

**PRODUCT SPEC SHEET**  
**ZEBRA MC9500-K SERIES**



**ZEBRA**



# ZEBRA MC9500-K SERIES

## A PREMIUM INDUSTRIAL-CLASS MOBILE COMPUTER — RAISING THE BAR FOR RUGGED KEY-BASED FIELD MOBILITY APPLICATIONS

The next evolution in rugged design, ergonomics, features, functionality and performance The MC9500-K Series leverages the flagship features and functionality of Zebra's signature MC9000 Series rugged mobile computers, while introducing many new capabilities defined through extensive research and testing in logistics, parcel/post, direct store delivery (DSD), field service, public safety and sales force automation applications in some of the world's leading organizations. The result is a device that is as different on the inside as it is on the outside — a groundbreaking product with an unsurpassed feature set that takes rugged mobile computing innovation to a new level. With the MC9500-K Series, you can simply expect more: a more rugged design, more data capture options, more intelligence, more processing power and better ergonomics, all in a sleeker, lighter and easier-to-use form factor that offers true carrier independence as well as a completely new approach to accessories, battery and backroom management.

**Features**

**Zebra MAX Rugged:**

Next generation rugged

**design:**

industry leading drop and tumble tests, IP67 sealing, Monocoque housing and integrated internal antennas (WWAN, WLAN and GPS); meets and exceeds applicable MIL-STD and IEC specifications for drop, tumble, sealing and other environment parameters

Next generation ergonomic design — sleeker, smaller, easier-to-grip rugged form factor delivers a new level of comfort and easy one-

### SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS	
<b>Dimensions</b>	9.2 in. H x 3.5 in. W x 2 in. D 23.36 cm H x 8.89 cm W x 5.08 cm D

DATA CAPTURE	
<b>Scanning</b>	1D Scanner; 2D Imager; 3 MP auto-focus flash-enabled digital color camera with symbology decode software

<b>Weight</b>	22 oz./623 g (including battery, stylus, keypad & strap)
<b>Display</b>	3.7 in. VGA Color (TFT) Display (640 x 480) with touch panel and backlight
<b>Touchpanel</b>	Polycarbonate analog resistive touch
<b>Backlight</b>	LED backlight
<b>Keypad Options</b>	Modular: alpha primary; numeric telephony, numeric calculator, alpha numeric
<b>Expansion Slot</b>	microSD slot — supports up to 32 GB
<b>Notifications</b>	Programmable LEDs; Audio notifications; Vibrator alerts

## PERFORMANCE CHARACTERISTICS

<b>CPU</b>	Marvell PXA320 @ 806 MHz
<b>Operating System</b>	All models except MC959B: Windows Mobile 6.5 (Classic and Professional editions) MC959B: Windows Mobile 6.1
<b>Memory</b>	256MB RAM/1GB Flash

## USER ENVIRONMENT

<b>Drop Specification</b>	6 ft./1.8 m drop to concrete across the operating temperature range; meets and exceeds applicable MIL-STD-810G drop specifications
<b>Tumble Specification</b>	2000 3.2 ft./1 m tumbles (4,000 hits) at room temperature; meets and exceeds applicable IEC tumble specifications
<b>Operating Temperature</b>	-4° F to 122° F/-20° C to 50° C
<b>Storage Temp.</b>	Ambient to -40° F/-40° C Ambient to 158° F/70° C RH 95%
<b>Sealing</b>	IP67 sealing; meets and exceeds applicable IEC sealing specifications

<b>Scan Angle</b>	Optimized for scanning (15° downward angle)
<b>Options</b>	Integrated Magnetic Stripe Reader (MSR) with encrypted head (optional)

## COLOR CAMERA

<b>Resolution</b>	3 megapixel
<b>Illumination</b>	User controllable flash
<b>Lens</b>	Autofocus

## 1D LASER SCANNER (SE950)

<b>Range on 100% UPCA</b>	24 in./60 cm
<b>Resolution</b>	4 Mil minimum element width
<b>Roll</b>	±35° from vertical
<b>Pitch Angle</b>	±65° from normal
<b>Skew Tolerance</b>	±50° from normal
<b>Ambient Light Immunity</b>	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux) Note: LED lighting with high AC ripple content can impact scanning performance.

