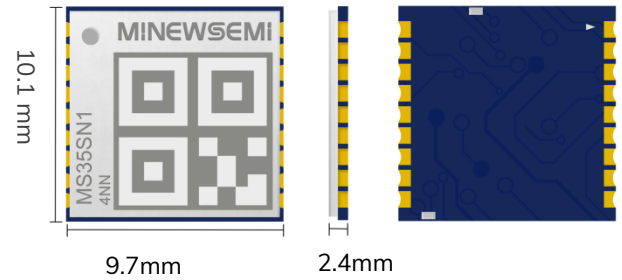


# MS35SN1

## 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

					
Fast location	Low-power	Multi-constellation Multi-band	Positioning accuracy 15cmCEP	Industrial-grade Temperature	Original observation data output

Parameter	Specification
1 Constellation	GPS: L1C/A, L5
	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°C - +85°C
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

NAVIC is optional

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