

RF5520U

Ring-style + Handheld, 2D + RFID Portable Scanner



Product Description

The RF5520U is NETUM's latest and first-of-its-kind portable scanner featuring ring + handheld operation, supporting both barcode (1D/2D) and RFID UHF scanning.

Durable Construction: Combines a high-strength soft TPR shell with a hard ABS casing, ensuring wear resistance and impact protection. Built to withstand harsh industrial environments like warehouses and logistics, delivering stable performance even with long-term use.

Compact & Portable: Lightweight and ergonomic, it offers effortless wear (as a ring) or handheld operation, making it ideal for mobile workflows.

Industrial Design: Bold lines + matte texture — professional industrial styling that suits production environments while optimizing comfort through ergonomic design for both grip and wear.

Product Features

- **Dual-mode scanning, seamless scene switching:** supports ring-type and handheld scanning, flexible switching, meets the needs of fast scanning in different scenarios, and improves operational efficiency
- **All types of data collection, covering industry needs:** supports one-dimensional code and two-dimensional code fast identification, integrated RFID UHF tag scanning, suitable for logistics traceability (barcode) + asset inventory (RFID) and other scenarios, one device for multiple uses, reducing equipment investment.
- **Technical collaboration:** RFID (batch) + barcode (single product/precision) covers "macro-micro" data collection
- **Equipped with removable battery:** The battery is removable design, easy to replace quickly, to ensure the continuous operation of the equipment, reduce downtime, suitable for high-intensity working environment.

Application Scenarios

Warehousing & Logistics: Smart Sorting + Asset Inventory in One

During warehousing and sorting, it is necessary to quickly scan the product barcode (one-dimensional/two-dimensional) to confirm the SKU, and at the same time, the entire batch of assets can be counted through RFID UHF tags (pallets/shelves) to reduce repetitive work.

Retail supply chain: full-link coverage from warehousing to cashier

Warehouse full box RFID UHF scanning (fast warehousing), store single product barcode scanning (cashier/replenishment), the equipment needs to be flexible to adapt to the "batch-single product" scenario.

Manufacturing production line: "second-level collaboration" of parts traceability and batch management

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Production line parts barcode

Medical consumables management: "precise inventory + usage traceability" of high-value consumables

Hospital high-value consumables RFID ultra-high frequency inventory (such as implantable devices, convenient and quick to find) + use barcode scanning (record user/time/patient), the equipment must meet the hygiene and portability requirements of medical scenarios.

Barcode module parameters

1	Optical performance	
1.1	Sensor resolution:	1280 x 960 pixels, rolling shutter
1.2	Aiming LED:	Green LED
1.3	Illumination:	Warm white LED light
1.4	LED classification	According to IEC/EN 62471, it is a risk-exempt group LED
2	Scanning performance	
2.1	Field of view: Horizontal:	Horizontal: 44.5°, Vertical: 33.5°
2.2	Offset, tilt and rotation:	Left and right swing tolerance: $\pm 60^\circ$ Forward and backward swing tolerance: $\pm 60^\circ$ Rotation tolerance: 360°
2.3	Focal length:	From the front of the engine: 6 inches / 15.24 cm

2.3	Decoding capabilities:	2D PDF417、MicroPDF417、Code 128 Emulation、QR Code、MicroQR、Data Matrix 、Maxicode、Aztec 1D Code128 (UCC/EAN-128、GS1-128、ISBT 128)、UPC/EAN(UPC-A、UPC-E、EAN-8/JAN-8、EAN-13/JAN-13、ISBN、ISSB EAN)、Code39、Code32、Code93、Code11、Interleaved 2 of 5 (ITF)、Discrete 2 of 5 (DTF)、Codabar (NW-7) MSI、Chinese 2 of 5、Matrix 2 of 5、Korean 3 of 5、Inverse 1D、Postal Codes、GS1 DataBar、Composite
2.4	Accuracy:	1D: ≥ 3 mil 2D: ≥ 5 mil
2.5	Scanning Performance:	5 mil Code 39 2.4 in/6.1 cm to 9.5 in/24.1 cm 5 mil Code 128 2.8 in/7.1 cm to 9.0 in/22.9 cm 6.67 mil PDF 417 2.4 in/6.1 cm to 8.0 in/20.3 cm 10 mil DataMatrix 2.9 in/7.4 cm to 8.5 in/21.6 cm 100% UPCA 1.8 in/4.6 cm to 19.5 in/49.5 cm 15 mil QR 1.2 in/3.0 cm to 11.5 in/29.2 cm 20 mil QR 1.2 in/3.0 cm to 14.0 in/35.6 cm

Carrier frequency:	840MHz ~960MHz
Antenna:	2dBi PCB antenna
Maximum RFID read range:	$\approx 0\sim 20\text{CM}$

RFID

- **Frequency band:** Works at 860 MHz - 960 MHz.
- **Supported tags:** ISO/IEC 18000-6C (EPC Class 1 Gen 2)
- **Supported output data:** EPC, (TID, user data)

Application scenarios:

Logistics and supply chain management: Quickly read cargo information and improve efficiency.

Retail: Inventory management and automatic checkout system.

Smart transportation: Vehicle identification and electronic toll collection system.

Asset tracking: Monitor and manage the flow of equipment and assets.

Medical industry: Patient and drug tracking to improve safety.

