



# Motorola DS3508 Series

Rugged corded digital scanners



## FEATURES

### Ability to read both 1D and 2D bar codes

Increases productivity by providing one device that can read all industry-standard bar codes

### Powerful 624 MHz processor, fast sensor shutter speed and patent pending fast-pulse illumination

Superior performance on 1D and 2D bar codes, improving productivity in a wide variety of applications

### IUID-enabled (DS3508-DP only)

Ability to understand IUID constructs, and automatically separate and send the required information to your application

### Capture bar codes, images and direct part marks with extraordinary speed

The Motorola DS3508 Series of rugged, corded digital scanners bring comprehensive, high performance data capture to harsh industrial environments to improve business efficiency. Engineered with breakthrough digital imaging technology, this scanner family delivers extremely fast and accurate data capture of one-dimensional (1D) and two-dimensional (2D) bar codes, images and direct part marks (DPM) as well as Item Unique Identification (IUID)\* support. Available in three models, the DS3508 Series of scanners can meet a wide variety of data capture needs in multiple industries.

### High performance that speeds productivity

With the DS3508 Series, you benefit from a scanning solution designed specifically for fast-paced production environments. The CMOS image sensors allow the accurate capture and processing of bar codes at a faster pace than the typical digital scanner. The DS3508 Series is armed with a powerful 624 MHz microprocessor, capable of decoding 1D or 2D bar codes within milliseconds, regardless of size or density. The patent pending fast-pulse illumination and fast sensor shutter speed enable image capture at a full 60 frames per second, delivering outstanding motion tolerance. In addition, the omni-directional scanning functionality allows operators to quickly capture bar codes from

any angle, eliminating the need to align bar codes with laser lines. Plus, the DS3508 Series offers the widest working range of any scanner in its class.

### Built for industrial environments

As innovative as it is rugged, the DS3508 Series delivers the ergonomic and operational features for scan-intensive industrial applications under the harshest operating conditions. The device is designed to perform reliably despite the inevitable bumps and drops — even on concrete. An IP65-rated seal makes it impervious to dust and water, and the exit window is scratch-resistant and recessed for the highest level of durability. As a result, enterprises enjoy a low total cost of ownership — employee and device downtime as well as equipment repair and replacement costs are minimized.

In addition, noisy machinery and poor lighting can make it difficult for operators to see or hear scanner feedback to ensure proper completion of scans. Motorola's DS3508 Series addresses this challenge with bright LEDs, an adjustable volume beeper and a vibrating pager motor placed in the handle, ensuring that decode feedback is clearly visible and audible to users, saving valuable worker time.

### Three models to meet many needs

This diverse product line offers a number of models designed to meet a wide variety of application needs across a variety of industries:

\* IUID available only on the DS3508-DP (DPM-enabled model)

**Ability to capture high density bar codes (DS3508-HD only)**

Increases productivity by enabling users to read high density 2D bar codes in addition to all industry-standard bar codes

**Ability to read a wide variety of DPM marks (DS3508-DP only)**

Enhances quality processes and improves lifetime product traceability

**Exceptional motion tolerance**

Enables extraordinary scanning speed for all bar codes, increasing throughput and productivity – regardless of application

**Unique aiming pattern**

Bright central laser dot ensures quick, accurate scanning – even in bright sunlight

**Omni-directional scanning**

Speeds reading time by eliminating the need to line up the bar code with the scan line

**Rugged design withstands multiple 6.5 ft./2 m drops to concrete**

Ensures maximum reliability with less downtime resulting from accidental drops

**IP65-rated sealing**

Protects against water and dust for reliable performance in harsh industrial conditions

**Integrated image capture**

**DS3508-SR: Combination 1D and 2D bar code scanning and image capture**

The DS3508-SR offers the flexibility to meet the needs of a wide variety of applications and environments, providing 1D and 2D bar code scanning and high-speed image capture and transfer, as well as support for a wide variety of interfaces for easy integration with new and legacy systems. The DS3508-SR is designed to streamline inventory management in scan intensive, fast-paced environments, from the largest warehouse to the retail backroom, where a quick scan enables the automatic and accurate capture of the information required to increase productivity and reduce errors. At the receiving dock, a scan of the bar code on the boxes, pallets or bill of lading enables automatic reconciliation of incoming shipments for faster processing of incoming goods. In put-away and picking, a quick scan can determine where product should be stored and also verify that product was placed on the right shelf, virtually eliminating false out-of-stocks due to misplacement — and lost sales. In shipping, a quick scan verifies that the right shipment is addressed to the right person, eliminating costly mis-ships. In addition to improving the efficiency of inventory management, this device can also provide invaluable photographic proof of condition. For example, with a quick press of the trigger, a worker can capture a photograph of a damaged shipment or product.

