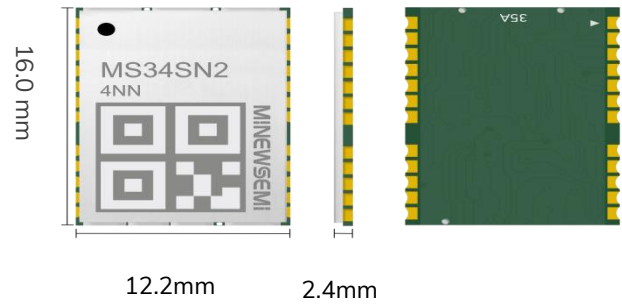


MS34SN2

GNSS Module









MS34SN2 is a GNSS module with integrated RTK positioning engine, supporting "simultaneous multi-constellation positioning" and L1+L5. The module supports GPS, BeiDou, GLONASS, Galileo and QZSS multi-satellite systems, and combined with RTK (carrier phase difference) technology, the MS34SN2 can achieve centimeter-level positioning accuracy, greatly improving the positioning accuracy of the device while maintaining ultra low power consumption. 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 MS34SN2's superior positioning performance makes it ideal for industrial and consumer applications in the automotive sector (e.g. T-Box, car navigation, V2X), transportation (e.g. industrial vehicles, operational vehicle supervision), trackers, shared motorcycles, smart agriculture, inspections, etc.

Advantages

- Mainstream Package Dimension: 16.0 mm × 12.2 mm × 2.4 mm
- Support Multi-satellite Systems: GPS, BDS, GLONASS, GALILEO, QZSS and NAVIC*
- Support DGPS and SBAS (WAAS/EGNOS/MSAS/GAGAN)
- Integrated RTK algorithm engine
- Support output RTCM data for CORS stations
- Ultra-low power consumption RTK operation mode 15mA

					
IMU Navigation	Low-power	Multi-constellation Multi-band	Centimeter precision positioning	Industrial-grade Temperature	RTK engine

Parameter	Specification			
1	Constellation	GPS:	L1 C/A	NAVIC is optional
		BDS:	B1I	
		GLONASS:	L1	
		QZSS:	L1 C/A	
		SBAS:	WAAS, EGNOS, MSAS, GAGAN, SDCM	
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 Coverage & Decovergence:	≤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	
		Back-up Power:	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°C - +85°C		
11	Differential Output	RTCM		
		RTK 1Hz, 2Hz, 5Hz		
12	Refresh Frequency	Support RTCM2.x, RTCM3.x output & MSM4/MSM7		
13	Package Size	16.0*12.2*2.4mm , LCC 24pin		