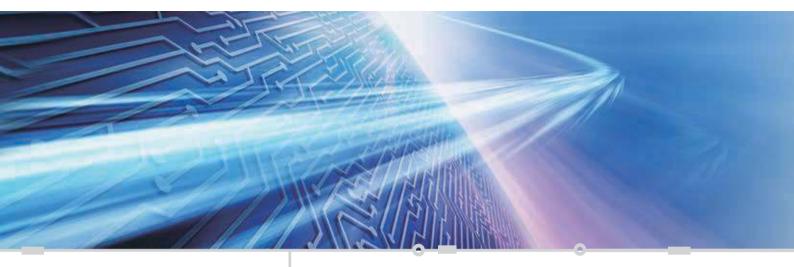# SinoGNSS®
By ComNav Technology Ltd.

K708 OEM Board

Features

⚙ GPS L1/L2/L5, BeiDou B1/B2/B3, GLONASS L1/L2, Galileo E1/E5a/E5b, QZSS

⚙ DP-Filter Smooth Function[1]

⚙ Advanced QUANTUM™ Technology

⚙ Support Long Baseline E-RTK[4]

⚙ Webserver Service

⚙ 8 GB Onboard Memory

MULTI-CONSTELLATION GNSS AND SUPERIOR PERFORMANCE

The K708 is a new generation OEM board designed to work with current constellations, which is also firmware upgradable to track satellite signals of upcoming constellations. With the advanced QUANTUM™ technology, it remarkably improves the stability and reliability of positioning in standalone and RTK modes. Your GNSS solution will never be outdated with the K708 OEM board inside.

ADVANCED HARDWARE STRUCTURE

As the update version of the K508, the K708 is embedded with more advanced SinoGNSS ASIC Chip, which makes great improvement in positioning performance and power consumption.Integrated with the advanced Microprocessor unit, the K708 is ideal for applications that require higher output data rate.

STRONG COMPATIBILITY

To improve working efficiency and productivity of users, the K708 is designed to be compatible with major GNSS brands from the physical design to data formats. It can also support customized data message when needed.

DESIGNED FOR FLEXIBILITY

The K708 is developed as a multi-functional GNSS product, especially for applications where high-accuracy PVT[2] is mostly concerned. With 8GB onboard memory, it is able to support years of raw data recording. For the WebServer service, it allows users to configure the K708 board more effectively.

Signal Tracking

- 496 channels
  - GPS: L1 C/A, L2C, L2P, L5
  - BeiDou: B1, B2, B3
  - GLONASS: L1 C/A, L1P, L2 C/A, L2P
  - Galileo: E1, E5a, E5b
  - QZSS[3]
  - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM

Performance Specifications

- Cold start: <50 s
- Warm start: <45 s
- Hot start: <15 s
- RTK Initialization time: <10 s
- Signal reacquisition: <1.5 s
- Initialization reliability: >99.9%
- 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
E-RTK (<100 km)[4]	0.2m + 1 ppm Horizontal 0.4m + 1 ppm Vertical
DGPS	<0.4 m RMS
SBAS	1 m 3D RMS
Standalone	1.5 m 3D RMS

Communications

- 3 LV-TTL ports,1 RS-232 baud rates up to 921,600 bps
- 1 USB port
- 1 LAN Ethernet port, HTTP, TCP and Ntrip protocol
- 2 CAN Bus (Reserved)
- 2 Pulse Per Second (PPS) output
- 1 Event Marker input
- 3 LED indicators show the working status
- External Oscillator input

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, VTG, GST; PTNL, PJK; PTNL, AVR; PTNL, GGK
  - ComNav Binary update to 100Hz
  - BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05, 0x7d-00, 0x7e-00, 0x7f-05
  - Position data output rate: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz, 50 Hz[5]

Physical

- Size(L × W × H): 100 mm × 60 mm × 9 mm
- I/O interface: 2 × 22 pin male connector
- Weight: 45 g
- Antenna connector: 1 × MMCX 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: 1.7 W
- Memory: 8 GB

Software

- ComNav Compass Receiver Utility software

Optional accessories

- AT-series GNSS antenna
- 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. PVT: Positioning, Velocity and Timing.

3. QZSS are reserved for future upgrade.

4. E-RTK: BeiDou B3 signal is used in RTK calculate engine. Currently, this mode only works in Asia Pacific (APAC) region.

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

Specifications subject to change without notice.

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