Module13.2 LoRa-1262

SKU:M149







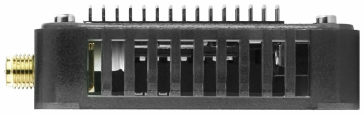
















Description

Module13.2 LoRa-1262 is a stackable long-range LoRa communication module. The module integrates the Stamp LoRa-1262 communication module and adopts the SX1262 LoRa RF transceiver solution, supporting 868 ~ 923 MHz frequency band communication. The module features an RP-SMA external antenna interface; the LoRa communication part uses an SPI communication interface to exchange data with the main controller, and integrates the M5IOE1 IO expansion chip, which can perform reset, bypass, and power management on the LoRa module, effectively reducing overall power consumption. Multiple onboard DIP switches are used for LoRa communication pin switching and M5IOE1 I2C address modification, allowing flexible adaptation to the IO resources of different controllers and supporting multi-module stacking. It is suitable for scenarios such as remote monitoring, smart home, industrial automation, and IoT nodes.

Note

Antenna Connection

Before using the LoRa module, please connect a matched external antenna first. Do not transmit RF signals without an antenna connected, otherwise it will cause permanent hardware damage!

Features

- Integrated Stamp LoRa-1262 module (based on SX1262)
  - Supports 868 ~ 923 MHz operating frequency band
  - Uses SPI communication interface
  - Supports LoRa, FSK, GFSK, MSK, GMSK, and OOK modulation modes
  - LoRa maximum transmit power approximately +22 dBm, receive sensitivity down to -147 dBm (in LoRa low-rate mode)

- Onboard RP-SMA external antenna interface
- Onboard DC 3.7V battery interface
- Flexible IO switching, supports stacking of multiple modules
  - LoRa pin DIP switch
  - M5IOE1 I2C address switch

Includes

- 1 x Module13.2 LoRa-1262
- 1 x 868 MHz RP-SMA Rubber Antenna

Applications

- Remote Monitoring
- Smart Home
- Industrial Automation
- IoT (Internet of Things) Devices

