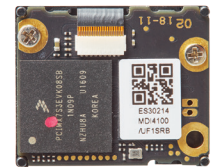
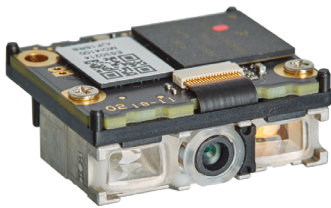
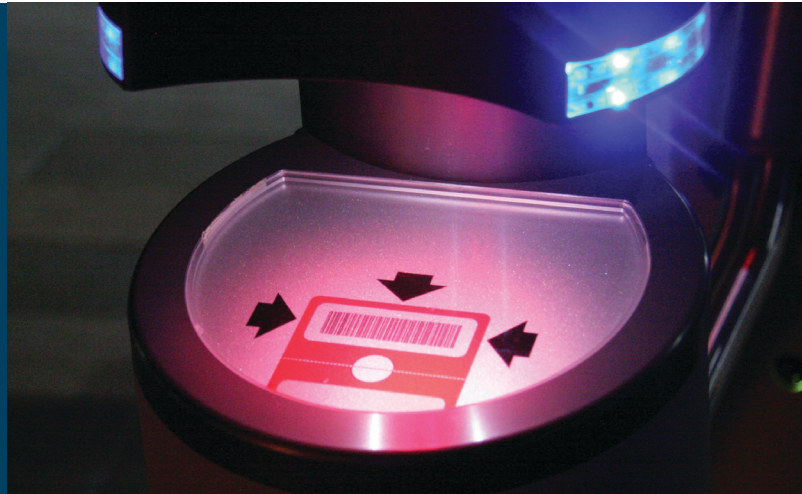


# MDI-4000/4100

## 2D CMOS Imager

With a faster shutter speed, a high speed processor and increased motion tolerance, the MDI-4000/4100 2D CMOS scan engines rapidly and easily scans barcodes off numerous surface types - including mobile phone, tablet and computer displays. These extremely small, yet powerful scan engines are the ideal embedded scanning solution in clinical, laboratory, industrial, kiosk and mobile applications.



## Highlights

- Industry's thinnest (10mm) 2D imager barcode scan engine
- Perfect for integration into small, space constrained mobile, medical, or retail barcode scanning devices
- High performance and low power 800MHz CPU and an ultra-fast 100 frames per second (fps) CMOS imager sensor enable high speeding scanning of 1D and 2D barcodes and OCR fonts
- Fast global shutter technology providing exceptional motion tolerance for moving applications
- Improved scanning of curved, wide, poorly printed and damaged barcodes
- Data editing program function captures up to 16 codes on multiple images simultaneously
- Single line green LED and warm, white LED illumination makes it easy to aim while providing safety and an extended service life
- Low power and an adjustable power consumption to fit your design needs
- Communication interface: USB or RS-232
- Engineering kit available - enables faster time to market
- Two year warranty protects your investment

# MDI-4x00

## Product Specifications



### Communication

**Serial CMOS:** 12 pin FFC connector: Serial TTL, USB

### Power

**Voltage requirement:** 3.0V ~ 5.5V

**Current consumption:** Max. 300 mA

### 2D Imager optics

**Light source:** Aiming green LED, warm white illumination LED

**Scan method:** CMOS area sensor, 640 x 480 pixels, black and white

**Scan rate:** Up to 100 fps

**Reading pitch angle:**  $\pm 65^\circ$

**Reading skew angle:**  $\pm 65^\circ$

**Reading tilt angle:**  $360^\circ$

**Curvature:** R>15 mm (EAN8), R>20 mm (EAN13)

**Min. resolution at pcs 0.9:** 0.1 mm / 4 mil

**Min. pcs value:** 0.2 (0.3 for UD model)

**Field of view:** Horizontal  $38^\circ$ , Vertical  $28.9^\circ$ ,

**Depth of field at code 39:**

52 - 126 mm (0.127 mm) / 2.05 - 4.96 in (5 mil)

46 - 246 mm (0.254 mm) / 1.81 - 9.68 in (10 mil)

60 - 466 mm (0.508 mm) / 2.36 - 18.35 in (20 mil)

**Depth of field at QR code:**

64 - 106 mm (0.169 mm) / 2.52 - 4.17 in (6.7 mil)

30 - 234 mm (0.381 mm) / 1.18 - 9.21 in (15 mil)

### Supported symbologies

**Barcode (1D):** JAN/UPC/EAN incl. add on, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 Databar (RSS), IATA, Industrial 2of5, Interleaved 2of5, ISBN-ISSN-ISMN, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey

**Postal code:** Chinese Post, Intelligent Mail Barcode, Korean Postal Authority code, POSTNET

**2D code:** Aztec Code, Aztec Runes, Chinese Sensible code, Codablock F, Composite codes, Data matrix (ECC200), Passport MRZ (OCR-B), maxi Code (mode 2-5), MicroPDF417, MicroQR Code, PDF417, QR Code

### Durability

**Temperature in operation:** -20 to 60 °C / -4 to 140 °F

**Temperature in storage:** -40 to 70 °C / -40 to 158 °F

**Humidity in operation:** 5 - 90% (non-condensing)

**Humidity in storage:** 5 - 90% (non-condensing)

**Ambient light immunity:** Fluorescent 10,000 lx max, Sunlight 100,000 lx max, Incandescent 10,000 lx max

**Drop test:** Packed in dummy case 1.8 m / 6 ft drop onto concrete surface

**MTBF:** 50,000 hours

### Physical

**Dimensions (WxHxD):** Camera (CMOS) 24.6 x 6.0 x 13.5 mm / 0.97 x 0.24 x 0.53 in, PCB (decoder board) 27.0 x 3.0 x 22.0 mm / 1.06 x 0.12 x 0.87 in

**Weight:** Ca. 5.5 g / 0.19 oz

### Regulatory & safety

**Product compliance:** RoHS, IEC62471

### Items

**Sold separately:** MEK-3100 development board (With power supply, RS-232 cable, USB cable, PCBs)