EM45 RFID Enterprise Mobile

The power of Zebra in your pocket

Zebra EM45 RFID Enterprise Mobile puts the power of Zebra in your pocket, delivering unmatched productivity and flexibility to your frontline. Combined with RFID reading, a high-performance camera and mobile convenience, EM45 RFID is an ergonomic, all-in-one, streamlined solution designed to simplify tasks and boost on-the-go operations. Built-in RFID provides precise reads that let you check and find inventory, complete tasks, and access critical information in seconds without juggling multiple devices. 5G and Wi-Fi 6E ensure fast, reliable connectivity, delivering seamless communication and data transfer. Plus, with its fast-charging, long-lasting battery, your staff is always ready. Built with Zebra DNA, EM45 RFID is just as easy to integrate, configure, deploy and manage as all of Zebra's Android devices, and is an AI-capable device that unlocks new ways of working. It's smarter than a smartphone in our slimmest form factor yet — built for the demands of the modern enterprise.

All-in-one enterprise mobile for your frontline

Built-in short-range RFID
Need to read RFID tags? Now there's no need for a separate RFID reader. Instantly capture RFID tags to find items, track inventory, parcels, baggage, medical equipment and more.

High performance camera ready for any task
The 50MP rear HDR camera with Optical Image Stabilization (OIS) captures richly detailed photos and 4k video — and more details means more business intelligence. Users are automatically alerted when the lens is dirty and needs cleaning, or prompted to retake an image with higher quality. Faces can be automatically blurred to protect privacy. Integrated software with advanced algorithms enables fast and easy capture of barcodes — regardless of symbology or condition. And the 8MP front camera enables video calls to enrich collaboration.

Create a workstation on demand
Effortlessly convert your EM45 RFID into a workstation whenever needed using Zebra Workstation Connect.[1] Just place the device into a cradle to launch a complete desktop interface, perfect for data-intensive tasks — eliminating the need to buy and manage fixed PCs.

Rich collaboration over Wi-Fi and cellular
Easily add powerful communication tools with Workcloud Communication. Enable cost-effective 2-way push-to-talk and secure RCS text messaging over Wi-Fi and cellular networks in just days. And turn EM45 RFID into a PBX handset with a customized interface that brings push-button simplicity to even the most complex telephony features.

Ready for contactless transactions
CPOC payment support enables contactless payment with any NFC-enabled bank card or mobile wallet. And support for contactless non-payment items in digital wallets enables instant validation of guest event tickets, boarding passes, loyalty cards and more.

For more information, please visit
www.zebra.com/em45-rfid

Designed to delight and boost productivity

Unlock advanced AI capabilities with EM45 RFID

The robust System-on-Chip (SOC) with a dedicated neural processing unit (NPU) provides the power to make advanced AI capabilities a reality for on-the-go workers. You can run small language models for translation or transcription; utilize AI vision models to examine shelves, products, labels, and text; 3D measurement tools; and enable generative AI assistants.

A battery that doesn't give up

The 4,750mAh battery powers over up to 25 hours of use, indoors and outside.[2] With fast charging, you can boost your battery from zero to 50% in just 30 minutes. And advanced device settings are pre-configured to enhance both performance and battery life.

Go ahead, drop it

EM45 RFID is built to withstand the durability test of time. This device is drop-tested, tumble-tested, waterproof and able to withstand extreme temperature swings. The result is a device built to last for years — with an enterprise-grade return on investment.

Everything looks better on EM45 RFID

The large 6.7 in. Full High Definition display makes work easier — workers see more and scroll less. A dynamic 120Hz refresh rate makes the display extraordinarily responsive, providing a superior user experience. The backlit 450 nit screen is easy to see in any lighting. Water droplet rejection prevents accidental activation when wet. The oleophobic coating prevent smudges, despite constant interaction with the screen. And the touchscreen supports gloves — ideal for workers in the field.

Three programmable action buttons

Two side buttons and one top button are programmable, allowing your workers to access up to three of their most used features and functions with a simple push.

