ZQ520 RFID Mobile Printer

EXCEPTIONAL DURABILITY AND RELIABILITY IN THE TOUGHEST ENVIRONMENTS

Zebra's ZQ520 RFID printer offers the best-in-class, rugged mobile printers for applications outside of a business's four walls. The premium (104 mm) ZQ520™ printer is Zebra's next-generation of high-performance mobile printers. The printers' patented, military-grade design provides exceptional durability and reliability in the toughest environments. The ZQ520 RFID printer extends the capabilities of Zebra's industry leading line of mobile printers by adding UHF RFID printing/encoding to create, on-demand RFID labels when and where they're needed.

ZQ520 RFID

The ZQ520 RFID printer leverages Zebras extensive history of RFID innovation and industry leadership to print and encode RFID labels when and where needed for maximum operations flexibility. The ZQ520 RFID printer extends Zebra's RFID portfolio to a mobile printing solution and is compatible with all current Zebra RFID technology making it easy to extend RFID to a mobile printer.

This printer can withstand the drops, bangs, bumps, accidents and environmental extremes that are common in mobile workplaces — making it ideal for on-the-go employees whose productivity depends on maximum printer functionality.

With Zebra's ZQ520 RFID printer, you gain the peace of mind knowing your mobile printers will not only withstand the elements, but also provide the power, connectivity and reliability your mobile employees need.

In addition to offering easy setup, the printer is simple to manage and maintain with the Link-OS® environment, and Print Touch™ device pairing. The ZQ520 RFID printer is "Made for iPod® / iPhone® / iPad®" (MFi) and Wi-Fi Alliance certified to support connectivity to a range of Apple®, Android™ and Windows® Mobile devices. And, with best-in-class accessories that are compact and multi-purpose, the ZQ520 RFID printer can transform cars, trucks and vehicles into productive mobile offices.

Tough. Reliable. Powerful.

On-the-go productivity requires dependable solutions in every situation. The high-performing ZQ520 RFID printer stands up to the test every time regardless of the environment.

Rugged Design
Mobile work environments can be abusive for hardware. The ZQ520 RFID printer is lightweight, yet engineered to handle the bumps, drops and collisions that are part of the job. And for additional protection, the ZQ520 RFID printer is designed to guard media from being ejected when the printer is dropped, keeping your workforce productive and focused while on the move.

Environmental Endurance
Zebra® not only protects your hardware, but also your operational uptime. The ZQ520 RFID printer meets IP54-rating for resistance to dust and liquids that are common in mobile environments — from dirt in the field to crumbs in a service vehicle. And with cold temperature compensation, the ZQ520 RFID printer automatically optimizes and balances print speed and print quality in cold temperatures.

Optimized Printing Power
To keep your employees on task and on schedule, the ZQ520 RFID printer is one of Zebra's first products to support bluetooth communication channel, an innovative feature that allows one channel to send print jobs to the printer while a second channel performs additional functions such as device management. ZQ520 RFID printer also features "draft mode," which optimizes the printing speed (5+ inches-per-second) for text-only printing. And with Power Smart Print Technology™, the printer can anticipate what users will print, saving batter power yet delivering fast, high-quality labels and receipts.

Simple to Use
ZQ520 RFID printer is designed for intuitive, simple use — from the first shift to the last. The simplified user interface reduces the amount of accidentally changed printer settings, and the large buttons increase accuracy for gloved hands and fingers. Intuitive media loading reduces time employees spend changing rolls.

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On-the-go Functionality for Premium Performance

The ZQ520 RFID printer is not limited by typical office boundaries. With reliable connectivity options and space-saving, multi-functional accessories, the ZQ520 RFID printer transforms every space into a productive work environment.

Reliable Connectivity

The ZQ520 RFID printer comes standard with 802.11a/b/g/n WLAN connectivity that supports both 2.4GHz and 5GHz bands and roaming within and across bands. And, with the multiport radio, your employees can simultaneously operate 802.11a/b/g/n and Bluetooth 3.0 — meaning they can be constantly updated and connected. If users lose their Bluetooth connectivity while on the road, Print Touch™ via NFC technology serves as an alternate option, ensuring users are always connected. The ZQ520 RFID printer is "Made for iPod / iPhone / iPad" (MFi certified) and Wi-Fi Alliance-certified, offering connectivity to a range of Apple, Android and Windows Mobile devices.

