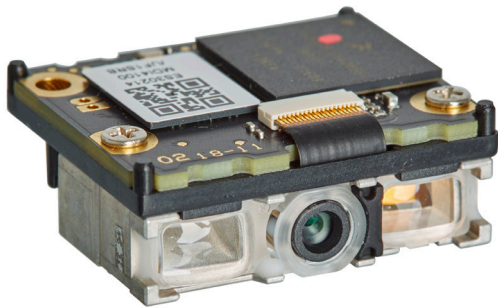


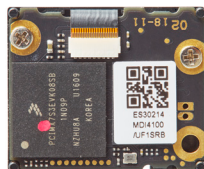
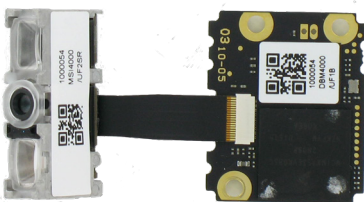
# MDI-4050/4150

## 2D CMOS Imager

The MDI-4x50 is an extremely small 2D CMOS imager with a fast shutter speed, a high speed processor and increased motion tolerance. It rapidly and easily scans barcodes off cell phone, tablet and computer displays.



scale  
100%



## 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-4050/4150

## 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:  $\pm 65^\circ$

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: 0.9

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

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

RoHS, IEC62471

### Items

Sold separately: MEK-3100 development board (with power supply, RS232 cable, USB cable, PCBs)