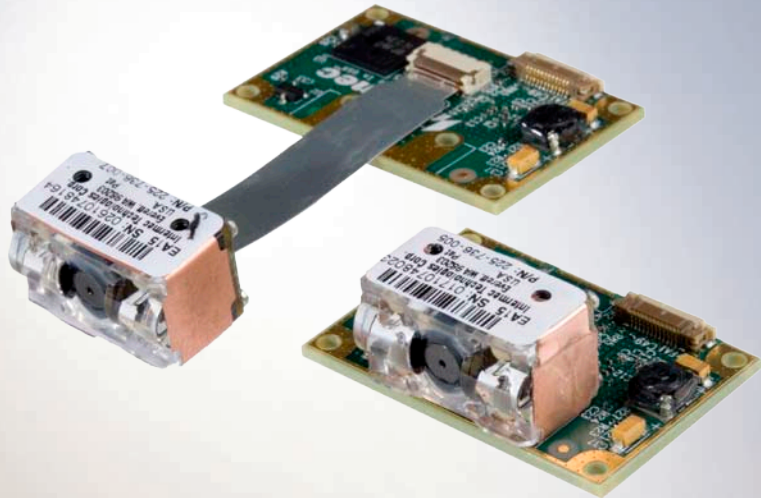


EA15

2-D Imager Engine



- Reads 1-D and 2-D barcodes
- Extremely durable, compact size for hassle-free integration
- Provides omni-directional scanning
- Twice as fast as traditional 2-D imagers
- Unmatched motion tolerance
- Available in standard and high-density
- Four configurations available to meet your requirements

The EA15 is an ultra-compact high performance 2-D imager engine, ideal for OEM applications in both mobile and fixed devices including handheld terminals and scanners, PDAs, medical devices, kiosks, lottery terminals and access control devices.

Everything has been done to simplify the integration of the EA15 engine: compact size, multiple mounting possibilities, low power 3.3 V operation, and standard RS232 interface. In fact, the EA15 interface is compatible with other Intermec decoded engines enabling an easy transition from linear to bi-dimensional scan engines, allowing end users to leverage their integration and design efforts across multiple OEM product platforms, reducing time to market and insuring cross platform compatibility for easier product migration. To ease the mechanical integration into a large variety of host devices, the EA15 is available in two versions: integral engine or separated engine and decode board.

The EA15 combines decode speed with unmatched motion tolerance to deliver an easy to use scanner with aggressive performance. Based on state-of-the-art CMOS technology for optimal image sensitivity and dynamic range, the EA15 features scanning speeds two times faster than traditional 2-D imagers.

Thanks to its 2-D omni-directional decoding and imaging capabilities, the EA15 is ready to meet future application needs. Using the latest Intermec algorithms, the EA15 decodes down to one pixel per dot, providing an outstanding decode performance even on poorly printed or damaged barcodes.

In addition, the EA15 offers uncompromised performance on current applications that include linear barcodes. The EA15 Performance Aiming System emulates the operation of linear imagers. This leads to very high scan rates (up to 200 scans per second) on linear barcodes, which is more than five times faster than traditional 2-D imagers.

The EA15 is built to match the most demanding scanning requirements, providing consistent scanning performance in total darkness to full sunshine and over a large temperature range.

The EA15 is based on solid state technology and complies with the most stringent standards for exposure to shock and vibration.

Physical Characteristics

Scan engine: 20.9 mm W x 14.0 mm D x 12.4 mm H (.8 in W x .55 in D x .5 in H)
Decode board: 38.1 mm W x 25.4 mm D x 6.6 mm H (1.50 in W x 1 in D x .26 in H)
Decoded 2D module: 38.1 mm W x 26.8 mm D x 16.0 mm H (1.50 in W x 1.5 in D x .6 in H)
Weight: 10g (0.35 oz.)

Scanning Performance

Scan Rate: 2D mode: 56 images/s auto adaptive
Linear emulation mode: 200 scans/s auto adaptive

Scan angle: 38.9° (Horizontal), 25.4° (Vertical)
Optical resolution: 752 (H) x 480 (V) pixels,
256 gray levels

Print Contrast: down to 25%
Versions: Standard range and high density

Symbologies

1D symbologies: EAN/UPC, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, postal codes.
2D symbologies: Data Matrix, PDF417, Micro PDF 417, Maxicode, QR, Aztec, EAN.UCC composite

Interfaces

High speed RS232 TTL with Intermec Scanner Control Protocol (ISCP), SPI

Connection

12 pin ZIF connector, pitch 0.5 mm (0.2 in)

Electrical Characteristics

Voltage: 3.3V+/- 5%
Current: 370mA @ 3.3V scanning with power save
Idle: 40mA
Standby current: 7mA

Environmental Characteristics

Ambient light: Works in any lighting conditions, from 0 to 100 000 lux
Operating temperature: -20° to 60° C (-4° to 140° F)
Storage temperature: -30° to 70° C (-22° to 158° F)
Relative humidity: 5% to 95% (non-condensing)
Shock: 2000G, 0.7ms, half sinus, 3 axes
Vibration: 8G r.m.s., from 10Hz to 500Hz, 2 hours/axis, 3 axes

Regulatory Approvals

UL recognized component, VDE certified, RoHS Compliant

Typical Reading Distances

Standard

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.125 mm/5 mils	7.2 cm/2.8"	13.1 cm/5.1"
	0.20 mm/8 mils	3.8 cm/1.5"	22.5 cm/8.8"
	0.25 mm/10 mils	3.4 cm/1.3"	27 cm/10.5"
	0.5 mm/20 mils	5 cm/2"	44 cm/17.2"
	1 mm/40 mils	8 cm/3.1"	83 cm/32.4"
UPC/EAN	0.33 mm/13 mils	5 cm/2"	32 cm/12.5"
Data Matrix	0.191 mm/7.5 mils	6.3 cm/2.5"	17.3 cm/6.7"
	0.254 mm/10 mils	4.8 cm/1.9"	22 cm/8.6"
	0.381 mm/15 mils	*	29 cm/11.3"
PDF417	0.16 mm/6.6 mils	6.2 cm/2.4"	15.4 cm/6"
	0.254 mm/10 mils	4.5 cm/1.8"	23 cm/9"
	0.381 mm/15 mils	4 cm/1.6"	37 cm/14.4"

*Minimum distance depends on symbology length and scan angle

High Density

Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm/4 mils	5.4 cm/2.1"	10.5 cm/4.1"
	0.125 mm/5 mils	4.7 cm/1.8"	13.3 cm/5.2"
	0.15 mm/6 mils	4 cm/1.6"	14.5 cm/5.7"
	0.20 mm/8 mils	3.5 cm/1.4"	17.6 cm/6.9"
	0.25 mm/10 mils	3.7 cm/1.4"	19.6 cm/7.6"
0.5 mm/20 mils	5 cm/2"	27.8 cm/10.8"	
UPC/EAN	0.33 mm/13 mils	5 cm/2"	21.9 cm/8.5"
Data Matrix	0.168 mm/6.6 mils	5.5 cm/2.1"	11.6 cm/4.5"
	0.191 mm/7.5 mils	4.4 cm/1.7"	15.1 cm/5.9"
	0.254 mm/10 mils	4.2 cm/1.6"	17.3 cm/6.7"
PDF417	0.125 mm/5 mils	5.6 cm/2.2"	11.4 cm/4.4"
	0.168 mm/6.6 mils	4 cm/1.6"	15 cm/5.9"
	0.254 mm/10 mils	3.7 cm/1.4"	18.8 cm/7.3"

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