DS9808-R

Next-generation hybrid presentation imager with integrated RFID

Innovative hybrid design
Truly designed for ease of use for both hands-free and handheld scanning; dynamically switches between modes

Motorola MAX Data Capture
Offers Motorola's best-in-class advanced data capture capabilities for superior application flexibility — enables the capture of UHF RFID tags, 1D, 2D and PDF417 symbologies as well as images and signatures; eliminates need for multiple devices — and associated costs; future proof — built-in support for the applications of tomorrow

Deploy the best of all worlds for a truly future-proof and cost-effective POS

The DS9808-R is a ground-breaking data capture device that represents two Motorola firsts. The DS9808-R is not only the first combination 1D/2D bar code scanner and RFID reader, it also represents a new RFID product category — the first combination handheld/hands-free UHF RFID reader. Motorola's revolutionary imaging engine enables the capture of 1D and 2D bar codes as well as images and signatures, with record swipe speeds on both 1D and 2D bar codes. The hands-free read range for bar codes and RFID tags can be adjusted to meet your needs — for example, the RFID read range can be set to prevent the inadvertent capture of RFID tags in a nearby cash-wrap. The flexible device can capture virtually any 1D or 2D bar code quickly and easily on paper labels as well as on mobile phone displays, providing built-in support for emerging applications — mobile coupons and mobile loyalty cards in retail to mobile boarding passes at the airport. The DS9808-R can also capture and parse the PDF417 bar codes on U.S. driver's licenses and other AAMVA compliant ID cards, enabling retailers to automatically populate a credit or loyalty care application or other form. The result is the extraordinary flexibility to accommodate virtually any type of inventory management technology at the POS — all with a single cost-effective device.

Realize the benefits of item-level RFID with the last link in the RFID chain

The DS9808-R complements Motorola's RFID portfolio, allowing retailers to easily implement RFID from the receiving dock to the checkstand. Retailers can now realize the proven benefits of real-time item level inventory visibility, including: timely re-ordering to eliminate out-of-stocks and the associated lost sales; increased inventory turns, which in turn reduce inventory carrying costs; real-time trending analysis for better purchasing decisions that put more of the products your customers want on the shelves of your store; and the ability to ensure timely replenishment of your shelves — with minimal human intervention.

Omni-directional bar code scanning; wide working range, laser aiming pattern
Easy to use; no need to align item and scanner; virtually no training required

Withstands multiple 4 ft./ 1.2 m drops to concrete
Designed to endure the rigors of everyday use for maximum reliability, uptime and a low total cost of ownership

Swipe speed programmable up to 100 inches/254 cm per second
Optimized scanning speed delivers robust performance and accurate capture of a wide variety of bar codes

Maximum flexibility and control
Independent RFID antenna power level controls for both hands-free and handheld operation help avoid inadvertent RFID tag reads; triggered operation in handheld mode offers unmatched control for reading RFID tags at the POS

Integrated compact base
Requires very little real estate, enabling easy deployment in even the most space constrained cash wraps

Rich best-in-class RFID functionality at the POS

The comprehensive RFID feature set enables retailers to maximize the value of RFID technology in the store. In addition to reading tags to complete purchases:

- Enables RFID price checking, new inventory commission, separated inventory identification (e.g. fitting rooms), and returns processing.

- While the DS9808-R continually reads RFID tags in the working field, built-in filtering prevents accidental multiple entries of the same tag. Associates will hear a single beep as the tag data is physically captured and entered into the transaction, just as if a bar code was scanned, providing associates with a familiar and intuitive process that eliminates the need for training.

- Special RFID parsing software allows the translation of the RFID EPC tag data to UPC bar code data on the fly, allowing retailers to implement RFID information into existing bar code-based inventory applications. As a result, a pilot test or full RFID solution can be implemented quickly, easily and cost-effectively into any existing retail technology environment.

Maximum ease of use for maximum throughput at the checkstand

The DS9808-R allows associates to instantly switch form factors and scanning modes. This extraordinary one-of-a-kind hybrid design marries a solid base with Motorola's award-winning handheld ergonomics, creating a scanner that delivers superior comfort and ease of use in handheld and hands-free modes. Switching from hands-free presentation style scanning to handheld mode is as easy as picking up the device. The unique tri-function trigger design enables retailers to assign specific functionality to different positions — for example, the upper trigger could be dedicated to RFID tags, the lower trigger could activate the imager to read 1D or 2D bar codes, and both triggers could be activated to execute a third function (such as a combination of RFID and bar code scanning).

Four functions in one easy to manage device deliver a rapid return on investment (ROI)

With the flexible DS9808-R, there is no need to purchase multiple devices to enable different types of data capture in your enterprise — no matter what applications you need now or in the future, the powerful comprehensive feature set will meet your needs. You enjoy the functionality of an RFID reader, an image capture device and a bar code scanner — all in a single device. Capital and operational costs are significantly reduced. There are fewer devices to purchase and manage, and compatibility with Remote Scanner Management (RSM) greatly simplifies configuration, deployment and day-to-day management of the devices.

