



# ZE500 Series Print Engines

## Innovatively engineered for ease of use and servicing

Zebra's ZE500™ Series print engines are designed to keep your mission-critical print-and-apply applications operating without interruptions. Incorporating customer feedback and best practices into the design, Zebra® created print engines that can endure harsh environments and are easy to integrate, operate and maintain. Pairing mindful engineering with the features you need—including optional expanded RFID capabilities for greater tracking and visibility—ZE500 Series print engines give you the tools and flexibility you need to keep your business moving forward.

### **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 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.

### **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.

### **Encased Design Withstands Harsh Environments**

Engineered without the need for cooling fans, the ZE500 Series' external cabinet is impervious to prevent debris and water from entering the print engine. This added protection enables the printer to perform in dusty environments or where wash-down and water may be splashed around.

## Smart Design and Features Give You Added Control and Capabilities

Featuring a broad range of connectivity, the ZE500 Series includes standard Serial, Parallel, USB and wired Ethernet—along with optional wireless capabilities—making it easy to integrate into your network.

### **Easy to Set Up**

The large, graphical display with simple five-button menu can be rotated or remotely located up to two meters with an optional kit, so it is easily accessible even for unusual mounting orientations. The applicator IO is the same for 5V and 24V—just simply switch jumpers to convert.

### **Immediate Access to Support**

An integrated QR Code gives you quick access to support and helpful how-to videos on topics ranging from changing the ribbon or drive system to changing the printhead and more.

For more information about the ZE500 Series Print Engines, visit [www.zebra.com/ze500](http://www.zebra.com/ze500) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

**Customize Print Quality Settings**

Maximize print and image quality with the easy-to-use outboard cam system that adjusts the printhead to the platen roller on all three different axes—no matter what media is in use. And, two printhead toggles help maximize pressure dispensation across the printhead so you can dial in even further on print quality.

**Simple to Maintain and Service**

Easily remove all three platen, pinch and peel rollers in minutes from the front of the print engine without the need to remove the ZE500 print engine from the print-and-apply system. Captured fasteners eliminate lost hardware, and the pinch and peel rollers are now the same part to eliminate confusion and misinstallation. Quickly access internal components via a hinged cage system that swings open wide for fast, simple maintenance. The innovative, extended-life modular drive system is engineered to be easily removed via only three screws and can be used as a spare module or rebuilt on a bench top. Change belts or alter resolution from 203 dpi to 300 dpi or vice versa in minutes. No need to shut down your operations for simple changes or maintenance.

# Specifications

# Markets and Applications

## RFID

- Supports tags compatible with: UHF EPC Gen 2 V2, ISO/IEC 18000-63 and RAIN RFID protocols
- Prints and encodes short pitch item level tags
- Variable RFID power settings to support the widest range of tags
- RFID job monitoring tools track RFID performance
- RFID ZPL® commands provide compatibility with existing Zebra RFID printers
- Support for industry multi-vendor chip-based serialization (MCS)
- Supports block permalocking of user memory compatible with ATA Spec 2000
- Integrated ThingMagic® RFID Reader/Encoder

## Standard Features

- Print methods: thermal transfer or direct thermal
- Orientation: right-hand or left-hand
- Industrial all-metal construction
- Applicator interface
- Transmissive and reflective media sensors
- Thin film printhead with E3™ Element Energy™ Equalizer for superior print quality
- Real-time clock
- Rotatable display
- ZPL II®

## Printer Specifications

|                     |  |
|---------------------|--|
| Resolution          | 203 dpi/8 dots per mm or 300 dpi/12 dots per mm  |
| Memory              | 16 MB SDRAM, 64 MB Flash   |
| Maximum Print Width | ZE500-4: 4.1"/104 mm<br>ZE500-6: 6.6"/168 mm   |
| Maximum Print Speed | ZE500-4: 12"/305 mm per second (203 and 300 dpi)<br>ZE500-6: 12"/305 mm per second (203 dpi)<br>10"/254 mm per second (300 dpi)  |
| Media Sensors       | Transmissive and reflective  |
| Print Length        | ZE500-4:<br>Label and liner width: 0.625"/16 mm to 4.5"/114 mm<br>Minimum length with back feed: 0.5"/13 mm<br>Minimum length without back feed: 0.25"/6.5 mm<br>Minimum length in stream mode: 0.25"/6.5 mm<br>Maximum length: 39"/991 mm<br>Maximum continuous media print length: 150"/3,810 mm<br>Ribbon width: 1"/25.4 mm to 4.2"/107 mm<br>ZE500-6:<br>Label and liner width: 3"/76 mm to 7.1"/180 mm<br>Minimum length with back feed: 3"/76 mm<br>Minimum length without back feed: 1"/25.4 mm<br>Minimum length in stream mode: 1"/25.4 mm<br>Maximum length: 39"/991 mm<br>Maximum continuous media print length: 150"/3,810 mm<br>Ribbon width: 3"/76 mm to 7.1"/180 mm |

## Media Characteristics

|                                |  |
|--------------------------------|--|
| Minimum Label and Liner Length | ZE500-4:<br>Applicator mode, backfeed on: 0.50 in./12.7mm<br>Applicator mode, backfeed off: 0.25 in./6.4mm<br>Stream mode: 0.25 in./6.4mm<br>Rewind mode: 0.25 in./6.4mm "loose loop"<br>Tear-off mode, backfeed on: 0.50 in./12.7mm |
|--------------------------------|--|

