

Unit GPS v1.1

SKU:U032-V11

UNIT
GPS V1.1

M5STACK



Description

Unit GPS v1.1 is a GNSS global positioning and navigation unit, utilizing the **AT6668** solution with a built-in ceramic antenna to provide more precise and reliable satellite positioning services. Compared to previous products, the AT6668 supports multi-frequency, multi-mode GNSS signal reception, capable of receiving signals from multiple satellite navigation systems (including GPS, BD2, BD3, GLONASS, GALILEO, and QZSS), supports both multi-system combined positioning and single-system standalone positioning, and offers stronger anti-interference capability and higher positioning accuracy. In areas with weak signals, it can quickly obtain higher-precision location information. This module is applicable to high-precision positioning scenarios such as in-vehicle navigation and IoT positioning devices.

| Features

- Supports multiple satellite navigation systems (GPS/QZSS/BD2/BD3/GAL/GLO)
- Multi-frequency and multi-system reception
- Multi-channel
- 2 x LEGO-compatible holes
- Programming platforms: Arduino, UIFlow, etc.

| Includes

- 1 x Unit GPS v1.1
- 1 x HY2.0-4P Grove cable (20cm)

| Applications

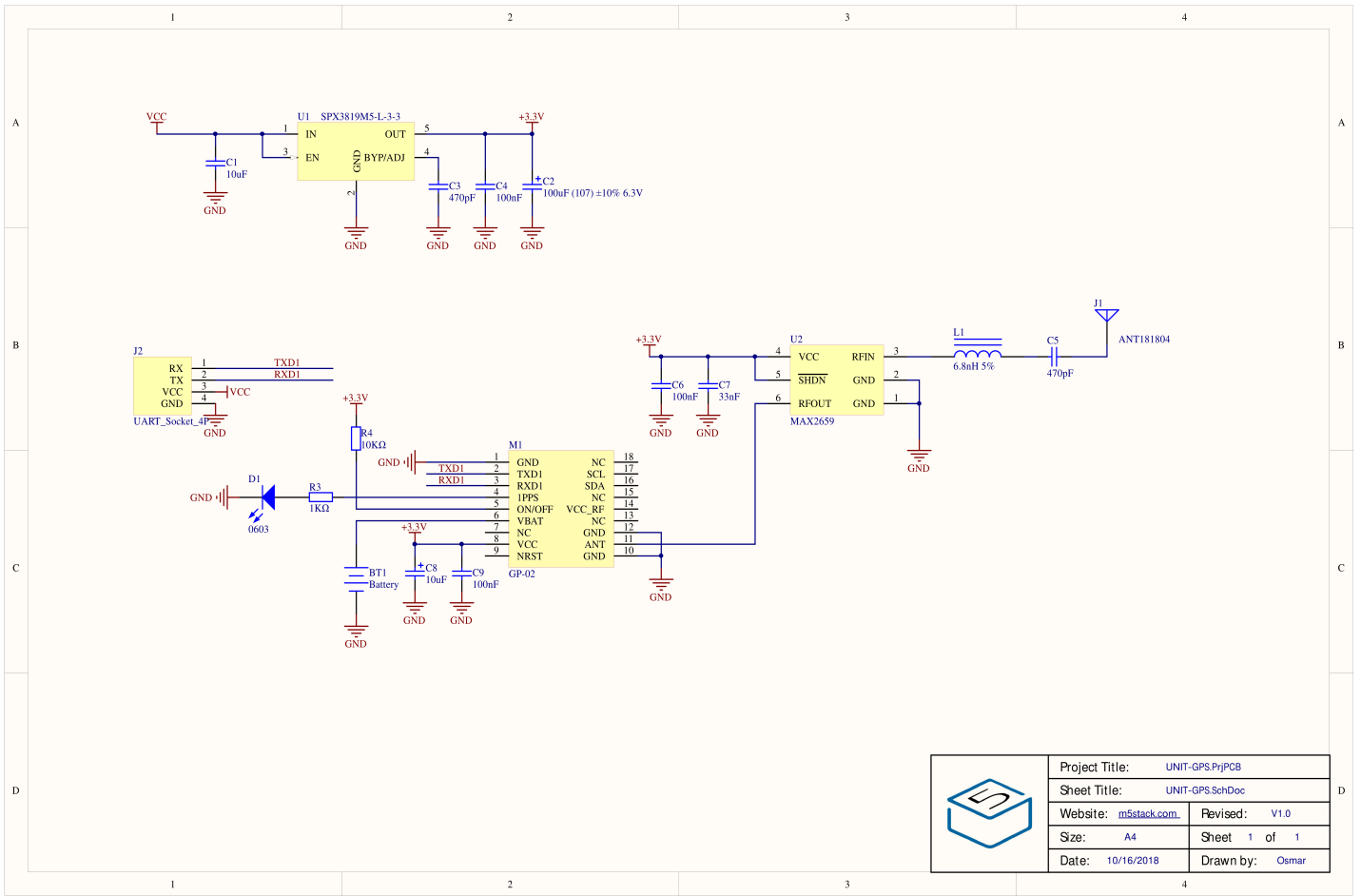
- Vehicle positioning and navigation
- Wearable devices
- IoT positioning devices
- Drones
- Portable devices
- Bus stop announcements

| Specifications

Specification	Parameter
SoC	ATGM336H-6N Module@AT6668
Supported Satellite Systems	GPS/QZSS/BD2/BD3/GAL/GLO Frequencies: BDS: B1I+B1C GPS/QZSS/SBAS: L1 GALILEO: E1 GLONASS: R1
Channels	50 channels
Communication	UART communication, default 115200bps@8N1
Positioning Accuracy	<1.5m (CEP50)
Positioning Update Rate	Up to 10Hz
Protocol	NMEA0183 4.1
Sensitivity	Tracking: -162dBm, Acquisition: -160dBm, Cold Start: -148dBm
Start Time	Cold Start: 23 seconds, Hot Start: 1 second
Power Consumption	DC 5V/31.64mA
Product Size	48.0 x 24.0 x 8.0mm
Product Weight	12.3g
Package Size	138.0 x 93.0 x 9.0mm
Gross Weight	17.6g

