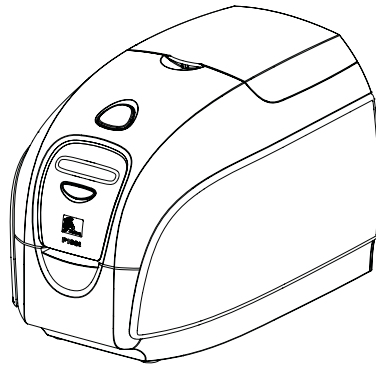


**Zebra® P100i™**  
Card Printer  
**User's Manual**

**Review Copy**  
**Aug 10, 2007**





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# Foreword



This manual contains installation and operation information for the Zebra P100i card printers manufactured by Zebra Technologies Corporation.

## Copyright Notice

© 2004 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 Technologies Corporation. 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

P100i is a trademark and Zebra is a registered trademark of Zebra Technologies Corporation. Windows is a registered trademark of Microsoft Corp. All other trademarks or registered trademarks are marks of their respective holders.

## Product Disposal



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**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 see our web site at:  
<http://www.zebra.com/environment>

---

## Return Materials Authorization

Before returning any equipment to Zebra Technologies Corporation for in-warranty or out-of-warranty repair, contact Repair Administration 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 the address listed below:

### For USA, Latin America, and Asia / Pacific:

Zebra Technologies Corporation  
Zebra Card Printer Solutions  
1001 Flynn Road  
Camarillo, CA. 93012-8706.USA  
Phone: +1 (805) 578-5001  
FAX: +1 (805) 579-1808

### For Europe and Middle East:

Zebra Technologies Corporation  
Zebra Card Printer Solutions  
Pittman Way, Fulwood  
Preston, PR2 9ZD  
Lancashire, U.K.  
Phone: +44 - 1 - 772 - 797555  
FAX: +44 - 1 - 772 - 693000

## Declarations of Conformity

### FCC Regulations

Model P100i has been tested and found to comply with the limits for a Class A digital device, 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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and operated in accordance with the P100i User's Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by Zebra may cause harmful interference and void the FCC authorization to operate this equipment.

## Industry Canada Notice

This device complies with Industry Canada ICES-003 class A requirements.

Cet équipement est conforme à l'ICES-003 classe A de la Norm Industrielle Canadienne.



<b>89/336/EEC modified by 92/31/EEC and 93/68/EEC</b>	<b>EMC Directive</b>	<b>EN 55022 (1998)</b>	RF Emissions control
	<b>EMC Directive</b>	<b>EN 301489-3 V1.4.1</b>	RF Emissions and Immunity for radio equipment
	<b>EMC Directive</b>	<b>EN55024 (2001)</b>	Immunity to Electro-Magnetic Disturbances
<b>73/23/EEC modified by 93/ 68/EEC</b>	<b>Low voltage Directive</b>	<b>EN 60950-1 (2001)</b>	Product safety
<b>1999/5/CE</b>	<b>R&amp;TTE Directive</b>	<b>EN300330-2 V1.1.1</b>	Radio Frequency Interferences

For a formal certificate, please contact the Compliance Office at Zebra's Camarillo facility.

**EUROPE:** Norway Only: This product is also designed for IT power system with phase to phase voltage 230V. Earth grounding is via the polarized, 3-wire power cord.

FI: "Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan"

SE: "Apparaten skall anslutas till jordat uttag"

NO: "Apparatet må tilkoples jordet stikkontakt"

## Icons

Throughout this manual, different icons highlight important information, as follows:



**Note** • Indicates information that emphasizes or supplements important points of the main text.



Advises you of information that is essential to complete a task, or points out the importance of specific information in the text.



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**Electric Shock Caution** • Warns you of a potential electric shock situation.

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**Electrostatic Discharge Caution** • Warns you of a situation where electrostatic discharge could cause damage to electronic components.

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**Caution** • Advises you that failure to take or avoid a specific action could result in physical harm to you, or could result in physical damage to the hardware.

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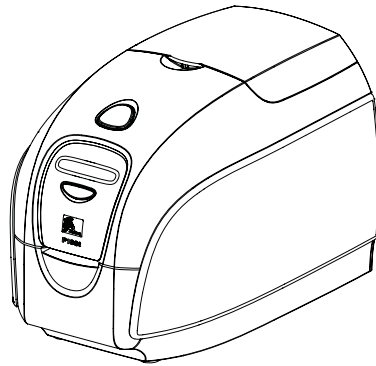
## P100i Printer Model

The Zebra Product Number tells a story:

Here is a quick review of the Zebra Card Printer Series numbering and lettering system to help you.

Model numbers include identifiers that specify options using the following lettering conventions:

Part Number	Description
P 1 0 0 i - _ _ _ _ - _ _ _ _	Base Printer P100i Single Card Feed, Single Sided Color Card Printer
_ _ _ _ _ - 0 _ _ _ _ - _ _ _ _ _ _ _ _ _ - B _ _ _ _ - _ _ _ _ _ _ _ _ _ - D _ _ _ _ - _ _ _ _ _ _ _ _ _ - H _ _ _ _ - _ _ _ _	Smart Card Options None Contact Encoder Contact Encoder & MIFARE contactless MIFARE contactless
_ _ _ _ _ - 0 _ _ _ _ - _ _ _ _ _ _ _ _ _ - M _ _ _ _ - _ _ _ _	Magnetic Encoder None Yes (select defaults below)
_ _ _ _ _ - 0 _ _ _ _ - _ _ _ _ _ _ _ _ _ - 1 _ _ _ _ - _ _ _ _	Magnetic Encoder Defaults None Stripe Down, HiCo/LoCo
_ _ _ _ _ - _ _ _ _ 0 _ _ _ _	Memory Expansion None
_ _ _ _ _ - _ _ _ _ A _ _ _ _ _ _ _ _ _ - _ _ _ _ C _ _ _ _	Interface USB Only USB and Ethernet
_ _ _ _ _ - _ _ _ _ _ - I _ _ _ _ _ _ _ _ - _ _ _ _ _ - U _ _ _	Power Cords U. S. and Europe U. K. and Australia
_ _ _ _ _ - _ _ _ _ _ - _ _ D 0	Windows Drivers and User Documentation included on one CD (Software & Documentation Package) which contains Multi-language documentation - English, Spanish, French, German, Chinese, Italian, and Portuguese
<b>Example</b>	
P100i-0M10A-ID0	P100i Printer, Magnetic Stripe Encoder (Stripe Down, HiCo), Standard Memory, USB Interface, US and Europe Power Cords, Windows Driver and User Documentation CD





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# Getting Started

## Unpacking Your Card Printer

Your P100i printer ships in a cardboard carton, protected by styrofoam inserts and a protective anti-static bag. Keep all packaging material in case you need to move or re-ship the printer.

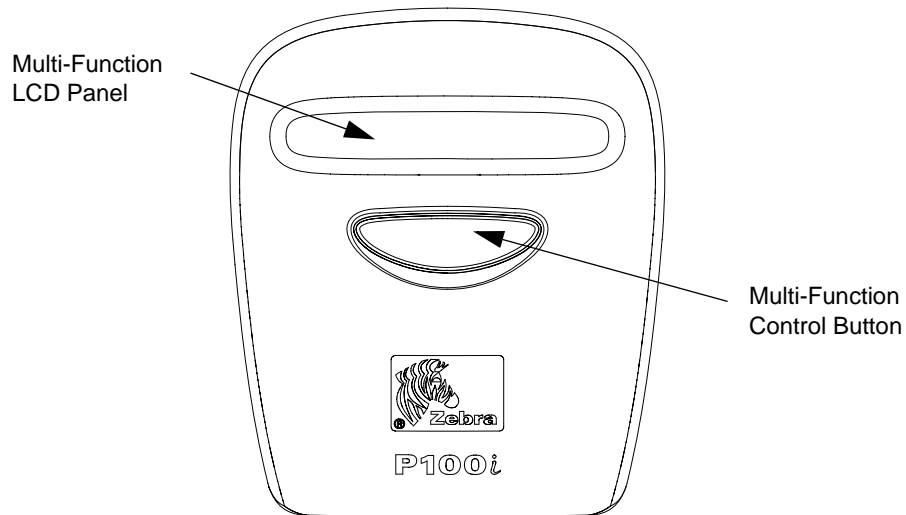
1. Before opening and unpacking the printer, inspect the carton to ensure that no damage occurred during shipment.
2. Ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.
3. Unlatch and remove the handle, open the carton, and remove the box containing the printer accessories from the shipping carton.
4. Remove the styrofoam packing material from the top of the printer.
5. Lift the printer out of the carton by holding it on both sides of the bottom and lifting the printer gently from the carton.
6. Make sure the following accessories are included with your P100i printer:
  - a. Software CD-ROM
  - b. Quick Start Guide
  - c. Cleaning Kit
  - d. 120 VAC and 230 VAC Power Cords
  - e. Power Transformer
  - f. USB Printer Cable

If any items are missing, please contact your dealer. To reorder, please refer to Appendix C of this manual.

