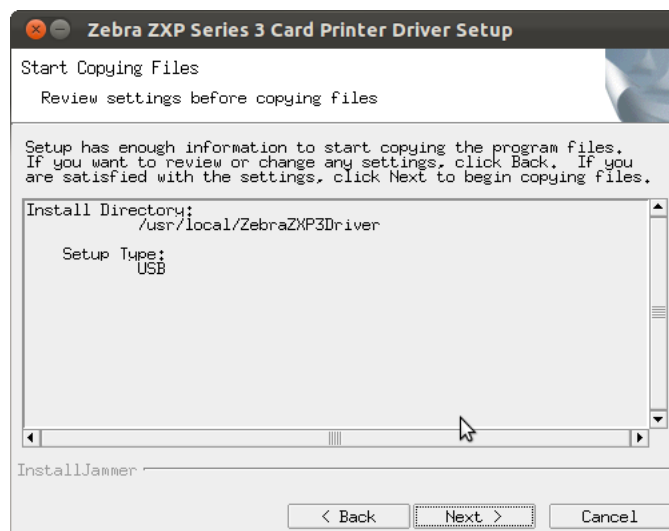


Installing the USB ZXP Series Printer

Select **USB** click *Next*.

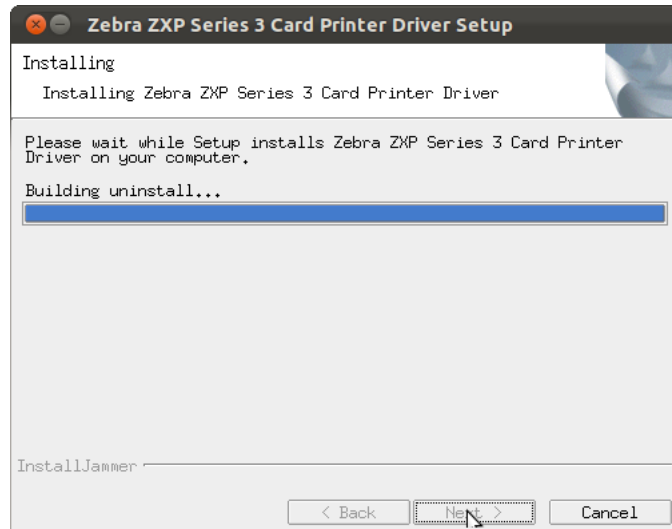
Note • Do not plug in the USB Printer before the Installation is complete.

The following screen will display the installation progress. After the installation is complete click *Next*.

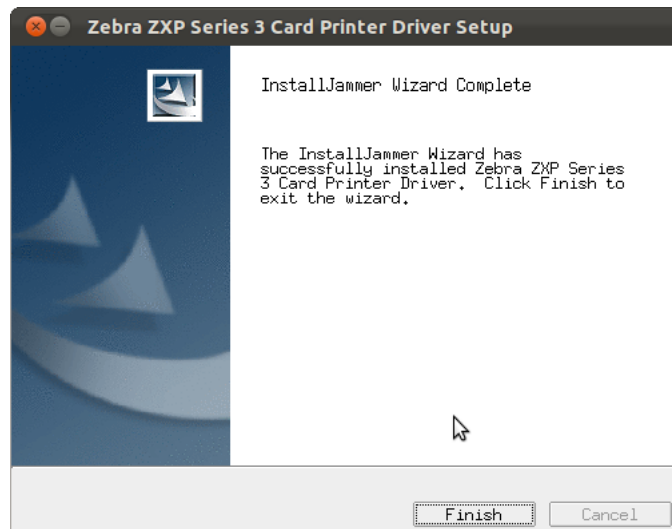


The files will be copied in to the appropriate directories.

- /usr/lib/cups/filter/rastertoexp3
- /usr/lib/cups/filter/pstoexp3ps
- /usr/lib/cups/backend/exp3usb
- /usr/local/ZebraZXP3Driver/



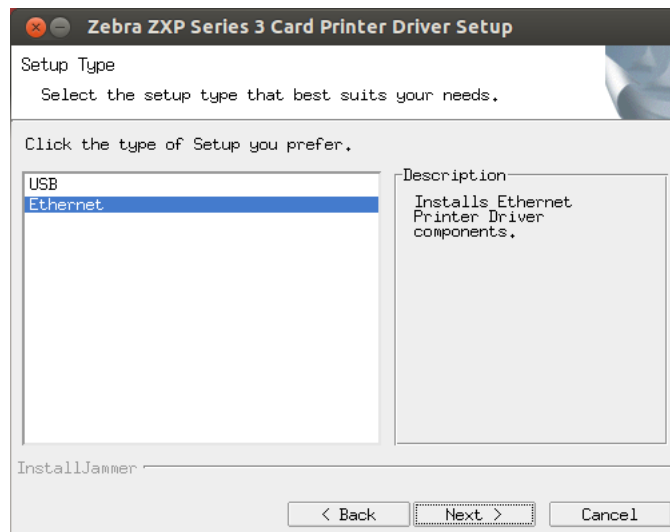
The final page shows that the driver has been installed successfully.



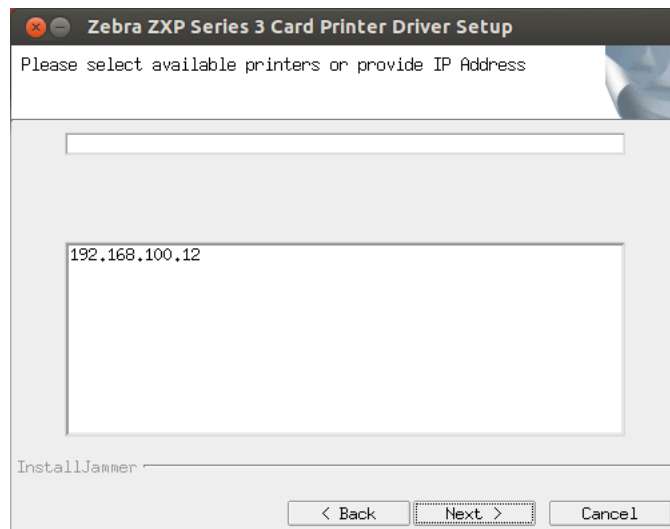
Click *Finish* to complete the installation and exit the Installer.

Installing Ethernet ZXPS3 Driver

Select Ethernet in the Setup type screen and click *Next*.



