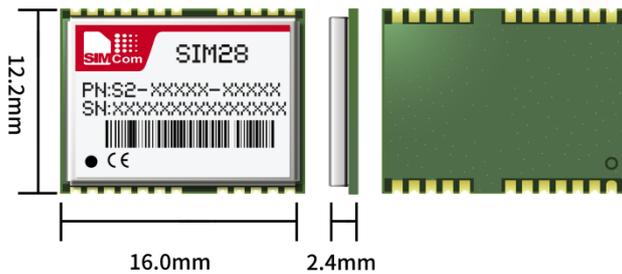


SIM28

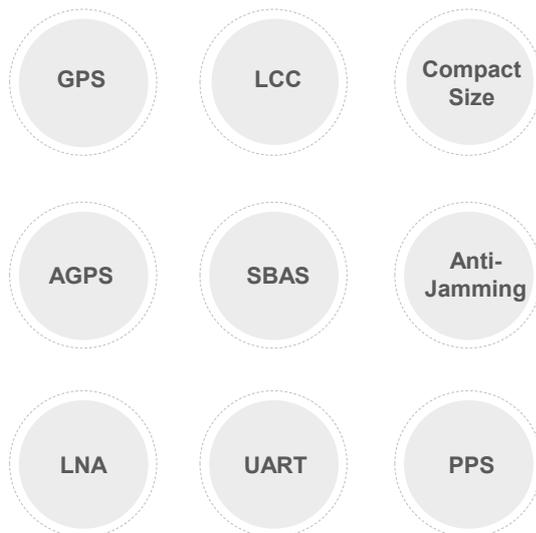
SIMCom GNSS Module



Product Description

SIM28 is a high performance and reliable GPS module. It is a GPS module integrated with GPS system in a LCC type 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.

SIM28 provides simultaneous GPS open service L1 reception capability. With 22 tracking channels and 66 acquisition channels, SIM28 can acquire and track any mix of multiple satellite signals. Combining advanced AGPS called EASY™ (Embedded Assist System) with proven AlwaysLocate™ technology, SIM28 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

Mechanical data

Dimensions	16*12.2*2.4mm
Weight	1g

Features

Support GPS (L1 Band Receiver 1575.42MHz)
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

Interfaces

Serial interfaces	UART
	SPI
	I2C
Digital I/O	EINT0 input
	Pulse-per-second (PPS)
Protocols	GPIO
	NEMA
	PMTK

Performance data

Receiver type	22tracking/66 acquisition-channel GPS receiver
Max. update rate	10Hz
Sensitivity ¹	
Tracking	-165 dBm
Reacquisition	-160 dBm
Cold starts	-147 dBm
Time-To-First Fix ²	
Cold start with EASY	13s
Warm start with EASY	1~2s
Cold start	32s
EPO Assist	12.5s
Hot start	<1s
Accuracy	
Automatic Position ³	<2.5m CEP
Speed ⁴	0.1m/s
Timing	10ns
Operation temperature	-40℃~+85℃

Electrical data

Power supply	2.8V~4.3V
Backup power	2.3V~4.3V
Power consumption ^{2,5}	
Acquisition	24mA
Tracking	19mA
Standby mode	<200uA
Antenna type	Active and passive
Antenna power	External or internal VCC_RF

Note

1. Demonstrated in lab
2. All SV @ -130 dBm
3. 50% 24 hr static, -130dBm
4. 50% @ 30m/s
5. @3.3V with a passive antenna