

# MiniScan

## Symbol MS22XX Series

### FIXED MOUNT SCANNERS

## High-performance, fixed mount scanning made simple

The Symbol MS22XX Series is a compact, affordable industrial fixed mount scanners that provides fast, aggressive performance on a full range of 1D and 2D symbologies including PDF417, RSS and composite codes.

Available in standard and a VHD version to read high-density bar codes, the Symbol MS22XX offers a “smart” raster pattern optimized to read 2D symbols and poorly printed linear bar codes, making this fixed mount scanner ideal for use in a variety of automated data collection devices:

### Applications

#### Fixed mount or industrial standalone

- Manufacturing and warehousing
- Assembly lines
- Conveyor belts

#### OEM

- Interactive kiosks and ATMs
- Healthcare and medical equipment
- Clinical diagnostic devices
- Security and ID verification
- Robotic equipment

### Users

- Security and ID verification
- Library and document tracking
- Backroom receiving
- Driver Licenses and DMV

- Blood analysis
- Gas pumps
- Data storage systems
- Gaming and lottery terminals
- Vending machines
- Turnstiles/Access control

## Plug-and-play installation speeds time to market

Symbol MS22XX fixed mount scanners are easy to program and configure, enabling you to shorten your development time and bring your product to market faster—even if you don’t have in-house technical resources for scanner integration. With its rugged durable housing, exit window, integrated beeper and interface options, the Symbol MS22XX enables your project teams to quickly and confidently integrate high-performance 1D and 2D bar code data capture into standalone and OEM 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.

For more information about the Symbol MS22XX, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the Web at: [www.symbol.com/ms22xx](http://www.symbol.com/ms22xx)



### FEATURES

“Smart” raster pattern automatically tailors the pattern to the height of the PDF417 symbol

Versatility with adaptive scan patterns: 1D linear and PDF raster

Compact, rugged, durable housing with integrated beeper, mounting holes, LEDs, decoder and a variety of interfaces

Sealed to IP54 standards

High speed scan rate—640 scans per second

Automatic, software-controlled or manual triggering

Integrated beeper with external beeper support

Easy to program simple serial interface (SSI)

Optional Software Developer’s Kit (SDK)

Supports 123Scan utility (multi-interface, 07 versions only)

Multiple mounting options

### BENEFITS

Enables you to build your device with the confidence that even novice users can scan items quickly and accurately

Application can be customized using multiple triggering methods to produce the appropriate scan pattern

Provides plug-and-play installation to reduce development time and speed up time to market

Protects against water and dust, ensuring reliable performance in rough conditions

Ensures fast, reliable data collection on all 1D and 2D codes such as PDF417, MicroPDF, RSS and composite codes for maximum productivity

Offers flexible control of unattended or hands-free applications

Allows internal or external beeper to be driven depending on application

Provides fast, simple interface communication with advanced features and functionality between scanner and host

Enables creation of applications using Windows 98, 2000, and XP platforms

Easy to use PC based utility reduces end-user installation time

Increases development flexibility



**MOTOROLA**

# Symbol MS22XX (Standard and VHD) Specifications

## Physical Characteristics

Dimensions:	1.60 in. H x 2.28 in. W x 2.94 in. D 40.64 mm max. H x 57.91 mm max. W x 74.67 mm max. D
Weight:	4.73 oz. (134 gm)

## Performance Characteristics

Light Source:	Visible Laser Diode 650 nm
Scan Rate:	640 scans per second
Scan Angle:	Cyclone Raster Horizontal: 34° ±1.5° 34° ±1.5° Vertical: 34° ±1.5° 12.5° ±1.5°
Scan Patterns:	Linear, smart PDF raster
Skew (Yaw):	±15° from plane parallel to symbol ("side to side")
Pitch Angle:	±30° from normal ("front to back")
Rotation:	±4° from vertical (for scanning benchmark label assuming 3:1 code word aspect ratio)
Minimum Print Contrast:	Minimum 35% absolute dark/light reflectance measured at 650 nm.
Symbologies:	1D: UPC/EAN, Code 128, UCC.EAN128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI 2D: PDF417, MicroPDF, RSS and Composite codes
Programmable:	Parameters: Laser On Time, Power Mode, Trigger Mode, Bidirectional Redundancy, Symbology Types/Lengths, Data Formatting, Serial Parameters, Beeper Tone, Pattern Controls
Interfaces:	Symbol MS2204/Symbol MS2204 VHD: RS 232 Symbol MS2207: TTL RS 232, USB, Synapse

