ZE511/ZE521 RFID Print Engines

Mission critical doesn't compromise–neither do Zebra print engines

Your lines and equipment must stand up to the 24/7/365 test, but you need more than just durable performance. Keep your operations moving forward with Zebra's rugged ZE511 and ZE521 RFID print engines, intelligently engineered to make your work easier–today and tomorrow. These purpose-built essential workers deliver it all: RFID encoding for advanced tracking, fast print speeds and all-metal construction for demanding operation, innovative features and forward capabilities for years of use, along with onboard analytics and expedited maintenance elements to maximize uptime. And, they feature Zebra's exclusive, industry-leading Print DNA™ software suite that makes them easy to setup, manage, maintain and secure–onsite or remotely. So, go ahead. Push the limits. A Zebra print engine won't let you down.



Innovation Has Arrived

Extending the ZE500 Series Legacy
Advancing the proven ZE500 Series, ZE511R and ZE521R print engines build on this durable, reliable legacy with innovative RFID technology, faster print speeds, performance-enhancing capabilities and evolving intelligence that make them stand apart. Added features such as the 4.3-inch, full-color LCD touch screen make operation easier. See printer status at a glance, make expedited settings changes and access support.

Zebra RFID: More Transformation, No Complication

Print and Encode With Ease
Featuring Zebra's own RE40 module, you can easily print and encode 4-inch RFID labels with the ZE511 and 6-inch RFID labels with the ZE521 for deeper visibility and insights in an ever-competitive business environment. Access the intuitive RFID wizards via the screen to get started.

Do RFID Your Way, Automatically
Incorporating Zebra's exclusive adaptive encoding technology with new algorithms, it eliminates complex and complicated placement guidelines so you can accurately encode smaller labels spaced closely together. Enjoy greater media flexibility and design labels for your application without limitation. Automatically calibrate RFID in minutes and adopt new inlays without pretesting. Simply calibrate and use them.

Engineered to Endure

Encased Design Withstands Harsh Environments
The ZE511 and ZE521 RFID deliver rugged durability to push the limits. Engineered without the need for cooling fans, their external cabinets are designed to resist debris and water ingress making them ideal in dusty environments or where water may be splashed.

Push the limits. Non-stop RFID printing/encoding for your mission-critical operations.
For more information, please visit www.zebra.com/ze511-ze521-rfid

Proven to Perform

Outstanding Print Speeds and Quality
Keep your lines moving quickly with best-in-class print speeds, up to 18 inches per second. For 203 dpi use cases printing faster than 14 ips, select the optional high-speed printhead[1]. For premium print resolution, choose the 600 dpi option[1].

Simple to Maintain and Service

Predict Maintenance Needs to Minimize Downtime
Use onboard analytics to predict and schedule maintenance to prevent unexpected downtime. Troubleshoot remotely and swap out the extended-life modular drive quickly and easily via only three screws for offline servicing to keep workflows moving.

New Printhead Design Expedites Replacement
The ZE511 and ZE521 have an improved socketed printhead design that eliminates tools with the quick-release tab. Easily remove all three platen, pinch and peel rollers in minutes from the front of the print engine without the need to remove the unit from the print-and-apply system.

Interior Space and Frustration-Free Details
Captured fasteners eliminate lost hardware. Quickly access internal components via a hinged cage system that swings open wide for fast, simple maintenance, newly designed with even more interior workspace.

Explore Managed Print Services (MPS) With Assurance
Looking to gain control and visibility of your print engines with MPS? Zebra's thermal printers with Print DNA, including the ZE511 and ZE521, make it easy. They're engineered for durability, and they offer innovative remote management, analytics and security capabilities that make them the obvious choice for MPS. With the Print DNA software toolset, your Zebra MPS provider can remotely manage and optimize your printers, track and automate supplies replenishment and ensure security. This leaves you free to lower your operating costs and minimize your IT workload.

Put it to Work for Years

Forward Focused to Match Your Evolving Business Needs
Printers should add to your operations, not create obstacles. Remove the hassle with the ZE511 and ZE521, engineered to handle tomorrow's technology. With the revolutionary Print DNA software suite, they have the innovative edge to grow with your business.

Don't Compromise–Drive Performance With the Most Innovative Software Suite

Simple to Deploy, Use, Manage and Secure
Now including Zebra's innovative Print DNA software suite, powered by our Link-OS operating system, the ZE511 and ZE521 are incredibly easy to integrate, use, manage and secure. Deploy them anywhere with setup tools, wizards and emulation capabilities. The large color touch screen and intuitive user interface make setup and operation easy with minimal training. See status at a glance from any angle via the screen that can be rotated and remotely located, up to two meters, for convenient accessibility.

