



## COST-EFFECTIVE

The SinoGNSS K700 is an entry level cost-effective GNSS engine which can deliver scalable sub-meter to centimeter (SBAS and RTK) positioning for various applications. With the advanced QUANTUM™ technology, it remarkably improves the stability and reliability of positioning accuracy in standalone and RTK modes.

## ADVANCED HARDWARE STRUCTURE

As the update version of the K500, the K700 is embedded with advanced SinoGNSS ASIC Chip, which makes great improvement in positioning performance and power consumption. Integrated with the advanced Micro processor unit, the K700 is ideal for applications that require higher output data rate.

## DESIGNED FOR DIVERSE APPLICATIONS

The K700 is a multifunctional high-precision GNSS product with many built-in functions. The RTK function makes it very suitable to work with low-cost land surveying products. It is also a good choice for GIS applications or fleet management system when working with the RTD and SBAS. In terms of DP-Filter smooth function<sup>1</sup>, it largely increases efficiency and productivity in precision agriculture applications.

## EASY TO INTEGRATE

The size of K700 is 41 mm x 71 mm x 11 mm, even smaller than a business card. The I/O and pin definitions are compatible with major brands. Compared with large-size OEM boards, the K700 makes it easier to integrate into small handheld devices, and its lower power consumption is an advantage for field work.



## Features

- ⚙️ GPS L1, BeiDou B1, GLONASS L1, SBAS
- ⚙️ DP-Filter Smooth Function<sup>1</sup>
- ⚙️ Advanced QUANTUM™ Technology
- ⚙️ Support Short Baseline RTK
- ⚙️ Support PPS and Event Marker
- ⚙️ Low Power Consumption and Compact Size
- ⚙️ Output PJK Coordinates Directly
- ⚙️ Support Maximum 50 Hz RTD/RTK

## Signal Tracking

- 200 Channels
  - GPS: L1
  - BeiDou: B1
  - GLONASS: L1
  - SBAS: WAAS, EGNOS, MSAS and GAGAN

## Performance Specifications

- Cold start: <50 s
- Warm start: <45 s
- Signal reacquisition: <3 s
- Velocity accuracy: 0.03 m/s
- Acceleration: 4 g
- Overload: 15 g
- Time accuracy: 20 ns

## Positioning Specifications

Mode	Accuracy
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 3D RMS

## Communications

- 3 LV-TTL ports, baud rates up to 921, 600 bps
- PPS output, Event Marker input
- 3 LED status indicators

## Data Format

- Correction data I/O: RTCM 2.X, 3.X, CMR(GPS only), CMR + (GPS only)

- Position data output:
  - ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA; PTNL, PJK; PTNL, GGK; PTNL, AVR; NAVPOS
  - ComNav Binary Data: up to 100Hz output
  - BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05, 0x7d-00, 0x7e-00, 0x7f-05
  - Position data output: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz, 50 Hz<sup>2</sup>

## Physical

- Size(L × W × H): 71 mm × 41 mm × 11 mm
- I/O interface: 2 × 12 pin male connector
- Weight: 18 g
- Antenna connector: 1 × MCX female, 50 Ω

## Environmental

- Working temperature: -40 °C to + 80 °C
- Storage temperature: -55° C to + 95 °C
- Humidity: 95% no condensation

## Electrical

- Input voltage: +3.3 V ~ +5.5 VDC
- Power consumption: 0.6 W

## Software

- ComNav Compass Receiver Utility software

## Optional accessories

- AT-series GNSS antennas
- 5 m/10 m RF Cables
- OEM Board Evaluation Kit

1. DP-Filter smooth function largely improves the pass to pass accuracy. Please refer to white paper for more information.

2. The maximum RTK position output rate is 50 Hz and raw data output rate is 100 Hz.

Specifications subject to change without notice.

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## ComNav Technology Ltd.

Building 2, No. 618 Chengliu Middle Road,  
201801 Shanghai, China

Tel: +86 21 64056796

Fax: +86 21 54309582

Email: sales@comnavtech.com

www.comnavtech.com

