MC9400/MC9450 Mobile Computer

The next evolution in the ultra-rugged MC9000 Series — now with more power, advanced scanning and the fastest cellular and Wi-Fi connections — Wi-Fi 6E and 5G

Nearly five million MC9000 Series ultra-rugged mobile computers have helped streamline and error-proof processes in the toughest environments — from manufacturing and warehousing to ports, yards and retail stores. Introducing the next evolution in this highly successful handheld mobile computer family, the MC9400/MC9450. The standard, freezer and non-incendive models are loaded with all the latest mobile technologies. These devices are faster, ready to power the new generation of industrial applications. Scanning is easier with the world's greatest scanning range — from in-hand to over 100 ft./30.5 m away. And with Wi-Fi 6E and private and public 5G, you get the fastest wireless connections available today — plus the ability to easily and cost-effectively extend your wireless networks to the most expansive indoor and outdoor facilities.

The latest in wireless connectivity

Private and public 5G — new cost-effective wireless options

These are the first gun-style devices to offer private and public 5G wireless data connectivity, bringing new affordable wireless networking options to expansive outdoor and indoor environments.[1] And with two SIM card options — nano SIM and eSim — you can support private and public 5G connections simultaneously for network redundancy or deploy different wireless networks in different areas of the business.

Wi-Fi 6E – maximum speed and performance, indoors and outside

Get the fastest Wi-Fi connections available, Wi-Fi 6E.[2]

With quadruple the bandwidth and capacity, triple the speed and up to triple the available spectrum, your workers get dependable and instant application response times, increasing productivity and workflow efficiency.[3]

Advanced Bluetooth connectivity

Compared to Bluetooth 5.2, Bluetooth 5.3 increases energy efficiency for improved battery life; minimizes device interference for more reliable and higher quality connections, and enables more secure connections through enhanced security features.

Best-in-class data capture and communication options

The latest in advanced scanning technology

Give your workers an unmatched scanning range with the new SE58 Extended Range Scan Engine with IntelliFocus™ technology. Scan barcodes in hand to over 100 ft./30.5 m away[4] — substantially farther than any scanner on the market. And the innovative green laser aimer is up to seven times more visible than the typical red aimer dot, making it easy to scan items on top warehouse racks.

Biometric facial recognition

Workers get easy device access, while you get the peace of mind that device access is restricted to pre-authorized users only, eliminating the risk of shared or compromised passwords.

The MC9400/MC9450 — the next evolution of ultra-rugged industrial mobile computers for the new generation of industrial mobility.

For more information, please visit www.zebra.com/mc9400-mc9450

Unmatched camera technology
The high-resolution front-facing camera is ideal for video-based collaboration. And the highest resolution rear camera in the class with HDR provides highly detailed photos, ideal for documenting incoming damaged shipments, quality checks and more.

Process automation made easy with OCR Wedge
Capture shipping container identification numbers, tire identification numbers (TINs), vehicle identification numbers (VINs) and more with the press of one button — ideal in manufacturing plants, yards, ports and depots.[5]

Choose from seven keypads to best match your data types
Select the keypad that will make data entry as easy as possible for your workers. And swap keypads on site to accommodate new data types or re-purpose devices in different areas of the business — without a trip to the service depot.

Enable push-to-talk and secure text messaging
Connect your workforce with push-to-talk and text to enable instant collaboration and communications. The speaker, microphone, PTT voice internal speaker and Bluetooth wireless headset deliver quality audio on every PTT call.[6] And you can share files and images on an individual or group chat.

Faster, more rugged and more flexible

The power to handle all your applications — simultaneously
Voice and line of business apps, simple 'green screen' legacy apps, apps powered by augmented reality and artificial intelligence — no matter how many applications workers need to use, the MC9400/MC9450 can power them, all at once. Take application performance to the next level. Compared to the MC9300, the new Qualcomm platform delivers 2.5x more processing power, 50 percent more RAM, four times the Flash and eight times micro SD storage.

No more lost devices
With the new BLE battery and Mobility DNA's Device Tracker, you can easily find devices — even if they are turned off or low in power.[7]

Three models for the most challenging environments
There's a model for every environment — standard, freezer and non-incendive. The freezer model includes a heated touch panel and scanner exit window, plus a freezer-rated battery. And the Class 1 Div 2 non-incendive model[8] enables mobile computing in areas where hazardous materials are present — such as flammable gases and materials.

Full backwards accessory compatibility for cost-effective upgrades
Upgrade to MC9400/MC9450 to put the advantages of the latest mobile features to work in your enterprise, while preserving your entire investment in MC9300 accessories. And you can also utilize MC9200 and older charging accessories with an adapter.

Advanced display technology for industrial environments
The large 4.3 in. display is easy to see indoors and outside, works when wet and is easy to use — even with thick gloves.