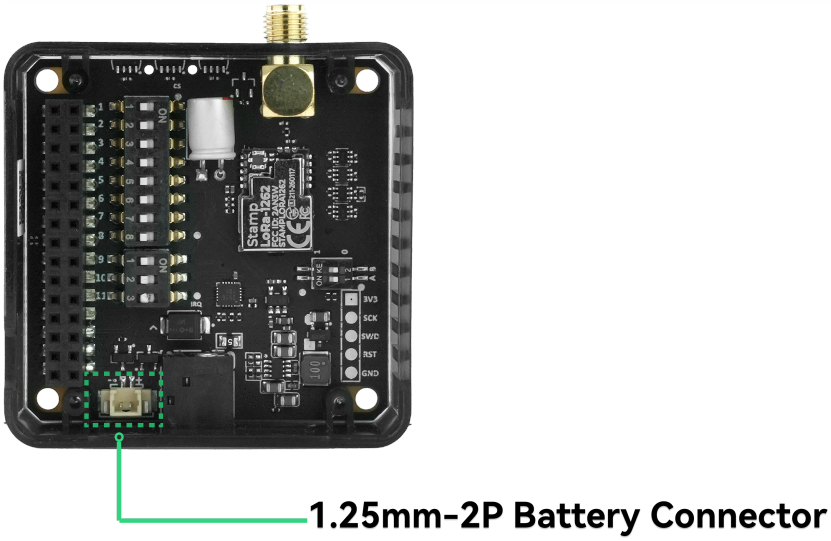
Specifications

Specification	Parameter
LoRa Module	Stamp LoRa-1262
Operating Frequency Band	868 ~ 923 MHz
Communication Interface	SPI
Antenna Specification	Length 108mm, Connector Type RP-SMA (Inner Thread Inner Hole), Operating Frequency Band 868 MHz, Gain 3dBi
Supported Modulation Modes	LoRa / FSK / GFSK / MSK / GMSK / OOK
Transmit Power	Maximum approximately +22 dBm
Receive Sensitivity	-147 dBm (LoRa Low-Rate Mode)
Antenna Connector	RP-SMA Female
Operating Power Consumption	LoRa module maximum power data transmission: Transmit: **4.2V** @ 277.45 mA / **5V** @ 137.10 mA / **12V** @ 71.38 mA Receive: **4.2V** @ 174.52 mA / **5V** @ 9.94 mA / **12V** @ 4.5 mA
IO Expansion Chip I2C Address	0x71 ~ 0x74, controlled by DIP switch
Standby Power Consumption	LoRa module standby or sleep: **4.2V** @ 79.4 uA / **5V** @ 693.03 uA / **12V** @ 1.06 mA LoRa module power off: **5V** @ 2.76 uA
DC Power Input Interface	Input voltage: DC 9~24V, Specification: 5.5 x 2.1 mm, Polarity: Center Positive Outer Negative
Battery Holder Specification	1.25mm-2P
Product Size	59.1 x 54.0 x 20.2mm
Product Weight	23.5g (excluding antenna)
Package Size	65.0 x 90.0 x 25.0mm
Gross Weight	38.3g

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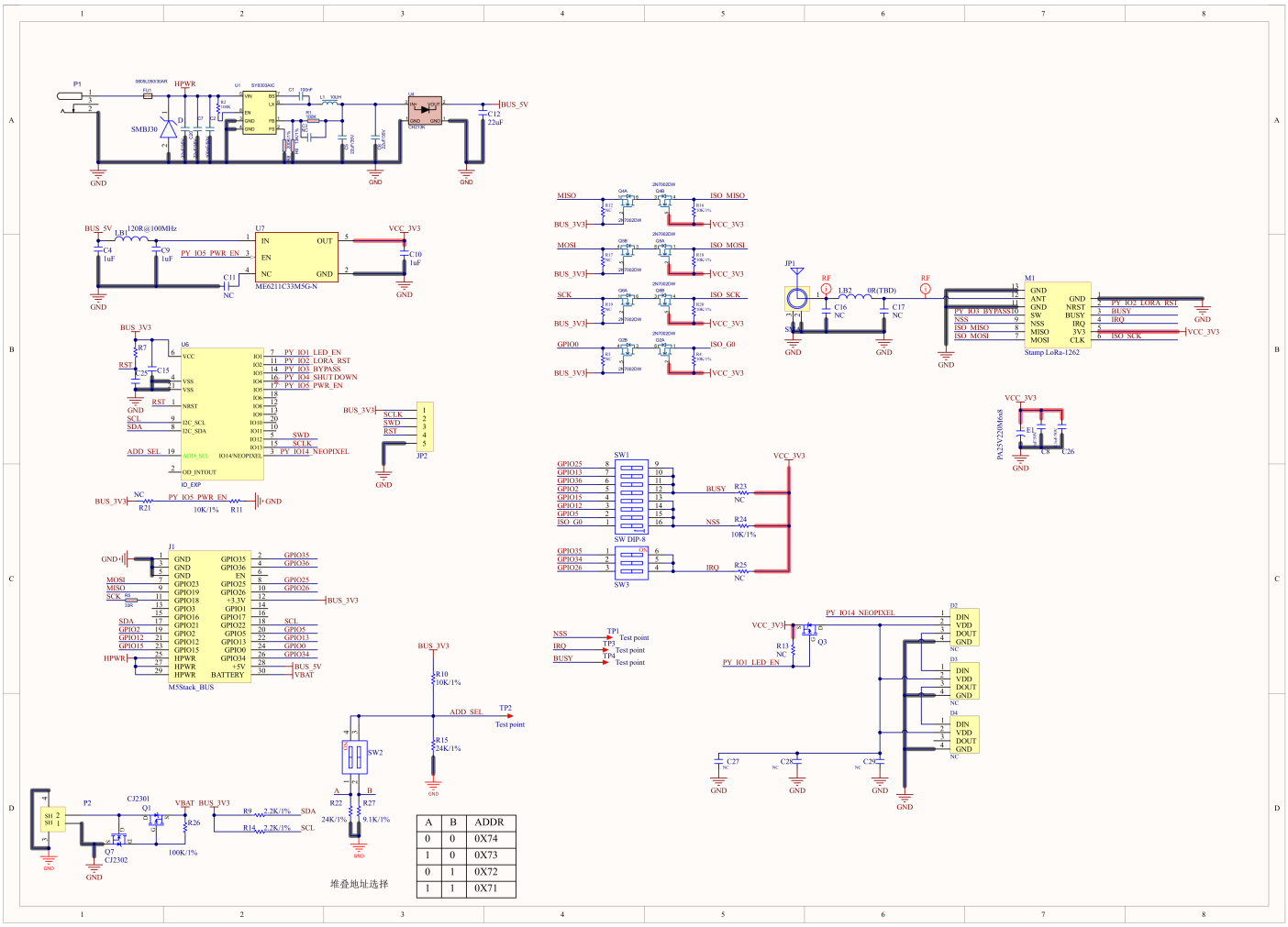
Battery Connector Description

