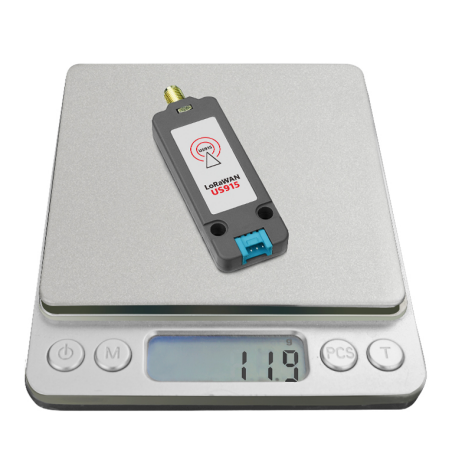
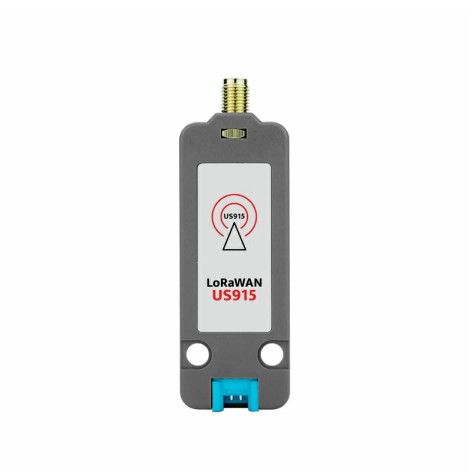


Unit LoRaWAN-US915

SKU: U184-US915



Description

Unit LoRaWAN-US915 is a LoRaWAN communication module based on LoRa technology, specifically designed for the US915 frequency band, suitable for the United States and other regions using the US915 frequency band. The module adopts the **STM32WLE5** solution, supporting long-distance communication with low power consumption and high sensitivity. The module comes with a built-in LoRaWAN protocol stack, supporting **Class A, Class B, and Class C** operation modes. It also supports point-to-point (P2P) communication mode and uses a UART communication interface (controlled via AT commands) for flexible configuration. Additionally, the product features a high-performance **rubber duck antenna**, optimized for stable signal coverage and extended communication range, making it suitable for various complex environments. This module can be used as a collection node to connect to a gateway for data collection and management, or for direct communication between devices in scenarios where a gateway is not required. It is used in IoT communication scenarios such as smart agriculture, industrial monitoring, and environmental monitoring node deployment, where long-distance and low-power communication is essential.

| Features

- Compliant with LoRaWAN® 1.0.3 protocol
- Supports 915MHz frequency band
- Supports LoRa® P2P (point-to-point) communication
- LoRaWAN activation modes: OTAA, ABP
- Serial communication (AT commands)
- High-sensitivity rubber duck antenna
- Low power consumption
- Compatible with LEGO holes
- Development platforms:
 - UiFlow1
 - UiFlow2
 - Arduino IDE

| Includes

- 1 x Unit LoRaWAN-US915
- 1 x HY2.0-4P Grove cable (20cm)
- 1 x Rubber duck antenna (@2.3dBi, total length 195mm, SMA male connector)

| Applications

- Smart agriculture
- Industrial monitoring
- Environmental monitoring node deployment

| Specifications

Specification	Parameter
LoRa Solution	STM32WLE5 @256 KB Flash, 64 KB RAM
Supported Frequency	US915 (902-928 MHz)
Protocol Support	LoRaWAN® 1.0.3 protocol (Class A, Class B, Class C)
Receiver Sensitivity	-137 dBm
LoRaWAN Activation	OTAA, ABP
Communication Mode	LoRaWAN and point-to-point (P2P)
Communication Range (P2P)	2300m (125Kbps), 1300m (500Kbps)
Interface Type	UART serial port @ default baud rate 115200, supports AT commands
Antenna Type	High-performance rubber duck antenna, 50-ohm impedance @2.3dBi, total length 195mm, SMA male connector
Standby Power	Idle state: DC 5V/7.23mA
Consumption	Sleep state: DC 5V/28.61uA
Operating Current	(500Kbps) Data reception: DC 5V/9.20mA Data transmission: DC 5V/11.36mA (125Kbps) Data reception: DC 5V/8.43mA Data transmission: DC 5V/117.16mA
Operating Temperature	0 ~ 40°C
Product Size	71.4 x 24.0 x 8.0mm
Product Weight	11.9g
Package Size	243.0 x 93.0 x 9.0mm
Gross Weight	37.0g

