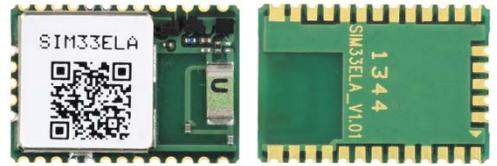# GNSS Antenna Module

SIM33ELA

SIMCom presents a high performance GPS module accompany with GNSS antenna-SIM33ELA. This is a standalone GNSS module embedded a linear antenna . Designed with MTK's high sensitivity navigation engine, it allows you to achieves the industry's highest levels of sensitivity, accuracy, and Time-to-First-Fix (TTFF) with lowest power consumption. And with embedded antenna in SMT type, it is very easy to embed into customer's application.

Smart Machine Smart Decision

Mechanical data
- Dimensions: 14*9.6*2.15mm
- Weight: 0.5g

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

Interfaces
- Serial interfaces   UART
- Digital I/O   PPS
                         3D-FIX
                         FORCE -ON

- Protocols   NMEA
                          PMTK

Support product
- SIM68 EVB KIT with USB V2.0 full speed interface

Performance data
- Receiver type   33tracking/99 acquisition-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 starts: 28 s (typical)
    Warm starts: 26s
    Hot starts: <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   2.8~4.3V
- Backup power   2.0V~4.3V
- Power consumption[2]   3.3V（typical）
    Acquisition   25mA
    Tracking   20mA
    Backup   14uA

1.Demonstrated on EVB KIT at library
2.All SV @ –130 dBm
3.50% 24 hr static, -130dBm
4.50%＠ 30m/s