Onboard 1.25mm-2P DC 3.7V battery connector. This connector is connected to the `M5-Bus BAT` pin by default, and can supply power to the whole device after being boosted by the host controller.



Schematics

- Module13.2 LoRa-1262 Schematics PDF



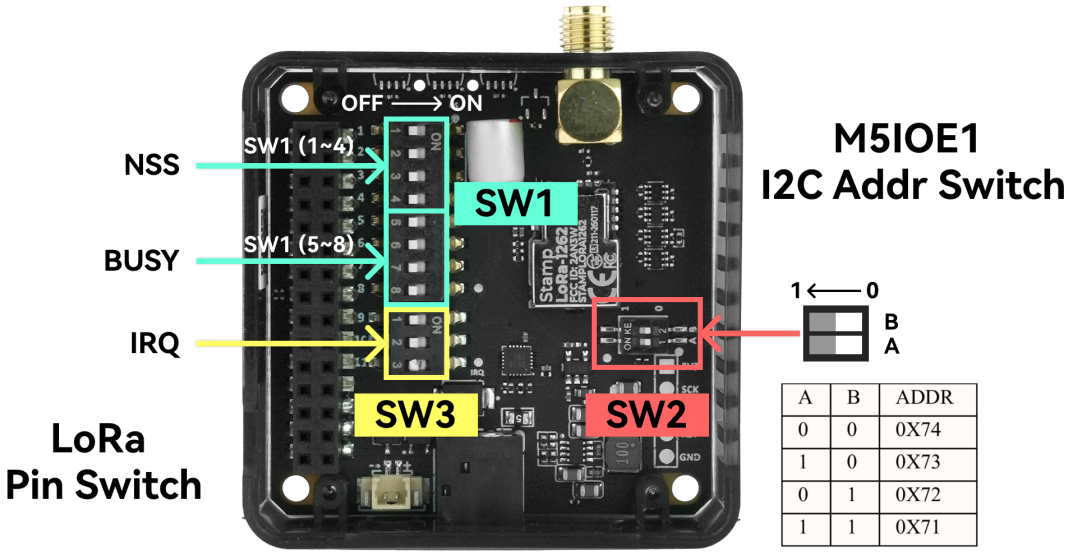
PinMap

M5-Bus

DIP Switch

The pins marked `SW1` and `SW3` in the M5-Bus below can be switched via DIP switches, to adapt to different controller devices.

PIN	LEFT	RIGHT	PIN
GND	1	2	IRQ (SW3)
GND	3	4	BUSY (SW1)
GND	5	6	EN
MOSI	7	8	BUSY (SW1)
MISO	9	10	IRQ (SW3)
SCK	11	12	3V3
	13	14	
	15	16	
SDA	17	18	SCL
BUSY (SW1)	19	20	NSS (SW1)
NSS (SW1)	21	22	BUSY (SW1)
NSS (SW1)	23	24	NSS (SW1)
HPWR	25	26	IRQ (SW3)
HPWR	27	28	5V
HPWR	29	30	VBAT



A	B	ADDR
0	0	0X74
1	0	0X73
0	1	0X72
1	1	0X71

M5IOE1

M5IOE1 Pin	Connected Signal	Function Description
IO2	`PY_IO2_LORA_RST`	LoRa module reset
IO3	`PY_IO3_BYPASS`	LoRa Bypass control
IO5	`PY_IO5_PWR_EN`	3.3V power enable
I2C_SDA	`SDA`	I2C data
I2C_SCL	`SCL`	I2C clock
ADD_SEL	`ADD_SEL`	I2C address selection

