

# **ITRON Water/Gas meter LoRaWAN module User Manual V1.1**



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# CATALOG

<b>1. OVERVIEW .....</b>	<b>1</b>
<b>2. FEATURE .....</b>	<b>2</b>
<b>3. TECHNICAL PARAMETERS .....</b>	<b>3</b>

## 1. Overview

ITRON water meter/gas meter LoRaWAN module can adopt all of the ITRON water meter and gas meter which equipped with non-magnetic steel. It is suitable for various reading scenes, and integrates water meter and gas meter into modern intelligent metering system.

The module integrates non-magnetic measurement acquisition and communication transmission. It can monitor abnormal states such as countercurrent, water leakage and battery undervoltage, and report the most real-time flow and other states of the water meter to the management platform. Comply with LoRaWAN1.0.2 standard protocol ensures that the current value of the water meter is transmitted to the lorawan gateway. The module use ASR6601CB chip to form a star network with the gateway, which is convenient for network maintenance, with high reliability and strong expansibility.



## 2. Feature

### Feature of ITRON water meter/gas meter LoRaWAN module:

- LoRa modulation mode, long communication distance; ADR is turned on, multi-frequency points and multi-rate automatically switches to improve the reliability of transmission ; Utilizing time division multiple access communication technology, automatically synchronizing communication time units to avoid data collisions; OTAA air activation is automatically generated for network access key, with simple operation and it's convenient to maintain ,the data is encrypted with multiple keys with high security; It supports wireless or infrared (optional) parameter setting reading;
- The non-magnetic measurement sensor processes 3 inductance signals and supports forward and reverse measurement. The non-magnetic measurement sensor supports automatic switching between high-speed and low-speed sampling to achieve the optimal design of power consumption; It supports the maximum flow rate 3600P/h, 1P means 1 turn of the dial ;
- The non-magnetic measurement sensor supports disassemble detection, magnetic interference detection, water leakage detection, and reverse flow detection. When any abnormal alarm of disassemble, magnetic attack, water leakage, or reverse is detected, it can actively report data packets of abnormal state to the management platform;
- Battery Low Voltage Alarm.When the voltage is lower than 3.2V (error 0.1V), it actively report the data package of battery low voltage alarm to the management platform;
- Built-in memory, the internal parameters are not missing after the power is failure, and it can be used normally without setting the parameters again after replacing the battery.
- Data is reported every 24h by default. The reporting cycle and reporting time point can be set.
- The function parameters of the module can be set wirelessly, and the near-field infrared setting function can be option.
- With standard spring antenna, and flexible circuit board antennas or other metal antennas can also be customized as per users' products.

### 3. Technical Parameters

Working frequency	It's Compatible with LoRaWAN® all frequency.
Effective transmit power	It complies with the restriction requirements of the LoRaWAN protocol
Sensitivity	<-126dBm
Operating temperature	-20°C~+70°C
Working voltage	+3.2V~+3.8V
Receive current	≤10mA
Transmit current	≤135mA
Transmit distance	≤15km
Quiescent current	≤25μA