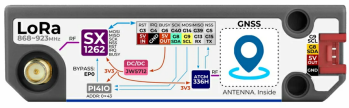
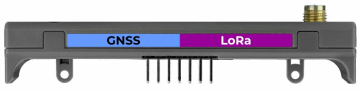
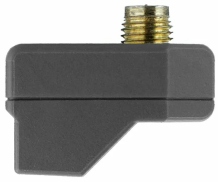
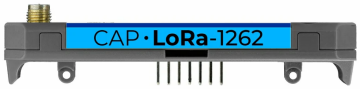
Cap LoRa-1262

SKU:U214









Description

Cap LoRa-1262 is a high-performance communication expansion module that integrates LoRa communication and GNSS global positioning and navigation, designed for use with Cardputer-Adv. The module is equipped with an HY2.0-4P expansion interface, enabling stable connection and functional expansion with host devices.

The LoRa module adopts a solution based on the SX1262 chip and is equipped by default with an **external SMA antenna**. In addition, a shielding cover design is used to further enhance anti-interference capability and optimize overall performance, providing stronger interference resistance and long-range communication capability. It supports the **868MHz ~ 923MHz frequency band**, delivering long-distance, low-power wireless links for Internet of Things (IoT) scenarios.

The GPS module adopts a solution based on the AT6668 chip and features a built-in ceramic antenna, providing accurate and reliable satellite positioning services. It supports reception of **multi-band and multi-constellation GNSS signals**, and can receive signals from multiple satellite navigation systems, including GPS, BD2, BD3, GLONASS, GALILEO, and QZSS. It supports both multi-system combined positioning and single-system independent positioning, offering strong anti-interference capability and high positioning accuracy. Even in weak signal environments, it can quickly obtain higher-precision location information, making it suitable for applications such as remote data acquisition, smart cities, smart homes, vehicle positioning and navigation, and IoT device positioning.

Features

- Integrates LoRa modulation technology and GNSS global positioning system
- Operating frequency: 868 ~ 923 MHz
- Supports FSK, GFSK, MSK, GMSK, LoRa, and OOK modulation modes
- LoRa receiving sensitivity: down to -147 dBm (LoRa low data rate mode)
- LoRa maximum transmission power: +22 dBm
- External SMA antenna interface for LoRa, built-in ceramic antenna for GPS
- Positioning supports multiple satellite navigation systems (GPS / QZSS / BD2 / BD3 / GAL / GLO)
- Multi-frequency and multi-system reception
- HY2.0-4P expansion interface
- Development Platform:
  - Arduino
  - UiFlow2

Includes

- 1 x Cap LoRa-1262
- 1 x LoRa Rubber Antenna

Applications

- Remote data acquisition
- Smart cities
- Smart homes
- Vehicle positioning and navigation
- IoT device positioning

