



GPS Module



SIM28M

SIMCom presents a small, high performance and reliable assisted GPS module-SIM28M. This is a standalone L1 frequency GPS module in a SMT type and it is designed with MTK high sensitivity navigation engine, which allows you to achieve the industry's highest levels of sensitivity, accuracy, and Time-to-First-Fix (TTFF) with lowest power consumption.

Smart Machine Smart Decision

Mechanical data

- Dimensions 10.1*9.7*2.5mm
- Weight 0.5g

Features

- Support EASY™ self-generated orbit prediction
- Support EPO™ orbit prediction
- Support AGPS
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- Support Jamming Removing
- Low-noise amplifier has been integrated

Interfaces

- Serial interfaces UART
- Digital I/O GPIO
TIMEMARK (PPS)

- Protocols NMEA
PMTK
PSIM

Support product

- SIM68 EVB KIT with USB V2.0 full speed interface

Certificate

- CE (in plan)

Performance data

- Receiver type: 22 tracking/66 acquisition-channel GPS receiver
GPS L1, C/A Code
- Max update rate 10Hz
- Sensitivity¹
 - Tracking: -165 dBm
 - Reacquisition -160 dBm
 - Cold starts: -148 dBm
- Time-To-First-Fix²
 - Cold starts 32 s (typical)
 - Warm starts 30s
 - Hot starts <1s
 - EPO Assist 13s (CTTFF)
- Accuracy
 - Automatic Position³ 2.5m CEP
 - Speed⁴ 0.1m/s
- Operation temperature -40℃~+85℃

Electrical data

- Power supply 2.8~4.3V
- Backup power 2.0 V~4.3V
- Power consumption^{2,5} 3.3V (typical)
 - Acquisition 17mA
 - Tracking 16mA
 - Backup 8uA
- Antenna type Active and passive
- Antenna power External

- 1.Demonstrated in library
- 2.All SV @ -130 dBm
- 3.50% 24 hr static, -130dBm
- 4.50% @ 30m/s
5. @2.8V with a passive antenna

More about SIMCom SIM28M
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