Make Setup Efficient
Provision printers quickly and easily by mirroring using a USB flash drive including firmware, embedded files and settings. Or, configure using a mobile device and Zebra's Printer Setup Utilities.

Connect Your Way With Comprehensive Communication
Add your ZE511 or ZE521 to your existing wired and wireless networks or connect them directly to any PC. Every ZE511 and ZE521 comes with USB, Serial, Ethernet, a dual USB Host port and Bluetooth® 4.1. Add an optional Parallel, 802.11 a/c wireless or Ethernet card to the open internal communication slot. And, with the included Print Touch tag (NFC), you can simply tap a compatible mobile device on the ZE511 or ZE521 to pair and print.

Update, Troubleshoot and Monitor–All From a Single Location
With Zebra's Printer Profile Manager Enterprise, part of Print DNA, you have the ability to easily manage, secure and troubleshoot your networked print engines from any location. An intuitive browser-based interface lets you see status at a glance, quickly triage issues to minimize downtime and perform updates and maintenance.

Unparalleled, Peace-of-Mind Printer Security
Security risks are real and costly. Endpoints are becoming popular targets–including networked thermal printers and print engines. Shield yourself from cyberattacks with Zebra's PrintSecure, part of Print DNA. Use it to easily configure your printers via secure connections, identify vulnerabilities, block unauthorized access and detect events before they happen.

Specifications

RFID

- Supports tags compatible with UHF EPC Gen 2 V2, ISO/IEC 18000-63 and RAIN RFID protocols
- Prints and encodes tags with a minimum pitch of 0.6 in./16 mm
- Adaptive Encoding Technology simplifies RFID setup and eliminates complex RFID placement guidelines
- RFID job monitoring tools track RFID performance
- Globally certified in more than 70 countries for RFID to support multinational deployments
- RFID log records all RFID data with timestamps, ensuring complete traceability
- RFID ZPL commands provide compatibility with existing Zebra RFID printers
- Support for industry standard multi-vendor chip-based serialization (MCS)
- Integrated Zebra RE40 RFID Reader/Encoder

Standard Features

- Print Methods: Thermal transfer and direct thermal printing
- Orientation: right-hand or left-hand
- 4.3 in. color touch screen with intuitive menu for quick operation and settings
- Industrial all-metal construction
- Communications: USB 2.0, RS-232 Serial, 10/100 Ethernet, Bluetooth 4.1, Dual USB Host, Applicator Interface
- Adjustable transmissive and fixed reflective media sensors
- Quick release, thin film printhead with E3 Element Energy Equalizer for superior print quality
- Real-time clock
- Rotatable screen
- Zebra Designer Essentials: easy label design tool free at www.zebra.com/zebradesigner
- ENERGY STAR certified
- PDF Direct

Printer Specifications

Resolution	ZE511: 203 dpi/8 dots per mm 300 dpi/12 dots per mm (optional) 600 dpi/24 dots per mm (optional) ZE521: 203 dpi/8 dots per mm 300 dpi/12 dots per mm (optional)
Memory	512MB SDRAM, 512MB Flash
Maximum Print Width	ZE511: 4.09 in./104 mm ZE521: 6.6 in./168 mm
Maximum Print Speed	ZE511: 18 ips/457 mm per second @ 203 dpi[2] 14 ips/356 mm per second @ 300 dpi 6 ips/152 mm per second @ 600 dpi ZE521: 14 ips/356 mm per second @ 203 dpi 12 ips/305 mm per second @ 300 dpi
Media Sensors	Transmissive and reflective
Maximum Continuous Print Length	Maximum Continuous Media Print Length ZE511: 203 dpi: 150 in./3801 mm 300 dpi: 100 in./2540 mm 600 dpi: 50 in./1270 mm ZE521: 203 dpi: 150 in./3801 mm 300 dpi: 100 in./2540 mm

