

# MDI-5350

## 2D CMOS Imager

MDI-5350 is an ultra-thin, 2D CMOS imager with a wide-angle lens, fast shutter speed, high speed processor and enhanced motion tolerance. It rapidly and accurately scans barcodes off cell phone, tablet and computer displays.



## Highlights

- Low profile, full spectrum illuminated 2D CMOS imager
- Perfect for integration into small, space constrained mobile, medical, or retail barcode scanning devices
- Improved performance, lower power and high-speed 1 megapixel CMOS imager sensor captures images at 120 fps (frames per second), enabling unparalleled scanning and decoding of 1D and 2D barcodes
- Supports OCR and GS1 data conversion
- 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
- Exceptional fast motion tolerance 2.54m/s
- The extremely high-performance decoder and horizontal 50-degree wide-angle lens enhances scanning performance, especially for wide-width barcodes and close-range applications. No more limitations due to scanning angles— simply scan with ease and precision.
- Improved scanning of curved, wide, poorly printed, low contrast and damaged barcodes
- Low power and an adjustable power consumption to fit your design needs
- Data editing program function captures up to 16 codes on multiple images simultaneously
- Engineering kit available - enables faster time to market
- Two year warranty

# MDI-5350

## Product Specifications



### Communication

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

### Power

**Voltage requirement:** 3.3V - 5.0V

**Current consumption:** Max 1000 mA

**Operating current:** typical 310 mA

**Standby current:** typical 68 mA

**Low power current:** 1.0 mA

### 2D Imager optics

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

**Scan method:** 1MP 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:**  $360^\circ$

**Curvature:**  $R > 20$  mm (UPC)

**Min. resolution at pcs 0.9:** 0.076 mm / 3 mil

**Min. pcs value:** 0.2

**Field of view:** Horizontal  $50^\circ$ , Vertical  $32^\circ$ , Diagonal  $58^\circ$

**Depth of field at code 39:**

50 - 292 mm (0.127 mm) / 1.97 - 11.49 in (5 mil)

39 - 517 mm (0.254 mm) / 1.54 - 20.35 in (10 mil)

48 - 935 mm (0.508 mm) / 1.89 - 36.81 in (20 mil)

**Depth of field at code 128:**

47 - 402 mm (0.2 mm) / 1.85 - 15.83 in (7.9 mil)

**Depth of field at EAN/UPC:**

35 - 602 mm (0.33 mm) / 1.38 - 23.7 in (13 mil)

**Depth of field at PDF417:**

48 - 184 mm (0.127 mm) / 1.89 - 7.24 in (5 mil)

38 - 328 mm (0.254 mm) / 1.49 - 12.91 in (10 mil)

**Depth of field at QR code:**

65 - 126 mm (0.127 mm) / 2.56 - 4.96 in (5 mil)

25 - 362 mm (0.381 mm) / 0.98 - 14.25 in (15 mil)

**Depth of field at Data Matrix:**

75 - 115 mm (0.127 mm) / 2.95 - 4.53 in (5 mil)

30 - 236 mm (0.254 mm) / 1.18 - 9.29 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), DMRE, Dot code, DPM, Passport MRZ (OCR-B), maxi Code (mode 2-5), MicroPDF417, MicroQR Code, PDF417, QR Code, rMQR

### Durability

**Temperature in operation:**  $-20$  to  $60^\circ\text{C}$  /  $-4$  to  $140^\circ\text{F}$

**Temperature in storage:**  $-40$  to  $70^\circ\text{C}$  /  $-40$  to  $158^\circ\text{F}$

**Humidity in operation:** 5 - 90% (no-condensation, no frost)

**Humidity in storage:** 5 - 90% (no-condensation, no frost)

**Ambient light immunity:** Fluorescent 10,000 lx max, Sunlight 100,000 lx max, Incandescent 10,000 lx max

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

**MTBF:** 375,419 hours

### Physical

**Dimensions (WxHxD):** 25.3 x 10.8 x 21 mm / 0.99 x 0.43 x 0.83 in

**Weight:** Ca. 7.3 g / 0.26 oz

### Regulatory & safety

**Product compliance:** RoHS, IEC62471:2006, IEC/EN 60825-1

### Items

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