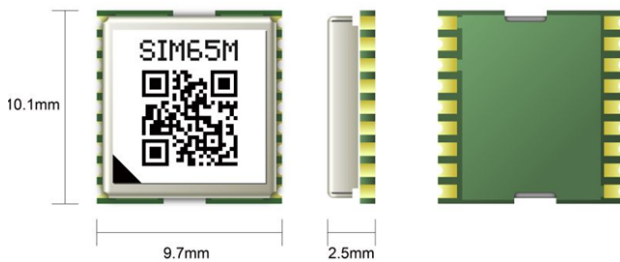


# SIM65M

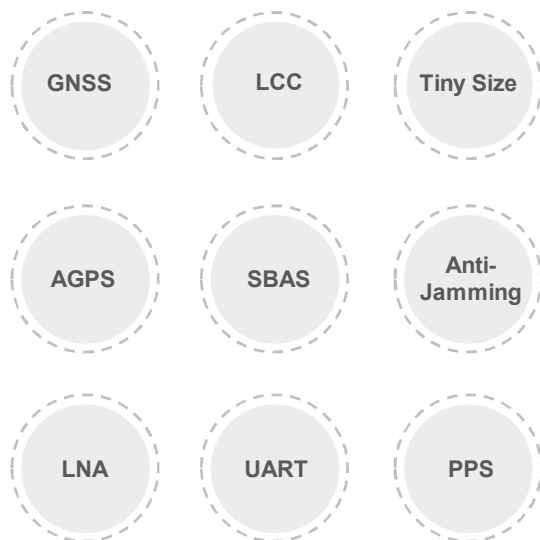
## SIMCom GNSS Module



### Product Description

SIM65M is a high performance and reliable GNSS module. It is a GNSS module integrated with GPS & GLONASS & BDS & Galileo & QZSS system in a LCC type with AIROHA'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.

SIM65M provides simultaneous GPS, GLONASS, BDS, Galileo and QZSS open service L1 reception capability. With 47 GNSS receiver channels, SIM65M can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM65M 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/BDS/Galileo/QZSS (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	NMEA RTCM

## Certifications (plan)

CE
RoHS/REACH

## Performance data

Receiver type	47channels GNSS receiver
Max. update rate	10Hz
Sensitivity <sup>1</sup>	
Tracking	-166dBm
Reacquisition	-158dBm
Cold starts	-147dBm
Time-To-First Fix <sup>2</sup>	
Cold starts	30s
Warm start	25s
Hot starts	1s
EPO Assist	15s
Accuracy	
Automatic Position <sup>3</sup>	2M
Speed <sup>4</sup>	0.1m/s
Operation temperature <sup>5</sup>	-40°C~+85 °C

## Electrical data

Power supply	2.8V~4.3V
Backup power	2.3V~4.6V
Power consumption <sup>2,6</sup>	
Acquisition	18mA
Tracking	18mA
Sleep current	210uA
Backup	15uA
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