MOTOROLA SE950/SE955

OEM scan engine

MINIATURE SCAN ENGINE SETS NEW STANDARD FOR PERFORMANCE, FEATURES AND RELIABILITY

The Motorola SE950/SE955 miniature scan engine sets a new benchmark, offering best-in-class quality, reliability, durability and scanning performance. Scanning across the wide working range is easy, intuitive and rapid, regardless of environment. The durable engine design enables you to deliver products that perform reliably day in and day out, increasing productivity and reducing total cost of ownership. Regardless of whether you are designing handheld computers, medical instruments, diagnostic equipment, lottery terminals, robotics and more, these extremelysmall scan engines deliver next-generation performance with an ease of integration that enables rapid cost-effective product development — a true competitive advantage.

DURABILITY FOR ALL DAY EVERY DAY USE

The Motorola SE950/SE955 offers superior reliability you can count on, regardless of whether you are incorporating the Motorola SE950/SE955 into mobile computers or laboratory analyzers. The patented Liquid Polymer Scan Technology is frictionless and will not wear out. Designed for durability, the elimination of fragile silicon mirrors combined with the die cast chassis enables the Motorola SE950/SE955 to handle drop shocks up to 2000Gs. You enjoy maximum uptime — and a lower total cost of ownership.

INCREASED PRODUCTIVITY

Scanning speed is optimized to provide aggressive read times, and the programmable scan line is easily adjusted, providing the flexibility to use a single scan engine for a wide variety of uses. The result is the rapid and accurate scanning needed to improve worker productivity.

LOWER TOTAL COST OF OWNERSHIP (TCO)

The Motorola SE950/SE955 enables the development of products that offer superior manageability. Built-in system performance monitoring enables remote access to scan engine statistics. Management of your products is easier, less time consuming and less expensive — a competitive advantage for you and a lower TCO for your customers.

RAPID AND FLEXIBLE INTEGRATION

The miniature Motorola SE950/SE955 is designed to easily integrate into the products you design today — and tomorrow. The industry standard form factor allows you to easily upgrade your current scan engine without the expense of changing your tooling processes, allowing you to offer the latest technology without the time and cost associated with changing your production line.

For more information on the Motorola SE950/SE955, visit our global contact directory at www.motorolasolutions.com/enterprise/contactus, or visit us on the Web at www.motorolasolutions.com/SE950955

FEATURES

Large working range
Meets the needs of a wide range of applications for increased productivity

Small and light scan engine
Easily optimize product designs

100 scans per second
Optimized scanning speed delivers aggressive performance and accurate capture of all bar codes — even damaged and poor quality

Low power consumption
Increases battery life in portable terminals

Bright scan line and aim mode
Provides intuitive ease-of-use across the entire working range

Programmable scan angle
Provides flexibility to easily and cost-effectively customize products for specific applications

RoHS compliant
Meets RoHS requirements

MOTOROLA SE950/SE955 SPECIFICATIONS CHART

Die cast zinc chassis and single board construction
Shock rating of 2,000G for outstanding durability

Liquid Polymer scan element
Eliminates friction and wear for superior durability and reliability

Flash upgradeable
Easy to upgrade software

MOTOROLA SE950 SCAN ENGINE SPECIFICATIONS (UNDECODED)

PHYSICAL CHARACTERISTICS

Dimensions	.46 x .85W x .61D (in) / 11.75H x 21.6W x 15.5D (mm)
Weight	.27 oz./ 7.5 g
Configuration	undecoded
Interface	DPB and I²C control on a 10 pin ZIF connector

USER ENVIRONMENT

Ambient Lighting Tolerance	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED[1]: 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: 3.3 VDC± 10% Scan Current: 76 mA typical Standby Current: 12 µA max.
Shock Rating	2,000 G

REGULATORY

Classification	Intended for use in CDRH Class II and IEC Class 2 devices - Optional Class I model
Electrical Safety	UL 60950, EN/IEC 60950
EMI/RFI	FCC Part 15 Class B, EN 55024/CISPR 22, AS 3548, VCCI
Environmental	RoHS compliant

