

SPECIFICATIONS

Rendimiento de GNSS		Características de la radio UHF	
Canales	1598	TX/RX	transmisión y recepción
GPS	L1C/A, L2P, L1C, L2C, L5	Rango de frecuencia	410-470MHz
GLONASS	G1, G2, G3	Protocolos	Farlink\ Trimtalk\ SOUTH(KOLIDA)
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b	Canales	60 canales protocolo Farlink 120 canales otros protocolos
Galileo	E1, E5b, E5a, E6, E5AltBoc*		
QZSS	L1C/A, L5, L1C, L2		
SBAS	L1, L5		
IRNSS	L5*		
L-Band*	B2b		
Precisión de posicionamiento		Hardware	
Código Diferencial	Horizontal: ±0.25m+1ppm Vertical: ±0.50+1ppm	Tamaño	156mm*78mm
Posicionamiento SBAS	típicamente <5m 3DRMS	Peso	1.3 kg (con doble batería incluida)
Posicionamiento Estático de alta Precisión	Horizontal: ±3mm+0.1ppm Vertical: ±3.5mm+0.4ppm	Almacenamiento de datos	Almacenamiento interno SSD de 8 GB Admite almacenamiento USB externo (hasta 32 GB) Almacenamiento automático de ciclos Intervalo de registro cambiabile Recopilación de datos sin procesar de hasta 20 Hz
Estático y estático rápido	Horizontal: ±2.5mm+0.5ppm Vertical: ±5mm+0.5ppm	Comunicación	4 Luces indicadoras 1 botón 1 puerto USB tipo C 1 puerto de alimentación externo LEMO de 5 PINES 1 puerto de antena UHF 1 Micro SIM card slot Linux OS INTERFAZ DE USUARIO WEB (WebUI) WIFI: estándar 802.11 b/g/n Bluetooth 4.2 estándar y Bluetooth 2.1+EDR La Red: 4G LTE\3G WCDMA\2G GSM NFC Soporta USB, FTP, comunicación de datos HTTP
Cinemática de posprocesamiento (PPK)	Horizontal: ±8mm+1ppm Vertical: ±15mm+1ppm	Guía de voz	La tecnología de voz inteligente proporciona estado indicación y guía de operación en varios idiomas chino, Inglés, coreano, ruso, portugués, Español, turco y definido por el usuario
Cinemática en tiempo real (RTK)	Horizontal: ±8mm+1ppm Vertical: ±15mm+1ppm	Entorno de funcionamiento	Operación: -30°C a +70°C Almacenamiento: -40°C a +80°C
Red RTK (VRS, FKP, MAC)	Horizontal: ±8mm+0.5ppm Vertical: ±15mm+0.5ppm	Humedad	100% condensación
inicialización de RTK	Time 2-8s, reliability >99.99%	Protección de entrada	IP68 impermeable, sellada contra la arena y polvo
TaTasa de posicionamiento	1Hz-20Hz	Golpes	Resiste a caídas desde bastón 2m sobre hormigón
Medición inercial	Angulo de inclinación: hasta 60 grados Precisión: hasta 2 cm		
Formatos de datos		Energía	
Tasa de posicionamiento	NMEA 0183, PSIC, PJK, Binary Code	Batería	7.4 V, 3400 mAh, Dos baterías
Corrección diferencial	RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2, CMR, CMR+	Duración de la batería	Base hasta 10 hrs Rover hasta 15 - 20 hrs eStático Hasta 20 hrs
Estático	STH, Rinex 2, Rinex 3	Carga USB	Soporta carga a través de banco de energía externa
La Red	Supported VRS, FKP, MAC, Ntrip		
Modo de operación			
Base	Base Internal Radio\ Base Network\ Base External Radio\ Base WIFI		
Movil	Rover UHF\ Rover Network\ Rover Bluetooth		
Estático	Static\ PPK		

FIELD SOFTWARE



K Survey



Field Genius



Surv X

K7

El poder para ser el Mejor



- * 1598 canales GNSS, la mejor capacidad de seguimiento de señales de su clase
- * GPS + GLONASS + BDS + GALILEO + QZSS
- * Corrección a nivel centimétrico a través de la Banda-L
- * Radio FarLink de 1 watt, hasta 8-10 km de rango de trabajo
- * Medición inercial de hasta 60 ° de ángulo de inclinación hasta una precisión de 2 cm
- * Batería dual, cambio en caliente, hasta 20 horas de trabajo

Detalles artesanales y Calidad, el poder para ser el mejor



Materiales de Calidad y características de vanguardia

Combinadas en una sola, multiplicando su poder

Una nueva y ponderosa Radio UHF
Un IMU altamente receptivo y mucho mas preciso
Chip GNSS lider en el mundo
Durabilidad excepcional
Y un gran salto en la duracion de la bateria

K7, el poder de ser el mejor

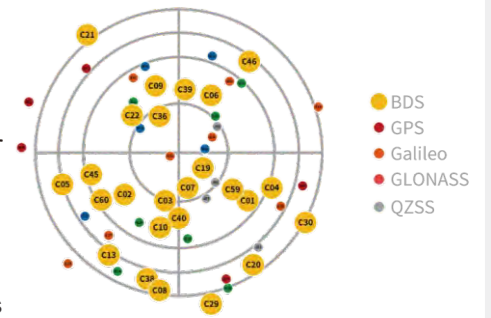
Lo unico que ha cambiado es Todo

1598 canales

Conseguí la mayor cantidad de satelites posibles

En un período de tiempo, algunos satélites GNSS desaparecen del horizonte y aparecen nuevos satélites. Mayor número de satélites que un receptor GNSS rastrea a la vez, mejor precisión que el GNSS puede calcular. Para capturar rápidamente los nuevos satélites que aparecen en el cielo, el receptor GNSS debe reservar una gran cantidad de canales.

