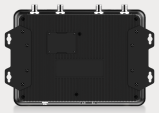
Newland AIDC
SCANNING MADE SIMPLE




# URF520 Solea

UHF Devices

EasySet
Ethernet
IP53
Nset
PoE
RFID
RS-232
RS-485
UHF
USB-B
Warranty
2 Years


## Features

**High-Performance RFID Reading.**
The URF520 Solea is a UHF RFID reader built on a high-performance Impinj E710 RFID chip. With a reading distance of up to 14 meters and a read rate of up to 900 tags per second, it's well-suited to high-throughput applications such as a self-service checkout. Signal strength is adjustable from 5 to 33 dBm, allowing the read zone to be fine-tuned to the application: wide coverage for large areas, or a tighter, more precise zone to avoid picking up unwanted nearby tags. The URF520 Solea is built on the globally recognized EPC Gen2 / ISO 18000-6C standard, working with UHF tags from a wide range of manufacturers, giving businesses the flexibility to choose the right tag for their application, rather than being tied to a single vendor.

**Flexible Antenna Support.**
The URF520 Solea can connect up to four antennas simultaneously, enabling a single reader to cover multiple reading points without the costs and complexities of installing several readers. It supports external antennas with different gain levels (3, 6, and 8 dBi), allowing each installation to be customized for its environment, whether it requires tight control over read zones or long-range portal coverage. Additionally, the reader automatically detects the presence and functionality of each connected antenna, quickly flagging any connection issues. This feature ensures that problems are identified and resolved promptly, eliminating the need for manual cable checks.

**Efficient and Reliable Data.**
The URF520 Solea supports real-time and trigger-based read modes. In real-time mode, the reader scans continuously, capturing tags the moment they appear. In trigger-based mode, it scans only when prompted by an external signal, such as a sensor or an automation event, providing precise control over when reads occur. The reader's built-in memory can also store up to 1,000 recently read tags, filtering out duplicates so that only new, relevant data is passed on. This keeps

**Easy Installation.**
The URF520 Solea features built-in mounting holes on the back of the device, allowing it to be mounted directly to walls, poles, or brackets without the need for separate mounting hardware, making installation quicker and more flexible across different site layouts. The reader supports DC, PoE, and PoE+ power supply, simplifying on-site wiring. PoE and PoE+ allow the reader to receive both power and network connectivity through a single Ethernet cable, reducing the number of cables needed and making installation easier in locations where a dedicated power outlet isn't readily available. This flexibility is supported by the URF520 Solea's low power consumption (10.5 W typical), which keeps it comfortably within standard PoE power budgets, allowing it to run over Ethernet alone in most installations without a separate power supply. This also means lower running costs and less heat generated during continuous operation.

**Built for Integration.**
The URF520 Solea provides a wide range of communication interfaces, including Ethernet, RS-232, RS-485, and USB-B, ensuring efficient and flexible data transmission across a variety of enterprise and industrial systems. The reader also features an integrated GPIO interface with opto-isolated inputs and relay outputs for automation. This allows the reader to connect directly to sensors or machinery, triggering scans automatically in response to external events, such as an item being detected at a checkout counter or a pallet arriving at a checkpoint, without requiring additional hardware. Relay outputs can then signal other equipment in response, such as activating an alert or indicator light. At the same time, the opto-isolated inputs protect the reader from electrical noise, ensuring reliable operation in demanding environments.

**Durable Industrial Design.**
The URF520 Solea features an aluminum alloy housing that supports

data clean and reduces unnecessary processing load, making the URF520 Solea well-suited to high-throughput industrial applications where reliable, low-noise data is essential.

effective heat dissipation, finished in a stable dark color for a simple, refined look that conveys both elegance and sturdiness. With an IP53 rating, the reader is protected against dust and moisture, while its wide operating temperature range of -20°C to +60°C ensures consistent performance in demanding environments. This combination of durable design and environmental resilience makes the Solea suitable for a range of industries, including retail, logistics, manufacturing, and warehouse environments. Backed by a standard two-year warranty, the URF520 Solea offers added confidence and reliability for long-term deployment.

2 Years Full Warranty

Nset

TECHNICAL SPECIFICATIONS

# URF520 Solea

### Performance

| | |
|---|---|
| Antenna Interface | 4 TNC Interface |
| Antenna Presence Detection | Supported |
| FM Mode | Frequency Hopping Spread Spectrum (FHSS) or Fixed Frequency (FF) |
| Frequency Range | ETSI (Europe): 865-868 MHz., FCC (USA): 902-928 MHz., SRRC-MII (China): 920-925 MHz. |
| Output Power | 5dBm-33dBm (±1dBm) adjustable |
| Protocol Supported | EPC C1 Gen2 (ISO 1800-6C) |
| Read Distance | >14 m (outdoor open space) (use 8dBi antenna, ALN9740) |
| Read Rate | ≥900 tags/sec (read rate can be affected by environment) |
| Read/Write Work Mode | Support single trigger mode and real-time mode |
| Receive Sensitivity | < -84dBm |
| RFID Engine | Impinj chip module |
| RSSI (Received Signal Strength Indicator) | Supported |

### Physical

| | |
|---|---|
| Dimensions | 227 x 166 x 42 mm (with bracket: 256 x 166 x 42 mm) |
| GPIO | 4-way optocoupler isolation input, 4-way relay output |
| Housing | Aluminium |
| Input Voltage | 9-24 VDC, 12V/3A |
| Interfaces | RS-232, RJ-45, USB-B, RS-485 |
| Power Consumption | 10.5 W |
| Power Supply | DC adapter, PoE (802.3af), PoE+ (802.3at) |
| Tag Cache | 1000 tags |
| Weight | 1.5kg (4 channels) |

### Environmental

| | |
|---|---|
| Ambient Temperature Detection | Supported |
| Humidity | 5% to 95% (non-condensing) |

| | |
|---|---|
| IP Rating | IP53 |
| Operating Temperature | -20°C to 60°C (-4°F to 140°F) |
| Storage Temperature | -40°C to 85°C (-40°F to 185°F) |

**Communication**

| | |
|---|---|
| Communication Protocol | TCP-IP, RS-232, RS-485, USB 2.0 full speed |

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**Newland AIDC EMEA**
Feel free to contact us or a partner near you.
info@newland-id.com - newland-id.com

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