E OPTICON

Companion Scanners

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
- When connected to the optional finger trigger, the scanner transforms into a ring scanner, perfect for hands-free operations and streamlined workflows.
- 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: ± 35° Reading skew angle: -50° to -8°, +8° to +50° Reading tilt angle: ± 20° 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, noncondensing)

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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, Finger trigger



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