

RFD8500 Series

Easily add high-performance UHF RFID and barcode capture to the mobile devices of today and tomorrow

With the RFD8500, you can empower select Zebra and compatible third-party mobile devices, tablets and smart phones with enterprise-class UHF RFID and 1D/2D barcode scanning technology, whenever and wherever you need it — simply, easily and cost-effectively. Pair the Bluetooth®-enabled sled with your mobile device and attach the mobile device to the RFD8500 for a single-handed RFID reader solution. Or put the mobile device in a pocket or holster and use the RFD8500 in standalone mode. With support for Android™, iOS®, and Windows®, you get real investment protection. When it comes to performance, whether your workers are capturing RFID tags or barcodes, the RFD8500 is unparalleled. Workers can capture tags and barcodes faster and with ease, improving productivity, operational efficiency and customer service.



Empower your handhelds with RFID

Multi-OS and multi-platform

Leverage your mobile computing strategy and add world-class data collection capability in an economical way. Provides the peace of mind that the investment you make today will serve your business needs tomorrow.

Fast RFID tag capture in various environments

With AutoMac¹ and our patent-pending breakthrough antenna design, you get maximum read/write speeds and coverage required to maximize workforce efficiency.

High performance battery for full shift operation

Our unique power-optimizing algorithm delivers the superior battery cycle times that ensure full-shift power, even with intensive usage.

Flexible connectivity options: Bluetooth or Batch Mode

Enable a real-time wireless connection to your mobile or backend systems via Bluetooth 2.1 or later. If a wireless connection is not available, batch mode enables the collection of up to 500 barcodes and/or 40,000 RFID tags. Just sync to upload the data from the RFD8500 to the host device at any time.

Flexible deployment options

Permanently attach to a compatible mobile device to create a dedicated inventory management device; temporarily attach to enable RFID when and where you need it on the mobile device of your choice, bringing comfort to inventory management tasks; deploy as separate devices — workers can put the host mobile computer in a pocket or on a desk to protect the device and create a lighter RFID solution.

Easy to deploy: Attach and remove in seconds with standard Quad Lock mounts and custom-tailored adapters

Just twist to lock onto or remove the RFD8500 from any Zebra or third-party mobile computer via a Quad Lock or slide-on/slide-off Zebra custom-tailored adaptor.

The RFD8500 — the right device makes all the difference.
For more information, visit www.zebra.com/rfd8500

Prevent counterfeiting and protect consumer privacy with EPC Global Gen2 v2

Protect profitability, customer safety and privacy with some of the latest RFID features. Cryptographic tag authentication provides extensive protection against tag cloning, allowing you to deploy non-clonable tags to prevent counterfeit product from entering your supply chain. In addition, the RFD8500 allows businesses to protect consumers' post-sales privacy. For instance, when a purchased product is returned for a full refund or exchange, the data is hidden until a tag is interrogated by the RFD8500 with an untraceable privilege.

Instantly capture any printed or electronic 1D/2D barcode

Zebra's SE4710 enterprise-class imager offers proprietary PRZM Intelligent Imaging technology, a megapixel sensor and advanced optics for lightning-fast capture of 1D and 2D barcodes — even if they are dirty, damaged or poorly printed.

Easily toggle between RFID and barcode scanning

Users can simply tap on a button to switch between RFID and barcode scanning modes on the fly, maximizing ease-of-use and productivity.

Fast and easy application development with Zebra's unique ZETI protocol

Our powerful Zebra Easy Text Interface (ZETI) can be used across many OS platforms, reducing the need to utilize a Software Development Kit (SDK) to integrate RFD8500 features into your application. This human readable ASCII protocol makes it fast and easy for the host to communicate with RFD8500 without the need to create an actual application, reducing application development time and cost.

Enterprise-class charging solutions for easy power management

The RFD8500 is compatible with the Zebra TC55 broad eco-system of charging accessories, potentially reducing or even eliminating the need to purchase charging solutions.

Deploy all around the world

The RFD8500 offers the style you need for customer-facing areas as well as the durability for all-day everyday business use, making it ideal in just about every industry. And with regulatory approvals for over 80+ countries, the RFD8500 can be deployed globally across your operations.

