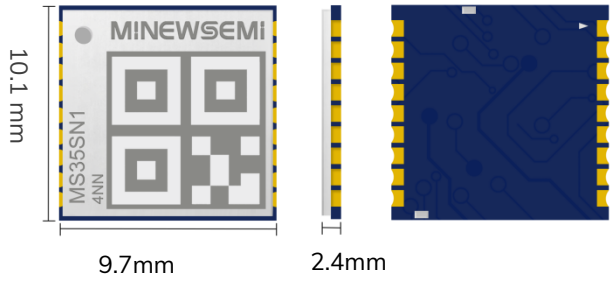
MS35SN1

GNSS Module

Multi-constellation



MS35SN1 is a multi-galaxy, concurrent, simultaneous multi-constellation positioning and L1+L5 positioning GNSS module. Built-in MTK advanced process GNSS Soc chip, integrated ARM Cortex-M4 FPU and MPU with a main frequency of up to 530MHz. The module supports GPS, BDS, GLONASS, GALILEO and QZSS with excellent positioning performance while maintaining 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! Accurate positioning is possible even in harsh environments.

The module makes it ideal for industrial-type applications in the automotive sector (e.g. T-Box, car navigation, V2X), transportation sector (e.g. industrial vehicles, operational vehicle supervision), shared electric bikes, smart agriculture, etc.

Advantages

- Mainstream package dimension: 10.1 mm × 9.7 mm × 2.4 mm
- Support multi-satellite systems: GPS, BDS, GLONASS, GALILEO, QZSS and NAVIC*
- Dual-band L1+L5 support
- Support DGPS and SBAS (WAAS/EGNOS/MSAS/GAGAN)
- 1.1.1.1 Support Output RTCM Original Observation Data Out

	Parameter	Specification		
1	Constellation	GPS:	L1C/A, L5	NAVIC is optional
		BDS:	B1I, B2a	
		GLONASS:	L1	
		GALILEO:	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;	
		Hot Start:	1s；	
5	Voltage	Main Power:	2.8-4.2V (3.3V is recommended)	
		Antenna Supply Voltage::	3.3V / Low power antenna power supply: 1.8V (optional)	
		PPS Output Voltage:	2.8V	
6	Speed Precision	<0.05m/s		
7	Time Precision	20 ns		
8	Power Consumption	<20mA @ 3.3V		
10	Operation Temp	Working: -40℃ - +85℃		
11	Refresh Frequency	GNSS 1-10Hz		
12	RTCM Differential Output	Support RTCM2.x, RTCM3.x output & MSM4/MSM7		
13	Package Size	10.1*9.7*2.4mm , LCC 24pin		

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