## Operating Characteristics

|                  |   |
|------------------|---|
| Environmental    | Operating Temperature: 31°F to 104°F/0°C to 40°C<br>Operating Humidity: 20% to 95% non-condensing R.H.<br>Storage/Transportation Temperature: -40°F to 160°F/-40°C to 71°C<br>Storage Humidity: 5% to 95% non-condensing R.H. |
| Electrical       | Universal power supply with power-factor correction 90–264 VAC, 47–63 Hz  |
| Agency Approvals | VCCI, CCC<br>• Standards approvals: IEC 60950-1; EN 55022, Class A; EN 55024; EN 61000-3-2, 3-3<br>• Product markings: NRTL; CE; FCC A; ICES-003; VCCI; C-Tick; CCC; NOM; Gost-R; S-Mark; KCC; BSMI                           |

## Physical Characteristics

|        |                |
|--------|----------------|
|        | ZE500-4        |
| Length | 14.9"/379 mm   |
| Width  | 9.6"/245 mm    |
| Height | 11.8"/300 mm   |
| Weight | 34 lbs/15.4 kg |
|        | ZE500-6        |
| Length | 17.2"/438 mm   |
| Width  | 9.6"/245 mm    |
| Height | 11.8"/300 mm   |
| Weight | 38 lbs/17.3 kg |

## Communication and Interface Capabilities

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| Parallel port: Centronics®-compatible<br>Serial interface: RS-232<br>USB 2.0<br>ZebraNet® 10/100 Print Server (internal)<br>Applicator interface with DB-15F connector<br>Optional ZebraNet b/g Print Server |
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## Software tools

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| <p>ZebraLink Solutions<br/>Zebra Setup Utilities — A Windows® application to quickly set up and configure your Zebra printer.<br/>ZebraDesigner™ — Simple Windows WYSIWYG label design application with basic features.<br/>ZebraDesigner Pro — Simple Windows WYSIWYG label design application offering more advanced features for more complex label designs.<br/>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).<br/>ZebraNet™ Bridge Enterprise — Centrally manage Zebra printers from a single PC screen anywhere on your global network.<br/>ZebraNet Utilities v7.0 — Provides enhanced printing, conversion and administration capabilities; message management; and more.<br/>Zebra Enterprise Connector — Print labels directly from Oracle's BI Publisher with the Enterprise Connector and Zebra printers.<br/>ZDesigner Windows Driver — Zebra's powerful Microsoft® certified Windows driver.</p> <p>Web View<br/>Connect and control Zebra barcode printers using ZPL II via the</p> |
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## Print Labelling

- Manufacturing and warehousing
- Automotive
- Pharmaceuticals
- Food and beverage
- Health and beauty

## Media Characteristics

|                     |   |
|---------------------|---|
|                     | Tear-off mode, backfeed off: 0.25 in./6.4mm<br>ZE500-6:<br>Applicator mode, backfeed on: 3.0 in./76.2mm<br>Applicator mode, backfeed off: 1.0 in./25.4mm<br>Rewind mode: 1.0 in./25.4mm "loose loop"<br>Tear-off mode, backfeed on: 3.0 in./76.2mm<br>Tear-off mode, backfeed off: 1.0 in./25.4mm |
| Maximum Media Width | ZE500-4: 4.5"/114 mm<br>ZE500-6: 7.1"/180 mm  |
| Media Roll Size     | 4.0" (101.6mm) O.D on a 1.0" (25.4mm) I.D. core   |
| Thickness           | ZE500-4: 0.0053"/0.135 mm to 0.010"/0.254 mm<br>ZE500-6: 0.003"/0.076 mm to 0.012"/0.305 mm   |
| Media Types         | Continuous, die-cut or black mark   |

## Ribbon Characteristics (Thermal-transfer option only)

|                 |  |
|-----------------|--|
| Standard Length | 1,968'/600 M   |
| Width           | ZE500-4: 1"/25.4 mm to 4.2"/107 mm<br>ZE500-6: 3"/76 mm to 7.1"/180 mm |
| Core I.D.       | 1"/25.4 mm ID  |

## Software tools

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.

## Barcode Symbologies

Barcode Ratios: 2:1, 7:3, 5:2, and 3:1

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, TLC 39, MicroPDF, RSS-14 (and composite), Aztec

## Fonts and Graphics

Zebra Global printing solution including Unicode™

Swiss 721 font standard

Bitmap fonts A to 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

Firmware support for downloadable TrueType™ fonts

Additional fonts available

Supports user-defined fonts and graphics, including custom logos

\*Contains UFST® from Agfa Monotype Corporation

For optimum print quality and printer performance, use Genuine Zebra supplies.  
Specifications subject to change without notice.



**NA and Corporate Headquarters**  
+1 800 423 0442  
inquiry4@zebra.com

**Asia-Pacific Headquarters**  
+65 6858 0722  
contact.apac@zebra.com

**EMEA Headquarters**  
zebra.com/locations  
contact.emea@zebra.com

**Latin America Headquarters**  
zebra.com/locations  
la.contactme@zebra.com