



Size(L × W × H): 30 mm × 30 mm × 3.2 mm

Weight: 6.6g

Features

GPS, BDS, GLONASS, Galileo, QZSS, IRNSS, SBAS

Support L-Band and PPP

Auto-IMU for 60°tilt compensation

Surface-mounted design and small size to integrate

High-performance floating-point arithmetic

Industry-leading low power consumption

Internal adaptive anti-interference algorithm

K803D GNSS Module

Easy Integration

30mm×30mm×3.2mm size module with surface-mounted design makes K803D modules ideal for users to integrate. The power consumption is lower to 0.95W.

In-built Newly Quantum III SoC chip

The K803D 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 Auto-IMU for 60°Tilt Compensation

K803D is equipped with Auto-IMU, eliminating the need for manual initialization, supporting automatic calibration, and streamlining the operations in the field. K803D easily integrates with devices requiring tilt compensation, such as RTK receivers and robots.

Adaptive Anti-interference Technology

The K803D 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.

K803D GNSS Module

K Series GNSS Module

Ver.2024.11.20

Signal Tracking

Channels	965
BeiDou	BDS-2: B1I, B2I, B3I BDS-3: B1I, B3I, B1C, B2a, B2b
GPS	L1C/A, L2P, L2C, L5, L1C
GLONASS	G1, G2, G3*
GALILEO	E1, E5b, E5a, E5 AltBoC, E6c ¹
QZSS*	L1C/A, L2C, L5, L1C
SBAS*	L1C/A, L5
IRNSS*	L5
L-Band* ²	

Performance Specifications

Cold start	<20s (Adding Acceleration Capture Module)
Hot Start (with RTC)	<10s (Typical)
RTK Initialization time	<5s (D<10km)
Signal reacquisition	<1 s
Initialization reliability	>99.9%
Velocity accuracy	≤0.02m/s
Time accuracy	20 ns

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

UART	x4
PPS	x1
EVENT	x2
SPI	x1 ³

IMU

Gyroscope	Measurement ranges: ±125°/s Zero-biased stability: 5°/h Angular random walk: 0.12°/sqrt(h)
Accelerometer	Measurement ranges: ±2g Biase instability: 50ug Velocity random walk: 0.07m/s/sqrt(h)

Data Format

Correction data I/O	RTCM2X,3X,CMR(GPSonly),CMR+(GPSonly)
Position data output	-ASCII: NMEA-0183 GGA, GSA, GSV, RMC, HDT, VHD, ZDA, VTG, GST, GLL; PTNL, PJK; PTNL, AVR; PTNL, GKG -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 ~ 35dB (suggested)

Physical

Size (L × W × H)	30 mm × 30 mm × 3.2 mm
Hardware interface	LGA 82 pin
Weight	6.6g

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	0.95W (Anti-interference off)

Software

ComNav Compass Receiver Utility software
Compass Solution software

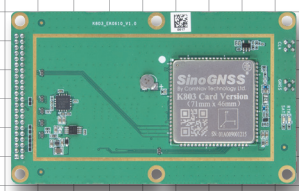
Optional Accessories

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

1. E5 AltBOC is reserved for future upgrade.
2. L-Band is optional.
3. SPI is reserved, support customization.

Note: Items marked with *are only support by specific firmware

Three size options for card version



60*100 mm (pin to pin with K708)



46*71 mm (pin to pin with K706)



50*40mm (pin to pin with K705)