Specifications

Physical Characteristics	
Dimensions	5.1 in. H x 3.1 in. W x 7.3 in. L 13 cm H x 8 cm W x 18.5 cm L
Weight	Imager Version: 15.3 oz./~435 grams; Non-Imager version: 15.3 oz./~430 grams
Power	PowerPrecision Li-Ion batteries, 4410 mAh
Configurations	RFID-only or RFID with SE4710 Imager
Power	PowerPrecision+ Lithium ion 7000 mAh with hot swap battery backup
Notification	LED and audible tone
User Input	Trigger, 3 push button switch
RFID Performance	
Standards Supported	EPC Class 1 Gen 2; EPC Gen2 V2
RFID Engine	Zebra Proprietary Radio Technology
Fastest Read Rate	900+ tags/sec
Nominal Read Range	20+ ft./6+ m
Frequency Range/ RF Output	US: 4.5 – 34.5 dBm EU: 4.5 – 34.5 dBm JP (LBT): 4.5 – 33 dBm JP: 4.5 – 27.5 dBm
Batch Mode Memory	Store 40,000+ RFID Tags, 500 barcode
User Environment	
Drop Specification	Multiple 4 ft./1.2 m drops to concrete (0° to 40° C)
Tumble Specification	1000 drops (500 tumbles, 1.6 ft./0.5 m) at room temperature
Operating Temp.	-10°C to 40°C/14°F to 104°F
Storage Temp.	-40°C to 70°C/-40°F to 158°F
Charging Temp.	0°C to 40°C/14°F to 104°F
Humidity	5-85% non-condensing
Electrostatic Discharge	+/-15kV air discharge +/-8kV direct discharge +/-8kVdc indirect discharge
Sealing	IP52

Communication	
Bluetooth	Bluetooth Version 2.1 SPP profile HID Profile Apple iAP2/MFI
Bluetooth Class	2
Bluetooth Pairing	Secure Simple Pairing 'just works' method
Compatible Host Devices (Bluetooth)	Devices with Android 4.4 or iOS 8 OS
Accessories	
External Interface	MicroUSB Connector and Charging Cradle-based charging
Other Accessories	Adapter mounts for Enterprise Zebra Mobile Computers; Quad lock adapter for variety of smart phones
Regulatory	
EMI/EMC	FCC Part 15 Subpart B Class B; ICES 003 Class B; EN 301 489-1; EN 301 489-3; EN 301 489-17; EN 55022 Class B; EN55024; EN 55032 Class B
Electrical Safety	UL 60950-1, CAN/CSA C22.2 No. 60950-1, IEC 60950-1, EN 60950-1
RF Exposure	EU: EN 50364, EN 62479; USA: FCC Part 2 (Section 2.1091), OET Bulletin 65 Supplement C; Canada: RSS-102
RFID/Bluetooth	EU: EN 300 328, FCC Part 15 Subpart C; Canada: RSS-247
Warranty	
Subject to the terms of Zebra's hardware warranty statement, the RFD8500 is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement, go to: http://www.zebra.com/warranty	
Footnotes	
1. AutoMac is a self-optimizing radio feature that automatically adapts to fast tag reading in various environments.	

PRODUCT SPEC SHEET

RFD8500 SERIES



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ZEBRA

TC52 and TC57 Series Touch Computer

THE ULTIMATE IN ENTERPRISE-CLASS TOUCH COMPUTING

The TC52/TC57 Touch Computers build on the highly successful TC51/TC56, adding a new platform and new capabilities to deliver the ultimate in enterprise-class touch computing. You get the ultimate user experience — the simplicity of Android with all the business features workers need to maximize productivity and minimize process cycle times. You get the ultimate technology advancements on a cutting edge platform, maximizing the benefits of mobility today, with the future proofing you need to serve your business tomorrow. You get the ultimate collection of value-add apps, Mobility DNA, with four new complimentary solutions that deliver unparalleled functionality — including the best possible WiFi performance, centralized control of the device update process, control over access to Google Mobile Services (GMS) and more. And optional Visibility Services offer the ultimate in device management capabilities to maximize device value.



The ultimate user experience

Android for instant familiarity

Your workers already know how to use an Android device, virtually eliminating training time and adoption curves. And you can deliver the highly-graphic interactive apps today's workers expect.

Advanced touchscreen technology

Give your workers touchscreen simplicity. The 5 in. display offers plenty of real estate for graphics-intensive intuitive applications. The easy, familiar and flexible multi-touch operation works even when wet, with a gloved finger or a stylus. And with best-in-class outdoor readability, the screen is easy to read, even in bright sunlight.

Easily capture it all — barcodes, labels and documents

Advanced scanning technology and PRZM Intelligent Imaging deliver lightning fast capture of printed and electronic 1D and 2D barcodes, including Digimarc — regardless of condition. The expanded working range and wide field of view allow workers to scan barcodes nearer and farther away, while omnidirectional scanning delivers true point and shoot performance — no need to ever align the device with the barcode.

