SIM68MD

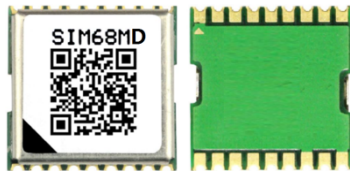## SIMCom GNSS Module

Product Description

SIM68MD is a high performance and reliable GNSS module. It 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.

SIM68MD provides simultaneous GPS, GLONASS, BeiDou , Galileo and QZSS open service L1 reception capability and GPS, BeiDou, Galileo and QZSS open service L5 reception capability. SIM68MD can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM68MD achieves the highest performance and fully meets the industrial standard.

GNSS	L1+L5 dual band	Compact Size
AGPS	SBAS	Anti-Jamming
Small Size	UART	PPS
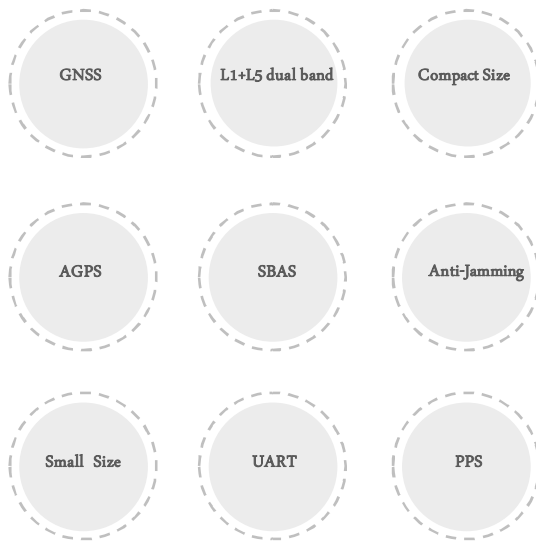
Key Benefits

◆ L1 and L5 dual-band GNSS receiver

◆ Support EASY™ self-generated orbit prediction

◆ Support EPO™ orbit prediction

◆ Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)

◆ Support Jamming Removing

Mechanical data

Dimensions	10.1*9.7*2.5mm
Weight	0.5g

Features

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 DGPS (RTCM)

Indoor and outdoor multi-path detection and compensation

LOCUS™ logger function

Interfaces

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

Certifications

TBD

Performance data

Receiver type	L1: 75SVs L5: 60SVs
Max. update rate	10Hz
Sensitivity[1]	
Tracking	-157dBm
	-166dBm (with external LNA design)
Reacquisition	-151dBm
	-160dBm (with external LNA design)
Cold starts	-141dBm
	-148dBm (with external LNA design)
Time-To-First Fix[2]	
Cold starts	27s
Warm start	25s
Hot starts	<1s
EPO Assist	13s
Accuracy	
Automatic Position[3]	1.5M
Speed[4]	0.1m/s
Operation temperature[5]	-40℃~+85 ℃

Electrical data

Power supply	2.8V~4.3V
Backup power	2.3V~4.6V
Power consumption[2,6]	
Acquisition	22mA
Tracking	22mA
Sleep current	340uA
Backup	50uA
Antenna type	Active and passive
Antenna power	External or internal VCC_RF