Near/Far 2D Imager Engine
3rd Generation

EX25

Revolutionary Scanning Performance to Improve Productivity

The EX25 from Intermec is the industry’s first bar code 2D imager that provides integrated near/far scanning technology featuring unparalleled flexibility to read 1D and 2D barcodes, omni-directionally at distances from 6 inches to over 50 feet (15 cm to 15m). This 3rd generation of revolutionary scanning technology translates into significant increases in user productivity.

The new EX25 advances scanning technology and delivers new levels of customer satisfaction with such enhancements as increased reading range of more than 30%. Its wider optical angle allows reading at closer distances than ever before. The EX25 efficiently reads 1D bar codes down to 3mils while enhancing user comfort.

The versatility of the EX25 eliminates the need for multiple barcode optics in OEM products, but also captures high quality images up to 1Mpix, extending its benefits to OEM customers and value add to the end user.

Breakthrough Features for Increased Ease of Use

Its omni-directional reading capability, coupled with a highly visible laser pointer, allows users to seamlessly transition between scanning – from objects up close to 15 meters (50 feet) away. This is done without requiring the user to move from their location, even in variable lighting conditions and angles.

Unparalleled Construction for Use in Any Situation

Designed to work in the most hostile environments, the EX25 operates from total darkness to full sunshine while being exposed to a wide temperature range. The EX25 also complies with the most stringent standards for shock and vibration.

Confidence Now and Protection for the Future

This exciting and powerful engine shares the same Intermec Scanner Control Protocol as other Intermec engines, supporting enhanced and integrated design efforts across multiple OEM product platforms. For Intermec scan engine customers, this results in reduced time to market and support for improved product migration.

Everything has been done to simplify the integration of the EX25 engine into space-constrained OEM devices, including its highly durable design, compact size, low power 3.3 V operation, and standard decoded RS232 interface.

- Class leading – the only auto-focusing 2D imager that can read near and far field, up to 50ft/15m
- High performing – reads poorly printed, damaged and bar codes down to 3mil resolution
- Rugged – designed to withstand extreme temperatures, vibrations and shock constraints, for extended and consistent use in tough environments
- Ergonomic – omni-directional bar code reading and fast “aim and scan” operation, optimized for operator productivity
- Future proofed – reads 1D, composite, stacked and 2D bar codes, to comply with the newest industry standards
- Powerful – captures high resolution images (1Mpix), extending application and customer use
- Purpose-built – extremely compact dimensions fit the tightest mechanical constraints, including the industry standard RS232 interface and the common Intermec communication protocol (ISCP)
The breakthrough features of the EX25 – including the ability to support 1D, stacked, composite and 2D matrix codes – provides users with assurance their investment is protected long-term while providing immediate support for current industry standards.

**Design**

- **Technology:** Auto-Focus 2D imager
- **Light Source:** Auto-adaptive illumination: 617 nm highly visible LEDs
- **Aimer:** 650nm Class 2 Laser

**Physical Characteristics**

- **Dimensions (Wx Dx H):** 34 mm x 33.7 mm x 21 mm (1.34 in x 1.33 in x .83 in)
- **Weight:** 32 g (.113 oz.)

**Scanning Performance**

- **Scan Rate:** up to 30 frames/s auto adaptive
- **Scan angle:** 14° (Horizontal), 8.7° (Vertical)
- **Optical resolution:** 1280 (H) x 800 (V) pixels, 256 gray levels
- **Min x. dimension:**
  - 1D codes: 0.075 mm (3 mils)
  - 2D codes: 0.167 mm (6.6 mils)
- **Print contrast:** down to 40%

**Symbologies**

- **2D symbologies:** Data Matrix, PDF417, Micro PDF 417, Codablock, Maxicode, QR, Aztec, GS1 composite codes

**Interfaces**

- **Connector:** 14 pin ZIF, pitch 0.5 mm (0.2 in)
- **Decode and image transfer:** High speed RS232 TTL (up to 460kbauds)
- **Intermec Scanner Control Protocol (ISCP)**

