SIMCom presents a high performance and reliable assisted GPS module—SIM28. It is in a SMT type with MTK mature GPS only navigation engine, which allows you to achieve the industry’s high levels of accuracy and Time-to-First-Fix (TTFF) with lowest power consumption.

**Mechanical data**
- Dimensions: 16*12.2*2.4mm
- Weight: 1g

**Features**
- Support EASY™ self-generated orbit prediction
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- Support EPO™ orbit prediction
- Support Jamming removing function
- Low-noise amplifier has been integrated

**Performance data**
- Receiver type: 22 tracking / 66 acquisition-channel GPS receiver
  - GPS L1, C/A Code
- Max. update rate: 10Hz
- Sensitivity
  - Tracking: -167 dBm
  - Reacquisition: -160 dBm
  - Cold starts: -147 dBm
- Time-To-First-Fix
  - Cold starts with EASY: 13s
  - Warm starts with EASY: 1~2s
  - Cold starts: 32s
  - Cold starts with EPO Assist: 12.5s
  - Hot starts: <1s

**Accuracy**
- Automatic Position: 2.5m CEP
- Speed: 0.1m/s
- Timing: 10ns

**Interfaces**
- Serial interfaces: UART, SPI / I²C
- Digital I/O: TIMEMARK output
  - EINT0 input
- GPIO
- Protocols: NMEA, PMTK

**Support evaluation products**
- SIM28-TE
- SIM28EVB KIT with USB V2.0 full speed interface

**Electrical data**
- Power supply: +2.8V ~+4.3V
- Backup power: +2.3V ~+4.3V
- Power consumption
  - Acquisition: 24 mA
  - Tracking: 19mΩ
  - Standby mode: <200μA
- Antenna type: Active and Passive
- Antenna power: External or internal VCC_RF

1. Demonstrated with a good active antenna
2. All SV @ -130 dBm
3. 3.5% 24 hr static, -130dBm
4. 4.5% @ 30m/s
5. @3.3V with a passive antenna