## Controls and Indicators

### Multi-Function LCD Panel

Your P100i printer is equipped with a Multi Function LCD Readout Panel to provide printer status information. The readout is controlled by the multi-function control button directly below the viewing window.



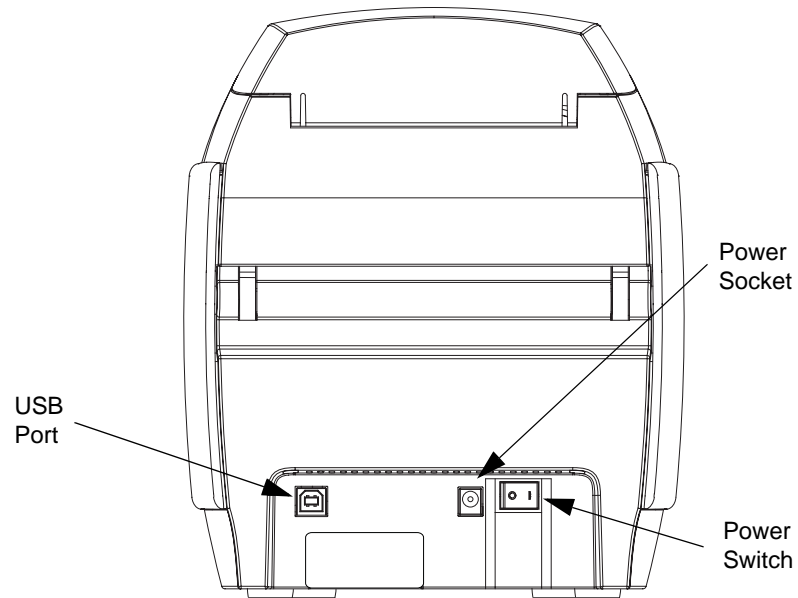
The LCD Panel can display the following messages:

Message	Mode
<b>Operational</b>	
Initializing	Fixed
SELF TEST	Fixed
READY	Fixed
DOWNLOADING DATA	Fixed
MAG ENCODING	Fixed
PRINTING MONO	Fixed
PRINTING CYAN	Fixed
PRINTING YELLOW	Fixed
PRINTING MAGENTA	Fixed
PRINTING BLACK	Fixed
PRINTING OVERLAY	Fixed
DOWNLOADING FIRMWARE	Fixed

<b>Message</b>	<b>Mode</b>
<b>CLEANING</b>	Fixed
<b>FEED LONG CLEANING CARD IN EXIT</b>	Scrolling
<b>REMOVE LONG CLEANING CARD</b>	Scrolling
<b>SINGLE CARD READY-PRINT OR EJECT</b>	Scrolling
<b>INSERT CARD</b>	Fixed
<b>PUSH BUTTON TO CONTINUE</b>	Scrolling
<b>Warnings (Printer will still operate)</b>	
<b>REMOVE CARD AT EXIT</b>	Scrolling
<b>CLEAN PRINTER</b>	Fixed
<b>CHECKING RIBBON</b>	Fixed
<b>ENCODING ERROR</b>	Fixed
<b>INVALID MAGNETIC DATA</b>	Scrolling
<b>CHECK RIBBON</b>	Fixed
<b>CLOSE LID</b>	Fixed
<b>FLASH ERROR</b>	Fixed
<b>READING ERROR</b>	Fixed
<b>Errors (Printer will not operate)</b>	
<b>OUT OF RIBBON</b>	Fixed
<b>MECHANICAL ERROR</b>	Fixed
<b>COVER OPEN</b>	Fixed
<b>PARAMETERS ERROR</b>	Fixed
<b>COMMAND ERROR</b>	Fixed
<b>OUT OF RIBBON</b>	Fixed

## Rear Panel Connectors, Controls, and Indicators

The figure below shows the rear of the P100i Printer.



### Power Switch

The power switch is located at the rear of the printer unit, bottom right.

### Power Socket

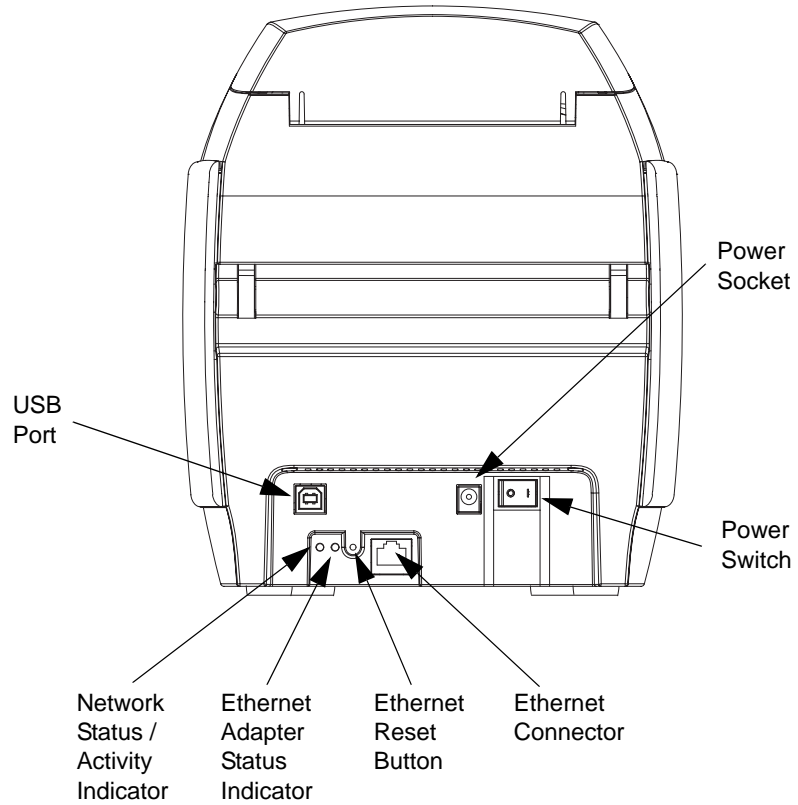
The power socket is located at the rear of the printer, to the left of the power switch.

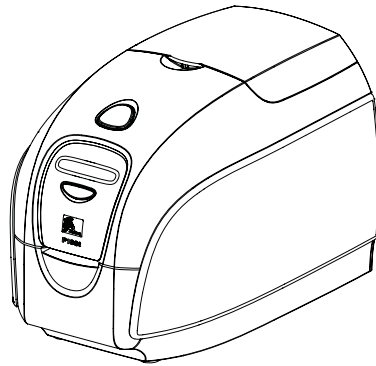
### USB Port

The USB port is located at the rear of the printer unit, bottom left.

## Ethernet Option

If your P100i Printer includes the Ethernet option, the rear of the printer will look like the figure below.









---

# Printer Installation

## Installing the P100i Printer



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**Caution** • Do not power the printer with USB attached to your computer at this time. THE DRIVER WILL PROMPT YOU WHEN IT IS TIME TO PLUG IN AND POWER UP YOUR PRINTER.

---

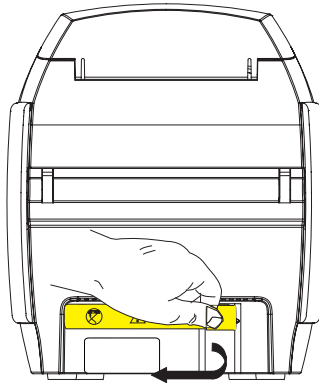


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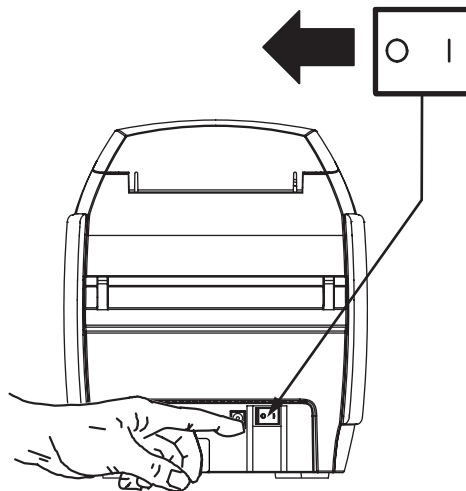
**Caution** • Limit electrical power supplied to the P100i Printer to 24 VDC. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power supply and properly protected against electrical surges and grounding faults. The power supply pack can only be replaced by the same product from the manufacturer.

