



ZEBRA

# MC9190-Z Handheld RFID Reader

## RUGGED, LONG RANGE RFID READER FOR INDUSTRIAL ENVIRONMENTS

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.

## 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 colored touch-screen with reduced glare for easier use indoors and outdoors

### GOVERNMENT GRADE ENCRYPTED WIRELESS SECURITY

### Make Sure Only Authorized Users 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.

**MC9190-Z — LONG RANGE, HIGH PERFORMANCE SAVES TIME AND MONEY.**

For more information about the Zebra MC9190-Z RFID reader, visit [www.zebra.com/mc9190z](http://www.zebra.com/mc9190z) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

# MC9190-Z Specifications

PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS	
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)
Keypad	28, 43 and 53-key options
Display	3.7 in. VGA color 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 Embedded Handheld 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-ER: 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 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 <sup>2</sup>	up to 30 ft. /up to 9.14 m
Nominal write range <sup>2</sup>	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; EU: 3 Watt EIRP

WIRELESS DATA COMMUNICATIONS	
WLAN	802.11 a/b/g
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 <sup>3</sup>
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 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.	
2: Actual read/write range is dependent upon a number of factors, including the specific tag used, nature of the items tagged, and presence or absence of radio interference.	
3: NOTE: Model numbers for Regulatory Certification are: MC919ZWR: North America, Asia/Pacific, Latin America; MC919ZEU: Europe, Middle East, India; MC919ZCN: China NOTICE: Repairs of this product may require the use of Zebra proprietary parts (and/or Zebra proprietary information). Zebra will sell these parts (and provide this proprietary information) only to end-user customers for self-service. Applicable in the U.S. For all other countries, please contact your Zebra account manager or the local Zebra Customer Service representative in your area for further details.	



NA and Corporate Headquarters  
+1 800 423 0442  
inquiry4@zebra.com

Asia-Pacific Headquarters  
+65 6858 0722  
contact.apac@zebra.com

EMEA Headquarters  
zebra.com/locations  
mseurope@zebra.com

Latin America Headquarters  
+1 847 955 2283  
la.contactme@zebra.com