



# RS507 Hands-Free Imager

Hands-free cordless (or corded) 1D/2D scanning



## FEATURES

### Hands-free scanning

Allows operators to use both hands to move packages, products or materials for maximum efficiency and productivity

### Bluetooth Cordless Freedom

Adds wearable functionality to most Motorola Mobile Computers

### Optional corded WT4000 adaptor

Provides an easy upgrade path for cost-effective migration from Motorola's RS409 1D Ring Scanner to 1D and 2D scanning without compromising scanning performance

### Reads 1D and 2D bar codes

Comprehensive bar code Symbology support allows you to capture all the bar codes you need today — and tomorrow

## Increase productivity in scan intensive applications with maximum flexibility, comfort, functionality and performance

Whether your workers are handling and sorting packages, picking or loading shipments in the warehouse or scanning bar codes to meet government regulations for tracking and tracing of product, the RS507 Hands-Free Imager from Motorola delivers the superior blend of technology, form and function your workers need to achieve a new level of scanning efficiency in your operations. The advanced design offers more features and functionality than any other ring scanner available today. Truly superior ergonomics, including Bluetooth® cordless freedom, provide unparalleled user comfort. The unmatched rugged design ensures reliable operation in the most demanding environments. Best-in-class scanning, including support for 1D and 2D bar codes, ensures first time every time fast and accurate capture of virtually any bar code. The RS507 pairs easily with most Motorola Mobile Computers, allowing you to extend hands-free cordless scanning to your workers wherever it will improve productivity. Optional corded adapter for Motorola's WT4000 provides an easy and cost-effective upgrade path to 1D and 2D bar code scanning — without any compromise in scanning performance. The RS507 will complement any voice picking application with hands-free bar code scanning.

## Best in class scanning performance

Built on the revolutionary Symbol SE4500 imaging engine from Motorola, the RS507 delivers stunning laser-like performance on both 1D and 2D bar codes, regardless of lighting. The powerful 624 MHz microprocessor decodes any bar code in milliseconds. The patent pending fast-pulse illumination and fast sensor shutter speed enable bar code decoding at a full 60 frames per second, delivering outstanding motion tolerance. Omni-directional scanning eliminates the need to align bar code and scanner. Advanced power management ensures more-than-ample battery power for a full shift. The result is the extraordinary scanning speed required to achieve new levels of worker productivity — and operational efficiency. Additionally, an extended scanning range of up to 24 inches provides the flexibility to meet the needs of many applications.

## State of the art ergonomics

The advanced ergonomic design of the RS507 provides unrivaled freedom of movement and user comfort — regardless of hand size, right- or left-handed operation or whether gloves are worn. The Bluetooth wireless connection to the Motorola mobile computer allows users to wear the RS507 on either hand — and the trigger swivel allows users to switch from right to left hand use in seconds.

**SE4500 imager: powerful 624 MHz processor, fast sensor shutter speed and patent pending fast-pulse illumination**

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

**Exceptional motion tolerance**

Enables extraordinary scanning speed for all bar codes, increasing throughput and productivity — regardless of application — including fast moving conveyor belts

**Unique aiming pattern**

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

**Multiple field replaceable components**

Ability to replace many components in the field helps keep devices in the hands of users for improved uptime

**Compatible with Motorola's Mobility Software Platform (MSP)**

Ability to remotely stage, provision, monitor and troubleshoot devices dramatically simplifies and reduces the costs associated with deployment as well as day-to-day management

**Motorola Interactive Sensor Technology (IST)**

Patent-pending combination of motion sensing and proximity sensing enables fast, intuitive automatic triggering that improves productivity while maintaining battery life

A new two-finger design improves balance, while the hygiene comfort pad helps protect knuckles from bumps and scrapes, and a triggerless model eliminates a substantial amount of thumb usage. The omnidirectional scanner further reduces wrist movement by eliminating the need to align scanner and bar code.

