



# Symbol MS4400 Series

## MiniScan Fixed-Mount Imager



### FEATURES

#### Compact size

Enables bar code and image capture in tight spaces like kiosks, countertops and clinical diagnostic equipment

#### Easy to mount

Rapid integration into your environment

#### 1D and 2D bar code reading

Provides versatility to read bar codes in a wide range of environments — from prescription drugs to drivers licenses; reduces expenses with the flexibility to support multiple applications

#### Ability to read a wide variety of DPM marks

Enhances quality processes and improves lifetime product traceability

#### Omni-directional capture pattern

Minimizes need to position bar codes; ensures rapid, accurate data capture

### Miniature imager offers comprehensive data capture — and versatility

The flexible and compact Symbol MS4400 Series offers high performance 1D and 2D bar code scanning, image capture and direct part mark (DPM) reading, wherever an extremely small footprint and fixed mounting are required. One of the smallest charged couple device (CCD) imaging products available today, the Symbol MS4400 is designed to fit in tight spaces — from a check-in kiosk at an airport gate, in point-of-sale (POS) areas with very limited counter space, in manufacturing cells where space is at a premium, in clinical diagnostic equipment, as a standalone device and more. Ready to mount, this small plug-and-play device can be integrated quickly and easily into your existing environment.

### Superior bar code capture, imaging and DPM reading performance

The Symbol MS4400 offers an array of features designed to deliver superior data capture performance. The dual-focus system provides exceptional depth of field for all bar code densities, offering the greatest decode range — and the flexibility required for use in a wide variety of applications. A wide range of bar code densities is supported — from 5 mil to 100 mil — enhancing the ability to capture virtually any bar code. Integrated bar code decoding simplifies integration into your environment by eliminating the need to develop complex decoding algorithms.

Built-in illumination ensures that bar codes, images and marks are appropriately lit to enable accurate capture, providing dependable operation in any lighting condition — from bright sunlight to total darkness. And when used in presentation mode, the Symbol MS4400 is quiet and unobtrusive, activated only when movement is detected. It also can be triggered with an external signal, allowing integration into a manufacturing line.

### Easy to use

The Symbol MS4400 offers features that make bar code capture easy, regardless of the user — your employees or customers at self-service kiosks. The omni-directional scan pattern eliminates the need to position items precisely. The clear aiming frame enables users to visually see the area that is to be captured, ensuring first time every time accurate capture. And an audible tone and visible LED light, programmable via two-way host communications, let users know that the data capture is accurate — and complete.

### Proven technology to enhance your solutions

With millions of installations worldwide, our OEM devices are proven to deliver high reliability and superior performance, ensuring the accurate and quick capture of data and images in your mission-critical applications and devices. In addition, an easy-to-integrate design and expert assistance from our

## SPECIFICATION SHEET

SYMBOL MS4400 SERIES  
MiniScan Fixed-Mount Imager

### Exit window, LED illumination, integrated beeper and common interfaces

Plug and play installation for reduced development time and integration costs

### Intuitive aiming feature

Projects a framed aiming pattern to enable users to visually see area to be captured for highly accurate aim

### Built-in LED illumination

Flexibility to adapt to any lighting environment, from total darkness to bright sunlight

### Smart dual-focus system

Offers the greatest decode range for maximum application flexibility

### Symbol MS4400: True RS232 interface with Simple Serial Interface (SSI) control

### Symbol MS4400: TTL Serial with Simple Serial Interface control and USB interface with SNAPi controls

Reduces integration time and cost

world-class OEM support team enable you to bring your systems to market quickly and cost effectively. And since even the most intelligent products require a maintenance plan and a support strategy, we offer superior services to help you maximize uptime and maintain peak performance.