Mobile-Workspace Accessories

ZQ520 RFID accessories are designed to optimize the tight spaces of mobile work environments — such as vehicles — through small footprints and multipurpose use. With easy and reliable vehicle charging options, employees can grab their device and go.

ZQ520 RFID printers also offer adapters to attach vehicle cradles to existing e-charge and settlement room brackets.

Remote Management

The ZQ520 RFID printer offers several device management options, including Profile Manager, which allows you to manage printers anywhere, anytime via a browser. Support for industry-standard MDM utilities makes it easy to communicate with all devices. ZQ520 RFID printer is equipped with Syslog, an IT diagnostics tool that enables the printer to save and record error events that are written and can be retrieved from a file or, for remote troubleshooting, written to an IP port.

The ZQ520 RFID printer offers several Link-OS environment software solutions and tools, including:

- PrintTouch NFC technology for fast pairing and easy access to essential data
- Profile Manager to monitor and control Link-OS printers anywhere in the world — all from one PC, tablet or smartphone screen
- Cloud Connect for direct and secure connection to the cloud
- Virtual Device Support — enabling printing using non-Zebra command languages

Power and Charging			
4-Bay Power Station		**AC Adapter**	
	Docks and charges up to four ZQ520 RFID printers simultaneously. Supports printers in exoskeleton and with / without extended battery.		Charges printer via wall outlet.
Battery		**Quad Battery Charger**	
	Extends life of printer for high-duty cycle applications. Four-cell bump-out pack. Has LED on outside for visible indication when battery is due for replacement.		Docks and charges up to four ZQ520 RFID batteries at a time. Supports both standard and extended batteries.

Power and Charging

PowerPrecision+ Battery

Powers printer. Can be polled and managed to monitor battery health and replacement. Compatible with ZQ520 RFID printers, single battery charger, vehicle charger, quad battery charger and 4-bay power station. Included in box with the printer.

Single Battery Charger

Docks and charges a single battery. Monitors and alerts on battery health. Supports both standard and extended battery.

Vehicle Charger

Charges printer via vehicle open-ended or lighter adapter power supply. May be used without vehicle cradle. Available as 12-24V or 15-60V.

Mounting

Vehicle Cradle

Docks and charges ZQ520 RFID printers. Available with open-ended or cigarette adapter power supply. Compatible with or without extended battery and with or without exoskeleton. Can be mounted with RAM mounting arm. Meets IP43-rating for additional protection from liquids and spills. Requires specific driver for connecting via USB.

Mounting Plate

Allows the printer to be fix-mounted in a vehicle with or without battery eliminator. Attaches to RAM mounting arm.

RAM Mounting Arm

Attaches to the ZQ500 mounting plate or vehicle cradle for flexible mounting orientation.

Wiring and Adapters

D-Ring Adapter Kit

Attaches to ZQ500 vehicle cradle to enable use with installed Datamax O'Neil e-charge brackets. Plastic female half-moon part allows users to attach ZQ500 vehicle cradle to existing Datamax O'Neil brackets.

RW420 Vehicle Cradle Adapter

Enables attachment of ZQ500 Series cradle to existing RW cradles without rewiring. Measures 6 inches. Legacy RAM arms are compatible with ZQ500 via this adapter.

Carrying

2-Roll Spare Media Case	Belt Clip
Carries two rolls of spare ZQ500 media. Attaches between the RAM arm and Vehicle Cradle.	Allows printer to be clipped to user's belt. Included in box with the printer.

Hand Strap	Rugged Shoulder Strap
Enables printer to be carried like a toolbox.	Offers over-the-shoulder carrying option. Connects with metal attachment clips.

Standard Shoulder Strap	Swivel Belt Loop
Offers over-the-shoulder carrying option. Connects with plastic attachment clips.	Alternative to a standard belt clip. One piece connects to the user's belt and one piece (D-Ring Adapter Belt Attachment) attaches in lieu of the belt clip on the ZQ500, so you can easily attach and rotate the printer to the hip.