**The most rugged ring scanner available**

The RS507 is the most rugged scanner in its class. Stringent drop specifications and a broad operating temperature range ensure reliable performance in the warehouse dock and aisles, outside in the yard and beyond the four walls out in the field. Performed across the operating temperature range, the 6 ft./ 1.8 m drop specification enables the device to easily withstand everyday drops and bumps — even in extreme heat or cold. A magnesium chassis provides additional protection for the sensitive electronics. The trigger is built for scan intensive applications, rated for many millions of actuations — and IP54 sealing protects the device against moisture. Abrasion resistance helps protect the most vulnerable areas of the device from everyday wear and tear.

**Maximum uptime...and a low total cost of ownership**

When uptime is crucial, Motorola's end-to-end mobility solutions deliver. Motorola's signature rugged design keeps your RS507 up and running, day in and day out. Field replaceable components eliminate the need to send the RS507 to the depot to replace worn components, including straps, comfort pads, the trigger swivel and triggerless strap holder. Motorola's Mobility Service Platform (MSP),

part of Motorola's suite of mobility management software applications, allows IT personnel to remotely stage, provision, monitor and troubleshoot your RS507 devices and their host Motorola devices, regardless of where they are located — substantially reducing management costs. To help protect your investment, Motorola recommends Service from the Start with Comprehensive Coverage. This unique service plan sets the standard for post-deployment support by covering normal wear and tear as well as accidental damage to internal and external components — significantly reducing unforeseen repair expenses.

**Proven technology...and a rapid return on investment (ROI)**

When you need scanning technology you can count on every minute of every day, choose Motorola — the inventor of bar code scanning as well as the ring scanner. In addition to the features you need to maximize on the job employee productivity, you'll enjoy investment protection and easy integration into your existing technology environment. The ability to scan 1D and 2D bar codes ensures support for the applications of today and tomorrow. Existing applications can be easily converted for use with the RS507, protecting your existing investments while providing a pain-free and cost-effective migration path to corded 2D as well as cordless 1D/2D scanning.

For more information on how the RS507 can help improve efficiency in your enterprise, access our global contact directory at [www.motorola.com/enterprisemobility/contactus](http://www.motorola.com/enterprisemobility/contactus) or visit [www.motorola.com/RS507](http://www.motorola.com/RS507)

