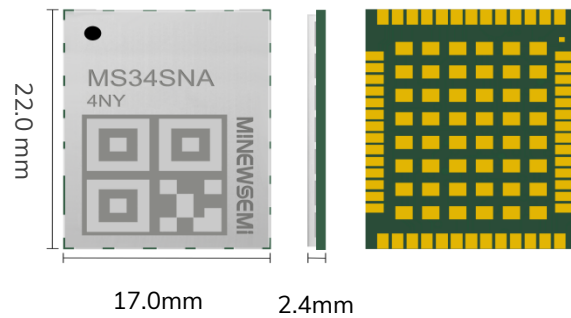


MS34SNA

Support RTK

GNSS Module



MS34SNA is supporting 'simultaneous multi-constellation positioning' and L1+L5, built-in 12nm advanced process GNSS Soc chip, integrated with main frequency up to 530MHz ARM Cortex-M4 FPU and MPU, and configured with independent dual-core Cortex A7 1.2GHz high-performance computing processor, the module supports GPS, BDS, GLONASS, GALILEO and QZSS multi-satellite systems. Combined with RTK (carrier phase difference) technology, the MS34SNA can achieve centimeter-level positioning accuracy, which greatly improves the positioning accuracy of the device and supports up to 10Hz RTK.

The multi-satellite system combination greatly increases the number of visible satellites when driving in dense urban canyon environments, reducing the time to first position and improving positioning accuracy, even up to 65 satellites in open environments! The RTK algorithm engine enables centimeter-level positioning accuracy in open roadways.

The module's superior positioning performance makes it ideal for industrial and consumer applications in automotive (e.g. T-Box, car navigation, V2X), transportation (e.g. industrial vehicles, operational vehicle supervision), trackers, shared electric bikes, smart agriculture, inspection, etc.

Advantages

- Mainstream package dimension: 17.0 mm × 22.0 mm × 2.5 mm
- Multi-satellite system support: GPS, BDS, GLONASS, GALILEO, QZSS and NAVIC*
- Support DGPS and SBAS (WAAS/EGNOS/MSAS/GAGAN)
- Support simultaneous multi-constellation positioning
- Integrated RTK algorithm engine
- Support output of RTCM data for CORS stations
- Support up to 10Hz RTK



Low-power



Multi-constellation
Multi-band



Centimeter
precision positioning



Industrial-grade
Temperature



RTK
engine

Parameter	Specification
1 Constellation	GPS: L1C/A, L5
	BDS: B1I, B2a
	GLONASS: L1
	GLILEO: E1, E5a
	QZSS: L1C/A, L5
	SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM
	NAVIC: L5
2 Operating frequency	GPS/QZSS L1: 1575.42MHz±1.023MHz
	GPS/QZSS L5: 1176.45MHz±10.23MHz
	BDS:B1I: 1561.098MHz±2.046MHz
	BDS:B2a: 1176.45MHz±20.46MHz
	Glonass G1: 1601.71875MHz±3.91175MHz
	Galileo E1: 1575.42MHz±1.023MHz
	Galileo E5a: 1176.45MHz±10.23MHz
	NAVIC: 1176.45MHz±10.23MHz
3 Sensitivity	Cold Start: -148dBm
	Re-capturing: -160dBm
	Tracking: -165dBm
4 Acquisition Time	Cold Start: ≤28s;
	Warm Start: 1s;
	Inherent Convergence &
	Deconvergence Time: ≤ 10s;
5 Position Accuracy	Single point location
	Open sky 1.5m CEP
	Complex urban environment: 2.5m CEP
	RTK
	Horizontal positioning accuracy: 1cm±2ppm
Elevation accuracy: 2cm±2ppm	
6 Speed Precision	<0.05m/s
7 Time Precision	20 ns
8 Voltage	Main Power: 3.0-3.3V
	Antenna Supply Voltage:: 3.3V / Low power antenna power supply: 1.8V (optional)
	PPS Output Voltage: 2.8V
9 Power Consumption	<20mA @ 3.3V
10 Operation Temp	-40℃ - +85℃
11 Refresh Frequency	RTK 1-10Hz
12 RTCM Differential Output	Support RTCM2.x, RTCM3.x output & MSM4/MSM7
13 Package Size	22.0*17.0*2.4mm , LGA 56pin

NAVIC is optional