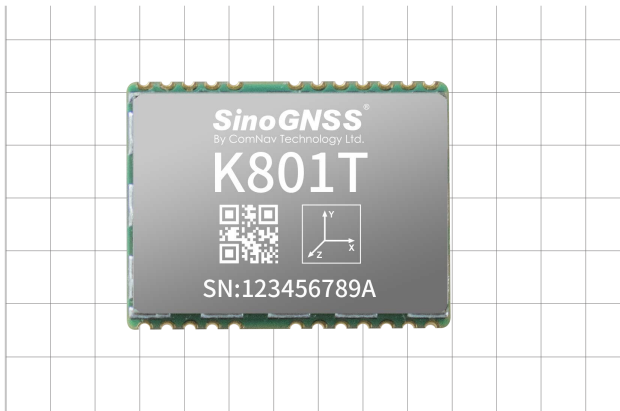


K801T GNSS Module

K Series GNSS Module

Ver.2025.07.01

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, IRNSS

Support L1/L5 bands

5ns timing accuracy

Surface-mounted design to integrate

Internal adaptive anti-interference algorithm

0.15W low power consumption

K801T Timing Module

The K801T module is a high-performance, low-cost GNSS module launched by ComNav Technology latest. It can meet the demand of nanosecond level timing accuracy and ideal for timing applications and solutions such as Internet of Things, 5G mobile networks and robotics.

Dual-band, multi constellation

K801T 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.

High Precision Timing Technology

The K801T GNSS module delivers timing accuracy at the nanosecond level for critical infrastructure applications. Its multi-band functionality minimizes timing discrepancies to under 5 nanoseconds in clear sky conditions, eliminating the dependency on external GNSS correction services.

Easy to Integrate

Featuring surface mounted design, smaller size of 12mm × 16mm and low power consumption, K801T is compatible with mainstream GNSS modules, allowing users to integrate more easily.

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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
IRNSS ¹	L5

Performance Specifications

Cold start	<24 s ¹
RTK Initialization time	<5 s
Signal reacquisition	<1 s
Initialization reliability	>99.9%
Velocity accuracy	≤ 0.02 m/s
Acceleration	4 g
Overload	15 g
Time accuracy	5 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 ³
1 Event Marker input ⁴
1 Pulse Per Second (PPS) output ⁵
1 indicator pins show the working status

- 1.Currently, the K801T, which supports the IRNSS L5 special version, only supports the L1 frequency band of other satellite systems
- 2.Cold start < 40s with the signal acquisition acceleration module.
- 3.SPI is reserved, support customization.
- 4.EVENT is reserved for future upgrade.
- 5.PPS is reserved for future upgrade.
- 6.CMR,CMR+ is reserved for future upgrade.
- 7.ComNav binary is reserved for future upgrade.

Data Format

Correction data I/O	RTCM2.X, 3.X, CMR (GPS only), CMR+(GPS only) ⁶
Position data output	-ASCII: NMEA-0183 GGA, GSA, GSV, RMC, HDT, VHD, ZDA, VTG, GST, GLL; -ComNav Binary ⁷

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