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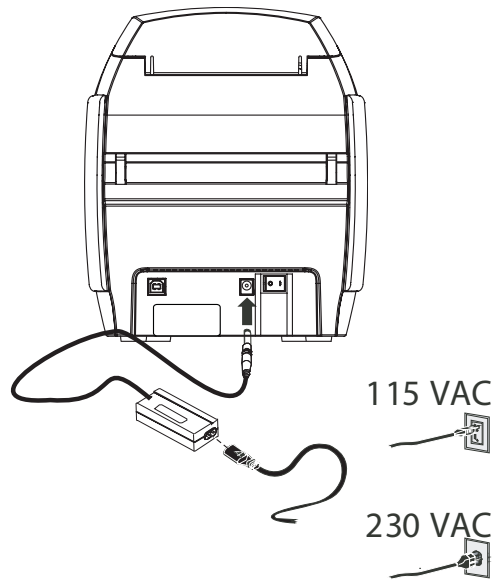
1. Place the printer in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down
2. Remove the yellow CAUTION label from the back of the printer.



3. Ensure that the printer's power switch is in the OFF (O) position.



4. Insert the power supply plug into the power socket, attach the power cord (120VAC or 230VAC) to the power supply, then plug the power cord in to a grounded electrical socket of the proper voltage and type.

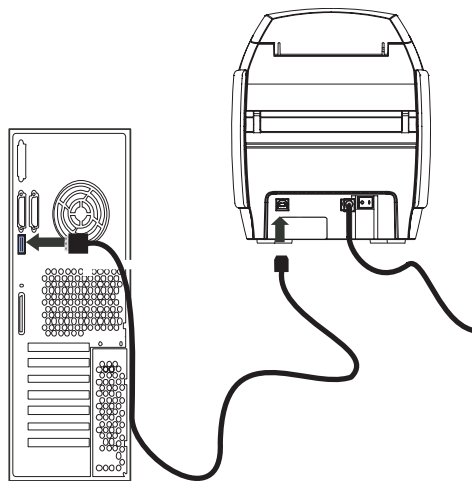


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**Caution** • Intermittent or unpredictable operation may occur from unsecured connectors. If damaged, the power cable must be replaced by an exact equivalent. The socket should always be easily accessible to power off the printer.

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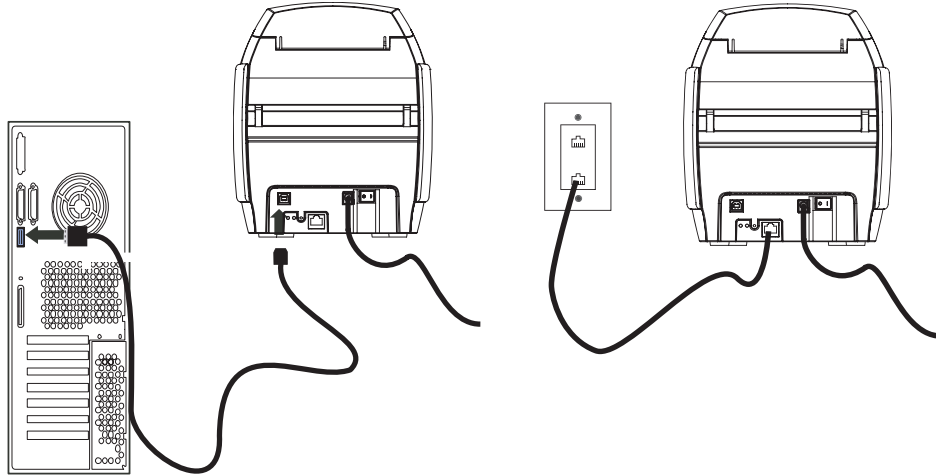
5. If your printer has only the USB interface, attach the included USB cable to your computer and the printer.



## Printer Installation

### Installing the P100i Printer

6. If your printer has the optional Ethernet interface (as well as the USB interface), connect **either** the USB cable to printer and computer or the Ethernet cable to the printer and the Ethernet network.



**Important** • Do not connect both the USB and the Ethernet interfaces at the same time!

## Installing the Printer Driver



**Important** • Do not power the printer with USB attached to your computer at this time. The driver will prompt you when it is time to plug in and power up your printer.

To install the P100i Printer on Windows 2000, Windows XP, or Windows Vista operating systems, insert the User Documentation and Drivers CD, included with your printer, into your computer and the InstallWizard will walk you through the required installation steps. The InstallWizard will:

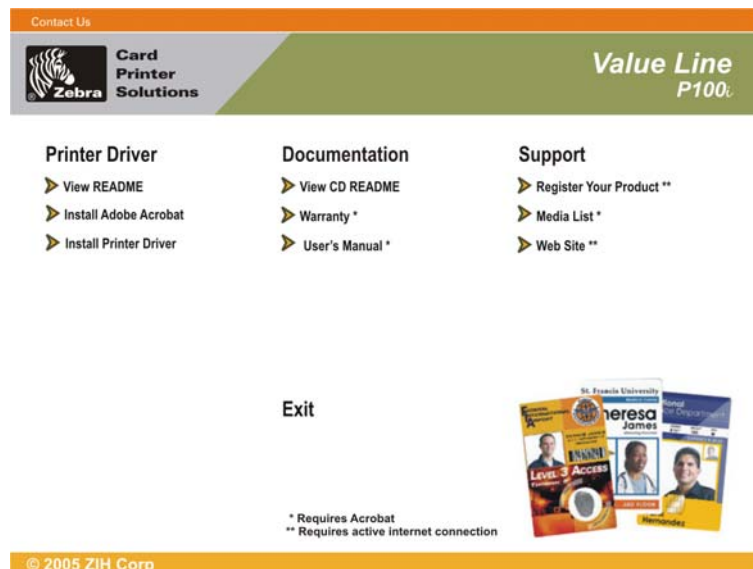
- Automatically install the User Interface when the driver CD is inserted.
- Start the installation process when the **Install Printer Driver** menu item is selected from the Main Menu.
- Allow you to install Ethernet drivers, if you plan on networking your card printer via an external print server
- Check to see which operating system you are using
- Detect previous versions of the driver and clean up any unnecessary Windows registry entries. You must select “Remove” from the install options to remove any previous driver versions.
- Install the new driver files
- Reboot your computer

## Print Driver Installation

Install the P100i Printer driver as follows:



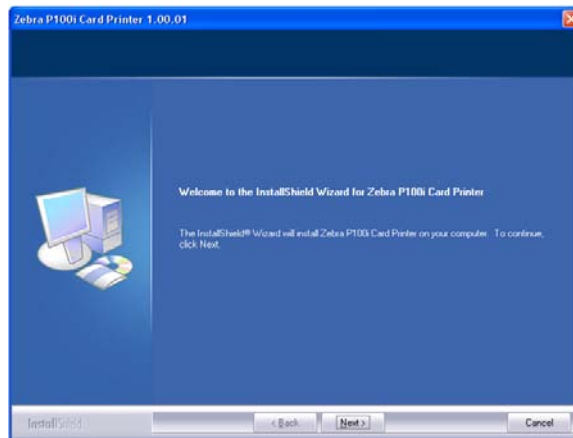
1. Insert the **P100i User Documentation and Drivers** CD into the CD drive of the host computer. The **Select Language** window will open.
2. From the **Select Language** window, choose the appropriate language for your system. The Main Menu will open in the selected language.



3. In the left column, select **Install Printer Driver**.



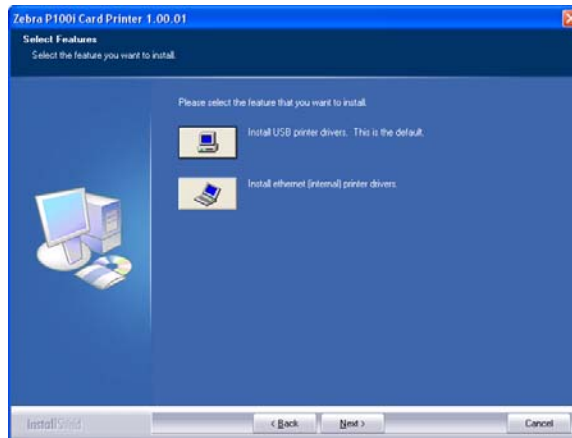
4. The InstallShield Wizard will be installed and a progress window will be displayed. Once the InstallShield Wizard has been installed, the **Welcome to InstallShield Wizard** window will open.



