R110Xi4 Industrial RFID Printer / Encoder

LEGENDARY, RUGGED DURABILITY WITH UHF RFID ENCODING

Print and encode a variety of UHF RFID smart labels for nearly any application with Zebra's high-performance, industrial R110Xi4™ RFID printer/encoder. Specifically engineered for high-volume operations in harsh environments, the proven R110Xi4 printer/encoder leverages the built-to-last Xi4™ printer platform for robust performance. Designed to grow with your evolving business needs, it gives you innovative, industry-leading features to meet the demands of your current and future applications.

Zebra OneCare Services
Increase printer uptime and reduce lost productivity and unbudgeted repair costs by selecting a Zebra® OneCare™ service agreement. A cost-effective means of planning and budgeting for your annual maintenance expenditures, your agreement ensures that trained Zebra technicians will bring your printer back to factory specifications. Zebra offers a variety of plans to fit your budget and business needs.

Genuine Zebra Supplies
Ensure consistent print quality, reduce downtime and increase productivity in your printing process with Genuine Zebra™ supplies. We manufacture each supplies product with the exact same materials every time so you always get crisp, readable and scannable output without needing to adjust the printer darkness setting between rolls.

Simplify Global RFID Printer/Encoder Deployment
Organizations with multinational supply chains can easily deploy the same R110Xi4 printer/encoder model in multiple countries through Zebra's global certification process.

ZebraLink Software Suite
The ZebraLink suite of software and tools makes it simple to design, manage and adapt a barcode printing application tailored to meet your unique business needs.

Innovation and Flexibility in RFID Printing/Encoding

Delivering superior flexibility and unique features, the R110Xi4 supports a wide range of applications. Available with 203 dpi/8 dots per mm or 300 dpi/12 dots per mm – along with high-resolution (600 dpi/23.5 dots per mm) – the R110Xi4 is ideal for high-volume smart labeling such as item-level and parts tagging, RFID pallet/carton labeling with print widths up to 4"/103 mm, as well as small-label applications such as component and healthcare specimen smart labeling.

Simplify setup with auto-configuration and smart inlay detection, which also enables encoding of a variety of different RFID tags

Reduce RFID Media Costs
The R110Xi4 can print/encode small RFID tags spaced closely together — with a distance (pitch) as narrow as 0.6"/16 mm or less on most RFID inlays, smaller than what other printer/encoders can accommodate. By spacing inlays closer, label converters use less material — which reduces your cost per label, requires fewer media roll changes and gives you faster printer/encoder throughput.

The R110Xi4 can also print directly on RFID inlays. If you don't need to print labels, you can avoid the additional cost of label face stock or RFID label converting.

Benefit from RFID Media Flexibility
Zebra's exclusive variable inlay detection and configuration feature automatically detects the inlay position within the tag, so you can choose media from a variety of sources—including other-brand products—to simplify calibration and setup.

The R110Xi4 offers multiple RFID power settings to support the widest range of transponder designs and sizes available in the market.

Ensure the Highest Encoding Accuracy in the Industry
Encoding accuracy is critical to make certain tagged assets "exist" in inventory or in transit. Lost assets cost you money. Get the highest encoding accuracy in the industry with Zebra's patented Adaptive Encoding Technology.

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For more information about the R110Xi4 Industrial RFID Printer / Encoder, visit www.zebra.com/r110xi4 or access our global contact directory at www.zebra.com/contact

Built on the Solid Xi4 Printer Platform

Zebra's built-to-last Xi™ series printers are legendary for their rugged durability, consistently outstanding print quality, fast print speed, long life and unparalleled reliability in demanding applications. These qualities translate into low total cost of ownership—making them a smart investment for organizations with high-volume, mission-critical or specialty labeling applications.

R110Xi4 RFID printer/encoders build upon the demonstrated durability of the Xi series legacy. Like the Xi series, R110Xi4 printer/encoders feature an all-metal construction and are engineered for dependable, 24/7 performance in the harshest conditions. Designed for years of continuous use, they can withstand the most demanding operating environments.

- Rugged, heavy-gauge steel housing and metal interior components withstand bangs and bumps.
- Enclosed operating mechanisms block out debilitating dust and dirt.
- Printers operate trouble-free in a wide range of temperatures and humidity levels.