<b>Scan Rate</b>	104 (±12) scans/sec (bi- directional)
<b>Scan Angle</b>	47° ±3° default; 35° ±3° reduced

## ZEBRA INTERACTIVE SENSOR TECHNOLOGY

<b>Motion-sensor</b>	3-axis accelerometer that enables motion-sensing applications for dynamic screen orientation, power management and free-fall detects
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## WIRELESS LAN VOICE AND DATA COMMUNICATIONS

handed operation for  
key-based  
applications

Zebra MAX FlexWAN  
for true carrier  
independence —  
support one or more  
networks and change  
networks as needed  
with this flexible  
family. Purchase with  
one of three different  
WAN modules, or add  
and change WAN  
modules to meet the  
needs of your mobile  
workforce, right in  
your back room:

### Zebra MAX Keypad:

Modular field  
swappable keypad  
options with new  
ergonomics — alpha  
primary, numeric  
telephony, numeric  
calculator, and full  
alpha numeric

Extremely durable  
Polycarbonate Insert  
Mold Decorated (IMD)  
keypad

Best-in-class display  
with advanced LCD  
technology for easy  
viewing in any lighting  
3.7 inch color high  
resolution VGA  
display (640 x 480)  
with digitizer and  
backlight


Mobility Platform  
Architecture (MPA)  
2.0, provides the  
latest best-in-class  
technology platform  
and enables easy  
and cost-effective  
porting of applications  
from other Zebra  
mobile computers

### Next generation performance:

powerful Marvell  
PXA320 @ 806 MHz  
microprocessor, larger

<b>Humidity</b>	5 - 95% non-condensing
<b>Vibration</b>	4g's PK Sine (5Hz to 2KHz); 0.04g2/Hz Random (20Hz to 2KHz); 60 minute duration per axis, 3 axis
<b>Thermal Shock</b>	-40° F to 158° F/-40° C to 70° C rapid transition
<b>ESD</b>	±15kv Air discharge, ±8kv direct discharge, ±8kv indirect discharge
<b>Altitude</b>	-1,200 ft. to 12,000 ft. operational; 15,000 ft. shipping
<b>Key and Trigger</b>	1 million presses
<b>Light Immunity</b>	Readability: Incandescent – 450 ft. candles; Sunlight – 8000 ft. candles; Fluorescent: 450 ft. candles

## BATTERY

<b>Power</b>	 <p>PowerPrecision Lithium ion battery 4800 mAh – with State of Charge and State of Health indicators</p>
<b>Standby Time</b>	150 hours
<b>Talk Time</b>	8 hours (minimum/suspend mode)
<b>User Profiles</b>	<p><b>Outdoor WAN+GPS:</b> 15 min./hour voice communication, 10KB transmission every 10 min, and GPS on all time, default out-of-box configuration of other parameters, minimum 8 hours of operation</p> <p><b>Outdoor Voice:</b> 15 min./hour voice communication, default out-of-box configuration of other parameters, minimum 8 hours of operation</p> <p><b>Outdoor Scan:</b> 600 scans and WAN transmits per hour, default out-of-box configuration of other parameters, minimum 8 hours of operation</p>

<b>Radio</b>	Tri-mode IEEE® 802.11a/b/g
<b>Security</b>	WPA2 (Personal or Enterprise); 802.1x; EAP-TLS; TTLS (CHAP, MS-CHAP, MS-CHAPv2, PAP or MD5); PEAP (TLS, MSCHAPv2, EAP-GTC); LEAP, EAP-FAST (TLS, MS-CHAPv2, EAP-GTC); CCXv4 certified; support for IPv6; FIPS 140-2 Certified
<b>Antenna</b>	Internal antenna w/diversity
<b>Data Rates Supported</b>	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps
<b>Voice Communications:</b>	Voice-over-IP ready, Wi-Fi™-certified, IEEE 802.11a/b/g direct sequence wireless LAN, Wi-Fi Multimedia™ (WMM), Zebra Voice Quality Manager (VQM)

## REGULATORY

<b>Electrical Safety</b>	IEC/UL/CSA/EN 60950-1
<b>Environmental</b>	RoHS compliant
<b>WLAN and Bluetooth (PAN)</b>	<p>USA: FCC Part 15.247, 15.407</p> <p>Canada: RSS-210</p> <p>EU: EN 300 328, EN 301 893</p> <p>Japan: ARIB STD T33, T66, T70, T71</p> <p>Australia: AS/NZS 4268</p>
<b>Wireless Wide Area Network</b>	<p><b>GSM-HSDPA</b> Global: 3GPP TS 51.010, 3GPP TS 34.121, 3GPP TS 34.123, GCF approved module USA: FCC Part 22, Part 24 Canada: RSS-132, RSS-133 EU: EN301 511, EN301 908 Australia: AS/ACIF S 024 HAC compliant</p> <p><b>CDMA-EVDO</b> USA: FCC Part 22, Part 24 Canada: RSS-129, RSS-133 HAC compliant</p>

memory footprint and a user accessible micro-SD card

Microsoft Windows Mobile 6.x operating system increases interoperability and security (Windows Mobile 6.5 for integrated voice and data models; Windows Mobile 6.1 for data-only MC959B model)

