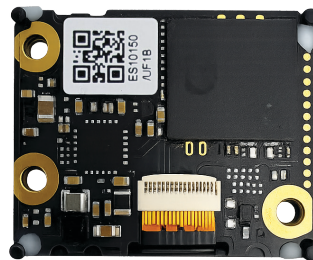


MDI-12

2D CMOS Imager

The M-12 is an ultra-wide-angle imager with an integrated decoder. Its compact design makes it ideal for use in kiosks and payment terminals. Even in low-light environments, the M-12 can read label codes using only minimal ambient light from the device's screen or indicator lights.



Highlights

- Full spectrum illuminated 2D CMOS imager suitable for on and off screen scanning
- Ultra-wide-Angle lens: Provides a broad field of view, enhancing the scanner's ability to capture barcodes from close by and various angles and positions. It reads standard QR codes at close proximity, as well as wide barcodes and large QR codes from a distance of up to 25 mm
- A special optical filter with sunlight resistance and industrial CMOS sensor control enables reliable readings in environments up to 120,000 lux
- 120 frames per second CMOS imager sensor enables high speeding scanning of 1D and 2D barcodes
- Its space-saving size makes it ideal for kiosks and payment terminals
- Even in low-light environments, the highly sensitive MDI-12 imager can read label codes using only minimal ambient light from the device's screen or indicator lights
- Powered by a high-performance, energy-efficient 800 MHz CPU, the device greatly reduces power consumption during operation, standby, and booting, making it perfect for wireless applications
- Fast global shutter technology with auto exposure
- Supports various configurations for easy integration into different environments, such as point-of-sale systems and kiosks
- Built to withstand extreme conditions, our barcode scan engine operates reliably between -20°C and 60°C
- Backed by a two year warranty

MDI-12

Product Specifications



Communication

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

Power

Voltage requirement: 3.3V ~ 5.0V

Current consumption: operating 170 mA

Standby current: 29 mA

2D Imager optics

Scan method: CMOS area sensor, 640 x 480 pixels

Scan rate: Up to 120 fps

Reading pitch angle: $\pm 55^\circ$

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

Reading tilt angle: 360°

Curvature: $R > 20$ mm (UPC)

Min. resolution at pcs 0.9: 0.127 mm / 5 mil (2D)

Min. pcs value: 0.2

Field of view: Horizontal 120° , Vertical 94.2° ,
Diagonal 120°

Depth of field at code 39:

7 - 74 mm (0.127 mm) / 0.28 - 2.91 in (5 mil)

12 - 136 mm (0.254 mm) / 0.47 - 5.35 in (10 mil)

Depth of field at code 128:

17 - 112 mm (0.20 mm) / 0.67 - 4.41 in (7.9 mil)

Depth of field at EAN/UPC:

11 - 173 mm (0.33 mm) / 0.43 - 6.8 in (13 mil)

Depth of field at Codabar:

14 - 152 mm (0.254 mm) / 0.55 - 5.98 in (10 mil)

Depth of field at PDF417:

13 - 68 mm (0.254 mm) / 0.51 - 2.68 in (10 mil)

Depth of field at QR code:

8 - 26 mm (0.127 mm) / 0.32 - 1.02 in (5 mil)

9 - 83 mm (0.381 mm) / 0.35 - 3.27 in (15 mil)

Depth of field at Data Matrix:

7 - 53 mm (0.254 mm) / 0.28 - 2.09 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-ISMN-ISSN, Matrix 2of5, MSI/Plessey, UK/Plessey, S-Code, Telepen, Tri-Optic, USPS
Postal code: Chinese Post, Intelligent Mail Barcode, Korean Postal Authority code, Dutch KIX code, UK Postal, Australian postal, Postal JPN, POSTNET, PLANET, 4-State Mailmark Barcode

2D code: Aztec Code, Aztec Runes, Composite codes, Codablock F, Data Matrix (ECC200), DMRE, Dot code, Maxi Code, PDF417, MicroPDF417, QR Code, Micro QR Code, rM QR code, Passport MRZ (OCR-B), Chinese Sensible 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, no frost)

Humidity in storage: 5 - 90% (non-condensing, no frost)

Ambient light immunity: Fluorescent 10,000 lx max, Sunlight 120,000 lx max, Incandescent 10,000 lx max

Drop test: Packed in dummy case 1.8 m / 6 ft drop onto concrete surface

Vibration test: 12 - 200Hz with 3.3G for 10 minutes

MTBF: 518,417 hours

Physical

Dimensions (WxHxD): 25.3 x 10.5 x 21 mm /

0.99 x 0.41 x 0.82 in

Weight: Ca. 3.7 g / 0.13 oz

Regulatory & safety

Product compliance: RoHS, IEC62471

Items

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