

# MDI-5010

## 2D CMOS Imager

The MDI-5010 is a 2D imager with a separated camera and decoder board. It has a wide reading range and a high performance.



scale  
100%



## Highlights

- High quality 2D imager barcode scan engine
- Perfect for integration into small, space constrained mobile, medical, or retail barcode scanning devices
- A CMOS area sensor of 1280 x 800 pixels
- High performance, low power and an extremely fast 120 fps CMOS imager sensor enable high speed scanning of 1D and 2D barcodes and OCR fonts
- Fast shutter technology provides exceptional motion tolerance for moving applications
- Improved scanning of curved, poorly printed and damaged barcodes
- Data editing program function: capture and combine up to 16 codes in one time
- Single green LED aiming line and warm, white LED illumination makes it easy to aim while providing safety and a long life
- Engineering kit available - allows for faster time to market
- Two year warranty protects your investment

# MDI-5010

## Product Specifications

### Communication

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

### Power

**Voltage requirement:** 3.3V ~ 5.0V

**Current consumption:** typical 390 mA

**Stand by current:** 24 mA

**Suspend mode:** 1.7 mA

### 2D Imager optics

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

**Scan method:** CMOS area sensor, 1280 x 800 pixels, black and white

**Scan rate:** Up to 120 fps

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

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

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

**Curvature:**  $R > 20$  mm (EAN13)

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

**Min. pcs value:** 0.9

**Field of view:** Horizontal  $48^\circ$ , Vertical  $30.8^\circ$

**Depth of field at code 39:**

95 - 189 mm (0.127 mm) / 3.7 - 7.4 in (5 mil)

53 - 524 mm (0.508 mm) / 2.1 - 20.6 in (20 mil)

**Depth of field at PDF417:**

78 - 225 mm (0.169 mm) / 3.1 - 8.9 in (6.7 mil)

48 - 299 mm (0.254 mm) / 1.9 - 11.8 in (10 mil)

**Depth of field at QR code:**

95 - 186 mm (0.169 mm) / 3.7 - 7.3 in (6.7 mil)

36 - 322 mm (0.381 mm) / 1.4 - 12.7 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  $60^\circ\text{C}$  /  $-4$  to  $140^\circ\text{F}$

**Temperature in storage:**  $-40$  to  $70^\circ\text{C}$  /  $-40$  to  $158^\circ\text{F}$

**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:** 364,154 hours

### Physical

**Dimensions (WxHxD):** Camera (CMOS) 21.5 x 11.8 x 13.4 mm / 0.85 x 0.46 x 0.53 in

PCB 25.1 x 3.2 x 20.8 mm / 0.99 x 0.13 x 0.82 in

FPC 6.0 x 0.3 x 24 mm / 0.24 x 0.1 x 0.94 in

**Weight:** Camera 3.5 g / 0.12 oz, PCB 2.5 g / 0.08 oz

### Regulatory & Safety

RoHS, IEC62471

### Items

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