## User Environment

Ambient Light:	Artificial Light 450 ft. candles (4,844 Lux) Sunlight 8,000 ft. candles (86,112 Lux)
Operating Temperature:	-4° to 122°F (-20° to 50°C)
Storage Temperature:	-40° to 158°F (-40° to 70°C)
Humidity:	5% to 95% non-condensing
Power:	Input Voltage: 5.0 VDC ±10% Scanning Current: 250 mA typical Standby Current: 25mA typical +/- 5mA (MS 2204, MS 2204 VHD) 45mA typical +/- 5mA (MS 2207) Vcc Noise Level: 200 mVp to p max
Drop:	Unit functions normally after multiple 30 in./76 cm drops to concrete

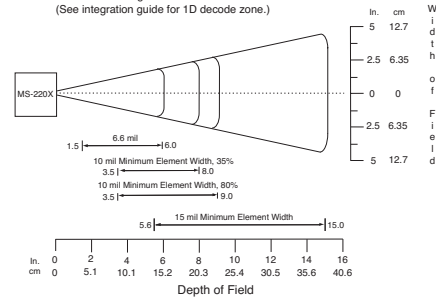
Environmental Sealing:	IP54
<b>Regulatory</b>	
Laser Classification:	CDRH Class II, IEC Class 2
Electrical Safety:	Certified to UL1950, CA C22-2 N0950 ENG60950/IEC950
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B European Union EMC Directive, Australian SMA
Environmental:	RoHS-compliant

Specifications are subject to change without notice.

For system, product or services availability and specific information within your country, please contact your local Motorola office or Business Partner.

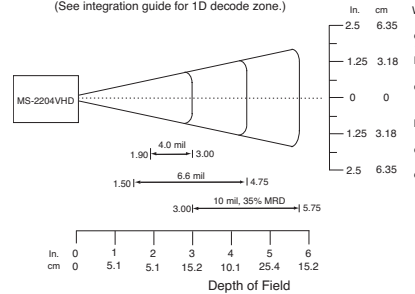
## Symbol MS22XX SD Decode Zone

Note: Typical performance at 68°F (20°C) on high quality symbols in normal room light. Y-module dimension = 3X.  
(See integration guide for 1D decode zone.)



## Symbol MS22XX VHD 2D Decode Zone

Note: Typical performance at 68°F (20°C) on high quality symbols in normal room light. Y-module dimension = 3X.  
(See integration guide for 1D decode zone.)



# About Motorola

Motorola is known around the world for innovation and leadership in wireless and broadband communications. Inspired by our vision of Seamless Mobility, the people of Motorola are committed to helping you get and stay connected simply and seamlessly to the people, information, and entertainment that you want and need. We do this by designing and delivering "must have" products, "must do" experiences and powerful networks — along with a full complement of support services. A Fortune 100 company with global presence and impact, Motorola had sales of US \$35.3 billion in 2005. For more information about our company, our people and our innovations, please visit <http://www.Motorola.com>



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### Web Site

For a complete list of Symbol subsidiaries and business partners worldwide contact us at:

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## BARCODING, WIRELESS AND DATA COLLECTION

*Our customers turn to us to help them become more productive and profitable. TPI's expertise guarantees your project will be successful: on time, on budget and meet your ROI requirements.*

*TPI will facilitate your entire wireless and data collection project:*

- ✓ *Business analysis*
- ✓ *Project justification & ROI*
- ✓ *Wireless design, RF site survey and spectrum analysis*
- ✓ *WWAN, WLAN design & installation*
- ✓ *Custom software*
- ✓ *Integration w/legacy systems*
- ✓ *Mobile computers*
- ✓ *Data collection terminals*
- ✓ *Barcode printers, labels and scanners*
- ✓ *RFID solutions*
- ✓ *Configuration and deployment*
- ✓ *Training and installation*
- ✓ *Service and upgrades*
- ✓ *Remote device management and support*

*TPI can share best practices in data collection from a number of industries including wholesale distribution, manufacturing, healthcare and retail/consumer goods. Our expertise allows you to shorten your learning curve and increase your return on investment.*

Product specification sheet provided by TPI

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