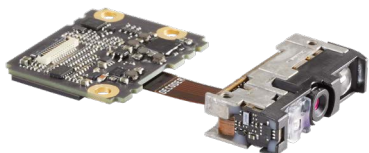


MDI-5200

2D CMOS Imager

The MDI-5200 is a super thin 2D CMOS imager with a fast shutter speed, a high speed processor and excellent motion tolerance. This scan engine has a separated camera and decoder board.



Highlights

- 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 and high speed 1 MP CMOS imager sensor captures images at a speed of up to 120 fps, enabling high speed scanning of 1D and 2D barcodes and OCR fonts
- Fast global shutter technology providing exceptional motion tolerance
- Improved scanning of curved, wide, poorly printed and damaged barcodes
- Class 1 red cross laser aiming and warm white LED for illumination makes it easy to aim while providing safety and an extended service life
- Low power consumption to fit your design needs
- Communication interface: USB or RS232
- Engineering kit available - enables faster time to market
- Two year warranty

MD-5200

Product Specifications

Communication

12 pin FFC connector: Serial TTL, USB

Power

Voltage requirement: 3.0V - 5.5V

Current consumption: Typical 300 mA

Low power current: 1.4 mA

Suspend mode: 30 mA

2D Imager optics

Light source: Red cross aiming laser,
warm white illumination LED

Scan method: 1 MP 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°

Curvature: $R > 20$ mm (UPC)

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

Min. pcs value: 0.2

Field of view: Horizontal 50° , Vertical 32° , Diagonal 58°

Depth of field at code 39:

66 - 146 mm (0.127 mm) / 2.6 - 5.75 in (5 mil)

52 - 289 mm (0.254 mm) / 2.05 - 11.38 in (10 mil)

78 - 567 mm (0.508 mm) / 3.07 - 22.32 in (20 mil)

Depth of field at code 128:

64 - 238 mm (0.2 mm) / 2.52 - 9.37 in (7.9 mil)

Depth of field at EAN/UPC:

53 - 357 mm (0.33 mm) / 2.09 - 14.06 in (13 mil)

Depth of field at PDF417:

61 - 176 mm (0.169 mm) / 2.4 - 6.93 in (6.7 mil)

62 - 257 mm (0.254 mm) / 2.44 - 10.12 in (10 mil)

Depth of field at QR code:

76 - 126 mm (0.169 mm) / 2.99 - 4.96 in (6.7 mil)

40 - 294 mm (0.381 mm) / 1.58 - 11.58 in (15 mil)

Depth of field at Data Matrix:

90 - 123 mm (0.169 mm) / 3.54 - 4.84 in (6.7 mil)

54 - 181 mm (0.254 mm) / 2.16 - 7.16 in (10 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: 375,419 hours

Physical

Dimensions (WxHxD): Camera (SMOS) 24.6 x 6.8 x
12.4 mm / 0.97 x 0.27 x 0.49 in, PCB (decoder board)
25.1 x 3.2 x 20.8 mm / 0.99 x 0.13 x 0.82

Weight: Ca. 5 g / 0.18 oz

Regulatory & Safety

RoHS, IEC62471:2006, IEC/EN 60825-1

Items

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