

# RM4-N



## 4- Channel NB IoT – Cat-M1 Low Power Transmission Interface for Industrial Applications

- Compatible with most standard communication Protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power



## TECHNICAL SPECIFICATION

### Sensor Interface

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Interface Options<br/>(RM4-L covers a wide range of industrial sensors interfaces. Unique design of the interface gives ultimate flexibility of up to 4 sensor interfaces for more flexibility at lower cost)</li> </ul> | <ul style="list-style-type: none"> <li>• 4 x 4-20mA</li> <li>• 4 x Pulse</li> <li>• 4 x Pt (100, 1000, 2 wire, 3 wire)</li> <li>• 4 x mV</li> <li>• 4 x SDI-12</li> <li>• 4 x 0-10V<sub>DC</sub><br/>(or other customised options on request)</li> </ul> |
| <ul style="list-style-type: none"> <li>• Electric Connection:</li> </ul>  | 1m cable, pin connection (or other options on request)   |
| <ul style="list-style-type: none"> <li>• Operating temperature range: (°C)</li> </ul>   | -10 ~ + 70   |

### Power

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Power Supply:</li> </ul>                  | Built-in Replaceable 3.6V Lithium Battery, External Power (option)  |
| <ul style="list-style-type: none"> <li>• Rated Voltage to Sensors (VDC)</li> </ul> | 12  |
| <ul style="list-style-type: none"> <li>• Battery Lifetime:</li> </ul>              | Typ. 50,000+ readings and 10,000+ transmission<br>(With UDP protocol/ More than 10 years for most applications) |

### Physical Specification

- |  |                          |
|--|--------------------------|
| <ul style="list-style-type: none"> <li>• Materials:</li> </ul>           | ASA                      |
| <ul style="list-style-type: none"> <li>• Weight: (g)</li> </ul>          | 450                      |
| <ul style="list-style-type: none"> <li>• Protection Rate: (-)</li> </ul> | IP66 /IP68, UV Protected |

### Communication

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• SIM Card Type</li> </ul>           | 4FF Nano-SIM, from any Network Provider                        |
| <ul style="list-style-type: none"> <li>• Firmware Update:</li> </ul>        | Over The Air, Locally via Wireless Connectivity                |
| <ul style="list-style-type: none"> <li>• Sampling Period:</li> </ul>        | Configurable via downlink (default 4 hours)                    |
| <ul style="list-style-type: none"> <li>• Power Consumption:</li> </ul>      | Power Saving: < 5uA, Transmission: < 220mA                     |
| <ul style="list-style-type: none"> <li>• Communication Standards</li> </ul> | Cat-NB1 (NB-IoT)<br>Cat-M1<br>(option of back support by GPRS) |



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# RM4-N

• Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39
• Data Rates:	Cat-M1: 375Kbps (DL)/375Kbps (UL) NB-IoT: 32Kbps (DL)/70Kbps (UL)
• TX Power:	23dBm
• Min Receiver Sensitivity:	Cat-M1: -107dBm NB-IoT: -113dBm
• Antenna:	Internal (Default)/ External (customised options available)
• Optional Features:	<ul style="list-style-type: none"> <li>• Attach without PDN (Packet Data Network)</li> <li>• Support for IPV6</li> <li>• SMS communication</li> <li>• Mobility support (Cat-M1 only)</li> </ul>

## NETWORK CONNECTION AND VISUALIZATION

### Network Integration

Pre-configured or configurable to all main narrow band networks (3, A1, AT&T, China Mobile, DU, Etisalat, KPN, M1 Singapore, Optus, Orange, Proximus, Spark, Sprint, Swisscom, Telefonica, Telstra, T-Mobile, Verizon, Vodafone, 1NCE, Emnify and any other network)

### Visualization and Data Management

10Sorex white label microservice platform and Integratable to all main IIoT platforms directly or through the API(AWS, Azure, PTC ThingWorx, Bosch IoT, Cisco Jasper & Kinetic, Sierra Numerex, MathWorks ThingSpeak, GE Digital Predix, LandisGyr, Siemens MindSphere, Cumulocity, myDevices, Ubidots, TagIO, AllThingsTalk Maker, HPE IoT and any other major IoT platform).

### 10Sorex Platform Main Features

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account
- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customization available on request



Encrypted &  
ultra-low power



Integrable



Dynamic alerting



Multi-tenant



Scalable



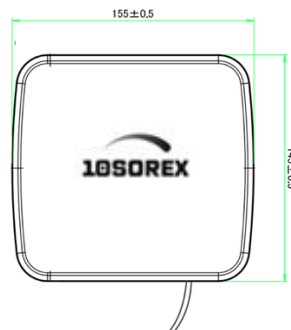


Composable & API first



# RM4-N

## MODEL GUIDE

Model:	Option / Schematic	
RM4 with 3m cable	RM4 with 4 pin connectors	
		

## INDUSTRIES



Water &  
Environment



Agriculture &  
Farming



Oil &  
Gas



Marine &  
Oceanography



Mining &  
Construction



Smart Building  
& HVAC



Transport &  
Logistics



Food &  
Beverage



Hydraulics and  
Compressed  
Air Systems

## APPLICATIONS

- Pump Performance Monitoring
- Water Pipeline Pressure Monitoring
- Pressurized System Monitoring
- Chiller and Cooling System Monitoring
- Hydraulic and Pneumatic Systems Monitoring
- Liquid Storage Level Monitoring
- Spraying System Monitoring
- Air Compressor Monitoring



# RM4-N

## ORDERING CODE

RM4-N							
Communication Type							
B: NB-IoT				C: Cat-M1			
Interface Options							
B1: 4 x Pulse (Reed switch)		C1: 4 x mV or MV/V		D1: 4 x Pt100 -Temp 2 wire			
E3: 4 x SDI12		E6: 4 x 4-20mA		E8: 4 x 0-10V			
Other customised options on request							
Electric Connection							
P: pin connector				3m: 3m wire cable			
Others as specified							
Device Activation							
S: on/off switch				X: No switch (always on)			
Antenna							
I: Internal				E: External			
Options							
(On request) <sup>1</sup>							
RM4-N	B	E6	P	S	I		

### Sample Product Code:

- **RM4-N-B-E6-P-S-I**

4-channel NB-IoT sensor interface with 4 x 4-20mA sensor connected by pin connection, activated by on-off switch and equipped by internal antenna.

### <sup>1)</sup> Product Options:

- **EP:** sensor with external power supply connector for 12V supply (adaptor is not included)
- **EPB:** connector for 12V supply with internal battery backup (adaptor is not included)
- **HG:** high-gain external antenna
- **HCB:** high-capacity battery



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