SPECIFICATIONS

GNSS Performance	
Channels	1598
GPS	L1C/A, L2P, L1C, L2C, L5
GLONASS	G1, G2, G3
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b
Galileo	E1, E5b, E5a, E6, E5AltBoc*
QZSS	L1C/A, L5, L1C, L2
SBAS	L1, L5
IRNSS	L5*
L-Band*	B2b

Positioning Accuracy	
Code Differential GNSS Positioning	Horizontal: ±0.25m+1ppm Vertical: ±0.50+1ppm
SBAS Positioning	Typically<5m 3DRMS
High Precision Static	Horizontal: ±3mm+0.1ppm Vertical: ±3.5mm+0.4ppm
Fast Static and Static	Horizontal: ±2.5mm+0.5ppm Vertical: ±5mm+0.5ppm
Post Processing Kinematic (PPK)	Horizontal: ±8mm+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, reliability >99.99%
Positioning Rate	1Hz-20Hz
Inertial Measurement	Tilt Angle: up to 60 degrees Accuracy: down to 2cm (Typically less than 10mm+0.7mm/°tilt)

Data Formats	
Positioning Data	NMEA 0183, PSIC, PJK, Binary Code
Differential Correction	RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2,CMR,CMR+
Static	STH, Rinex 2, Rinex 3
Network	Supported VRS, FKP, MAC, Ntrip

Operation Mode	
Base	Base Internal Radio\ Base Network\ Base External Radio\ Base WIFI
Rover	Rover UHF\ Rover Network\ Rover Bluetooth
Static	Static\ PPK

UHF Radio Chracteristics	
TX\RX	Transmitting and Receiving
Frequency Range	410-470MHz
Protocols	Farlink\ Trimtalk\ SOUTH(KOLIDA)
Channels	60 channels for Farlink protocol 120 channels for other protocols

Hardware	
Size	156mm*78mm
Weight	1.3kg (dual batteries included)
Data Storage	8GB SSD internal storage Support external USB storage (up to 32 GB) Automatic cycle storage Changeable record interval Up to 20Hz raw data collection
Communication	4 Indicator lights 1 Button 1 Type C USB port 1 5-PIN LEMO external power port 1 UHF antenna port 1 Micro SIM card slot Linux OS SOC System, WEB UI WIFI: 802.11 b/g/n standard Bluetooth 4.2 standard and Bluetooth 2.1+EDR Network: 4G LTE\3G WCDMA\2G GSM NFC Supported USB, FTP, HTTP data communication
Voice Guide	Intelligent voice technology provides status indication and operation guide Chinese, English, Korean, Russian, Portuguese, Spanish, Turkish and user define
Environment	Operating: -30˚C to +70˚C Storage: -40˚C to +80˚C
Humidity	100% condensation
Ingress Protection	IP68 waterproof, sealed against sand and dust
Shock	Survive 2m pole drop on concrete

Power	
Battery	7.2V, 6800mAh battery, hot swappable
Battery Life	Base up to 10 hours, Rover up to 15 - 20 hours, Static up to 20 hours. 4 hours charge to full power
USB recharge	Power Bank (type-C USB) Supported

FIELD SOFTWARE

K Survey

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

KOLIDA Professional's Choice

K7

The Power to Be Your Best

* 1598 GNSS channels, best-in-class signal tracking capability
* GPS + GLONASS + BDS + GALILEO + QZSS
* Centimeter level correction data through L-band
* 2 watt Farlink radio, up to 8-10 km working range
* Inertial Measurement up to 60° tilt angle down to 2cm accuracy
* Dual battery hot-swappable, Up to 20 hours working

Craftsmanship and Quality,
The Power To Be Your Best.

Quality Materials & State-Of-Art Features

Add them together,
Multiply their power.

A brand new powerful UHF radio.
An inertial measurement sensor so responsive and more accurate.
The world's leading GNSS chip.
Exceptional durability.
And a huge leap in battery life.

K7, the power to be your best.

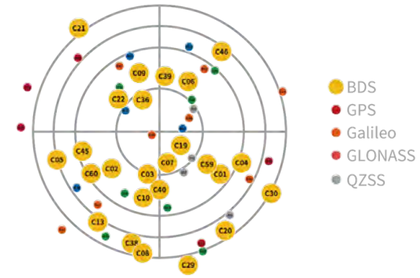
The Only Thing That Changed Is Everything.

