SE4850 Extended Range Scan Engine

Extended range performance for industrial environments

Create mobile devices that can help your customers improve end-to-end efficiency and throughput. From barcodes and documents in hand to barcodes on the uppermost warehouse rack, the Zebra SE4850 Extended Range Scan Engine with IntelliFocus™ technology utilizes intelligent autofocus to quickly determine barcode distance and then capture it. Scan barcodes from near contact to over 70 ft./21.3 m away, providing the flexible range required to support virtually any industrial application. PRZM Intelligent Imaging Technology ensures first-time, every-time scanning. Rugged construction provides the durability required in warehouses, manufacturing plants and other industrial environments. Multiple decode options enable easy integration into any design, no matter how space constrained. Boost productivity for your customers with the SE4850, the imager built to meet the demands in today's industrial environments.



Advanced Technologies for Superior Performance

IntelliFocus Technology Helps You Scan Near and Far

IntelliFocus™ technology easily captures 1D and 2D barcodes in a variety of conditions over a wide working range, in hand or across the room. With adjustable illumination and intelligent autofocus, users do not have to sacrifice scanning speed for working range.

The Ultimate Working Range

Two 1 MP imagers deliver an extraordinary working range — from 3 in./7.6 cm to over 70 ft/21.3 m. And since the fixed near imager and variable focus far imager eliminate the typical dead spots where dual imagers overlap, the result is flawless barcode capture over the entire scanning range.

High Quality Lens

The superior lens ensures the quality of the image from corner to corner for fast, dependable decoding.

Illumination System

The patented advanced optics technology eliminates the need for two illumination systems and minimizes the amount of required light. Illumination is automatically adjusted — the closer the scanner is to the barcode, the less illumination is generated. The result? Barcodes in any condition can be easily captured in any lighting condition — from the dimmest corners of the warehouse to bright sunlight — all with less power and longer battery cycle times on the host device.

Rugged Industrial Construction

You and your customers can count on durability and reliability in demanding conditions. With its rugged all-metal construction and an unprecedented 2500G shock rating, the SE4850 thrives in demanding industrial environments.

Get the industrial scan engine that provides IntelliFocus barcode capture technology, extended range scanning, versatility, performance and durability.

For more information, visit www.zebra.com/se4850

Ease of Use

Innovative Laser Aimer Pattern for easier Close-up and Extreme Range Scanning

Take the guesswork out of aiming at any range with the specially designed aimer pattern. Two dashes appear to the right and left of the standard aiming dot, making it easy to see at the maximum scanning distance of 70 ft/21.3 m. The pattern also makes it easy to scan large barcodes at close range — simply position the barcode within the outermost edges of the aiming pattern for first-time capture of every barcode. And the bright laser aimer is easy to see in any lighting condition.

PRZM Intelligent Imaging

Dramatically accelerate time to decode with Zebra's PRZM Intelligent Imaging patented decode technology that offloads a portion of the decoding process to the ASIC, instead of the processor. The PL5000 or SDL decoder can then interpret and transmit the data at impressive speeds to keep workers moving.

Exceptional Motion Tolerance

Enables extraordinary scanning speed — no need for workers to pause between barcodes, increasing throughput and productivity in any application.

Omni-Directional Scanning

Give users true 'point and shoot' simplicity — no need to waste time aligning scanner and bar code.

Easy to Integrate

Choose Your Decode Option

Choose the decoder strategy that best fits your product designs — hardware or software. Two hardware options meet different needs: The PL5000A MIPI miniature decoder board fits in the smallest of products, while the PL5000C Ball Grid Array can be soldered onto your circuit board to more deeply embed Zebra scanning functionality into your products — and take less space. Zebra's software-only decoding option doesn't require any space, so it can fit into any design. There is no hardware to purchase and integrate, reducing cost and time to market — and no hardware to power, extending battery cycle times on the host device.

Enables a Multitude of Industrial Applications

Provides the flexibility to enable many industrial applications, from barcode capture on the production line to ensure the right part is utilized at the right time or in the warehouse to ensure the right items are picked for orders — or capturing a bill of lading at the receiving dock to streamline recordkeeping. Since you no longer need multiple engines to offer multiple types of data capture, you can standardize on a single engine, streamlining and reducing the cost of product development.

