Multi-system Multi-function

K801 supports multi-system, multi-frequency signal tracking.Contains high-precision GNSS measurement engine、The navigation engine supports high-performance RTK positioning.

Low latency Mini size

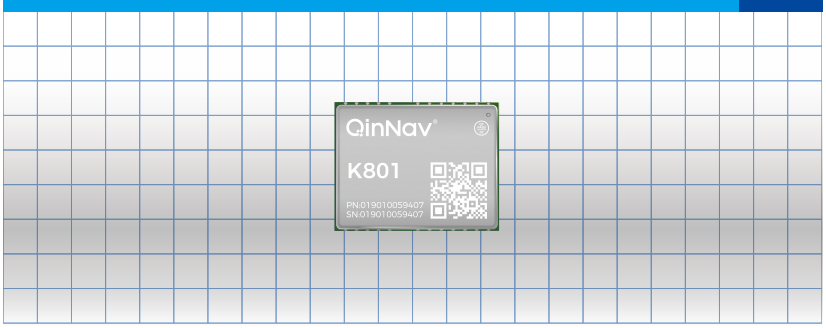
Module surface mount design, the size is 16mm×12mm×2.2mm, low latency, and power consumption is 0.15W.

Anti-interference

It is built-in narrowband and continuous wave suppression algorithm engine. It can effectively deal with satellite signal interference environments, providing stable continuous and reliable high-precision position information.

K801

HIGH-PRECISION POSITIONING GNSS MODULE



16mm×12mm×2.2mm

IoT　ID　UAV　Robot

The K801 module is a multi-system, multi-frequency, mini-size, high-precision positioning OEM module independently developed by QinNav Technology Ltd. It supports signal positioning, including GPS, BDS-2, BDS-3, GLONASS, Galileo, SBAS and QZSS, it is mainly used for Mower、UAV and handheld devices with size, weight, and power requirements.

- Size: 16mm×12mm, Multi-System, multi-frequency, surface mount design
- Signal Tracking: BDS、GPS、GLONASS、Galileo、QZSS*、SBAS*
- Low latency
- Power: 0.15W

*Due to factors such as product iteration or technical updates, the product information provided in this document includes but is not limited to product names, parameters, and specifications that may change from time to time without prior notice. Please refer to the latest version of the specification file or consult with the staf

SinoGNSS By ComNav Technology Ltd. / QinNav

QinNav Technology，LTD.
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Websites：www.qinnav.com
Location：Building 1, 618 Chengliu Middle Road, Jiading District, Shanghai

v1.0

K801 HIGH-PRECISION POSITIONING GNSS MODULE

Signal Tracking

BDS	B1I, B2a
GPS	L1C/A, L5
GLO	G1
GAL	E1, E5a
QZSS*	L1C/A, L5
SBAS*	L1C/A

Time to First Fix

Cold Start	< 24s

Accuracy

Timing Accuracy (RMS)	5ns
SPP Accuracy	H ≤ 1.5m, V ≤ 3m (1σ, PDOP≤4)
Speed Accuracy	≤ 0.02m/s (PDOP ≤4)
RTK Initialization Time	< 15s (D<10km)
RTK Initialization Reliability	> 99.9 %
RTK Accuracy	H: ± (10 + 10^{-6} × D) mm V: ± (15+ 10^{-6} × D) mm D-Baseline length (Unit: mm)

IMU*

Optional

Gyroscope*

Range	±250°/s
Zero bias stability	3.5°/h

Accelerometer*

Range	±8g
Zero bias stability	25μg (x , y) 100μg (z)

Data Rates

Measurement & Position	5Hz (Optional)
RTK	5Hz (Optional)
IMU*	50Hz (Optional)

Electrical

Voltage	+ 3.3V~+3.45V DC
Power Consumption	0.15W

Environmental

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

Data Formats

NMEA-0183	GPGGA, GPGSV, GPGLL, GPGSA, GPGST, GPRMC, GPVTG, GPZDA, GPNTR etc.
RTCM3.X	1005, 1019, 1020, 1042, 1044, 1046 MSM4: 1074, 1084, 1094, 1114, 1124 MSM7: 1077, 1087, 1097, 1117, 1127

Antenna Interface

Impedance Matching	50Ω
Antenna Voltage	External: +3.3V~+5V @ (0-100) mA
Antenna Gain	15dB~35dB

Hardware Interface

UARTx2, PPSx1, I^2Cx2, USBx1

Physical

Size	16mm×12mm×2.2mm
Weight	1.0g
Package	LGA 24Pin

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