

## Key Features

- Four antenna ports
- High RF sensitivity for longer read-write ranges
- Multiple communication interfaces
- Supports reading-writing of tags
- High tag read rate
- Supports auto-pilot mode
- Multi-regional support
- Compact package
- Best suited for industrial applications



# Product Datasheet

## Four Port Fixed Reader

Model No. : SN-FR 401

Scratchnest

ScratchNest SN-FR 401 is a fixed four port RAIN RFID Reader which works in the ultra-high frequency range. It boasts various features including two antenna ports and USB, RS-232, RS-485, and LAN interfaces that make it easy to install and use. Additionally, the range of RF power is 0 to 31.5 dBm which is adjustable via software.





## Physical Characteristics

- Dimensions**200 x 160 x 30 mm
- Material**Aluminium alloy
- Communication Interfaces**USB, RS-232, RS-485, and LAN
- Input Voltage**9-24 V DC supply
- Current Rating**2 A
- Cooling Mode**Air cooling
- Ethernet Interface**10/100 base T-Ethernet (RJ45)
- GPIO**4 output and 4 input, optically isolated

## UHF RFID Features

- Frequency**865-868 MHz and 902-928 MHz
- Air Interface Protocol**EPC Class1 Gen2 (ISO 18000-6C), ISO 18000-6A/B
- Antenna**Four, four 50 Ohm TNC connector
- MCU**Arm Cortex-M4
- RF Power**0 - 31.5 dBm
- RF Power Control**Command-adjustable with separate read and write levels
- Default RF Power**31.5 dBm
- Read range**> 10 m, with suitable antennas
- RF Sensitivity**< -90 dBm
- RSSI**Supported
- Maximum Tag Read Rate**700 tags/s (with 16-bit tag EPC length)
- Tag Read Indication**LED and buzzer
- Carrier Cancellation Circuitry**Enabling pre- and re-tuning
- Dense Reader Mode**Supported
- Auto Pilot Mode**Supported

## User Environment

- Operating Temperature**-25 to 65 °C
- Storage Temperature**-45 to 90 °C
- Relative Humidity**10 % to 90 %





## Visual and Sound Indicators

- |                    |                      |
|--------------------|----------------------|
| • <b>Power</b>     | Red LED              |
| • <b>Antenna 1</b> | Yellow LED           |
| • <b>Antenna 2</b> | Yellow LED           |
| • <b>Antenna 3</b> | Yellow LED           |
| • <b>Antenna 4</b> | Yellow LED           |
| • <b>Tag</b>       | Green LED and buzzer |

## Connectors Type

- |                  |                   |
|------------------|-------------------|
| • <b>USB</b>     | USB type B        |
| • <b>LAN</b>     | RJ45              |
| • <b>RS232</b>   | DB9 connector     |
| • <b>RS485</b>   | DB9 connector     |
| • <b>GPIO</b>    | Phoenix connector |
| • <b>Antenna</b> | TNC connector     |


## Accessories Included


- Reader
- Power adapter
- Mounting brackets
- USB cable
- LAN cable
- User manual
- Free demo software


## Applications


- Warehouse Management
- Assets and Inventory Management
- Smart Attendance Systems
- Railways
- Logistics
- Anti-counterfeiting
- Jewelry Management

## Contact Details

 [www.scratchnest.com](http://www.scratchnest.com)

 [sales@scratchnest.com](mailto:sales@scratchnest.com)

 +91-844-742-2760

 Room No. 6, 3rd Floor, East Wing, M. Visvesvaraya Block, IIT Ropar,  
Rupnagar, Punjab, India - 140001



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Note - All the mentioned specifications are subject to changes without notice.