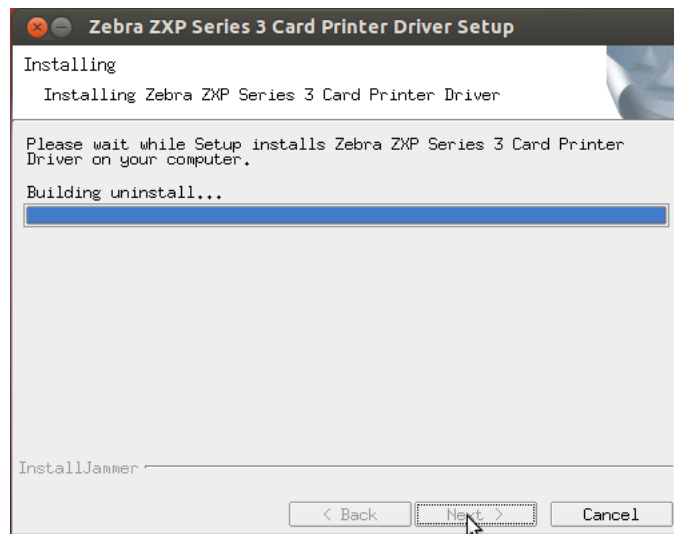
The next window will display the IP addresses of the connected ZXPS3 card printers.



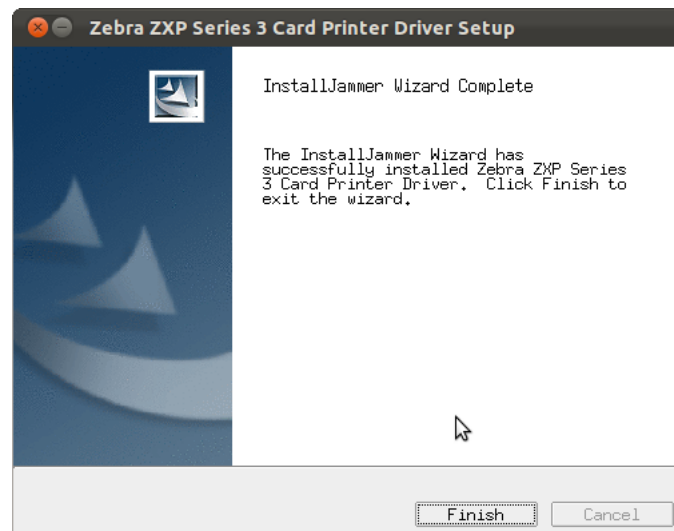
Select the IP address to add the printer.

The files will be copied in to the appropriate directories.

- /usr/lib/cups/filter/rastertoexp3
- /usr/lib/cups/filter/pstoexp3ps
- /usr/lib/cups/backend/exp3socket
- /usr/local/ZebraZXP3Driver/



The final page shows that the driver has been installed successfully.



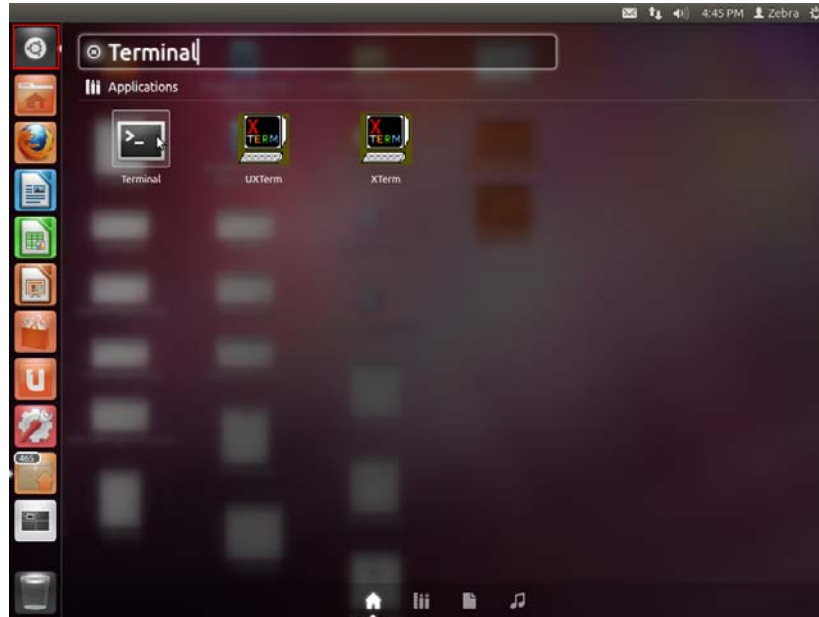
Click *Finish* to complete the installation and exit the Installer.

1 Getting Started

Extracting files using Terminal

Extracting files using Terminal

Click on the Ubuntu Wubi (marked in red in the image below). Type *Terminal* and click on the Terminal icon on the dashboard to launch Terminal.



Change the Directory to where the Zebra Linux Driver tar file is located:

(Zebra_ZXP3_Series_Printer_Driver-0.0.0.xx-Linux-xxxx-Install.tar).

Un-tar the Binary file using the following command:

```
tar -xvf Zebra_ZXP3_Series_Printer_Driver-0.0.0.xx-Linux-xxxx-Install.tar
```

This will extract the files under the folder Zebra_ZXP3_Series_Printer_Driver.

Run the Installation inside the extracted directory using the following command:

```
sudo ./Zebra_ZXP3_Series_Printer_Driver-0.0.0.xx-Linux-xxxx-Install.tar Install
```

Proceed with the installation using the setup wizard.

Uninstall

To Remove the Zebra ZXP Series 3 Printer Application:

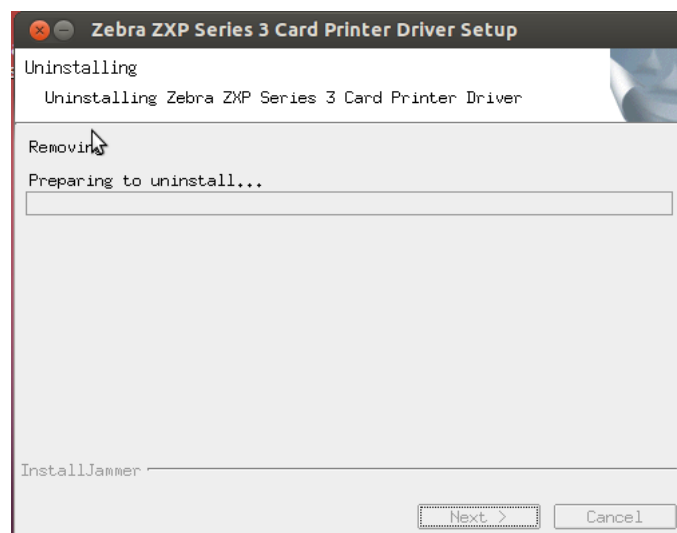
- Open the Terminal and change the Directory to `cd /usr/local/ZebraZXP3Driver`
- If you are not a super user, switch user to 'root' (`su`)
- Type the root password
- Run the uninstall binary (`/uninstall`)

To Remove the Zebra Series 3 Printer Driver from the Applications Menu.:

- Click on “Uninstall Zebra ZXP Series 3 Card Printer Driver” Link
- Type the root password
- Uninstall wizard opens



To uninstall the driver, click *Yes*. The Printer will be deleted from the system.