Need to capture multiple barcodes on a single label or data on a form, such as checkboxes, text fields, signatures and more? You can do it all with the press of a single button with Zebra's SimulScan, a no-cost pre-installed Mobility DNA application.

Full shift power your workers can count on

The PowerPrecision+ high capacity battery delivers up to an impressive 14 hours of power² — plenty for the longest shift. With Warm Swap mode, swapping batteries is fast and easy — there's no need to turn off the device or close active apps. And with fast charging, batteries are fully charged and ready to go in record time.

Active Edge™ Touch Zone for One-touch Feature Access

Your users can easily create unique dedicated soft keys on either side of the display to access their most frequently used device features and applications with single touch simplicity — from the scanner, camera and line-of-business applications to push-to-talk and text messaging.

All the latest technology advancements

Rugged and ready for the toughest business day

While these touch computers look like smartphones, the similarities stop there — they are engineered for the enterprise, inside and out. You can drop it in water or on concrete and use it in dusty areas, out in the rain or snow — and still expect reliable operation. The unibody design provides extra impact protection for the sensitive electronics. And the Corning Gorilla Glass touch panel and imager window bring maximum scratch-resistance and shatter-proofing to two of the most vulnerable device features.



THE TC52/TC57 — THE ULTIMATE ENTERPRISE TOUCH COMPUTER.

FOR MORE INFORMATION, VISIT WWW.ZEBRA.COM/TC52 AND WWW.ZEBRA.COM/TC57

A platform to handle all your apps — today and tomorrow

The ultra-powerful processor provides superior performance on all voice and data apps. You also get built-in support for the next two versions of Android (P and Q)¹ and future apps, such as artificial intelligence.

Rich locationing support

Easily implement locationing with support for many technologies, including Visible Light Communication (VLC), Bluetooth 5.0 BLE and WiFi, plus Zebra's SmartLens and MPact solutions.

Support for the latest WiFi enhancement improves WiFi range and speed — with less power

2x2 Multiple-User Multiple Input Multiple Output (MU-MIMO) technology allows access points to communicate with multiple devices simultaneously via pinpoint beamforming, boosting WiFi network capacity, speed and range. And processing is shifted from the mobile device to the access point, extending battery cycle time.

The highest quality voice in its class

Three microphones, high-volume speakers and noise-cancellation technology work together to ensure that callers on both ends of every call can hear every word — even in the noisiest areas.

New 5 MP front-facing camera supports more advanced apps

With the new front-facing camera, you get built-in support for the latest locationing technology, Visible Light Communication (VLC), which allows you to track the location of shoppers and workers using existing LED lighting infrastructure. Video calling improves service and productivity. Customers enjoy a more personal touch — and remote experts can see a repair in process to help onsite technicians resolve issues faster and increase first-time-fix rates.

Complete cellular network flexibility with single device simplicity

The TC57 provides all workers anywhere in the world with dependable cellular service. Support for carrier aggregation substantially improves application performance by increasing data capacity and speeds. And support for the powerful Public Safety LTE network provides the reliable communications first responders need, eliminating network congestion concerns and providing the interagency operation required for improved situational awareness.

Ultra high-resolution photos and videos

The 13 MP color rear camera captures highly detailed photos and videos — ideal for proof-of-condition/delivery/service, onsite technical support and more.

Bluetooth 5.0 for twice the speed and four times the range — with less power

A new Bluetooth range of 800 ft./240 m and data speeds up to 2 Mbps increases application flexibility and performance for Bluetooth peripherals, such as printers and headsets, while Bluetooth Low Energy reduces power requirements to extend battery cycle times.

Maximize productivity with enterprise accessories

Unlike consumer smartphones, you get a full suite of backward compatible business-class accessories that make the TC52/TC57 easier to use and manage, from a snap-on trigger handle for easier scanning to unique ShareCradles that charge it all — devices and batteries.

Drive workforce productivity, efficiency and device value to a new level with powerful new Mobility DNA apps

WorryFree WiFi — dependably superior WiFi, delivered

Provide every worker with the best possible WiFi connection, every minute of every shift. This free tool delivers near instant application response times, unmatched roaming performance, plus exceptional voice quality and network diagnostics — everything you need to leverage your WiFi network to increase workforce productivity and better serve customers.

