



GPS Module

SIM28



SIMCom presents a high performance and reliable assisted GPS module-SIM28. It is in a SMT type with MTK mature GPS only navigation engine, which allows you to achieve the industry's high levels of accuracy and Time-to-First-Fix (TTFF) with lowest power consumption.

Smart Machine Smart Decision

Mechanical data

- Dimensions: 16*12.2*2.4mm
- Weight: 1g

Features

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

Interfaces

- Serial interfaces UART, SPI / I²C
- Digital I/O TIMEMARK output
 EINT0 input
 GPIO
- Protocols NMEA
 PMTK

Support evaluation products

- SIM28-TE
- SIM28EVB KIT with USB V2.0 full speed interface

Electrical data

- Power supply +2.8V ~4.3V
- Backup power +2.3V ~4.3V
- Power consumption^{2,5}
 - Acquisition: 24 mA
 - Tracking: 19mA
 - Standby mode: <200μA
- Antenna type Active and Passive
- Antenna power External or internal
 VCC_RF

Performance data

- Receiver type 22 tracking / 66 acquisition-channel GPS receiver
 GPS L1, C/A Code
- Max. update rate 10Hz
- Sensitivity¹
 - Tracking: -167 dBm
 - Reacquisition: -160 dBm
 - Cold starts: -147 dBm
- Time-To-First-Fix²
 - Cold starts with EASY: 13s
 - Warm starts with EASY: 1~2s
 - Cold starts: 32s
 - Cold starts with
EPO Assist: 12.5s
 - Hot starts: <1s
- Accuracy
 - Automatic Position³: 2.5m CEP
 - Speed⁴: 0.1m/s
 - Timing: 10ns
- Operation temperature: -40°C~+85 °C

Certificate

- 1.Demonstrated with a good active antenna
- 2.All SV @ -130 dBm
- 3.50% 24 hr static, -130dBm
- 4.50% @ 30m/s
5. @3.3V with a passive antenna

More about SIMCom SIM28
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