K825 GNSS Module

K Series GNSS Module | Ver.2023.12.18

Size(L × W × H)**:** 30 mm × 40 mm × 3.2 mm
Weight: 10g

K825
GNSS Module

Features

- Dual-antenna Design for Robust Heading and Positioning
- BeiDou Global Signal BDS-2, BDS-3
- Support L-Band and PPP
- Support INS+GNSS navigation
- Surface-mounted design and small size to integrate
- High-performance floating-point arithmetic
- Industry-leading low power consumption
- Internal adaptive anti-interference algorithm

Easy Integration

The K825 module is a 30mm×40mm×3.2mm module with surface-mounted design. It and is ideal for users to integrate. The power consumption is lower to 1.6W .

In built newly Quantum III SoC chip

The K825 incorporates ComNav's new generation high-accuracy Quantum III SoC chip with the capability of tracking all the GNSS constellations and signals. It can provide users with highly reliable positioning information with support of high-performance floating point arithmetic.

Onboard IMU for reliable navigation

With up to 20HZ IMU data update rate and inertial navigation fusion algorithm, K825 can provide continuous and high-quality positioning data in the harsh environments such as tunnels, buildings and forests.

Adaptive Anti-interference Technology

The K825 has internal adaptive anti-interference algorithm which enables the module effectively suppress wideband, narrowband and continuous-wave interference. It can provide users with high-quality observing data even in the complex electromagnetic environment.

SinoGNSS®
By ComNav Technology Ltd.

K825 GNSS Module

K Series GNSS Module | Ver.2023.12.18

Signal Tracking

GPS	L1C/A, L2P,L2C,L5
BDS-2	B1I, B2I, B3I
BDS-3	B1I, B3I,B1C,B2a, B2b
GLONASS	G1, G2, G3*
Galileo	E1, E5b, E5a, E5 AltBoC*, E6c*
QZSS	L1C/A, L2C,L5,L1C*
SBAS	L1C/A
IRNSS	L5
L-Band[1]	

Performance Specifications

Cold start	<30 s
Hot start	<10 s
RTK Initialization time	<5 s
Signal reacquisition	<1 s
Initialization reliability	>99.9%
Velocity accuracy	4 g
Overload	15 g
Time accuracy	20 ns

Heading Specifications

Azimuth: (0.15/R)°[2]	
Roll or Pitch: (0.3/R)°	

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	1.5m 3D RMS

Communications

3 LVTTL ports
1 SPI[3]
2 Event Marker input
1 Pulse Per Second (PPS) output
3 indicator pins show the working status

1. L-Band is optional.
2. R(meter) is the length of two GNSS antennas.
3. SPI is reserved, support customization.
4. One size option for card version: 46*71 mm (pin to pin with K726).

Data Format

Correction data I/O	RTCM 2.X, 3.X, CMR (GPS only), CMR+ (GPS only)
Position data output	-ASCII: NMEA-0183 GGA, GSA, GSV, RMC, HDT, VHD, ZDA, VTG, GST, GLL; PTNL, PJK; PTNL, AVR; PTNL, GGK -ComNav Binary -Position data output rate: 1 Hz, 2 Hz, 5 Hz, 10 Hz,20Hz

Antenna Interface

Impedance Match	Wiring 50 Ω impedance matching
LNA Power: External	+3.3V ~ +5V ± 5%VDC @ 0-100mA
LNA Gain	20 ~ 40dB (suggested)

Physical

Size (L × W × H)	30 mm × 40 mm × 3.2 mm
Hardware interface	LGA 60 pin
Weight	10 g

Environmental

Working temperature	-40 °C to + 85 °C
Storage temperature	-55 °C to + 95 °C

Electrical

Input voltage	+3.3 V ± 5% DC
Power consumption	1.6 W (Anti-interference off)

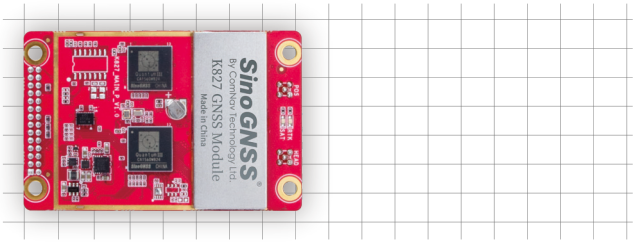
Software

ComNav Compass Receiver Utility software
Compass Solution software

Optional Accessories

AT-series GNSS antenna
5m/10m RF Cables
Evaluation Kit
Card version[4]

Option for board (K827)



71*46 mm (pin to pin with K726)

SinoGNSS®
By ComNav Technology Ltd.

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

Web: www.comnavtech.com
Email: sales@comnavtech.com
Tel : +86 21 64056796 Fax: +86 21 54309582