Schematics

- [Unit GPS v1.1 Schematics PDF](#)

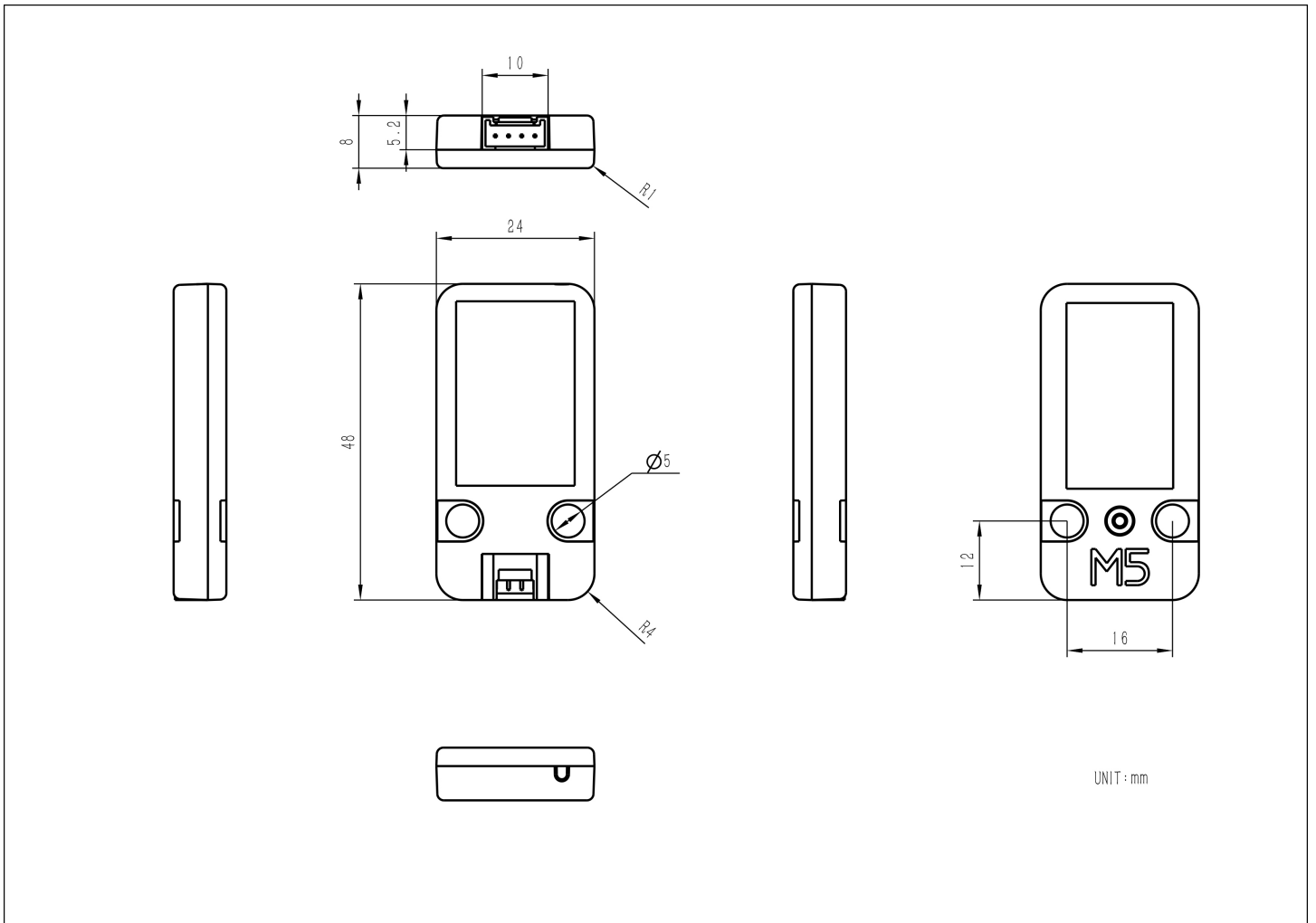


PinMap

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Model Size



Datasheets

- [ATGM336H-6N](#)
- [MAX2659](#)
- [CASIC Multi-mode Satellite Navigation Receiver Protocol Specification](#)

Softwares

Arduino

- [Unit-GPS v1.1 Arduino Library](#)

UiFlow2

- [Unit GPS v1.1 UiFlow2 Docs](#)

Video

- [Unit GPS v1.1 Product Introduction](#)

[unit gps v1.1 video.mp4](#)

Product Comparison

Product

Compare



Unit-GPS v1.1



Unit-GPS

SoC	AT6668	AT6558
Supported Satellites	BD2/BD3/GPS/GLONASS/GALILEO/QZSS	BDS/GPS
Positioning Accuracy	1.5m	2.5m
Channels	50 channels (CEP50)	32 channels (CEP50)
Sensitivity	Tracking: -162dBm, Acquisition: -160dBm, Cold Start: -148dBm	Tracking: -162dBm, Acquisition: -148dBm, Cold Start: -146dBm
Cold Start	Cold Start: 23 seconds, Hot Start: 1 second	Cold Start: 35 seconds, Hot Start: 1 second