Media Characteristics

Minimum Label and Liner Length	ZE511: • Applicator mode, backfeed on: 0.50 in./12.7 mm • Applicator mode, backfeed off: 0.25 in./6.4 mm • Stream mode: 0.25 in./6.4 mm • Rewind mode: 0.25 in./6.4 mm "loose loop" • Tear-off mode, backfeed on: 0.50 in./12.7 mm • Tear-off mode, backfeed off: 0.25 in./6.4 mm ZE521: • Applicator mode, backfeed on: 3.0 in./76.2 mm • Applicator mode, backfeed off: 1.0 in./25.4 mm • Rewind mode: 1.0 in./25.4 mm "loose loop" • Tear-off mode, backfeed on: 3.0 in./76.2 mm • Tear-off mode, backfeed off: 1.0 in./25.4 mm
Media Width	ZE511: .625 in./16 mm—4.5 in./114 mm ZE521: 3 in./76 mm—7.1 in./180 mm
Thickness	ZE511: 0.0053 in./0.135 mm to 0.010 in./0.254 mm ZE521: 0.003 in./0.076 mm to 0.012 in./0.305 mm
Media Types	Continuous, die-cut or black mark

Ribbon Characteristics

Standard Length	1,968 ft./600 m
Width	ZE511: 1 in./25.4 mm to 4.2 in./107 mm ZE521: 3 in./76 mm to 7.1 in./180 mm
Core I.D.	1 in./25.4 mm ID

Operating Characteristics

Environmental	Operating Temperature: 31°F to 104°F/0°C to 40°C Operating Humidity: 20% to 95% non-condensing R.H. Storage/Transportation Temperature: -40°F to 160°F/-40°C to 71°C 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	• Standards approvals: IEC 62368-1; EN 55032, Class A; EN 55035; EN 61000-3-2, 3-3 • Product markings, but not limited to: cTUVus; CE; FCC A; ICES-003; VCCI; RCM; CCC; EAC; S-Mark; KCC; BSMI; India-BIS; In-Metro; Energy Star

Physical Characteristics

Depth	ZE511: 14.9 in./379 mm ZE521: 17.2 in./438 mm
Width	ZE511: 9.6 in./245 mm ZE521: 9.6 in./245 mm
Height	ZE511: 11.8 in./300 mm ZE521: 11.8 in./300 mm
Weight	ZE511: 34 lbs/15.4 kg ZE521: 38 lbs/17.3 kg

Options and Accessories

Communication	• Parallel port option card • Dual band 802.11ac Wi-Fi™ and Bluetooth option card • 10/100 Ethernet option card
Accessories	• Extend peel bar kit • User Interface extension and mounting kit

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

Markets and Applications

- **Manufacturing**
- **Warehouse Management**
- **Retail**
- **Healthcare**

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[3]) 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

Consistently Exceptional Zebra Certified Supplies

Printing supplies can impact everything from printhead lifespan to operational efficiency. That's why we design, produce and rigorously pretest our own line of thermal printing supplies to ensure consistent, optimized performance in your Zebra printer. We offer the widest selection of in-stock RFID labels and tags for general purpose, advanced and specialty use applications, in a variety of sizes and materials, using inlays from leading manufacturers.
www.zebra.com/supplies

Service When You Need it

You invest in Zebra printers to better serve your customers and boost operational efficiency. Now, you can ensure predictable performance and eliminate unbudgeted repair expenses with Zebra OneCare™. You get unmatched technical support direct from Zebra, as well as comprehensive repair services, including accidental damage and defined repair turn-around times. And Zebra's Visibility Services provide the real-time insight into printer operational information you need to increase printer availability and optimize utilization within your workflows. www.zebra.com/zebraonecare

Recommended Services

Zebra OneCare Select™	Comprehensive Coverage, including printheads, normal wear and accidental breakage Priority access 24x7 live technical support and software updates Advance Replacement and Express Shipping (Next Day Device Replacement) Standard Commissioning Online Return Material Authorization (RMA) support
Zebra OneCare Essential™	Comprehensive Coverage, including printheads, normal wear and accidental breakage Priority access 8x5 live technical support and software updates Three-day depot repair turnaround time plus free return ground shipping Online Return Material Authorization (RMA) support

Footnotes

1. Available on the ZE511 model only
2. Maximum print speed is 18 ips/457 mm per second at 203 dpi in direct thermal mode. Maximum print speed is 14 ips/356 mm per second at 203 dpi in thermal transfer mode.
3. Contains UFST® from Agfa Monotype Corporation

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

Print DNA Software

This printer is supported by our Print DNA suite of software capabilities to get your printer up and running quickly and securely, and enable your printer to evolve with your business needs. Print DNA features may vary by model, and some features may require a license. For more information, please visit
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