

# OPN-6000

## 2D CMOS Imager

Designed for a variety of markets such as healthcare, hospitality, retail, and logistics, the OPN-6000 enables real-time barcode scanning into any Bluetooth® ready device. In addition to being extremely small and lightweight, the OPN-6000 comes at an affordable price point that enables any business to integrate barcode scanning into their mobile applications.



## Highlights

- Advanced ergonomic design allows for all day comfort and scanning efficiency regardless of hand size
- Ready-to-go out of the box—just pair it with your Bluetooth device
- By supporting a wide range of Bluetooth and USB interfaces and configurable batch capabilities it integrates seamlessly with almost any existing or new barcode application
- An ultra-fast 100 frames per second (fps) CMOS imager rapidly scans and decodes 1D and 2D barcodes
- Fully configurable and customizable using OptiConnect, OptiConfigure and the OPN Companion application. Programmable using our free software development kit
- Inductive charging or charging via USB-C port
- Bluetooth 5.4 compliant that supports Bluetooth low energy (BLE)
- Audible and visible feedback via LED, vibrating motor and buzzer
- 4 days battery life with 1,000 scans per day
- Extremely durable: IP54 rating and survives 1.5 m drop test
- Configurable and programmable with the free Software Development Kit to customize scanning behavior
- Small form factor: weighs only 52g, 64.4 x 44 x 19.4 mm
- Backed by a two year warranty

# OPN-6000

## 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: 256 kB

External Flashrom: 2 MB

### Operating indicators

Visual: 4 LEDs

Non-visual: buzzer, vibrate

### Operating keys

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

### Communication

USB: USB-C, USB VCP/CDC (Virtual COM port), HID (Human Interface Device), MSD (Mass Storage Device), OPN2001 mode (Companion application)

Bluetooth: Ver. 5.4 Bluetooth Low Energy, HID (Human Interface Device), DFU (Device firmware update), UART (Serial port emulation), BAS (Battery service), OptiConnect service

### Power

Rechargeable battery: Lithium-Ion 500 mAh

Operating time (Batch, Bluetooth): 4 days (1000 scans/day)

Operating time (Batch, idle): >6 months

Operating time (Bluetooth, idle): >1 month

Data retention time: Indefinite

Charge method: USB-C cable, or wireless charging

Max charging time: 4 hrs

### 2D Imager optics

Light source: Green LED (aiming) and warm white LED (illumination)

Scan method: CMOS area sensor, 640 x 480 pixels, black and white

Scan rate: Up to 100 fps

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

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

Reading tilt angle:  $360^\circ$

Curvature: R>15 mm (EAN8), R>20 mm (EAN13)

Min. resolution at pcs 0.9: 0.1 mm / 4 mil

Min. pcs value: 0.2 (0.3 for UD model)

Field of view: Horizontal  $38^\circ$ , Vertical  $28.9^\circ$

Depth of field at code 39:

55 - 128 mm (0.127 mm) / 2.16 - 5.04 in (5 mil)

54 - 239 mm (0.254 mm) / 2.13 - 9.41 in (10 mil)

71 - 435 mm (0.508 mm) / 2.79 - 17.13 in (20 mil)

Depth of field at QR code:

62 - 113 mm (0.169 mm) / 2.44 - 4.45 in (6.7 mil)

24 - 252 mm (0.381 mm) / 0.94 - 9.92 in (15 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), Passport MRZ (OCR-B), maxi Code (mode 2-5), MicroPDF417, MicroQR Code, PDF417, QR 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)

Humidity in storage: 5 - 90% (non-condensing)

Ambient light immunity: Fluorescent 10,000 lx max, Sunlight 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 (WxHxD): 64.4 x 44 x 19.4 mm / 2.54 x 1.73 x 0.76 in

Weight: Ca. 52g / 1.8 oz

### Regulatory & Safety

CE, FCC, RoHS, IEC/EN 62471, EN IEC 62368, EN 55032, EN 55035

### Items

Free service: OptiConnect App, SDK for programming and configuration