**Electrical Characteristics**

- **Voltage:** 3.3V +/- 5%
- **Max Current:**
  - Imager: 450 mA
  - Laser: 230 mA
- **Standby current:** <32 mA
- **Hybernate current:** <3 mA

**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:** -40° to 70°C (-40° 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

**Symbology Density**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Density</th>
<th>Min Distance</th>
<th>Max Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 39</td>
<td>0.25 mm</td>
<td>10 mils</td>
<td>135 cm</td>
</tr>
<tr>
<td></td>
<td>0.5 mm</td>
<td>16 cm</td>
<td>280 cm</td>
</tr>
<tr>
<td></td>
<td>1 mm</td>
<td>25 cm</td>
<td>550 cm</td>
</tr>
<tr>
<td></td>
<td>1.4 mm</td>
<td>40 cm</td>
<td>720 cm</td>
</tr>
<tr>
<td></td>
<td>2.5 mm</td>
<td>100 mils</td>
<td>1200 cm</td>
</tr>
<tr>
<td>Code 128</td>
<td>2.5 mm</td>
<td>*</td>
<td>1300 cm</td>
</tr>
<tr>
<td></td>
<td>0.33 mm</td>
<td>15 cm</td>
<td>160 cm</td>
</tr>
<tr>
<td>EAN 100%</td>
<td>0.25 mm</td>
<td>10 mils</td>
<td>90 cm</td>
</tr>
<tr>
<td></td>
<td>0.76 mm</td>
<td>25 cm</td>
<td>310 cm</td>
</tr>
<tr>
<td></td>
<td>1.4 mm</td>
<td>55 mils</td>
<td>172.17 in</td>
</tr>
<tr>
<td></td>
<td>2.5 mm</td>
<td>*</td>
<td>450 cm</td>
</tr>
<tr>
<td></td>
<td>7.62 mm</td>
<td>20 cm</td>
<td>1524 cm</td>
</tr>
</tbody>
</table>

*Depends on symbology length and scan angle

---

**Typical Reading Distances**

- **Typical reading distances measured at 20°C, 200 lux on A grade labels**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Density</th>
<th>Minimum Distance</th>
<th>Maximum Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 39</td>
<td>0.25 mm</td>
<td>5.91 in</td>
<td>53.15 in</td>
</tr>
<tr>
<td></td>
<td>0.5 mm</td>
<td>6.30 in</td>
<td>110.24 in</td>
</tr>
<tr>
<td></td>
<td>1.0 mm</td>
<td>9.84 in</td>
<td>216.54 in</td>
</tr>
<tr>
<td></td>
<td>1.4 mm</td>
<td>15.75 in</td>
<td>283.46 in</td>
</tr>
<tr>
<td></td>
<td>2.5 mm</td>
<td>*</td>
<td>472.44 in</td>
</tr>
<tr>
<td>Code 128</td>
<td>2.5 mm</td>
<td>*</td>
<td>1300 cm</td>
</tr>
<tr>
<td>EAN 100%</td>
<td>0.33 mm</td>
<td>5.91 in</td>
<td>62.99 in</td>
</tr>
<tr>
<td>Data Matrix</td>
<td>0.25 mm</td>
<td>5.91 in</td>
<td>35.43 in</td>
</tr>
<tr>
<td></td>
<td>0.76 mm</td>
<td>9.84 in</td>
<td>122.05 in</td>
</tr>
<tr>
<td></td>
<td>1.4 mm</td>
<td>*</td>
<td>450 cm</td>
</tr>
<tr>
<td></td>
<td>7.62 mm</td>
<td>7.9 in*</td>
<td>1524 cm</td>
</tr>
<tr>
<td></td>
<td>300 mils</td>
<td>*</td>
<td>433.07 in</td>
</tr>
</tbody>
</table>

---

© 2013 Honeywell International Inc.

---

**Intermec by Honeywell**