



N10F

GNSS Module

N10F is a small, high performance and reliable GNSS module, with single-frequency and multi-star. The module can support concurrently GPS, BD, Glonass, Galileo, QZSS, and also support B1C frequency.

The multiple GNSS systems increase the number of visible satellites, reduce the time to fix and improve the positioning accuracy. The module supports AGNSS, and EASY™ can download the predicting orbits, which helps to fix position quickly, especially under the week signal. It has tiny package and extremely low power consumption, makes it easier to be applied to power sensitive devices, like vehicle, ship, asset tracking and other scenarios.



LCC



Tiny Size



Temperature Range
-40°C to +85°C



High sensitivity



High precision



BD3



AGNSS

Main Features

- Support GPS+BD+Glonass+Galileo+QZSS
- Band:
 - GPS: L1C/A
 - BDS: B1I, B1C
 - Glonass: L1
 - Galileo: E1
 - QZSS: L1, L1S
- SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM
- Support EPO™ orbit prediction
- Support EASY™ self orbit prediction
- Built-in LNA
- Dimensions: 10.1*9.7*2.2 mm
- Package: LCC
- Weight: <1 g
- Operation temperature: -40°C~+85 °C
- Storage temperature: -45°C~+90 °C

Interfaces

- Serial interfaces :
 - UART
 - Baud Rate: 115200bps default
- Digital I/O:
 - PPS/GPIO
- Protocols:
 - NMEA0183/RTCM3.3

Power Management

- Power supply: 2.8V ~ 3.6V (Typical 3.3V)
- IO Voltage: 2.8V
- Backup power: 1.6V ~ 4.3V
- Maximum update rate: 10Hz
- Antenna type: Active/passive
- Antenna power: External

Performance data

- Power consumption: (GPS/G+G+G+B)
 - Tracking: 22.85mA/23.4mA
 - Acquisition: 23.26mA/26.53mA
 - Sleep: 210μA/210uA
- Sensitivity: (GPS/G+G+G+B)
 - Acquisition Tracking: -165dBm/-163dBm
 - Acquisition Tracking: -158dBm/-157dBm
 - Cold starts acquisition: -148dBm/-147dBm
- Time-To-First-Fix: (GPS/G+G+G+B)
 - Cold starts: 31s/23.8s
 - Warm starts: 24/20.3s
 - Hot starts: 1.78s/0.5s
- Position accuracy: 1.5m CEP50
- Speed precision: 0.1m/s
- 1PPS accuracy: 8ns