

MDI-3100

2D CMOS Imager

The MDI-3100 is a 2D CMOS imager with a fast shutter speed allowing increased motion tolerance. Easily scans many surface types including LCD screens with the adjustable illumination feature.



Highlights

- CMOS image sensor with fast decode speed of 60 fps
- Two models available: Standard Resolution and High Density (HD)
- Features an integrated camera and decoder in an ultra-miniature module
- Omnidirectional 360° scanning, reads 1D and 2D barcodes
- Fast global shutter technology providing exceptional motion tolerance for moving applications
- Adjustable illumination makes it easy to read a wide variety of surface types
- Bar form LEDs provide barcode targeting without the need for lasers and their associated regulations
- Programmable and image capture software available
- Communication interface: serial CMOS via 12 pin FFC connector
- Low power, operates under 3.3V or 5V to fit your design needs
- Two year warranty protects your investment

scale
100%



MDI-3100

Product Specifications

Communication

Serial CMOS: 12 pin FFC connector

Power

Voltage requirement: 3.3 ~ 5.5V

Current consumption: Max. 390 mA for 3.0V and max. 260 mA for 5.5V

2D imager optics

Light source: Aiming green LED + red illumination LED

Scan method: CMOS area sensor, 752 x 480 pixels

Scan rate: Up to 60 fps

Reading pitch angle: ± 50°

Reading skew angle: ± 50°

Reading tilt angle: 360°

Curvature: R>16 mm (EAN10), R>20 mm (EAN12)

Min. resolution at pcs 0.9: 0.127 mm / 5 mil

Min. pcs value: 0.9

Field of view: Horizontal 48°, Vertical 34°

Depth of field at code 39:

60 - 90 mm (0.127 mm) / 2.36 - 3.54 in (5 mil)

55 - 120 mm (0.254 mm) / 2.17 - 4.72 in (10 mil)

Depth of field at QR code:

65 - 85 mm (0.169 mm) / 2.56 - 3.35 in (6.7 mil)

40 - 120 mm (0.381 mm) / 1.57 - 4.72 in (15 mil)

Depth of field at data matrix:

0 - 95 mm (0.212 mm) / 2.36 - 3.74 in (8.4 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/ ECO-140), maxi Code (mode 2-5), microPDF417, micro qr Code, PDF417, QR code

Durability

Temperature in operation: -30 to 60 °C / -22 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

MBT F: 50,000 hours

Physical

Dimensions (WxHxD): 25.3 x 12.4 x 21.2 mm / 0.99 x 0.49 x 0.83 in.

Weight: Ca. 8 g / 0.28 oz

Regulatory & Safety

RoHS, IEC62471

Items

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