Rugged and ready for just about anything
The MC9400 and MC9450 are designed for your toughest environments. Muddy? Just hose it off. Submerged in water? No worries, it's waterproof. With Zebra's toughest drop and tumble testing, these devices have what it takes to handle the inevitable everyday drops on concrete in ports, yards, manufacturing plants and more. And two of the most vulnerable features are protected with Corning Gorilla Glass for maximum scratch- and shatter-resistance — the display and scanner window.

Android — enhanced with features for the enterprise
You get built in support through Android 17, with security updates to protect devices and their data. Easily deploy 'zero touch' updates on your schedule, automatically.[9] Control which GMS services are available on your devices to increase security and privacy.[10] And over 100 features can be added to improve security, data capture support, wireless connectivity and device manageability.[11]

PowerPrecision+ advanced battery technology
PowerPrecision+ batteries are designed and manufactured to deliver superior performance, reliability and safety. Visibility into real-time battery statistics makes it easy to spot and replace batteries that can no longer hold a full charge, protecting productivity. Batteries are always ready to go with fast charging. Change batteries on the fly without losing any data with hot swap support. And drop and tumble testing is performed with the battery inserted, ensuring that your batteries are as rugged as your devices.

Get your legacy apps up and running instantly
Run 'green screen' apps right out of the box with pre-loaded and pre-licensed Ivanti All-Touch TE — no licenses to purchase, backend system changes or user training required.

Mobility DNA
Simplify every aspect of owning Zebra mobile devices with Mobility DNA, a comprehensive collection of applications that contain many no-cost tools. Make device management easier for IT personnel. Give workers time-saving features that improve productivity and workflow efficiency by making Zebra devices even easier to use.

Specifications

Physical Characteristics

Dimensions	9.4 in. L x 3.5 in. W x 7.4 in. H 240 mm L x 88 mm W x 189 mm H
Weight	26.2 oz./743 g with battery
Display	4.3 in. WVGA; 800 x 480 pixels; color display
Imager Window	Corning® Gorilla® Glass
Touch Panel	Dual mode capacitive touch with finger, gloved finger or stylus input (conductive stylus sold separately); screen protector (sold separately); Corning Gorilla Glass with air gap (standard model) or optically bonded (freezer model)
Power	Rechargeable Li-Ion: 3.6V, 7000mAh (25.20 Wh); Optional BLE Battery Li-Ion 3.6V, 7000mAh (25.20 Wh); Optional Freezer Capacity battery — 5000mAh (18.80 Wh); Optional 7000mAh (25.20 Wh) Non-Incendive battery; Hot swap battery backup with temporary session persistence
Expansion Slot	MicroSD supports up to 2 TB
SIM	MC9450 only: 1 nano SIM; 1 eSIM
Network Connections	MC9400/MC9450: WLAN, WPAN (Bluetooth), USB 2.0, High Speed (host and client); MC9450 only: WWAN 5G; data only
Notifications	Audible tone; multi-color LED; haptic feedback
Keypad	Backlit, field replaceable keypads; 58 Key AlphaNumeric, 53 Key AlphaNumeric STD, 53 Key Terminal Emulation (5250 and VT), 43 Key/34 Key Numeric/Function, 29 Key Numeric/Calculation
Voice and Audio	Speaker, microphone, PTT voice (internal speaker and Bluetooth wireless headset support)
Buttons	Trigger scan button; keypad scan button
Interface Ports	USB 2.0 (bottom pogo connector) — high speed (host and client)

Performance Characteristics

CPU	Qualcomm 4490 octa-core; 2.4 GHz
Operating System	Upgradeable to Android 17
Memory	6 GB RAM/128 GB Flash
Security	FIPS 140-2 Validated; supports Secure Boot and Verified Boot

User Environment

Operating Temperature	Standard: -4°F to 122°F/-20°C to +50°C, Freezer: -22°F to 122°F/-30°C to +50°C
Storage Temperature	-40°F to 158°F/-40°C to 70°C
Humidity	Standard: 5%-95% non-condensing; Freezer: 5%-95% condensing (condensation resistant model with heaters for scanner exit window and touch panel glass)
Drop Specification	Exceeds per MIL-STD-810H: 12 ft./3.65 m to concrete; Enterprise drop standard 8 ft. (2.4 m) to concrete across temperature (-20°C to

Device Approvals, Certifications and Compliance

TAA compliant; ARCore Google certification[12]; Android Enterprise Recommended (AER)	
TAA (optional on select configurations)	Trade Agreement Act compliance optional on select configurations[12]
Non-incendive (NI)(optional on select configurations)	Class I,II, III Div 2; Gases: Class I, Groups A/B/C/D; Dusts: Class II, Groups F/G; Fibers/ Flyings: Class III; -20° C Ta 50° C T6

Data Capture

Scanning	SE58 1D/2D Extended Range Scan Engine with IntelliFocus™ technology with green laser aimer SE4770 1D/2D Scan Engine with red laser aimer
Camera	Front: 8 MP; Rear: 16 MP autofocus; flash LED generates balanced white light; supports Torch mode + HDR (standard)
NFC	ISO 14443 Type A and B; FeliCa and ISO 15693 cards

