SinoGNSS®
By ComNav Technology Ltd.

K706 OEM Board

Features

- ⚙ **GPS L1/L2, BeiDou B1/L2, GLONASS L1/L2, Galileo, QZSS**
- ⚙ **DP-Filter Smooth Function[1]**
- ⚙ **Advanced Quantum™ Algorithm**
- ⚙ **WebServer service**
- ⚙ **Onboard MEMS-IMU functionality**
- ⚙ **8GB onboard memory**

MULTI CONSTELLATION GNSS AND SUPERIOR PERFORMANCE

The K706 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 latest Quantum™ Algorithm, it remarkably improves the stability and reliability of positioning accuracy in standalone and RTK modes. Your GNSS solution will never be outdated with the K706 OEM board inside.

EASY TO INTEGRATE

The K706 is designed for easy integration with rugged reliability. The compact form factor and lower power consumption make it an optimal choice integrated into handheld devices. The I/O and pin definitions are compatible with ComNav K5 series OEM board, ensuring an easy replacement. With 8GB onboard data storage, WebServer service, the K706 helps you to simplify integration and reduce development time. Supported by our innovative research team, ComNav promises to improve effectivity and profitability for your business.

DESIGNED FOR DIVERSE APPLICATIONS

As small-sized and multifunctional OEM board, the K706 has reliable performance in a wide range of applications, such as UAV mapping, machine control, precision agriculture and high accuracy land surveying, especially in handheld RTK devices. Furthermore, the Onboard MEMS-IMU provides consistent position and navigation when satellite signals lost, which well suits for fleet management and mobile surveys.

Signal Tracking

- - 352 Channels
    - GPS: L1 C/A, L2C, L2P
    - BeiDou: B1, B2
    - GLONASS: L1 C/A, L1P, L2 C/A, L2P
    - Galileo, QZSS [2]
    - SBAS: WAAS, EGNOS, MSAS,GAGAN

Performance Specifications

- Cold start: <50s
- Hot start: <15s
- RTK Initialization time: typically <10s
- Signal reacquisition: <1.5s
- Initialization reliability: typically>99.9%
- Velocity accuracy: 0.03m/s
- Acceleration: 4g
- Overload: 15g
- Time accuracy: 20ns

Positioning Specifications

Mode	Accuracy
Post Processing	2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical
Single Baseline RTK (<30km)	10 mm + 1 ppm Horizontal 20 mm + 1 ppm Vertical
DGPS SBAS	<0.4 m 3D RMS 1 m 3D RMS
Standalone	1.5 m 3D RMS

Communications

- 3 LV-TTL ports, baud rates up to 921,600 bps
- 1 USB port
- 1 LAN Ethernet port
- 1 CAN Bus
- 1 Pulse Per Second (PPS) output
- Event Marker input
- 3 LEDs indicating working status

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 update to 100 Hz
    - BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05,0x7d-00, 0x7e-00, 0x7f-05
    - Position data output rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz, 50Hz[3]

Physical

- Size(L×W×H): 71mm×45.7mm×10.6mm
- I/O interface: 24-pin dual rows male pin header
- Weight: 26.6g
- Antenna: 1 x MCX receptable(+3.3V~+5.5VDC&0~100mA)

Environmental

- Working temperature: -40 °C to + 85 °C
- Storage temperature: -55° C to + 95 °C
- Humidity: 95% no condensation

Electrical

- Input voltage: +3.3V ~ +5.5VDC
- Power consumption: 1.68W
- 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 inofrmation.
2. Galileo and QZSS are reserved for future upgrade.
3. The maximum RTK position output rate is 50Hz and raw data 100Hz.

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