

# **LoRa IR Gateway R211 Data Sheet**

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Wireless Sensor Network Based on LoRa Technology



**R211**

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The specifications are subject to change without prior notice.

LoRa IR Gateway



**R211 Appearance**

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## LoRa IR Gateway

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### General Description

Netvox LoRa IR Gateway can be used for IR learning and application. After IR learning, R211 can send the infrared control signal to corresponded electric devices. R211 can receive infrared signal from other infrared device and process predefined action, ex. controlling other LoRa devices.

### Principle of Operation

IR spectroscopy (which is short for infrared spectroscopy) deals with the infrared region of the electromagnetic spectrum, i.e. light having a longer wavelength and a lower frequency than visible light. Infrared Spectroscopy generally refers to the analysis of the interaction of a molecule with infrared light. Netvox LoRa IR Gateway absorbs the IR spectroscopy from remote controller, records code, and emits to IR devices.

### Example Applications

- Remote controlling of air condition, TV, HiFi Audio, etc.

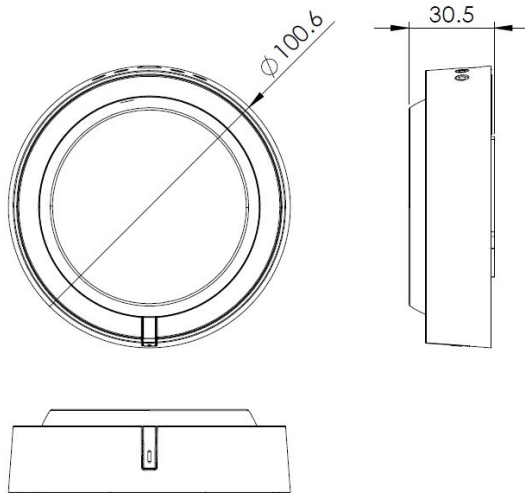
### Features of NETVOX Sensors

- LoRaWAN™ Class C compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Built-in 4M serial flash
- Infrared learning and emission
- Infrared frequency 38KHz
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne

\*1. Actual range may vary depending on environment.

**LoRa IR Gateway**

**Technical Specifications**



(Unit: mm)

**Electric**

Power Supply	DC 12V
Working Current	50mA / 12V/ 0.6W
Infrared Frequency	38 KHz
Infrared Transmission Range	32 meters

**Frequency**

TX Power	19dBm $\pm$ 1dBm
Rx Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps ) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	Up 10 km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps~50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 Configured before shipment

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**LoRa IR Gateway**

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**Physical**

Dimension	Diameter-106mm , height-30.5mm
Weight	100g
Operating Temperature	-20°C ~ 55°C
Environment Humidity Range	5% RH ~ 95% RH (No condensation)
Storage Temperature	-40°C ~ 85°C

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