

## Specifications

### GNSS characteristics

- **692 GNSS channels**
  - GPS L1C/A, L1C, L2C, L2E, L5
  - GLONASS L1C/A, L2C/A, L2P, L3
  - BeiDou B1, B2, B3
  - Galileo GIOVE-A, GIOVE-B, E1, E5A, E5B
  - SBAS L1C/A, L5
- **Initialization:** time <10s, reliability >99.99%
- Supported data formats: RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2

- Output data formats: NMEA 0183, PJK plane coordinates, Binary code, Trimble GSOF

### Inertial Measurement

- Tilt Angle: up to 60 degrees
- Accuracy: down to 2cm

### Positioning Accuracy

- **Code differential GNSS positioning**
  - Horizontal:  $\pm 0.25\text{m} + 1\text{ppm}$
  - Vertical:  $\pm 0.50\text{m} + 1\text{ppm}$
- SBAS positioning accuracy: typically <5m 3DRMS

### Static

- Horizontal:  $\pm 2.5\text{mm} + 0.5\text{ppm}$
- Vertical:  $\pm 5\text{mm} + 0.5\text{ppm}$

### Real-time kinematic (RTK)

- Horizontal:  $\pm 8\text{mm} + 1\text{ppm}$
- Vertical:  $\pm 15\text{mm} + 1\text{ppm}$

### Network RTK

- Horizontal:  $\pm 8\text{mm} + 0.5\text{ppm}$
- Vertical:  $\pm 15\text{mm} + 0.5\text{ppm}$

### RTK initialization time

- 2~8s

### Physical characteristics

- **Size**
  - 17.5 x 17.5 x 8.3 cm

### Weight

- 1.33 kg (2 batteries included)

### User interface

- Five Indicator lights
- Two buttons
- Linux System

### I/O interface

- 5PIN LEMO external power port+RS232
  - 7PIN external USB(OTG)+Ethernet
  - Bluetooth 2.1+EDR standard
  - Bluetooth 4.0 standard, support android, ios connection
- ### Memory
- 8GB SSD internal storage
  - Support external USB storage (up to 32 GB)
  - Automatic cycle storage
  - Changeable record interval
  - Up to 50Hz raw data collection

### Operation

- RTK rover & base
- RTK network rover: VRS, FKP, MAC
- NTRIP, Direct IP
- Post-processing

### Environmental characteristics

- Operating temperature:  $-45^{\circ}$  to  $+60^{\circ}\text{C}$
- Storage temperature:  $-55^{\circ}$  to  $+85^{\circ}\text{C}$
- Humidity: 100% condensing
- IP67 waterproof, sealed against sand and dust
- Drop: 2m pole drop on concrete

### Power characteristics

- Two Li-Ion batteries, 7.4 V, 3400 mAh
- Battery life: >14h (static mode)  
>10h (internal UHF base mode)  
>12h (rover mode)
- External DC power: 9-25 V

### UHF Radio characteristics

- Built-in radio
- Frequency Range 410-470MHz
- Protocol: TrimTalk450s, TrimMark3, SOUTH (KOLIDA)
- 1W/2W/3W switchable
- typically working range 7-8km
- "Barrier-Free" Measurement Technology: Repeater/ Router/ CSD mode

### Cellular module characteristics

- WCDMA/ CDMA2000/ TDD-LTE/ FDD-LTE 4G
- Compatible with 3G GPRS/ EDGE

### WebUI

- Configure and monitor receiver by web server via Wi-Fi or USB cable

### NFC

- Close range (shorter than 10cm) automatic pair between receiver and controller (need NFC chip in controller)

### Wifi

- 802.11 b/g standard
- Hotspot: allow device to access in
- data link: broadcast differential data

### Voice Guide

- intelligent voice technology provides status indication and operation guide
- Chinese, English, Korean, Russian, Portuguese, Spanish, Turkish and user define

### Standard system components

- K5 UFO Receiver
- Li-Ion battery
- Charger and adapter
- All-direction antenna
- Tape measure
- 30 cm pole extension
- 7-pin to OTG cable
- Engineering Star (Windows)
- Engineering Star (Android)
- 1 year warranty

