MC3090-Z

Business-class handheld RFID reader

FEATURES

Lightweight, ergonomic pistol grip design
Built for all day comfort; reduces user fatigue in read- and scan-intensive applications

Motorola's patented omnidirectional MAX *RFID Antenna*
Orientation insensitive design eliminates the need for precise reader and tag alignment for faster and more accurate reads

Color touchscreen
Easy and intuitive interface; reduces training time and costs

Pinpoint locationing technology
A unique combination of intuitive audible and visual cues easily guides workers to a specific item: as the device moves closer to the desired item, a beep tone increases in frequency and volume, while a sliding graphical bar increases in size

New class of RFID reader brings the benefits of RFID from industrial environments to the carpeted space

The MC3090-Z represents another RFID first from Motorola — the first business-class handheld RFID reader designed specifically to extend the benefits of RFID beyond industrial spaces and into customer facing and business environments. The MC3090-Z starts with the signature rugged design and high performance for which Motorola's industrial handheld RFID products are known, and adds the ergonomics required for all day comfort and ease of use. At just half the weight of its industrial counterparts, the MC3090-Z is the lightest UHF RFID rugged handheld reader on the market, offering a well-balanced design and a convenient gun-style grip for read intensive applications. Add a groundbreaking new antenna design that drives RFID performance to new heights and the result is a highly versatile device that is at home in customer facing environments — from retail stores and healthcare facilities to the business office.

Motorola MAX *RFID Antenna* — delivering maximum RFID performance

Until now, enterprises have been forced to choose between two types of antennas: linear polarization for a longer read range or circular polarization for wider coverage. The MC3090-Z antenna combines the advantages of these two technologies into a patented omnidirectional antenna that offers the best of both worlds — a superior read range and a superior coverage area. The orientation insensitive antenna delivers extraordinary reliability and eliminates the need to precisely align the reader with the tag, adding to user comfort and productivity. The result is the ability to accurately and rapidly capture RFID tags on even the most challenging items — from a pile of clothing in a retail store or a box of files in the office to data tapes in the data center.

Motorola's signature rugged design and dual data capture functionality deliver superior value

The MC3090-Z offers the best of form and function with Motorola MAX *Rugged* and Motorola MAX *Data Capture*. While the MC3090-Z is designed for the carpeted space, Motorola MAX *Rugged* provides Motorola's flagship rugged specifications, ensuring dependable operation and a maximum lifecycle in demanding business environments. The reader passes one of the industry's most stringent impact tests, able to survive a 4 ft./1.2 m drop to concrete across the entire operating temperature range. In Motorola's unique endurance test, the MC3090-Z continued to perform reliably after 1,000 1.64 ft./0.5m drops in Motorola's tumble drum. And IP54 sealing enables the device to withstand dusty environments, spills and the routine wipedowns required in healthcare and other challenging environments.

Motorola MAX *Data Capture* offers two best-in-class advanced data capture technologies in one device — the ability to read RFID tags and scan bar codes. The number of devices you need to

Easy-to-use Application Programming Interfaces (APIs)
Enables rapid and cost-effective application development

Wi-Fi 802.11a/b/g wireless connectivity
Connects to virtually any wireless LAN for easy integration into any wireless enterprise environment; enables real-time wireless data capture anywhere in your environment

Motorola MAX *Rugged*: meets and exceeds MIL-STD 810F standards for drop, tumble and sealing
Built for all day enterprise use; provides dependable operation despite the inevitable drops and spills; provides extended lifecycle; withstands wipe downs

Motorola MAX *Data Capture*
Offers exceptional RFID and bar code scanning functionality in a single device; eliminates the need to purchase two devices, reducing capital and operational costs

320 x 320 display with backlight
30% higher resolution than ¼ VGA for easier viewing in virtually any lighting condition

purchase and manage is reduced — as well as the associated capital and operational costs. In addition to exceptional RFID performance, the device also enables first time capture of even poor quality 1D bar codes, further protecting user productivity and data accuracy.

Easy-to-use robust locationing

Until now, RFID handheld readers identified the general proximity of an item — for example, a shelf. The MC3090-Z is the only RFID reader to offer pinpoint locationing technology. A unique combination of intuitive audible and visual cues quickly and easily guides workers to the desired item. As the device moves closer to a specific item, a beep tone increases in frequency and volume, while a sliding graphical bar increases in size.

The Motorola end-to-end advantage

When you choose the Motorola MC3090-Z, you enjoy the advantages of a world-class partner channel, world-class management solutions and world-class services. Our award-winning partner channel offers a best-in-class broad set of ready-to-go and custom applications, minimizing deployment time and cost. Compatibility with Motorola's Mobility Services Platform (MSP) and the Motorola Mobility Suite offers extraordinary centralized control over all your Motorola devices — the ability to remotely stage, provision, monitor, troubleshoot, secure data on the devices and much more drives device management costs to a new low. And since your employees will count on the MC3090-Z every day, Motorola's Service from the Start with Comprehensive Coverage will help keep your devices up and running at peak performance. This exceptional service is truly comprehensive, providing technical software support and software downloads as well as true end-to-end and inside-outside protection for your device. Normal wear and tear, internal and external components damaged through accidental breakage and select accessories that ship together with the MC3090-Z are all covered — at no additional charge.