**DS3508-HD: Optimized for comprehensive 2D bar code capture**

The DS3508-HD offers the same capabilities as the DS3508-SR, but adds optimization for the very tiny and dense 2D bar codes frequently found in warehousing, transportation and logistics, and manufacturing environments. In manufacturing operations, the DS3508-HD allows even small parts with small bar code labels to be easily scanned to verify that the right part is used at the right time. As a result, product quality improves, increasing customer satisfaction and retention. Real-time inventory visibility allows manufacturers to reduce standard stocking levels, reducing warehouse space requirements and increasing inventory turns and profitability. And in the event you are notified of a defective part, you can easily trace the location of defective product for more rapid and targeted recalls, protecting brand image, customer perception and recall costs. And companies involved in warehousing, shipping and delivery of smaller items can easily read the small, dense 2D bar codes that may be utilized on smaller packages.

**DS3508-DP: Comprehensive IUID-enabled scanner with support for 1D, 2D and DPM bar codes**

This powerful scanner combines highly advanced DPM-specific software with the functionality of the DS3508-SR, the focusing capability of

the DS3508-HD and integrated IUID parsing capability. This single cost-effective device provides government agencies and industrial manufacturers — including automotive, aerospace and medical — with the ability to capture all 1D and 2D bar codes as well as every type of direct part mark. Comprehensive IUID support enables the capture and processing of Unique Item Identifiers (UIIs) — the scanner can validate, read, separate and transmit the right information to your application. And field upgradable construct tables future-proof your IUID applications.

**Reduce capital and operational expenses**

The ability to capture 1D and 2D bar codes as well as direct part marks with a single device eliminates the need to purchase, manage and maintain multiple devices to accommodate multiple bar code symbologies in the enterprise. As a result, the enterprise enjoys a fast return on investment. Since one device does it all, capital and operational costs are reduced — and productivity is increased. In addition, IT departments can dramatically reduce the time, cost and logistical headaches associated with scanner configuration and management with Motorola's 123Scan<sup>2</sup> Configuration Utility and Remote Scanner Management (RSM) technology, both of which are supported on the DS3508 Series. 123Scan<sup>2</sup> is a powerful PC-based software tool that provides rapid and easy scanner set-up and customization. RSM enables remote, network-based device management from a central location.

**An investment for now and the future**

In addition to the productivity-enhancing features you need to keep business moving, the DS3508 Series provides you with investment protection. Onboard support for multiple interfaces, a standard feature, allows you to use your scanner with many different types of systems for seamless integration now, as well as painless migration to the new systems of the future. We back up our leading scanner design with a full three-year warranty. And to help protect your investment, Motorola Enterprise Mobility Services offers Service from the Start with Comprehensive Coverage. This unique service goes far beyond normal wear and tear to include accidental damage to exit windows, scan elements and more at no additional charge.

**For more information**

For more information on the DS3508 Series of rugged, corded, handheld scanners and the full line of accessories, access our global contact directory at [www.motorola.com/enterprisemobility/contactus](http://www.motorola.com/enterprisemobility/contactus) or visit us on the Web at [www.motorola.com/ds3508](http://www.motorola.com/ds3508)