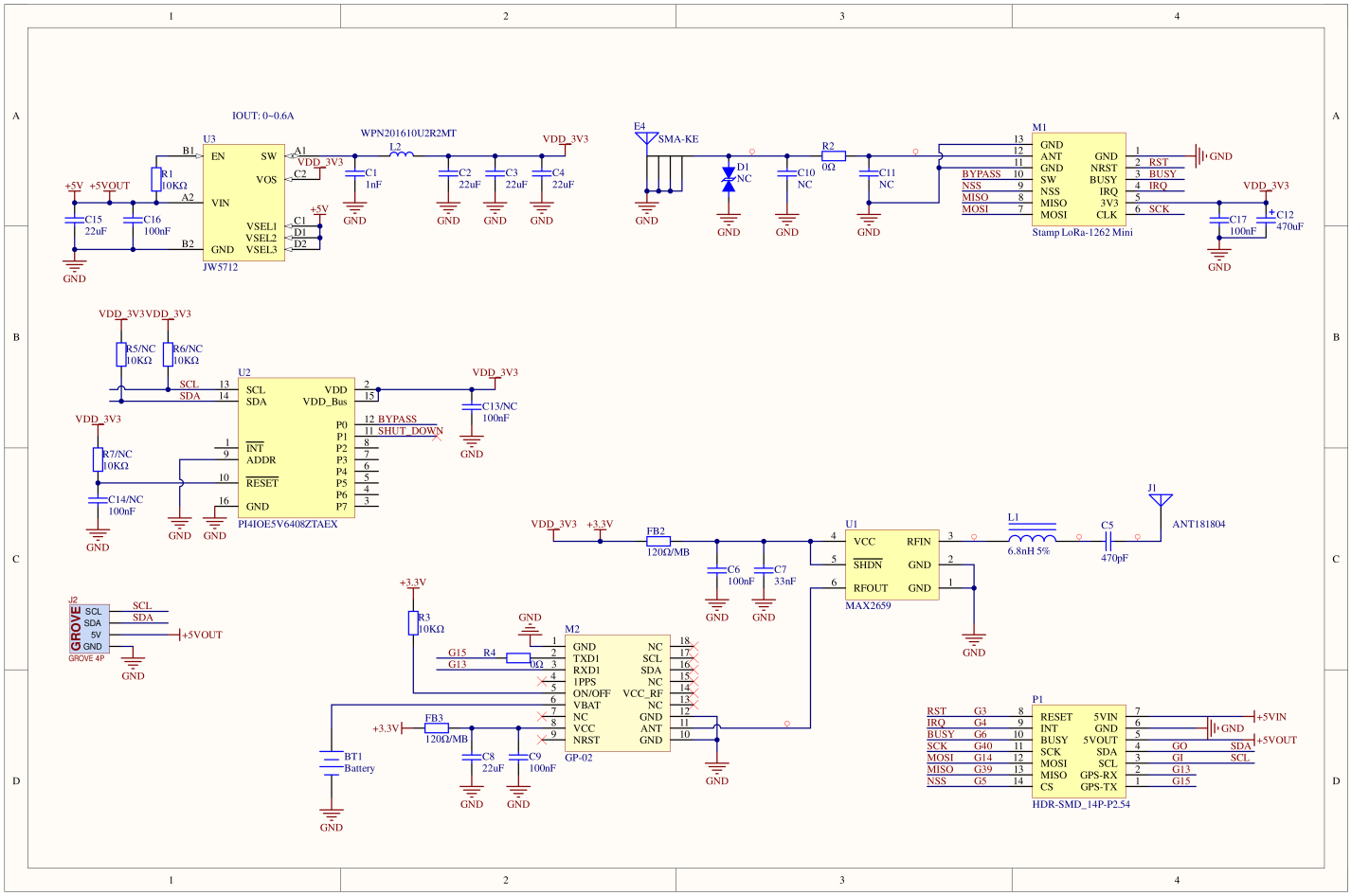
Specifications

Specification	Parameter
LoRa Module	SX1262
LoRa Frequency Range	868 ~ 923 MHz
LoRa Programmable Bitrate	Up to 300kbps
LoRa Communication Interface	SPI
LoRa Antenna	Size 108 x 9.3mm, Interface Type SMA (internal thread, internal hole), Gain 3dBi
LoRa Transmit Power	+22dBm
LoRa Receiver Sensitivity	-147dBm (LoRa Low Data Rate Mode)
LoRa Operating Current	DC 5V@163.4mA
Supported Modulation Modes	FSK / GFSK / MSK / LoRa / OOK
GPS Module	ATGM336H-6N@AT6668
GPS Communication Interface	UART, default 115200bps@8N1
Supported GNSS Systems	GPS / QZSS / BD2 / BD3 / GAL / GLO
Frequency Bands	BDS: B1I+B1C GPS / QZSS / SBAS: L1 GALILEO: E1 GLONASS: R1
GPS Channels	50 Channels
GPS Positioning Accuracy	<1.5m (CEP50)
GPS Update Rate	Up to 10Hz
GPS Protocol	NMEA 0183 4.1
GPS Sensitivity	Tracking: -162dBm Acquisition: -160dBm Cold Start: -148dBm
GPS Time to First Fix	Cold Start: 23s Hot Start: 1s
Power Consumption (Power On)	33.1mA
Product Size	84.0 x 24.0 x 15.2mm
Product Weight	22.1g (excluding antenna)

Specification	Parameter
Package Size	170.0 x 120.0 x 17.0mm
Gross Weight	31.6g

Schematics

- Cap LoRa-1262 Schematics PDF



PinMap

Cap-Bus

PIN	LEFT	RIGHT	PIN
GPS_TX	1	14	LoRa_NSS
GPS_RX	2	13	LoRa_MISO
SCL	3	12	LoRa_MOSI
SDA	4	11	LoRa_SCK
5V_OUT	5	10	LoRa_BUSY
GND	6	9	LoRa_IRQ
5V_IN	7	8	LoRa_RST

Cardputer-Adv	G3	G4	G6	G40	G14	G39	G5
Cap LoRa-1262 (LoRa)	RST	IRQ	BUSY	SCK	MOSI	MISO	NSS