Enterprise durability and world-class support deliver maximum uptime — and a low total cost of ownership (TCO)

The DS9808-R offers a new standard for bar code scanner reliability, providing the maximum uptime required in the demanding retail environment. The 4 ft./1.2 m drop to concrete drop specification ensures dependable performance — in spite of the inevitable everyday drops and bumps. In addition, Motorola's Service from the Start Advance Exchange Support with Comprehensive Coverage ensures the business continuity required in retail. This multi-year coverage plan provides next-business-day device replacement, even in the event internal or external components are damaged through accidental breakage. The result is an extraordinary lifecycle, extraordinary uptime — and a truly outstanding ROI.

For more information

For more information on the DS9808-R, access our global contact directory at www.motorola.com/ enterprisemobility/contactus or visit www.motorola.com/ds9808R

DS9808-R Specifications

Physical Characteristics

Dimensions:	8.5 in. (max) H x 3.5 in. W x 6 in. D 21.6 cm (max) H x 8.9 cm W x 15.2 cm D
Weight:	16.4 oz/465 g
Voltage and Current:	Nominal: 5V ±5% VDC @ 1.2 A
Data Capture Options:	1D/2D bar codes and RFID tags
Color:	Twilight Black

Performance Characteristics

DS9808-SR and DS9808-LR Imager Mode

Light Source:	Aiming Pattern: 650nm laser diode Illumination: 630nm LED
Imager Field of View:	39° H x 25° V
Roll/Pitch/Yaw:	360°, ±65°, ±60°
Swipe Speed :	Programmable up to 100 in./254 cm per second (Horizontal Read Rate)
Frame Rate:	Up to 60 frames per second

DS9808-LR Laser Scanner Mode

Light Source:	650nm LED
Scan Angle:	40° ±3° nominal

Symbology Decode Capability

1-D:	UPC/EAN (UPCA/UPCE/UPCE1/EAN-8/EAN-13/JAN-8/JAN-13 plus supplementals, ISBN (Bookland), ISSN, Coupon Code), Code 39 (Standard, Full ASCII, Trioptic), Code 128 (Standard, Full ASCII, UCC/EAN-128, ISBT-128 Concatenated), Code 93, Codabar/NW7,Code 11 (Standard, Matrix 2 of 5), MSI Plessey, I 2 of 5 (Interleaved 2 of 5 / ITF, Discrete 2 of 5, IATA, Chinese 2 of 5), GS1 DataBar (Omnidirectional, Truncated, Stacked, Stacked Omnidirectional, Limited, Expanded, Expanded Stacked, Inverse), Base 32 (Italian Pharmacode)
PDF417 (and variants):	PDF417 (Standard, Macro), MicroPDF417 (Standard, Macro), Composite Codes (CC-A, CC-B, CC-C)
2-D:	TLC-39, Aztec (Standard, Inverse), MaxiCode, DataMatrix/ECC 200 (Standard, Inverse), QR Code (Standard, Inverse, Micro)
Postal:	U.S. Postnet and Planet, U.K. Post, Japan Post, Australian Post, Netherlands KIX Code, Royal Mail 4 State Customer, UPU FICS 4 State Postal, USPS 4CB
Nominal Working Range (Handheld):	See chart on back
Nominal Working Range (Hands free):	See chart on back
Minimum Resolution:	Code 39 – 4 mil, UPC – 7.8 mil (60%), PDF417 – 5 mil, Datamatrix – 5 mil

RFID

Frequency:	902 - 928 Mhz (US, Canada & Mexico); Other countries pending
Tag Type:	EPCglobal Class 1 Gen 2 (ISO 18000-6C)
Read Range/RF Power:	Adjustable from near contact up to 40 inches/1 m depending on tag sensitivity and orientation

Imaging Characteristics

Graphics Format Support:	Images can be exported as Bitmap, JPEG or TIFF
Image Transfer Speed:	USB 2.0: Up to 12 Megabits/second RS-232: Up to 115 kb/second
Image Transfer Time:	Typical USB application is ~0.2 seconds with a compressed JPEG of 100kb
Image Quality:	120 DPI on a 4 x 6 in./10.2 x 15.2 cm document @ 6.5 in./16.5 cm

User Environment

Operating Temperature:	32° to 104° F /0° to 40° C
Humidity:	5% to 95% RH (Non-Condensing)
Drop Specification:	Withstands multiple 4 ft./1.2 m drops to concrete
Ambient Light Immunity:	Incandescent – 150 ft. candles (1,600 Lux) Sunlight – 8,000 ft. candles (86,000 Lux) Fluorescent – 150 ft. candles (1,600 Lux) Mercury Vapor – 150 ft. candles (1,600 Lux) Sodium Vapor – 150 ft. candles (1,600 Lux) Immune to normal or artificial light