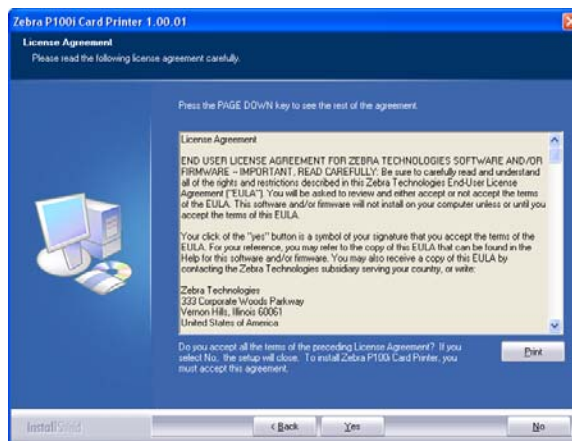
5. On the **Welcome to InstallShield Wizard** window, click the **Next** button.

## Printer Installation

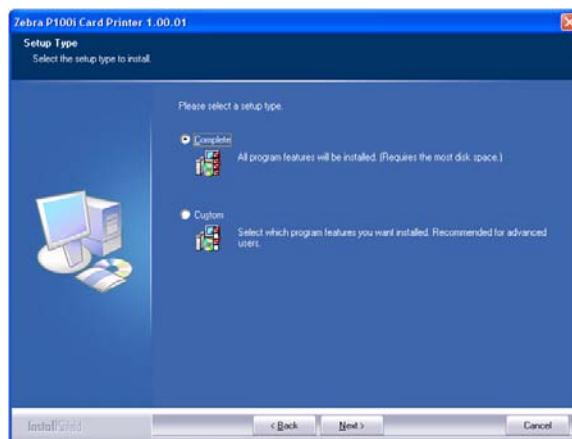
### Installing the Printer Driver



6. Select USB or Ethernet, click the **Next** button.
7. If you agree to the License Agreement, click the **Yes** button.

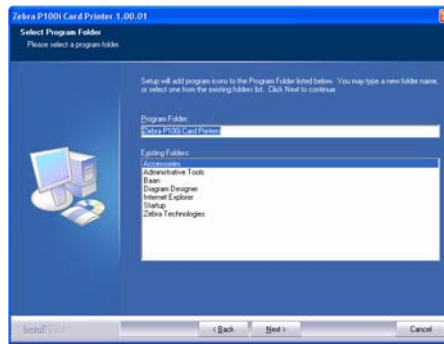


8. Most users should select the Complete setup type; then click the **Next** button.

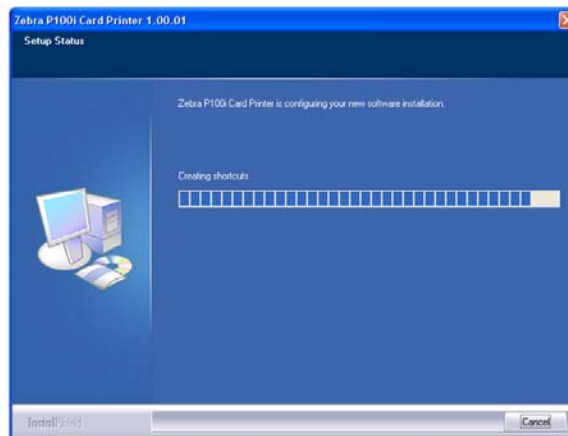


9. Specify the location to load the Driver, then click the **Next** button.

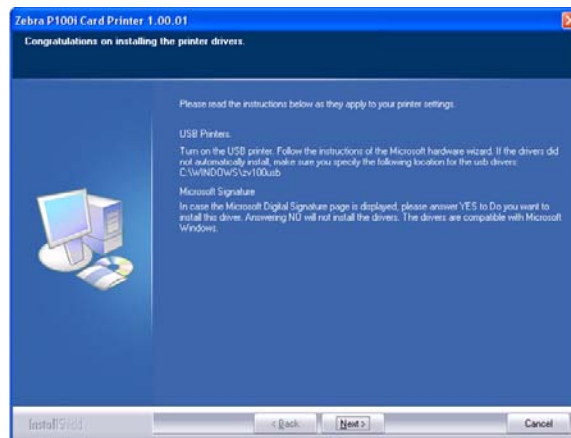




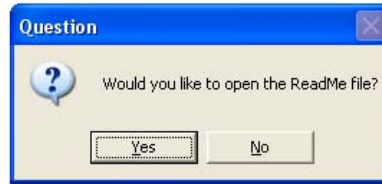
10. The Install Wizard will show the progress of the installation.



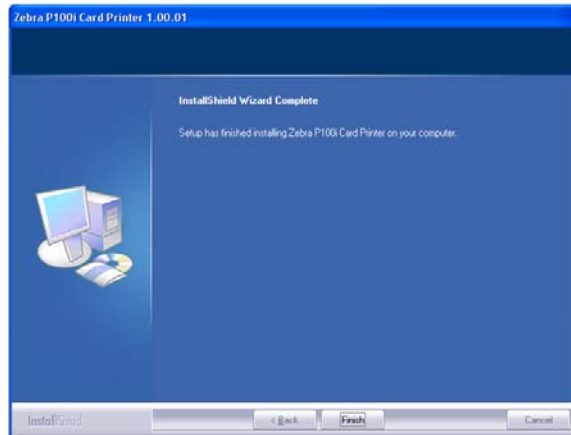
11. Read the appropriate information.



12. If you wish, you can open the ReadMe file, which has information about the driver version you have installed.



13. Driver installation is now complete. Click the **Finish** button.



14. After installing the Driver, restart your computer.
15. When you apply power to the printer, the Windows New Hardware Found wizard will find the printer.

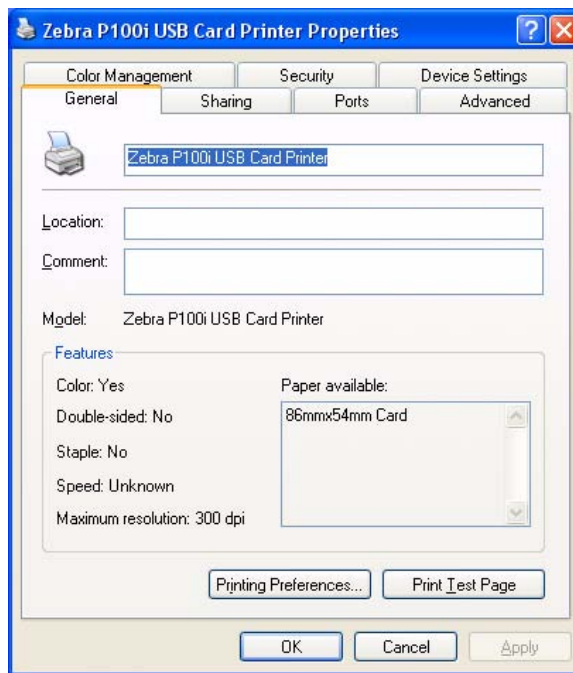
## Change Printer Driver Options

You can change the default settings for the P100i printer driver. Change the options as follows:

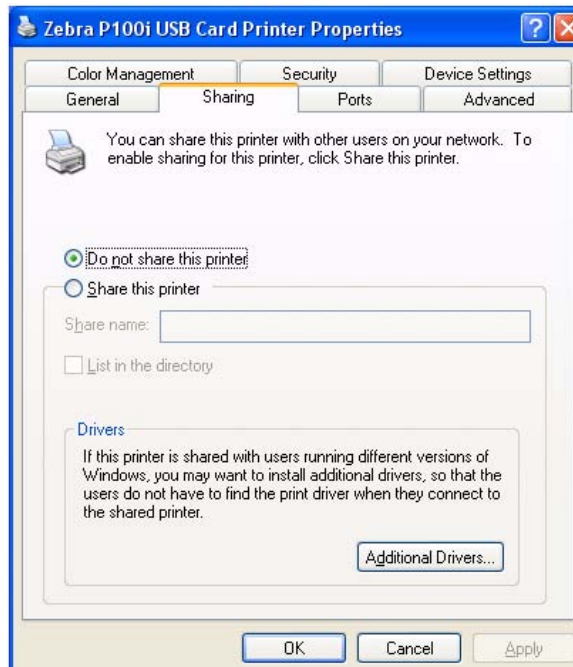


**Note** • The screen shots shown in this section are for the P100i Printer using the USB interface. If you are using the Ethernet interface, the screens will refer to the “Zebra P100i Network Printer.”

