



# GPS Module

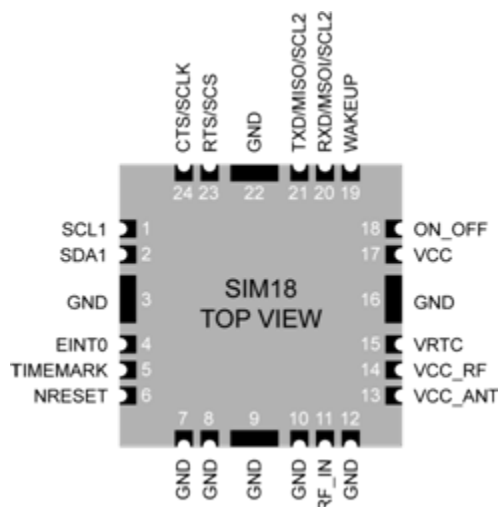


## SIM18

SIMCom presents an ultra compact and reliable GPS module-SIM18. This is a standalone L1 frequency GPS module in a SMT type and it is designed with SiRF4 high sensitivity navigation engine, which allows you to benefit from small dimensions and cost-effective solutions.

## Smart Machine Smart Decision

### Mechanical data



- Dimensions: 11\*11\*2.2mm
- Weight: 0.5g

### Interfaces

- Serial interfaces UART, SPI or I<sup>2</sup>C  
Additional master mode I<sup>2</sup>C
- Digital I/O  
1 NReset  
1 EINT0 input  
1 ON\_OFF input  
1 WAKEUP output  
1 time pulse
- Protocols NMEA, OSP

### Support product

- SIM18 EVB KIT with USB V2.0 full speed interface

### Certificate

- CE (available at Nov. 2010)

### Performance data

- Receiver type 48-channel SiRF4 engine  
GPS L1, C/A Code
- Max. update rate 1Hz
- Sensitivity<sup>1</sup>
  - Tracking: -161 dBm
  - Reacquisition: -160 dBm
  - Cold starts: -147 dBm
- Time-To-First-Fix<sup>2</sup>
  - Cold starts: 35 s (typical)
  - Hot starts: 0.6 s (typical)
- Accuracy
  - Position<sup>3</sup>: 2.5m CEP
  - Speed<sup>4</sup>: <0.01m/s
- Operational limits
  - Velocity: <1850km/h
  - Altitude: <18288km
- Operation temperature: -40° C to +85° C

### Electrical data

- Power supply 1.71V to 1.89V
- Backup power 1.71V to 1.89V
- Power consumption<sup>2,5</sup>
  - Acquisition 45mA (average)
  - Tracking 40mA (average)
  - Sleep 18 μA (average)
- Antenna type Active and passive
- Antenna power External or internal VCC\_ANT

1. Demonstrated with a good active antenna
2. All SV @ -130 dBm
3. 50% 24 hr static, -130dBm
4. 50% @ 30m/s
5. @1.8V with a passive antenna

More about SIMCom SIM18  
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