For more information about the Symbol MS4400 MiniScan Imager, access our global contact directory at [www.symbol.com/contact](http://www.symbol.com/contact) or visit us on the web at [www.symbol.com/MS4400](http://www.symbol.com/MS4400)

# Symbol MS4400 Specifications

Models	
MS440x:	1D and 2D bar codes
MS440xHD:	1D and 2D bar codes, including high density 2D matrix codes and image capture
MS440xDPM:	Direct part marking
Physical Characteristics	
Dimensions:	0.99H x 1.91W x 2.18D (in) 25.14H x 48.51W x 55.37D (mm)
Weight:	1.8 oz./51.03 g
Interfaces:	9-pin male D-sub supports all interfaces
User Environment	
Ambient Light:	Total darkness to 9000 ft. candles (96,900 LUX)
Operating Temp.:	-4° to 122° F/-20° to 50° C
Storage Temp.:	-40° to 158° F/-40° to 70° C
Humidity:	Operating: 95% RH, non condensing at 60°C Storage: 85% RH, non-condensing at 70°C
Power:	Camera/Aim Input Voltage: 5 VDC ± 10% Illumination Input Voltage: 5 VDC ± 10% Camera/Aim Operating Current: 120mA
Drop Rating:	Unit functions normally after multiple 30 in (76 cm) drops to concrete
Illumination Element:	635 ± 20 nm (LED)
Symbologies Supported:	All major 1D bar codes 2-D: MaxiCode, PDF417, DataMatrix, QR Code, Aztec & Composite Codes Postal Codes: US Postnet, US Planet, UK Postal, Australian Postal, Japan Postal
Programmable Patterns:	Power Mode, Trigger mode, Beeper tone, session time, focus control, camera control, image control, advanced data formatting, Document capture, Signature capture
Image File Formats:	BMP, TIFF, JPG
Regulatory	
Laser Classification:	Intended for use in CDRH Class II/IEC 825 Class I devices
Electrical Safety:	ETL, VDE, CETL, EN60950, Ctick, VCCI
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B, CISPIR22 Class B
Environmental:	RoHS Compliant

Performance Characteristics	
Sensor Resolution:	640 (H) x 480 (V) (gray scale)
Field of View:	Horizontal: 32.2 degrees; Vertical: 24.5 degrees
Focal Distance from Front of Engine:	Standard Focus: Near: 5 inches Far: 9 inches High Density Focus: Near: 3.2 inches Far: 6.5 inches
Aiming Element (VLD):	650 ± 5 nm
Illumination Element:	635 ± 20 nm (LED)
Minimum Print Contrast:	Minimum 25% absolute dark/light reflectance measured at 650 nm
Ranges - 1D codes:	<b>Near Focus</b> <b>5 mil:</b> Code 39 - 80% MRD: 2.7 - 5.5 in / 6.9 - 12 cm <b>6.67 mil:</b> PDF417 - 80% MRD: 3 - 5.25 in / 7.62 - 13.3 cm <b>7.5 mil:</b> Code 39 - 80% MRD: 2.2 - 6 in / 5.6 - 15.2 cm <b>10 mil:</b> PDF417 - 80% MRD: 3 - 6 in / 7.6 - 15.2 cm <b>13 mil:</b> UPC-A - 80% MRD: 2 - 7 in / 5.1 - 17.8 cm <b>15 mil:</b> PDF417 - 80% MRD: * - 7 in / * - 17.8 cm <b>20 mil:</b> Code 39 - 80% MRD: * - 9.5 in / * - 24.1 cm <b>Far Focus</b> <b>5 mil:</b> Code 39 - 80% MRD: 5.5 - 7 in / 6.9 - 14 cm <b>7.5 mil:</b> Code 39 - 80% MRD: 3.5 - 9 in / 8.9 - 22.9 cm <b>10 mil:</b> PDF417 - 80% MRD: 5 - 9 in / 12.7 - 22.9 cm <b>13 mil:</b> UPC-A - 80% MRD: 2.75 - 13.5 in / 6.9 - 34.3 cm <b>15 mil:</b> PDF417 - 80% MRD: * - 12 in / * - 30.5 cm <b>20 mil:</b> Code 39 - 80% MRD: * - 18.5 in / * - 46.9 cm

\* = Near distance are field of view limited



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