# Motorola DS3508 Series Specifications

| <b>Physical Characteristics</b>    |  |
|------------------------------------|--|
| Dimensions:                        | 7.34 in. L x 4.82 in. W x 2.93 in. D<br>18.65 cm H x 12.25 cm W x 7.43 cm D)   |
| Weight (w/o cable):                | 11.85 oz. (336 gm)   |
| Voltage and Current:               | 5 volts +/- 10%, 330 mA  |
| Color:                             | Twilight Black/Yellow  |
| <b>Performance Characteristics</b> |  |
| Light source:                      | Aiming pattern: 650nm visible laser diode<br>Illumination: 630nm LED   |
| Imager Field of View:              | Standard Range Focus: 39.6° H x 25.7° V<br>High Density Focus: 38.4° H x 24.9° V   |
| Roll/Pitch/Yaw:                    | ±360, ±60, ±60   |
| Motion Tolerance:                  | Programmable up to 100 in./sec. (2.54m/sec.) when in Enhanced Presentation Mode for 100% 13 mil UPC. Swipe speed will vary depending on code type, scan distance and print quality.  |
| <b>Symbology Decode Capability</b> |  |
| 1D Codes:                          | 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)  |
| 2D Codes:                          | TLC-39, Aztec (Standard, Inverse), MaxiCode, DataMatrix/ECC 200 (Standard, Inverse), QR Code (Standard, Inverse, Micro)  |
| Postal codes:                      | U.S. Postnet, U.S. Planet, U.K. Postal, Japan Postal, Australian Postal, Dutch Postal, 4State Postal   |
| DPM Marks (DPM unit only):         | Datamatrix marks applied by dot-peening. All supported barcode types listed above marked by laser etching, chemical etching, ink marking, molding, stamping or casting methods on surfaces such as including metal, plastic, rubber or glass   |
| IUID Support:                      | Supports IUID parsing. The ability to read and separate IUID fields per application requirements   |
| <b>Imaging Characteristics</b>     |  |
| Graphics Format Support:           | Images can be exported as Bitmap, JPEG, or TIFF  |

|                       |  |
|-----------------------|--|
| Image Transfer Speed: | USB 2.0: Up to 12 Megabits/second<br>RS-232: Up to 115 kb/second   |
| Image Transfer Time:  | Typical USB application is ~0.2 seconds with a compressed JPEG   |
| Image Quality:        | Standard Range Focus: 130 DPI on a 5.8 x 3.6 in. / 14.6 x 9.1 cm document @ 6.6 in. / 16.8 cm.<br>High Density Focus: 370 DPI on a 2.0 x 1.3 in. / 5.1 x 3.3 cm document @ 1.5 in. / 3.8 cm. |

| <b>User Environment</b>        |   |
|--------------------------------|---|
| Operating temp.:               | -4° F to 122° F/-20° C to 50° C   |
| Storage temp.:                 | -40° F to 140° F/-40° C to 60° C  |
| Humidity:                      | 5% to 95% relative humidity, non-condensing   |
| Sealing:                       | Sealed to IP65 specifications   |
| Drop specs:                    | Unit functions normally after repeated 6.5 ft. (2 m) drops to concrete  |
| Ambient light immunity:        | Incandescent – 150 ft. candles (1,600 LUX)<br>Sunlight – 8,000 ft. candles (86,000 LUX)<br>Fluorescent – 150 ft. candles (1,600 LUX)<br>Mercury Vapor – 150 ft. candles (1,600 LUX)<br>Sodium Vapor – 150 ft. candles (1,600 LUX)<br>Immune to direct exposure to normal office and factory lighting conditions, as well as direct exposure to sunlight |
| Electrostatic discharge (ESD): | Conforms to 20 kV air discharge and 8 kV of contact discharge   |

| <b>Interfaces</b>     |  |
|-----------------------|--|
| Interfaces supported: | USB, RS-232, RS-485 (IBM 46xx Protocols), Keyboard Wedge |

| <b>Regulatory</b>  |   |
|--------------------|---|
| Electrical Safety: | UL60950-1, CSA C22.2 No. 60950-1, EN 60950-1 / IEC 60950-1  |
| Laser Safety:      | EN 60825-1, IEC 60825-1, 21CFR1040.10, CDRH Class II, IEC Class 2                                     |
| EMI/RFI:           | FCC Part 15 Class B, ICES-003 Class B, EN 55022, EN 55024, EN 61000-6-2, AS/NZS 4268:2008, Japan VCCI |
| Environmental:     | Compliant with RoHS directive 2002/95/EEC   |

| <b>Options</b> |   |
|----------------|---|
| Accessories:   | Holster (mounts to pants or belt);<br>Intelli-Stand (hands-free scanning);<br>Tool Balancer Pulley (tethered) |

| <b>Warranty</b>   |  |
|---|--|
| The Motorola DS3508 Series is warranted against defects in workmanship and materials for a period of 3 years (36 months) from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions. See full warranty for details. |  |

| <b>Recommended Service</b>      |  |
|---------------------------------|--|
| Service from the Start – Bronze |  |

\*See back for decode zone.

