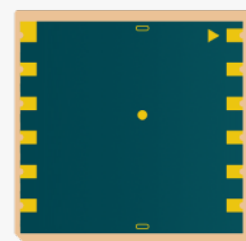


N25-01-B0309



18.4mm

18.4mm



6.45mm

# N31B

## GNSS module

N31B is an ultra-compact POT(Patch on Top) GNSS module. This is a standalone GNSS module in a SMT type base on MTK high sensitivity navigation engine. N31B supports intelligent detection and short-circuit protection of antenna insertion and unplugging, as well as automatic switching between built-in patch antenna and external active antenna and continuous positioning during the switching process. N31B supports EASY™, provides up to 3 days GNSS orbit prediction ability without any host CPU porting or internet connection requirement. It has tiny package and extremely low power consumption, makes it easier to be applied to power sensitive devices.



Tiny Size



Ultra Low Power Consumption



Extended Temperature Range -40°C to +85°C



EASY™ Technology



Super Tracking Sensitivity -165dBm



Embedded Patch Antenna

## Main Features

- Support EPO™ orbit prediction
- Support EASY™ self-generated orbit prediction
- Support GPS/Galileo/Glonass/BD2
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- Low noise amplifier has been integrated
- Automatic antenna switching function
- Support short circuit protection and antenna detection
- Patch Dimensions : 18.4\*18.4\*4.0 mm
- Module Dimensions : 16.0\*16.0\*6.45 mm
- Weight : about 8g
- Operation temperature : -40°C~+85 °C

## Power Management

- Power supply : +3.3V ~4.3V
- Backup power : +2.0V ~4.3V
- Power consumption
  - Acquisition : 25mA
  - Tracking : 22mA
  - Sleep : 600μA
  - Backup : 15μA
- Antenna type : Embedded

## Interfaces

- Serial interface
  - UART
- Digital I/O
  - PPS
  - Force\_on
- Protocols
  - NMEA
  - PMTK

## Performance Data

- Receiver type
  - 33 tracking / 99 acquisition- channel GNSS receiver
- Maximum update rate: 10Hz
- Sensitivity
  - Tracking : -165 dBm
  - Reacquisition : -160 dBm
  - Cold starts : -148 dBm
- TTFF without EASY™
  - Cold starts : 32s (typical)
  - Warm starts : 30s
  - Hot starts : <1s
- TTFF with EASY™
  - Cold starts : 15s (typical)
  - Warm starts : 5s
  - Hot starts : <1s
- Accuracy
  - Automatic Position : 2.5m CEP
  - Speed : 0.1m/s