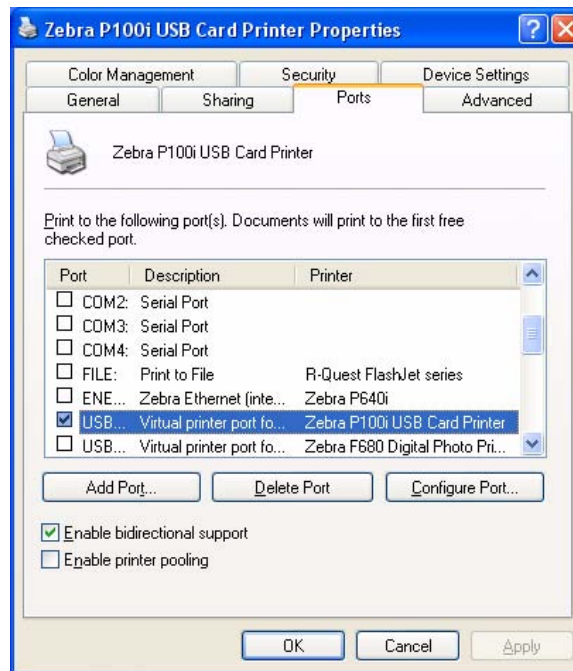
1. Select Start>Settings>Printers and Faxes to bring up a listing of connected printers.
2. From the Printers and Faxes list, right click the P100i USB Card Printer and select **Properties** from the pop-up menu. The **Printer Properties** window will open.



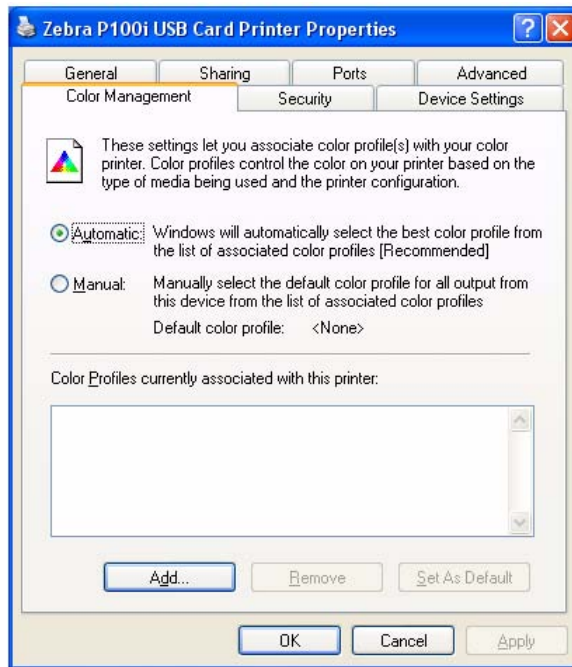
3. On the General tab, click on the Printing Preferences button to change the card orientation settings, monochrome conversion settings, various ribbon settings, or to adjust the color and head settings properties.



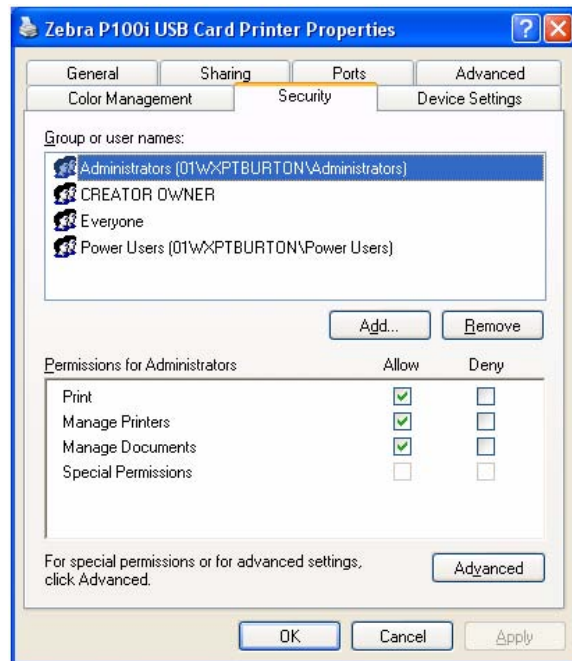
4. On the Sharing tab, you can choose to share the printer over the network, and install additional drivers to accommodate different operating systems.



5. On the Ports tab, you can add, delete, and configure the printer ports, as well as choose which port the P110i printer is assigned.



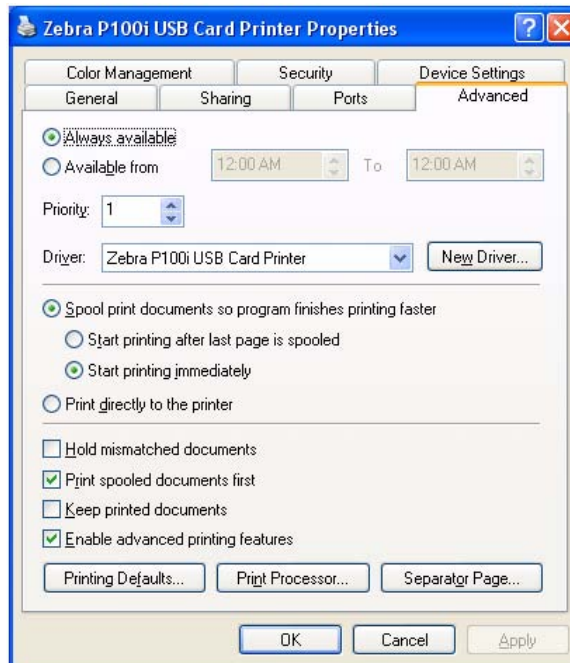
6. On the Color Management tab, you can add, remove, or change printer color profiles.



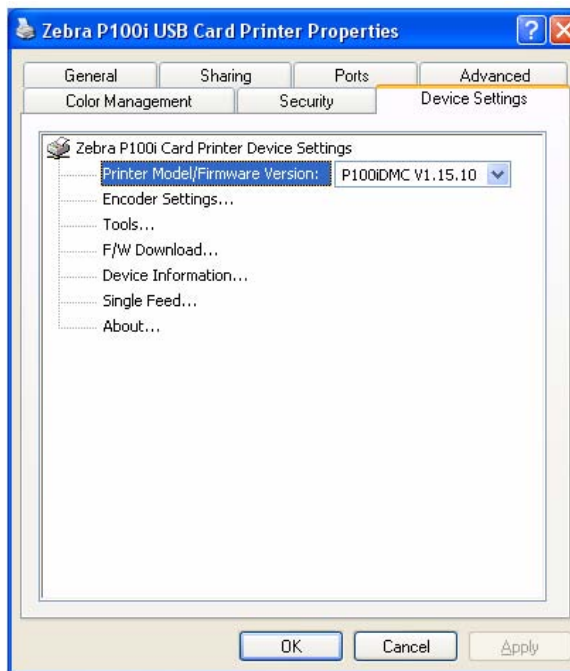
7. Use the Security tab to change permissions for the P100i printer.

## Printer Installation

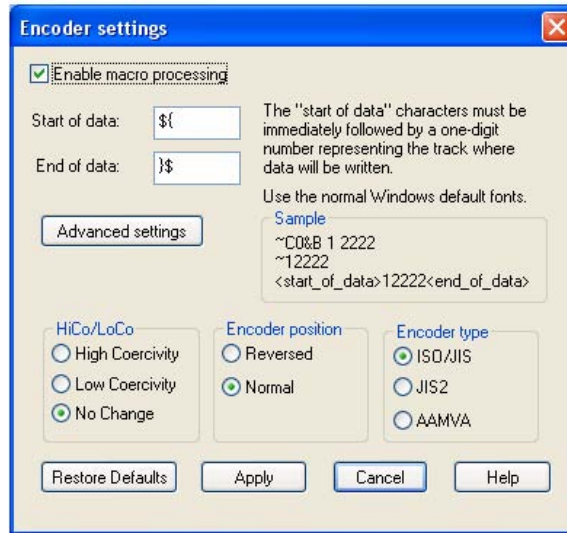
### Change Printer Driver Options



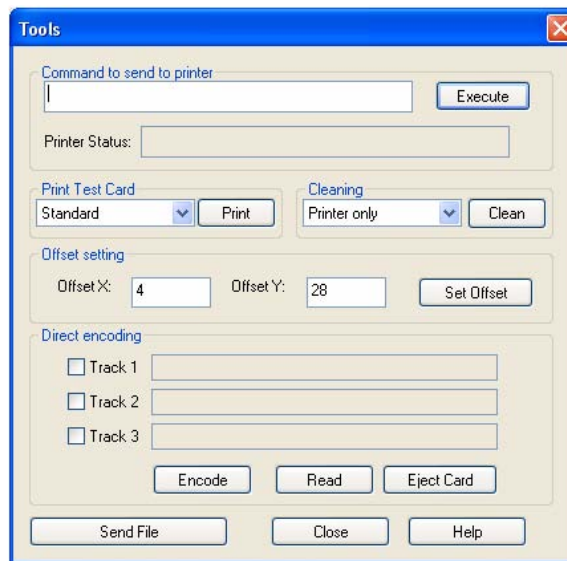
8. On the Advanced tab, you can choose various printer properties, install different printer drivers, and change default printer settings.



