

# WISE-4471-S250

## NB-IoT / eMTC IoT Wireless Sensor Node

NEW



### Introduction

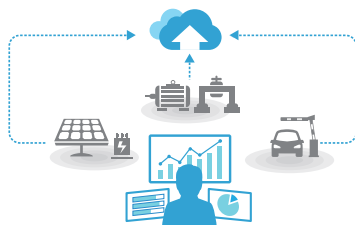
NB-IoT is a new wireless communication technology with low power consumption in wide area networks. It is an international standard defined by the 3rd Generation Partnership Project (3GPP). NB-IoT feature low power consumption and remote transmission and can be constructed directly on LTE networks based on licensed spectrum bands.

WISE-4471 series is a 4G cellular based IoT wireless sensor node compliant with LTE Cat. NB1 and Cat. M1 with built in antenna for flexible installation. In addition to offering various I/O types, WISE-4471 series provides a data logger and direct cloud connectivity so that data can be published to the cloud by messaging protocol such as MQTT, CoAP, LWM2M with secure socket supported.

### Features

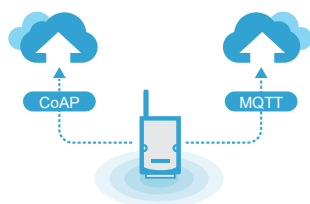
#### Automatic Connection with Cloud

By pre-integration messaging protocol such as MQTT, WISE-4471 series can integrate with cloud services automatically, reducing setup complexity for rapidly implementation.



#### Open Connectivity for Cloud and System

WISE-4471 series support CoAP and MQTT communication protocols while continually integrating mainstream cloud services to simplify the complexity of data integration.

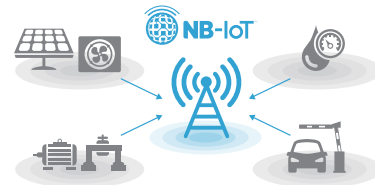


### Features

- Global coverage of NB-IoT and eMTC frequency bands
- Application-ready I/O combination with optional IP65 I/O
- Wide voltage power input with 10 ~ 50V<sub>DC</sub>
- Data buffered function with time stamp reducing data lost
- Fast and easy deployment to reduce operation cost
- Supports direct cloud service for IoT integration
- Support MQTT and CoAP protocols

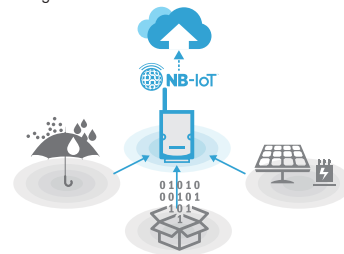
### Legacy and Existing Devices to NB-IoT/eMTC

WISE-4471 series offer digital I/O, 4-20-mA analog and RS-232/485 interfaces for various applications, quickly providing NB-IoT/eMTC network functions to existing devices.



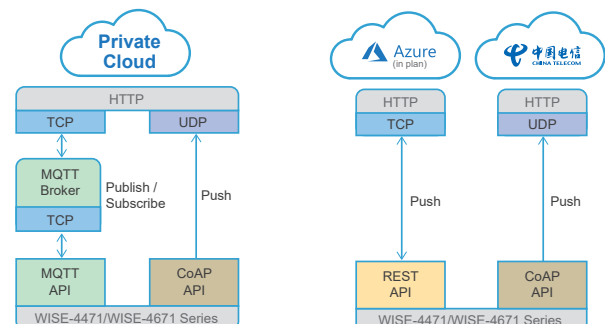
### Upgrade Legacy Equipment through Cloud Management

WISE-4471 series NB-IoT/eMTC sensor nodes are suitable for data collection from widely distributed stations. No complicated programming, setup, or registration are required for a fast introduction into IoT applications such as smart cities, smart water/electricity meters, and remote facility management.



### Device to Cloud System Architecture

WISE-4471 series wireless sensor nodes support the open communication protocols MQTT, CoAP, and RESTful. Users can transmit data to specific public cloud services or existing private cloud platforms by publish/subscribe or push.



## Specification

### Wireless Communication

- 3GPP Standards R13 LTE Cat M1 / NB1
- Frequency Band 2, 3, 4, 5, 8, 12, 13, 20, 28
- Antenna Type Internal

### General

- Power Input 10 ~ 50V<sub>DC</sub> external power
- Configuration Interface Micro-B USB
- SIM 3FF/Micro SIM
- Connector
  - WISE-4471-S2xx: Plug-in screw terminal block (I/O and power)
  - WISE-4471-S4xx: M12 4-pin code-A male x 1 (Power)  
M12 8-pin code-D female x 1 (I/O)
- LED Indicator Status, Error, Tx, Rx, Signal Level
- Mounting DIN 35 rail, wall, pole and stack
- Dimension (W x H x D) 70 x 112 x 38 mm
- Certification CE(RED), NCC, FCC, IC

### Digital Input

- Channels 6 (Dry Contact)
- Supports 3kHz Frequency Input

### Digital Output

- Channels 2

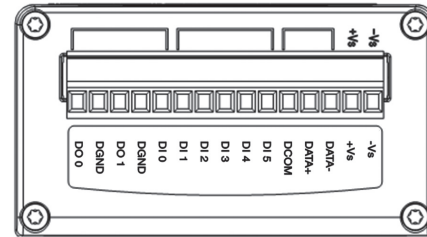
### Serial Port

- Port Number 1
- Type RS-485
- Data Bits 7, 8
- Stop Bits 1, 2
- Parity None, Odd, Even
- Baud Rate (bps) 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
- Protocol Modbus/RTU  
(Total 64 addresses by 30 max. instructions)

### Environment

- Operating Temperature -20 ~ 60°C
- Storage Temperature -40 ~ 85°C
- Operating Humidity 20 ~ 95% RH
- Storage Humidity 0 ~ 95% RH

## Pin Assignment



## Ordering Information

- WISE-4471-S250UA NB-IoT / eMTC IoT WSN with 6DI, 2DO, 1RS-485

### Selection Table

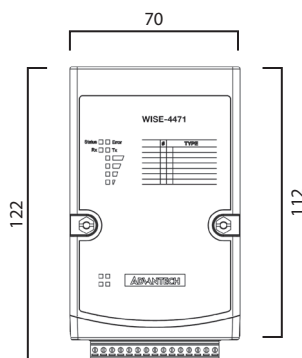
Model Name	IP-rated	Analog Input	Digital Input	Digital Output	RS-485	RS-232/RS-485
WISE-4471-S250	-		6	2	1	
WISE-4471-S214	-	4	4			
WISE-4471-S472	IP65		1		1	1
WISE-4471-S414	IP65	4				

### Accessories

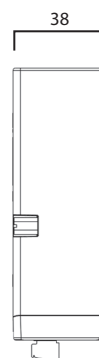
- PWR-242-AE DIN Rail Power Supply (2.1A Output Current)
- PWR-243-AE Panel Mount Power Supply (3A Output Current)
- PWR-244-AE Panel Mount Power Supply (4.2A Output Current)

## Dimensions

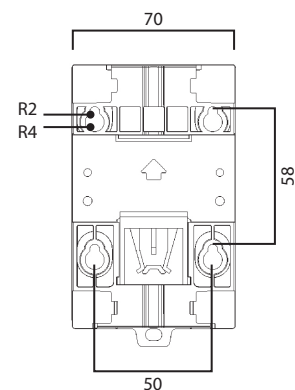
Unit: mm



Front View



Side View



Mounting Kit