SinoGNSS®
By ComNav Technology Ltd.

K728 OEM Board

Features

- GPS L1/L2, BeiDou B1/B2, GLONASS L1/L2
- Dual-antenna design for robust heading and positioning
- Advanced Quantum™ Algorithm
- DP-Filter Smooth Function[1]
- Support PPS and Event Marker
- Webserver service

DUAL-ANTENNA INPUT

The K728 is a single GNSS board that delivers robust heading and positioning. With dual-antenna input design, observations from both antennas are transferred to the processor where multi-constellation RTK are computed. It's able to deliver centimeter-accuracy positioning and high-precision heading through COM port or Ethernet connections.

MULTI-CONSTELLATION GNSS

The K728 is capable of tracking GPS L1C/A, L2C, L2P; BeiDou B1, B2; GLONASS L1C/A, L1P, L2C/A, L2P and SBAS. Using the latest Quantum™ algorithm in combination with upgraded SinoGNSS® ASIC chip and latest Atmel® processor, the K728 GNSS Receiver provides robust 404 channels for multi-constellation tracking performance.

STRONG COMPATIBILITY

The K728 was designed for strong compatibility and easy integration. With the standard I/O and pin definitions, the K728 is compatible with major GNSS manufacturers from physical design to data formats, which also ensures a seamless replacement for customers who used SinoGNSS® K5 series OEM boards.

FLEXIBILITY INTERFACING

The K728, a multi-purpose GNSS product, is a wise choice for precision agriculture, UAV and intelligent transportation system with high-accuracy positioning and heading requirements. Ethernet connection allows convenient configuration via web browsers, as well as high speed data transfer. Customers also benefit from its compact design and lower power consumption. With PPS, Event Marker functions, the K728 always meets your high-accuracy application demands.

Technical Specifications K728

Signal Tracking

- 404 channels
  - GPS: L1 C/A, L2C, L2P
  - BeiDou: B1, B2
  - GLONASS: L1C/A, L1P, L2C/A, L2P

Performance Specifications

- Cold start: <50s
- Warm start: <45s
- Hot start: <15s
- RTK Initialization time typically <10s
- Signal reacquisition <2s
- Initialization reliability typically>99.9%
- Velocity accuracy: 0.03m/s
- Acceleration: 4g
- Overload: 15g

Heading Specifications

- Azimuth: (0.2/R)° [2]
- Roll or Pitch: (0.4/R)°

Positioning Specifications

Mode	Accuracy
Post Processing	2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical
Single Baseline RTK (<30km)	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
DGPS	<0.4 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)
- 1 Pulse Per Second (PPS) Output
- Event marker input
- 4 LED working 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, VTG, GST; PTNL, PJK PTNL, AVR PTNL, GGK
  - ComNav Binary
  - BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05, 0x7d-00, 0x7e-00, 0x7f-05

Physical

- Size (L×W×H): 100 mm × 60 mm × 9 mm
- I/O interface: 44-pin double male header
- Weight: 44.2 g
- Antenna: 2 x 50Ω MCX female

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: 2.1 W

Software

- ComNav Compass Receiver Utility software

Optional accessories

- AT-series GNSS antenna
- OEM Board Evaluation Kit

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

2. R (meter) is the length of two GNSS Antennas.

Specifications subject to change without notice.

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