

NB-IoT Soil Moisture & EC Sensor

NSE01



OVERVIEW:

The Dragino NSE01 is a NB-IoT Soil Moisture & EC Sensor designed for IoT of Agriculture. It detects **Soil Moisture**, **Soil Temperature** and **Soil Conductivity**, and upload the value via wireless to IoT Server via NB-IoT Network.

NarrowBand-Internet of Things (NB-IoT) is a standards-based low power wide area (LPWA) technology developed to enable a wide range of new IoT devices and services. NB-IoT significantly improves the power consumption of user devices, system capacity and spectrum efficiency, especially in deep coverage.

NSE01 supports different uplink methods include **TCP**, **MQTT**, **UDP** and **CoAP** for different application requirement.

NSE01 is powered by **8500mAh Li-SOCI2 battery**, It is designed for long term use up to 5 years. (Actually Battery life depends on the use environment, update period & uplink method)

To use NSE01, user needs to check if there is NB-IoT coverage in local area and with the bands NSE01 supports. If the local operate support it, user needs to get a **NB-IoT SIM card** from local operator and install NSE01 to get NB-IoT network connection.

Features:

- NB-IoT Sensor Node
- Ultra low power consumption
- Monitor Soil Moisture
- Monitor Soil Temperature
- Monitor Soil Conductivity
- Temperature Compensation for measurements
- NB Bands: B1/B3/B8/B5/B20/B28
- Uplink via MQTT,TCP,CoAP or UDP
- AT Commands to change parameters
- Uplink on periodically
- IP66 Waterproof Enclosure

Specifications:

NB-IoT Module:

- NB Module: Quectel BC95-G
- B1 @H-FDD: 2100MHz
- B3 @H-FDD: 1800MHz
- B8 @H-FDD: 900MHz
- B5 @H-FDD: 850MHz
- B20 @H-FDD: 800MHz
- B28 @H-FDD: 700MHz
- Protocol: CoAP, UDP, MQTT, TCP

Part Number - NSE01