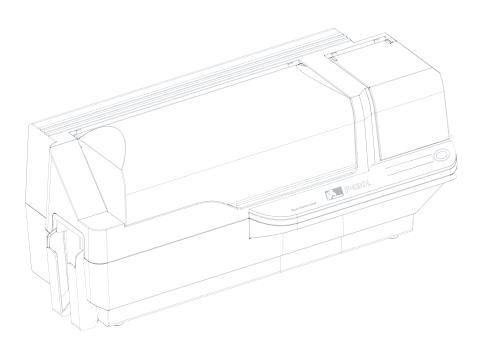




Zebra® P430i Card Printer

User's Manual





Foreword



This manual contains installation and operation information for the Zebra P430i Card Printers manufactured by Zebra Technologies Corporation, Camarillo, California.

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



Copyright Notice

© 2006 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 reserves the right to make changes, for the purpose of product improvement, at any time.

Trademarks

P430*i* is a trademark and Zebra is a registered trademark of Zebra Technologies Corporation. Windows and MS.DOS are registered trademarks of Microsoft Corp. 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 see our web site at: http://www.zebra.com/environment

Declarations of Conformity



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

FCC Regulations

Model P430*i* 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 P430*i* 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.

FCC Radiation Exposure Statement (applicable to 15.247 device only)

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum 20 cm between the radiator and your body. This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC.

Industry Canada Notice

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

Cet equipement est conforme a l'ICES-003 classe A de la norm Industrielle Canadian.



P430i 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	
P430i	Base Printer P430 <i>i</i> Color Card Printer	
0 B C D E E F	Smart Card Options None Contact Encoder Contact encoder & HID iCLASS Contact encoder & MIFARE contactless Contact station HID iCLASS MIFARE contactless	
	Magnetic Encoder None Yes (select defaults below)	
	Magnetic Encoder Defaults None Stripe Down, HiCo Stripe Up, HiCo	
0	Memory Expansion None	
A C	Interface USB Only USB and Ethernet	
	Power Cords U. S. and Europe U. K. and Australia	
	Windows Drivers and User Documentation / Training CD Windows Drivers and User Documentation / Training included on one CD (Software & Documentation Package) which contains Multi-language documentation	

Icons

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



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



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



Provides an example or scenario to demonstrate or clarify a section of text.



Electrostatic Discharge Caution • Warns you of the potential for electrostatic discharge.



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



Caution • Warns you of a situation where excessive heat could cause a burn.



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.



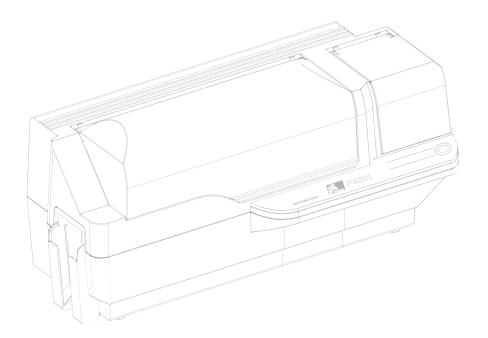




Table of Contents

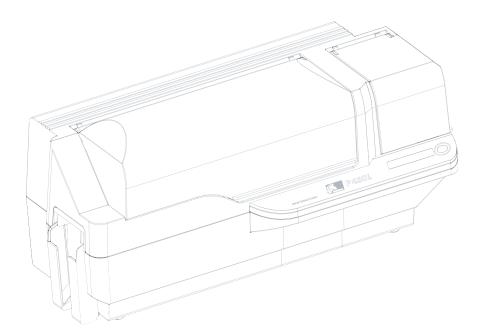
1 • Introduction	1
Printer Features	1
Controls, Connectors, and Indicators	2
LCD Panel	
2 • Installation and Setup	5
General Information	5
Unpacking the Printer	6
Installing the Print Driver Software and Setting Driver Options	0
Installing the P430 <i>i</i> Print Driver	0
Loading a Ribbon	1
Installing the Card Cleaning Cartridge	4
Setting the Card Thickness Control	6
Loading Cards	8
Card Output Hopper	0
Connecting the Printer to your Computer	1
Connecting Power	2
Printing a Test Card	3
Packing the P430 <i>i</i> Printer for Shipment	3
3 • Printing a Card	5
Setting Printer Properties	5
Printing a Sample Card	6
Removing Rejected Cards	7
Feeding One Card at a Time	8

