

# RS-3000

## 2D CMOS Imager

The RS-3000 BT ring barcode scanner enables businesses to easily and quickly integrate hands-free barcode scanning into numerous mobile applications. Featuring an adjustable finger strap, it is designed for left and right-handed use and its advanced ergonomic design allows for all day comfort and scanning efficiency regardless of hand size.



## Highlights

- One of the smallest and lightest ring barcode scanners available
- Advanced ergonomic design allows for all day comfort and scanning efficiency regardless of hand size
- The scanner easily clicks onto a ring scanner bracket to transform into a wearable
- Adjustable finger strap allows for an easy and quick conversion for either right or left hand operation
- BT 4.2 compliant that supports BT low energy (BLE)
- NFC tag for easy BT pairing
- Configurable and programmable with the free Software Development Kit to customize scanning behavior
- Wireless charging with any Qi compatible charging pad or charging via USB-C port
- Ideal companion scanner for Apple and Android mobile devices
- Accurate battery monitoring, lasts a full working day, up to 20 hours
- An ultra-fast 100 frames per second (fps) CMOS imager rapidly scans and decodes 1D and 2D barcodes including improved scanning of curved, wide, poorly printed and damaged barcodes
- Barcode scanner is triggered via external thumb button
- Made of durable, high impact-resistant polycarbonate plastic, survives 1.5 m drops to concrete
- Backed by a two year warranty

# RS-3000

## Product Specifications



### Operation

CPU: 32-bit

O/S: Proprietary

Software: 4 applications available (more applications are programmable in C-language. Free software development kit with free RX compiler)

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

### Memory

Flashrom: 512 kB

Ram: 96 kB

External flashrom: 1 MB (>50,000 barcodes + time stamp)

### Operating indicators

Visual: 2 LED (red/green/blue)

Non-visual: buzzer

### Operating keys

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

Strap: 1 scan trigger

### Communication

USB: USB-C, supports USB-HID, USB-COM, USB-MSD

BT: Ver. 4.2 (BLE), SPP, HID, 1 to 1 connection, master & slave mode, authentication and encryption

### Power

Rechargeable battery: Lithium-Ion 3.7V 400mAh

Operating time(Batch): 4.500 scans (1 scan / 5 sec)

Operating time(Batch, idle): 2 months

Operating time(BT): 3.500 scans (1 scan / 5 sec)

Operating time(BT, idle): 27 hours

Data retention time: Indefinite

Charge method: Wireless with any Qi compatible charging pad or with an USB-C cable

### 2D Imager optics

Light source: Aiming green LED, warm white illumination LED

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:  $R > 20$  mm (EAN13)

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

Min. pcs value: 0.2

Field of view: horizontal  $38^\circ$ , vertical  $28.9^\circ$ , diagonal  $46.4^\circ$

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  $60^\circ\text{C}$  /  $-4$  to  $140^\circ\text{F}$

Temperature in storage:  $-40$  to  $70^\circ\text{C}$  /  $-40$  to  $158^\circ\text{F}$

Humidity in operation: 5% to 90% (non-condensing)

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

Ambient light immunity: Incandescent 10,000 lx max,

Fluorescent 10,000 lx max, direct sun 100,000 lx

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

Vibration test: 12 - 200Hz with 3.3G for 10 min

Protection rate: IP42

### Physical

Dimensions (W x H x D):

32.3 x 20.8 x 47.7 mm / 1.27 x 0.82 x 1.88 in,

41 x 44.8 x 47.7 mm / 1.61 x 1.76 x 1.88 in (incl bracket)

Weight body: Ca. 26.2 g / 0.92 oz, ca. 34.4 g / 1.21 oz (incl. bracket)

Case: ABS+PC, black/grey

### Regulatory & safety

Product compliance: CE, FCC, RoHS, IEC62471:2006

### Items

Enclosed: Ring bracket, USB C cable