COM.GPS

Description

COM.GPS is a satellite positioning module in the M5Stack stacking module series. It is developed based on the NEO-M8N module and is equipped with an active antenna. The NEO-M8 can spend a small amount of time, conduct high-sensitivity acquisition, and keep the system low power consumption. NEO-M8N integrates the 72-channel u-blox M8 GNSS engine, supports multiple GNSS systems: BeiDou, Galileo, GLONASS, GPS / QZSS, allowing simultaneous reception 3 Data from a GNSS system. Programmable FLASH is integrated inside the module, which can read and write data. The module's high sensitivity, small static drift, low power consumption and compact size are very suitable for applications in vehicles, handheld devices such as PDAs, vehicle monitoring, mobile phones, cameras and other mobile positioning systems. The UART communication protocol is used between the M5Core and the GPS module, and the serial port connection pins can be modified through the dial switch on the back.

If you want to change the serial port baud rate, please click (u-center-just-for-Windows).

Note: In order to get a good signal from the GPS module, please place the module outdoors when using it.

UART protocol: baud rate (default is 9600bps), data bit (8 bits), start bit (1 bit), stop bit (1 bit), check bit (none).

> COM.GPS RXD/TXD can be connected to M5Stack's UART (TX(0/13/17)RX(5/15/16)) by setting the DIP switch, **M5Stack Fire** GPIO16 /GPIO17 is connected to PSRAM by default. It is recommended to use any one of the remaining two groups of pins.

> The right dial switch is invalid for this module, no need to set.

Product Features

Antenna type: external GPS antenna
External antenna port: SMA
Can receive data from 3 GNSS systems at the same time
Horizontal position accuracy: minimum 2.5m
GPS module (NEO-M8N) built-in flash memory, through u-center-just-for-Windowsupgrade firmware
Protocol: NMEA, UBX, RTCM
Industry leading -167dBm sensitivity
Backward compatible with NEO-7 and NEO-6 series

Includes

1x COM.GPS Module
1x External antenna(length: 1 m)

Application

GPS-based logistics tracking management
Driverless car positioning

Specification

Resources	Parameter
Receiver type	GPS:L1C/A SBAS:L1C/A QZSS:L1C/A GLONASS:L1OF BediDou:B1 Galileo:E1B/C
Positioning time	Cold start:26S Hot start:1.5S
Sensitivity	-167 dBm
Update rate	Separate GNSS 10Hz, Parallel GNSS 5Hz
Rate accuracy	0.05m/s
Height limit	50000m
Speed limit	500m/s
Working voltage	2.7 ~ 3.6
Working temperature	-40 ~ 80°C
Net Weight	28g
Gross Weight	99g
Product Size	54*54*13.2mm
Package Size	165*60*36mm

datasheet
    NEO-M8N

EasyLoader

EasyLoader is a concise and fast program writer, which has a built-in case program related to the product. It can be burned to the main control by simple steps to perform a series of function verification. Please install the corresponding driver according to the device type. M5Core host Please click here to view the CP210X driver installation tutorial, M5StickC/V/T/ATOM series can be used without driver)

Related Link

GPS Info (GPS)

TinyGPS++ Library

U-Blox Protocol Manual

u-blox Protocol Manual

Example

1. Arduino

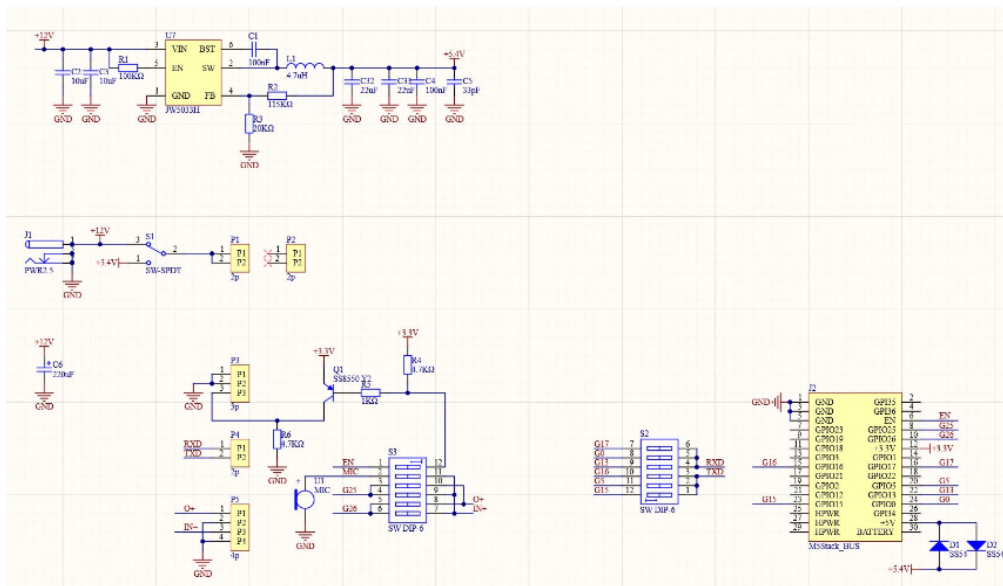Click here to download the Arduino example

Note: In order to get a good signal from the GPS module, please place the module outdoors when using it.

Protocol specification:

For more information,please refer to u-blox 8 / u-blox M8 Receiver Description - Manual

Schematic

Schematic

PURCHASE