

# 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≥20 mm (12 digits), R≥16 mm (10 digits)  
**Reading pitch angle:** ± 70°  
**Reading skew angle:** ± 70°  
**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