

Single-Band GNSS Module

CM121

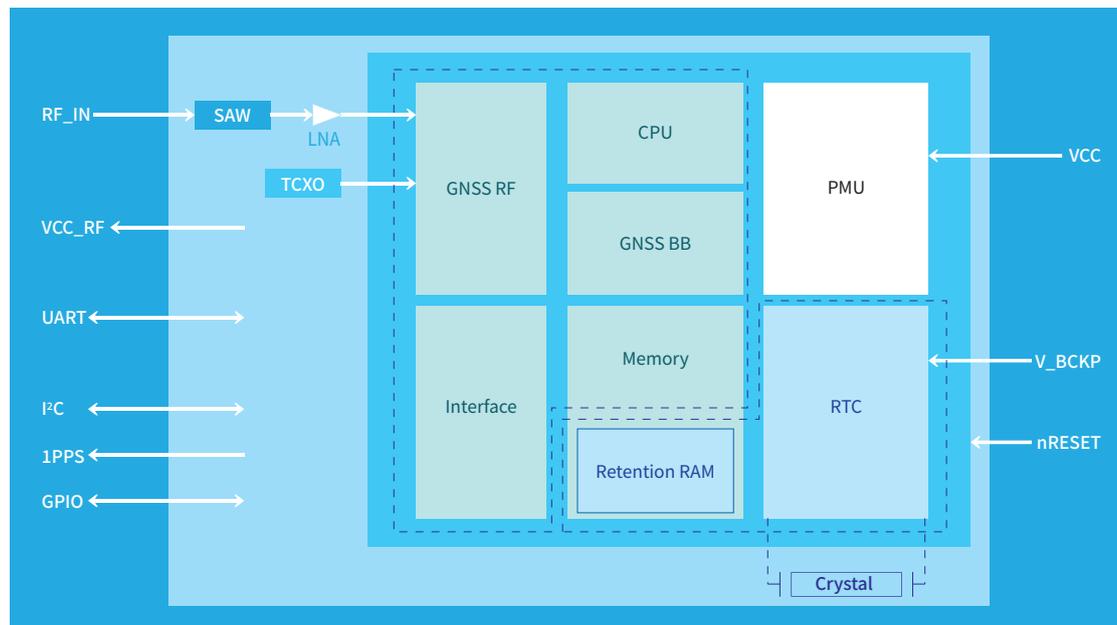
CM121 is a single-band, multi-constellation GNSS module that supports GPS, BDS, GLONASS, Galileo, and QZSS systems. It features exceptional sensitivity, high-performance and low-power consumption in a standard compact package. The module is suitable for applications such as trackers, walkie-talkie, dash cam, and two-wheelers.



Technical advantages

- » L1 band, BDS/GPS/GLONASS/Galileo/QZSS
- » Tracking consumption < 46mW
- » Adaptive anti-jamming capability
- » Real-time and predicted A-GNSS
- » Pin compatible with popular package for easy design
- » Package: 10.1 x 9.7 x 2.5 (mm), 18-pin LCC

Product block diagram



Product Specifications

Performance Index

Supported GNSS Constellation	GPS: L1C/A BDS: B1I, B1C Galileo: E1B/C GLONASS: G1 QZSS: L1C/A
Sensitivity	Cold Start: -149dBm Warm Start: -155dBm Re-acquisition: -159dBm Tracking: -165dBm
Horizontal Positioning Accuracy	2.0m (CEP50, Open Sky)
Rate Accuracy *	0.1m/s
TTF *(CEP50)	Cold start: 26s Hot start: 1s Re-acquisition: 2s
Power Consumption *	Tracking: 13.5mA@3.3V Acquisition: 16.2mA@3.3V
Update rate	1Hz~5Hz
Data format	NMEA-0183, ICOE protocol

Others

Input Voltage	2V~3.6V
Communication interface	UART x 1, I ² C ^① x 1
Operating temperature	-40~+85°C
Storage temperature	-40~+85°C
Package	10.1×9.7×2.5 (mm), 1000pcs/reel
Application restrictions	Acceleration ≤ 4 g Altitude ≤ 18,000 m Velocity ≤ 515 m/s

Note:

① The function will be available in customized versions.

* Test environment: -130dBm signal under the simulator at 25°C

Application scenarios



Walkie-talkie



Trackers



Logistics
Positioning