

OPN-2500

Laser engine

The OPN-2500 allows real-time barcode scanning into any Bluetooth device, as well as scanning in batch mode. It is extremely small and lightweight, and it comes at an affordable price point that enables any business to integrate barcode scanning into their mobile applications.



Highlights

- Price point makes real-time barcode scanning with any Bluetooth host device affordable
- HID (Human Interface Device), DFU (Device firmware update), UART (Serial port emulation), BAS (Battery service), OptiConnect service
- Bluetooth 5.4 Low Energy
- Ready-to-go out of the box, just pair it with your Bluetooth device or connect with USB
- High speed 100 scans/second laser barcode scanner
- The internal flash memory safely stores your data even without active connection
- 3-in-1 default application (Bluetooth, OPN2001 and Batch application)
- Fully configurable and customizable using OptiConnect, OptiConfigure and the OPN Companion application. Integrate with your own applications using our free SDKs
- 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
- Easily fits into pocket or on a key chain
- Audible and visible feedback
- USB-C charging/communications port. It supports USB-HID (keyboard), USB-COM (serial port profiles: USB-CDC and USB-VCP) and USB-MSD (hard disk)
- High capacity Lithium-Ion battery
- Two year warranty

OPN-2500

Product Specifications



Operation

CPU: 32-bit

O/S: Proprietary

Software: 3-in-1 default applications (Bluetooth, OPN2001, and Batch application)

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

Memory

Flashrom: 1 MB

SRAM: 256 kB

External Flashrom: 2 MB

Operating indicators

Visual: 2 LED (RGB)

Non-visual: buzzer

Operating keys

Entry options: 2 keys (1 scan button, 1 function key)

Communication

USB: USB-C, USB-VCP, USB-CDC, USB-HID, USB-MSD

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

Power

Rechargeable battery: lithium-Ion Polymer 3.7V 250 mAh

Operating time (batch): 12,500 scans (1 scan / 5 sec)

Operating time (Batch, idle): >6 months

Operating time (Bluetooth): 12,000 scans (1 scan / 5 seconds)

Operating time (Bluetooth, idle): >1 month

Data retention time: Indefinite

Charge method: Enclosed USB-C cable

Barcode scanner optics

Light source: 650 nm visible laser diode

Scan method: Vibrating mirror

Scan rate: Up to 100 scans / second

Reading pitch angle: $\pm 35^\circ$

Reading skew angle: -50° to -8° , $+8^\circ$ to $+50^\circ$

Reading tilt angle: $\pm 20^\circ$

Curvature: R>15 (EAN 8), R>20 (EAN 13)

Min. resolution at pcs 0.9: 0.127 mm / 5 mil

Min. PCS value: 0.2

Depth of field:

70 - 550 mm (1.00 mm) / 2.76 - 21.65 in (39 mil)

50 - 380 mm (0.5 mm) / 1.97 - 14.96 in (20 mil)

50 - 230 mm (0.25 mm) / 1.97 - 9.06 in (10 mil)

50 - 130 mm (0.15 mm) / 1.97 - 5.12 in (6 mil)

60 - 110 mm (0.127 mm) / 2.36 - 4.33 in (5 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 2 of 5, ISBN-ISMN-ISSN, Matrix 2 of 5, MSI/Plessey-UK/Plessey, S-Code, Telepen, Tri-Optic

Postal code: Chinese Post, Korean Postal Authority code

Durability

Temperature in operation: 0 to 40 °C / 32 to 104 °F

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

Humidity in operation: 20% to 85% (no frost, non-condensing)

Humidity in storage: 20% to 85% (no frost, non-condensing)

Ambient light immunity: Incandescent 4,000 lx max, Fluorescent 4,000 lx max, direct sun 80,000 lx

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

Vibration test: 10 - 100Hz with 2G for 30 min

Protection rate: IP42

Physical

Dimensions (W x H x D): 32 x 62 x 16 mm / 1.26 x 2.44 x 0.63 in

Weight body: Ca. 29 g / 1 oz (incl. battery)

Case: ABS, Black

Regulatory & safety

Product compliance: CE, FCC, RoHS, IEC 60825-1 Class 2, FDA CDRH Class II

Items

Enclosed: USB-C cable, Neck strap

Sold separately: Silicon cover