Wi-SUN RF Transceiver Module

Without Antenna

Characteristic

Using the open, global standard IEEE.802.15.4g, Wi-SUN transmission distance could be up to 1 km in an open area. Compared with other LPWA technologies, it not only requires no communication cost, but also can automatically switch the connection target according to the actual radio wave situation through a multi-hop network, achieving higher reliability.

In the development of smart cities and smart grids, it has become a communication technology for the construction of large-scale mesh networks required by them.

Applications

The application of the Field Area Network (FAN) is mainly in facilities in large fields, such as smart grids, smart streetlights, etc., allowing public facilities to connect to the same field network and achieve interoperability.

- Smart meter
- Remote monitoring system for fire door status
- Public infrastructure monitoring system
- Environmental monitoring of power plants

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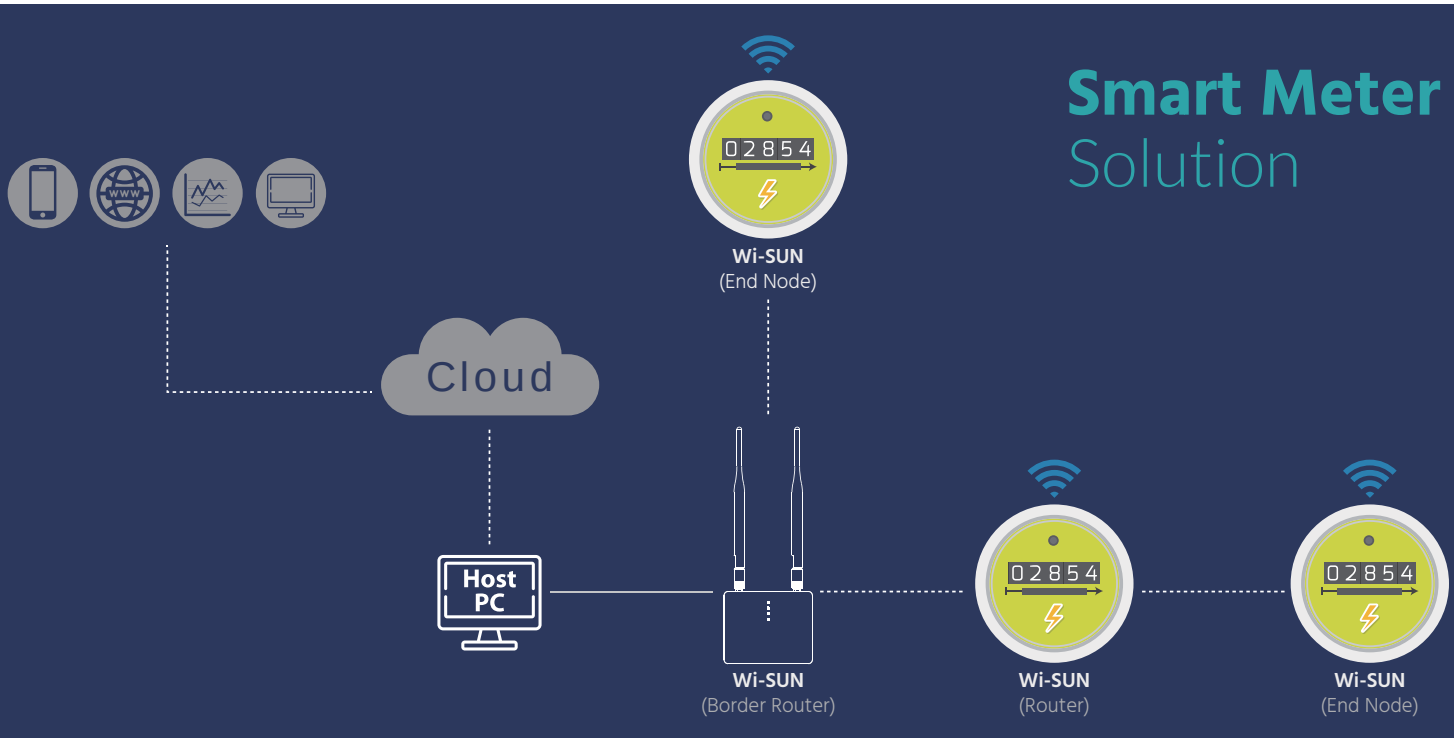
RF as a service

EVK Board Integration

- Magnetic and Reed Sensor × 1
- Temperature and Humidity Sensor × 1
- G-Sensor × 1
- Buttons × 2
- Power Supply: AA Battery × 2
- Micro USB Interface × 2
- SMA or U.FL Antenna Connector

