

Walrus LoRaWAN-ID Gateway



 Read this Guide before installing the application

 ■ Thank you for choosing our products ■

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CONTENT

1. PRODUCT OVERVIEW 1

 1.1 DESCRIPTION 1

 1.2 FEATURES 1

2. GLOBAL ELECTRICAL SPECIFICATIONS AND RELIABILITY 1

 2.1 POWER SUPPLY 1

 2.2 SPECIFICATIONS 2

3. MECHANICAL SIZE AND PACKAGE INFORMATION 3

 3.1 MECHANICAL SIZE 3

 3.2 PACKAGE INFORMATION 3

1. Product overview

1.1 Description

Walrus is an IOT gateway based on LoRaWAN and target to LPWAN network. The GW could support LoRaWAN Class A/C protocol and Wi-Fi IEEE 802.11b/g/n standard. The 2.4G wireless transmission rate up to 150Mbps. Users could connect the GW to Cloud server via Wi-Fi.

This gateway integrates a 1T1R 802.11n Wi-Fi module, adopts MT7688AN highly integrated SOC master, contains a 580MHZ MIPS24KEc CPU, a 100M Ethernet port, 1 * USB2.0, LTE module (some models). An SX1308 LoRa baseband processing chip is integrated at the same time, which can support 8 multi-SF channels (SF12 to SF7), 1 single-SF channel and 1 high-speed GFSK channel. The output power can be up to 25dBm, and the sensitivity is -142dBm @ 300bps. Under certain transmission cycle and data length conditions, a single gateway can access tens of thousands of nodes.

Walrus is a smart, easy installation and high reliability device. Customers could setup a quick LoRaWAN network for their LPWAN application with Walrus.

1.2 Features

- Upstream supports 8 parallel Multi-SF LoRa channels, 1 Single-SF LoRa channel, and 1 high-speed GFSK channel
- Half duplex mode for LoRaWAN communication
- The transmitting power is up to 25dBm, and the receiver sensitivity is -142dBm @ 300bps
- Support LoRaWAN ClassA / C protocol
- Support 802.11 b/g/n wireless protocol
- Support 10 / 100M Ethernet port and WIFI connection for Internet access
- Support Ethernet cable within 100m
- Support LTE 4G (optional models)
- M2M, IOT Internet of Things, Low Power Wide Area Network LPWAN
- Wireless Sensor Network
- Industry 4.0, industrial equipment monitoring
- Wireless remote monitoring
- Smart Home, Smart Building, Smart Community, Smart City
- Wireless alarm and security system
- Environmental data monitoring

2. Global electrical specifications and reliability

2.1 Power Supply

Walrus is equipped with 12V / 1.5 A 5 energy efficiency power adapter, input voltage range of

90 ~ 264VAC; 50 ~ 60HZ, output voltage range 11.4 ~ 12.6 V.

2.2 Specifications

Conducted Receiver sensitivity and Transmitter output power would be used to evaluate the performance here.

Sensitivity

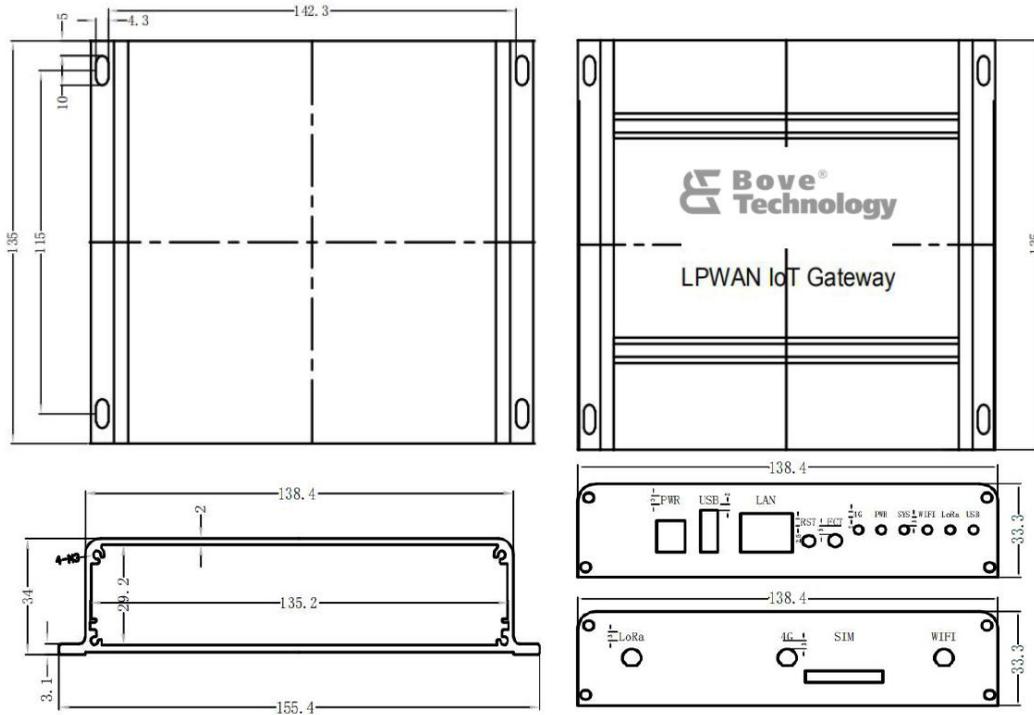
Test condition: 32byte payload, PER=10%, +25°C.

Conducted Receiver sensitivity

Part Number	Bandwidth/kHz	Spreading Factor	Sensitivity/dBm
Walrus-ID-470	125	12	-140
		7	-125
	250	12	-136
		7	-122
	500	12	-133
		7	-119
Walrus-ID-868	125	12	-139
		7	-125
	250	12	-136
		7	-122
	500	12	-133
		7	-119
Walrus-ID-915	125	12	-139
		7	-125
	250	12	-136
		7	-122
	500	12	-133
		7	-119

3. Mechanical size and package information

3.1 Mechanical size



Walrus Mechanical size

3.2 Package information

3.2.1 Package list

Package List

Material	PN	Qty
Walrus	Walrus-ID-xxx	1
Adapter	12/1.5A	1
Antenna of WIFI	6dBi High-efficiency omnidirectional antenna	1
Antenna of LoRa	High-efficiency omnidirectional antenna	1
Antenna of 4G (Optional)	High-efficiency omnidirectional antenna	1

Corporate Profile

Bove provides comprehensive solutions on flow metering and control to over 30 countries in the globe. We design and manufacture range of flow metering solutions and IoT (internet of things) consumer products, which includes high accuracy water meter, thermal energy meter, testing bench, smart tap, smart communication softwares for residential, commercial and industrial sectors. Since 2009 Bove has always been moving on the edge of technology to deliver state of the art products and solutions to customers all around the world.

A couple of our engineers are dedicated in metering and Communication industry for over 10 years, core team are previously working in Huawei, Baidu, IBM, and CitiGroup, etc. With these talents Bove are able to provide prompt services and reliable products to our global customers.

Bove is committed to address the unique challenges that the residential and industry are facing, including increasing customer demand, water scarcity, and environment conservation. With hope, honor and our hard and quality work, we are looking to future to make Bove one of the best brands in metering industry in the world.

Our Mission

To exceed our customers expectation by providing prompt, quality and reliable technology.

Our Vision

Creating an Eco Society

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