Learn

LoRaWAN Operation Mode Comparison

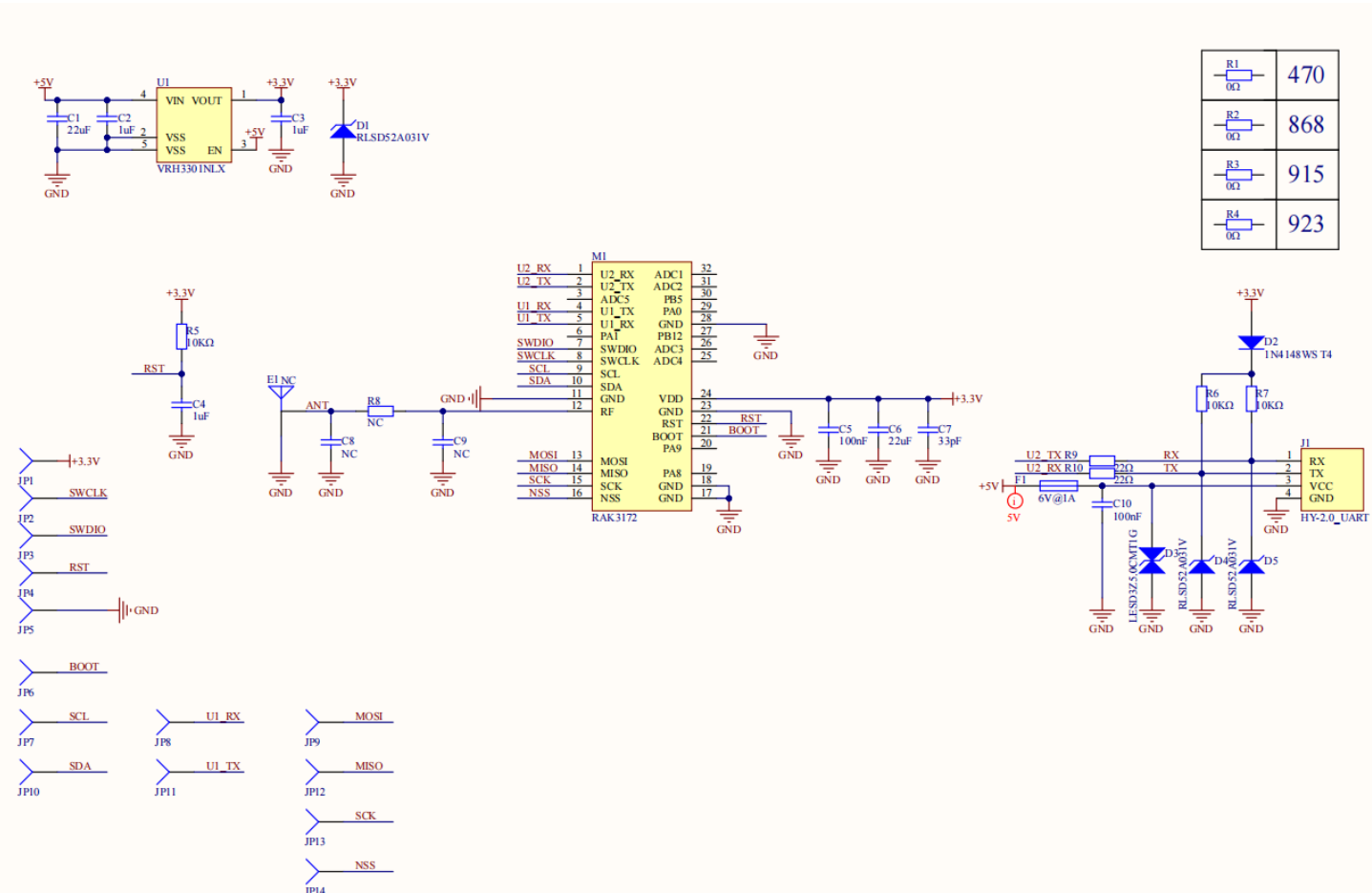
Mode	Downlink Real-time Performance	Power Consumption	Application Scenarios
Class A	Lowest	Lowest	Periodic data upload, low-power sensors
Class B	Medium	Medium	Timed control devices
Class C	Highest	Highest	Real-time control devices, industrial automation

Certifications

- [RAK3172 Module Certification Information](#)

Schematics

- [Unit LoRaWAN-US915 Schematic PDF](#)



PinMap

Unit LoRaWAN-US915

Coming soon...

Protocol

- [Unit LoRaWAN-US915 AT Command Manual](#)

Video

- [Unit LoRaWAN-US915 Product Introduction and Case Demonstration](#)

[LoRaWAN Video.mp4](#)

Product Comparison

Product Comparison Table		
 Unit LoRaWAN-US915  Unit LoRaWAN 915MHz		
Chip Module	STM32WLE5	ASR6501
Receiver Sensitivity	Minimum -137 dBm	Minimum -137 dBm
Interface Type	UART @ default baud rate: 115200	UART @ default baud rate: 115200
LoRaWAN Protocol Version	LoRaWAN 1.0.3, supports Class A/B/C	LoRaWAN 1.0.1, supports Class A/C
Transmit Power	Maximum 22 dBm	Maximum 21 dBm
Protocol Stack Support	Built-in LoRaWAN protocol stack	Built-in LoRaWAN protocol stack
Communication Mode	LoRaWAN and point-to-point (P2P)	LoRaWAN