



OrionM2M

AUTONOMOUS RADIO MODEM

ORIONMETER ORN-GMZ-LW868/NB

PURPOSE:

- ❖ Remote wireless reading of gas flow meters in the areas of Smart Utilities, Smart City, Industrial IoT, automated gas control systems;
- ❖ Monitoring, control and accounting of municipal resources in management systems;
- ❖ Wireless data transmission in the LoRaWAN or NB-IoT network.



building
connected future












LoRa Alliance Member™



APPLICATION

Autonomous radio modem is meant for calculating the number of turnovers of the disk of the gas meter. The function of remote control of the gas meter valve is provided. The radio modem independently provides emergency closing of the meter valve in case of a gas leak and sends an operational message to the dispatcher via the LoRaWAN or NB-IoT network.

FEATURES

-  The convenience of connecting the radio modem via the standard connector of the gas meter;
-  Self-activation of the radio modem by gas flow;
-  Activation of the radio modem by magnet;
-  The detection of magnetic effects in the process of operation;
-  Immediate notification and closing of the valve in the event of a gas leak;
-  Remote control of the gas meter check valve;
-  EasyTool technology allows you to make a wireless remote connection to a radio modem for configuring, updating software, and reading accumulated data over a secure channel;
-  Using of **BatteryCare®** technology allows you to operate the radio modem for up to 7 years without replacing the power source;
-  The non-volatile memory of the radio modem allows you to store data up to 62 days of hourly profile with the ability to remotely request readings.

| LoRaWAN | | Parameters | |
|---|---------------------------|--|--------------------------|
| Class of LoRaWAN devices | A | Built-in battery capacity, mAh | 9000 |
| Quantity of LoRa channels | up to 16 | Embedded battery voltage, V | 3,6 |
| Operating frequency, MHz | EU863-870 | Chemical composition of the battery | Li-SOCl2 |
| | US902-928 | Service life without battery replacement, years | up to 10 |
| | AU915-928 | Warranty period, months | 36 |
| | CN779-928 | Guaranteed number of packets sent by the device, at least pcs. | 40 000 |
| | AS923 | Work temperature, °C | - 40° ... + 50° |
| | KR920-923 | Number of measuring channels | 1 |
| IN865-867 | Activation with a magnet | yes | |
| RU864-870 | Gas flow activation | yes | |
| KZ865-868 | Hourly archive, day | 62 | |
| Activation method in the operator's network | OTAA | Notification of the opening | yes |
| Type of Lora antenna | Embedded | Notification of magnet exposure | yes |
| Receiver responsivity, dBm | -137 | Control of the counter check valve | yes |
| Transmitter power, dBm (mW) | 14 (up 25) | Housing material | Polycarbonate |
| Data transfer rate, kbit/sec | 0,3...40 | Overall dimensions, mm | 160 x 140 x 30 |
| Communication distance in urban areas, km | up to 5 | Weight, kg | ≤ 0,25 |
| Line-of-sight communication range, km | up to 15 | Degree of ingress protection | IP65 |
| NB-IoT | | Bracing | front panel of the meter |
| Device category | cat-NB1 | | |
| Radio frequency range | B1/B2/B3/B4/B5/B8/B12/B13 | | |
| | /B17/B18/B19/B20/B25/B28/ | | |
| | B66 | | |
| | B66 | | |
| Antenna type | PCB | | |
| Receiver responsivity, dBm | -129 | | |
| Transmitter power, dBm (mW) | 23 (up to 200) | | |
| Data transfer rate, kbit/sec | DL 25,5 / UL 16,7 | | |
| Communication distance in urban areas, km | up to 3 | | |
| Line-of-sight communication range, km | up to 15 | | |

MODELS OF SUPPORTED METERS

| Manufacturer | Model | Manufacturer | Model |
|--------------|--------------|--------------|--------------|
| Saiman | CF-G1,6-01-Д | Zenner | Atmos G1,6S |
| | | | Atmos G1,6MS |
| | | | Atmos G1,6-T |
| | CF-G4-01-ДТ | | Atmos G2,5S |
| | | | Atmos G2,5MS |
| | | | Atmos G2,5-T |
| | CF-WG6-01-Д | | Atmos G4S |
| | | | Atmos G4-T |
| | | | Atmos G6S |
| | | | Atmos G1,6S |
| | | | Atmos G1,6MS |
| | | | Atmos G1,6-T |