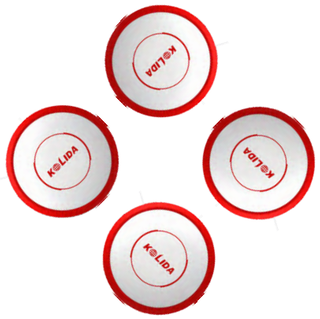
1598 channels

Capture satellites
As many as possible

In a period of time, some GNSS satellites disappear from horizon and new satellites appear. Bigger number of satellites a GNSS receiver tracks at a time, better accuracy the GNSS can calculate. To quickly capture the new satellites that appear in the sky, GNSS receiver must reserve a big number of channels.

K7 is capable to track signal from 5 satellite constellations (GPS, Glonass, Beidou, Galileo, QZSS), process signal of up to 16 frequencies. When compared to traditional GNSS RTK, K7's accuracy is higher, get fixed solution faster, the working performance in forest and city center is better.





Top Cap and Seal Ring

Long service life,
Enhanced signal reception.

The top cap of K7 is made of PBT + PC materials, which provides a good performance of fire prevention, anti-deformation. GNSS signal will be received evenly from all directions.

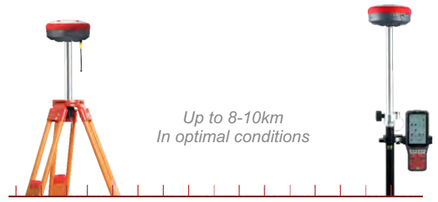
A silicone seal ring is placed overhead to extend the service life. It withstands high temperature, resists wear and corrosion. The diamond shape texture prevents the receiver from falling off on your hands.

Farlink Radio

Transmit mass data
Small power consumption

When GNSS receiver is using signal of bigger number of satellites, the data amount to send and receive by UHF radio increased greatly. The traditional radio protocol is unable to meet the demand. Farlink technology is developed to send large number of data and avoid data loss.

Farlink technology improves the signal-catching sensitivity from -110db to -117db, so K7 can catch the very weak signal from a base station far way.



Bodywork and Colorful Indicator Light

The extraordinary
robustness you can rely on.

The robust bodywork is made of magnesium alloy AZ91D, which offers high strength, excellent heat dissipation. A metallic paint surface treatment has been applied to the lower part of K7, to prevent the receiver from scratching, collision, rustiness.

The four-color indicator lights of K7 offer high brightness, is easy to identify in both day and night.

The 3rd generation IMU

Faster initialization
More accurate data output

KOLIDA's 3rd generation Inertial Measurement Sensor "M8" is able to realize the real-time output of accurate tilt measurement data under high tilt angle and high dynamic attitude.

- 200 Hz high frequency calculation, faster initialization speed
- Calibration free, immune to the effect of earth magnetic field
- Coordinate double-check before output, result is more accurate
- Tilt angle is up to 60°, accuracy is down to 2cm•

Power System You Can Relay On

Safe-lock, Hot Swap,
Up to 20 hours working.

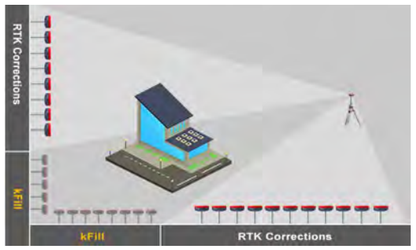
The power consumption of K7 maybe is the least in its class. Two batteries can provide up to 20 hours working time when it runs as a rover. K7 also can be recharged by external power source via Type-C port.

