LoRa Express Gateway

Indoor Series- GPE810 . M

ufiSpace

Indoor LoRa V1.5 Gateway

The LoRa indoor gateway is designed with Semtech version 1.5 technology , and to meet the needs of IoT services.

This indoor gateway provides users the services as an aggregator of LoRa sensors to the internet for the related services in indoor environment .

For future's connected devices will control everything from indoor temperatures to air conditioner, from the flow of energy through our cities to the flow of critical healthcare data, unlocking hidden value in unconnected machines. The connectivity is critical to generate intelligence, except the WiFi, LoRa is also an alternatively solution for indoor applications.


Product Overview

This Indoor gateway uses LoRaWAN technology from Semtech and is complied with specification defined by LoRa Alliance.

This gateway has one 1.5 dBm LoRa antenna port, theLoRa interface operates in sub-giga hertz (915/920/868/433/470 MHz...) and with WiFi IEEE 802.11b/g/n/2.4GHz as Access Point function. One Ethernet port as WAN application; with USB2.0 for extension use on the 2G/3G/4G dongle.
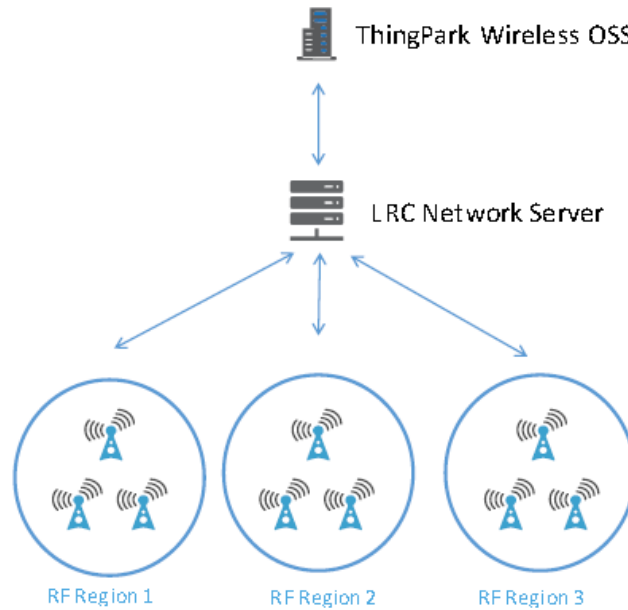
Figure 1. Gateway External Ports
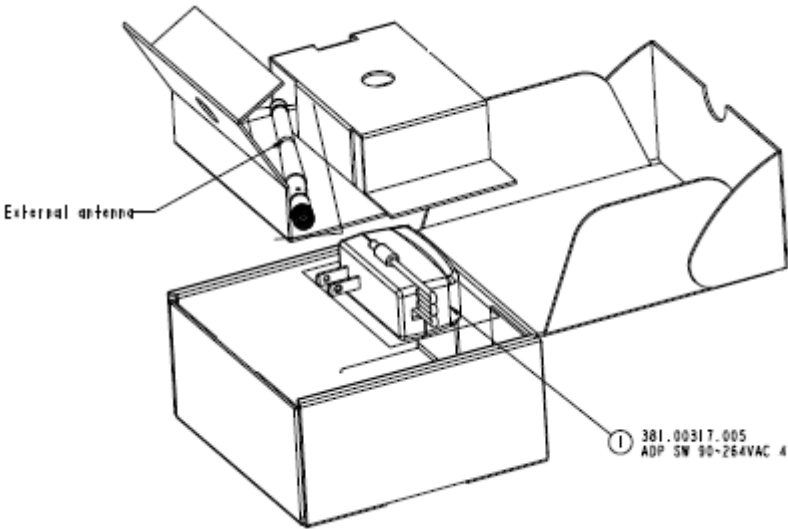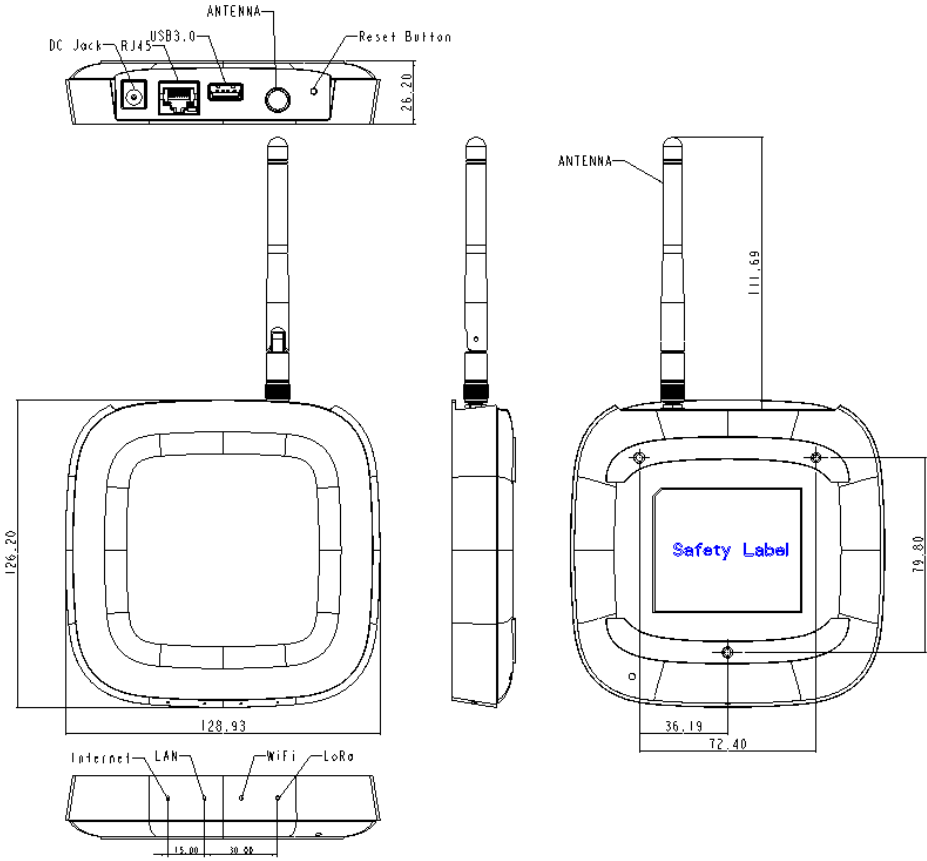
Accessory List:
A: Gateway Unit *1