## and transfer capabilities

Reduces the costs associated with operating and maintaining multiple devices by integrating the technology needed for image capture and transfer

## Multiple on-board interfaces and universal cable set

Ensures flexible connectivity with different hosts; enables easy upgrading of hosts and cable replacement; provides investment protection

## Bright LED, beeper with adjustable volume and vibrating pager motor

Multiple confirmation modes for positive user feedback in noisy environments

## Advanced data formatting

Eliminates costly modifications to the host software

## Supports 123Scan<sup>2</sup> scanner configuration tool

Enables rapid and easy customized set-up through a free, wizard-based PC software tool

## Supports RSM (Remote Scanner Management)

Lowers IT expenses and TCO by enabling remote management from a central location

**SPECIFICATION SHEET**

Motorola DS3508 Series

**DS3508 Series Decode Zone**

| Label Density         | Depth of Field   |                    |                     |                    |
|-----------------------|------------------|--------------------|---------------------|--------------------|
|                       | DS3508-SR        |                    | DS3508-HD/DS3508-DP |                    |
|                       | English          | Metric             | English             | Metric             |
| Code 39 - 3 mil       | N/A              | N/A                | 1.10" - 1.60"       | 2.79 - 4.06 cm     |
| Code 39 - 4 mil       | 2.60" - 4.50"    | 6.60 - 11.43 cm    | Contact - 3.5"      | Contact - 8.89 cm  |
| Code 39 - 5 mil       | 1.00" - 6.30"    | 2.54 - 16.00 cm    | Contact - 4.2"      | Contact - 10.67 cm |
| Code 39 - 7.5 mil     | Contact - 10.10" | Contact - 25.65 cm | Contact - 5.4"      | Contact - 13.72 cm |
| Code 39 - 20 mil      | 1.00" - 20.90"   | 2.54 - 53.09 cm    | 1.10" - 9.20"       | 2.79 - 23.37 cm    |
| 100% UPC - 13 mil     | 0.90" - 15.10"   | 2.29 - 38.35 cm    | 0.80" - 6.20"       | 2.03 - 15.75 cm    |
| PDF417 - 6.67 mil     | 2.70" - 6.10"    | 6.86 - 15.49 cm    | Contact - 3.70"     | Contact - 9.40 cm  |
| PDF417 - 10 mil       | 0.40" - 9.30"    | 1.02 - 23.62 cm    | Contact - 4.50"     | Contact - 11.43 cm |
| PDF417 - 15 mil       | 3.30" - 14.80"   | 8.38 - 37.59 cm    | 3.20" - 5.60"       | 8.13 - 14.22 cm    |
| Data Matrix - 4 mil   | N/A              | N/A                | 1.00" - 2.10"       | 2.54 - 5.33 cm     |
| Data Matrix - 5 mil   | N/A              | N/A                | 0.40" - 2.70"       | 1.02 - 6.86 cm     |
| Data Matrix - 7.5 mil | 2.10" - 5.50"    | 5.33 - 13.97 cm    | Contact - 3.50"     | Contact - 8.89 cm  |
| Data Matrix - 10 mil  | 1.10" - 7.10"    | 2.79 - 18.03 cm    | Contact - 4.40"     | Contact - 11.18 cm |
| QR Code - 4 mil       | N/A              | N/A                | 1.10 - 1.40"        | 2.79 - 3.56 cm     |
| QR Code - 5 mil       | N/A              | N/A                | 0.50" - 2.20"       | 1.27 - 5.59 cm     |
| QR Code - 7.5 mil     | N/A              | N/A                | Contact - 3.30"     | Contact - 8.38 cm  |
| QR Code - 10 mil      | 1.50" - 6.10"    | 3.81 - 15.49 cm    | Contact - 4.00"     | Contact - 10.16 cm |

For more information, including decode zone pictorial, see the Product Reference Guide located in the Resources tab at [www.motorola.com/ds3508](http://www.motorola.com/ds3508).



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