A reinforced battery compartment has been designed for K7, each compartment has a hinged seal door with rotary switch, totally prevent the "drop off".

kFill

Save the RTK/ CORS
Signal Loss

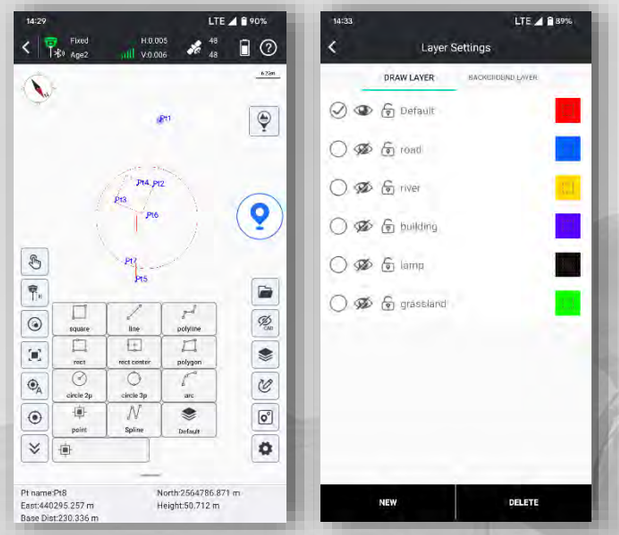
KOLIDA kFill technology is able to provide a 5 minutes sustainable high accuracy service during temporary RTK or CORS signal coverage outages. After RTK and CORS signal recovers, receiver will switch to real-time corrections seamlessly.



Ksurvey APP

Field Data Collection & Mapping: The Most Advanced is Here

Measure & Draw : Save Time in Field work and Office



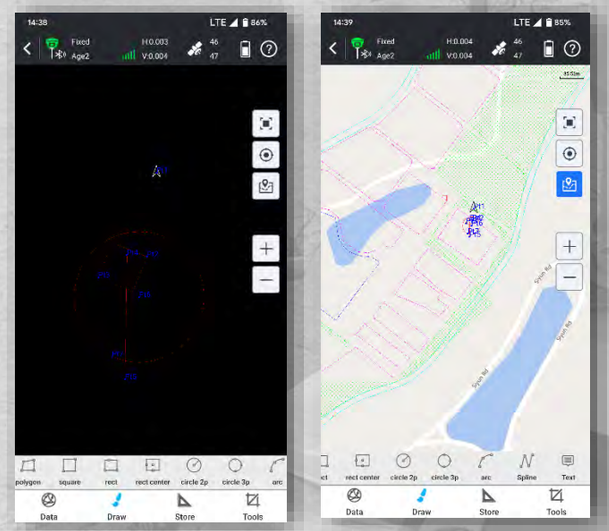
This feature allows you to draw the result map while completing point measurements.

- Before measuring points, users can choose the shape of the target object to be measured from 11 preset figures. The software will guide you to measure points in an order and automatically connect lines and complete the drawing of the figure.

- The .dxf or .dwg maps created on-site can be used directly in office work.

- Users can assign measured objects with different attributes, to different layers for measurement and management, making no mistakes.

CAD Draw : Drafting without a PC



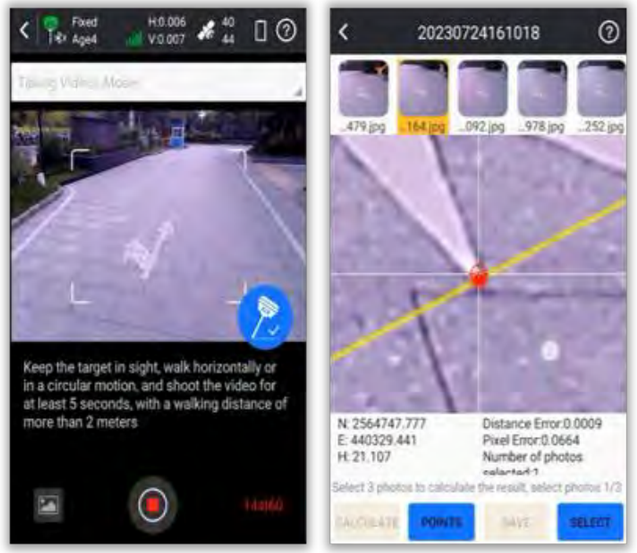
This feature enables CAD drawing capabilities, which were previously only possible on a PC. Now surveyors can edit CAD map on RTK controller or tablet or phones.

- CAD drawing does not require a computer.

- CAD files prepared on office PCs can be edited and managed by users on RTK data collection terminals.

- Drawing tools include up to 11 types of figures and one type of text.

