

# MiniScan MS954 Series Scanner

## Fixed Mount Scanner

The MS954 is a compact, durable, fixed-mount laser bar code scanner for premium linear scanning on all types of 1-D bar codes, including poorly printed and low contrast symbols. The MS954 offers a configurable scan angle of 47° and 35° for OEM devices requiring a flexible, expanded working range. As one of the smallest, lightest and brightest fixed-mount scanners available today, the MS954 is ideal for accurate automated data collection in OEM device designs with space constraints. It can also be used as a standalone fixed-mount scanner.



### Rich feature set for more flexibility in many environments

The MS954 features a configurable scan angle and a working range of over 35 inches/88.9 cm to ensure high first-time read rates for maximum productivity. The MS954 is easy to program and configure, enabling you to cut your development time and bring your product to market faster — even if you don't have the in-house technical resources for scanner integration. With its durable housing and built-in RS-232 interface, the MS954 enables your project teams to quickly and confidently integrate high performance 1-D bar code data capture into many applications.

### 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 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.

## Features

### High performance fixed-mount scanner

Premium scanning on poorly printed and low contrast 1-D symbols for maximum accuracy and productivity

### Working range from near contact to over 35 in./88.9 cm

Flexible decode range for maximum accuracy and efficiency

### Configurable scan angle of 47° and 35°

Ability to control scan angle to meet demands of application

### Compact durable housing, mounting holes, LEDs and RS-232 interface

Plug-and-play installation reduces development time and speeds up time to market

For more information on the MS954, access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact) or visit us on the web at [www.zebra.com/ms954](http://www.zebra.com/ms954)

**Software controlled or manual triggering**

Offers flexible control for unattended or hands-free applications

**Easy-to-program simple serial interface (SSI)**

Provides fast, simple communications between scanner and host

**Reads all major 1-D symbologies**

Versatile decode capability enables devices to realize a high first-time read rate for improved productivity

**Bright 650 nm laser diode**

Scan line is easy to see

**Software developer's kit (SDK) at no extra charge**

Enables the creation of applications using familiar Microsoft Windows® 98, 2000 and XP platforms

**Applications OEM embedded**

Kiosks and ATMs; clinical diagnostics; medical instruments; blood and chemical analysis; gaming equipment; vending and lottery machines; turnstiles/access control

**Fixed-mount**

Manufacturing and warehousing; assembly lines; library and document tracking

# Specifications

## Physical Characteristics

Dimensions:	1.02H x 1.93W x 2.31D (in) 25.9H x 49.02W x 58.67D (mm)
Weight:	1.67 oz./ 47.34 g
Interface:	RS-232

## User Environment

Ambient lighting tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight ) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED <sup>1</sup> : 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)
Operating temperature:	-4° to 140°F (-20° to 60°C)
Storage temperature:	-40° to 158°F (-40° to 70°C)
Humidity:	5% to 95% non-condensing
Power:	Input voltage: 5 VDC ± 10% Scanning current: 95mA Standby current: 27mA Vcc noise level: 200mV peak-to-peak max
Drop Rating:	Unit functions normally after multiple 30 in (76 cm) drops to concrete
Symbologies:	All major 1-D bar codes
Programmable parameters:	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology Types/Lengths, Data Formatting, Serial Parameters, Beeper Tone, Scan Angle

## Regulatory

Laser classification:	CDRH Class II, IEC Class 2
Electrical safety:	Certified to UL1950, CA C22-2 NO950 ENG60950/ IEC950
Environmental:	RoHS compliant
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B European Union ENC Directive, Australian SMAV

## Performance Characteristics

Light source:	Visible laser diode 650 nm
Scan rate:	104 ± 12 scans per second
Scan angle:	47° ± 3° (typical) / 35° ± 3° (narrow )
Scan pattern:	Linear
Minimum print contrast:	Minimum 25% absolute dark/light reflectance measured at 650 nm
Ranges - 1-D codes:	5 mil: Code 39; 2.5:1 - 0.7 - 7.3 (in) / 1.8 - 18.54 (cm) 7.5 mil: Code 39; 2.5:1 - 0.9 - 12.4 (in) / 2.29 - 31.24 (cm) 13 mil: 100% UPC - 80%MRD: 0.9 - 22 (in) / 2.29 - 55.88 (cm) 20 mil: Code 39; 2.2:1 - * - 27.5 (in) / * - 69.85 (cm) 20 mil: Code 39; 2.2:1 - 80% MRD : 2 - 30 (in) / 5.08 - 76.2 (cm) 40 mil: Code 39; 2.2:1 - * - 28 (in) /*- 71.12

## Performance Characteristics

	(cm) 55 mil: Code 39; 2.2:1 - * - 35 (in) /*- 88.90 (cm)
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## Footnotes

\* = Near ranges on lower densities (not specified) largely depend on the width of the bar code and the scan angle.  
1 - LED lighting with high AC ripple content can impact scanning performance



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