



## N23 GNSS module

N23 is GNSS module. This is a standalone GNSS module in a SMT type base on HD high sensitivity navigation engine. The N23 has high performance and small package, which makes it easy to be used in M2M scenarios, such as measurement, timing, navigation, tracking, etc.



Tiny Size



Ultra Low Power  
Consumption



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



Super Tracking  
Sensitivity -160dBm

## Main Features

- Support GPS/IRNSS/Galileo/Glonass
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS, SDCM)
- Low noise amplifier has been integrated
- Module Dimensions : 16.0\*12.2\*2.5 mm
- Weight : <1g
- Operation temperature: -40°C~+85 °C

## Power Management

- Power supply : +3.0V ~ 3.6V
- Backup power : +1.7V ~ 3.6V
- Power consumption  
Acquisition: 36mA  
Tracking: 34mA  
Sleep: 980uA  
Backup: 9.0uA
- Antenna type : Active and Passive
- Antenna power : External

## Interfaces

- Antenna interface:  
GNSS\_ANT
- Serial interface  
UART
- Digital I/O  
PPS/Force\_on/ANT\_DET/HRST
- Protocols  
NMEA  
PHD

## Performance data

- Receiver type  
40 tracking / 96 acquisition- channel GNSS receiver
- Maximum update rate: 20Hz
- Sensitivity  
Tracking : -160 dBm  
Reacquisition : -157 dBm  
Cold starts : -146 dBm
- TTFF@-130dBm  
Cold starts : 32s (typical)  
Warm starts : 30s  
Hot starts : <1s
- Accuracy  
Automatic Position : 2.5m CEP  
Speed : 0.1m/s