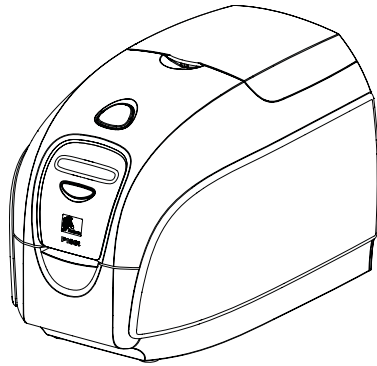
9. On the Device Settings tab, you can change settings for a Magnetic Encoder. (Click on Encoder Settings. A button "Properties" will open next to it. Click that button.)



10. Again from the Device Settings tab, you can change various parameters and even send test commands to the printer. (Click on Tools. A button "Properties" will open next to it. Click that button.)



11. Once the P100i printer driver options are set to your satisfaction, click the OK button to save your new configuration and close the Properties window.





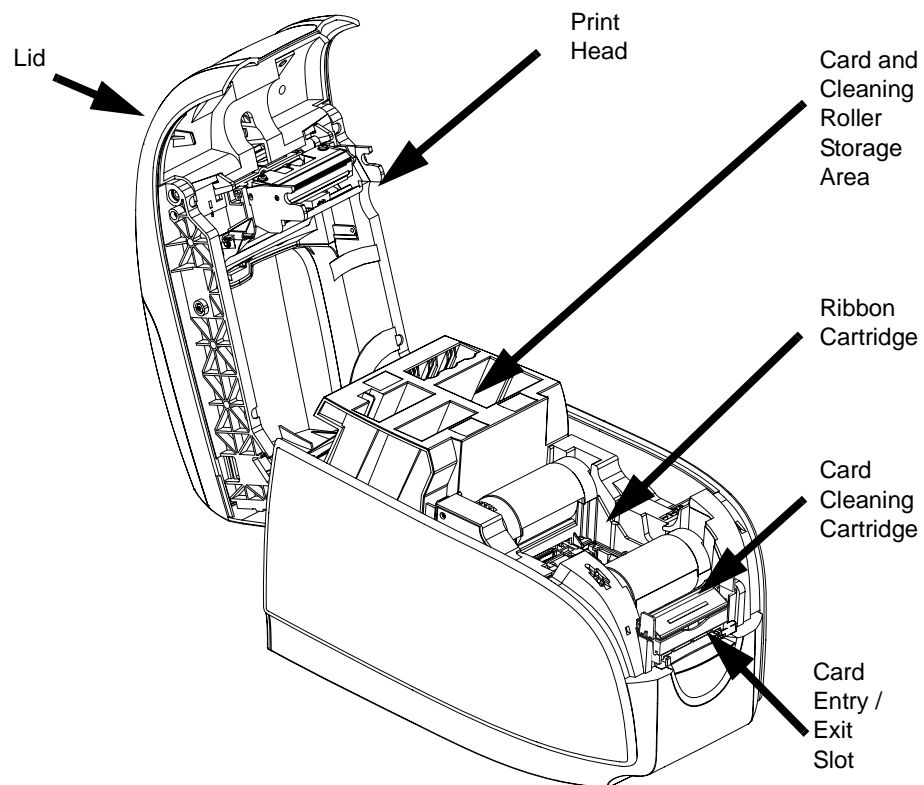


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# P100i Printer Setup

## Printer Features

The following shows an interior view of your P100i Printer.



## Loading Ribbon Cartridge

The P100i Printer requires approved ribbon cartridges (see Appendix C). The Resin Thermal Transfer and Dye Sublimation ribbons are specifically designed for your P100i Printer.

- *i* Series Printers require the use of *i* Series ribbons for full color printing.
- Each ribbon cartridge includes an integrated adhesive cleaning roller assembly that is used to clean the cards entering the printer. Improper cleaning will reduce printer life and degrade print quality
- When the ribbon is completely used, change the whole cartridge assembly.

