PRODUCT SPEC SHEET
ZEBRA MC9190-Z HANDHELD RFID READER

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RUGGED, LONG RANGE RFID READER FOR INDUSTRIAL ENVIRONMENTS

LONG RANGE, HIGH PERFORMANCE SAVES TIME AND MONEY

To put more product into the hands of your customers – and put more profit into your pockets – you need to know what you have and where to find it. On the dock or in the storeroom, the MC9190-Z Handheld RFID Reader is designed to make that job faster and easier.

The MC9190-Z is Zebra's new best-in-class standard for handheld RFID readers. With its high RF sensitivity that provides for greater accuracy, higher throughput and longer reads, the MC9190-Z reaches further to bring reliable data about your products right to your fingertips. Inventory counts can be accomplished more often, more quickly and accurately and, unlike scanning with bar codes, without line of sight. Then, armed with more complete information, you can better locate and track assets and inventory, and manage your stock levels to avoid running out of product or carrying expensive excess inventory.

RUGGED AND READY TO WORK

The MC9190-Z is sealed to meet IP64 standards so you can use it even in dust or rain. A tough, non-glare LCD screen allows for optimal reading in bright sunlight and worry-free glass protection in rugged use. The MC9190-Z's specially designed corner bumpers enable it to handle repeated drops to a concrete floor with a 6ft./1.8m drop spec. We built it to work for a living, even in your toughest environment.

MAKE A SMART CHOICE

The MC9190-Z joins the broadest, most comprehensive portfolio of business and industrial fixed, mobile, handheld and hands-free RFID readers available today. Simply put, Zebra RFID devices are being used in more applications, more industries and more countries. To you, that means extensive experience you can tap to solve your unique challenges, higher confidence that we can deliver what you expect and greater value built in every device we make. It all adds up to make the MC9190-Z an easy choice.

For more information on the Zebra MC9190-Z RFID reader, please visit us on the web at www.zebra.com/mc9190zor access our global directory at www.zebra.com/contact.

ZEBRA MC9190-Z SPECIFICATIONS

PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

WIRELESS DATA COMMUNICATIONS

WLAN:	802.11 a/b/g

ZEBRA

FEATURES

Multi-modal data capture

Integrated RFID and barcode in one rugged device gives you lower total cost of ownership.

Greater efficiency

Reliable, long-range RFID performance allows more frequent and more accurate inventory-count operation to better manage on-the-floor, backroom and distribution inventory – reduce out-of-stock and excess inventory carrying costs.

Maximum rugged design

Can withstand a 6 ft./1.8 m drop to concrete, 2000 one-meter tumbles and has an IP64 sealing to help ensure reliable operation in spite of everyday drops, bumps and exposure to dust and liquids

Superior ergonomic design

The most ergonomic RFID handheld reader in its class, the MC9190-Z is easy to handle, so staff can use the product longer with less fatigue.

Readable in any environment

The MC9190-Z features a large 3.7" VGA coloured touch-screen with reduced glare for easier use indoors and outdoors.

GOVERNMENT GRADE ENCRYPTED WIRELESS SECURITY

Make sure only authorised users

Dimensions:	10.75 in. L x 4.7 in. W x 7.7 in. H 27.3 cm L x 11.9 cm W x 19.5 cm H
Weight:	34.35 oz / 2.147 lbs (including battery) 973.8 gr / .986 kg (including battery)
Keyboard:	28, 43 and 53-key options
Display:	3.7 in. VGA colour with digitizer and backlight
Power:	Removable, rechargeable 7.2 volt Lithium Ion 2200 mAh battery pack , 15.8 watt hours

PERFORMANCE CHARACTERISTICS

CPU:	Marvell PXA320 processor at 806 MHz
Operating System:	Microsoft Windows Mobile 6.5
Memory (RAM/ROM) :	256 MB/1 GB
Expansion:	Up to 32 GB SD/MMC card
Application Development:	PSDK, DCP and SMDK available through Zebra Developer Zone Web site
Scan Engine Options:	SE960: 1-D Laser, SE1524-A&E: 1 -D Extended Range, SE4500: 2-D Imager SE4500-HD: 1-D/2-D DPM