### Optional system components

- External Radio (410-470 MHz, 5-35W)
- Battery Case SA-6003
- Data collectors
  - K720 (Windows)
  - H3 plus (Android)
  - T17 (Windows)
  - X11 pro (Windows)
- Field software
  - Field Genius (Windows)
  - SurvX (Android)
- 1-2 year warranty extension

**KOLIDA**  
Professional's Choice

# K5 IMU

A future-oriented productivity tool

YouTube K5 IMU

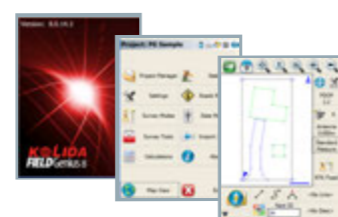


- 692 Channels GNSS Mainboard, All Constellations Supported
- Inertial Measurement + GNSS Positioning, More Accurate and Faster
- Up to 60° Tilt Angle, More Convenient to Measure in Difficult Terrain
- All-new Long Range Radio Link with Anti-interference Capability

## Field Software



Engineering Star



Field Genius



Surv X

**KOLIDA**  
Professional's Choice

**GUANGDONG KOLIDA INSTRUMENT CO., LTD.**

Add: 7/F, South Geo-information Industrial Park, No.39 Si Cheng Road, Tian He IBD, Guangzhou 510663, China  
Tel: +86-20-22139033 Fax: +86-20-22139032  
Email: export@kolidainstrument.com market@kolidainstrument.com http://www.kolidainstrument.com

# K5 IMU

A future-oriented productivity tool



## More Advanced GNSS Positioning Engine

Featuring a powerful 692 channels GNSS mainboard inside, K5 IMU can track and process all the existed satellite constellations. With the utility of BEIDOU (COMPASS) signal, the data acquisition speed and GNSS signal stability are greatly improved from old generation technology.

## Inertial Measurement, a Technology that Greatly Improves Efficiency

The latest inertial measurement technology is onboard with K5 IMU. The tilt survey is no more affected by the earth's magnetic field and requires no correction. It can be activated and start working within only few seconds. With a maximum tilt angle of 60°, there is no need for centering, this fast positioning will increase measurement speed by 20% or even more. The combination algorithm of IMU + GNSS can get fixed solution faster and keep measurement results more stable.

## New Radio Link, Improved Functions and Higher Performance

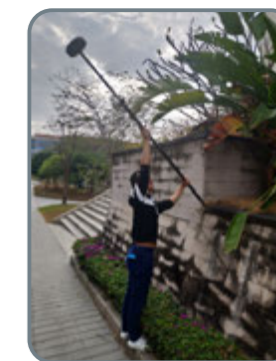
SDL-400 built-in radio can send signal as far as 7km in urban area and 8km in suburb. The maximum coverage area is up to 200 sq.km. It also features anti-interference capability, so K5 IMU can work close to interference source. The next upgrade will increase the communication channels from 8 to 120, to improve the signal transmission quality to a new level. Meanwhile, K5 IMU will support more radio protocol such as Satel, CHC, ZHD, user will have more flexibility to organize the working team and equipment according to mission demand.

## Other Features



## How can Inertial Measurement transform the way we work?

Bring More Safety to Your Work



Bring More Sufficient GNSS Signal to Non-signal Point

Conveniently Measure Inaccessible Points



## Data Collector. Simply Trustable



### T17N

- Windows Mobile 6.5
- 1Ghz CPU, RAM 512MB
- 1GB ROM, Extendable to 32GB
- 3.7V, 6500mAh removable Li-ion
- 3.7 Inch, 480X640VGA
- WCDMA
- Include EGSTAR3.0



### H3PLUS

- Android 6.0
- Quad-core 1.3GHz CPU, 2GB RAM
- 4.3 Inches, WVGA 800X480dpi
- 8 megapixel camera with auto focus
- 6500mAh, up to 10Hours
- Dual SIM Card
- 4G FDD TDD network, 3G WCDMA
- GPS\GLONASS\SBAS\A-GPS
- Include EGSTAR

## Post-processing SW. Free of Charge



### KOLIDA GEO Office

Integrates static data processing and kinematic data adjustment

### Intelligent

- Antenna manager with popular receiver types.
- Fast processing and clear display
- Manually edit and filter satellite data for best result
- Update online.

### Versatile

- Compatible with numerous data format.
- Export abundant types of report.
- Transformable to RINEX format