SE4100/SE4107 OEM Scan Engines

Cost-effective, enterprise-class decoded and undecoded imagers

Are you looking for a versatile and affordable 1D/2D scan engine that will fit in just about any product design and host type? You've found it. Now, with the low-cost SE4100 undecoded and SE4107* decoded scan engines, you can afford to add enterprise-class 1D/2D scanning into mobile computers, payment terminals, mobile point-of-sale (POS), scanning sleds, access control systems, kiosks and more. The low cost enables competitive OEM product pricing and improves your margins. And its tiny size makes integration easy. Whether you are designing new products or upgrading existing product from 1D to 2D, with these tiny scan engines, it will simply take less — less space to accommodate slimmer designs or new features, less development and integration time, and less cost. The SE4100/SE4107 OEM scan engines — the perfect balance of scanning functionality, size and cost.



Proven scanning performance you can trust

Scan it all — printed and electronic 1D, 2D and PDF417 barcodes, plus OCR, Digimarc® and DotCodes. With Zebra's exclusive PRZM Intelligent Imaging Technology, advanced software decode algorithms easily capture every barcode in virtually any condition. And with the megapixel sensor, wide field of view and broad 20 in./50.8 cm working range, barcode capture is faster and easier than ever.

Enterprise-class durability

The 2,500 G shock rating and wide temperature range deliver the durability that commercial, retail and industrial applications require.

Easy intuitive first-time aiming

The bright, rectangular illumination field and green LED aiming spot enables accurate aiming for exceptional ease of use. White illumination increases scanning flexibility by enabling the easy capture of any color barcode. The micro-lens array delivers the uniform light required to produce superior images for dependable scanning. And the LED aimer speeds regulatory approval for a faster time to market and expands use cases to applications where LED aimers are preferred.

Easy integration with a wide range of designs and devices

The SE4100 supports parallel or MIPI interfaces for easy integration with a wide range of host platforms. The SE4107 supports serial and USB, plus SSI for easy upgrading from other Zebra scan engines.

High quality optical components

Whether you choose the decoded or undecoded engine, there's no compromise on performance — both engines have the same high-quality optical systems, unlike some competitors.

Put enterprise-class scanning in your product designs for less — less space, less time and less cost.

For more information, visit www.zebra.com/se4100-se4107

Easy development, upgrades and updates with the decoded SE4107

Reduce development time and cost with this decoded engine. There's no integration or programming required to accommodate an extra decoder board. No OS or high-end processor is required in the host device, allowing you to add enterprise-class scanning to more types of products. You can easily upgrade existing products from 1D to 2D. And you can easily update firmware and decode libraries to integrate new features, symbologies and performance enhancements —providing your customers with an extended product lifecycle and an increased return on their investment in your products.

Save space and cost with the undecoded SE4100

When size and cost are the top two factors, the SE4100 is ready for the job. It is more than 35% thinner than the decoded SE4107, ideal for the most space constrained products. And without onboard decoding hardware, it's less expensive.

Specifications

Physical Characteristics

Dimensions	SE4100: .27 in. L x .88 in. W x .54 in. D 6.9 mm H x 22.3 mm W x 13.7 mm D SE4107: .45 in. L x .88 in. W x .54 in. D 11.5 mm H x 22.3 mm W x 11.5 mm D
Weight	SE4100: < 0.16 oz./4.5 g SE4107: < 0.19 oz./5.5g
Interface	SE4100: Camera port on 27 pin ZIF connector; supports parallel or MIPI interface SE4107: SSI Control over TTL Serial or USB on 12-pin ZIF connector

User Environment

Ambient Light	Max 107,639 lux (direct sunlight)
Operating Temp.	-4° F to 122° F/-20° C to 50° C
Storage Temp.	-22° F to 158° F/-30° C to 70° C
Humidity	Operating: 95% RH, non-condensing at 122° F/50° C Storage: 85% RH, non-condensing at 158° F/70° C
Shock Rating	A total of 36 shocks in the following conditions: 2000 ± 100 g, ½ sine, 0.85 ± 0.1 msec shock, +X, −X, +Y, −Y, +Z, −Z directions, 6 shocks in each direction at -22° F /-30° C and 140° F/60° C2500 ± 100 g, ½ sine, 0.70 ± 0.1 msec shock, +X, −X, +Y, −Y, +Z, −Z directions, 6 shocks in each direction at 68° F/20° C
Power	SE4100: Operational Input voltage Engine: VCC = 3.3V +/- 0.3V; VCC_ILLUM = 3.3V +/- 0.3VTotal 3.3V current draw (VCC = VCC_ILLUM = 3.3V) with illumination and aiming on = 240mA peak; 210mA RMSCurrent draw in low-power modes (Idle/Hibernate / Standby) = 7mA/0.3mA/0.3mASE4107 Serial: Operational input voltage: 3.3 +/- 0.3VTotal current draw: 490mA Peak; 475mA RMS at Vin = 3.3VCurrent draw in low-power modes (Idle/Hibernate/ Standby): 90mA/3mA/3mASE4107 USB: Operational input voltage: 5.0 +/- 0.5VTotal current draw: 280mA Peak; 260mA RMS at Vin = 5.0VCurrent draw in low-power modes (Idle/Hibernate/ Standby): 60mA/2mA/2mA

Performance Characteristics

Sensor Resolution	1280 x 960 pixels, rolling shutter
Field of View	Horizontal: 44.5°, vertical: 33.5°
Skew, Pitch & Roll	Skew tolerance: ±60° Pitch tolerance: ±60° Roll tolerance: 360°
Focal Distance	From front of engine: 6 in./15.24 cm
Aiming LED	Green LED
Illumination	1 warm white LED

Regulatory

LED Classification	Exempt Risk Group LED product per IEC/EN 62471
Electrical Safety	Complies with IEC/EN 60950-1 + A1 + A2 and UL 60950-1 Second Edition, 2014-10-14 and CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10. Complies with IEC/EN 62368-1:2014 (Second Edition) and UL 62368-1, 2nd Ed, 2014-12-01 and CAN/CSA C22.2 No. 62368-1-14, 2nd Ed.
Environmental	RoHS Compliant

Warranty

Subject to the terms of Zebra's hardware warranty statement, the SE4100 and SE4107 are warranted against defects in workmanship and materials for a period of 15 months from the date of shipment. For the complete Zebra hardware product warranty statement, go to:
https://www.zebra.com/warranty

Footnotes

* Specifications are subject to change.

Decode Ranges

Symbology/Resolution	Near/Far
5 mil Code 39	2.4 in./6.1 cm to 9.5 in./24.1 cm
5 mil Code 128	2.8 in./7.1 cm to 9.0 in./22.9 cm
6.67 mil PDF 417	2.4 in./6.1 cm to 8.0 in./20.3 cm
10 mil DataMatrix	2.9 in./7.4 cm to 8.5 in./21.6 cm
100% UPCA	1.8 in./4.6 cm to 19.5 in./49.5 cm
15 mil QR	1.2 in./3.0 cm to 11.5 in./29.2 cm
20 mil QR	1.2 in./3.0 cm to 14.0 in./35.6 cm

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