Industrial automation: Real-time monitoring of production line and equipment status.

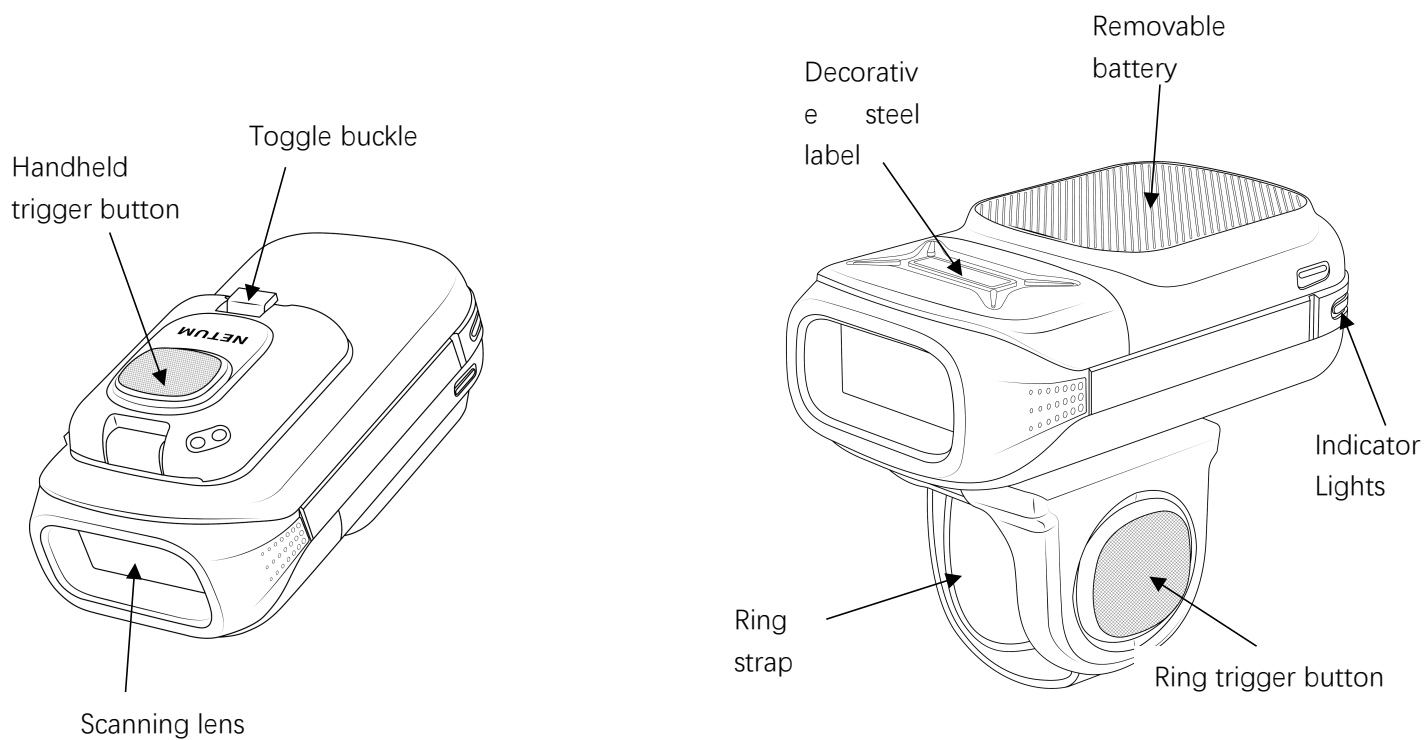
Animal identification: Animal identification and tracking, feeding management, vaccination records.

Product Specifications

1	Wireless Parameters	
3.1	Transmission Mode:	Wireless Bluetooth 4.2 (Supports Bluetooth HID SPP BLE)
3.2	Communication Distance:	Open Visible Distance $\leq$ 30 meters
3.3	Battery Capacity:	1000Mah
3.4	Battery Life:	$\approx$ 5 hours (continuous operation)
3.5	Use Times:	$\approx$ 18,000 times (scan once per second)
3.7	Prompt Mode:	Buzzer, LED Indicator, Vibration

3.8	Scan Mode:	Wearable Ring Button Trigger Scan
		Portable Handheld Button Trigger Scan
4	Electrical Characteristics	
4.1	Operating Voltage:	5 VDC±5%
4.2	Current @3.3VDC	Operating Current: 310mA Standby Current: ≤0.6μA
5	Physical Dimensions	
5.1	Dimensions Length x Width x Height (mm):	72*50*55mm Handheld: 72*50*32mm
	Ring:	
5.2	Cable:	Type-C interface, cable length: 1.2m
5.3	Color:	Gray + Black
5.4	Material:	ABS+TPR+PC
5.5	Weight:	Ring type ≈72g Handheld ≈68g
6	Operating environment	
6.1	Operating temperature:	-4° F to 122° F / -20° C to 50° C
6.2	Storage temperature:	-22° F to 158° F/-30° C to 70° C
6.3	Storage humidity:	5%-90%
6.4	Ambient lighting:	Up to 107,639 lux (under direct sunlight)

Product Introduction



Installation Tutorial

Ring installation tutorial



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②



③



④

Handheld Installation Tutorial



①



②



③



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Battery removal tutorial

