

# MC9090-G RFID

## Handheld RFID Readers



### FEATURES

Supports EPC Generation 1 and 2  
Allows easy integration of RFID as part of your supply chain processes

Exceptionally rugged construction: passes industry's most stringent drop and tumble tests; IP64 sealing rating; integrated internal antennas  
Flexibility to use in nearly any environment; dramatically reduces repair and downtime costs; delivers enterprise performance and ROI

Supports 1D and 2D bar code scanning, RFID and imaging  
Multi-modal single device provides superior application flexibility and cost efficiency

Integrated 802.11a/b/g  
Enables real-time data communications; technology differentiating features deliver superior wireless connectivity

Empower mobile workers with real-time comprehensive advanced data capture capabilities in a rugged handheld computer. Streamline your business operations, reduce errors, and increase your productivity and profitability with the power of the MC9090-G RFID from Motorola. The device provides mobile workers throughout the supply chain with complete data capture functionality and real-time connectivity to critical business applications. Workers can read RFID tags and capture 1D and 2D bar codes as well as images, ensuring seamless integration throughout the enterprise—even when multiple types of product identification and tracking systems are deployed. Handheld on-the-spot RFID capabilities remove the dependency on fixed readers installed at typical choke points, enabling efficient exception handling, pricing audits and changes, stock picking and more.

The superior construction is designed to withstand rigorous use in extreme environments and a wide variety of working conditions, providing the flexibility to be used on the manufacturing floor in the warehouse, on the loading dock, and out in the yard as well as in the back room or out on the sales floor of a retail operation. An anywhere, anytime wireless connection provides the real-time information needed to streamline business processes, increase productivity and enable more strategic decision-making. Support for wireless printing, wireless headsets and more via wireless PAN simplifies

everyday use for end-users. While the ergonomic pistol-grip design provides comfort in scan-intensive applications such as shelf price audits and inventory management.

### The power to meet your enterprise application requirements

Equipped with the latest advances in mobile technology, the MC9090-G RFID handheld provides support for the richest enterprise applications. Whether your application is simple or complex, the MC9090-G RFID delivers performance you can count on—from the latest Intel processor designed for the specific demands of mobility, to robust persistent storage capabilities and multiple advanced data capture options. Windows Mobile 5.0 provides your workers with a familiar feature-rich environment—and reduces training requirements.

The ability to read and encode RFID tags, capture images as well as scan bar codes enables enterprises to deploy a single device in many business areas, eliminating the need and associated costs for multiple devices in multi-modal data capture environments. Workers can count on a triple battery life for a full shift through superior power management. And modular keypads, a rugged touch panel and a display that is easy to view inside and outside provides users with maximum readability, ease-of-use and comfort.

# MC9090-G with RFID 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	35.4 oz./1 kg (includes battery scanner and radio)
Keyboard	28-, 43- and 53-key; optional Emulation (5250-3270T)
Display:	3.8 in. QVGA color
Power:	Removable rechargeable 7200 mAh Lithium Ion 2200 mAh battery pack, 15.8 watt hour
Performance Characteristics	
CPU:	Intel® XScale® BiVerde PXA270 processor at 624 MHz
Operating System:	Microsoft Windows Mobile 5.0 Premium Edition
Memory (RAM/ROM):	64 MB/128 MB
Expansion:	SO/MMC card
Application Development	PSDK, OCP and SMOK available through Motorola Developer Zone Web site
Bar Code Options	Omni-directional 1D and 2D imaging engine reads symbologies and captures grayscale images and signatures with intuitive laser aiming
User Environment	
Operating Temp.:	32° F to 122° F / 0° 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 10 concrete: 6 ft./1.8 m across the operating temperature range
Tumble:	2,000 one-meter tumbles at 0° C temperature (4,000 hits)
Environmental sealing:	IP64 (electronic enclosure display and keypad)
Electrostatic Discharge (ESD):	+1-15kVdc air discharge; +/-8kVdc direct discharge; +78kVdc indirect discharge
RFID	
Standards supported:	EPC Gen 1 (Class 0 & Class 1) and Gen 2
Nominal read range:	0.2 ft. to 10 ft. / 6.1 cm to 304.8 cm
Nominal write range:	1 ft. to 2 ft. / 30.5 cm to 61 cm
Field:	70-degree cone (approx. 1 measured from nose of device)
Antenna:	Integrated, nearly polarized
Frequency Range:	902-928 MHz
Output Power:	1W (4W EIRP)

Wireless Data Communications	
WLAN:	802.11 a/b/g
Output Power	100mW 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 Support:	Bluetooth Version 1.2 with BT Explorer (manager) included
Peripherals and Accessories	
Chargers:	Single slot USB 4-in-1 Ethernet, 4-slot charge only
Printers:	Supports extensive line of Motorola 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
Large Display	
General:	Approved for use in the United States and Canada only
Electrical Safety:	Certified to UL 60950-1 CSA C22.2 No 60950-1 IEC 60950-1
EMRFI Radio Versions:	FCC Part 2 (SAR/FCC Part 15 RSS210)
Laser Safety:	IEC Class 2/FOA Class 1 in accordance with IEC 60825-1/EN 60825-1
Warranty	
The MC9090-G 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: See Nice from the Start - Bronze with Comprehensive Coverage	
<p>At the time of purchase, please contact your Motorola representative for information on the availability of the MC9090-G RFID in your area. The MC9090-G RFID is not available in all countries.</p> <p>NOTE: This product is available in the U.S. and Canada only.</p> <p>NOTICE: For information on the use of Motorola Wireless devices, please refer to the Motorola Wireless User Guide. Motorola will use these parts and provide this information to the Motorola Customer Service Center in the U.S. For all other countries, please contact your Motorola representative for information on the availability of the MC9090-G RFID in your area.</p>	

Large 3.8" display: exceptional clarity and contrast. Easy to read in a variety of lighting conditions.

Forward scanning pistol grip ergonomics. Reduces user fatigue. Multiple bar code scanning and RFID tag reading applications.

Integrated directional antenna (70 degree forward-looking).

Enables isolation of desired tags.

API (Application Programming Interface) for Microsoft® Windows® CE.NET 4.2 and Windows Mobile 2003.

Familiarity simplifies and reduces the time required to develop RFID-enabled applications.



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