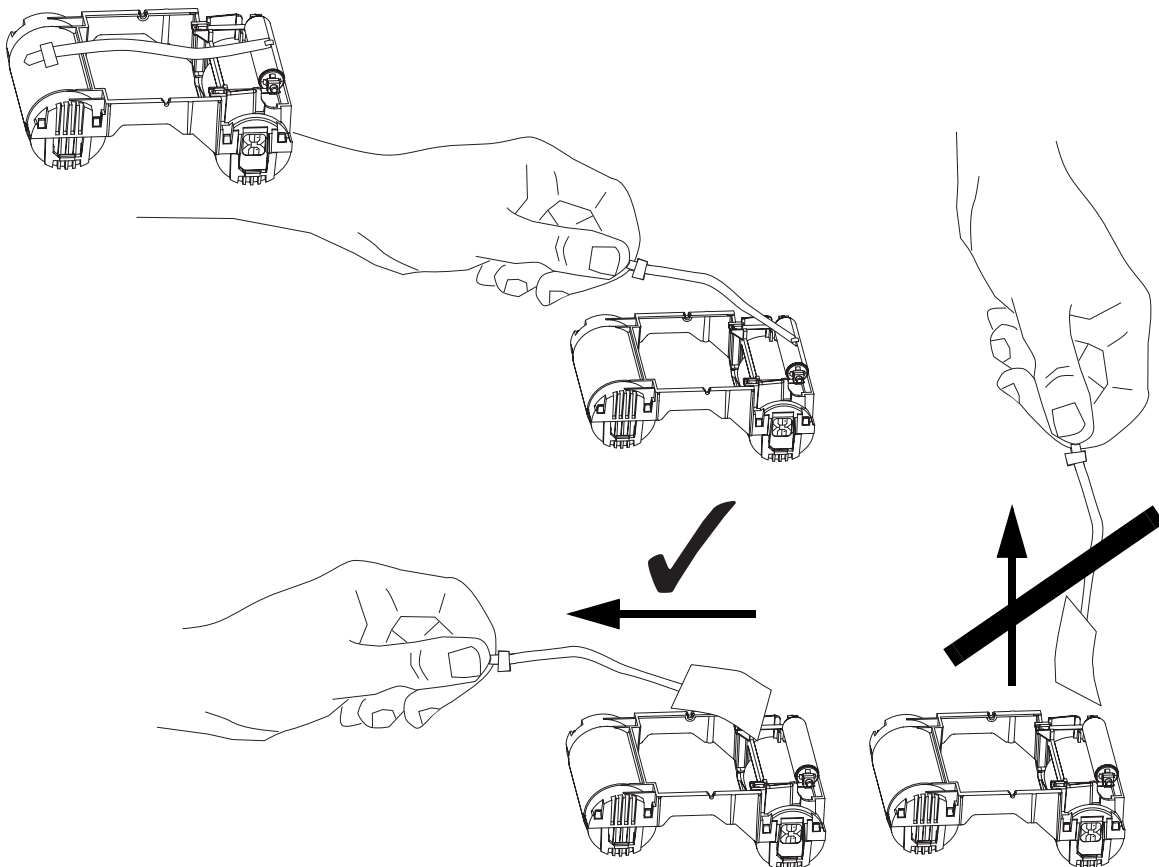


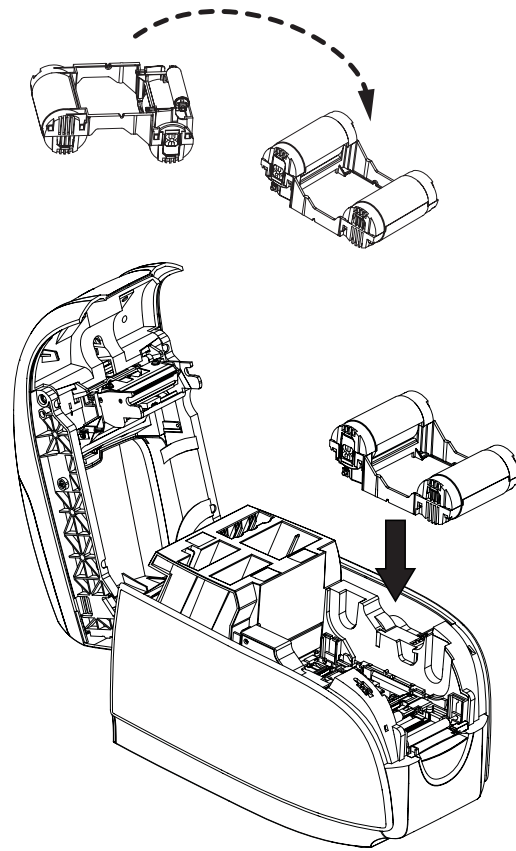
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**Electrostatic Discharge Caution • DO NOT TOUCH** the print head or the electronic components on the print head. Discharge of electrostatic charge from the human body or other surfaces can damage the print head or other electronic components

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1. Open printer lid by pressing the Cover Release button on the top of your printer.
2. Peel protective wrapper from adhesive cleaning roller by gently pulling on the tape. Discard the protective wrapper.





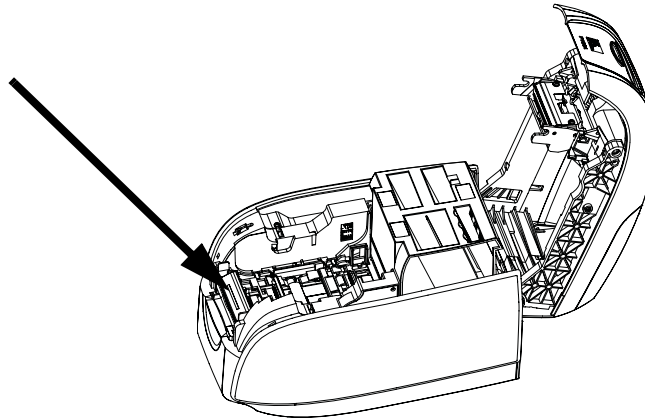
3. Insert the ribbon cartridge with the cleaning roller facing down, so the gears on the ends of the rollers fit into the appropriate slots.

## Installing the Cleaning Cartridge

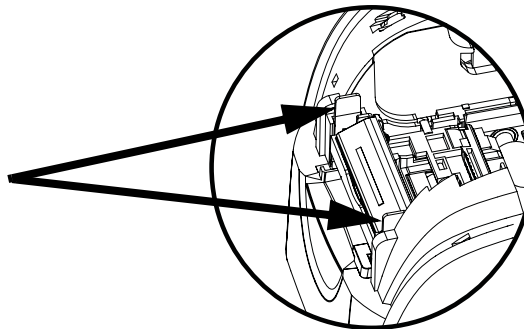
The Cleaning Cartridge removes surface dust particles and oil from the card surface, resulting in better printing.

A new printer will have a Cleaning Cartridge installed, but its Cleaning Roller will have a protective wrapper that must be removed.

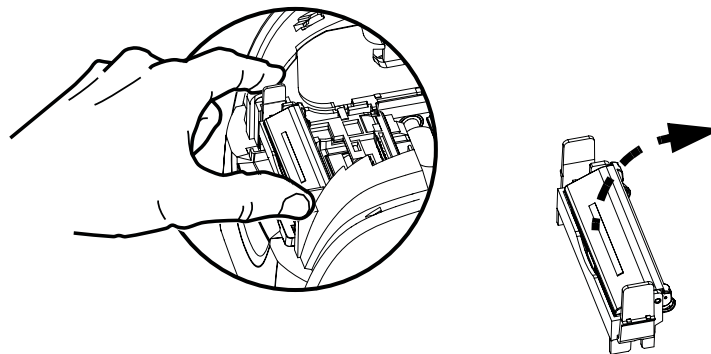
1. Locate the Cleaning Cartridge.



2. The Cleaning Cartridge is held in place by two clips.



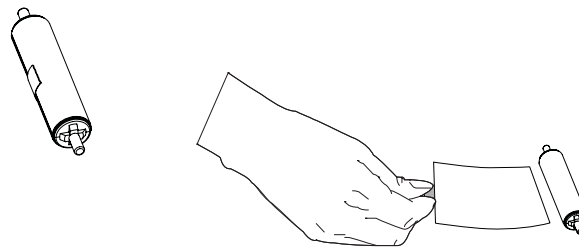
3. Gently squeeze the clips and lift the Cleaning Cartridge free of the printer.



4. Lift the lid of the Cleaning Cartridge. A new printer will have a Cleaning Roller with its protective wrapping. A dirty Cleaning Roller should be replaced.

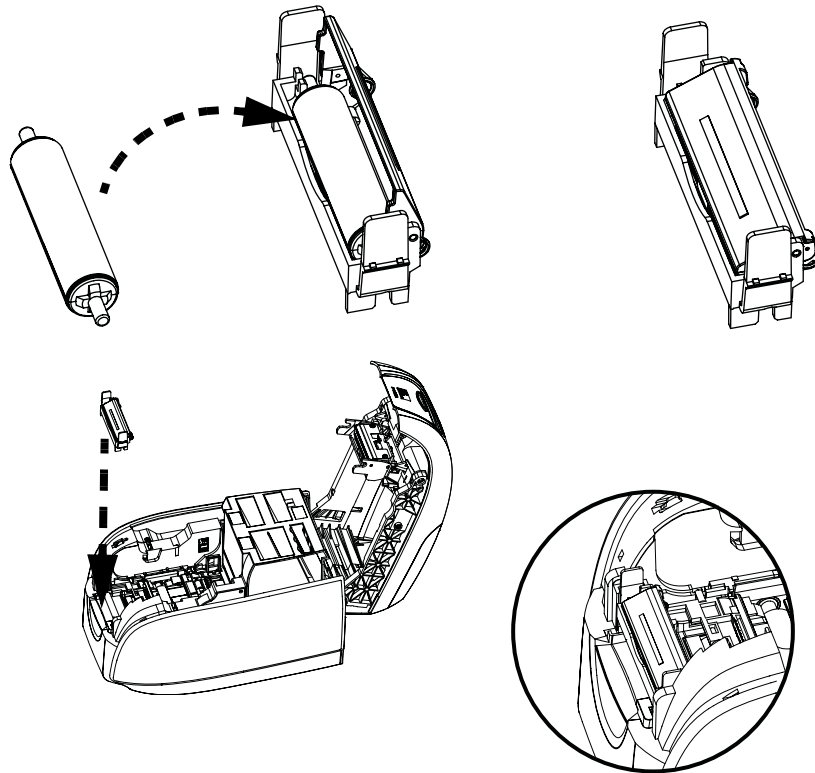


5. Remove the Cleaning Roller from the Cleaning Cartridge. (Discard a dirty Cleaning Roller and replace it with a new one.)
6. Remove the protective wrapper from the Cleaning Cartridge.



7. Place the Cleaning Roller in the Cartridge, close the lid, and insert it in place so the latches engage.

**P100i Printer Setup**  
Installing the Cleaning Cartridge



Close the printer lid and push down until you hear an audible click.



**Note** • After the lid is closed, the ribbon automatically synchronizes when the printer power is on.

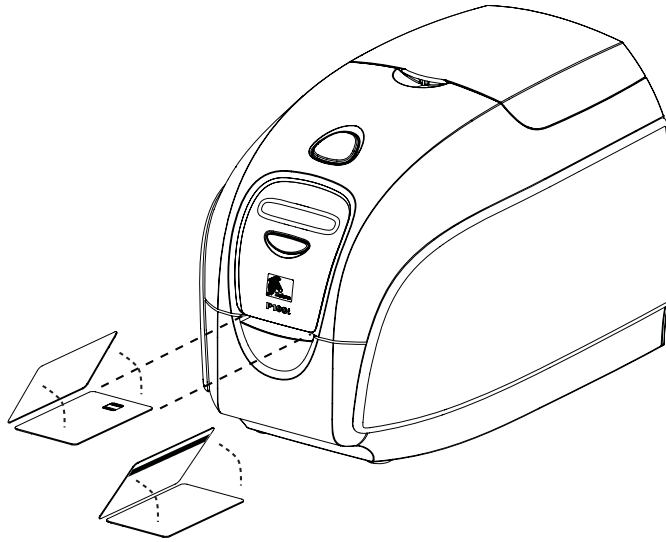
## Inserting Cards

Cards are inserted one at a time into the slot on the front of the P100i. The card is printed (on the top surface), and ejected out through the same slot.