Advanced biometrics for secure and easy access

On-device fingerprint and facial recognition features ensure only authorized users can unlock the device and access information – at home or at work. Or, centrally control multi-factor authentication — including facial recognition, 3rd party Single Sign On, pin and a barcode scan — with Zebra's Identity Guardian.[3]

All the latest wireless connections: Wi-Fi 6E, 5G and Bluetooth 5.3

Your workers get the fastest and most reliable wireless connections available to keep the flow of work moving no matter where your workers are — inside your facility or out in the field.

Enterprise device security — and personal data privacy

EM45 RFID is the ideal corporate owned personally enabled (COPE) device: enterprise information is secure and user personal content remains private.

Zebra DNA — the most comprehensive software platform

Simplify device integration

Create rich apps that take full advantage of your device's capabilities with Enterprise Mobility Management Tool Kit. Build feature-rich web applications with Enterprise Browser. And easily capture and integrate barcode data into your apps without writing any code with DataWedge API.

Increase device security

Keep your devices secure every day they are in service with LifeGuard™ for Android™ [4]. And restrict apps and device features with Enterprise Home Screen.

Deploy devices quickly and easily

Let your devices provision themselves right out of the box with Zebra Zero-Touch. Stage a handful or thousands of devices with the scan of a barcode or tap on an NFC tag with StageNow.

Make device management simple and easy

Locate missing devices quickly and easily with Device Tracker. Ensure EM45 RFID is always connected to your Wi-Fi network with seamless roaming across access points with Wireless Fusion. Control which Google Mobile Services are active on your devices with GMS Restricted Mode. Test major device systems to eliminate unnecessary trips to the repair depot with Device Diagnostics.

Increase on-the-job productivity

Use Device Central to easily manage Bluetooth accessories. Give workers a soft keypad designed for your data with Enterprise Keyboard. Capture only the barcodes you want with Simulscan. And with OCR Wedge, you can automatically capture standardized data such as drivers licenses and license plates.

Unmatched value with Zebra OneCare maintenance plans

Keep your devices looking like new and minimize downtime with your choice of maintenance plans. Zebra OneCare Essential offers basic coverage with 8x5 support and a 3-day repair time, while Zebra OneCare Select provides 24x7 support and same-day overnight replacement of a ready-to-use device, with all apps and settings pre-loaded. Both plans cover accidental damage and normal wear and tear — and unlimited battery replacement. And the dashboard in VisibilityIQ OneCare makes it easy to keep track of all devices in the repair cycle.

Specifications

Physical Characteristics

Dimensions	6.72 in L x 3.17 in W x .42 in D (170.65mm L x 80.54mm W x 10.7mm D)
Weight	8.82 oz (250g) (with embedded battery)
Display	6.7 in color Full High Definition+ (2400 x 1080); LED backlight; 450 Nits; dynamic 120Hz refresh rate
Touch Panel	Multi mode capacitive touch with bare or light gloved fingertip input; water droplet rejection, Oleophobic coating
Power	Service replaceable; rechargeable Li-Ion, PowerPrecision for real-time battery metrics; Capacity: 4,750mAh/18.43Wh
Expansion Slot	User-accessible MicroSD card; supports up to 2 TB
SIM	Dual SIM (single Nano SIM and eSIM)
Network Connections	WWAN; Wi-Fi, Bluetooth and NFC
Notifications	Audible tone; vibration Audible tone; vibration
Keypad	On-screen keypad
Voice and Audio	Two microphones with noise cancellation; HAC compliant (North America); Dual Stereo speakers for loudness; High Quality stereophonic speaker phone; Bluetooth wireless headset support; PTT headset (Zebra USB-C) support; HD VoIP, Voice and Multimedia, supporting Super-wideband (SWB), Wideband (WB) and Full band (FB)
Buttons	Volume up/down; Power (fingerprint biometrics). Programmable action buttons: Left - default to scan; Right - default to PTT; Top - default to camera
Interface Ports	USB 3.1 (Bottom Type C) — SuperSpeed (host and client); OTG/host charging mode