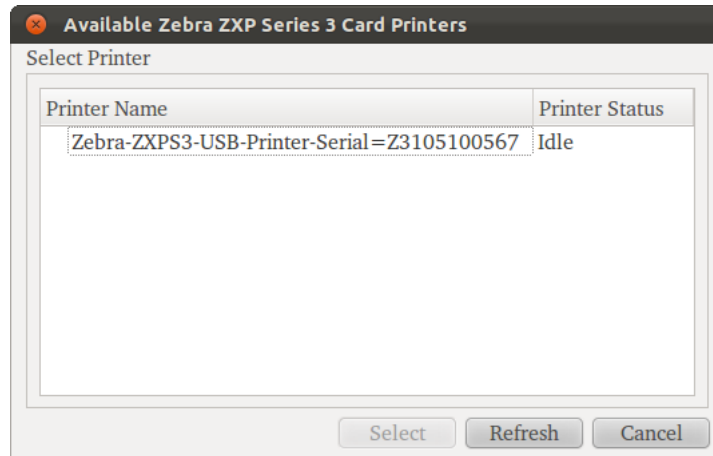
Note • The following instructions are for the USB interface. If you are using the Ethernet interface, the corresponding screens will refer to the Network Printer.

Printing Preferences

Click on the Ubuntu Wubi icon (marked in red in the image below). Type *Zebra* and click on the Zebra ZXP Series 3 Printer Driver Preferences icon on the dashboard to launch the printer preferences.

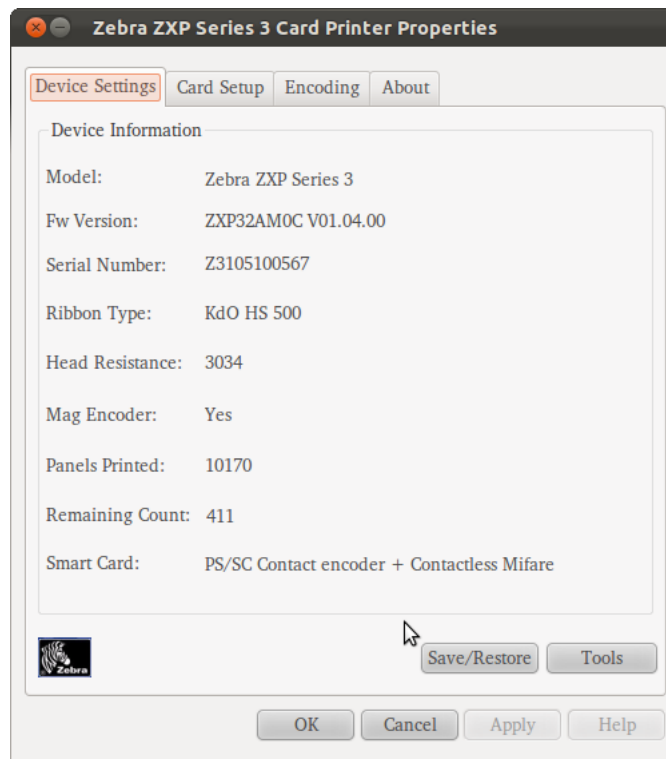


The Printer Properties application will launch and display all the available installed printers. Select the printer and click *Select* to open the Printer Preferences. Property pages of Zebra ZXP Series 3 printer can be viewed and the settings can be adjusted.



Device Settings

Displays printer information of a general nature. It includes the selection for 'Save/Restore' and 'Tools'.

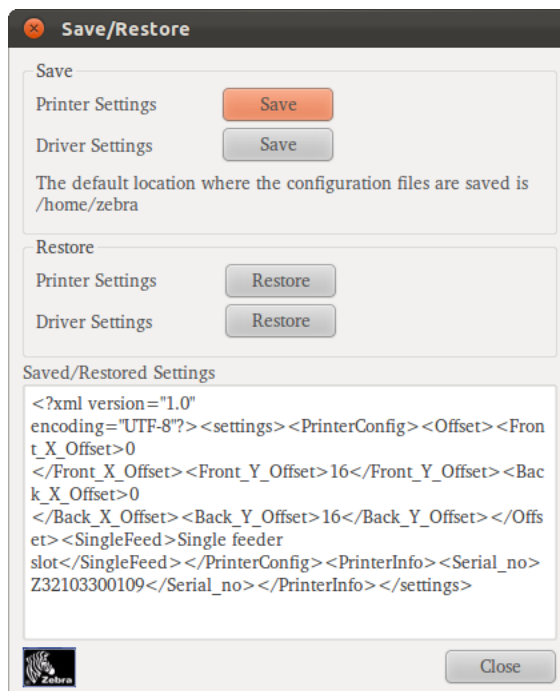


The Device Information includes:

- **Model:** Displays the Model number of the printer that has been connected.
- **Firmware Version:** Displays that current Firmware version that is available on the installed printer.
- **Serial Number:** Displays the Serial Number of the printer that is connected,
- **Ribbon Type:** Displays the type of ribbon that has been installed in the system.
- **Head Resistance:** Displays the value of print head resistance value of the printer that is connected.
- **Mag Encoder:** Displays is the Magnetic Encoder is installed printer.
- **Panels Printed:** Displays the total number of panels printed for the lifetime of the printer.
- **Remaining Count:** Displays the remaining card count for the ribbon installed. For monochrome ribbons, this will display 'Unknown'.
- **Smart Card:** Displays if the Smart Card Encoder is installed.

Save/Restore

Click on the Save/Restore button to save your printer and/or driver settings. You can later restore those saved settings. These settings can be saved in the user selected locations.



