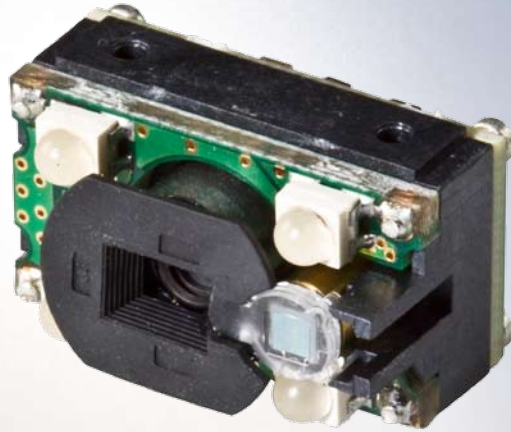


# EA21

DECODED 2D IMAGER  
*Megapixel, Wide  
Angle Optics  
Document Capture and  
barcode reading*



- High resolution document capture, up to A4 format
- Space-saving; combined high performance barcode scanning and document capture in one form factor
- Reduces cost of ownership by reducing development time & eliminating the need for 2 optics
- Future proofed: Reads any 1D & 2D barcodes omni-directionally and provides image capture and analysis opportunities
- New: Available with the industry smallest USB 2.0 high performance decoding board, to add decoding speed and further save room
- Highly visible laser aiming frame – Enhanced comfort in use, from total darkness to bright sunshine environments
- Plug compatible with Intermec EA11 & EA20X 2D Imagers – Leverages your design efforts & provides interchangeability
- Highly durable design – Built to withstand harsh environments

The EA21 not only provides high performance 1D & 2D barcode scanning at standard range but goes beyond: With its wide angle and large sensor it can be used for various image capture and image analysis applications.

By combining 2D barcode scanning and Megapixel document imaging into a pico size form factor, EA21 is the ideal solution for mobile products with the most stringent mechanical constraints. This provides freedom in your total product design to achieve the smallest and lightest result possible.

EA21 is very flexible and captures images in 99% of lighting conditions. Intermec's highly visible laser aimer ensures that the user can easily target images and barcodes. The laser projects both a laser pointer and a four corner framer and additional LEDs provide flood illumination.

Powered by Intermec patented decoding and leading edge hardware, the EA21 is designed for intensive scanning usage on standard 1D and 2D barcodes for maximum scanning productivity and accuracy. EA21 is available with the industry smallest USB 2.0 decode board (ED40 High Performance decode board). It does not only increase decoding performances but it is the ideal choice to transfer efficiently videos and images with the EA21.

EA21 is part of the 2D imager Intermec family: It is designed for inter-changeability; it is plug compatible with the Intermec EA11 & EA20X 2D Imagers. It uses the same decode board and communication protocol. Engineering efforts can therefore be leveraged and development time reduced.

For larger volume requirements a reference design option is available to optimize space constraints even further. EA21 is flash upgradable and is configurable on-line or off-line, to best match your product requirements and be ready to upgrade to the latest market demands.

As for all Intermec scan engines, EA21 is designed to work in the most hostile environments. It operates from total darkness to full sunshine over a large temperature range and complies with the most stringent standards for shock and vibration.

By choosing Intermec, you are choosing to work with the industry's imaging market leader: With more than 40 years of experience, Intermec offers the widest range of 2D Imagers and maintains a dedicated in house engineering team specialized in imaging and decoding, securing your partnership for the long term.

### Physical Characteristics

**Scan engine:** 20.6 mm W x 13.4 mm D x 12.5 mm H (.81 in W x .53 in D x .49 in H)  
**Decode board (ED40):** 34 mm W x 19 mm D x 5.6 mm H (1.34 in W x .75 in D x .22 in)  
*Mounting of the scan engine on the decode board (bracket mounted) is optional*  
**Weight:**  
**Scan engine:** <10g (0.35 oz.)  
**Decode board:** 6g (0.21oz.)

### Scanning Performance

**Light Source:** 617nm Highly Visible LED, 650nm Laser Framing/Aiming  
**Scan Rate:** 2D mode: 30 images/s auto adaptive  
**Scan angle:** 48.0° (Horizontal), 31° (Vertical)  
**Framing Angles:** 47.0° (Horizontal), 30.0° (Vertical)  
**Optical resolution:** 1280 (H) x 800 (V) pixels, 256 gray levels  
**Print Contrast:** down to 30% on 1D and 2D symbologies  
**Min. Resolution:** 1D symbologies 0.15mm (6mil), 2D matrix 0.25mm (10mil)

### Symbologies

**1D symbologies:** EAN/UPC, GS1 Databar (limited expanded & omni-directional), 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 (Australian Post, BPO, Canada Post, Dutch Post, Japan Post, PostNet, Sweden Post)  
**2D symbologies:** Data Matrix, PDF417, Micro PDF 417, Codablock Maxicode, QR, Aztec GS1 composite codes

### Interfaces

High speed USB 2.0 & RS232 TTL with Intermec Scanner Control Protocol (ISCP)

