GNSS Module

SIM68V

SIMCom presents a high performance and reliable GNSS module-SIM68V. This is a standalone L1 frequency GNSS module 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: 16*12.2*2.4mm
- Weight: 1g

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

Interfaces

•Serial interfaces	UART, SPI / I²C
•Digital I/O	EINT0 input
	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
•Sensitivity[1]	
Tracking:	-167 dBm
Reacquisition:	-160 dBm
Cold starts:	-148 dBm
•Time-To-First-Fix[2]	
Cold starts:	28 s
Warm start:	26 s
Hot starts:	<1s
EPO Assist:	13s（CTTFF)
• Accuracy	
Automatic Position[3]:	2.5m CEP
Speed[4]:	0.1m/s
•Operation temperature[5]:	-40℃~+85 ℃

Electrical data

•Power supply	
•Backup power	2.8V~4.3V
•Power consumption[2,6]	2.3V~4.6V
Acquisition	34mA
Tracking	30mA
AlwaysLocate™	340uA
Backup	14uA
•Antenna type	Active and passive
•Antenna power	External or internal VCC_RF

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℃~ -30℃,the sensitivity will be somewhat worse
6. @2.8V with a passive antenna