Zebra MAX Sensor — Interactive Sensor Technology (IST) offers leading edge motionbased applications

## Zebra MAX Locate:

Supports Assisted and Autonomous GPS; SUPL 1.0 compliant — enables a signal lock in challenging areas where signals are typically weak, such as urban canyons and indoors

## WLAN:

802.11a/b/g tri-mode radio; comprehensive VoIP support FIPS 140-2 certification ensures data security — even in sensitive government applications

## WPAN:

Bluetooth® v2.1 with EDR IrDA for wireless connectivity to existing business equipment

## Zebra MAX Data Capture:

Multi-mode data capture: industry leading 1D/2D bar code scanning plus 3 megapixel (2048 x 1536) autofocus flash-enabled optional digital color

## WIRELESS WAN VOICE AND DATA COMMUNICATIONS

<b>Radio</b>	Modular 3.5G WAN (GSM HSDPA or CDMA EVDO Rev A) MC959B: Modular 3.5G Dual-WAN (GSM HSUPA and CDMA EVDO Rev A)
<b>Frequency Band</b>	HSDPA: 850, 900, 1800,1900, and 2100 MHz EVDO Rev A: 850 and 1900 MHz

## WIRELESS PAN DATA AND VOICE COMMUNICATIONS

<b>Bluetooth®</b>	Class II, v2.1 with Enhanced Data Rate (EDR); integrated antenna; FIPS 140-2 compliant
<b>IrDA</b>	Infra-red port for connection to printers and other devices

## VOICE AND AUDIO

<b>Audio</b>	VoWWAN; VoWLAN; rugged audio connector; high-quality speakerphone; support for wired and wireless (Bluetooth) headsets; headset, handset and speaker phone modes (Applies to all models except MC959B, which is data only)
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## PERIPHERALS AND ACCESSORIES\*

<b>Communication and Charging Cables</b>	Charge only cable, auto charge cable, USB charge/sync cable, DEX cable, modem adapter cable
<b>Battery Chargers/ Cradles</b>	4-slot battery charger; 1-slot battery charger; 4-bay Ethernet cradle; 4-bay charge only cradle; single bay USB cradle; vehicle battery charger using auto charge cable; vehicle cradle with charging capabilities
<b>Application Specific</b>	Snap-on magnetic stripe reader

NOTE: Data only MC959B model is not HAC compliant

<b>RF Exposure</b>	±50° from normal
<b>Ambient Light Immunity</b>	USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50360 Japan: ARIB STD T56 Australia: Radiocommunications Standard 2003

<b>EMI/RFI</b>	USA: FCC Part 15, Class B Canada: ICES-003 Class B EU: EN55022 Class B, EN 55024, EN 301 489-1, EN 301 489-7, EN 301 489-17, EN 301 489-19, EN 301 489-24, EN 60601-1-2, EN 50121-3-2, EN 50121-4 Australia: AS/NZS CISPR-22
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<b>Laser Safety</b>	IEC Class2 / FDA Class II in accordance with IEC60825-1/EN60825-1
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For countries outside USA, Canada, European Economic Area, Japan, or Australia, consult your local Zebra representative

## NETWORK COMMUNICATIONS

<b>I/O</b>	USB 2.0 Client (High Speed) or USB 1.1 host (Full Speed); USB (via 1-bay cradle) or Ethernet (via 4-bay cradle)
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## HAZARDOUS LOCATION CERTIFICATIONS

UL Class I, II, III Division 2, Groups A, B, C, D, F, G (Select Configurations Only)

## RECOMMENDED SERVICES

Customer Services  
Service from the Start with Comprehensive Coverage

camera with decode and high resolution document capture capability

High quality speakerphone, microphone and receiver for multiple voice modes — handset, headset and speakerphone

Zebra MAX Backroom Management: gamechanging backroom management through an industry-first Universal Accessory System

### Zebra MAX Battery:

high capacity battery with unique, industry-first battery information indicators for state of charge and state of health, greatly simplifying battery management

IEEE 1725 compliance for the entire MC9500-K system — all models, batteries and power-related accessories (such as cradles and charging cables) MSP compatibility — comprehensive and flexible centralized management of all devices, anywhere in the world, all from a single console

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**Attachments**

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**Soft Goods**      Rigid and soft case  
                         holsters

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**WARRANTY**

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The MC9500-K Series is warranted against defects in workmanship and materials for a period of 12 months from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions.

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\* For a complete list of MC9500-K Peripherals and Accessories, please visit [www.zebra.com/mc9500k](http://www.zebra.com/mc9500k)



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