MC9000-G Series with RFID

MOBILE COMPUTERS

Real-Time Mobile Computing with RFID Delivers Real Business Value

The MC9000-G with RFID from Symbol Technologies is a ruggedized mobile computer that features integrated support for the most popular radio frequency identification standard — EPC™, the Electronic Product Code. By integrating support for either EPC Class 1 or Class 0 RFID reading and programming with a robust commercial mobile computer, the MC9000-G is able to offer an unparalleled level of functionality suitable for a broad range of RFID applications. Combining RFID, bar code reading, imaging, 802.11 connectivity, a full 1/4 VGA screen and alphanumeric keypad, the MC9000-G with RFID has the flexibility to give your organization real-time access to mission-critical information from key points in your supply chain. Enterprise-wide management and control of the MC9000-G is easy with Symbol's Mobility Services Platform (MSP).

Many of the world's largest retailers, manufacturers and logistics organizations are integrating RFID as part of their supply chain processes, and RFID is rapidly emerging as a key technology across a wide range of markets and applications. With a feature set that delivers superior data collection, communication and collaboration, the MC9000-G with RFID facilitates faster decision-making and increased productivity in a variety of environments — from the factory to the warehouse to the sales floor.

Mobile Solutions Add Value to RFID

Traditional supply chain applications of RFID rely on automatic reading of tagged items using fixed readers installed at dock doors, mechanized conveyors, depalletization stations and other "choke" points in the movement of goods. However, when integrated with a mobile solution, RFID technology expands and improves the general functionality and performance of your entire mobile application.

Services for a More Successful Mobility Solution

Symbol offers a full suite of services, including complete analysis, design, installation, training and ongoing support for the seamless deployment, management and continued support of your RFID solution.

For more information on the MC9000-G with RFID and its full line of accessories, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at **www.symbol.com/rfid**.

FEATURES	BENEFITS
Available in EPC Class 1 read/write or EPC Class 0 read/write models	Allows easy integration of RFID as part of your supply chain processes
Extremely rugged design withstands multiple 6 ft./1.8 m drops to concrete; 2,000 3.3 ft./1 m tumbles (4,000 hits)	Ensures less down time due to accidental drops
Dual mode: integrated bar code scanning and RFID	Maximum flexibility for enterprise applications
IP64 sealing rating (electronic enclosure)	Protects against water and dust to ensure reliable performance in rough conditions
Microsoft® Windows® CE .NET(Class 1 model only), Windows Mobile 2003 operating system (both models)	Gives versatility through familiar interfaces with wide software application support
Intel® XScale™ PXA255 processor at 400 MHz	Delivers high-speed CPU performance for robust enterprise applications, including multimedia
3.8 in. large, bright, color display with backlit keypad	Allows easy viewing in many environments, such as ambient light
Wireless LAN communications	Enables real-time data exchange for maximum productivity
Forward scanning, pistol grip ergonomics	Reduces user fatigue in scan-intensive applications
Directional antenna (70-degree forward-looking)	Enables you to isolate the RFID tags you are interested in
API (Application Programming Interface) for Microsoft® Windows® CE .NET (Class 1 model only), Windows Mobile 2003 (both models)	Use familiar tools to build RFID-enabled applications

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MC9000-G with RFID Specification Highlights

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:	53-key
Display:	
Embedded CE models (Class 1 only)	3.8 in. 1/4 VGA Mono
Windows Mobile models (Class 1 and Class 0):	3.8 in. 1/4 VGA Mono or Color
Power:	Removable, rechargeable 7.4 volt 2200 mAh Li Ion battery pack (2200mAh, 7.4V)

Performance Characteristics

CPU:	XScale PXA255 processor at 400 MHz
Operating System:	Microsoft Windows Embedded CE. NET (Class 1 model only) or Windows Mobile 2003 (Both Class 0 and Class 1 models)
Memory:	64/64MB
Application Development:	SDK available through Symbol Developer Zone Web site
Bar Code Options:	Class 1 model: 1D scan engine, omnidirectional 1D and 2D imaging engine Class 0 model: Omnidirectional 1D and 2D imaging engine

