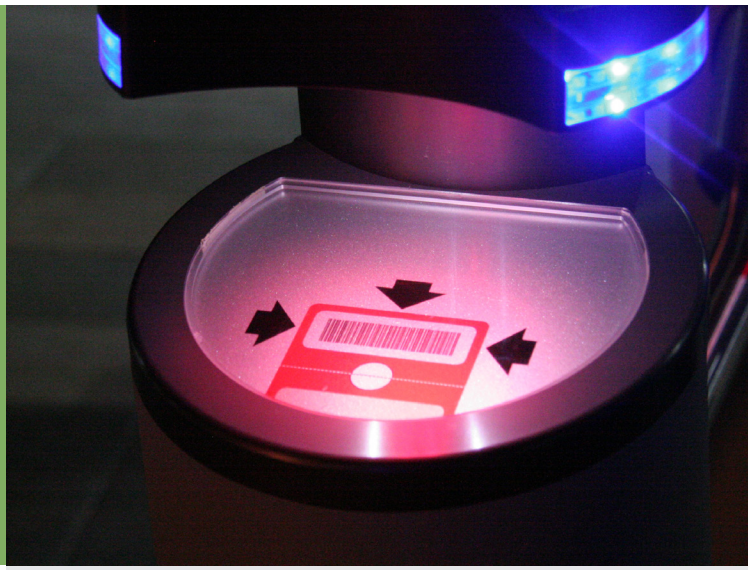
OPTICON

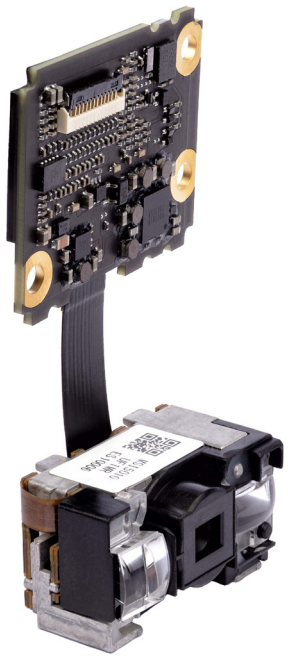
Engines

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: ± 65°
Reading skew angle: ± 65°
Reading tilt angle: 360°
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°, Vertical 30.8°
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 °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: 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)

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