Specifications

GNSS characteristics
- **336 GNSS channels**
  - GPS: L1C/A, L1C, L2C, L2E, L5
  - GLONASS: L1C/A, L1P, L2C/A, L2P, L3
  - BeiDou: B1, B2, B3
  - Galileo: E1, E5A, E5B, E5AltBOC, E6
  - IRNSS: L5
  - QZSS: L1C/A
  - SBAS (EGNOS): L1, L5
  - Global Correction Service (MSS L-Band): Star-Link (optional); Star-Fill (optional)
  - Support fully independent processing of satellite data so that it can provide both Standalone and RTK solutions using either GPS only, GALILEO only, GLONASS only, BEIDOU only or mixed.
- **Initialization:** time <10s, reliability >99.99%
- **Supported data formats:** RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2, CMR CMR+
- **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: ±0.25m+1ppm
- Vertical: ±0.50m+1ppm
- SBAS: 0.5m (H) 0.85m (V)

Static and Fast Static
- Horizontal: ±2.5mm+0.5ppm
- Vertical: ±5mm+0.5ppm

Post-Processing Kinematic
- Horizontal: 10mm ± 1ppm
- Vertical: 15mm ± 1ppm

Real-time kinematic (RTK)
- Horizontal: ±8mm+1ppm
- Vertical: ±15mm+1ppm

Network RTK (VRS, FKP, MAC)
- Horizontal: ±8mm+0.5ppm
- Vertical: ±15mm+0.5ppm

RTK initialization time
- 2~8s

Physical characteristics
Size
- 16.3 x 16.3 x 9.6 cm

Weight
- 1.33 kg (with built-in battery)

User interface
- Five Indicator lights, Two buttons
- OLED color screen, 1 inch, 128x64 res.
- 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
- Single-Base RTK, Network Single-Base DGPS, Network DGPS

Environmental characteristics
- Operating temperature: -45° to +75°C
- Storage temperature: -55° to +85°C
- Humidity: 100% condensing
- IP68 waterproof, sealed against sand and dust
- Drop: 2m pole drop on concrete
- Enhanced Multipath Reduction with special filters and technology for signal correction due to multi-path error in phase and pseudo-distance measurements.
- Vibration resistant
- Detect satellites at low altitudes

Power characteristics
- Two Li-Ion batteries, 7.4 V, 10,000 mAh
- Battery life: >14h (static mode)
  - >7h (internal UHF base mode)
  - >8 to 14h (rover mode)
  - >10h (internal UHF, rover mode)
  - >10h (GSM/GPRS, rover mode)
- External DC power: 9-28 V

UHF Radio characteristics
- Built-in radio, 120 channels with 12.5KHz or 25KHz channel pitch
- Frequency Range 410-470MHz

- Protocol: TrimTalk450s, TrimMark3, SOUTH (KOLIDA), Hi-target, CHC, Satel
- 1W/2W/3W switchable
- typically working range 7-8km
- "Barrier-Free" Measurement Technology: Repeater/ Router

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
- K9 Receiver & built-in battery
- Charger and adapter
- All-direction antenna
- Tape measure
- 30 cm pole extension (with base only)
- 7-pin to OTG cable
- Engineering Star (Windows)
- 1 year warranty

Optional system components
- External Radio (410-470 MHz, 5-35W)
- Battery Case SA-6003
- Data collectors
  - H3 plus (Android), H5 (Android)
  - T17N (Windows mobile)
  - S50 (Android)
- Field software
  - Field Genius (Windows)
  - SurvX (Android)
  - Engineering Star 5.0 (Android)
- 1-2 year warranty extension

KOLIDA
Professional's Choice

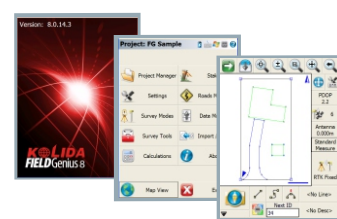# K9
Let's challenge the top
2020 New Offer!

- 336 channels, World-leading GNSS Engine, All Constellations Supported
- Star-Fill Technology Now Available, to Overcome "Non-signal" Spots
- 2cm Accuracy L-band Positioning service subscription (optional)
- Inertial Measurement + GNSS Positioning, Faster & Reliable
- OLED Color Screen, User Friendly Operation
- 10,000 mAh battery, A Whole-day Working With only One Recharge
- Equipped with 336 channels mainboard, K9 is able to deliver reliable fixed solution in harsh environment including urban areas or under tree foliage.

Field Software

| Engineering Star | Field Genius | Surv X |

K9

Improved Reliability Under Challenging Environment

with 336 channels solution, the usability of Glonass & Galileo satellites is greatly improved, so in harsh environment K9 is able to track more satellite than other receivers and provide more reliable positioning result.

Star-Fill,
Save the signal-loss

This new function will let you continue working a few minutes when radio or mobile signal is becoming very poor or even lose in blind area, the accuracy is down to 2cm.