Performance Characteristics

CPU	Qualcomm® 5430 Octa-core, 2.2 GHz
Operating System	Android; for supported Android versions, visit: www.zebra.com/android-versions
Memory	8 GB DDR5 RAM/128 GB UFS3.1 Flash

User Environment

Operating Temperature	+32F to +122F (0C to +50C)
Storage Temperature	-40F to +158F (-40C to +70C)
Humidity	5% — 95% non-condensing
Drop Specification	5 ft (1.5m) to tile over concrete across temperature (0C to +50C/+32F to +122F) with protective boot exceeding MIL-STD-810H; Multiple 4 ft (1.2m) to tile over concrete across temperature (0C to +50C/+32F to 122F) exceeding MIL-STD 810H
Tumble Specification	600 1.6 ft (0.5m) tumbles for device with protective case; 300 1.6 ft (0.5m) tumbles for device (1.6 ft/0.5m)

Data Capture

Scanning	Camera-based scanning, leveraging Zebra's advanced decoder library for accurate and efficient data capture — complimentary with the device
Camera	Rear: 50 MP, Auto focus, OIS; ƒ/1.9, Video Recording Resolution: UHD 4K (3840x2160) @30fps, Front: 8 MP, ƒ/2.0, Video recording 1080P@30fps
NFC	NFC ISO 14443 Type A and B; Mifare, FeliCa and ISO 15693 cards, NFC Forum tags 2,3,4,5; Host Card Emulation, Contactless Payment Support VAS (Value Added Services) and Wallet support, Apple ECP1.0 and ECP2.0, Apple VAS and Google Smart Tap certified, VAS Library/SDK
Built-in RFID	Short range integrated UHF RFID; 4 ft (1.2m) range, reads 20 tags per second; EU 865-868 MHz and US 902-928 MHz

Wireless LAN

WLAN Radio	IEEE 802.11 a/b/g/n/ac/ax/d/h/i/r/k/v/w/mc; 2x2 MU-MIMO; Tri-band (2.4 GHz, 5 GHz, 6 GHz); Wi-Fi CERTIFIED 6™ (Wi-Fi 6E); Dual Band Simultaneous; IPv4, IPv6
Data Rates	2.4 GHz: 802.11b/g/n/ax — 20 MHz - up to 286.8 Mbps; 5 GHz: 802.11a/n/ac/ax — 20 MHz, 40 MHz, 80 MHz, 160 MHz - up to 2402 Mbps; 6 GHz: 802.11ax — 20 MHz, 40 MHz, 80 MHz, 160 MHz — up to 2402 Mbps
Operating Channels	Channel 1-13 (2401-2483 MHz): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; Channel 36-165 (5150-5850 MHz): 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165; Channel 1-233 (5925-7125 MHz); Channel Bandwidth: 20, 40, 80, 160 MHz; Actual operating channels/frequencies and bandwidths depend on regulatory rules and certification agency
Security and Encryption	WPA3 Enterprise 192-bit mode (GCMP256) — EAP-TLS; WPA3 Enterprise, AES-CCMP-128 — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP, EAP-PWD; WPA3 Personal (SAE), AES-CCMP-128; WPA/WPA2 Enterprise, TKIP and AES-CCMP-128; WPA/WPA2 Personal (PSK), TKIP and AES-CCMP-128; Enhanced Open (OWE), AES-CCMP-128; WEP 40 bit and 104 bit; WAN device only: EAP-SIM, EAP-AKA, EAP-AKA Prime
Certifications	Wi-Fi Alliance Certifications: Wi-Fi CERTIFIED n; Wi-Fi CERTIFIED ac; Wi-Fi CERTIFIED 6 (Wi-Fi 6E); WPA2-Personal; WPA2-Enterprise; WPA3-Personal; WPA3-Enterprise (includes 192-bit mode); Protected Management Frames; Wi-Fi Enhanced Open; WMM (Wi-Fi Multimedia); WMM-Power Save; WMM-Admission Control; Voice-Enterprise; Wi-Fi Direct; Wi-Fi Agile Multiband; Wi-Fi QoS Management; Wi-Fi Optimized Connectivity; Passpoint
Fast Roam	802.11r Fast BSS Transition; PMK Caching; Cisco CCKM; OKC

