EV14

Value Performance
APS Scan Engine
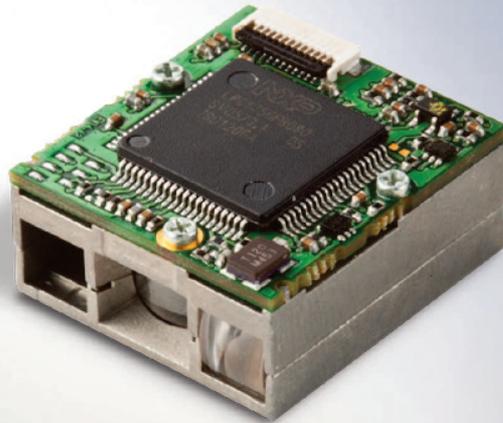
- **High performance** - reads up to 200 scans per second

- **High definition** - capable of reliably reading codes down to 4 mils resolution

- **Visible aimer** - casts a unique, bright and sharp LED illumination

- **Outstanding reliability** - no moving parts and a rated MTBF above 250,000 hours

- **Investment protection** - Intermec-owned linear CMOS sensor and field upgradable firmware

- **Battery friendly** - optimized for running on low power sources (3.3V, <120 mA)

- **Interface flexibility** - USB or RS232 TTL interface

Combining compact size ($5.2cm^3$/$0.32in^3$) and great scanning performance, the EV14 is the value version of the Intermec best-selling EV15 engine. The EV14 is based on the Intermec linear CMOS sensor using state-of-the-art Active Pixel Sensor (APS) technology. The EV14 is ideal for OEM applications where space is limited for scanner integration in both portable and fixed devices, including handheld terminals, PDAs, PC and cell phone peripherals, lottery terminals, time and attendance terminals, automated access control, sorting machines and more.

Outstanding Reliability
With no moving parts and no laser diode, the EV14 is designed to be very reliable. With an MTBF above 250,000 hours, it also has a longer life than typical laser scanners. Its rugged design means it can withstand 2000G shocks and 8G vibrations and can be used in a wide temperature range.

Low Power
The EV14 provides easy electrical connection. The 3.3V low power operation is ideal for preserving battery life in mobile applications. Additionally, the standby current is reduced to micro amps to preserve the host device battery when the scan engine is not in use.

Unique Reading Performance
The EV14 benefits from the latest generation of Intermec standard algorithms, delivering great performance. To meet the growing demand for e-couponing, virtual loyalty cards and access control applications, the EV14 is capable of reading bar codes displayed on LCD or mobile phone screens. A high scan rate and depth of field make it possible to read poorly printed, damaged, low contrast, wide or high density bar codes.

Bright and Sharp
The EV14 uses a unique 617nm illumination system to provide a safe and sharp aiming line. With the EV14, you can clearly see what you are scanning, even in brightly lit or backlit conditions, thus improving usability and throughput.

Protect Your Investment
Ultra compact, reliable and easy to integrate, the EV14 is field upgradable (flash memory) as a provision for future requirements. You can also choose to run it either on USB or RS232 TTL interface.

The EV14 interface is compatible with our existing 2D image decode boards. This interchangeability makes it easy to switch from 1D to 2D imaging in your designs, simplifying your migration path and future-proofing your solution.

Integrate the power of Intermec APS technology into your design. Choose EV14 and set your solution apart from the competition.

Intermec®

Design
Processor: New generation CPU
Sensor: APS CMOS linear image sensor
Light Source: 617 nm bright and sharp scanning line

Scanning Performance
Scan Rate: 200 scans/s
Scan Angle: 40°
Print Contrast: Down to 25%
Min X. Dimension: 0.10 mm (4 mils)
Reading Distance: Up to 51 cm (20 in)

Physical Characteristics
Dimensions (HxDxW):
11.4 x 22.5 x 20.6 mm (0.45 x 0.89 x 0.81 in)
Weight: 12 g

Symbologies
UPC (E&A), EAN, GS1 dataBar, 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