# RS507 Specifications

| Physical Characteristics                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |        |        |             |             |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------------|-------------|
| Dimensions (H x W x L):                         | 1.16 x 2.1 x 2.92 in. (2.9 x 5.3 x 7.4 cm)<br>1.42 x 2.5 x 2.92 in. (3.6 x 5.3 x 7.4 cm)<br>1.16 x 2.1 x 2.92 in. (2.9 x 5.3 x 7.4 cm)<br>1.3 x 2.1 x 2.92 in. (3.3 x 5.3 x 7.4 cm)                                                                                                                                                                                                                                                                                                                                                                                                                         |        |        |        |             |             |
| Weight:                                         | Triggerless, standard battery: 4.3 oz./121.4 g<br>Triggerless, extended battery: 5.2 oz./146.4 g<br>Trigger, standard battery: 4.8 oz./134.8 g<br>Trigger, corded (with cord): 5.0 oz./140.8 g                                                                                                                                                                                                                                                                                                                                                                                                              |        |        |        |             |             |
| Performance Characteristics                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |        |        |             |             |
| Optical Resolution:                             | WVGA 752 H x 480 V pixels (gray scale)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |        |        |             |             |
| Roll:                                           | 360°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |        |        |             |             |
| Pitch Angle:                                    | ± 60° from normal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |        |        |             |             |
| Skew Tolerance:                                 | ± 60° from normal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |        |        |             |             |
| Aiming Element:                                 | 655 nm ± 10 nm Visible Laser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |        |        |             |             |
| Illumination Element:                           | 637 nm ± 20 nm Red LEDs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |        |        |             |             |
| Field of View:                                  | Horizontal: 39.6°; Vertical: 25.7°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |        |        |             |             |
| SR Typical Working Distance (from exit window): | Density (mil)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5      | 7.5    | 20     | 13          |             |
|                                                 | 1D Code Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 39     | 39     | 39     | UPC         |             |
|                                                 | Near (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2      | Note   | Note   | 1.5         |             |
|                                                 | Far (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7.4    | 10.5   | 24.6   | 15.4        |             |
|                                                 | Density (mil)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.67   | 10     | 15     | 15          |             |
|                                                 | 2D Code Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PDF417 | PDF417 | PDF417 | Data Matrix |             |
|                                                 | Near (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.3    | Note   | Note   | 2.7         |             |
|                                                 | Far (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7      | 10     | 14.6   | 12.3        |             |
| DL Typical Working Distance (from exit window): | Density (mil)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3      | 5      | 7.5    | 20          | 13          |
|                                                 | 1D Code Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 39     | 39     | 39     | 39          | UPC         |
|                                                 | Near (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.6    | 1.3    | Note   | Note        | 1.5         |
|                                                 | Far (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.1    | 7.2    | 9.8    | 19.6        | 11.9        |
|                                                 | Density (mil)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5      | 6.67   | 10     | 15          | 15          |
|                                                 | 2D Code Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PDF417 | PDF417 | PDF417 | PDF417      | Data Matrix |
|                                                 | Near (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.7    | 1.8    | Note   | Note        | 2.2         |
|                                                 | Far (inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.4    | 6.8    | 8.9    | 11.6        | 11.1        |
| Note : Near Distance are FOV limited.           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |        |        |             |             |
| Ambient Light Immunity (from total darkness):   | Indoor: 450 ft. candles (4,845 lux)<br>Outdoor: 9,000 ft. candles (96,900 lux)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |        |        |             |             |
| Motion Tolerance:                               | 25 inch per second, typical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |        |        |             |             |
| Supported Symbolologies:                        | Codabar, Code 39, Code 128, EAN-13, EAN-8, Interleaved 2 of 5, UPC-A and UPC-E<br><br>Code 11, Code 32 Pharmaceutical (PARAF), Code 93, MSI, Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded), Straight 2 of 5 IATA (two-bar start/stop), Straight 2 of 5 Industrial (three-bar start/stop), Trioptic, UPC-E1<br><br>4-CB (4-State Customer Barcode), Aztec, MicroPDF417, PDF417, MaxiCode<br><br>Australian Post, British Post (4 state code and "infomail"), Data Matrix, Japanese Post, KIX (Netherlands) Post, Planet Code, Postnet, QR Code, EAN/UCC Composite, TCIF Linked Code 39 (TLC39) |        |        |        |             |             |
| Supported Aiming Modes:                         | Class 2 Laser, cross hair with bright center for sunlight visibility; Pick List mode option                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |        |        |             |             |