Markets and Applications

Retail

- Inventory management
- Assisted selling
- In-store communications/collaboration

Hospitality

- Event management
- Access control
- Lead capture
- Cashless payment
- Collaboration

T&L/Field Mobility

- Parcel tracking
- Proof of delivery
- Maintenance/inspections
- Equipment identification
- Work order management
- Collaboration

T&L/Airlines

- Passenger ticketing, check-in, boarding and gate-side bag check
- Passenger manifest check
- Food/inflight sales

Healthcare

- Patient tracking
- Medical equipment tracking
- At-home care

User Environment

Sealing	IP68 and IP65, with battery per applicable IEC sealing specifications
Vibration	Sine: 4 g's peak, 5hz to 2khz; Random:0.04 g^2/hz, 20hz to 2khz
Thermal Shock	-40F to +158F (-40C to +70C)
Electrostatic Discharge (ESD)	+/-15 kV air discharge, +/-8 kV direct discharge; +/-8 kV indirect discharge

General Certifications

Google ARCore certified; Android Enterprise Recommended (AER) certified, AT&T/Verizon certified

Interactive Sensor Technology (IST)

Motion Sensor	3-axis accelerometer with MEMS Gyro
Light Sensor	Automatically adjusts display backlight brightness
Proximity Sensor	Automatically detects when the user places the device against head during a phone call to disable display output and touch input
Magnetometer	eCompass to detect direction
Pressure Sensor	Altitude detection for locating

Wireless WAN

Radio Frequency Band[5]	North America: 5G FR1: n2/5/7/8/12/13/14/25/26/29/30/38/41/48/66/71/77/78; 4G: B2/4/5/7/8/12/13/14/17/25/26/29/30/38/41/48/66/71; 3G: B2/4/5 Rest of World: 5G FR1: n1/2/3/5/7/8/20/26/28/38/40/41/66/71/77/78; 4G: B1/2/3/4/5/7/8/13/17/18/20/26/28/38/39/40/41/42/43/66/71; 3G: B1/2/4/5/6/8/19; 2G: 850/900/1800/1900 Dual SIM/Dual Standby, VoLTE, Gigabit LTE-A, 5G NR Sub-6 (NSA, SA), LTE/NR Carrier Aggregation, Supports private 5G/LTE; CBRS (available only in the US)
GPS	GPS, GLONASS, Galileo, Beidou, QZSS; Dual-Band GNSS — concurrent L1/G1/E1/B1; (GPS/QZSS, GLO, GAL, BeiDou) + L5/E5a/BDSB2a (GPS/QZSS, GAL, BeiDou); a-GPS; supports XTRA
Multimedia	Wi-Fi Multimedia™ (WMM) and WMM-PS; Including TSPEC

Wireless PAN

Bluetooth	Class 1, Bluetooth v5.3; Classic Bluetooth(BR/EDR) and Bluetooth LE

Environmental Compliance

RoHS Directive 2011/65/EU; Amendment 2015/863; REACH SVHC 1907/2006 For a complete list of product and materials compliance, please visit: www.zebra.com/environment

Warranty

Subject to the terms of Zebra's hardware warranty statement, EM45 RFID is 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

Zebra OneCare™ Essential and Select; Zebra VisibilityIQ Foresight™; Professional Services Gold Build

Footnotes

1. Workstation Connect available in Q2 2025.
2. Battery life is estimated based on average performance under typical usage conditions. Actual battery life may vary significantly and is dependent on individual usage and settings.
3. Identity Guardian facial recognition and 3rd party SSO features require the purchase of a license.
4. Requires a Zebra OneCare maintenance contract.
5. Actual band support may vary by country or carrier. For more details, please contact www.zebra.com/technicalsupport

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