PowerPrecision Console — prevent aging batteries from reducing workforce productivity

This free PC-based solution provides an easy-to-read dashboard that allows you to quickly identify and remove aging batteries from your battery pool — before they impact workforce productivity and mobile device uptime.

End-to-end revolutionary control of the update process with LifeGuard

Updating your enterprise-class Android mobile devices is often time-consuming, costly, complex and difficult to track. Now you can do it all with LifeGuard Analytics — free with your Zebra OneCare Support contract. View available updates along with priority and which devices are eligible for the update. Automatically update your devices over the air with the press of a button. And easily monitor and manage the status of updates in real time.

Easily manage access to Google Mobile Services (GMS) with Restricted Mode

StageNow's new Restricted Mode delivers an industry first — an easy way to simply click to deactivate Google Mobile Services (GMS) that come standard with the operating system — and reactivate should you need them down the road. StageNow is free and pre-loaded on every TC52/TC57.

The ultimate in device management options

Improve device value with Zebra's optional Visibility Services

Get the device management data you need to take device uptime, operational efficiency and the return on investment to the next level. Asset Visibility Service (AVS) is an easy to use and deploy solution that doesn't require an Enterprise Mobility Management (EMM) system. Operational Visibility Services (OVS) is a comprehensive device management solution that leverages your EMM information to help get more value out of your Zebra mobile devices. These optional services can be added to your optional Zebra OneCare support contract.

TC52/TC57 Series Specifications

PHYSICAL CHARACTERISTICS	
Dimensions	6.1 in. L x 2.9 in. W x 0.73 in. H 155 mm L x 75.5 mm W x 18.6 mm H
Weight	8.8 oz./249 g with battery
Display	5.0 in. High Definition (1280 x 720); exceptionally bright, outdoor viewable; optically bonded to touch panel
Imager Window	Corning Gorilla Glass
Touchpanel	Dual mode capacitive touch with stylus or bare or gloved fingertip input (conductive stylus sold separately); Corning Gorilla Glass; water droplet rejection; fingerprint resistant anti-smudge coating
Backlight	LED backlight
Power	Rechargeable Li-Ion; 4150mAh/15.98Wh; 4.4 volts PowerPrecision+ with improved battery technology for longer cycle times and real-time visibility into battery metrics for better battery management, fast USB Charging (up to 2.4A)
Expansion Slot	User accessible microSD up to 32GB SDHC and up to 256 GB SDXC
SIM Slots	TC57 only: 1 nano SIM
Network Connections	WWAN, WLAN, WPAN (Bluetooth)
Notification	Audible tone; multi-color LEDs; vibration
Keypad	On-screen keypad and enterprise keyboard
Voice and Audio	Three microphones with noise cancellation; vibrate alert; speaker; Bluetooth wireless headset support; High quality speaker phone; PTT headset support; cellular circuit switch voice; HD Voice; and SWB & FB audio
Buttons	Six programmable buttons for maximum flexibility: Back button, dual dedicated scan buttons, dedicated push-to-talk button and volume up/down buttons
PERFORMANCE CHARACTERISTICS	
CPU	Qualcomm Snapdragon™ 660 octa-core, 2.2 GHz
Operating System	Android 8.1 Oreo with Zebra's Restricted Mode for control over GMS and other services
Memory	4GB RAM/32GB Flash
USER ENVIRONMENT	
Operating Temp.	-4°F to 122°F/-20°C to 50°C (RH 5% to 95% non-condensing)
Storage Temp.	-40°F to 158°F/-40°C to 70°C
Humidity	5% to 85% non-condensing
Drop Specifications	Multiple 4 ft./1.2 m to tile over concrete over -10°C to 50°C (14°F to 122°F) Multiple 6ft. drops to concrete with the rugged boot accessory per MIL STD 810 G
Tumble Specification	500 1.6 ft./0.5 m tumbles, meets or exceeds IEC tumble specification