### Connection

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

### Electrical Characteristics

#### Optics only, typical values:

**Voltage:** 3V -5%/+10%  
**Operating Current, typical:** 85 - 215mA (lighting conditions dependent)  
**Power saving mode:** 2mA  
**Optics + decode board, typical values:**  
**Voltage:** 3V to 5.5V

**Operating current:** decode board & voltage dependent; refer to the ED30 & ED40 Integration Guides for detailed information

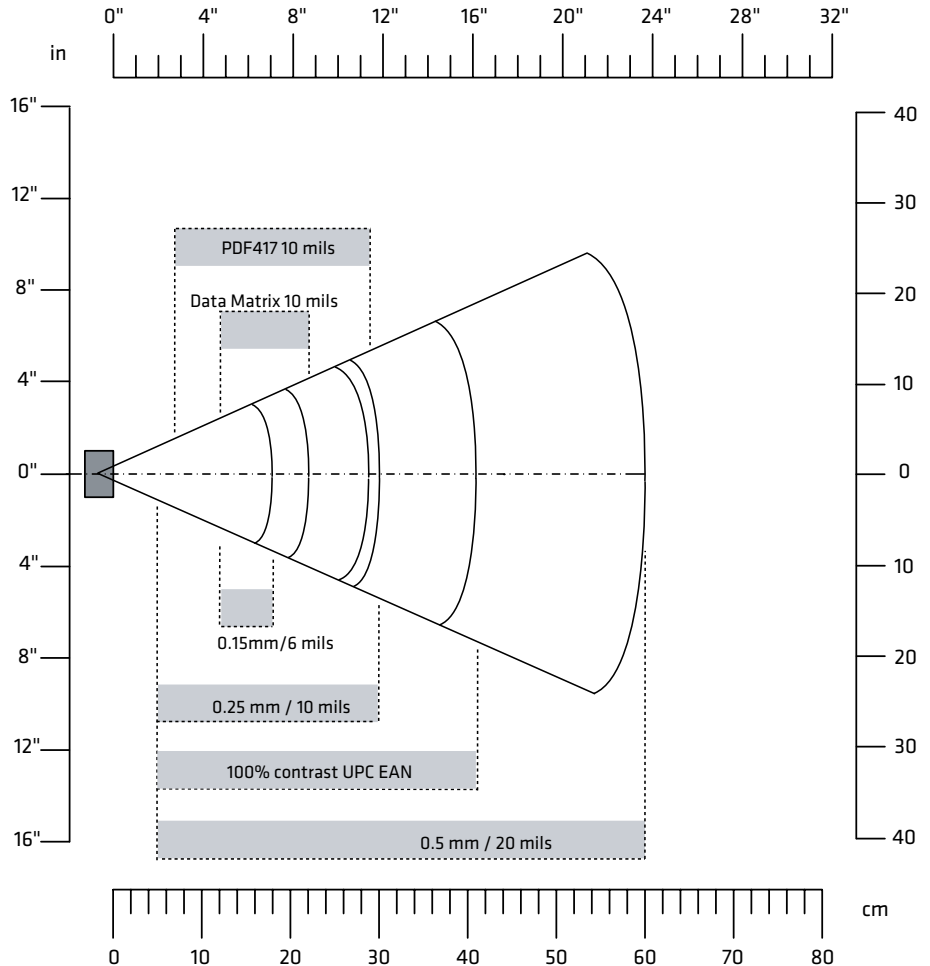
### Environmental Characteristics

**Ambient light:** from 0 to 100 000 lux  
**Operating temperature:** -20° to 50° C (-4° to 122° F)  
**Storage temperature:** -40° to 70° C (-40° to 158° F)  
**Relative humidity:** 95% Rh @ 60°C (140°F)  
Non-condensing, 4 days  
**Shock:** 2000G, 0.7ms, half sinus, 6 directions  
**Vibration:** 8G r.m.s., from 10Hz to 500Hz, 2 hours/axis, 3 axes

### Regulatory Approvals

UL, cUL, VDE certified, RoHS compliant, Class 2 Laser

### Reading Distances



### North America

**Corporate Headquarters**  
6001 36th Avenue West  
Everett, Washington 98203  
Phone: (425) 348-2600  
Fax: (425) 355-9551

### North Latin America

**Headquarters Office**  
Mexico  
Phone: +52 55 52-41-48-00  
Fax: +52 55 52-11-81-21

### South Latin America

**Headquarters Office**  
Brazil  
Phone: +55 11 5502.6770  
Fax: +55 11 5502.6780

### Europe/Middle East & Africa

**Headquarters Office**  
Reading, United Kingdom  
Phone: +44 118 923 0800  
Fax: +44 118 923 0801

### Asia Pacific

**Headquarters Office**  
Singapore  
Phone: +65 6303 2100  
Fax: +65 6303 2199

### Internet

www.intermec.com  
Worldwide Locations:  
www.intermec.com/locations

### Sales

Toll Free NA: (800) 934-3163  
Toll in NA: (425) 348-2726  
Freephone ROW:  
00 800 4488 8844  
Toll ROW: +44 134 435 0296

### OEM Sales

Phone: (425) 348-2762

### Media Sales

Phone: (513) 874-5882

### Customer Service and Support

Toll Free NA: (800) 755-5505  
Toll in NA: (425) 356-1799



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