K825 GNSS Module



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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.

Features

Weight: 10g

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

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.



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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	
<30 s	
<10 s	
<5 s	
<1 s	
>99.9%	
4 g	
15 g	
20 ns	

Heading Specifications

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

Positioning Specifications

Post Processing Single Baseline RTK DGPS SBAS Standalone 2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical 8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical <0.4 m RMS 1 m 3D RMS 1.5m 3D RMS

Communications

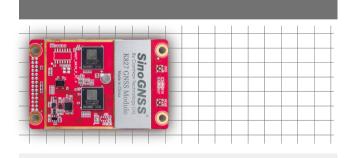
- 3 LVTTL ports
- 1 SPI³
- 2 Event Marker input
- 1 Pulse Per Second (PPS) output
- 3 indicator pins show the working status

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 2X, 3X, 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 Matching	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 Receiv	er Utility software
Compass Solution softwar	e
Optional Accessori	es
AT-series GNSS antenna	
5m/10m RF Cables	
Evaluation Kit	
Card version ⁴	

9





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