| Interface:                                                                                 | <b>Bluetooth:</b> Class II, v 2.1 with Adaptive Frequency Hopping (AFH)<br><b>Supporting profiles:</b> Serial Port Profile (SPP), Human Interface Device Profile (HID), Service Discovery Application Profile (SDAP)<br><b>Pairing:</b> by reading terminal BT address as barcode off the display<br><br>Serial |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Replaceable Parts:                                                                   | Batteries, corded adaptor, trigger swivel, triggerless strap holder, comfort pad, straps and buckle                                                                                                                                                                                                             |
| User Interface                                                                             |                                                                                                                                                                                                                                                                                                                 |
| LED:                                                                                       | Two (parallel), multi color, rear left and rear right                                                                                                                                                                                                                                                           |
| Beeper:                                                                                    | Rear center, up to 80 dBA SPL @ 10 cm                                                                                                                                                                                                                                                                           |
| Restore Key:                                                                               | User accessible for emergency boot up and Bluetooth reconnect (after excessive disconnection period)                                                                                                                                                                                                            |
| Scan Triggering:                                                                           | Manual or Automatic using Interactive Sensor Technology (IST)                                                                                                                                                                                                                                                   |
| User Environment                                                                           |                                                                                                                                                                                                                                                                                                                 |
| Operating Temperature:                                                                     | -4° to 131° F/-20° to 55° C                                                                                                                                                                                                                                                                                     |
| Storage Temperature:                                                                       | -40° to 158° F/-40° to 70° C excl. battery<br>-40° to 140° F/-40° to 60° C incl. battery                                                                                                                                                                                                                        |
| Humidity:                                                                                  | 5% to 85% (non-condensing)                                                                                                                                                                                                                                                                                      |
| Drop Specification:                                                                        | 6 ft./1.8 m multiple drops to concrete across operating temperature range                                                                                                                                                                                                                                       |
| Sealing:                                                                                   | IP54                                                                                                                                                                                                                                                                                                            |
| Electrostatic Discharge:                                                                   | ESD: ±15kV air discharge, ±8kV direct discharge                                                                                                                                                                                                                                                                 |
| Power                                                                                      |                                                                                                                                                                                                                                                                                                                 |
| Cordless:                                                                                  | Li-Ion 970mAh, 3.7V with up to 35,000 scans (continuous) or up to 10 hours with 900 scans per hour on a single charge using fresh batteries.<br>Li-Ion 1940mAh, 3.7V with up to 70,000 scans (continuous) or up to 20 hours with 900 scans per hour on a single charge using fresh batteries.                   |
| Corded:                                                                                    | Corded adaptor to WT4000                                                                                                                                                                                                                                                                                        |
| Software Compatibility                                                                     |                                                                                                                                                                                                                                                                                                                 |
| Motorola's Mobility Services Platform (MSP); DataWedge; Wavelink's Terminal Emulation (TE) |                                                                                                                                                                                                                                                                                                                 |
| Peripherals and Accessories                                                                |                                                                                                                                                                                                                                                                                                                 |
| Battery charger:                                                                           | Charges eight (8) standard and extended batteries simultaneously in 4 hours. Includes LED indicators (8) and battery age test.                                                                                                                                                                                  |
| Regulatory                                                                                 |                                                                                                                                                                                                                                                                                                                 |
| Electrical Safety:                                                                         | Certified to UL60950-1, CSA C22.2 No. 60950-1, EN60950-1, IEC 60950-1                                                                                                                                                                                                                                           |
| Laser Safety:                                                                              | CDRH Class II, IEC 60825-1 Class 2                                                                                                                                                                                                                                                                              |
| EMI/RFI:                                                                                   | FCC Part 15 Class B, ICES-003 Class B, European Union EMC and R&TT Directives, Australian AS/NZS 60950.1                                                                                                                                                                                                        |
| RoHS:                                                                                      | Compliance with RoHS standards                                                                                                                                                                                                                                                                                  |
| Recommended Services                                                                       |                                                                                                                                                                                                                                                                                                                 |
| Service from the Start with Comprehensive Coverage                                         |                                                                                                                                                                                                                                                                                                                 |

## New manual triggering mechanism with easy swivel

Latest PUSHGATE® technology provides maximum durability and reliability, rated for millions of actuations — providing the extended lifecycle required for scan intensive applications; easily switches from right to left hand use

## Rugged design: magnesium chassis, 6 ft./1.8m drop specification, IP54 sealing, extended operating temperature range (-4° to 131° F/-20° to 55° C)

The most rugged hands-free scanner/imager available today; provides dependable performance in demanding environments

## Dual rear LEDs and high power beeper

Visible and audible notifications provide scan confirmation, even in low lighting or noisy environments

## Enterprise Mobility Developer's Kit (EMDK)

Enables rapid and easy application development for the host mobile computer; supports configuration of the RS507

## Battery age testing

Protects user uptime by enabling enterprises to quickly identify and replace batteries that have reached end-of-life

## RoHS compliant

Meets RoHS requirements

## SPECIFICATION SHEET

RS507 Hands-Free Imager  
Hands-free corded/cordless 1D/2D scanning



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