Table of Contents

4 • (Cleaning	29
	Cleaning the Printer	. 29
	When to Clean	. 29
	How to Clean	. 30
	Cleaning the Print Head	. 31
	Card Cleaning Cartridge	
	When to Replace the Cleaning Roller	
	How To Replace the Cleaning Roller	
5 • ⁻	Troubleshooting	35
	Print Quality Issues	
	Troubleshooting the Ethernet Connection and Adapter	
	Resetting to Factory Defaults	
	Ethernet Adapter Status Indicator	
	Network Status/Activity Indicator	
	•	
6 • '	Technical Specifications	
	General Specifications	
	Ribbon Specifications	
	Card Specifications	
	Bar Codes	
	Fonts	
	Card Dimensions	. 44
	Bi-Directional Communications Interfaces	
	Mechanical Specifications	
	Electrical	
	Environmental	
	Options	
	Introduction	
	Media Loading Orientation	. 47
• M	agnetic Card Stripe Encoder	47
	Sample Encoding Program	. 48
	Magnetic Encoder Cleaning	. 48
	When to Clean	. 48
	How to Clean	. 48
	ISO Standard Encoding	. 49
	Introduction	. 51
	Media Loading Orientation	. 51

Table of Contents

Smart Card Contact Station	51
Smart Card Contact Station Interface	52
Printer Sharing	53
Connecting to a Network	53
External Print Server	54
Internal Print Server	54
Sales and Support Locations	55
Worldwide Sales & Support	55
Corporate Headquarters	56
Website	56



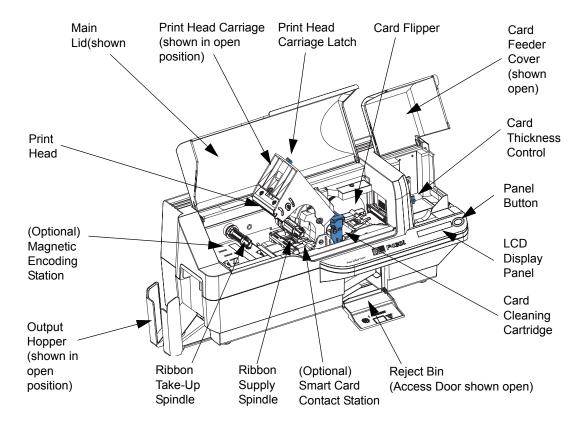
Introduction



Thank you for choosing the Zebra P430*i* Card Printer. This manual guides you to efficient start up and operation of your new Card Printer.

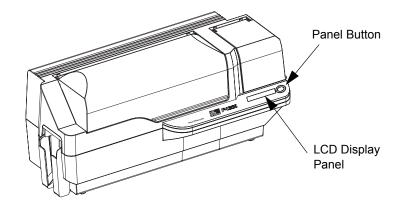
Printer Features

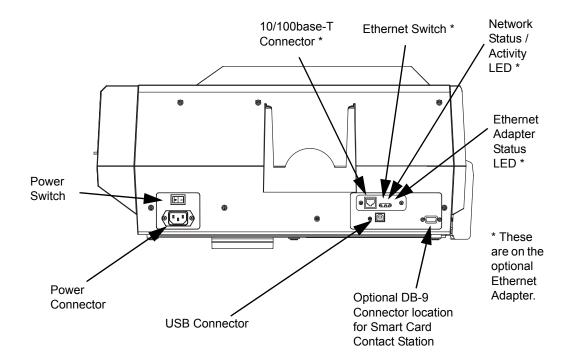
The following shows the main functional features found on your P430*i* Printer.



Controls, Connectors, and Indicators

Your P430*i* Printer has an LCD Display Panel and a Panel Button on the front and a power connector, power switch, and interface connector(s) on the rear panel.