To Save Settings, click on the appropriate save button (Printer Settings or Driver Settings). Specify a location to save the file, enter file name and click *Save*.

To Restore Settings, click on the appropriate Restore button (Printer Settings or Driver Settings). Select the desired file, and click *Open*.

Tools

Click on the Tools button to test and communicate with the printer.

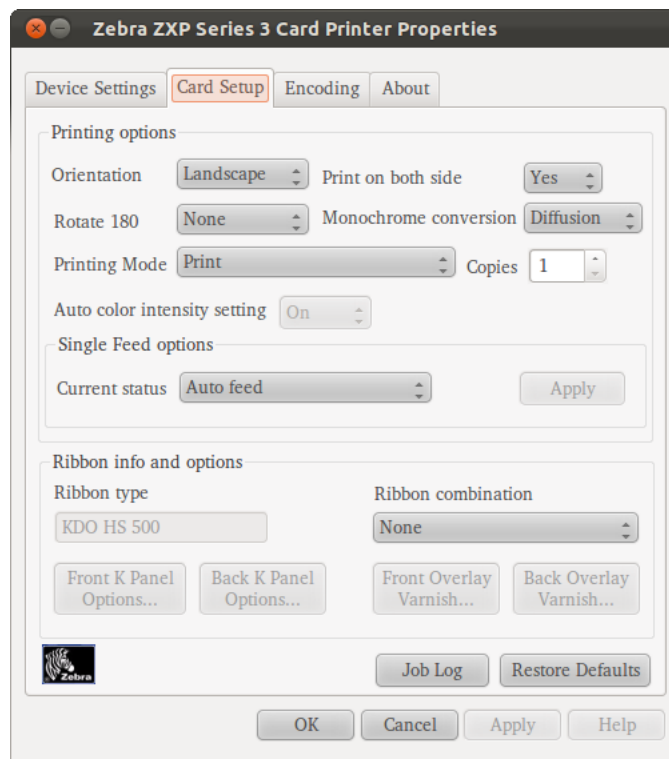
- In the **Command to Send to Printer** box, enter a printer command (without leading escape character) in the top edit box, and click *Execute* to send the command directly to the printer.
- **Print Test Cards:** Three test card types are available: Standard, Printer Parameters, and Encoder Parameters. Click on the Print button to print the test card.
- **Clean:** Click on the clean button to clean the printer's print head, cleaning rollers, and feeder rollers.
- **Offset Setting:** Enter the Front and Back X and Y direction offsets, and click on the Set Offsets button to apply the offsets for printing the card.
- **Firmware Download:** The Firmware Download dialog box is used to install the firmware downloaded from the Zebra. Click *Select File* and select the firmware file (BIN) from the Browse window. Click *Open* and select *Start Firmware Download* to install the firmware

- **Send File:** This command will allow a .prn (PRN file needs to be created for the ribbon type that is being used for printing)
- The .txt file option is disabled and not supported.

Note • The .prn file must be created with a Zebra printer driver using the same ribbon as present in the printer.

Card Setup

Card Setup tab allows the user to adjust selected card and print job parameters. This feature is not enabled if the printer does not have the magnetic encoder option which can be found in the Device Settings dialog.



- Printing options
 - Orientation: Selection for portrait or landscape printing.
 - Print on both sides: Selection for single-sided or dual-sided printing.
 - Rotate 180°: Selection for rotating the image 180°.
 - Monochrome Conversion: Specifies the method of monochrome conversion used in printing. Different selections have different effects on the way the image is printed.
 - Diffusion
 - Halftone Regular
 - Barcode

- Text Mode
- Printing Mode: Sets the type of printing required are:
 - Print
 - Encode only (Use this when magnetic encoding is the only function desired, printing will not occur).
 - Print and Encode on same side.
- Copies: Sets the number of copies of cards printed
- Auto Color Intensity Setting: Turns On or Off the Auto Color Intensity Setting.
- Single Feed options:
 - Current Status displays the current card feed method; choices are Card feeder, Single feeder slot, and Auto feed.
- Ribbon Info and Options
 - Ribbon type: It displays the type of ribbon that is installed in the printer.
 - Ribbon combinations: Are based on ribbon type; for example:
 - YMCKOK
 - YMCKO on Front, K on Back.
 - YMCKO on Front, YMCKO on Back
 - YMCKO
 - YMCKO on Front, YMCKO on Back.
 - YMCO on Front, K on Back

The Restore Defaults button to reset the settings to the original values.

Job Log

The Job Log is a utility that builds a database of card transactions in the printer's host computer. The Job Log records the data encoded on the card's magnetic stripe, together with date, time, and the printer's serial number.

- **Enable Logging:** If this box is checked, the logging feature is enabled.
- **Log File Definition -** Choose one of the following options:
 - If the “Create new log file each day” box is unchecked, the data is saved to a log file of your choice (Filename).
 - If the box is checked, the data is saved to log file ZXPLog with the day's date.
 - In addition to the Filename, you may wish to enter a special field Separator Character. The default field Separator Character is “|”.
- **Log File Contents -** The Log File Contents group selects the data to be logged in the file you specified above. The data will be logged in the order displayed on the screen, each field being separated by the character specified in the Log file Definition, Separator.

The Log File Contents selections include:

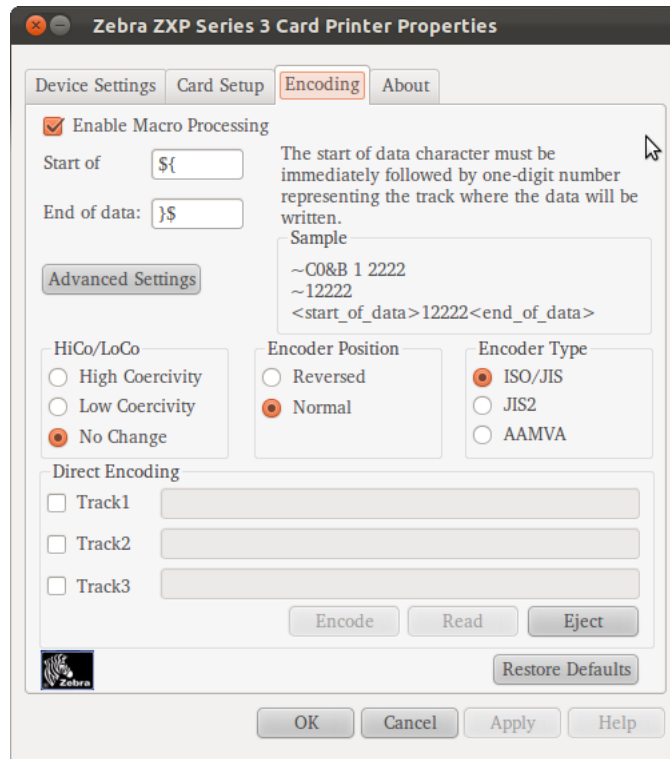
- **Time:** Logs the time which the card was sent to the printer in the HH:MM:SS format. The 24-hour clock is used, so 13:00:00 = 1:00 pm, and 05:00:00 = 5:00 am.
- **Date:** Logs the date the card was sent to the printer in the MM/DD/YYYY format.
- **Printer serial number:** Logs the serial number of the printer that printed the card.
- **IP address:** Logs the IP address of the PC that sent the card to the printer.
- **User name:** Logs the username of the person submitting the card print job.

