IDCR@FT
RFID & NFC EXPERTS

UHF | RAIN - Handheld Reader
Zebra - EM45

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) compliant
- Google ARCore certified / Android 14
- 5G, WiFi, Bluetooth 5.2, GPS
- Up to 1,5 m reading range
- IP65 protection

UHF | RAIN - Handheld Reader
All-in-one enterprise mobile

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.

Common Applications

- Inventory management
- Assisted selling
- Event management
- Access control
- Equipment identification

TECHNICAL SPECIFICATIONS

Physical Characteristics

Dimension	170.65mm L x 80.54mm W x 10.7mm
Weight	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

User Enviroment

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

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

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);
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;
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 & AES-CCMP-128; WPA/WPA2 Personal (PSK), TKIP & AES-CCMP-128; Enhanced Open (OWE), AES-CCMP-128; WEP 40 bit & 104 bit; WAN device only: EAP-SIM, EAP-AKA, EAP-AKA Prime

TECHNICAL SPECIFICATIONS

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	-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	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

Part No. / Model

	Zebra - EM45