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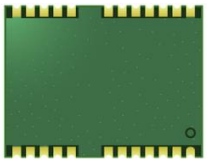
SIM68AD

SIMCom GNSS Module



GNSS

L1+L5 dual band

DR

AGPS

SBAS

Anti-Jamming

Compact Size

UART

PPS

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

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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
Low-noise amplifier has been integrated
Support DGPS (RTCM)
Indoor and outdoor multi-path detection and compensation
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℃~ -30℃, 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[4]	0.1m/s
Acceleration	0.1 m/s²
Operation temperature	-40℃~+85 ℃

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

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