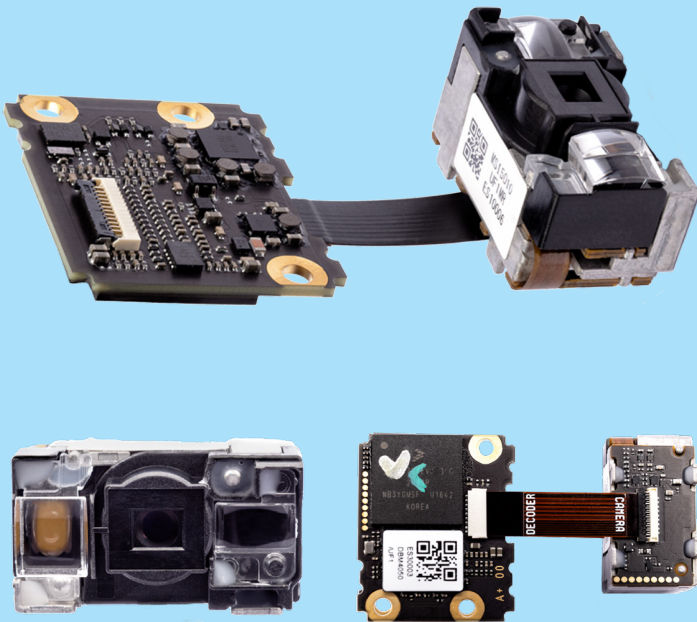# MDI-5010

Full Spectrum Illuminated 2D CMOS Imager

Highlights

- Separated camera and decoder allows for integration into space constrained mobile, medical, or retail barcode scanning devices

- High performance, low power 800MHz CPU and an ultra-fast 120 (fps) CMOS imager sensor enables high speed scanning of 1D and 2D barcodes and OCR fonts

- 1280 x 800 pixel CMOS sensor allows for wide angle reading

- Extremely compact size 0.85" x 0.46" x 0.53" (W x H x D)

- Fast shutter technology provides exceptional motion tolerance for moving applications

- Communication interface: USB and serial

- Improved scanning of curved, wide, poorly printed and damaged barcodes

- Data editing program function: capture and combine up to 16 codes on multiple images simultaneously

- DPM (Dot-peen, etched) and OCR reading capable (OCR-A, OCR-B, Visas, Passports and free-form)

- Single green LED aiming line and warm, white LED illumination makes it easy to aim while providing safety and an extended service life

- Engineering kit available—allows for faster time to market

- Two year warranty protects your investment

≡ OPTICON

MDI-5010

Product Specifications

COMMUNICATION

Serial, USB

POWER

VOLTAGE REQUIREMENT: 3.3V ~ 5.0V
OPERATING CURRENT: 390 mA typ.
STAND BY CURRENT: 28 mA typ.
SUSPEND MODE: 2.1 mA typ. (config. option)

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)
MINNIMUM RESOLUTION:
PCS 0.9: 4mil (0.10mm)
1D Code: 4mil (0.10mm)
GS1-DataBar: 6.7mil (0.17mm)
Stacked Code: 6.7mil (0.17mm)
2D Code: 6.7mil (0.17mm)
MINIMUM PCS VALUE: 0.9
FIELD OF VIEW: Horizontal 48°, Vertical 30.8°
DEPTH OF FIELD AT:
Code 39:
5 mil (0.127 mm) 3.7 - 7.4 in (95 - 189 mm)
20 mil (0.508 mm) 2.1 - 20.6 in (53 - 524 mm)
PDF417:
6.7 mil (0.169 mm) 3.1 - 8.9 in (78 - 225 mm)
10 mil (0.254 mm) 1.9 - 11.8 in (48 - 299 mm)
QR Code:
6.7 mil (0.169 mm) 3.7 - 7.3 in (95 - 186 mm)
15 mil (0.381 mm) 1.4 - 12.7 in (36 - 322 mm)
DATA OUTPUT FORMATTING CAPABLE:
GS1 formats
UDI formats
ISBT formats - concatenation
Others / Custom

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

BARCODE (2D): Aztec Code, Aztec Runes, Chinese Sen-sible code, Codablock F, Composite codes, Data matrix (ECC200), Passport MRZ (OCR-B), maxi Code (mode 2~5), MicroPDF417, MicroQR Code, PDF417, QR Code

BARCODE (POSTAL CODES): Chinese Post, Intelligent Mail Barcode, Korean Postal Authority code, POSTNET

DURABILITY

TEMPERATURE:
Operation: -4 to 140 °F (-20 to 60 °C)
Storage: -40 to 158 °F (-40 to 70 °C)

HUMIDITY:
Operation: 5 - 90% (non-condensing)
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 6 ft (1.8 m) drop onto concrete surface

MTBF: 364,154 hours

PHYSICAL

DIMENSIONS (W X H X D):
Camera (CMOS): 0.85 x 0.46 x 0.53 in (21.5 x 11.8 x 13.4 mm)
Decoder PCB: 0.99 x 0.13 x 0.82 in (25.1 x 3.2 x 20.8 mm)
Flex Cable: 0.24 x 0.1 x 0.94 in (6.0 x 0.3 x 24 mm)

WEIGHT:
Camera: 0.12 oz (3.5 g)
PCB: 0.08 oz 2.5 g)

REGULATORY & SAFETY

RoHS, IEC62471

ITEMS SOLD SEPARATELY

MEK Development Kit