Work Faster,
Wait Less

The Maxwell 7 GNSS engine inside K9 provides an ultra-fast positioning speed, typically it starts tracking satellite signal within 5 seconds after turning on, coordinate can be acquired within 10 seconds.

L-Band Correction
Infinite Freedom

2cm Accuracy CenterPoint RTX correction service is available now! After subscribing to it, surveyors can work almost anywhere in the world without a base station or VRS network.
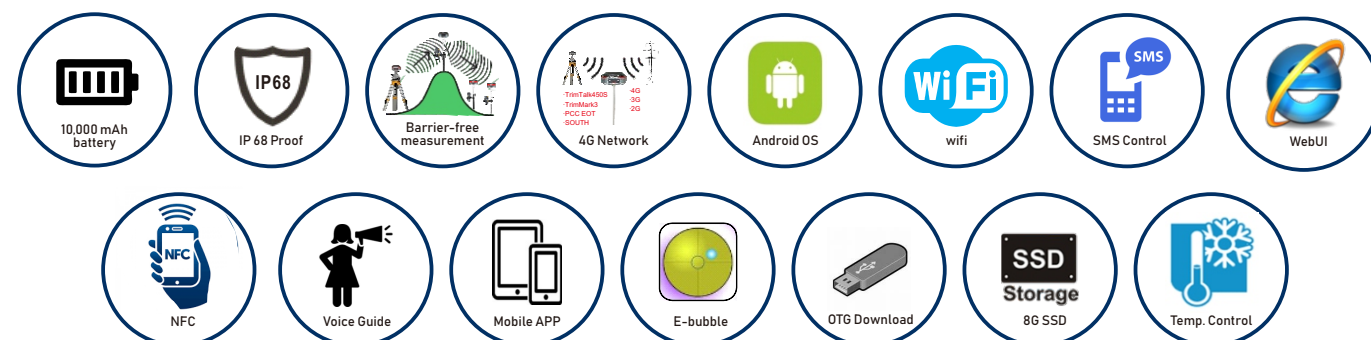
Inertial Measurement,
Fast and Flexible

The newly developed inertial tilt survey is no more affected by the earth's magnetic field and requires no correction. The maximum tilt angle has been improved to 60 °, measurement speed is increased by over 30%.

Other Features

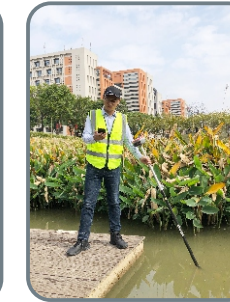|							
10,000 mAh battery	IP 68 Proof	Barrier-free measurement	4G Network	Android OS	wifi	SMS Control	WebUI
NFC	Voice Guide	Mobile APP	E-bubble	OTG Download	8G SSD	Temp. Control	

How can Inertial Measurement transform the way we work?

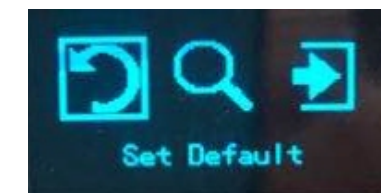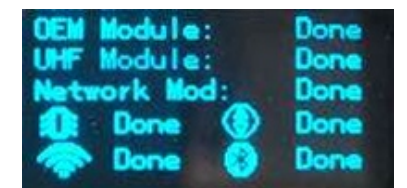Bring More Safety to Your Work   Conveniently Measure Inaccessible Points   Measure Non-signaled Points

Increase Your Efficiency with 10 Innovative Designs!

Make your workflow simpler and Smoother

- Quickly switch working mode & data link, without handheld controller and mobile phone.
- Quickly check system information on receiver screen, no need of other device.
- Quickly launch PPK measurement program, without handheld controller.
- Precisely display self-check status on receiver screen, save time, never miss information.
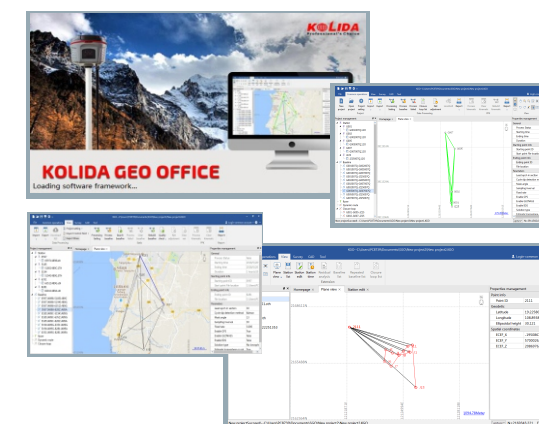
Make you work easier and comfortable

- Re-designed self-check program, only one press to activate it.
- Two steps to restore factory default setting, operation in WebUI is not needed.
- Menu display and voice guide in 8 languages, no problem to work in foreign countries.

Make you working result more reliable

- Newly designed GNSS /Network / wifi / BT all-in-one antenna, enhances signal strength and stability.
- Static data recording status, data size, time can be viewed on screen in real time, to prevent data loss and rework.
- PPK data recording status can be viewed on screen, to prevent data loss and rework.

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