

Wireless IoT Controller with External Antenna R207C Data Sheet

Wireless Sensor Network Based on LoRa Technology



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Wireless IoT Controller with External Antenna

Introduction

R207C is a highly reliable wireless smart cloud gateway. As the core of the entire wireless smart IoT system, R207C achieves the combination of cloud technology and LoRa wireless IoT technology.

The Netvox APP (Android and iOS) can control the device. Users can also monitor all changes in the network by accessing R207C through the cloud, and easily realize real IoT remote control to achieve energy saving, carbon reduction, and green environmental protection.

Netvox LoRa private protocol is a private wireless communication protocol based on the feature of LoRa that is long distance, low power consumption, using CSMA/CA mechanism, and AES128 encryption. Netvox LoRa private protocol frequency bands are as follows:

500.1 MHz_China Region	China Region
920.1 MHz_Asia Region	Asia includes Japan, Singapore, Southeast Asia and other regions
865.2 MHz_INDIA Region	India
868.0 MHz_EU Region	European Region
915.1 MHz_AU/US Region	America/Australia

Main Characteristic

- Support Netvox LoRa proprietary protocol wireless networkSupport Netvox Cloud
- Support Netvox Cloud
- Support Gateway mode
- One RJ-45 data interface
- LoRa communication distance 10km (in an open space)

Wireless IoT Controller with External Antenna

Application

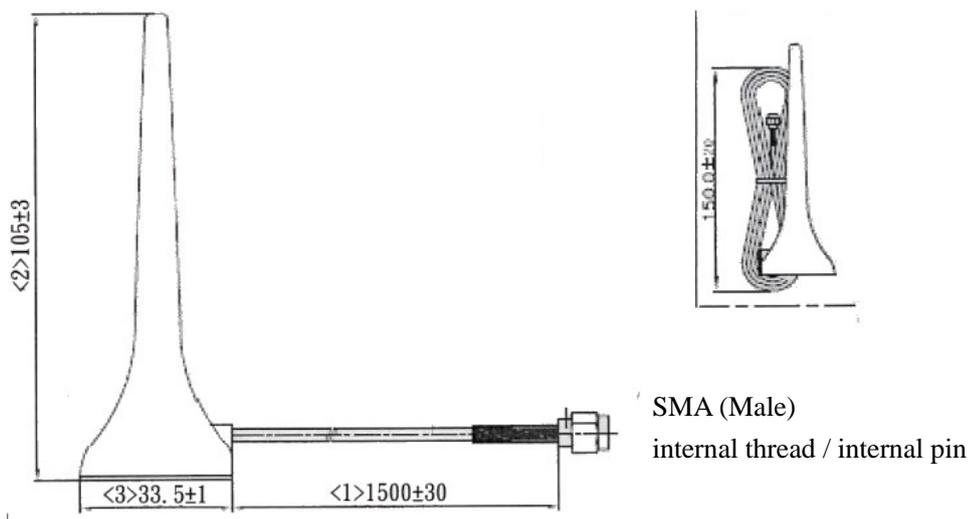
- Smart cloud gateway for home, office, etc.
- Smart city
- Intelligent building
- Smart Home
- Smart transportation
- Smart logistics
- Smart meter reading

Dimension

1. Host Body Dimension: : 76.5mm * 37.0mm * 22.0mm



2. Antenna: 33.5mm*105mm



Wireless IoT Controller with External Antenna

Hardware Description

	Description	Remarks
Main Chip	RTL8196EU	Realtek
DDR1	32MB	
Flash	16MB	
Ethernet Port	One RJ45 port (WAN)	
USB Interface	USB 2.0	
LoRa	R100H	Netvox
LED Indicator	Cloud	
Reset Button	Tact Switch	
Power Adapter	Input: 100 ~ 240V AC Output: 5V/1A DC	

Indicator

Indicator	Status	Description
Cloud	On	Connected
	Off	Not Connected
	Flash	Data Transmitting

Button

Button	Description
Reset Button	Press to restart the device Press and hold for 5 seconds, and then release to reset and restart

Electric

Operating Power	Input: 100~240V AC Output: 5V/1A DC
Power Consumption	5V/ 0.12A/ 0.6W (typical value)

Wireless IoT Controller with External Antenna

Frequency

Frequency Range	410-525MHz 862-1020MHz (User can select the desired frequency band)
Communication Channel	(Users can choose according to their needs)
Bandwidth	125k Hz
Antenna Type	External antenna
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Communication Distance	Up to 10 km (the actual transmission distance depends on the environment)
RX Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Data Transfer Rate	1.2~300kbps (it can be set according to requirements)
Modulation Method	LoRa/FSK
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

Physical

Dimension	76.5mm * 37.0mm * 22.0mm
Shell Material	PC510
Ambient Temperature Range	-10°C ~ 50°C
Storage Temperature Range	-20°C ~ 60°C
Ambient Humidity Range	0 ~ 95%RH
Storage Humidity Range	0 ~ 95%RH