Cardputer-Adv	G13	G15
Cap LoRa-1262 (GPS)	GPS-RX	GPS-TX

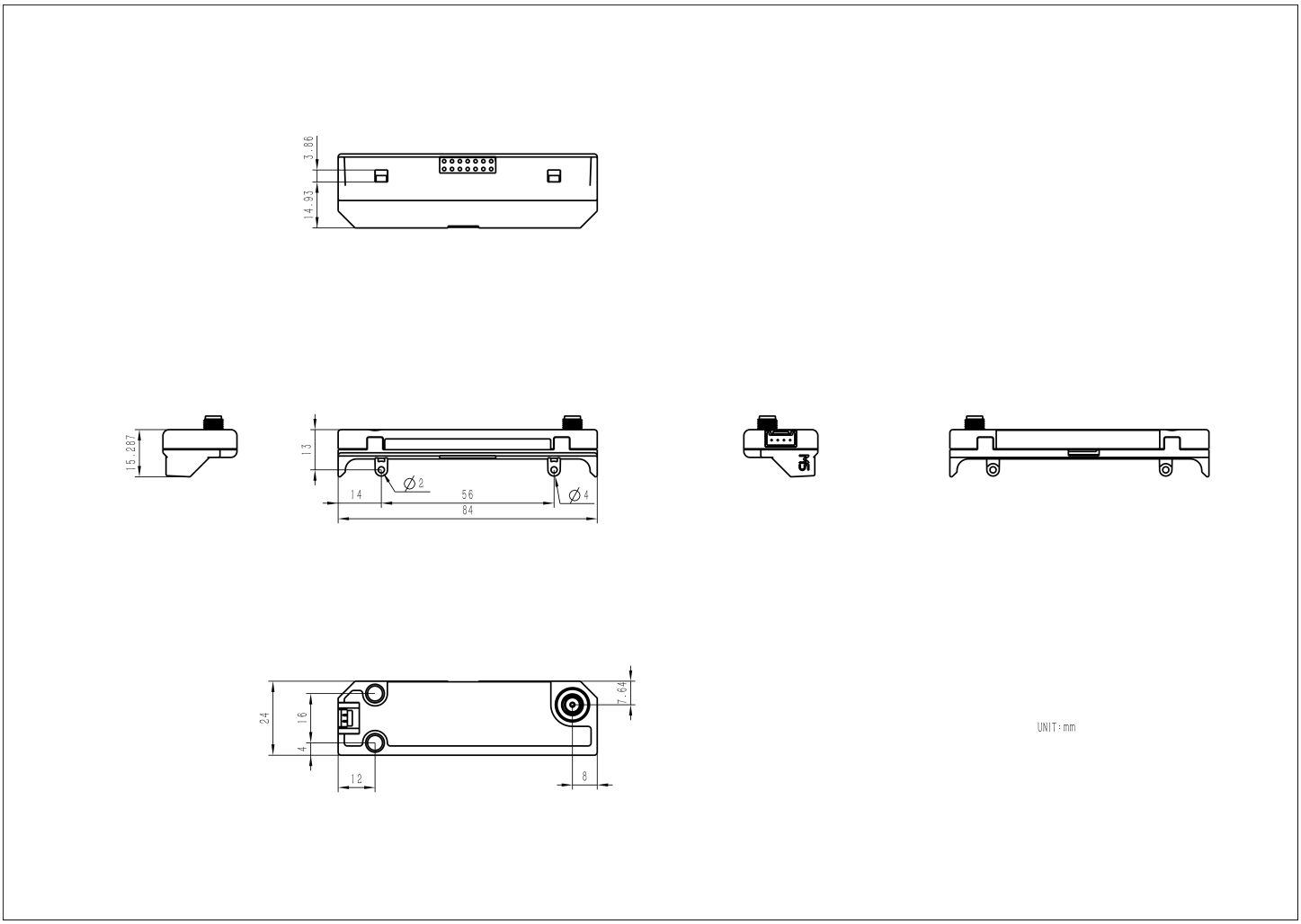
Cardputer-Adv	G8	G9
Cap LoRa-1262 (HY2.0-4P)	SDA	SCL

Cap LoRa-1262

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

Model Size

- Cap LoRa-1262 Model Size PDF



Datasheets

- SX1262
- ATGM336H-6N
- CASIC Multi-Mode Satellite Navigation Receiver Protocol Specification

Softwares

Arduino

- Cap LoRa-1262 Arduino Quick Start
- Cap LoRa-1262 Arduino LoRa Driver Library
- Cap LoRa-1262 Arduino GPS Driver Library

UiFlow2

- Cap LoRa-1262 UiFlow2 Docs

Video

- Cap LoRa-1262 Product Introduction and Feature Demonstration

U214-Cap-LoRa-1262-EN.mp4

Product Comparison

Compare Feature		
	Cap LoRa-1262	**Cap LoRa868**
HY2.0-4P Expansion Interface	Yes	No
Module	Stamp LoRa-1262, smaller size	Stamp LoRa-1262 legacy version, standard size
Shielding Cover	Yes	No
Performance	Better	-