

Ultra-low Power RTK Module

CM262

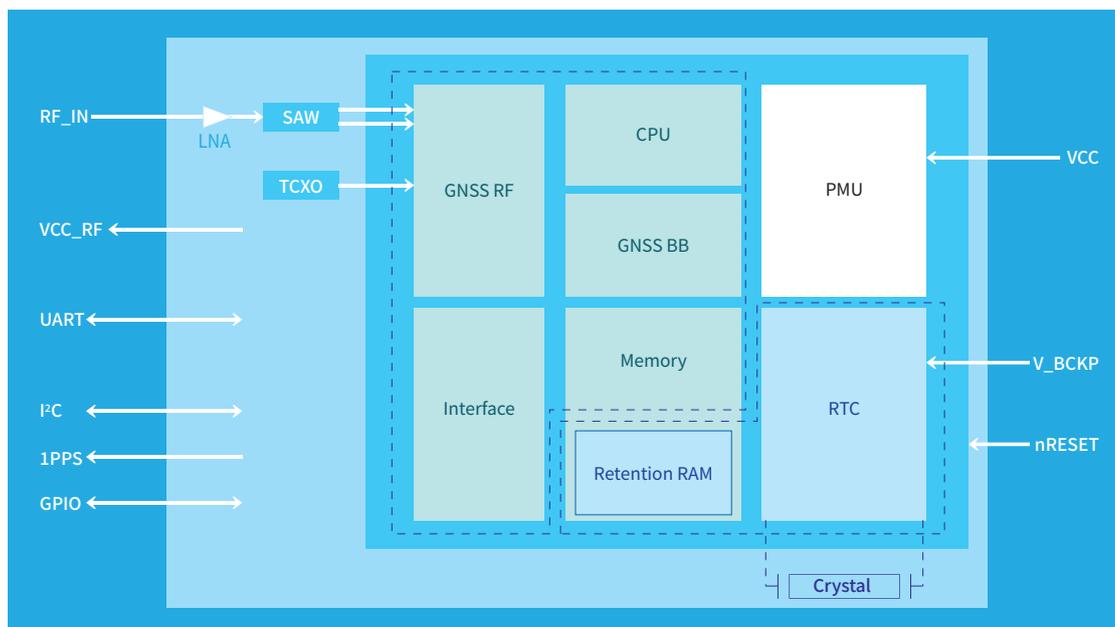
CM262 is an ultra-low power module that supports dual-band and multi-system positioning, including GPS, BDS, Galileo, GLONASS, QZSS. With high-precision RTK algorithm inside, CM262 provides centimeter-level positioning accuracy. With power consumption of less than 40mW, this module is ideal for application scenarios with stringent requirements for both positioning accuracy and power consumption.



Technical advantages

- » L1+L5, GPS/BDS/GLONASS/Galileo/QZSS
- » Dual-band RTK algorithm inside with centimeter accuracy
- » Ultra-low power consumption, 40 mW under tracking mode
- » Easy integration of RTK for fast time-to-market
- » Real-time and predicted A-GNSS
- » Package: 16.0 x 12.2 x 2.4 (mm), 24-pin LCC

Product block diagram



Product Specifications

Performance Index

Supported GNSS Constellation	BDS: B1I, B1C, B2a GPS: L1C/A, L5 Galileo: E1, E5a QZSS: L1, L5 GLONASS: L1
Horizontal Positioning Accuracy	Single-Point Positioning: 1.0m RTK Positioning: 1cm+1ppm
Rate Accuracy ^①	0.1m/s
TTF ^②	Cold start: 24s Hot start: 1s Re-acquisition: 1s
Sensitivity ^{③④}	Cold Start: -148dBm Warm Start: -155dBm Re-acquisition: -156dBm Tracking: -163dBm
Power Consumption ^⑤	Tracking: 38mW Acquisition: 40mW
Update rate	1Hz
Data format	NMEA-0183, ICOE protocol

Others

Input Voltage	2.7V~3.6V
Communication interface	UART x 1, I ² C* x 1
Operating temperature	-40~+85°C
Storage temperature	-40~+125°C
Package	16.0 x 12.2 x 2.4 (mm), 500pcs/reel
Application restrictions	Acceleration ≤ 4 g Altitude ≤ 18,000 m Velocity ≤ 515 m/s

Note:

- ① Simulated linear motion at constant velocity (33 m/s)
- ② Instrument-measured satellite signal strength: -130 dBm
- ③ C/N0 of 41 dB-Hz achieved at -130 dBm signal level
- ④ With external Low-Noise Amplifier (LNA) implementation
- ⑤ The test result is based on DCDC supply mode

* This feature is still under development.

Final performance parameters will be documented in the subsequent product release specification.

Application scenarios



Handheld devices Two-wheelers Positioning card