

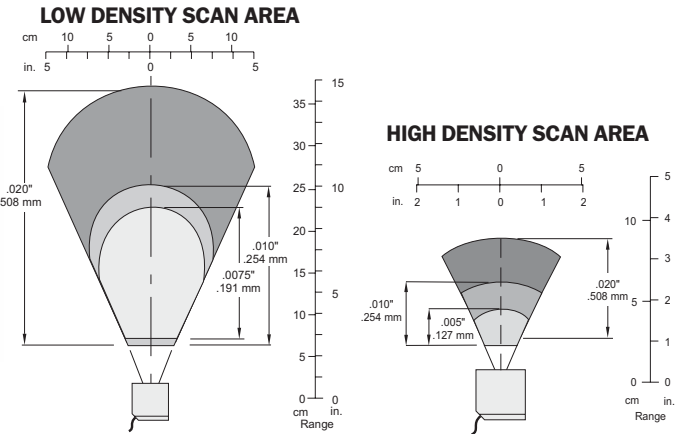
# MS-3

**For simple embedded bar code scanning, the MS-3 Engine offers small size and reliable performance with minimal budget impact.**

One of the smallest and lightest scan engines in its class, the **MS-3 Engine** is ideal for embedded bar code applications where space is restricted or weight is a consideration. Designed for industry standard form factor, it offers embedded power management, bi-directional serial link for dynamic configuration, and upgradeable flash memory.

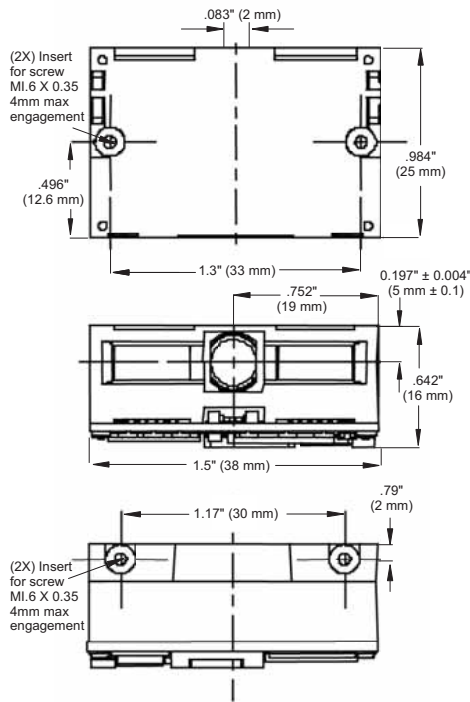
The **MS-3 Engine** is part of Microscan's **MS-3** trio that also includes the **MS-3 CCD** and the **MS-3 Laser**. The **MS-3 Engine** is the base model offering fewer features than the CCD and Laser options but at considerable budget savings.

## ENGINE



### MECHANICAL (ACTUAL SIZE)

**Weight:** 17 g (0.6 oz.)



**Min. X dimension:** down to 0.05 mm (2mil) on Code 39  
**Depth of field:** 0 to 49.2 cm (19.4")  
**Barcode width:** up to 18 cm (7") on 0.3 mm (12 mil) resolution code  
**Print contrast:** down to 20%  
**Scan angle:** 48° nominal

### SYMBOLOGIES

UPC (E&A), EAN, Code 11, Code 39, Code 128, UCC EAN 128, ISBN, ISBT, Interleaved, Industrial and Standard 2 of 5, Codabar, Code 93, MSI, Plessey, Telepen.

### INTERFACES

**Undecoded mode:** industry standard output (DBP)  
**Decoded mode:** RS232 TTL

### CONNECTION

**Connector:** 12 pin ZIF  
**Flexwire:**  
**Undecoded mode:** 12 to 8 pin ZIF  
**Decoded mode:** 12 to 12 pin ZIF

### CONFIGURATION (DECODED INTERFACE ONLY)

**Setup Options:** EasySet PC, Windows™ software, and dynamic RS232 configuration.

### HOST CONNECTOR/PIN ASSIGNMENTS 12 Pin ZIF Connector

Pin No.	Decoded Operation	In/Out
1	VCC	In
2	RXD	In
3	Trigger input	In
4	Power enable	In
5	TXD	Out
6	RTS	Out
7	GND	
8	Detect in 1 Must be connected to contact 11	In
9	LED	Out
10	CTS	In
11	Buzzer Must also be connected to contact 8	Out
12	Detect in 0 Must be connected to GND	In

### CHARACTERISTICS

**Voltage:** 5V +/- 5%  
**Current:**  
**Undecoded mode:** 122 mA typical  
**Decoded mode:** 130 mA typical  
**Standby current:** 1uA

### ENVIRONMENTAL CHARACTERISTICS

**Operating temperature:** -30 to 60° C (-22 to 140° F)  
**Storage temperature:** -40 to 60° C (-40 to 140° F)  
**Relative humidity:** 5% to 95% (non-condensing)  
**Shock:** 2000G **Vibration:** 50G r.m.s.  
**Ambient light:** works in any lighting conditions, from 0 to 100 000 lux

### ACCESSORIES

Demo board kit compatible with standard RS-232 cable.

### REGULATORY APPROVALS

UL recognized component, VDE certified

### ISO CERTIFICATION

Issued by RWTüV, USA Inc.  
 ISO 9001:2000 - Cert No. 03-1212

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### GENERAL

Compact CCD scan engine for OEM devices.

### DESIGN

**Processor:** Custom chip (ASIC inc. DSP processor) for signal processing and decoding.  
**Flash memory Sensor:** CCD linear image sensor  
**Optics:** 645 nm visible LED  
 Bright and sharp scanning line

### SCANNING PERFORMANCE

**Scan rate:**  
**Decoded mode:** 270 scans/sec auto-adaptive.  
**Undecoded mode:** 36 scan/sec

# MICROSCAN®

### Microscan Systems, Inc.

Tel 425 226 5700 / 800 251 7711  
 Fax 425 226 8250

### Microscan Europe

Tel 31 172 423360 / Fax 31 172 423366

### Microscan Asia Pacific R.O.

Tel 65 6846 1214 / Fax 65 6846 4641

**Web site:** www.microscan.com

**E-mail:** info@microscan.com

**Tech support:** helpdesk@microscan.com