ZEBRA
CAPTURE YOUR EDGE

SE4720/SE4770 OEM 1D/2D Scan Engines

The ultimate in performance, flexibility and reliability in a small form factor

When it comes to selecting a scan engine for your designs, you want it all — a small form factor, best-in-class performance, easy integration and all the options you need to address product and customer requirements. Now, you can have it all with Zebra's SE4720 and SE4770 scan engines. You get the miniature size you need to fit in literally any design, making it easy to integrate imaging into your products — and enabling the creation of slimmer and lighter devices. You get advanced technology that delivers the unmatched scanning performance that has made Zebra the world's leader in barcode capture. And with a choice of aimer type, illumination color, interface and decoder, you get all the options you need to simplify and reduce the cost of creating the perfect device for your market, users and applications. Put the best "of all worlds in your product designs with the miniature scan engines that deliver it all — the Zebra SE4720/SE4770.

Get the Ultimate in Scanning Performance

Global shutter technology
The global shutter captures the entire image simultaneously, enabling fast capture of the barcode image.

High quality lens
The superior lens ensures the quality of the image from corner to corner.

Megapixel sensor
Provides the high resolution required to capture the clearest image.

PRZM Intelligent Imaging
Only from Zebra, PRZM's software decode algorithms deliver superior performance on poor quality and challenging barcodes, for first-time, every-time scanning.

Maximum motion tolerance
High first-pass read rates allow workers to quickly capture barcodes, whether the scanner or the barcode are in motion.

Wider field of view
Capture large barcodes and multiple barcodes quickly and easily with a larger 'sweet spot' — no need for users to spend time repositioning the device to capture the barcode.

Extraordinary working range
Capture barcodes farther than 24 in./60 cm away, allowing you to meet the needs of more types of users and applications.

Get the Ultimate in Flexibililty

Fits-anywhere design
At just a third of an inch high (8.1 mm) and a fifth of an ounce (6 grams), this tiny-but-mighty scan engine is easy to integrate into the smallest of spaces — ideal for the new generation of thin mobile devices and sleds, as well as mobile computers, handheld scanners, self-service kiosks, medical and diagnostic instruments and lottery terminals.

Choose your aimer type: LED or laser
The market for your products typically defines the type of aimer you need. That's why this miniature family of scan engines offers LED and laser aimers. The SE4720 offers LED aimers that are ideal in markets that prefer not to use lasers, such as healthcare. The SE4770 offers laser aimers, ideal for scanning at longer ranges or in bright sunlight, ensuring that the aimer is visible at longer ranges, indoors and outside.

Empower your slimmest designs with powerful next-generation imaging.
For more information, visit www.zebra.com/se4720-se4770

Choose your illumination and aimer color
The illumination and aimer color combination that will deliver the best scanning performance for your customers is dependent upon the types and colors of the barcodes that will be scanned. The SE4720 LED aimers are available in white illumination with a green aimer spot, or red illumination with a red aiming spot. And the laser aimers in the SE4770 are available in either white or red illumination, both with a sharp red laser cross hair.

Choose your interface
Both scan engines support the popular MIPI interface as well as the more traditional parallel interface. You get the freedom to utilize the processor best suited for your application without sacrificing cost, integration time, or precious space for incremental hardware components. The result? Faster time to market, reduced development costs, more competitive pricing and higher margins.

Choose the right decode option
When you choose the SE4720/SE4770, you also have the flexibility to choose the decoder strategy that best fits your product designs — software or hardware. Our software decode option allows you to further reduce space and system power requirements — ideal in the smallest of designs. Hardware options include three high-performance dual-core decoders that connect to your host.

Beyond the barcode to richly featured document capture
The advanced focusing, optical and illumination systems enable the SE4720/SE4770 to also capture photos for proof of delivery and damage claims, as well as documents. With Zebra's integrated Intelligent Document Capture technology, it's easy to capture documents that are highly legible— and searchable. With the single press of a button, this intelligent software determines when conditions are ideal to capture the highest quality image, taking the guesswork away from users. Once the image is captured, it is automatically analyzed and up to eight functions are performed as needed. In a fraction of a second, without any user intervention, shadows and noise are removed, and images are de-skewed, rotated, brightened, sharpened and cropped.

Get the Ultimate in Reliability

Proven technology from the proven world leader in scanning technology
When you choose the SE4720/SE4770, you get the peace of mind that comes from choosing superior, well-tested technology. Every day, all around the world, our OEM products power over tens of millions of devices in thousands of applications in practically every industry. In addition to fast and easy integration into your products, Zebra's highly reliable, award-winning data capture technology delivers superior performance, enabling the rapid, cost-effective design of more profitable high-quality data capture solutions.