Advanced and flexible features make the R110Xi4 easier and faster to operate, customize, maintain and integrate.

- Tailor menu content and navigation to meet your needs. The R110Xi4 features a front control panel with a large, bright, easy-to-read LCD and a customizable menu that supports a wide variety of languages—great for multinational operations.
- Easily integrate the R110Xi4 with a variety of connectivity choices including Serial, simultaneous Parallel/Ethernet, internal ZebraNet® 10/100 Print Server (Ethernet), and optional secure 802.11b/g wireless connectivity.
- Reduce downtime and proactively plan supply changes with advanced ribbon- and media-low sensing capabilities.
- Ensure optimum print quality with on-board diagnostic tools and adjustments.

Standard Features

RFID	Physical
Supports tags compatible with UHF EPC Gen 2 V2, ISO/IEC 18000-63 and RAIN RFID protocols	Full-function front panel and large multilingual back-lit LCD display with user-programmable password protection
Prints and encodes tags with a pitch of 0.6"/16 mm	Clear media side door enables easy monitoring of supplies usage without opening the printer systems
Adaptive Encoding Technology automatically selects optimum encoding settings	Thin film printhead with Element Energy Equalizer™ (E3™)
Auto-tag calibration for label lengths of 2" or greater	64 MB Flash memory
Variable inlay placement supports a range of inlay positions for maximum media flexibility	Serial RS-232 and bi-directional Parallel ports with auto detect
RFID counters keep track of the good and bad labels	USB 2.0
RFID processes optimized for fastest label throughout	Transmissive and reflective dual media sensors are selectable through software or front panel
RFID ZPL® commands allow ease of RFID setup with maximum flexiblity	Real-time clock
Variable RFID power settings for both read and write allow maximum flexibility for printing small labels	Advanced label/media counters
	Internal ZebraNet® 10/100 Print Server — supports 10Base-T, 100Base-TX and fast Ethernet 10/100 auto-switching networks

R110Xi4 Specifications

PRINTER SPECIFICATIONS

Resolution	203 dpi/8 dots per mm
	300 dpi/12 dots per mm
	600 dpi/23.5 dots per mm
Memory	64 MB Flash; 16 MB RAM
Maximum Print Width	4.0"/102 mm
Maximum Print Speed	14"/356 mm per second (203 dpi)
	12"/305 mm per second (300 dpi)
	6"/152 mm per second (600 dpi)
Media Sensors	Transmissive and reflective
Maximum Print Length	150"/3810 mm

MEDIA CHARACTERISTICS

Media Width	0.79"/20 mm to 4.5"/114 mm
Media Roll Size	8"/203 mm OD on a 3"/76 mm ID core
Thickness	0.003"/0.076 mm to 0.012"/0.305 mm
Media Types	Continuous, die-cut or black mark, notch

RIBBON CHARACTERISTICS (Thermal-transfer option only)

Standard Length	1476'/450 M or 984'/300 M
Core I.D.	1"/25.4 mm inner diameter (ID)

OPERATING CHARACTERISTICS

Environmental	Operating Temperature: 40°F to 105°F/5°C to 40°C
	• Thermal transfer: 40°F to 105°F/5°C to 40°C
	• Direct thermal: 32°F to 105°F/0°C to 40°C
	Operating Humidity: 20% to 85% non-condensing
	Storage/Transportation Temperature: -40°F to 140°F/ -40°C to 60°C
	Storage Humidity: 5% to 85% non-condensing
Electrical	90-264 VAC; 48-62Hz
Agency Approvals	IEC 60950-1, EN 55022 Class B, EN 55024, EN 61000-3-2, EN 61000-3-3
	Product Markings: FCC-B, C-Tick

PHYSICAL CHARACTERISTICS

Length	20.38"/517.5 mm
Width	10.31"/261.9 mm
Height	15.5"/393.7 mm
Weight	50 lbs/22.7 kg

COMMUNICATION AND INTERFACE CAPABILITIES

ZebraNet 10/100 Print Server — supports 10Base-T, 100Base-TX and fast Ethernet 10/100 auto-switching networks.

