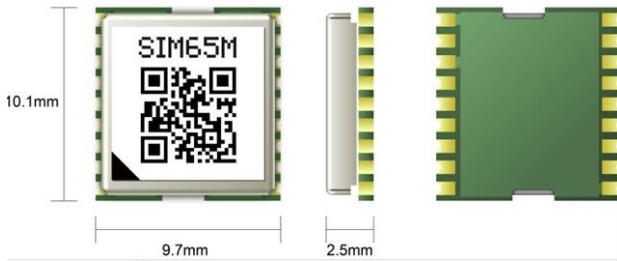


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# SIM65M

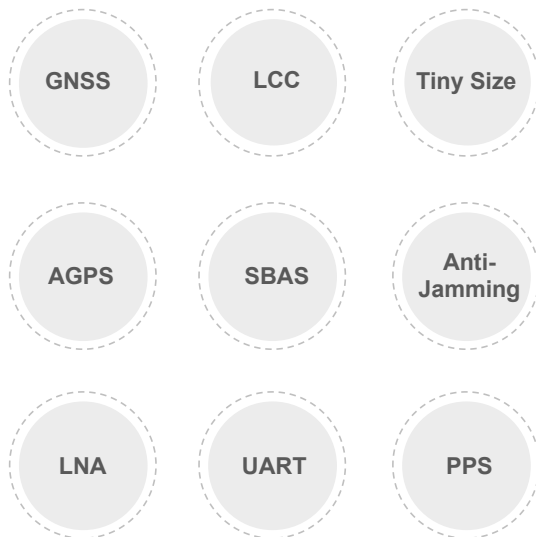
## SIMCom GNSS Module



### 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

CE/UKCA
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	25s
Warm start	21s
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

	SIM65M	SIM65M(U)	SIM65M(W)
Power supply	2.8V~4.3V	3.0V~4.3V	1.75V~1.95V
Backup power	1.75V~3.6V	1.75V~3.6V	1.75V~3.6V
IO level	2.8V	3.3V	1.8V
Power consumption <sup>2</sup>			
Acquisition	12mA	11mA	15mA
Tracking	12mA	11mA	15mA
Sleep current	250uA	270uA	210uA
Backup	15uA	15uA	15uA
Antenna type	Active and passive		
Antenna power	External or internal VDD_ANT		

### Note

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