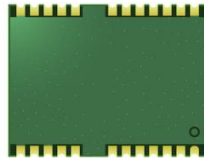


# SIM68AD

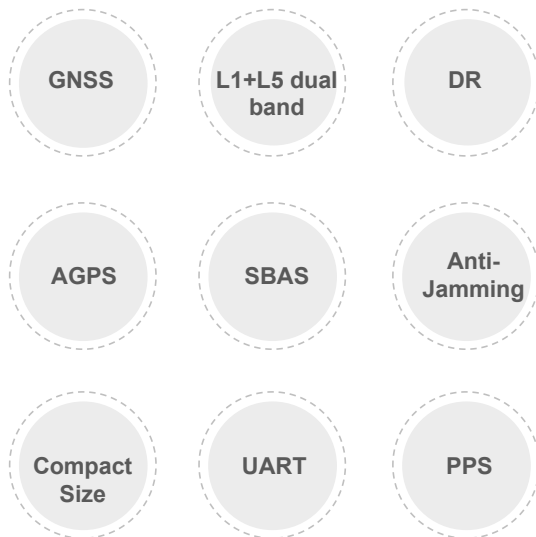
## SIMCom GNSS Module



### Product Description

SIM68AD is a concurrent multi-GNSS receiver supporting dead reckoning function. It is equipped with a powerful GNSS core and a 6-axis IMU. SIM68AD is a standalone L1 +L5 dual-band GNSS module 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.

SIM68AD provides simultaneous GPS, GLONASS, BeiDou, Galileo and QZSS open service L1 reception capability and GPS, BeiDou, Galileo and QZSS open service L5 reception capability. SIM68AD can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM68AD achieves the highest performance and fully meets the industrial standard.



### Key Benefits

- ◆ L1 and L5 dual-band GNSS receiver
- ◆ Support DR(UDR)
- ◆ Support EPO™ orbit prediction
- ◆ Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- ◆ Support Jamming Removing
- ◆ EASY™ self-generated orbit prediction
- ◆ Low-noise amplifier has been integrated

## Mechanical data

Dimensions	16*12.2*2.4mm
Weight	1g

## Features

Support	DR(UDR)
Support	L1: BeiDou/GPS/GLONASS/Galileo/QZSS L5: BeiDou/GPS/Galileo/QZSS
Support	EASY™ self-generated orbit prediction
Support	EPO™ orbit prediction
Support	SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
Support	Jamming Removing
Support	Low-noise amplifier has been integrated
Support	DGPS (RTCM)
Support	Indoor and outdoor multi-path detection and compensation
Support	LOCUSTM logger function

## Interfaces

Serial interfaces	UART SPI I2C
Digital I/O	Pulse-per-second (PPS) EINT0 input
Protocols	NMEA RTCM

## Certifications(plan )

CE UKCA
ROHS REACH

### Note

1. Demonstrated in lab
2. All SV @ -130 dBm
3. 50% 24 hr static, -130dBm
4. 50% @ 30m/s
5. When at -40°C~ -30°C, the sensitivity will be somewhat worse
6. @3.3V with a passive antenna
7. \*: optional

## Performance data

Receiver type	L1: 75SVs L5: 60SVs
Max. update rate	1Hz
Sensitivity	Tracking -166dBm Reacquisition -159dBm Cold starts -148dBm
Time-To-First Fix	Cold starts 27s Warm start 25s Hot starts <1s EPO Assist 13s
Accuracy	Automatic Position 1.5M Speed <sup>4</sup> 0.1m/s Acceleration 0.1 m/s <sup>2</sup>
Operation temperature	-40°C~+85 °C

## Electrical data

Power supply	2.8V~4.3V
Backup power	2.3V~4.6V
Power consumption	Acquisition 26mA Tracking 26mA Backup 46uA
Antenna type	Active and passive
Antenna power	External or internal VCC_RF