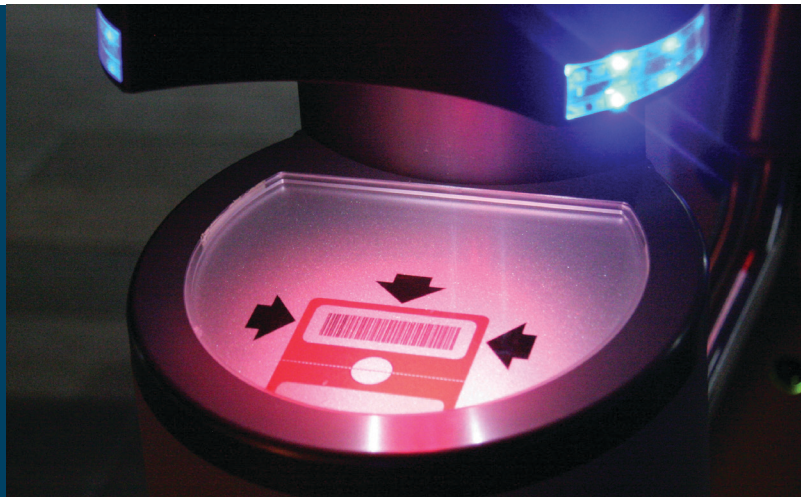
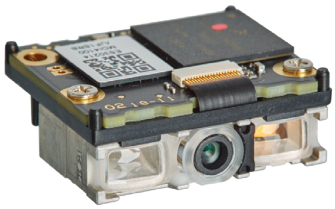
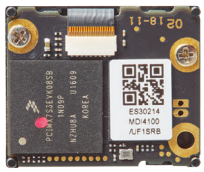
MDI-4050/4150

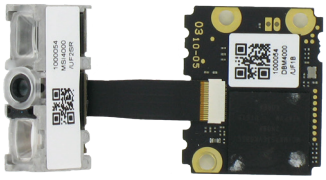
2D CMOS Imager

With a faster shutter speed, a high speed processor and increased motion tolerance, the MDI-4050/4150 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

- Ultra-low profile, full spectrum illuminated 2D CMOS imager
- Perfect for integration into small, space constrained mobile, medical, or retail barcode scanning devices
- High performance, lower power 800MHz CPU and an ultra-fast 100 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: serial CMOS: 12 pin FFC connector, serial TTL, USB
- Engineering kit available – enables faster time to market
- Two year warranty

MDI-4x50

Product Specifications

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

Power
Voltage requirement: 3.0V ~ 5.5V
Current consumption: Max. 300 mA
Low power current: 9 mA
Suspend mode: <2 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: ± 65°
Reading skew angle: ± 65°
Reading tilt angle: 360°
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°, Vertical 28.9°,
Depth of field at code 39:
55 - 128 mm (0.127 mm) / 2.16 - 5.04 in (5 mil)
54 - 239 mm (0.254 mm) / 2.13 - 9.41 in (10 mil)
71 - 435 mm (0.508 mm) / 2.79 - 17.13 in (20 mil)
Depth of field at QR code:
62 - 113 mm (0.169 mm) / 2.44 - 4.45 in (6.7 mil)
24 - 252 mm (0.381 mm) / 0.94 - 9.92 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: 396,252 hours

Physical
Dimensions (WxHxD): Camera (CMOS) 24.6 x 6.0 x 13.6 mm / 0.97 x 0.24 x 0.53 in, PCB (decoder board) 25.1 x 3.2 x 20.8 mm / 0.99 x 0.13 x 0.82 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, RS232 cable, USB cable, PCBs)

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