Interfaces

Interfaces Supported:	USB, RS-232, RS-485* (Port 9B, Port 5B) (*Tag "write" commands are not supported via RS-485)

Regulatory

Electrical Safety:	UL60950-1; CSA C22.2 No. 60950-1; IEC60950-1
Laser Safety:	IEC 60825-1; 21CFR1040.10; CDRH Class II; IEC Class 2
EMI/RFI:	FCC Part 15 Class B; Canada RSS-210; ICES-003 Class B
RF Exposure:	FCC 47CFR Part 2, OET Bulletin 65 Supplement C
Environmental:	Compliant with RoHs directive 2002/95/EEC
Regulatory Model Numbers:	DS9808-RUS – US Version DS9808-RWW – Worldwide (Non-US) version

Warranty

Subject to the terms of Motorola's hardware warranty statement, the DS9808 is warranted against defects in workmanship and materials for a period of 3 years from the date of shipment. For the complete Motorola hardware product warranty statement, go to: http://www.motorola.com/warranty

Recommended Services

Customer Services:	Service from the Start Advance Exchange Support

Product Availability

Currently available in the U.S., Canada and Mexico. Please contact your local Motorola representative regarding availability in your region.

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MAX
Data Capture

Supports RSM (Remote Scanner Management)
Lowers IT expenses and TCO by enabling remote management from a central location

Multiple on-board interfaces; universal cable compatible
Easy to install; future proof design easily connects to the hosts of today and tomorrow

Extra loud beeper
Audible even in the loudest environments

Extra large LED indicator
Clearly visible from all scanning positions

Rubberized handle
Provides workers with a comfortable, sure grip

Recessed connector in the base
Minimizes the scanner footprint

Bar Code Decode Ranges

Nominal Working Range (Handheld):

DS9808-LR

Code 39 – 5 mil:	0 – 5.0 in (0 – 12.7 cm)
UPC/EAN – 10 mil (80%):	0 – 13.5 in (0 – 34.3 cm)
UPC/EAN – 13 mil (100%):	0 – 18 in (0 – 45.7 cm)

DS9808-SR

Code 39 – 5 mil:	0 – 4.5 in (0 – 11.4 cm)
UPC/EAN – 10 mil (80%):	0 – 8.5 in (0 – 21.6 cm)
UPC/EAN – 13 mil (100%):	0 – 10.5 in (0 – 26.7 cm)

DS9808-LR/DS9808-SR

PDF417 – 6.6 mil:	0 – 5.0 in (0 – 12.7 cm)
Datamatrix – 10 mil:	0 – 6.0 in (0 – 15.2 cm)

Nominal Working Range (Hands-free):

DS9808-LR/DS9808-SR

Code 39 – 5 mil:	0 – 4.5 in (0 – 11.4 cm)
UPC/EAN – 10 mil (80%):	0 – 7.0 in (0 – 17.8 cm)
UPC/EAN – 13 mil (100%):	0 – 8.0 in (0 – 20.3 cm)
PDF417 – 6.6 mil:	0 – 4.5 in (0 – 11.4 cm)
Datamatrix – 10 mil:	0 – 4.5 in (0 – 11.4 cm)

Note: The decode range in hands-free mode is programmable and can be limited to 6.5 inches (16.5 cm) for UPC/EAN – 13 mil bar codes, if desired.

One multi-function scanner...many uses

The DS9808-R can be utilized in many different industries and many different applications, including:

Retail
- Scanning items for purchase at the POS
- Beyond POS: Price checking, new inventory commission, separated inventory identification (e.g. fitting rooms), and returns processing
- RFID serialization protects against return attempts on items that were not purchased as well as items that were purchased at competing chains
- Commission RFID tags at point of manufacture or for stocking in store-level deployments
- Back-room price checking
- Return To Vendor (RTV) applications (old, damaged, mismatched product going back for credit)

Asset Management
- Commissioning assets into an RFID Asset Management application

Hospitality/Loyalty
- Membership Identification

Government/Transportation
- Proof of Identity

Healthcare
- Medication check-in, receiving or dispensation

Pharmacies
- Check-in, receiving or dispensation at bottom-level, box level or item level RFID-tagged drugs and medication

Libraries
- Check-in, self checkout and auto-sorting

Law, insurance and general office environments: Enterprise file/document tracking
Real-time tracking of files and folders on desks and in boxes, containers, or reusable totes
- Cost-effective archiving and timely access/inquiries
- Compliance with regulatory requirements
- Automate monitoring of check-out time limitations and delinquent returns
- Automated alerts for unauthorized access

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