LCD Panel

The LCD Panel can display the following messages:

Message	Mode		
Operational			
Initializing	Scrolling		
SELF TEST	Scrolling		
READY	Fixed		
DOWNLOADING DATA	Fixed		
PRINTING MONO	Fixed		
MAG ENCODING	Fixed		
CONTACT ENCODING	Fixed		
CONTACTLESS ENCODING	Scrolling		
PRINTING CYAN	Fixed		
PRINTING YELLOW	Fixed		
PRINTING MAGENTA	Fixed		
PRINTING BLACK	Fixed		
PRINTING OVERLAY	Fixed		
DOWNLOADING FW	Fixed		
Warnings (Printer will still Operate)			
CLEAN PRINTER	Scrolling		
ENCODING ERROR (printing stops)	Blinking		
CONTACT ERROR	Blinking		
CONTACTLESS ERROR	Scrolling		
INVALID MAGNETIC DATA (encoding stops)	Scrolling		
INVALID CONTACT DATA (encoding stops)	Scrolling		
INVALID CONTACTLESS DATA (encoding stops)	Scrolling		
EMPTY FEEDER & PRESS BUTTON	Scrolling		
Cleaning			
CLEANING PRINTER	Blinking		
REMOVE RIBBON THEN CLOSE HEAD	Scrolling		
EMPTY FEEDER & PRESS BUTTON	Scrolling		
LOAD CLEANING CARD INTO FEEDER	Scrolling		
PRESS BUTTON TO CONTINUE	Scrolling		
FEED LONG CLEANING CARD IN EXIT	Scrolling		

Message	Mode	
CLEANING PRINTER	Blinking	
Errors (Printer will not operate)		
BROKEN RIBBON	Blinking	
OUT OF RIBBON	Blinking	
MECHANICAL ERROR	Blinking	
OUT OF CARDS	Blinking	
PRINT HEAD OPEN	Blinking	
CHECK RIBBON	Blinking	
REJECT BOX FULL	Blinking	
LID OPEN	Fixed	
COMMAND ERROR	Blinking	

Installation and Setup



General Information

This section will guide you through the installation and setup of your P430*i* Card Printer. This consists of the following procedures, which should be performed in the order presented.

- Unpacking the Printer
- Installing the Print Driver Software and Setting Driver Options
- · Loading a Ribbon
- Installing the Card Cleaning Cartridge
- Setting the Card Thickness Control
- · Loading Cards
- Connecting the Printer to your Computer
- · Connecting Power
- Printing a Test Card to verify printer operation

The procedure to be followed for Packing the Printer for Shipment is given at the end of this section.

The printer should be placed in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.



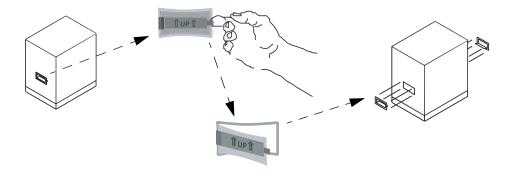
Electric Shock Caution • Limit AC power supplied to the P430i Printer to 100 - 230 volts, $60 \sim 50$ Hertz. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power source and properly protected against electrical surges and grounding faults; the electrical reliability of the printer is based on the reliability of the mains power source and with the earth connection.

The printer's power supply is an internal unit that can only be serviced or replaced by trained and authorized personnel.

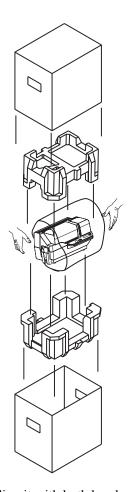
Unpacking the Printer

Your P430*i* Card Printer ships in a carton and protective anti-static bag. Keep all packaging material in case you need to move or re-ship the printer.

- **1.** Inspect the shipping container to ensure that no damage has occurred during shipment. If any damage is apparent, file a claim with the shipper.
- 2. Unlatch and remove the handles on either end of the shipping container, as shown in the figure below.



- **3.** (See the figure on the next page as you perform the following steps.) Lift the upper part of the shipping container off of the lower part (which will still hold the printer and its packing material).
- **4.** Remove the packing material around the top of the printer.



- **5.** Lift the printer out of the carton by holding it with both hands.
- **6.** Please ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.
- **7.** Make sure the following items are included with your P430*i* printer:



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

- **8.** Remove packing tape securing the printer's Main Cover and Card Feeder Cover.
- **9.** Your P430i Printer ships with warning tape where the Card Cleaning Cartridge will be installed, and a pad that protects the print head from possible damage in shipment. To remove the tape and pad, follow the following steps:
 - **a.** Open the printer's main lid by lifting at its lower front lip.

