**Wireless IoT Sensing Devices**

**Features**
- For North America, Europe, Japan, and China
- Longer communication range than 2.4GHz
- Better penetration through concrete and steel than 2.4GHz
- Less interference than 2.4GHz spectrum
- Application-ready I/O combination with IP65 housing
- Powered by solar rechargeable battery or 10~50VDC input
- Global Positioning System (GPS) support

**Common Specification**

**Wireless Communication**
- IEEE Standard: 802.15.4g
- Frequency Band: 868.1~869.5MHz for Europe (Proprietary LoRa), 903.0~907.9MHz for North America (Proprietary LoRa), 923.8~923.4MHz for Japan (Proprietary LoRa), 470.3~509.7MHz for China (Proprietary LoRa)
- Spreading Factor: 7~12
- Outdoor Range: 5km with line of sight (with 2 dB Antenna)
- Transmit Power: Up to 13dBm
- Receiver Sensitivity: Up to -136dBm at SF = 12 / 125KHz
- Data Rate: 7.47 kbps at SF7 mode JP923, 21.9 kbps at SF7 mode US915
- Frequency Band: IEEE 802.15.4g

**Gbps**
- GNSS Systems: GPS/QZSS L1 C/A, GLONASS L1/C/A, BeiDou B1I
- Update Rates: Single GNSS: up to 18 Hz, 2 Concurrent GNSS: up to 10 Hz
- SBAS (L1 C/A): WAAS, EGNOS, MSAS, GAGAN
- Accuracy: Position: 2.5 m CEP (50% confidence), With SBAS: 2.0 m CEP (50% confidence)
- Acquisition Time: Cold starts: 26 s, Warm starts: 1 s

**General**
- Power Input: Built-in 4000mA Lithium rechargeable battery pack (10~50VDC input)
- Battery Life: 6 months (1 hour data update and 1 day GPS update)
- Configuration Interface: Micro-USB
- Connector: Power: M12 4-pin code-A male x 1, I/O: M12 8-pin code-D female x 2, I/F: M12 4-pin code-A male x 1, Transmit: M12 4-pin code-A male x 1, Receive: M12 4-pin code-A male x 1
- LED Indicator: Status, Error, Tx, Rx, Battery/Signal Level
- Mounting: DIN 35 rail, wall, pole, and stack
- Dimension (W x H x D): 82 x 122 x 49 mm (without antenna)

**Environment**
- Operating Temperature: 0~60°C
- Operating Humidity: 0%~95% RH

**Ordering Information**

**Wireless Sensor Node**
- **WISE-4610-S614**
- **WISE-4610-S672**

**Private LoRa Network Gateway**
- **WISE-3610ILS-S614**
- **WISE-3610ILS-S672**

**Digital Input**
- Channels: 6
- Input Type: Dry Contact (Wet Contact by request)
- Logic Level: 0: Open, 1: Close to DCOM
- Isolation Voltage: 3,000Vrms
- Supports 200Hz Counter Input (16-bit + 1-bit overflow)
- Keep/Discard Counter Value when Power-off
- Supports 200Hz Frequency Input
- Supports Inverted DI Status