Interfaces
Decoded Mode: USB 2.0 full speed and RS232 TTL with Intermec Scanner Control Protocol (ISCP)

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

Electrical Characteristics
Voltage: 3.1 to 3.6V
Current: <120 mA typical @ 3.3 V
Standby Current: <60 µA

Environmental Characteristics
Operating Temperature: -30° to 50°C (-22° to 122°F)
Storage Temperature: -40° to 70°C (-40° to 158°F)
Relative Humidity: 5% to 95% (non-condensing)
Shock: 2000G, 0.7 ms, half sinus, 3 axes
Vibration: Random, 8 Grms, 10-500 Hz, 3 axes
**Ambient Light:** Works in any lighting conditions (0 to 100,000 lux)

Regulatory Approvals
UL Recognized Component, LED Class 1, VDE Certified, RoHS, China RoHS, WEEE Compliant

Accessories
Demonstration kit

EV14 Typical Reading Distances
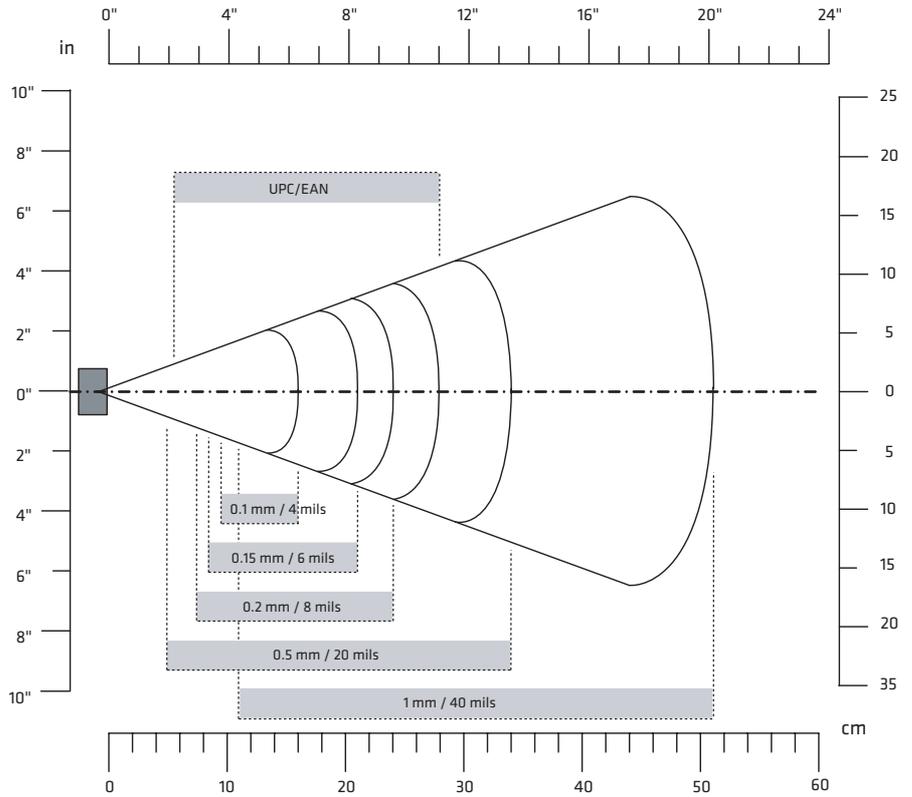
Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm / 4 mils	9.5 cm / 3.74 in	16 cm / 6.30 in
	0.125 mm / 5 mils	9 cm / 3.54 in	19 cm / 7.48 in
	0.15 mm / 6 mils	8.50 cm / 3.35 in	21 cm / 8.27 in
	0.2 mm / 8 mils	7.5 cm / 2.95 in	24 cm / 9.45 in
	0.5 mm / 20 mils	5 cm / 1.97 in	34 cm / 13.39 in
	1 mm / 40 mils	11* cm / 4.33 in	51 cm / 20.08 in
UPC/EAN	0.33 mm / 13 mils	5.50 cm / 2.17 in	28 cm / 11.02 in

*Minimum distance depends on bar code width.

RoHS compliant

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