PERFORMANCE CHARACTERISTICS

Light Source	Visible Laser Diode 650 nm
Scan Rate	104 (±) 12 scans/sec (bi-directional)
Scan Angle	47° ± 3° (typical) / 35° ± 3° (narrow)
Scan Patterns	Linear
Minimum Print Contrast	Minimum 20% absolute dark/light reflectance measured at 650 nm
Ranges - 1D codes	**4 mil:** Code 39; 2.5:1 - 80% MRD: 1 - 5.5 (in) / 2.5 - 13.97 (cm) **5 mil:** Code 39; 2.5:1 - 80% MRD:1.25 - 8 (in) / 3.18 - 20.32 (cm) **7.5 mil:** Code 39; 2.5:1 - 80% MRD:1.5 - 13 (in) / 3.81 - 33.02 (cm) **10 mil:** Code 39; 2.5:1 - 90% MRD:1.5 - 18 (in) / 3.81 - 45.72 (cm) **13 mil:** 100% UPC - 90% MRD: 1.5 - 24 (in) / 3.81 - 60.96 (cm) **15 mil:** Code 39; 2.5:1 - 80% MRD:1.5 - 28 (in) / 3.81 - 71.12 (cm) **20 mil:** Code 39; 2.2:1 - 80% MRD: 1.75 - 33 (in) / 4.45 - 83.82 (cm) **40 mil:** Code 39; 2.2:1 - 80% MRD: * - 36 (in) / x - 91.44 (cm) (dependent on width of barcode) **55 mil:** Code 39; 2.2:1 - 80% MRD: * - 45 (in) / x - 114.30 (cm) (dependent on width of barcode)

(* = dependent on width of bar code)
1 - LED lighting with high AC ripple content can impact scanning performance

MOTOROLA SE955 SCAN ENGINE SPECIFICATIONS (DECODED)

PHYSICAL CHARACTERISTICS

Dimensions	**SE-955-I100R (3.3V):** .46H x .85W x .61D (in) / 11.8H x 21.6W x 15.5D (mm) **SE-955-I105R (5V):** .48H x .85W x .89D (in) / 12.1H x 21.6W x 22.6D (mm)
Weight	.28 oz./ 8 g
Configuration	decoded
Interface	SSI Control over TTL Serial on a 12 pin ZIF connector

USER ENVIRONMENT

Ambient Lighting Tolerance	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED[1]: 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: **SE-955-I100R (3.3V):** 3.3 ± 10% **SE-955-I105R (5V):** 5V ± 10% Scan Current: **SE-955-I100R (3.3V):** 86mA **SE-955-I105R (5V):** 90mA Standby Current: **SE-955-I100R (3.3V):** 12µA **SE-955-I105R (5V):** .35µA
Shock Rating	2,000 G

REGULATORY

Laser Classification	Intended for use in CDRH Class II and IEC Class 2 devices - Optional Class I model
Electrical Safety	UL 60950, EN/IEC 60950
EMI/RFI	FCC Part 15 Class B, EN 55024/CISPR 22, AS 3548, VCCI
Environmental	RoHS compliant

PERFORMANCE CHARACTERISTICS

Light Source	Visible Laser Diode 650 nm
Scan Rate	104 (±) 12 scans/sec (bi-directional)
Scan Angle	47° ± 3° (typical) / 35° ± 3° (narrow)
Scan Patterns	Linear
Minimum Print Contrast	Minimum 20% absolute dark/light reflectance measured at 650 nm
Symbologies Supported	All major 1D 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
Ranges - 1D codes	**4 mil:** Code 39; 2.5:1 - 80% MRD: 1 - 5.5 (in) / 2.5 - 13.97 (cm) **5 mil:** Code 39; 2.5:1 - 80% MRD:1.25 - 8 (in) / 3.18 - 20.32 (cm) **7.5 mil:** Code 39; 2.5:1 - 80% MRD:1.5 - 13 (in) / 3.81 - 33.02 (cm) **10 mil:** Code 39; 2.5:1 - 90% MRD:1.5 - 18 (in) / 3.81 - 45.72 (cm) **13 mil:** 100% UPC - 90% MRD: 1.5 - 24 (in) / 3.81 - 60.96 (cm) **15 mil:** Code 39; 2.5:1 - 80% MRD:1.5 - 28 (in) / 3.81 - 71.12 (cm) **20 mil:** Code 39; 2.2:1 - 80% MRD: 1.75 - 33 (in) / 4.45 - 83.82 (cm) **40 mil:** Code 39; 2.2:1 - 80% MRD: * - 36 (in) / x - 91.44 (cm) (dependent on width of barcode) **55 mil:** Code 39; 2.2:1 - 80% MRD: * - 45 (in) / x - 114.30 (cm) (dependent on width of barcode)

(* = dependent on width of bar code)
1 - LED lighting with high AC ripple content can impact scanning performance

MOTOROLA