



# Symbol SE3223

## OEM Scan Engines



### FEATURES

#### State-of-the-art TBE scan elements

Choose the best pattern for your application: Omni-Directional, Smart Raster or Linear

#### Optimized for aggressive reading of 1D symbols with a raster pattern for 2D symbols

Enables 1D linear and 2D raster scanning solutions including PDF417, Micro PDF, RSS and Composite codes to be added to a variety of OEM devices

#### Compact size

Excellent scanning performance in a small package

#### Zinc chassis

Minimum weight and strength; extremely durable

#### Retrocollective optical system

Provides high ambient light immunity

#### Simple Serial Interface (SSI) compatible

Provides a migration path to other SSI scan engines with advanced features/functionality

### Flexible, dependable performance for all your applications

The Symbol SE3223 is an adaptive, multi-pattern scan engine that packs power and performance into the smallest package available at an affordable price. The Symbol SE3223 offers a full range of scanning capabilities and features, delivering unmatched adaptability for virtually any application. The result is a scan engine unparalleled for reliability, performance, durability and flexibility, enabling design of totally integrated scanning solutions for any industry, in any environment — kiosk, ATM, lottery machine and more — at an affordable price.

### Three scan patterns in one scanner

The innovative, state-of-the-art Symbol SE3223 scan engine incorporates two scan motors called Taut Band Elements (TBE) that deliver the power to generate three different scan patterns — 1D linear, 2D raster and omni-directional “Cyclone.” This flexibility gives you the power to select the best scan pattern for the application. The Symbol SE3223 is optimized for reading on 1D symbols and features a Smart Raster scan pattern for 2D symbols including PDF417, Micro PDF, RSS and Composite Codes.

- **“Cyclone” Omni-Directional Scan Pattern:** “Cyclone” is a unique rotating omni-directional scan pattern with virtually no ‘holes’ that provides very aggressive performance on 1D

codes. This ensures fast throughput at the point of activity and the ability to read 1D symbols in 360° of rotation, eliminating the need to orient the bar code in the field of view.

- **Smart Raster Scan Pattern:** The unique Smart Raster Scan Pattern scans several different areas of the symbol for more efficient coverage, effectively reading even damaged or poorly printed bar codes. It automatically covers 1D and 2D symbols, and delivers superb decoding performance even on hard to read truncated bar codes, eliminating the need for operator training.
- **High Density Single Line Scan Pattern:** The Cyclone’s single scan line appears as a ‘mini’ raster and scans multiple areas of 1D codes to swiftly and accurately capture data on poorly printed and damaged bar codes. The single line is ideal for standard 1D bar codes.

The full range of scan patterns makes the Symbol SE3223 ideal for a wide range of OEM designs — providing an easy and cost-effective means to upgrade or modify your existing OEM devices with high-performance 1D and 2D functionality.

### Optimum ergonomic design — plus durability and reliability

The small form factor of the Symbol SE3223 optimizes the ergonomic design of fixed-mount OEM devices such as kiosks, ATM’s, lottery terminals and vending machines. A zinc chassis

## SPECIFICATION SHEET

SYMBOL SE3223  
OEM scan engines

provides minimum weight, while also providing durability. A wide temperature range, immunity to ambient light and operation at only 5 volts for extended battery life combine to provide reliability in the most demanding environments. Our Simple Serial Interface (SSI) ensures quick, easy system integration.

### 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.

Choose the best scan engine for your OEM solutions — Symbol SE3223 Scan Engine Series — unmatched in reliability, performance and durability. For more information about our scan engines, 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/oem](http://www.symbol.com/oem)

## Symbol SE3223 Specifications

### Physical Characteristics

Dimensions (max.):	.76H x 1.51W x 1.37D (in) 19.30 mm H x 38.35 mm W x 34.80 mm D
Weight:	1.4 oz/40 g
Configuration:	decoded
Interface:	SSI Control over TTL Serial on a 12 pin ZIF connector

### Performance Characteristics

Light Source:	Visible Laser Diode 650 nm
Scan Rate:	640 (±) 10% scans/sec 22 frames/sec
Scan Angle:	Cyclone Raster Horizontal: 34° ± 1.5° 34° ± 1.5° Vertical: 34° ± 1.5° 12.5° ± 1.5°
Scan Patterns:	Semi Omni, Smart Raster, Omni Directional, Raster (Slab) Pattern
Minimum Print Contrast:	35% absolute dark/light reflectance differential (PDF) 25% absolute dark/light reflectance differential (1D)
Symbologies Supported:	All major 1D bar codes and PDF 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, Pattern Controls
Ranges - 1D codes:	<b>6 mil:</b> Code 39 - 80% MRD: 1.25 - 4.25 (in) / 3.18 - 10.8 (cm) <b>13 mil:</b> 100% UPC - 80% MRD: 2.5 - 13.5 (in) / 6.35 - 34.29 (cm) <b>20 mil:</b> LC 35% - 80% MRD: 2.75 - 13.5 (in) / 13.97 - 34.29 (cm)
PDF 417 codes:	<b>6.6 mil:</b> PDF417 - 80% MRD: 2 - 6.5 (in) / 5.08 - 15.88 (cm) <b>10 mil:</b> PDF417 - 35% MRD: 4.5 - 10.5 (in) / 11.43 - 26.67 (cm) <b>15 mil:</b> PDF417 - 80% MRD: *2 - 33 (in) / 5.08 - 83.82 (cm)

### User Environment

Ambient Light:	Artificial: 450 ft. candles (4,844 Lux) Sunlight: 8000 ft. candles (86,112 Lux)
Operating Temp.:	-22° to 140°F (-30° to 60°C)
Storage Temp.:	-40° to 158°F (-40° to 70°C)
Humidity:	5% to 95% non-condensing
Power:	Input Voltage: 5 VDC ± 10% Scan Current: 230 mA typical Standby Current: 65 µA max
Shock Rating:	1,000 G

### Regulatory

Laser Classification:	Intended for use in CDRH Class II and IEC Class 2 devices
Electrical Safety:	UL, VDE, and CUL recognized component laser
Environmental:	RoHS compliant

\* = near ranges on are largely dependent upon the width of the bar code and the scan angle



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