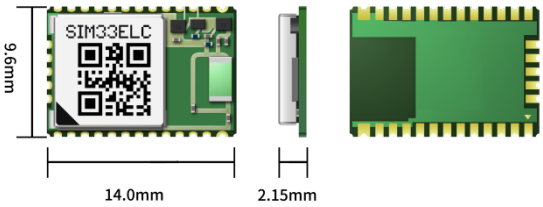
V: 2020.02

SIM33ELC

SIMCom GNSS Module



GNSS | LCC | Tiny Size

AGPS | SBAS | Anti-Jamming

Embedded antenna | UART | PPS

Product Description

SIM33ELC is a high performance and reliable GNSS module. It is a standalone GNSS module with an embedded linear antenna on it. It is designed with MTK'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. And with embedded antenna in LCC type, it is very easy for customer's applications design.

SIM33ELC provides simultaneous GPS, GLONASS, Galileo and QZSS open service L1 reception capability. With 33 tracking channels and 99 acquisition channels, SIM68M can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM68M 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

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Mechanical data

Dimensions	14*9.6*2.15mm
Weight	0.5g

Features

Support GPS/GLONASS/QZSS (L1 Band Receiver 1575.42MHz)
Support EASY™ self-generated orbit prediction
Support EPO™ orbit prediction
Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
Support AGPS
Support Jamming Removing
Low-noise amplifier has been integrated

Interfaces

Serial interfaces	UART
Digital I/O	Pulse-per-second (PPS)
	GPIO
Protocols	NEMA
	PMTK

Performance data

Receiver type	33tracking/99acquisition-channel GNSS receiver
Max. update rate	10Hz
Sensitivity[1]	
Tracking	-165 dBm
Reacquisition	-160 dBm
Cold starts	-147 dBm
Time-To-First Fix[2]	
Cold start	28s
Warm start	26s
Hot start	<1s
EPO Assist	13s（CTTFF)
Accuracy	
Automatic Position[3]	<2.5m CEP
Speed[4]	0.1m/s
Operation temperature	-40℃~+85 ℃

Electrical data

Power supply	2.8V~4.3V
Backup power	2.0V~4.3V
Power consumption[2]	
Acquisition	25mA
Tracking	20mA
Backup	14uA

Note

1. Demonstrated in lab
2. All SV @ –130 dBm
3. 50% 24 hr static, -130dBm
4. 50%@ 30m/s

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