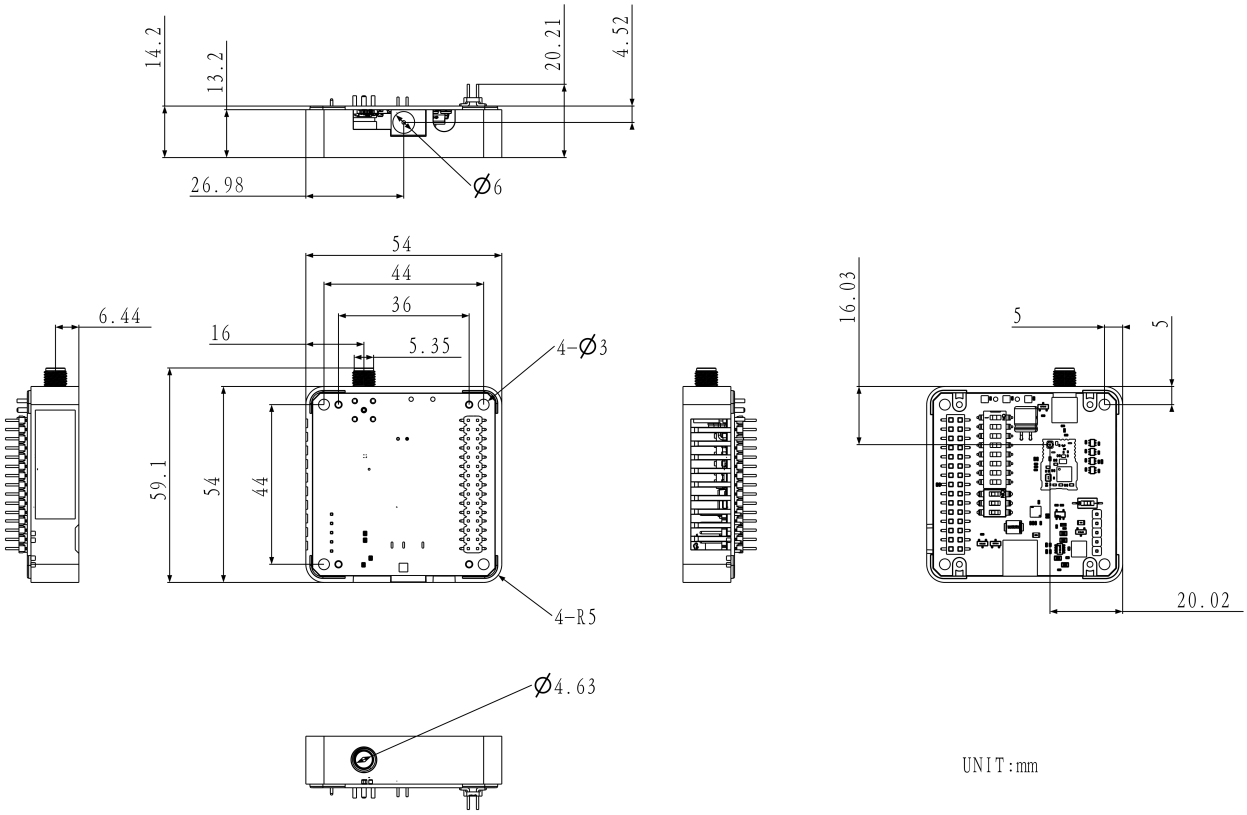
I2C Address Selection

Using the `A` and `B` address selection bits of SW2, the following I2C addresses can be configured for M5IOE1. When using multiple stacked modules, please set a different address for each module.

A	B	I2C Address
0	0	0x74
1	0	0x73
0	1	0x72
1	1	0x71

Model Size

- Module13.2 LoRa-1262 Model Size PDF



Datasheets

- SX1262 Datasheet
- M5IOE1 IO Expansion Management Chip

Softwares

Arduino

- Module13.2 LoRa-1262 Arduino Quick Start
- Module13.2 LoRa-1262 Arduino Driver Library

Video