For more information on how you can bring the benefits of RFID into new areas of your business, please visit us on the web at www.motorola.com/MC3090Z or access our global contact directory at www.motorola.com/enterprisemobility/contactus

MC3090-Z Applications

As the first business-class handheld RFID reader, the MC3090-Z enables the extension of RFID beyond industrial spaces and into customer facing and business environments. Industries and applications include:

Industry	Application
Retail Sales Floor; POS; Backroom	• Inventory/Cycle Counting • Automatic Replenishment • Receiving/Shrink Control • Item Finding
Enterprise Business office/carpeted space	• Asset/IT Management • File and Document Tracking • Item Finding
Healthcare Hospitals; clinics	• Asset Management (for high value critical assets) • Patient Tracking • Item Finding
Manufacturing/Warehousing (environmentally controlled) Production line; warehouse aisles and loading docks	• Work In Process (WIP) • Receiving/Shipping

Motorola MC3090-Z Specifications

Physical Characteristics	
Dimensions:	7.6 in. H x 4.7 in. W x 6.4 in. D 19.34 cm H x11.94 cm W x 16.26 cm
Weight:	22.93 oz./650 g (including battery, stylus, narrow keypad & strap)
Display:	3 in. QVGA color display (320 x 320) touchscreen with backlight
Battery:	Li-Ion 4,400 mAh @ 3.7Vdc (2X Battery only)
Network Connections:	RS232; USB (host and client)
Keypad:	48-key Alpha-Numeric
Data Capture Options:	RFID; 1D laser scanner
Performance Characteristics	
CPU:	IntelXScale PXA270 @ 520 MHz
Operating System:	Windows Mobile 6.1
Memory:	128MB RAM/1GB Flash
User Environment	
Drop Specification:	4 ft./1.2 m drop to concrete across the operating temperature range; meets and exceeds MIL-STD 810F
Tumble Spec.:	500 1.64 ft./.5 m tumbles (1,000 drops) at room temperature; meets and exceeds MIL-STD 810F
Operating Temp.:	14° F to 122° F/-10° C to 50° C
Storage Temp.:	-22°F to 160° F/-30°C to 70°C
Sealing:	IP54; Meets and exceeds MIL-STD 810F
Humidity:	5-95% non-condensing
ESD:	+/-15kvVDC air discharge, +/-8kvVDC direct discharge, +/-8kv indirect discharge
RFID	
RFID Power Output:	1 watt EIRP
RFID Antenna Type:	Integrated Orientation Insensitive
Frequency Range:	US: 902-928 MHz
Standards Supported:	EPC Gen 2 DRM (DRM compliant up to 0.5W)
Wireless LAN Voice and Data Communications	
Radio:	Tri-mode IEEE® 802.11a/b/g
Data Rates Supported:	802.11a: up to 54 Mbps, 802.11b: up to 11 Mbps, 802.11g: up to 54 Mbps
VoIP-Ready:	Optional (region dependent)
Wireless PAN Data and Voice Communications	
Bluetooth®:	Region dependent
Peripherals and Accessories	
Cradles:	Single-slot USB/RS232 charging cradle with spare battery well
Chargers:	Four-slot battery charger; adaptor for universal battery charger
Printers:	Supports Motorola approved printers
Other Accessories:	Holsters, charging cables, magnetic stripe reader
Regulatory	
EMI/EMC:	FCC Part 15 Class B, ICES 003 Class B, IEC 60601-1-2, EN 301 489-1, EN 301 489-17, EN 301 489-3
Electrical Safety:	UL 60950-1, CSA C22.2 No. 60950-1, IEC 60950-1
RF Exposure:	USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50360; EN 50364 Japan: ARIB STD T56 Australia: Radiocommunications Standard 2003
WLAN, Bluetooth and RFID:	USA: FCC Part 15.247, 15.407 Canada: RSS-210 EU: EN 300 328, EN 301 893 : EN 302 208 Australia: AS/NZS 4268
Laser Safety:	A21CFR1040.10, IEC/EN 60825-1

Warranty

The MC3090-Z 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.

Recommended Services

Customer Services: Service from the Start with Comprehensive Coverage

MAX *Rugged*

MAX *Data Capture*

MAX *RFID Antenna*

Windows Mobile®

MC3090-Z
Business-class handheld RFID reader

Featuring Motorola Mobility Architecture eXtensions (MAX)

Motorola Mobility Architecture eXtensions (MAX) allows Motorola mobile computers to deliver extraordinary value — a truly unprecedented return on investment (ROI) and total cost of ownership (TCO). This unique set of Motorola features turbo charges Motorola mobile computers, driving ease-of-use, ease-of-management, flexibility, modularity, lifecycle and overall system performance to new heights. Features in the MC3090-Z include...

MAX *Rugged*

With MAX *Rugged*, you can count on a device built for the most demanding business environments. A minimum of three specifications — industry leading mechanical stress and endurance tests plus environmental sealing — insures dependable performance and maximum lifecycle.

MAX *Data Capture*

Integrate best-in-class advanced data capture functionality, including: 1D, 2D and DPM bar code scanning; signature capture; high resolution image and document capture; RFID and more.

MAX *RFID Antenna*

Maximize the performance of your RFID solutions with this patented orientation insensitive antenna. The unique combination of linear and circular polarization maximizes read range and coverage area, delivering the extraordinary reliability required to capture tags — even on the most challenging items.

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