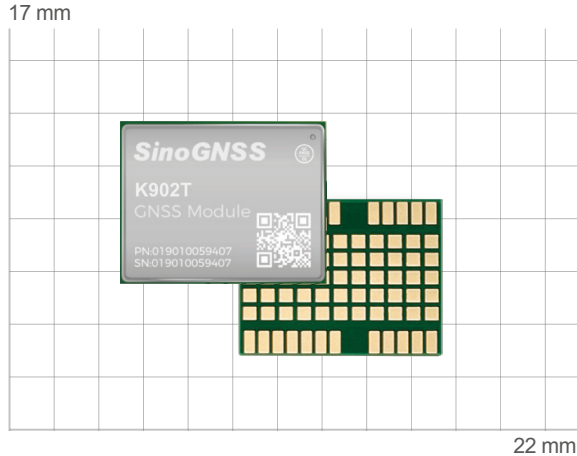




Size(W × L × H): 17 mm × 22 mm × 2.5 mm

Weight: 1.9 g

Features

Support GPS, BDS-2, BDS-3, GLONASS, GALILEO, NAVIC, QZSS and SBAS

RF&BB Integrated High-Precision GNSS SoC Chip

Brand New Dual Core CPU Structure

5ns Timing Accuracy

Support PPP-B2b, PPP-HAS Service

Application



K902T GNSS Module

Next-Gen QC7820 SoC Technology

The K902T incorporates ComNav's QC7820 SoC, an advanced multi-frequency GNSS processor designed for reliable signal tracking across all operational navigation constellations. The chipset's innovative architecture ensures robust performance in diverse signal environments.

High Precision Timing Technology

The K902T GNSS module provides nanosecond-level timing precision for mission-critical infrastructure. With advanced multi-band technology, it achieves <5ns timing accuracy in open-sky conditions without relying on external services.

Multi Anti-Interference Technologies

The K902T module features an advanced internal adaptive anti-interference system incorporating wideband reception, narrowband suppression, and continuous-wave rejection technologies. Its intelligent algorithm effectively mitigates all types of RF interference, ensuring high-quality observation data even in the most challenging electromagnetic environments.

Easy Integration

With its space-saving SMT package and ultra-low power operation, the K902T maintains full pin compatibility with industry-standard GNSS modules, simplifying design-in and reducing development time.

K902T GNSS Module

K Series GNSS Module

Ver.2025.06.17

Signal Tracking

GPS	L1C/A, L2P, L2C, L5, L1C
BDS-2	B1I, B2I, B3I
BDS-3	B1I, B3I, B1C, B2a, B2b
GALILEO	E1, E5b, E5a, E5 AltBoC*, E6c*
GLONASS	G1, G2, G3*
SBAS	L1C/A, L5
QZSS	L1C/A, L2C, L5, L1C
NAVIC*	L5

Performance Specifications

Cold Start	< 20 s (Adding Acceleration Capture Module)
Hot Start (with RTC)	< 10 s (Typical)
Signal Reacquisition	< 1 s
Initialization Reliability	> 99.9%
Velocity Accuracy	≤ 0.02 m/s
Time Accuracy	5 ns
PPP Convergence Time	<15 min ¹

Positioning Specifications

Post Processing	2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical
DGPS	< 0.4 m RMS
SBAS	1 m 3D RMS
Standalone	1.5 m Horizontal; 3 m Vertical
PPP	0.1 m Horizontal; 0.2 m Vertical

Communications Interfaces

UART	x 2
UART3 or CAN(optional)	x 1
I2C	x 1
SPI	x 1
PPS	x 1
EVENT	x 1
ETH	x 1

Data Format

Correction data I/O	RTCM 2.X, 3.X
Position data output	- ASCII (NMEA-0183): GGA, GSA, GSV, RMC, HDT, VHD, ZDA, VTG, GST, GLL - Binary: ComNav Binary - Position Output Rate: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz*, 50 Hz*

Antenna Interface

Impedance Match	50 Ω
LNA Power (External)	+ 3.3V ~ + 5V ± 5%VDC @ 0-100 mA
LNA Gain	20 ~ 35 dB (Suggested)

Physical

Size (W × L × H)	17 mm × 22 mm × 2.5 mm
Hardware Interface	LGA 54 pin
Weight	1.9 g

Environmental

Working Temperature	-40 °C to + 85 °C
Storage Temperature	-55 °C to + 125 °C

Electrical

Input Voltage	+ 3.3 V ± 5% DC
Power Consumption	0.4 W

Operational Limits

Maximum velocity	515 m/s
Maximum altitude	18,000 m
Maximum acceleration	4g

Software Tools

ComNav Compass Receiver Utility
Compass Solution Software

Note: Items marked with *are only support by specific firmware.

¹ The laboratory test results may be affected by experimental environment and are provided for reference purposes.