Protection

Exoskeleton Case	Soft Case
Increases drop specification, seals off ports and increases IP rating for extreme use environments. Can be used with extended battery pack, 4-bay power station and vehicle cradle. Cannot be used with linerless. Users must tear down when using exoskeleton. Not compatible with belt clip included with printer. AC adapter and vehicle cannot be used when printeris in exoskeleton case.	Canvas case adds layer of printer protection. Includes shoulder strap. Battery (including extended pack) and ports remain accessible via flaps. Cannot be used with printer belt clip.

Other

USB Cables with Strain Relief	USB Cable (Micro A / B to USB A converter — 6")
Prevents USB cable breakage via hard plastic twist lock.	Adapter cable for connecting USB memory sticks or other traditional USB A devices to the printer.

Encrypted Magnetic Stripe Reader Module
Attaches to printer to enable payment processing and reading of licenses, credit cards and badges. Encryption keys can be loaded via Zebra Custom Application Group.

ZQ520 RFID Specifications

PRINTER NAME

ZQ520

STANDARD FEATURES

- Supports tags compatible with UHF EPC Gen 2 V2.0/ISO 18000-6C
- Prints and encodes tags with a minimum pitch of 0.6"/16 mm
- RFID job monitoring tools track RFID performance
- RFID ZPL® commands provide compatibility with existing Zebra RFID printers
- Support for industry standard multi-vendor chip-based serialization (MCS)
- Supports block permalocking of user memory compatible with ATA Spec 2000
- Integrated ThingMagic® RFID Reader/Encoder
- Apple iOS, Android, Windows Mobile and BlackBerry® connectivity
- Direct thermal printing of barcodes, text and graphics
- 203 dpi resolution (8 dots per mm)
- Print speed up to 5"/127 mm per second (with Draft mode enabled)
- ZPL® programming languages
- XML support
- Resident fixed and scalable fonts
- 400 MHz 32-bit ARM® processor with 256 MB RAM (8 MB available for user applications)
- 512 MB Flash supports downloadable programs, receipt formats, fonts and graphics (64 MB available for user storage)
- USB On-The-Go ports (with optional strain relief cable)
- 2450 mAh removable, rechargeable PowerPrecision+ Li-Ion battery
- Built-in battery charger
- Black mark using fixed center position sensors
- Cold Temperature Compensation mode-optimizes / balances print speeds to allow for better print performance at lower temps
- Dual-sided tear bar which allows for clean tear in either direction
- Supports vertical and horizontal printing
- Printer can be used in any orientation
- Center-loading media locking for variable roll widths
- "Clamshell" design for easy media loading
- Management: Mirror, SNMP, Web server, Profile Manager, AirWatch® and Wavelink Avalanche®
- Simple easy-to-read LCD with large icons for battery and wireless status
- Label odometer
- NTP (Network Time Protocol) support via WiFi
- QR code links to web-based help pages; not displayed on LCD
- Zebra® Print Touch simplifies Bluetooth pairing and launches web-based help pages with Near Field Communication (NFC) enabled devices
- Power Smart Print Technology — anticipates upcoming printing to optimize battery consumption and print speed

PRINTER SPECIFICATIONS

Resolution	203 dpi resolution (8 dots/mm)
Maximum Print Width	ZQ520: 4.09"/104mm
Maximum Print Speed	Up to 5"/127mm per second
Media Sensors	Black mark sensing using fixed center-position sensor
Print Length	Maximum: 39"
Power	2450 mAh removable, rechargeable PowerPrecision+ Li-Ion battery, with optional extended battery

MEDIA CHARACTERISTICS

Maximum Media Width	ZQ520: 4.45"/113 mm +1 mm
Maximum Media Roll Size	ZQ520: 2.24"/57 mm
Thickness	0.0063" (0.1600 mm) for labels and 0.0055" (0.1397 mm) for tag/receipt
Media Types	Receipt, Black mark Label, Tag

The ZQ520 RFID mobile printer can only be used with Zebra Genuine RFID labels.

