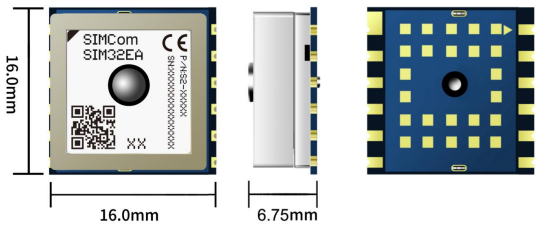
V: 2025.02

SIM32EA

SIMCom GNSS Module



GNSS | LCC | Tiny Size | AGNSS | SBAS | Anti-Jamming | Embedded antenna | External antenna | PPS

Product Description

SIM32EA is a high performance and reliable GNSS module. It is a GNSS module integrated with GPS &GLONASS & 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.

SIM32EA provides simultaneous GPS, GLONASS , Galileo and QZSS open service L1 reception capability. With 47 GNSS receiver channels, SIM32EA can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EPOC™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM32EA achieves the higher performance and fully meets the industrial standard.

Key Benefits

- Support EPOC™ self-generated orbit prediction
- Support EPO™ orbit prediction
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- Support Jamming Removing
- Low-noise amplifier has been integrated
- Embedded antenna or external antenna automatic switchover
- Wide voltage

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Mechanical data

Dimensions	16*16*6.75mm
Weight	5.8g

Features

Support GPS/GLONASS/Galileo/QZSS (L1 Band Receiver 1575.42MHz)
Support EPOC™ self-generated orbit prediction
Support EPO™ orbit prediction
Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
Support Jamming Removing
Low-noise amplifier has been integrated
Wide voltage 1.75V~3.6V
Embedded antenna or external antenna automatic switchover

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[1]	
Tracking	-166dBm
Reacquisition	-160dBm
Cold starts	-148dBm
Time-To-First Fix[2]	
Cold starts	30s
Warm start	25s
Hot starts	1s
EPO Assist	15s
Accuracy	
Automatic Position[3]	1.5 m
Speed[4]	0.1m/s
Operation temperature[5]	-40℃~+85 ℃

Electrical data

Power supply	1.75V~3.6V
Backup power	1.70V~3.6V
Power consumption[2,6]	
Acquisition	10mA
Tracking	10mA
Sleep current	900uA
Backup	13uA

Note

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

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