Visual Positioning : Industry-Leading Non-Contact Measurement Technology



(This function only works with the receiver models that have front-facing camera or dual-cameras)

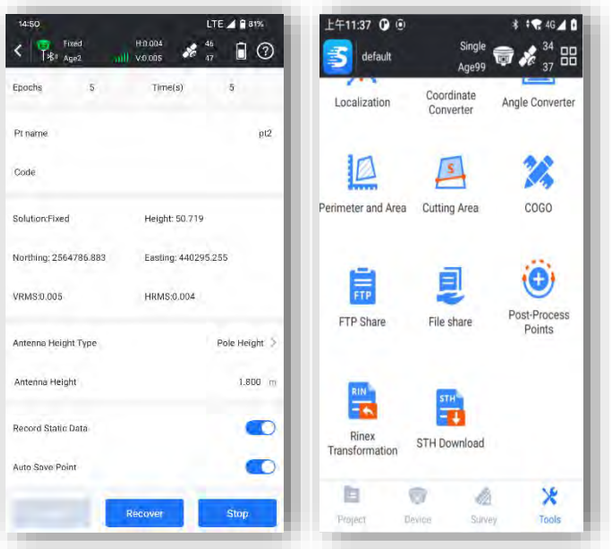
Photogrammetry Measurements can be conducted by taking pictures or videos. Coordinates of all points in the photos can be acquired.

- Now, target points that are inaccessible due to dangerous environments, poor satellite signals, or impassable terrain can be measured remotely.

- The captured image data can also be used with software like SGO, Pixel4D, DJI Terra, and CC for 3D modeling.

- Image measurement data can also be combined with drone measurement data to address issues of blurriness and deformation in ground data models collected by drones.

Static & PPK Measurement : More Assistance Now is Available



The software provides both static and PPK data collection capabilities.

- Data can be downloaded wirelessly, no need for a PC and cables.

- It is possible to convert .sth files into RINEX files right on the data collector or tablet or your phone, no need of PC.

- Data can be shared with others through mobile Internet.

- The accuracy of PPK data collection is as high as Trimble equipment, the result can be directly imported for use in TBC.

Ksurvey APP

Stakeout: Lighten Your Load, Increase Your Output

CAD Stake-Out : Save Labor Cost and Reduce Errors

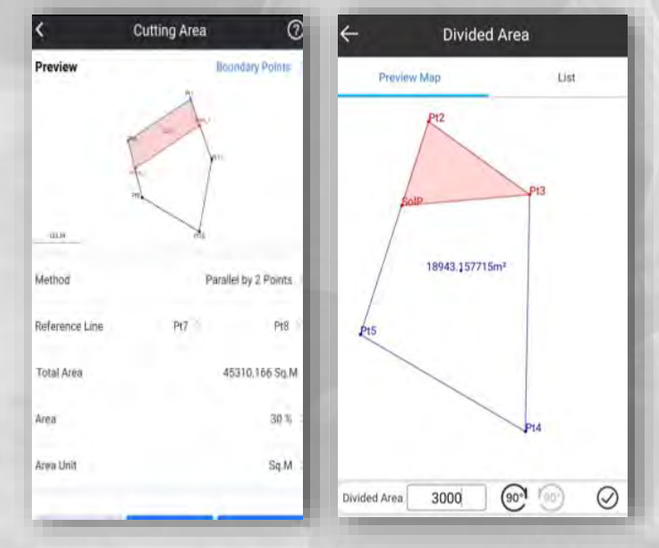
Traditional data collection software requires users to import points or lines to be setout from .csv or .txt files, users need to spend quite a lot of time to edit point and line libraries.

Moreover, for complex shapes such as curves, circles, and polygons, the traditional stake-out process is complicated. Now, our new CAD stake-out program offers a superior solution for surveyors.

- No need for manual editing of point libraries.
- Staking-out geometric shape is faster and easier.

- No need for obtaining coordinate files before work. Staking-out can be done with just a CAD drawing.
- Online maps and CAD drawings can be displayed simultaneously, improving accuracy.
- AR guide lines make staking-out more intuitive.

Area Division : Developed for Professional Cadastral Survey and Stake Out



Select points to form a polygon, and directly identify the area division points for the surveyor to stake out. There is no more need for the user to guess a position to measure, and then to adjust.

- Six methods of division to determine the area division points. The methods are flexible and suitable to different user needs.