OPERATING CHARACTERISTICS

Environmental	Operating Temperature: -4ºF to 131ºF/-20ºC to 55ºC Operating Humidity: 10% to 90% non-condensing Charging Temperature: 32ºF to 104ºF/0ºC to 40ºC Cradle Temperature: 32ºF to 122ºF/0ºC to 50ºC Storage Temperature: -22ºF to 150ºF/-30ºC to 66º C Storage Humidity: 10% to 90% non-condensing
Agency Approvals	Emissions: FCC Part 15, Subpart B, EN55022 Class-B, EN60950, EN55024 and VCCI class B Susceptibility: EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4, and EN61000-4-5 Safety: CE, UL, TUV, CSA

PHYSICAL CHARACTERISTICS

	ZQ520
Length	2.6"/67 mm
Width	6.1"/155 mm
Height	6.2"/158 mm
Weight (w/battery)	1.81lbs / 0.82 kgs

SOFTWARE TOOLS

Link-OS Solutions

Profile Manager — Advanced, server based device management for networked printers, operates via a web browser interface

Cloud Connect — Secure, direct, encrypted and authenticated connections to the web for printing and device management

Virtual Devices — Use legacy and non-Zebra command languages to print labels and tags

Zebra Utilities — Print from iOS, Android, Windows Mobile devices

Print Station — Driverless printing from Android devices

AirWatch Connector — Manage from within the AirWatch environment

Multiplatform Software Development Kit — Simplifies printing application development with support for Blackberry, Apple, Android, WinCE®, WinMobile®, Windows desktop and Linux/Unix platforms

BARCODE SYMBOLOGIES

ZPL Barcode Symbologies
- Barcode Ratios: 2:1, 3:1, 5:2, 7:3
- Linear Barcodes: Code 11, Code 39, Code 93, Code 128, ISBT-128, UPC-A, UPC-E, EAN-8, EAN-13, UPC-A and UPC-E with EAN 2 or 5 digit extensions, Planet Code, Plessey, POSTNET, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar, and GS1 DataBar (RSS)
- 2D Barcodes: PDF417, MicroPDF-417, Code 49, TLC39, Maxicode, Codablock, Data Matrix, QR code, Aztec

FONTS AND GRAPHICS

ZPL Font Specifications
- Character Fonts: Standard bitmapped Zebra fonts: A, B, C, D, E (OCR-B), F, G, H, (OCR-A), GS, P, Q, R, S, T, U, V and Ø Smooth font (CG Triumvirate Bold Condensed)
- Unicode Scalable Swiss 721 is preloaded on the printers E: memory location (supports Latin, Cyrillic, Arabic and Hebrew)
- Google/Adobe Hans (Asia SKUs only)
- Thai Angsana (Asia SKUs only)

Ideal for These Applications

Manufacturing
- Asset Tagging

Retail
- Item Level RFID

Transportation and Logistics
- Pallet labeling

Healthcare
- Specimen tracking

ZQ520 RFID Specifications

OPTIONS AND ACCESSORIES

ZebraNet® 802.11a/b/g/n radio with support for: Wi-Fi® Certification

Bluetooth 3.0/802.11b/g Multiport Radio (can be used simultaneously)
• Security modes 1 – 4
• "Made for iPod/iPhone/iPad" (MFi) certified
• WEP, TKIP and AES encryption
• WPA and WPA2
• 802.1x (with WEP, WPA, or WPA2)
  − EAP-FAST, EAP-TTLS, EAP-TLS, PEAP, LEAP
• 802.11d and 802.11i
• Key Bonding

ZBI 2.x™ — powerful programming language that lets printers run standalone applications, connect to peripherals, and much more

PRODUCT WARRANTY

ZQ500 Series Printers are warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For the complete warranty statement, please visit: www.zebra.com/warranty.

RECOMMENDED SERVICES

The Zebra OneCare Service portfolio of Essential, Select and Premier maximizes the availability and productivity of your devices. Key features include 24/7 technical support, comprehensive coverage, advance replacement and software updates. Optional Visibility Services are available. For more information go to www.zebra.com/zebraonecare.

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

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