- Spooler job number: Logs the number which the card print job was assigned in the Windows int spooler.
- Magnetic Track 1, 2, 3 Data: Logs the data sent to the printer to be encoded on the card's magnetic stripe.
- Static text: Adds to the record text in the box at right, 16 characters maximum.

Note • The various log files are stored at /home/<user name>/ZXP3log. The Delete log files button deletes the log files. The Save Job Log Settings button saves the Job Log settings.

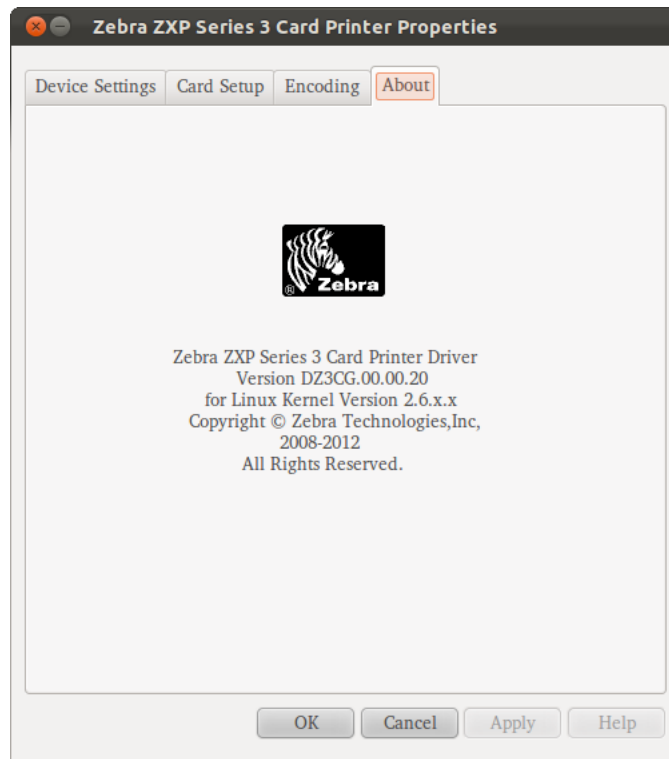
Encoding

Encoding - It is used to adjust and to set Magnetic Encoder parameters. See [Magnetic Encoding on page 25](#) for more information.



About

The About tab specifies the Printer Model, Driver Version, and the Zebra Technologies Corporation Copyright.

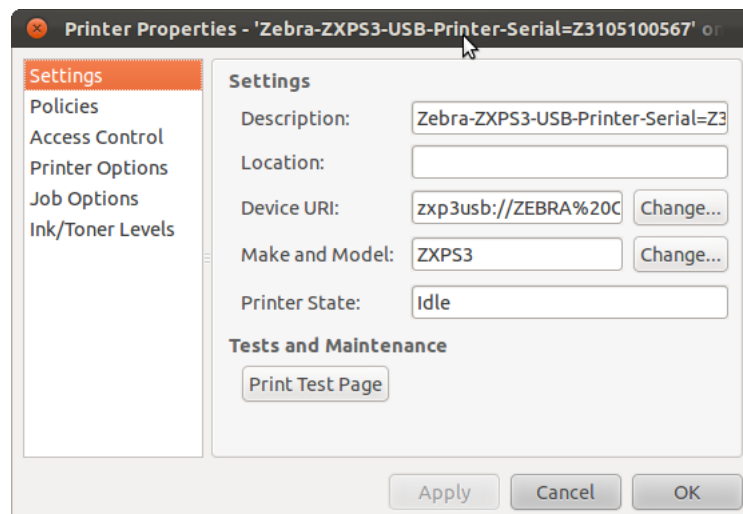


Printer Properties

Click on the Ubuntu Wubi icon (marked in red in the image below). Type *Printing* and click on the Printing icon on the dashboard to launch the printer properties.



The Printer Properties will list all the available printers.





Magnetic Encoding

Introduction

The purpose of this document is to describe how to do the magnetic encoding with Zebra ZXP Series 3 printer driver for Linux, using Libre Office and Printer Properties, in detail. The document provides information on magnetic encoding with ZXP Series 3 Printer on 32-bit and 64-bit Linux operating system tested on Ubuntu 12.04 environment.

Magnetic Encoding Using Printer Properties

Prerequisite

Download the latest Zebra ZXPS 3 Linux Driver Release Version driver from the FTP and then install the driver in USB/Ethernet mode. [Verify Installation Manual for Installation steps].

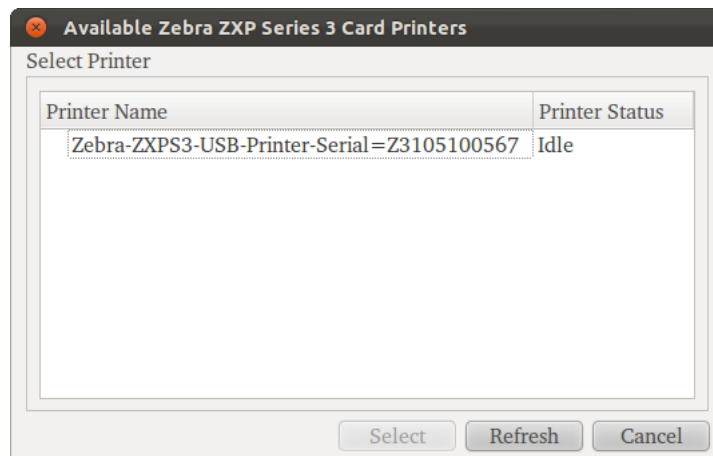
Click on the Ubuntu Wubi icon (marked in red in the image below). Type *Zebra* and click on the Zebra ZXP Series 3 Printer Driver Preferences icon on the dashboard to launch the printer preferences.

