WISE-R311

LoRaWAN gateway module

Preliminary

Features

- Latest Semtech SX1302 gateway chipset solution
- Long-range wide area IoT gateway
- Support embedded LNS software(docker image) for linux-based OS
- LoRaWAN protocol for both private and public system application
- Standard mini-pcie form factor
- Global LoRaWAN Frequency Plans

CE FCC IC RoHS COMPLIANT 2002/95/EC

Introduction

WISE-R311 is the next generation of industrial LoRa gateway module. It has standard mini-pcie form factor can easily connect to most of platform in the world. It has high-performance that offers reliable connectivity for industrial environments.

Advatech WISE-R311 is using Semtech SX1302 chipset solution, It is a new generation of baseband LoRa chip for gateways. It excels in reducing current consumption, simplifies the thermal design of gateways, and reduces the bill Of materials costs, yet it is capable of handling a higher amount of traffic than preceding devices.

Besides the hardware itself, Advantech also provides an embedded LoRaWAN network server (LNS) for linux-based OS platform. Users can easily manage all the end-devices and gateways with few simple clicks on the web.

Specifications

WSN Support

- **Standard**   LoRa
- **Frequency**   EU868/AU915/US915/AS923

General

- **Interface**   Mini-pcie

Power Requirements

- **Power Input**   +3.3±5% V_{DC}
- **Power Consumption**   2.9W

Environment

- **Operating Temperature** -40 ~ 75°C
- **Storage Temperature**   -40 ~ 85°C
- **Operating Humidity**   10 ~ 95% RH
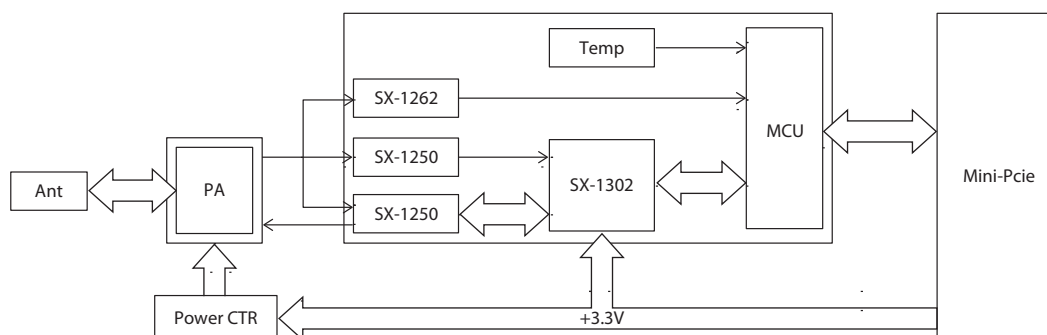
Ordering Information

- **WISE-R311-NA**   8-ch LoRaWAN Gateway module, 902~928MHz version
- **WISE-R311-EA**   8-ch LoRaWAN Gateway module, 862~870MHz version

Accessories

- **1750008945-01**   SMA(M) cable, 10 cm
- **1750008946-01**   Dipole Ant. 863~928MHz SMA 90/180 170mm

Block Diagram

Pin Definition

1	NC	2	+3.3V
3	NC	4	GND
5	NC	6	NC
7	NC	8	NC
9	GND	10	NC
11	NC	12	NC
13	NC	14	NC
15	GND	16	NC
Mechanical key			
17	NC	18	GND
19	NC	20	NC
21	GND	22	RESET#
23	NC	24	+3.3V
25	NC	26	GND
27	GND	28	NC
29	GND	30	NC
31	NC	32	NC
33	NC	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+3.3V	40	GND
41	+3.3V	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	NC
49	NC	50	GND
51	NC	52	+3.3V