Cloud-Based Wireless Smart Home Controller R206 Data Sheet

Wireless Sensor Network Based on LoRa Technology

R206

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Cloud-Based Wireless Smart Home Controller
General Description

R206 is a highly reliable cloud-based wireless smart gateway. As the core of the entire wireless smart IoT system, R206 is the first to achieve the perfect combination of cloud technology, WiFi mobile networking technology and LoRa wireless IoT technology. Third-party software can control the device through R206, such as R206 and Android client can achieve mode control. At the same time, users can monitor all changes in the network by accessing R206 through the cloud, and easily realize real IoT remote control, achieving energy saving, carbon reduction and green environmental protection.

Main Characteristics

• Support LoRa wireless intelligent network
• Support for Netvox Cloud
• Support USB dongle
• Support Gateway mode
• Has two RJ-45 data interfaces
• WiFi communication distance of 250 meters (visible distance in open space)
• Simple operation through third-party software control

Example Applications

• Cloud Smart Gateway for IoT Systems

Technical Specifications

Hardware Description

	Description	Remarks
Main chip /wifi	MT7620A	Ralink Mediatek
Flash	32MB	
DDR2	128MB	
LoRa	R100（SX1276）	Netvox
Ethernet Port	Two RJ45 ports(LAN/WAN)	
USB Interface	USB 2.0	
LED Indicator	Power / LAN / WAN / Wifi / Cloud / WPS / LoRa	
Adaptation Port	UART 4pin pin header	
Reply Button	Tact Switch	
Power Adapter Input	Power adapter Input: 100 ~ 240V AC output: 12V / 1.5A DC	

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Technical Specifications

Indicator Description

Indicator	Status	Description
Power	on	The device is powered on.
	off	The device is not powered on.
LAN	on	Connection status
	off	Not connected
	flash	Data transmission
WAN	on	Connection status
	off	Not connected
	flash	Data transmission
Wifi	on	Wifi on
	off	Wifi off
	flash	Data transmission
WPS	off	Turn off WPS function
	flash	Turn on the WPS function
	on	WPS builds a connection
LoRa	on	Network builds successfully
	off	Unbuilt network
	flash	Allow network joining

Button Description

Button	Description
LoRa function key	Press to open the screen, then press to close the screen
WPS button	Press to enable the WPS function
Reset button	Press to restart the device.Release after 5 seconds; the device resets and restarts.

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Electric

Working power	Input: 100～240V AC Output:12V/1.5A DC
Power consumption	2.2W（28mA @230V 50Hz）(typical)

Frequency

	LoRa	Wifi
Frequency Bandwidth	410-525MHz 862-1020MHz (User can select the desired frequency band)	2.4 to 2.4835 GHz
Communication Channel	(Users can choose according to their needs)	11, 13 or 1 4 C h1 — 2412MHz C h2 — 2417MHz C h3 — 2422MHz～ Ch1 4 —2477MHz
Bandwidth	TBD	20/40 MHz
Antenna Type	Built-in antenna	Built-in PCB antenna
TX Power	19dBm±1dBm (maximum, can be set according to requirements)	18.5 dBm (maximum, can be set according to requirements)
Communication Distance	Up to10 km, the actual transmission distance depends on the environment.	250 meters (actually depending on the specific communication conditions)
Rx Sensitivity	-136dBm (LoRa，Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)	- 75.5 dBm
Data Transfer Rate	0.3kbps～50kbps (can be set according to requirements)	> 120 Mbps
Modulation	LoRa/FSK	DSSS

Physical

Dimensions	124mm * 155mm * 65mm
Shell Material	PC510
Operating Temperature	-10℃～50℃
Storage Temperature	-20℃～60℃
Working Humidity	0～95%RH
Storage Humidity	0～95%RH

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