Specifications

- **Model:** WD-KLFM-A / WD-KLFM-B
- **Package Type:** SMD
- **Antenna Type:** External
- **Module Size:** 16 x 21 x 2.45 mm
- **Operating Temperature:** -40°C ~ 85°C
- **Main Chipset:** VC7300 (ARM Cortex-M3 processor)
- **Frequency Band:** 868MHz / 915MHz
- TX Power 0dBm, +13dBm, +20dBm
- Max Throughput up to 300kbps
- -109dBm at 50kbps GFSK
- Automatic Channel Hopping
- Supply voltage range 2.7V~3.6V (3.3V typical)
- Maximum 35 General Purpose I / O Pins
- 1 Msps 10-bit ADC with 6 external inputs
- 32-bit timers × 4
- 16-bit PWM timers × 4
- SPI master / slave × 1
- I2C master / slave × 1
- UART × 4
- Memory:
  [WD-KLFM-A] 512KB Flash with write protect, support both IAP and ISP
  [WD-KLFM-B] 1MB Flash with write protect, support both IAP and ISP
  128KB RAM with parity check and data retention under sleep mode
  16KB SRAM with data retention under deep-sleep mode
- Supports OTA (WD-KLFM-B only)
- 128 / 192 / 256-bit AES CODEC
- ECC encrypt/decrypt accelerated engine
- True random number generator (TRNG)
- Pseudo random number generator
- Real time clock (RTC)
- Standard 2-wires SWD debug port



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Wi-SUN RF Transceiver Module

With Chip Antenna and U.FL Connector

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EVK Board Integration

- Magnetic and Reed Sensor × 1
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- G-Sensor × 1
- Buttons × 2
- Power Supply: AA Battery × 2
- Micro USB Interface × 2

Specifications

- **Model:** WD-KLG7-A / WD-KLG7-B
- **Package Type:** SMD
- **Antenna Type:** Chip Antenna & U.FL Connector
- **Module Size:** 16 x 27 x 2.45 mm
- **Operating Temperature:** -40°C ~ 85°C
- **Main Chipset:** VC7300 (ARM Cortex-M3 processor)
- **Frequency Band:** 868MHz / 915MHz (Depend on Chip Antenna *)
- TX Power 0dBm, +13dBm, +20dBm
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- Supply voltage range 2.7V~3.6V (3.3V typical)
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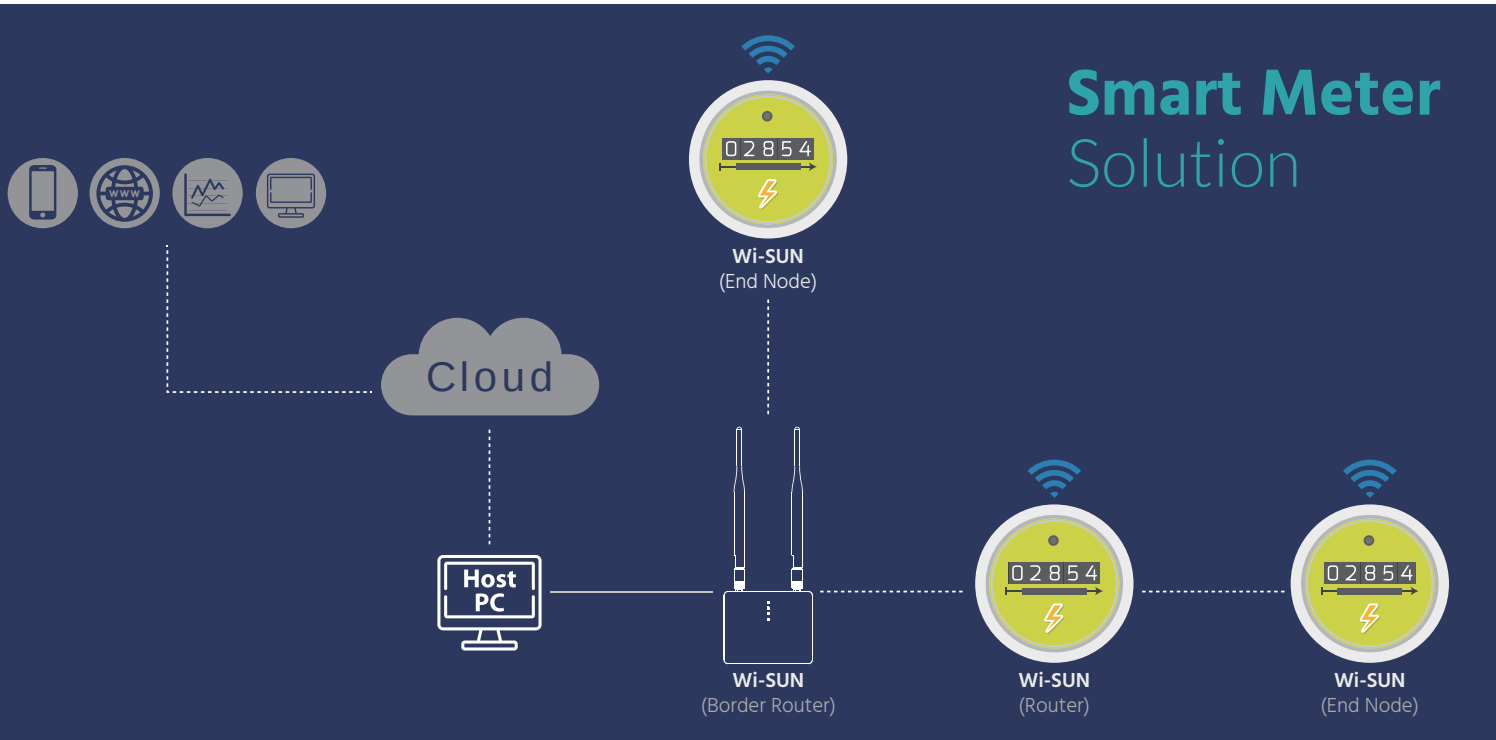
* WD-KLG7 serial is 915MHz



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