**Important** • Handle the cards only by the edges.

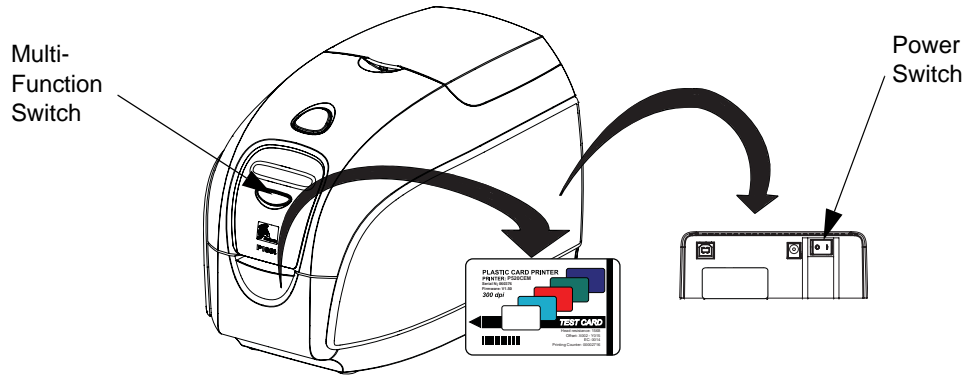
The following figure shows the usual insertion orientation for contact smart-cards and cards with a magnetic stripe. (Note that for magnetic-stripe cards, if printing is desired on the side with the magnetic stripe, the card would be inserted stripe up, with the stripe toward the right side of the printer as viewed from the front.)



## Printing a Test Card

With Ribbon Cartridge and Card Cleaning Cartridge loaded, your P100i printer is ready to print. To check the operation of the printer, you should print a test card.

1. Place the printer power switch in the OFF (0) position.
2. While holding down the Multi Function Button, place the printer power switch in the ON (|) position. The LCD status window will glow blue.



3. Keep pressing the Multi Function button until you are prompted to insert a card.
4. Insert a card into the card entry slot. At this point you can release the Multi Function button. A test card will print after a few seconds and then exit the printer.

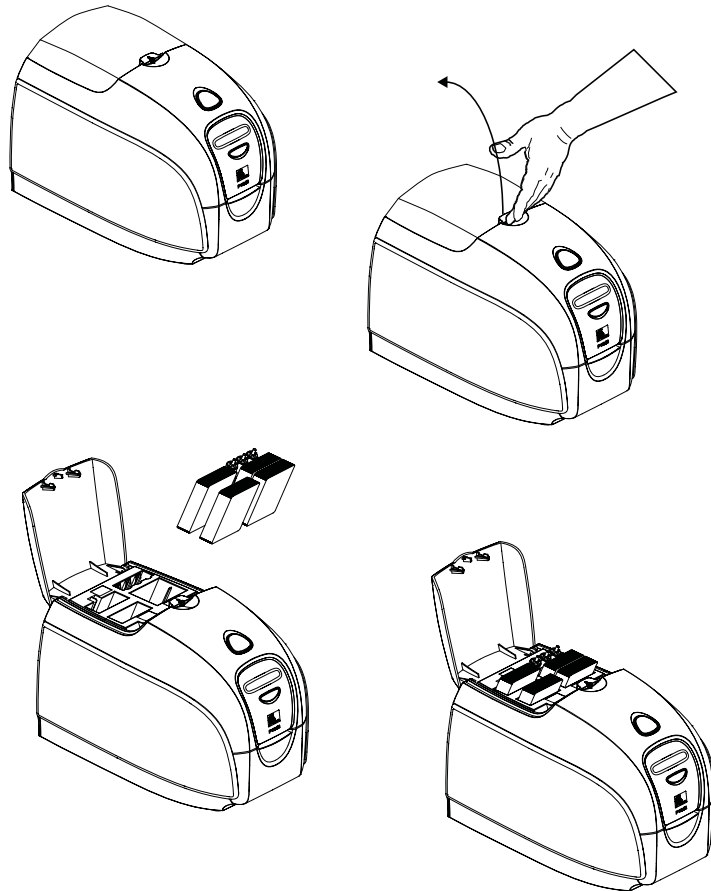


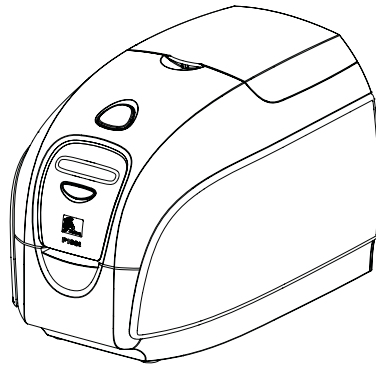
## Storing Extra Cards and Cleaning Rollers

The P100i includes a storage area where you can keep up to 100 extra cards (four groups of 25 cards) and up to three extra Cleaning Rollers.



**Important** • Handle the cards only by the edges.







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# P100i Printer Operation

## Printing

Printing with the P100i Printer requires the Windows Printer Driver, your card design/issuing software or printer command level programming through the printer interface.

The P100i Card Printer can be used with any Windows 2000, Windows XP, or Windows Vista software application program, using the drivers provided on CD with the printer. Reference Chapter 2 for instructions on installing the P100i printer driver.

## Creating a Sample Card

Before you begin a new printing session, print a sample card to ensure that the cards will be printed correctly. Follow the steps below to print your first card using the True Colours™ Card Printer Ribbon Cartridge and the Windows printer driver.

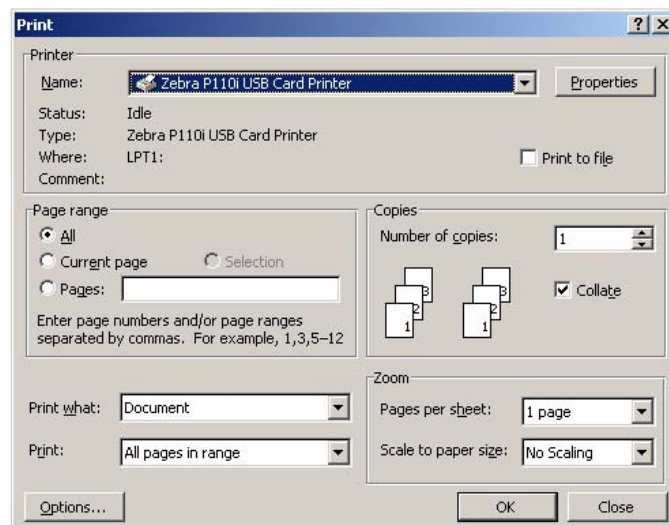
1. Go to the Microsoft Word Software.
2. If the P100i printer was not selected as the default printer, go to File> Select Printer and choose Zebra P100i Card Printer from the printer names list. Close the Print dialog box.
3. Go to File>Page Setup.
4. Select the Size tab, and under Paper Size, choose Card. Under orientation, select Landscape or Portrait.
5. Select the Margins tab, and set the Top, Bottom, Left and Right margins to 0 (zero).
6. Press OK to close Page Setup window.
7. The card appears on the window.
8. Design a card with both black and colored text and with colored pictures similar to the sample card shown below.



## Printing a Sample Card

Once you completed creating your sample card, you are ready to print. Ensure your printer has a True Colours™ Card Printer Ribbon Cartridge installed and there is card stock in the card feeder. Reference Chapter 3 for instructions on installing the ribbon and loading the cards. Print your sample card as follows:

1. Select File>Print to open the Print dialogue box. Ensure the following settings in the Print dialogue box:
  - Printer Name: - Zebra P100i Card Printer
  - Print to File: - Unchecked
  - Page Range: - All
  - Number of Copies: - 1
  - Collate: - Unchecked
  - Print What?: - Document
  - Print: - All pages in range
  - Pages per sheet: - 1 page
  - Scale to paper size: - No scaling



2. Click the OK button.

3. The printer will feed in a card and start printing. The data download time will vary depending on the complexity of the card design and the processing speed of the computer.
4. Once the printing is completed, the card is ejected from the printer.
5. Check the card for any discrepancies. If the sample card is correct, your P100i card printer is ready to produce more cards.