User Environment

Operating Temperature:	Monochrome/Color: -4° to 122° F/-20° to 50°C
Storage Temperature:	-25° to 160° F/-40° to 70° C
Humidity:	5% to 95% non condensing
Drop Spec:	Multiple drops to concrete: 6 ft/1.8 m: 14° C to 122° F/-10° C to 50° C 5 ft/1.5 m: -13° C to 14° F/-25° C to -10° C
Tumble:	2,000 3.3 ft./1 m tumbles at room temperature (4,000 hits)
Environmental Sealing:	IP64 (electronic enclosure)
ESD:	+/-15kVdc air discharge +/-8kVdc direct discharge +/-8kVdc indirect discharge

RFID

Standards supported:	EPC Class 1 read/write model or EPC Class 0 read/write model
Nominal read range*:	0.2 ft. to 10 ft./6.09 cm to 304.8 cm
Nominal write range*:	1 ft. to 2 ft./30.5 cm to 60.9 cm
Field:	70-degree cone (approx.) measured from nose of device
Antenna:	External, linearly polarized
Frequency Range:	902-928 MHz
Output Power:	1W (4W EIRP)

Wireless Data Communications

WLAN:	802.11b
Output Power:	100 mW
Data Rate:	802.11b: 11 MB per second
Antenna:	Internal
Frequency Range:	Country-dependent; typically 2.4 to 2.5 GHz

Peripherals and Accessories

Cradles:	Single-slot and 4-slot cradles available
Printers:	Supports extensive line of Symbol-approved printers, cables and accessories
Charger:	4-Slot universal battery charger
Other Accessories:	Cable adapter module; snap-on magnetic stripe reader and modem; holster

Regulatory

General:	Suitable for sale in the United States and Canada only
Electrical Safety:	Certified to UL60950, CSA C22.2 No. 60950
EMI/RFI Radio Versions:	North America: FCC Part 2 (SAR), FCC Part 15 RSS210 Class B (Class 1 model only)
Laser Safety:	IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1

*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.

MC9000-G with RFID: Market, Applications and Users

Market	Applications	User
Manufacturing	Inventory management Supply-line replenishment	Assembly-line personnel Shipping/receiving personnel
Retail	Warehouse management Price audits/changes Store receiving Inventory management	Sales associates Receiving-dock personnel Stock-room personnel Supervisors
Wholesale	Warehouse management Receiving/Putaway/Shipping	Warehouse personnel
Distribution	Returns processing	Loading-dock personnel
Third-party logistics	Warehouse management	Warehouse personnel
Pharmaceutical	Enhanced Traceability	Compliance personnel
Aviation	Parts Tracking Baggage	Maintenance personnel Baggage handling personnel
Defense	Logistics/Supply	Service personnel

How Do Mobile Solutions Add Value to RFID Technology?

Challenge	Mobile Solution Value
Exception Processing	Allows misreads and other problem shipments to be investigated away from the dock without impeding flow
Remote Location Support	Provides a means of utilizing RFID information for receiving — even in the middle of a desert
Quick Start	No installation and low total solution cost allows a "quick start" with RFID
In Situ Processing	Goods stored away from fixed readers — e.g., in storage racks – can still be processed using RFID tag information
Mixed Bar Code and RFID	Lets workers switch quickly between RFID-tagged items and items marked with a bar code

About Symbol Technologies

Symbol Technologies, Inc., The Enterprise Mobility Company™, is a recognized worldwide leader in enterprise mobility, delivering products and solutions that capture, move and manage information in real time to and from the point of business activity. Symbol enterprise mobility solutions integrate advanced data capture products, radio frequency identification technology, mobile computing platforms, wireless infrastructure, mobility software and world-class services programs under the Symbol Enterprise Mobility Services brand. Symbol enterprise mobility products and solutions are proven to increase workforce productivity, reduce operating costs, drive operational efficiencies and realize competitive advantages for the world's leading companies. More information is available at **www.symbol.com.**

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