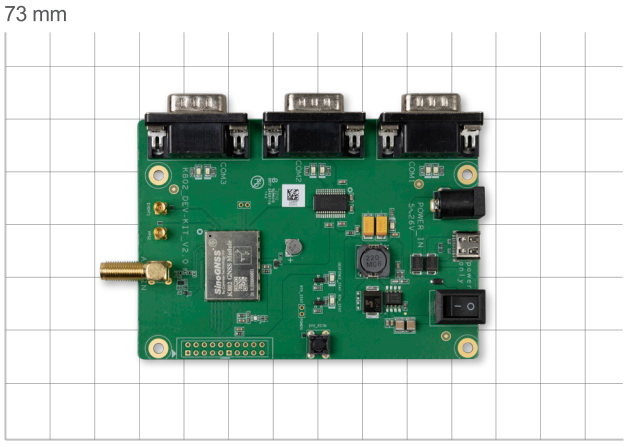
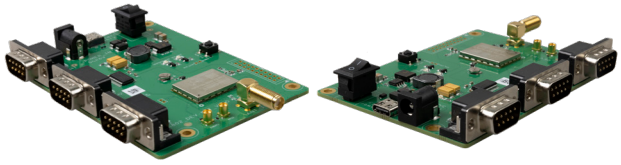
K802 GNSS Development Board

K Series GNSS Module | Ver.2022.10.25



Size(L × W × H): 100mm x 73mm x 10mm
Weight: 20g



Features

- BDS-3, BDS-2, GPS, GLONASS, Galileo,SBAS and QZSS
- Certificated by AEC-Q104 Grade2
- GNSS+INS navigation
- 0.6W power consumption
- 100Hz data output*

Applications

Autonomous Driving | UAV | Robotics | Precision Agriculture

K802

GNSS Development Board

Easy for integration

K802 development board is 100mmx73mm with multiple interfaces, making it easier for testing. The power consumption is lower to 0.6W.

Reliable performance with optimized algorithm

K802 module is embedded with ComNav's latest QUANTUM III SoC chip to provide reliable centimeter positioning accuracy in the most challenging dynamic conditions. The multi-frequency and its ability to track all the current and planned GNSS constellations enables it to receive much more satellite signals.

Professional model certified by AEC-Q104 Grade2

K802 module certified by AEC-Q104 Grade2. It adheres to industrial standard quality specifications and production flow and strict qualification tests are performed to meet the standard of automotive industry.

INS+GNSS navigation for continuous positioning

K802 is designed with an onboard high-precision IMU module for RTK positioning, which can provide continuous and high-quality positioning data with inertial navigation fusion algorithm where GNSS signal is lost.

SinoGNSS®
By ComNav Technology Ltd.

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Signal Tracking

GPS	L1C/A, L2P,L2C
BDS	B1I,B2I,B1C,B2b
GLONASS	G1, G2
Galileo	E1,E5b
QZSS	L1C/A,L2C
SBAS	L1C/A
Navic	L5*

Performance Specifications

Cold Start	< 20s(Adding Acceleration Capture Module)
Hot Start (with RTC)	< 10s(Typical)
Reacquisition	< 1s
RTK Initialization time	< 5s(baseline < 10km)
Initialization Reliability	> 99.9 %
Velocity accuracy	≤ 0.02 m/s (PDOP ≤4)
Time Accuracy	20ns
Overload	15g

Positioning Specifications

Single Baseline RTK	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
Post Processing	2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical
DGPS	<0.4 m RMS
SBAS	1 m 3D RMS
Standalone	1.5m 3D RMS

Communications

3 UART ports

1 SPI

1 Event Marker input

1 Pulse Per Second (PPS) output

3 I2C

Anti-interference

Signal-to-interference rate is up to 50dB.

Data Format

Position data output	-ASCII: NMEA-0183 GGA, GSA, GSV, RMC, HDT, ZDA, VTG, GST, GLL; PTNL, PJK; PTNL, AVR; PTNL, GGK '-ComNav Binary '-BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05, 0x7d-00, 0x7e-00, 0x7f-05 '-Position data output rate: 1 Hz, 2 Hz, 5 Hz, 10 Hz,20Hz, 50Hz, 100Hz(optional)
Corrections data	RTCM 2.X, 3.X, CMR (GPS only), CMR+(GPS only)

Antenna Interface

Impedance Matching	50 Ohm
LNA Power External	+3.3V ~ +5.0V ± 5%VDC
LNA Gain	20 ~ 40dB

Physical

Size (L × W × H)	100mm x 73mm x 10mm
Weight	20 g

Environmental

Operating Temperature	-40℃ ~ +85℃
Storage Temperature	-55℃ ~+95℃

Electrical

Voltage	+6V ~16V DC
Power Consumption	0.6 W (Anti-interference off) Set anti-interference on consumes more about 0.2W

"*"upgradeable

1. R(meter) is the length of two GNSS antennas.

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