

# OPN-3102i

## 2D CMOS Imager Bluetooth® Companion Scanner



### Highlights

- 2D CMOS imager rapidly scans and decodes 1D and 2D barcodes
- Price point makes real-time barcode scanning with an Android™, Apple® or Windows® devices affordable
- Ready-to-go out of the box, just pair it with your Bluetooth device
- Supports Apple MFi, SPP and HID Bluetooth profiles for added flexibility
- Memory: 1 MB Storage Flash, 96 KB RAM and 512 KB + 32 KB System Flash
- Small form factor: weighs only 2 oz, 1.42 x 3.27 x 0.85 in (WxHxD)
- Audible, visual, and vibrate feedback options following a successful scan
- USB rechargeable, high capacity Lithium-Ion battery
- Extremely durable: IP54 rating against dust and moisture and survives 5 ft drop test
- Two year warranty protects your investment



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## Product Specifications

### OPERATION

**CPU:** 32 bit CISC / 96 MHz, from 512 Kbytes + 32 Kbytes

**SRAM:** 96 Kbyte, from (storage) 1 Mbyte

### MEMORY

**SYSTEM FLASH:** 512 KB + 32KB

**STORAGE FLASH:** 1 MB

**RAM:** 96 KB

### OPERATING KEYS

**ENTRY OPTIONS:** 2 key: Trigger, function

### OPERATING INDICATORS

**VISUAL:** LED, 2 colors (red / green), 1 color (blue)

**AUDIBLE:** Buzzer, volume adjustable (3 levels)

**PHYSICAL:** Vibrator, strength adjustable (3 levels)

### RTC

**CONTENTS:** Date, hour, minute, second

**ERROR:** ± 90 seconds or less difference per month

### COMMUNICATION

#### BLUETOOTH:

Frequency: 2402 to 2480 MHz

Specification: Bluetooth standard Ver 2.1 conforming

Communication distance: 10 m

Output level: Class 2 (maximum 4 dBm)

Profile: SPP / HID

**BUILT-IN NFC TAG:** ISO / IEC 14443 type A, type B, JIS X 631 - 4

**USB:** Full-speed 12 Mbps (HID / COM), hi-power bus-powered

### POWER

**CURRENT CONSUMPTION (DURING CHARGING):** Less than 500 mA

**BATTERY:** Lithium polymer, 600 mAh (typ.)

**CONTINUOUS USE TIME:** 10 hours or more

**CHARGING METHOD:** Electromagnetic induction type non-contact power feed, micro-USB

**OPERATING (CHARGING) VOLTAGE RANGE:** 4.5 ~ 5.5V

### 2D IMAGER OPTICS

**LIGHT SOURCE (ILLUMINATION):** Light bulb color LED × 1 piece

**LIGHT SOURCE (AIMING):** 1 green LED

**SENSOR:** VGA CMOS area sensor

**SCAN RATE:** 100 fps (fastest value)

**NUMBER OF READ PIXELS:** 300 thousand pixels

**FOCUS DISTANCE:** 4.3 in (109.2 mm) (distance from the tip of the scanner)

**READING PITCH ANGLE:** ± 70°

**READING SKEW ANGLE:** ± 70°

**READING TILT ANGLE:** 360°

**MINIMUM PCS VALUE:** 0.2 or more

**MINIMUM RESOLUTION AT PCS 0.9:**

0.1 mm (Code 39)

0.169 mm (GS 1 Databar, Composite Code, PDF 417)

0.212 mm (QR Code, Data Matrix)

**FIELD OF VIEW:** Horizontal: 38°, Vertical: 28°

### CURVED SURFACE READING:

R ≥ 16 mm (Codabar 0.15 mm 10 digits)

R ≥ 20 mm (UPC 12 digits)

### SUPPORTED SYMBOLOGIES

**BARCODE (1D):** EAN - 8, EAN - 8 Add - on, JAN - 8, JAN - 8, EAN - 13 Add - on, EAN - 8, EAN - 8 Add - on, UPC - A Add - on, UPC - E, UPC - 13, Code 39, Tri-Optic, NW-7, Industrial 2 of 5, Interleaved 2 of 5, S-Code, IATA, Code 93, Code 128, MSI / Plessey, UK / Plessey, TELEPEN, Matrix 2 of 5, Chinese Post Matrix 2 of 5, Code 11, Korean Postal Authority code, Postal Code

**BARCODE (2D):** PDF417, MicroPDF 417, Codablock F, QR code, Micro QR code, Data Matrix (ECC 0-140 / ECC 200), MaxiCode (Modes 2 to 5), Aztec Code, Chinese-sensible code

**BARCODE (POSTAL CODES):**GS 1 DataBar, GS 1 DataBar Limited, GS 1 DataBar Expanded, Composite GS 1 DataBar, Composite GS 1 - 128 , Composite EAN, Composite UPC

### DURABILITY

#### TEMPERATURE:

Operation: 14 to 122 °F (-10 to 50 °C)

Storage: -4 to 140 °F (-20 to 60 °C)

#### HUMIDITY:

Operation: 20 to 85% RH (non-condensing, non-freezing)

Storage: 20 to 85% RH (non-condensing, non-freezing)

#### AMBIENT LIGHT IMMUNITY:

Fluorescent: 10,000 lx

Direct sun: 100,000 lx

#### STATIC ELECTRICITY RESISTANCE:

Nondestructive: ± 15 kV (air discharge, direct)

Non-malfunction: ± 8 kV (air discharge, direct)

**DROP TEST:** 5 ft (1.5 m) drop onto concrete surface

**PROTECTION RATE:** IP 54

### PHYSICAL

**DIMENSIONS (WXHXD):** 1.42 x 3.27 x 0.85 in (36.0 x 83.0 x 21.6 mm)

**BODY WEIGHT:** 2 oz (60 g)

### REGULATORY AND SAFETY

**LED SAFETY STANDARD:** IEC 62471: 2006 Risk exemption group

**PRODUCT SAFETY:** EN 60950-1: 2006, IEC 60950-1: 2005

**EMC:** EN 55024: 2010, EN 55032: 2012 + AC: 2013 EN 301 489 - 1 V 1, .9 2, EN 301 489 - 17 V 2. 2. 1., 300 300 328 V 1 .9 1 EN 302 291 - 2 V 1. 1. 1, FCC Part 15 Subpart C, Subpart B Class B, VCCI Class B

**CERTIFICATION STANDARD:** CE marking, construction design certification (radio law)

**OTHER:** Bluetooth logo authentication, MFi license (OPN-3102i only)

**SUPPRESS ENVIRONMENTAL IMPACT:** RoHS directive

### ENCLOSED ITEMS

USB cable, neck strap

### SOLD SEPARATELY

**28-OPNBOOT02-01:** Silicone cover / attachment

**OPA-3201-USB:** OPN dedicated wireless USB adapter

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