Wireless WAN Data Communications (MC9450 only)

Radio Frequency Band	3G NA: B2/4/5; RoW: 1/2/4/5/8 4G NA: B2/4/5/7/8/12/13/14/17/25/26/29/30/38/41/ 48/66/71; RoW: B1/2/3/4/5/6/7/9/10/14/17/18/20/26/28/ 38/39/40/41/42/43/66/71 5G FR1 NA: n2/5/7/8/12/13/14/25/26/30/38/41 /48/66/71/77/78; RoW: n1/2/3/5/7/8/12/18/20/ 26/28/38/40/41/66/71/77/78; Gigabit LTE-A; 5G NR Sub-6 (NSA, SA); LTE/NR Carrier Aggregation; supports private networking (LTE/5G)
GPS	MC9450 only: GPS, GLONASS, Galileo, QZSS Dual-Band GNSS — Concurrent L1/G1/E1 (GPS/QZSS, GLO, GAL) + L5/E5a/BDSB2a (GPS/QZSS, GAL) a-GPS Supports XTRA
Multimedia	Wi-Fi Multimedia™ (WMM) and WMM-PS; Including TSPEC
VOIP Communications	Supports Workcloud Communication™ PTT Express and Workcloud Communication PTT Pro

Wireless LAN

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)2; 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, 160MHz - up to 2402 Mbps
Fast Roam	802.11r Fast BSS Transition; PMK Caching; Cisco CCKM; OKC

Markets and Applications

Warehousing/Distribution

- Picking
- Put-away
- Cross-docking
- Shipping
- Receiving
- Inventory control
- Reverse logistics
- Cold storage
- Non-incendive

Manufacturing

- Inventory management
- Put-away
- Line-side replenishment
- Work-in-Process (WIP)
- Material track and trace
- Quality control
- Safety testing

Retail

- Reverse logistics
- Price verification/updates
- Store receiving
- Online order fulfillment
- Backroom inventory management

Ports and Yards

- Asset management (rail cars, containers and cargo)
- Shipment tracking
- Yard management

User Environment

	50°C) exceeding MIL-STD-810H Freezer version: 7 ft. (2.1 m) to concrete (-30°C to 50°C) exceeding MIL-STD810H
Tumble Specification	6,000 3.3 ft. (1m) tumbles; meets or exceeds IEC tumble specification
Sealing	IP65 and IP68 with battery 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
Electrostatic Discharge (ESD)	+/- 15 kV air discharge; +/- 8 kV direct discharge; +/- 8 kV 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

Wireless LAN

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, 50, 52, 56, 60, 64, 100, 104, 108, 112, 114, 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	WEP (40 or 104 bit); Enhanced Open (OWE); WPA/WPA2 Personal (TKIP and AES); WPA3 Personal (SAE); WPA/WPA2 Enterprise (TKIP and AES); WPA3 Enterprise (AES); EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP, EAP-PWD; WPA3 Enterprise 192-bit mode (GCMP256) - EAP-TLS; MC9450 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

Wireless PAN

Bluetooth	Class 2, Bluetooth v5.3 and Secondary BLE for beaconing within BLE battery

Warranty

Subject to terms of Zebra's hardware warranty statement, the MC9400/MC9450 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

Environmental Compliance

RoHS Directive 2011/65/EU RoHS Amendment (EU) 2015/863 (EN IEC 63000:2018 Standard); For a complete list of product and materials compliance, please visit www.zebra.com/environment

Recommended Services

Zebra OneCare™ Essential and Select support services; Zebra Visibility Services — VisibilityIQ™ Foresight; for information, www.zebra.com/services

Footnotes

1. 5G is available on the MC9450; connections are data only;
2. For 6GHz: Wi-Fi 6E will be available in December 2023
3. 5G vs. Wi-Fi 6: a Powerful Combination for Wireless; Intel; www.intel.com/content/www/us/en/wireless-network/5g-technology/5g-vs-wifi.html
4. Printing resolution, contrast and ambient light dependent
5. Requires the one-time purchase of a license for each OCR Wedge data type
6. Requires a Workcloud Communication license
7. Requires the purchase of the optional BLE battery and Device Tracker licenses
8. Available in North America
9. Requires Zebra Zero Touch, a Mobility DNA tool; requires one-time purchase of device licenses
10. Requires Stage Now, an included Mobility DNA tool; GMS (Google Mobile Services) are not available on all models in all

Footnotes

regions
11. Requires Mobility Extensions (Mx), an included Mobility DNA tool
12. Available Q1 2024

Mobility DNA

Mobility DNA solutions add functionality and simplify deployment and management of our mobile devices. Features may vary by model and a support contract may be required. More information:
www.zebra.com/mobilitydna

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