

OPN-3102i

2D CMOS Imager

The OPN-3102i enables real-time barcode scanning into any Bluetooth® device. It is extremely small, lightweight and durable making it an ideal solution for a variety of mobile applications in retail, healthcare, manufacturing, logistics, hospitality and field operations.



Highlights

- An ultra-fast 100 frames per second (fps) CMOS imager rapidly scans and decodes 1D and 2D barcodes
- Price point makes real-time barcode scanning with an Android, Apple or Windows Bluetooth devices affordable
- Integrated NFC tag makes Bluetooth pairing simple and quick
- Supports Apple MFi and SPP and HID Bluetooth profiles for added flexibility
- Dedicated cradle available
- Small form factor: weighs only
- 60 grams, 36 x 83 x 21.5 mm (W x H x D)
- Audible and visible feedback after a successful scan
- High capacity Lithium-Ion battery, USB rechargeable or wireless charging
- Extremely durable: IP54 rating against dust and moisture and survives 1.5 m drop test
- Two year warranty protects your investment

OPN-3102i

Product Specifications



Operation

CPU: 32-bit

O/S: Proprietary

RTC: Supports year, month, day, hour, minute, second (leap year supported)

Memory

Flashrom: 1 MB

Ram: 96 kB

Operating indicators

Visual: 1 LED (red/green/blue)

Non-visual: buzzer, vibrate

Operating keys

Entry options: 2 keys total, 1 function key, 1 scan key

Communication

USB: Micro USB

Bluetooth: Ver. 2.1, SPP, HID, 1 to 1 connection, master / slave mode, authentication and encryption

NFC: ISO 14443 tag for easy Bluetooth pairing

Power

Rechargeable battery: Lithium-Ion 600 mAh

Operating time: 10 hours (2 scans / 10 sec. incl Bluetooth communication)

2D Imager Optics

Light source: Green aiming LED, warm white LED

Scan method: CMOS area sensor, 640 x 480 pixels

Scan rate: Up to 100 fps

Focal distance: 109.2 mm / 4.3 in from the front

Curvature: R \geq 20 mm (12 digits), R \geq 16 mm (10 digits)

Reading pitch angle: $\pm 70^\circ$

Reading skew angle: $\pm 70^\circ$

Reading tilt angle: 360°

Field of view: Horizontal 38°, Vertical 28.9°, Diagonal 46.4°

Min. resolution at PCS 0.9: 0.127 mm / 5 mil min.

Min. PCS value: 0.2

Depth of field at code 39:

60 - 150 mm (0.127 mm) / 2.36 - 5.90 in (5 mil)

70 - 205 mm (0.254 mm) / 2.76 - 8.07 in (10 mil)

80 - 390 mm (0.508 mm) / 3.15 - 15.35 in (20 mil)

Depth of field at Code 128:

80 - 165 mm (0.2 mm) / 3.15 - 6.50 in (7.87 mil)

Depth of field at UPC:

65 - 260 mm (1.33 mm) / 2.56 - 10.24 in (52.36 mil)

Depth of field at PDF417:

65 - 125 mm (0.169 mm) / 2.56 - 4.92 in (6.65 mil)

50 - 180 mm (0.254 mm) / 1.97 - 7.09 in (10 mil)

Depth of field at QR Code:

70 - 95 mm (0.169 mm) / 2.76 - 3.74 in (6.65 mil)

35 - 225 mm (0.381 mm) / 1.38 - 8.86 in (15 mil)

Depth of field at Data Matrix:

60 - 130 mm (0.212 mm) / 2.36 - 5.12 in (8.35 mil)

50 - 150 mm (0.254 mm) / 1.97 - 5.91 in (10 mil)

* The depth of field depends on the view angle and symbol length

Supported symbologies

Barcode (1D): UPC-A, UPC-A Add-on, UPC-E, UPC-E Add-on, EAN-13, EAN-13 add-on, EAN-8, EAN-8 Add-on, JAN-8, JAN-13, Codabar / NW-7, Code 11, Code 39, Code 93, Code 128, GS1 DataBar, GS1 DataBar Limited, GS1 DataBar Expanded, Composite GS1-DataBar, Composite GS1-128, Composite EAN, Composite UPC, IATA, Industrial 2of5, Interleaved 2of5, Matrix 2of5, MSI/Plessey, UK/Plessey, S-Code, Telepen, Tri-Optic

Postal code: Chinese Post, Korean Postal Authority code

2D code: Aztec Code, Codablock F, Data Matrix (ECC 200), Maxi Code (mode 2 to 5), MicroPDF417, Micro QR Code, PDF417, QR Code, Chinese Sensible Code

Durability

Temperature in operation: -10 to 50 °C / 14 to 122 °F

Temperature in storage: -20 to 60 °C / -4 to 140 °F

Humidity in operation: 20% to 85% (non-condensing)

Humidity in storage: 20% to 85% (non-condensing)

Ambient light immunity: Fluorescent 10,000 lx max, direct sun 100,000 lx max, Incandescent 10,000 lx max

Drop test: 1.5 m / 5 ft drop onto concrete surface

Protection rate: IP54

Physical

Dimensions (W x H x D): 36 x 83 x 21.5 mm / 1.42 x 3.27 x 0.85 in

Weight body: Ca. 60 g / 2.12 oz (incl. battery)

Case: Black or white version

Regulatory & safety

Product compliance: CE, FCC, VCCI, RoHS, EN55032 Class B, IEC62471:2006, EN60950-1, IEC60950-1, EN62479, EN55024

Items

Enclosed: MicroUSB cable, Neck strap

Sold separately: CRD-3000 cradle