USB 2.0 — 12 Mbits/second

High-speed bi-directional Parallel interface with auto detect — IEEE 1284-1994 compatibility, ECP, nibble mode

High-speed Serial interfaces:
• RS-232C with DB9F connector, optional converter for DB25F available
• Optional RS-422/485 with multidrop capability to network multiple printers from a single host with external adapter

Applicator interface — with DB15F connector

SOFTWARE TOOLS

ZebraLink Solutions

Zebra Setup Utilities — A Windows application to quickly set up and configure your Zebra printer.

ZebraDesigner™ — Simple Windows® WYSIWYG label design application with basic features.

ZebraDesigner Pro — Simple Windows WYSIWYG label design application offering more advanced features for more complex label designs.

ZBI-Developer™ — Programming utility makes it dramatically easier for programmers to create and test complex ZBI 2.0™ programs and distribute them to the printer (standard with ZBI 2.0).

ZebraNet Bridge Enterprise — Centrally manage Zebra printers from a single PC screen anywhere on your global network.

ZebraNet Utilities v7.0 — Provides enhanced printing, conversion and administration capabilities; message management; and more.

Zebra Enterprise Connector — Print labels directly from Oracle's BI Publisher with the Enterprise Connector and Zebra printers.

ZDesigner Windows Driver — Zebra's powerful Microsoft® certified Windows driver.

Web View
Connect and control Zebra barcode printers using ZPL II via the printer's web interface using common web browsers.

Alert
Printers equipped with ZebraNet print servers will notify you via any email-enabled wired, or wireless device to minimize downtime.

FIRMWARE

ZBI 2.0™ — Optional powerful programming language that lets printers run stand-alone applications, connect to peripherals, and much more.

ZPL and ZPL II® — Zebra Programming Language provides sophisticated label formatting and printer control and is compatible with all Zebra printers.

EPL™ and EPL2™ — Eltron® Programming Language with Line Mode simplifies label formatting and enables format compatibility with legacy applications.

BARCODE SYMBOLOGIES

Linear Barcodes: Code 11, Code 39, Code 93, Code 128 with subsets A/B/C and UCC Case Codes, ISBT-128, UPC-A, UPC-E, EAN-8, EAN-13, UPC and EAN 2-or 5-digit extensions, Plessey, Postnet, Standard 2-of-5, Industrial 2-of-5, Interleaved 2-of-5, Logmars, MSI, Codabar and Planet Code

2D Barcodes: Codablock, PDF417, Code 49, DataMatrix, MaxiCode, QR Code, MicroPDF417, TLC 39, GS1DataBar, RSS), Aztec

FONTS AND GRAPHICS

Unicode™-compliant Global Printing
Bitmap fonts A through H and GS symbols are expandable up to 10 times, height and width independent

Smooth scalable font Ø (CG Triumvirate™ Bold Condensed*) is expandable dot-by-dot, height and width independent

IBM® Code Page 850 International Characters

Supports user-defined fonts and graphics — including custom logos

Contains UFST® from Monotype Imaging, Inc.

61 MB user-available non-volatile memory storage for downloadable objects

12 MB user-available SDRAM

OPTIONS AND ACCESSORIES

Clear media side bi-fold door — allows shorter media door opening radius

Full-width rotary knife cutter and catch tray — operates under software control cutting labels individually or in strips

Media rewind spindle — rewinds finished roll internally onto 3"/76 mm core or enables label peel and liner rewind

Applicator interface — provides status and control signals for applicators and remote control devices

Media supply spindle for 3"/76 mm core or 1.57"/40 mm core

Additional fonts

Specifications subject to change without notice.

Ideal for These Applications

The high-performance R110Xi4 is designed for item-, case- and pallet-level identification.

Manufacturing
• Retail tagging
• Item-level tracking
• Work-in-process
• Product authentication
• Asset tracking
• Inventory management
• Distribution
• Product ID / serial numbers
• Package labeling
• Receiving / put-away labeling
• Compliance labeling

Transportation and Logistics
• Package verification
• Document tracking
• Asset tracking
• Inventory management
• Distribution
• Order picking / packing
• Shipping / receiving
• Cross-docking

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