Specifications

Physical Characteristics

Dimensions	0.75 in. H x 1.5 in. W x 0.98 in. D 19.0 mm H x 38.0 mm W x 25.0 mm D
Weight	1.41 +/- 0.07 oz./40 +/- 2 g
Interface	27 pin 0.3 mm pitch ZIF connector, MIPI

User Environment

Ambient Light	10,000 ft candles (107,639 lux)
Operating Temp.	-4° F to 140° F/-20° C to 60° C
Storage Temp.	-40° F to 158° F/-40° C to 70° C
Humidity	5% to 95% (non-condensing), not intended for exposed operation
Shock Rating	2000: G ±5%, any mounting surface, at -20° C and 55° C for 0.85 ±0.1 ms 2500: G ±5%, any mounting surface, at 23° C for 0.70 ±0.10 ms
Power	Operational Input voltage Engine: VCC_ENGINE = 3.3 +/- 0.3V; VCC_SENSOR = 3.3 +/- 0.3V VCC_HOST: 1.8 to 3.6V VCC_ILLUM: 2.9 to 5.5V Total 3.3V Current Draw = 200mA to 600mA typical, depending on barcode distance (600mA to 1,000mA peak) Current Draw in Low-Power Modes (Idle / Hibernate1 / Hibernate2 / Standby) = 80mA / 3.3mA / 1.3mA / 0.38mA

Performance Characteristics

Sensor Resolution	1280 horizontal x 800 vertical pixels
Field of View	Far: Horizontal: 12°, Vertical: 7.6° Near: Horizontal: 32°, Vertical: 20°
Skew Tolerance	±60°
Pitch Tolerance	±60°
Roll Tolerance	360° Focal distance from front of engine: Far: Multiple focusing distances ranging from 15 in. – 350 in./381 mm – 8,890 mm Near: 11 in./279.4 mm
Aiming Element	655 nm Laser
Illumination Element	Hyper Red 660 nm LED
Min. Print Contrast Minimum	25%

Regulatory

Laser/LED Classification	Laser: Class 2 IEC60825:2014 LED: Exempt Risk Group IEC62471
Environmental	RoHS Compliant

Decode Ranges (Typical Working Ranges)

Symbology/Resolution	Near — Far
10 mil Code 39	3.0 in./7.6 cm* — 85.0 in./215.9 cm
13 100% UPC	3.5 in./8.9 cm — 100 in./254 cm
15 mil Code 128	5.0 in./12.7 cm* — 115 in./292.1 cm
20 mil Code 39	3.0 in./7.62 cm* — 180.0 in./457.2 cm
40 mil Code 39	6.0 in./15.2 cm* — 340.0 in./863.6 cm**
55 mil Code 39	7.0 in./17.8 cm* — 430.0 in./1092.2 cm**
100 mil Code 39 (paper)	15.0 in./38.1 cm* — 840.0 in./2133.6 cm**
100 mil Code 128 (reflective)	20.0 in./50.8 cm* — 840.0 in./2133.6 cm**
DataMatrix 10	5.0 in./12.7 cm — 45.0 in./114.3 cm
DataMatrix 55	5.0 in./12.7 cm — 250.0 in./635.0 cm
15 mil Code 128 (4 in. wide)	8.0 in./20.3 cm* — 110.0 in./279.4 cm
	* Depends on the width of the bar code (shorter bar codes can be read even closer, and wider bar codes farther). ** Range is reduced under lower ambient light level.

Warranty

Subject to the terms of Zebra's hardware warranty statement, the SE4850 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

Markets and Applications

- Transportation and Logistics
- Warehouse
- Manufacturing

NA and Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
contact.apac@zebra.com

EMEA Headquarters
zebra.com/locations
contact.emea@zebra.com

Latin America Headquarters
zebra.com/locations
la.contactme@zebra.com

ZEBRA and the stylized Zebra head are trademarks of Zebra Technologies Corp., registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners. ©2024 Zebra Technologies Corp. and/or its affiliates. 10/13/2022 HTML