USER ENVIRONMENT

Operating Temp.:	-4° F to 122° F/-20° C to 50° C
Charging Temp.:	32° F to 104° F/0° C to 40° C
Storage Temp.:	-40° F to 158° F/-40° C to 70° C
Humidity:	5% to 95% non-condensing
Drop Spec:	Multiple drops to concrete: 6 ft./1.8 m across the operating temperature range
Tumble:	2,000 one-meter tumbles at room temperature (4,000 hits)
Environmental Sealing:	IP64 (electronic enclosure, display and keypad)
Electrostatic Discharge (ESD):	+/-15kVdc air discharge; +/-8kVdc direct discharge; +/-8kVdc indirect discharge
MIL-STD 810F:	Meets and exceeds applicable MIL-STD 810F for drop, tumble and sealing
Ambient Lighting Tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED1: 450 Ft
Output Power:	100 mW U.S. and international
Data Rate:	802.11a: up to 54 Mbps; 802.11b: up to 11 Mbps; 802.11g: up to 54 Mbps
Antenna:	Internal
Frequency Range:	All country dependent: 802.11a - 5 GHz; 802.11b – 2.4 GHz; 802.11g – 2.4 GHz
Bluetooth:	Bluetooth Version 2.1 with EDR
WLAN Security:	WPA2 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), WPA2/AES, CCX v4, FIPS 140-2 and IPv6

PERIPHERALS AND ACCESSORIES

Cradles:	Single-slot serial/USB, 4-slot Ethernet, 4-slot charge only
Printers:	Supports extensive line of Zebra approved printers and cables
Charger:	4-Slot universal battery charger
Other Accessories:	Cable adapter module; snap-on magnetic stripe reader; modem module; full set of cables; Zebra approved CAC Reader for government applications

REGULATORY

General:	Approved for use in the US, Canada, Europe, Asia/Pacific, Latin America, Middle East[3]
Electrical Safety:	Certified to UL60950-1, CSA C22.2 No. 60950-1, IEC 60950-1, EN 60950-1
EMI/RFI:	USA: FCC Part 15 Canada: ICES 003 Class B EU: EN 301 489-3, EN 301 489-1, EN 301 489-17, EN 302-208, EN55022 Class B, EN55024
Laser Safety:	IEC Class2/FDA Class II in accordance with IEC60825-1/ EN60825-1, 21CFR1040.10
RF Hazard and Human Exposure:	US – FCC OET Bulletin 65 Supplement ‘C’ Canada – RSS-102 and RSS210 EU – EN 62311, EN62479, EN 50364

WARRANTY

The MC9190-Z RFID is warranted against defects in

access your devices, your data and your network with Zebra MAX Secure

Wired-line grade security without impacting wireless performance: native FIPS 140-2 Level 1 certification; support for all the latest encryption and authentication protocols; compatibility with Zebra's Mobile Security Suite for device-level protection and compatibility with Zebra's Mobile Virtual Private Networks (MVPNs)

Common access card (CAC) capable

Optional accessories to support authentication for government applications

	Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)

RFID

Standards supported:	EPC Gen 2 DRM (DRM compliant up to 0.5w)
Nominal read range[2]:	up to 30 ft. /up to 9.14 m
Nominal write range[2]:	up to 4 ft./ up to 1.22 m
Field:	70-degree cone (approx.) measured from nose of device
Antenna:	Integrated, linearly polarized
Frequency Range:	EU: 865-868MHz; US: 902-928MHz
Output Power:	EU: 2 Watt ERP; US: 3 Watt EIRP

workmanship and materials for a period of one year (12 months) from date of shipment, provided the product remains unmodified and is operated under normal and proper conditions.

RECOMMENDED SERVICES

Customer Services: Service from the Start – Bronze with Comprehensive Coverage

1 LED lighting with high AC ripple content can impact scanning performance. 2Actual read/write range is dependent upon a number of [illegible]

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