3 Magnetic Encoding

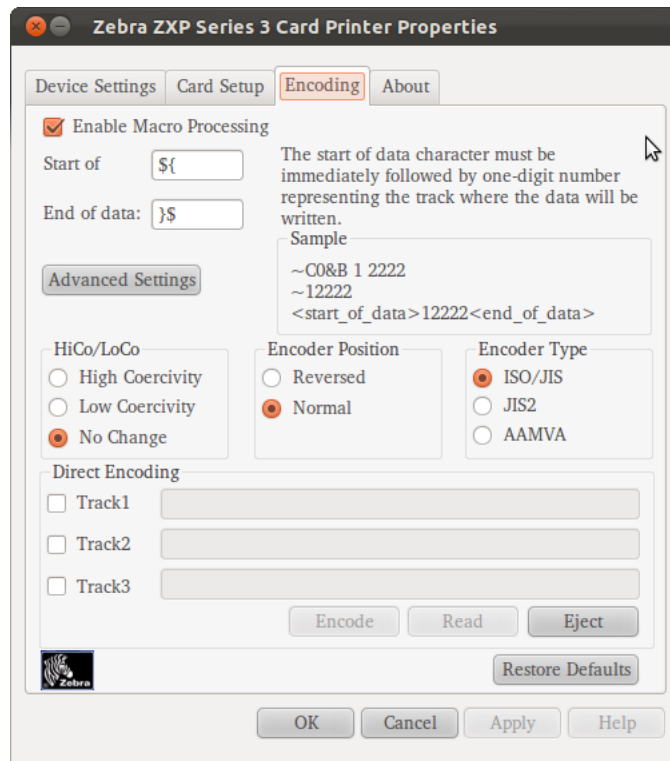
Magnetic Encoding Using Printer Properties



The Printer Properties application will launch and display all the available installed printers. Select the printer and click *Select* to open the Printer Preferences. Property pages of Zebra ZXP Series 3 printer can be viewed and the settings can be adjusted.



Click on the **Encoding Tab** to navigate to the Magnetic Encoding page in the Printing Preferences dialog.



- **Enable macro processing:** This option is used to set the encoding preamble and other magnetic encoder parameters.
 - **Start of Data:** Beginning of the data string for the encoder. Note that Start of Data characters must be immediately followed by a one-digit number representing desired track where the data will be written. Use the normal Windows default fonts.
 - **End of Data:** Ending of the data string for the encoder.
 - **HiCo/LoCo:** Select the type of coercivity of magnetic stripe cards to be used.
 - **Direct Encoding:** For writing data and reading encoded data.
 - To read encoded data: Click on the checkboxes to select Track 1, Track 2, and/or Track 3; click on the Read button, and validate the data read.
 - To write data: Click on the checkboxes to select Track 1, Track 2, and/or Track 3; enter the data to be written; and click on the Encode button.
 - To eject the card: Click on the Eject Card button to eject the card.
 - The Restore Defaults button to reset the settings to the original values.
 - **Advanced Settings:** Advanced Settings provides advanced configuration capabilities and tools to manage magnetic encoder operation. This option is primarily used for Non-ISO encoding.

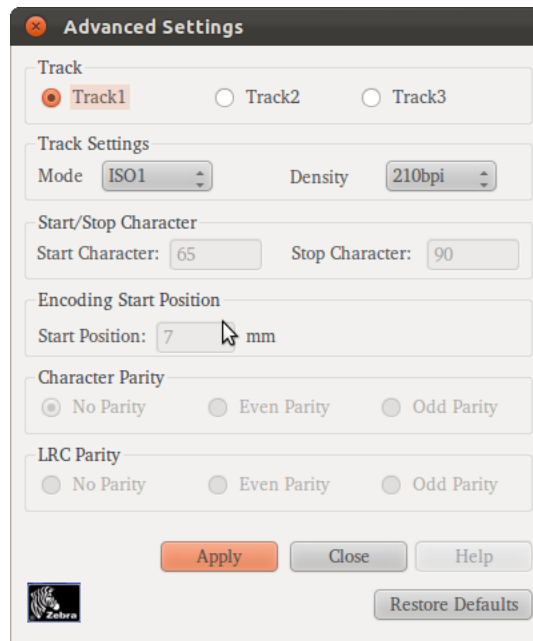
Note • Track 1 will accept only 76 characters (uppercase, numbers and special characters (" \$, ^, (,), space, ., ', /, ")). Track 2 will accept only 37 characters (numbers and " = " sign). Track 3 will accept only 104 characters (numbers and " = " sign).

Direct Encoding

For writing data and reading encoded data.

- **To Read Encoded Data:** Click on the checkboxes to select Track 1, Track 2, and/or Track 3; click on the Read button, and validate the data read.
- **To Write Data:** Click on the checkboxes to select Track 1, Track 2, and/or Track 3; enter the data to be written following all the preconditions; and click on the Encode button.
- **To Eject The Card:** Click on the Eject Card button to eject the card.

Advanced Settings: Advanced Settings provides advanced configuration capabilities and tools to manage magnetic encoder operation. This option is primarily used for selecting advanced encoding options.