B:Antenna *1

C:Adaptor*1

LoRa Network Solution

This outdoor LoRa gateway receives data from end-devices, then relay it to a backend server and routed to a application server for information processing.

Figure 2. LoRa Network

Deployment

This Indoor gateway supports also provide the optional wall mounting support due to the 3 nuts on its bottom. For this function, 3 pieces of machine screws shall be used, and the recommended spec is M3X6mm or others appropriate.
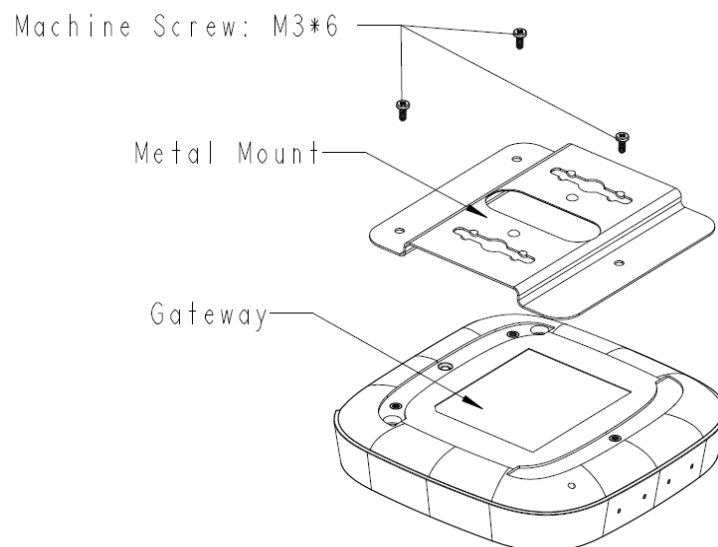
Figure 3. A Typical Wall Mount Deployment

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Hardware Specifications

Item	Technical Information
Processor	Mediatek MT7688 MIPS24KEc (580 MHz)
Storage/Memory	64MB NOR Flash/ 4Gb DDRII
WiFi	IEEE 802.11 b/g/n 1T1R 2.4 GHz
Ethernet	10/100 Mbps/ RJ45
Interface	USB 2.0 for 2G/3G/4G
DC PWR	DC 12V / 1.5A
Power Consumption	5W
Antenna	SMA type, 1.5 dBi Gain
Operation Temperature &Humidity	-5~40 ℃, 10%~90%
Storage Temperature & Humidity	-40~70℃, 5%~90%
Dimension	128.9 x 128.9 x 26.2 mm
Weight	205g
Regulatory	MSIP/CE/FCC

Hardware Specifications

Country Regulation	LoRaWAN 1.0 (GW1.5)	Technical Information	Model - Sub
US	Frequency Band Tx/Rx	902 – 928 MHz	GPE810
	Tx Power (EIRP) dBm	923.3-927.5@30	-915U-M
Europe	Frequency Band Tx/Rx	863 – 870 MHz	GPE810
	Tx Power (EIRP) dBm	863-869@14 ,869.525@26.5	-868E-M
China	Frequency Band Tx/Rx	470 – 510 MHz	GPE810
	Tx Power (EIRP) dBm	16.98	-470C-M
	Frequency Band Tx/Rx	433 MHz	GPE810
	Tx Power (EIRP) dBm	14	-433C-M
Japan	Frequency Band Tx/Rx	922 – 923 MHz	GPE810
	Tx Power (EIRP) dBm	13	-922J-M
Korea	Frequency Band Tx/Rx	917 – 923.5 MHz	GPE810
	Tx Power (EIRP) dBm	920-923@23	-917K-M
Taiwan	Frequency Band Tx/Rx	920 – 925 MHz	GPE810
	Tx Power (EIRP) dBm	23	-920T-M
Asia	Frequency Band Tx/Rx	915 – 928 MHz	GPE810
	Tx Power (EIRP) dBm	23	-923A-M

Hardware Specifications

Common Features	LoRaWAN 1.0 (GW1.5)	Technical Information
	Sectorization	NA
	ADR	Yes
	Geo-localization	NA
	RF Channel Scanning	Yes
	Higher grade SAW filter	Yes
	LoRa Channels	8
	Class A,B,C end-device	Yes
	Data Rate (BW)	1172-21875 bit/sec
	Improvement of coexistence with LTE	Yes