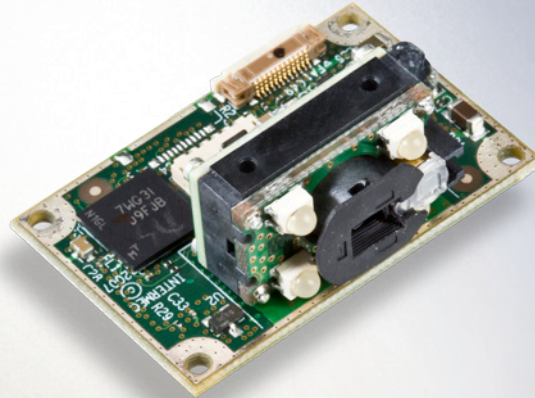


EA21

Decoded 2D Imager
*Document Capture and
Barcode Reading*



- **Enhanced Mobile Document Imaging (eMDI) – Snappy, high resolution mobile document capture with “point and capture” user experience, up to A4 format**
- **Space-saving – combines high performance barcode scanning and document capture in one imager**
- **Reduces cost of ownership by reducing development time & eliminating the need for 2 optics**
- **Future proof – Reads any 1D & 2D barcodes omni-directionally and provides image capture and analysis opportunities**
- **Highly visible laser aiming frame – Enhanced comfort in use, from total darkness to bright sunshine environments**
- **Plug compatible with Intermec EA15 & EA20X 2D Imager – 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: It is equipped with the unique eMDI imaging software (enhanced mobile document imaging), the most flexible and high performing mobile document capture solution in its class today.

By combining 2D barcode scanning and 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.

Built with users in mind, EA21 captures full page documents within a 35° angle and 10° rotation. It works as easily as scanning a barcode; just target the document to capture and press the trigger: When you hear the beep, it means that the image has been successfully captured and that quality is ensured. This greatly reduces the variability in image quality between individual users. eMDI software automatically improves the image, removing keystone effects and enhancing the image to provide a file ready for document management applications.

EA21 is very flexible and captures images in 99% of lighting conditions, with any variety of background behind the document. 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 part of the 2D imager Intermec family: It is designed for inter-changeability; it is plug compatible with the Intermec EA15 & 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: 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)
Weight:
Scan engine: <10g (0.35 oz.)
Decode board: 6g (0.21 oz.)

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

Enhanced Mobile Document Imaging (eMDI)

eMDI produces images which meet the following specifications:

- Images created from full page documents (Letter, A4) or smaller
Image Format: JPEG (256 grayscale)
Image File Size: Approximately 120 KB (Varies based on document size & image compression)
- Images created from half-page documents (5.5" or 8.5", A5) or smaller
Image Format: JPEG (256 grayscale) or TIFF (monochrome)

For more information, please refer to the eMDI product profile (http://epsfiles.intermec.com/eps_files/eps_spec/eMDI_spec_web.pdf)

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: 360mA @ 3.3V

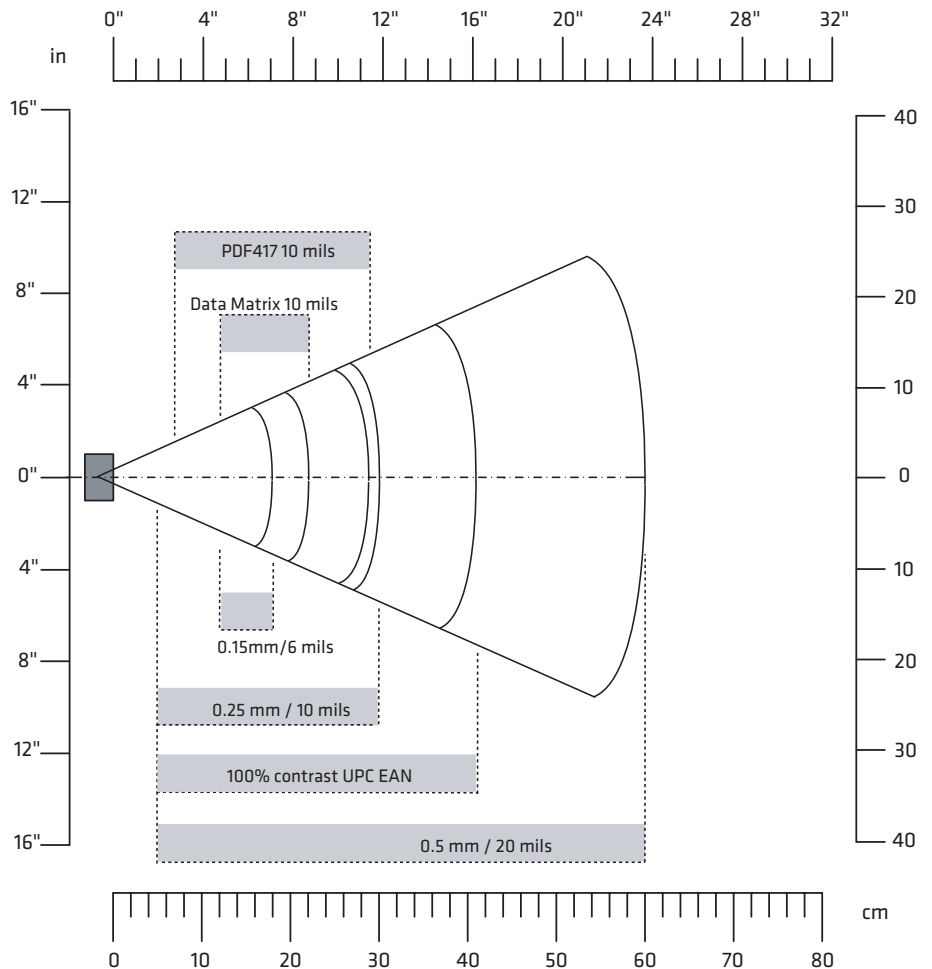
Environmental Characteristics

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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