USER ENVIRONMENT (CONTINUED)	
Sealing	IP67 and IP65 per applicable IEC sealing specifications
Vibration	4 g's PK Sine (5 Hz to 2 kHz); 0.04 g 2/Hz Random (20 Hz to 2 kHz); 60 minute duration per axis, 3 axis
Thermal Shock	-40° F to 158° F/-40° C to 70° C rapid transition
Electrostatic Discharge (ESD)	+/- 15kv air discharge; +/- 8kv direct discharge; +/- 8kv indirect discharge
INTERACTIVE SENSOR TECHNOLOGY (IST)	
Light Sensor	Automatically adjusts display backlight brightness
Magnetometer	eCompass automatically detects direction and orientation
Motion Sensor	3-axis Accelerometer with MEMS Gyro
Pressure Sensor	Automatically detects altitude information for locating
Proximity Sensor	Automatically detects when the user places the handset against head during a phone call to disable display output and touch input
DATA CAPTURE	
Scanning	SE4710 imager (1D and 2D) with extraordinary range: Scan range – Code 39 barcode: 20 Mil: 1.8 in. to 32.0 in./4.5 cm to 81.3 cm 3 Mil: 3.1 in. to 5.6 in./7.9 cm to 14.2 cm Digimarc support
Camera	Front – 5 MP; f/2.0 aperture front facing camera Rear – 13 MP autofocus; f/2.2 aperture; rear camera flash LED generates balanced white light; supports Torch mode; 4K video with image stabilization
NFC	ISO 14443 Type A and B; F; FeliCa and ISO 15693 cards; P2P mode and Card Emulation via Host
WIRELESS WAN DATA AND VOICE COMMUNICATIONS (TC57 ONLY)	
Radio Frequency Band	Supports VoLTE, Carrier Aggregation up to 3DL CA LTE FDD: 700/800/850/900/1800/1900/ AWS/2100/2600 (28,13,14,12,17/19,20/5,26/8/3/2, 25/4,66/1/7); LTE TDD: 1900/2300/2500 (39/40/41,38); UMTS/HSPA/HSPA+: 850/900/AWS/1900/2100 (5/8/4/2/1); GSM/GPRS/EDGE: 850/900/1800/1900
GPS	TC57 only: Autonomous, Assisted GPS (A-GPS); Navstar; GLONASS; Galileo; BeiDou
WIRELESS LAN	
Radio	TC52: IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v²/w; Wi-Fi™ certified; IPv4, IPv6, 2x2 MU-MIMO TC57: IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v²/w; Wi-Fi™ certified; IPv4, IPv6, 5GHz 2x2 MU-MIMO
Data Rates	5GHz: 802.11a/n/ac — up to 866.7 Mbps 2.4GHz: 802.11b/g/n — up to 300 Mbps
Operating Channels	Channel 1-13 (2412-2472 MHz); Chan 36-165 (5180-5825 MHz) Channel Bandwidth: 20, 40, 80 MHz Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency

TC52/TC57 Series vertical markets and applications:

RETAIL ASSOCIATES

- Price/inventory Checks
- Loyalty apps
- Item locator
- Price management
- Line busting/POS
- Assisted selling
- Electronic coupons
- Store transfers
- Gift registry lookup

RETAIL MANAGERS

- Workforce management
- Planogram management
- Promotion compliance
- Merchandising

DIRECT STORE DELIVERY DRIVERS

- Order automation
- Delivery tracking
- Inventory management
- Customer support

FIELD SERVICE TECHNICIANS

- Asset management
- Parts inventory
- Invoicing
- Scheduling and location-based services

LIGHT COURIER DRIVERS

- Proof of delivery
- Asset management
- Location services
- Invoicing

Continued on page 4

TC52/TC57 Specifications (continued)

WIRELESS LAN (CONTINUED)

Security and Encryption	WEP (40 or 104 bit); WPA/WPA2 Personal (TKIP, and AES); WPA/WPA2 Enterprise (TKIP and AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC and LEAP.EAP-PWD
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Certifications	WFA (802.11n, WMM-PS, 801.11ac, PMF)
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Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC
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WIRELESS PAN

Bluetooth	Class 2, Bluetooth v5.0, Bluetooth Low Energy (BLE)
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WARRANTY

Subject to the terms of Zebra's hardware warranty statement, the TC52/57 Series is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement, please visit: www.zebra.com/warranty

RECOMMENDED SERVICES

Zebra OneCare Essential and Select support services
 Zebra Visibility Services — Asset Visibility Service (AVS) and Operational Visibility Service (OVS)

1. Upgrading to new supported versions of Android requires the purchase of a Zebra OneCare Service contract
2. Based on typical user profiles
3. Available Q1 2019

Specifications subject to change without notice.



MOBILITY DNA SOFTWARE

Mobility DNA solutions help you get more value out of our mobile computers by adding functionality as well as simplifying deployment and management of our mobile devices. For more information on these Zebra-only features, please visit www.zebra.com/mobilitydna



Mobility DNA is available on Android only. Features may vary by model and a Support Contract may be required. To learn what solutions are supported, please visit: <https://developer.zebra.com/mobilitydna>



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