

12 mm



16 mm

Size(L × W × H): 12mm × 16 mm × 2.4 mm**Weight:** 1.6g

Features

Support BDS-3, BDS-2, GPS, GLONASS, Galileo, QZSS

Support L1/L5 bands

Small size, 12mm×16mm

Surface-mounted design to integrate

Internal adaptive anti-interference algorithm

0.15W low power consumption

K801 GNSS Module

The K801 GNSS module is a high-performance, low-cost GNSS positioning module launched by ComNav Technology latest. It can meet the demand of centimeter and decimeter level high-precision positioning and ideal for consuming market and solutions such as Internet of Things, intelligent driving, UAV and robotics.

Dual-band, multi constellation

K801 adopts high-precision Soc chip and supports BDS-3, GPS, BDS-2, GLONASS, Galileo, QZSS and L1/L5 dual-frequency signals, which can significantly reduce signal acquisition time under interrupted situations and improve positioning accuracy.

Adaptive Anti-interference Technology

The power consumption is lower to 0.15W. Built-in anti-multipath and anti-interference technologies can improve anti-interference capability so that effectively mitigates the multipath effect in urban canyons, and improve positioning reliability and stability in complex environments.

INS+GNSS navigation

K801 is designed with an onboard high-precision IMU module, which can provide continuous and high-quality positioning data with inertial navigation fusion algorithm.

Easy to Integrate

Featuring surface mounted design, smaller size of 12mm × 16mm and low power consumption, K801 is compatible with mainstream GNSS modules, allowing users to integrate more easily.

Signal Tracking

Channels	372
GPS	L1 C/A, L5
BeiDou	B1I, B2a
GALILEO	E1, E5a
GLONASS	G1
SBAS	WAS, EGNOS, MSAS, GAGAN,SDCM
QZSS	L1 C/A, L5

Performance Specifications

Cold start	<24 s ¹
Hot start	<1 s
RTK Initialization time	<5 s
Signal reacquisition	<1 s
Initialization reliability	>99.9%
Velocity accuracy	≤ 0.02 m/s
Overload	15 g
Time accuracy	20 ns

Positioning Specifications

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

Communications

2 LVTTTL ports
1 SPI ²
1 Event Marker input
1 Pulse Per Second (PPS) output
1 indicator pins show the working status

1. Cold start < 40s with the signal acquisition acceleration module.
2. SPI is reserved, support customization.

Data Format

Correction data I/O	RTCM 2,X, 3,X, CMR (GPS only), CMR+(GPS only)
Position data output	-ASCII: NMEA-0183 GGA, GSA, GSV, RMC, HDT, VHD, 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

Antenna Interface

Impedance Match	Wiring 50 Ω impedance matching
LNA Power: External	+3.3V ~ +5V ± 5%VDC @ 0-100mA
LNA Gain	0 ~ 32dB (suggested)

Physical

Size (L × W × H)	12 mm × 16 mm × 2.4 mm
Hardware interface	LGA 24 pin
Weight	1.6 g

Environmental

Working temperature	-40 °C to + 85 °C
Storage temperature	-40 °C to + 95 °C

Electrical

Input voltage	+3.3 V ± 5% DC
Power consumption	0.15W (Anti-interference on)

Software

ComNav Compass Receiver Utility software
Compass Solution software