- The graphic display is intuitive and understandable.

Live-View Stake-Out : Faster, More Accurate, More Intelligent

(This function only works with the receiver models that have downward-facing camera or dual-cameras)

Users utilize the real-time imagery captured by the camera at the bottom of the receiver and the AR guide lines displayed by the software, to locate the target points.

- When users perform stake-out with a dual-camera GNSS receiver, the software can call upon both cameras to work together. At medium to long distances, the software uses the front-facing camera to indicate the direction of travel, and at close range, it uses the downward-facing camera to find the specific location. This further increases the speed of staking out.

- AR guide lines can be displayed in point staking out, line staking out, and CAD staking out programs.

Additional Features

Compatible with Multiple Devices

The App Now works with GNSS, Total Station, Echo Sounder, GIS Tablet, in future it will work with SLAM Scanner, Terrestrial Lidar Scanner.

Innovations for Better User Experience

- **RTK Data Backup**
- **QR Code Share**
- **Multiple Basemap Support**
- **Basemap Adjustment**
- **Network Mount Point Sorting**
- **NMEA Output Setting**

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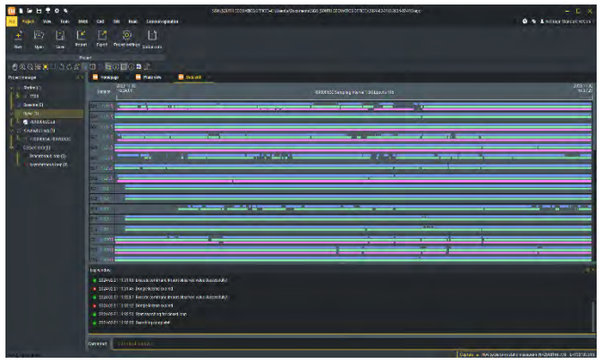
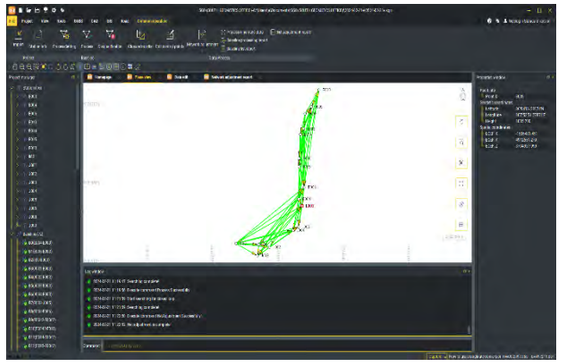
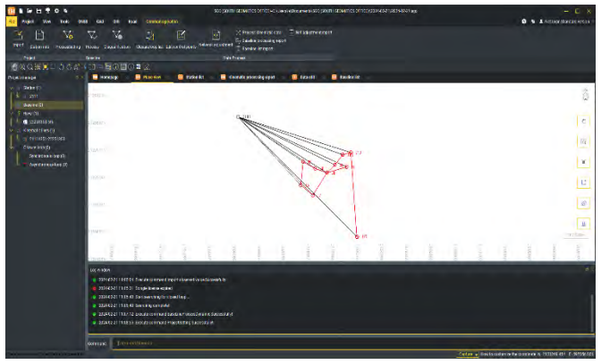
KOLIDA Geo Office (KGO)

Ideal GNSS Data Processor, Help You To Keep Advancing







Data Processing & Reporting

When surveyors need to do post-processing of GNSS data, our software always can provide state-of-the-art technology to help you to produce optimal results.

User just need to import field data, the software will automatically process GNSS baselines.

Once results come out, the software can generate reports.

RINEX Import and Export

This feature enables users to import the third party GNSS receiver data into our software and post-process it, by using the industry standard RINEX format.

High Accuracy Guaranteed

RTK check, the unique function in our software, can compare RTK and PPK results to automatically acquire the most accurate coordinates for each target point.

It fills up the gap of poor corrections in RTK or hindered observations in PPK.

This improvement is to provide guarantee for your every survey.

3D Modelling

User can import photogrammetry image data into the software, to achieve 3D modeling, visually presenting geographic information data such as coordinates, areas, and volumes.

Model data can be transformed into different formats and applied with various coordinate parameters based on actual needs, making it adaptable to a wider range of application scenarios.