SE4720/SE4770 Series Specifications

Physical Characteristics	
Dimensions	0.32 in. H x 0.88 in. W x 0.54 in. D 8.1 mm H x 22.3 mm W x 13.7 mm D
Weight	0.17 oz +/- 0.008 oz/4.85 g +/- 0.25 g
Interface	**SE4720:** Camera Port on 27 pin ZIF connector; supports parallel or MIPI interface **SE4770:** Camera Port on 21 pin ZIF connector; separate configurations for parallel or MIPI interface
User Environment	
Ambient Light	Max 107,639 lux (direct sunlight)
Operating Temperature	-22° F to 140° F/-30° C to 60° C
Storage Temperature	-40° F to 158° F/-40° C to 70° C
Humidity	Operating: 95% RH, non-condensing at 140° F/60° C Storage: 85% RH, non-condensing at 158° F / 70° C
Shock Rating	2000 ± 100 g, ½ sine, 0.85 ± 0.1 msec shock, +X, –X, +Y, –Y, +Z, –Z directions, 6 shocks in each direction for a total of 36 shocks at -22° F/-30° C and 140° F/60° C 2500 ± 100 g, ½ sine, 0.70 ± 0.1 msec shock, +X, –X, +Y, –Y, +Z, –Z directions, 6 shocks in each direction for a total of 36 shocks at 68° F/20° C
Power	Operational Input voltage engine: VCC = 3.3 +/- 0.3 V; VCC_ILLUM = 5.0 +/- 0.5 V; VDD_IO_HOST = 1.7 to 3.6 V Total 3.3 V Current Draw (VCC = VDD_IO_HOST = 3.3 V) with illumination and aiming on = 180 mA Total 5V Current Draw (VCC_ILLUM = 5.0 V) with illumination and aiming on = 400 mA Pk for 4 ms or 1,200 mA for .63 ms Current Draw in Low-Power Modes (Idle / Hibernate / Standby) = 55mA / 0.55mA / <0.005 mA
Performance Characteristics	
Sensor Resolution	1280 x 800 pixels
Field of View	Horizontal: 48°, Vertical: 30°
Skew Tolerance	+/- 60°
Pitch Tolerance	+/- 60°
Roll Tolerance	360°

Performance Characteristics (continued)	
Focal Distance	From front of engine: 7.00 in./17.8 cm
Aiming VLD	**SE4720:** 606 nm Orange or 525 nm Green LED **SE4770:** 655 nm Laser
Illumination	One (1) Hyper Red 660 nm LED or one (1) Warm-White LED
Regulatory	
Classification	**SE4770 (Laser Aim):** Intended for use in CDRH Class II/IEC 825 Class 2 devices **SE4720 (LED Aim):** Classified as Exempt Risk Group per IEC/EN 62471
Electrical Safety	**SE4770 (Laser Aim):** UL, VDE and CU recognized laser component **SE4720 (LED Aim):** UL Recognized Component which complies with IEC/EN 60950-1
Environmental	RoHS Compliant

Decode Ranges (Typical Working Ranges)[1]	
Symbology/Resolution	**Near/Far**
Code 39: 3 mil	3.0 in. / 7.6 cm to 5.8 in. / 14.7 cm
Code 128: 5 mil	2.3 in. / 5.8 cm to 9.8 in. / 24.9 cm
PDF417: 5 mil	3.0 in. / 7.6 cm to 7.9 in. / 20.1 cm
PDF 417: 6.67 mil	2.5 in. / 6.3 cm to 10.1 in. / 25.7 cm
DataMatrix: 10 mil	2.1 in. / 5.3 cm to 11.0 in. / 27.8 cm
UPCA (100%)	1.6 in. / 4.1 cm to 24.9 in. / 63.2 cm
Code 128: 15 mil	2.4 in. / 6.1 cm to 27.8 in. / 70.6 cm
Code 39: 20 mil	1.6 in. / 4.1 cm to 36.1 in. / 91.7 cm
QR Code: 20 mil	1.1 in. / 2.8 cm to 17.5 in. / 44.5 cm

Warranty

Subject to the terms of Zebra's hardware warranty statement, the SE4720/SE4770 is warranted against defects in workmanship and materials for a period of fifteen (15) months from the date of shipment. For the complete Zebra hardware product warranty statement, please visit: www.zebra.com/warranty

Footnotes

1. Printing resolution, contrast and ambient light dependent

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