



Size(W × L × H): 12.2 mm × 16 mm × 2.5 mm

Weight: 1.0 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

Small Size & Low Power Consumption

Support PPP-B2b, PPP-HAS Service

Application



K901 GNSS Module

Next-Gen QC7820 SoC Technology

The K901 integrates ComNav's cutting-edge QC7820 SoC chip, delivering industry-leading GNSS precision. It supports full-constellation tracking and provides centimeter-accurate positioning through advanced floating-point processing for unmatched reliability in demanding applications.

Small Size & Low Power Consumption

The K901 module features a compact design for space-saving integration and optimized power efficiency to reduce energy consumption. Ideal for size and power-sensitive applications, it delivers robust performance within minimal footprint.

Multi Anti-Interference Technologies

The K901 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 K901 maintains full pin compatibility with industry-standard GNSS modules, simplifying design-in and reducing development time.

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)
RTK Initialization Time	< 5 s (D < 10 km)
Signal Reacquisition	< 1 s
Initialization Reliability	> 99.9 %
Velocity accuracy	≤ 0.02 m/s
Acceleration	4 g
Time accuracy	20ns
PPP Convergence Time	<15 min ¹

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	1.5 m Horizontal; 3 m Vertical
PPP	0.1 m Horizontal; 0.2 m Vertical

Communications Interfaces

UART	x 3
PPS	x 1
EVENT	x 1
I2C	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)	+ 3.3 V ~ + 5 V ± 5%VDC @ 0-100 mA
LNA Gain	20 ~ 35 dB (Suggested)

Physical

Size (W × L × H)	12.2 mm × 16 mm × 2.5 mm
Hardware Interface	LGA 24 pin
Weight	1.0 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	0.35 W

Software Tools

ComNav Compass Receiver Utility
Compass Solution Software