

WISE-4471-S250

NB-IoT / eMTC IoT Wireless Sensor Node

NEW



Introduction

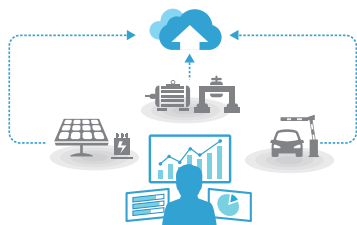
NB-IoT is a new wireless communication technology with low power consumption in wide area networks. It is an international standard defined by the 3rd Generation Partnership Project (3GPP). NB-IoT feature low power consumption and remote transmission and can be constructed directly on LTE networks based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

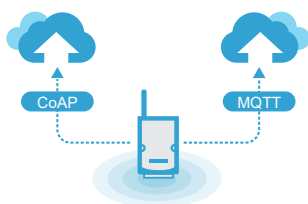
Automatic Connection with Cloud

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.

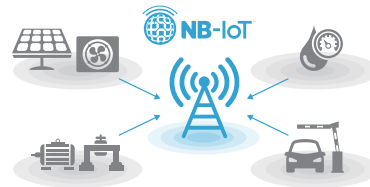


Features

- 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_{DC}
- Data buffered function with time stamp reducing data loss
- Fast and easy deployment to reduce operation cost
- Supports direct cloud service for IoT integration
- Support MQTT and CoAP protocols

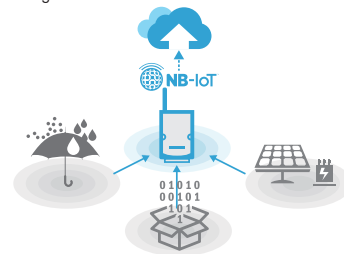
Legacy and Existing Devices to NB-IoT/eMTC

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.



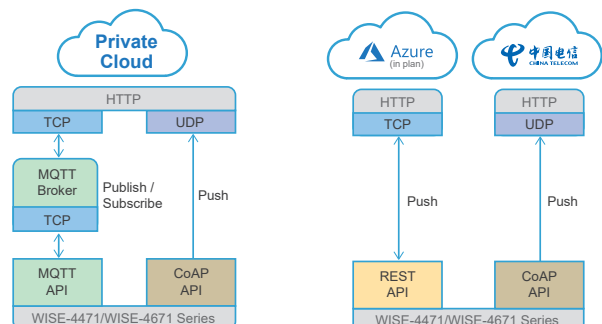
Upgrade Legacy Equipment though Cloud Management

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_{DC} external power
- **Power Consumption** 2.0 W
- **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

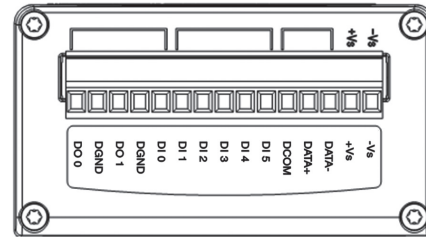
Serial Port

- **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

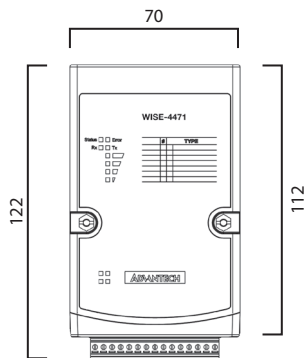
Model Name	IP-rated	Analog Input	Digital Input	Digital Output	RS-485	RS-232/RS-485
WISE-4471-S250	-		6	2	1	
WISE-4471-S214	-	4	4			
WISE-4471-S472	IP65		1		1	1
WISE-4471-S414	IP65	4				

Accessories

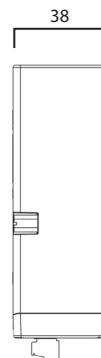
- **PWR-242-AE** DIN Rail Power Supply (2.1A Output Current)
- **PWR-243-AE** Panel Mount Power Supply (3A Output Current)
- **PWR-244-AE** Panel Mount Power Supply (4.2A Output Current)

Dimensions

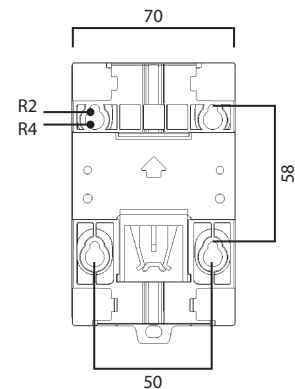
Unit: mm



Front View



Side View



Mounting Kit