



## OEM SCAN ENGINES

# MOTOROLA SE1224HP

## HIGH PERFORMANCE DECODED SCAN ENGINE

The Motorola SE1224HP scan engine is built on fuzzy logic processing to deliver a new level of performance for OEM bar code scanning devices. With its flexible reading range and superior scanning of poorly printed symbols, adding this powerful decoded scan engine to your design extends the capabilities of your solution in a variety of industries and applications. Now handheld computers, medical instruments, diagnostic equipment, lottery terminals, vending machines, robotics and countless other appliances can all be equipped with the leading-edge scanning technology and reliability that is available only from Motorola.

## COMPATIBILITY PLUS FLEXIBILITY PROTECTS YOUR INVESTMENT

Your hardware investment is protected when you use the Motorola SE1224HP. The standard Simple Serial Interface (SSI) communication protocol ensures compatibility with our other decoded scan engines, helping save you time and money when upgrading the

capabilities of your designs. The Motorola SE1224HP integrates into your device seamlessly with the dimensions of an undecoded Motorola SE1200HP and the electrical interface of a Motorola SE1223HP. The Motorola SE1224HP also supports Reduced Space Symbolologies® (RSS) as well as existing 1D symbolologies without compromising the form factor of your OEM device.

## 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 missioncritical 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. For more information, access our global contact directory at [www.motorola.com/contact](http://www.motorola.com/contact) or visit us on the web at [www.motorola.com/se1224hp](http://www.motorola.com/se1224hp).

## FEATURES

### High-performance reader with fuzzy logic decode capability

Premium scanning for all 1D codes including poorly printed, damaged or low contrast bar codes

### Supports new RSS symbologies in addition to standard 1D symbols

Protects your investment without compromising form factor

### Compact, single board design

Optimized for quick and easy integration

### 3.3V and 5V versions available

Supports extended portable applications

### Simple Serial Interface (SSI) software

Provides a migration path to other SSI scan engines with advanced features/ functionality to help you keep costs to a minimum

## SPECIFICATIONS CHART

### PHYSICAL CHARACTERISTICS

Dimensions .75H x 1.51W x 1.38D (in)  
19.1H x 38.35W x 35.05D (mm)

Weight 1.33 oz./37 g

Configuration decoded

Interface SSI Control over TTL Serial on a 12 pin  
ZIF connector

### USER ENVIRONMENT

Ambient Light Artificial: 450 ft. candles (4,844 Lux)  
Sunlight: 8,000 ft. candles (86,112 Lux)

Operating Temp. -22° to 140°F (-30° to 60°C) chassis temp.

Storage Temp. -40° to 158°F (-40° to 70°C)

Humidity 5% to 95% non-condensing

Power SE-1224HP-I000AR: 5VDC ± 10%  
SE-1224HP-I001AR: 3.3VDC ± 10%

Scan Current 140 mA typical

Standby Current 60 uA

Shock 2000 G

### PERFORMANCE CHARACTERISTICS

Light Source Visible Laser Diode 650 nm

Scan Rate 35 (± 5) scans/sec (bi-directional)

Scan Angle 42° (typical), 30° (narrow)

Scan Patterns	Linear
Minimum Print Contrast	Minimum 25% absolute dark/light reflectance measured 650 nm
Symbologies	All major 1D bar codes
Programmable Parameters	Laser On Time, Aim Duration, Power Mode, Trigger Bi-directional Redundancy, Symbology Types/Lengths, Data Formatting, Serial Parameters, Beeper Tone
Scan Angle	5 mil: Code 39; 2.5:1 - 80% MRD: 4.5 - 9.25 (in) / 11.43 - 23.5 (cm) 7.5 mil: Code 39; 2.5:1 - 80% MRD: 4.25 - 14.75 (in) / 10.79 - 37.47 (cm) 13 mil: 100% UPC - 80% MRD: 3.25 - 26 (in) / 8.26 - 66.04 20 mil: Code 39; 2.2:1 - 80% MRD: 2 - 41.5 (in) / 5.08 - 105.41 (cm) 40 mil: Code 39; 2.2:1 - 80% MRD: 3.25 - 70.75 (in) / 8.26 - 179.79 (cm) 55 mil: Code 39; 2.2:1 - 80% MRD: 4.5 - 86 (in) / 11.43 - 228.6 (cm)

### REGULATORY

Laser Classification	Intended for use in CDRH /IEC 825 Class II devices
Electrical Safety	UL, VDE, and CUL recognized component laser
Environmental	RoHS Compliant

### 650 nm bright laser diode

Scan line is easy to see even in outdoor applications

### Dual-scan angle switches from standard to narrow under software control

Offers fast, accurate bar code reading on menus and pick lists

### Metal chassis

High shock rating for commercial, industrial or retail applications

For more information, access our global contact directory at [www.motorola.com/contact](http://www.motorola.com/contact) visit us on the web at [www.motorola.com/se1224hp](http://www.motorola.com/se1224hp)