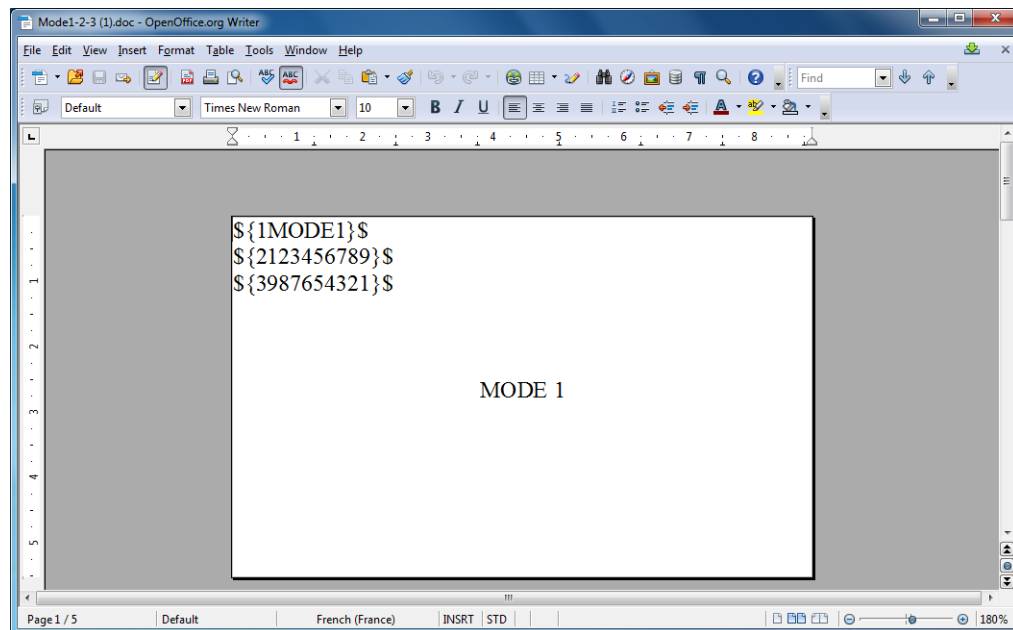


The screenshot shows the 'Advanced Settings' dialog box. It has a title bar with a close button. The 'Track' section has three radio buttons: 'Track1' (selected), 'Track2', and 'Track3'. The 'Track Settings' section has two dropdown menus: 'Mode' (set to 'ISO1') and 'Density' (set to '210bpi'). The 'Start/Stop Character' section has two text input fields: 'Start Character' (set to '65') and 'Stop Character' (set to '90'). The 'Encoding Start Position' section has a text input field for 'Start Position' (set to '7') and a unit selector 'mm'. The 'Character Parity' section has three radio buttons: 'No Parity' (selected), 'Even Parity', and 'Odd Parity'. The 'LRC Parity' section has three radio buttons: 'No Parity' (selected), 'Even Parity', and 'Odd Parity'. At the bottom, there are four buttons: 'Apply' (orange), 'Close' (grey), 'Help' (grey), and 'Restore Defaults' (grey). A Zebra logo is in the bottom left corner.

- **Track:** Select the track you want to configure.
- **Track Settings:** Select the Mode (ISO1, ISO2, ISO3, 3-bit, 4-bit, 5-bit, 6-bit, or 7-bit) and Density (75bpi or 210 bpi) for the tracks.

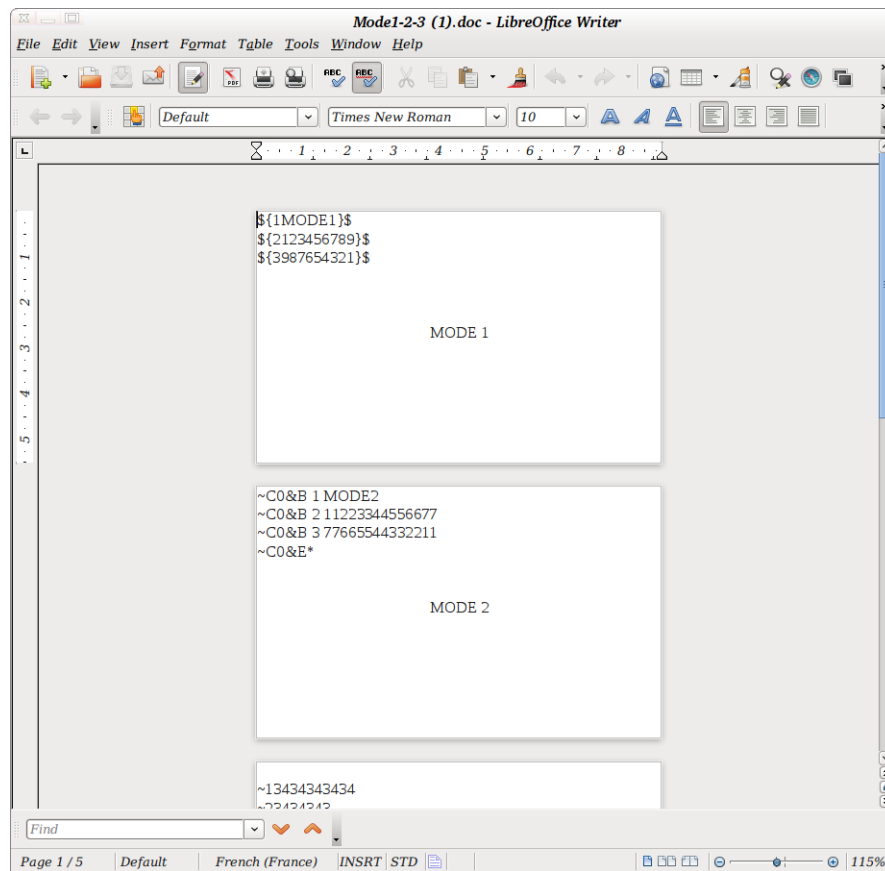
Magnetic Encoding Using Open Office

Open any existing document with magnetic encoding data or create the new document.

