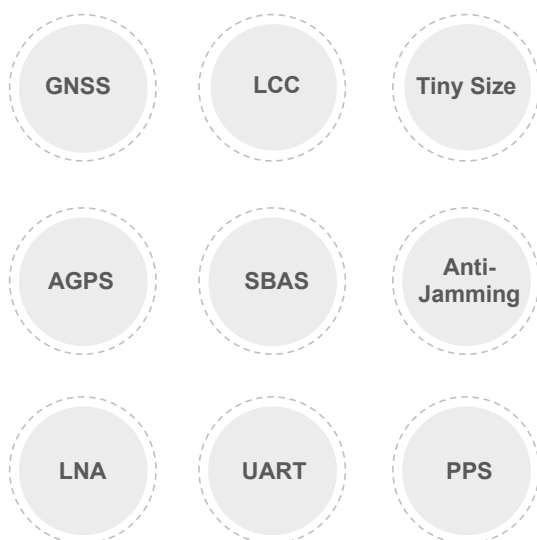
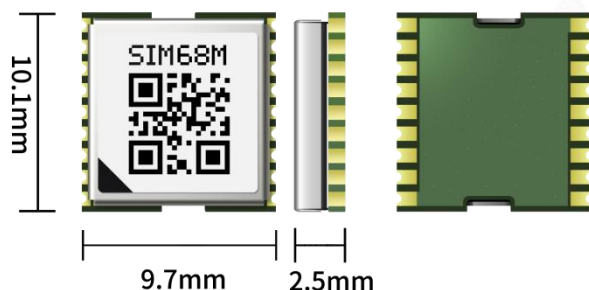


SIM68M

SIMCom GNSS Module



Product Description

SIM68M is a high performance and reliable GNSS module. It is a GNSS module integrated with GPS & GLONASS system in a LCC 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.

SIM68M provides simultaneous GPS, GLONASS, Galileo and QZSS open service L1 reception capability. With 33 tracking channels and 99 acquisition channels, SIM68M can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM68M achieves the highest performance and fully meets the industrial standard.

Key Benefits

- ◆ 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

Mechanical data

Dimensions	10.1*9.7*2.5mm
Weight	0.5g

Features

Support GPS/GLONASS/Galileo (L1 Band Receiver 1575.42MHz)
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	Pulse-per-second (PPS) EINT0 input
Protocols	NEMA PMTK

Certifications

CE
RoHS/REACH

Performance data

Receiver type	33tracking/99 acquisition-channel GNSS receiver
Max. update rate	10Hz
Sensitivity ¹	
Tracking	-165 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°C~+85 °C

Electrical data

Power supply	2.8V~4.3V
Backup power	2.3V~4.6V
Power consumption ^{2,6}	
Acquisition	25mA
Tracking	25mA
AlwaysLocate™	640uA
Backup	8uA
Antenna type	Active and passive
Antenna power	External or internal VCC_RF

Note

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. @3.3V with a passive antenna