



GNSS Module



SIM68E

SIMCom presents a high performance and reliable GNSS module-SIM68E. This is GNSS module integrated with GPS & GLONASS system in a SMT type with MTK's high sensitivity navigation engine, which allows customer to achieve industry's high level sensitivity, accuracy, and Time-to-First-Fix (TTFF) with lower power consumption.

Smart Machine Smart Decision

Mechanical data

- Dimensions: 13*15*2.3mm
- Weight: 0.5g

Features

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

Interfaces

- Serial interfaces UART
- Digital I/O GPIO
- Pulse-per-second (PPS)

- Protocols NMEA
- PMTK

Support product

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

Performance data

- Receiver type 33tracking/99 acquisition-channel GNSS receiver
- Max. update rate 10Hz
- Sensitivity¹
 - Tracking: -165 dBm
 - Reacquisition: -160 dBm
 - Cold starts: -148 dBm
- Time-To-First-Fix²
 - Cold starts: 28 s
 - Warm start: 26 s
 - Hot starts: <1s
 - EPO Assist: 13s (CTTFF)
- Accuracy
 - Automatic Position³: <2.5m CEP
 - Speed⁴: 0.1m/s
- Operation temperature⁵: -40°C~+85 °C

Electrical data

- Power supply 2.8V~4.3V
- Backup power 2.3V~4.6V
- Power consumption^{2,6}
 - Acquisition 25mA
 - Tracking 20mA
 - AlwaysLocate™ 340uA
 - Backup 14uA
- Antenna type Active and passive

1. Demonstrated in lab
2. All SV @ -130 dBm, GPS&GLONASS mode
3. 50% 24 hr static, -130dBm, GPS&GLONASS mode
4. 50% @ 30m/s
5. When at -40°C ~ -30°C, the sensitivity will be somewhat worse
6. @2.8V with a passive antenna

More about SIMCom SIM68E
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