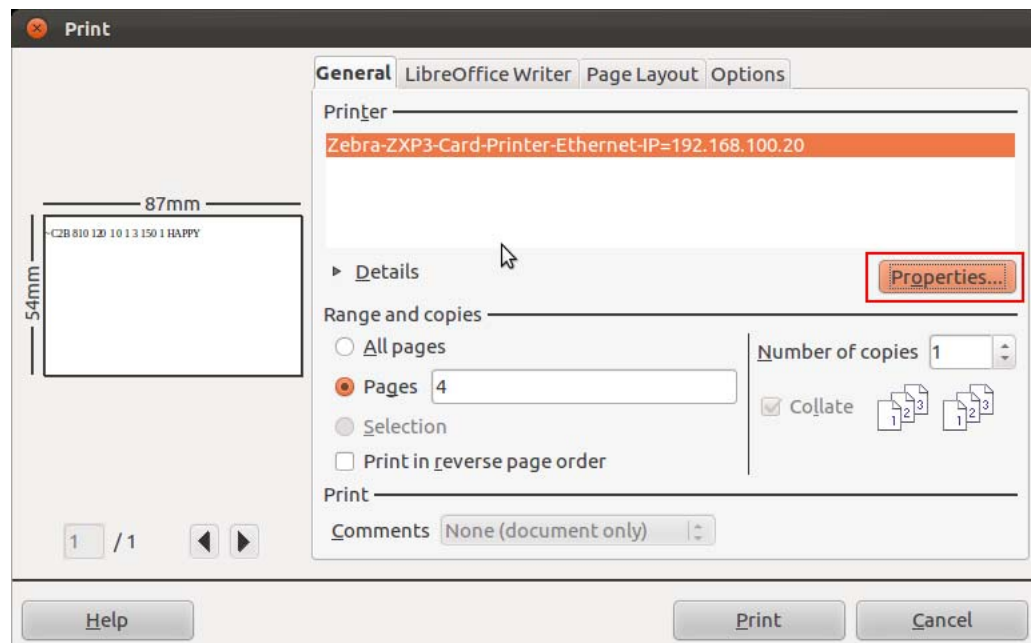


3 Magnetic Encoding

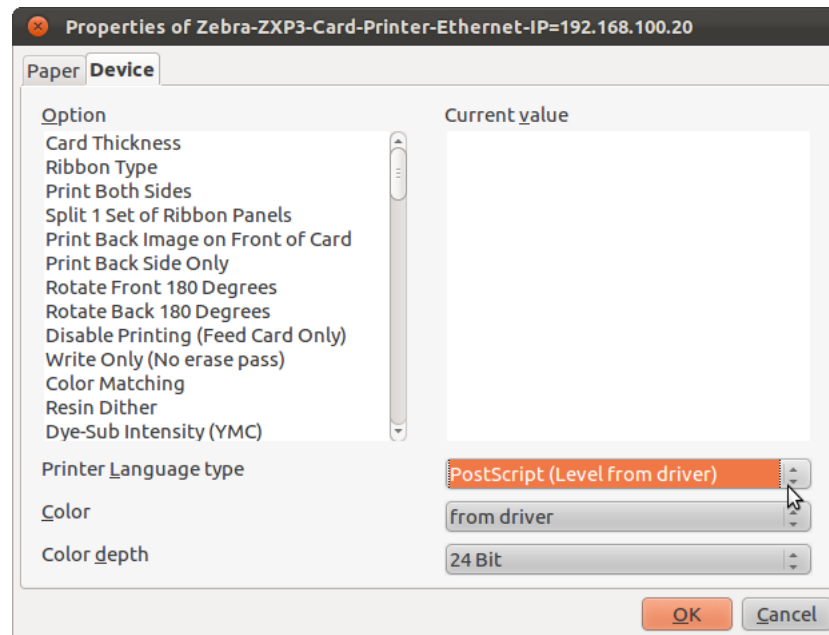
Magnetic Encoding Using LibreOffice



Click *File* and then select *Print*. Select the installed Zebra ZXP Series 3 printer from the available printers list and click on Properties.



In the dialog and click the **Device** tab and select *PostScript (Level from driver)* from the Printer Language type drop-down menu. Click *OK*.



In Open office the print job will use the Postscript Pre-filter but the Libre office uses the PDF Pre-filter. The PDF data is encrypted so extracting the Magnetic Encoding data from the file is not possible. In order to do the Magnetic encoding successfully using Libre Office the above setting is required.



Appendix 4

Worldwide Support

For Technical Support or Repair Services, contact the appropriate facility listed below.

North America and Latin America - Technical Support

T: +1 877 ASK ZEBRA (877 275 9327)
+1 847 913 2259
E: ts1@zebra.com

North America and Latin America - Repair Services

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Services for a Repair Order (RO) number. Mark the RO number clearly on the outside of the box. Ship the equipment, freight prepaid, to the address listed below:

Zebra Technologies Repair Services
333 Corporate Woods Parkway
Vernon Hills, IL 60061

webform: www.zebra.com/repair
T: +1 877 ASK ZEBRA (877 275 9327)
E: repair@zebra.com

Europe, Middle East, and Africa - Technical Support

Language	Phone	Email
Arabic	+971 (0)46058220	zebraCareUAE@zebra.com
Dutch	+31 (0)33 450 50 48	ZebraCareBNL@zebra.com
English (UK)	+44 (0)1628 556 225	zebraCareUK@zebra.com
(Sweden)	+46 (0)8 594 709 88	zebraCareUK@zebra.com
(South Africa)	+27 (0)11 201 7712 / 0860 393272	zebracareSA@zebra.com
French	+33 (0) 1 53 48 12 74	zebraCareFR@zebra.com
German	+49 (0) 2159 676 870	zebraCareDE@zebra.com
Hebrew	+97 236 498 140	ZebraCareIL@zebra.com
Italian	+39 0 2 575 06388	ZebraCareIT@zebra.com
Polish	+48 223 801 980	zebraCarePL@zebra.com
Russian	+7 495 739 5993	ZebraCareRU@zebra.com
Spanish	+34 (0) 917 992 896	zebraCareES@zebra.com
Turkish	+90 212 314 1010	zebraCareTR@zebra.com

For further assistance, contact:

Zebra Technologies Card Printer Solutions
Dukes Meadow
Millboard Road, Bourne End
Buckinghamshire SL8 5XF, UK

T: +44 (0) 1628 556 025

F: +44 (0) 1628 556 001

E: cardts@zebra.com

Europe, Middle East, and Africa - Repair Services

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact your supplier for a Return Materials Authorization (RMA) number, or contact one of the following repair centers for support and instructions:

Type of repair and location	Phone	Email
Depot Repair in Germany, Austria, Switzerland	+49 (0) 2159 676 870	zebracareDE@zebra.com
Depot Repair in France	+33 (0) 1 53 48 12 74	zebracareFR@zebra.com
Depot and On-Site Repair in UK and Ireland	+44 (0) 1628 556 225	zebracareUK@zebra.com
Depot Repair in South Africa	+27 (0) 11 201 7777	-
Depot Repair in Middle East	+971 (0) 46058220	support_dxb@emitac.ae

For further assistance, contact:

For assistance anywhere in the EMEA, contact After Sales Customer Services at:

T: + 44 (0) 177 2 69 3069

E: ukrma@zebra.com

Asia Pacific - Technical Support

Zebra Technologies Asia Pacific Pte. Ltd.
120 Robinson Road
#06-01 Parakou Building
Singapore 068913

T: +65 6858 0722
F: +65 6885 0838
E: tsasiapacific@zebra.com

Asia Pacific - Repair Services

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Services for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material, and mark the RMA number clearly on the outside. Ship the equipment, freight prepaid, to either address listed below:

Zebra Technologies Asia Pacific Pte. Ltd.
No.5 Changi North Way Level 3
Singapore 498771
Agility Building

T: +65 6546 2670 ext 3203 and 3204
F: +65 6546 5328
E: APACRepair@zebra.com

Zebra Website

www.zebra.com

km.zebra.com (Knowledge Base)