K7 es capaz de rastrear la señal de 5 constelaciones de satélites (GPS, Glonass, Beidou, Galileo, QZSS), procesar señales de hasta 16 frecuencias.. En comparación con un GNSS RTK tradicional, la precisión de K3 IMU es mayor, obtenga una solución fija más rápido, el rendimiento de trabajo en el bosque y el centro de la ciudad es mejor.



Radio "Farlink"

Tramsion de data masiva, consumiendo muy poca energia

Cuando el receptor GNSS utiliza señal de un mayor número de satélites, la cantidad de datos para enviar y recibir por radio UHF aumenta enormemente. El protocolo de radio tradicional es incapaz de satisfacer la demanda. La tecnología Farlink está desarrollada para enviar una gran cantidad de datos y evitar la pérdida de los mismos.

La tecnología Farlink mejora la sensibilidad de captura de señal de -110db a -117db, por lo que K7 puede captar señales muy débiles de una estación base a mayor



la 3ª generación de IMU

Inicializacion mas veloz, y mejor precision en los resultados

El sensor de medición inercial de 3ª generación "M8" de KOLIDA es capaz de realizar la salida en tiempo real de datos precisos de medición de inclinación bajo un alto ángulo de inclinación y alta actitud dinámica.

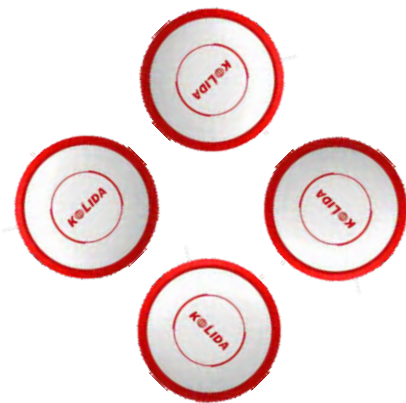
- cálculo de alta frecuencia de 200 Hz, velocidad de inicialización más rápida
- Libre de calibraciones, inmune al efecto del campo magnético terrestre
- Doble verificación de las coordenadas antes de la salida, el resultado es más preciso
- El ángulo de inclinación es de hasta 60°, la precisión se reduce a 2 cm



Kfill

Protéjase de la pérdida de señal RTK / CORS

La tecnología KOLIDA kFill es capaz de proporcionar, por un tiempo de 5 minutos, servicio sostenido y de alta precisión durante interrupciones temporales de cobertura de señal RTK o CORS. Luego de recuperar la señal RTK y CORS, el receptor cambiará a correcciones en tiempo real sin problemas !



Cubierta superior y sellado

Larga vida de servicio y recepcion de señales aumentada

La cubierta superior del K7 esta hecha de PBT+PC, lo que provee un buen rendimiento en prevencion de combustion y anti-deformaciones. Las señales GNSS seran recibidas de manera equivalente desde todas las direcciones.

Un anillo de sellado de silicona extiende la vida util del equipo. Es resistente a altas temperaturas, el desgaste y la corrosion. Su forma de diamante previene al receptor caerse de sus manos.

Indicadores de luz y cuerpo del receptor en destacados colores

Una extraordinaria robustez en la que puedes confiar

El robusto cuerpo del receptor esta construido con una aleacion de magnesio AZ91D, que ofrece una gran Dureza y excelente disipacion del calor. Se ha aplicado un tratamiento de superficie de pintura metálica a la parte inferior del K7, para evitar que el receptor se raye, choque o se oxide.

El pane indicativo de 4 luces del K7 ofrece alto brillo y esta manera es mas sencillo identificar la operacion tanto en el dia como en la noche.



Poderoso Sistema de energia, en el que puedes confiar

Bloqueo de seguridad, cambio en caliente, hasta 20 de horas de trabajo

El consumo de energia del K7 es quiza el menor de su clase Su doble bateria puede ofrecer hasta 20 horas de trabajo en modo Rover. El K7 puede Tambien ser recargado externamente mediante Puerto cable tipo C.

Se ha diseñado un compartimento de batería reforzado para K7, cada compartimento tiene una puerta de cierre con bisagras con interruptor giratorio, que evita totalmente la "caída".



SPECIFICATIONS

GNSS Features

Channels.....	1698
GPS.....	L1C, L1C/A, L2C, L2P(Y), L5
GLONASS.....	G1, G2, G3
BDS.....	B1I, B2I, B3I, B1C, B2a, B2b
GALILEOS.....	E1, E5a, E5b, E6, AltBOC*
SBAS.....	L1*
IRNSS.....	L5*
QZSS.....	L1, L2C, L5*
MSS L-Band.....	GalileoHAS & BDSPPP
Positioning Output Rate.....	1Hz~20Hz
Initialization Time.....	< 10s
Initialization Reliability.....	> 99.99%

Positioning Precision

Code differential GNSS positioning.....	Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMS
GNSS Static.....	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 3.5 mm + 0.5 ppm RMS
Static (Long Observation).....	Horizontal: 2.5 mm + 0.1 ppm RMS Vertical: 3 mm + 0.4 ppm RMS
Rapid Static.....	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
PPK.....	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
RTK(UHF).....	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
RTK(NTRIP).....	Horizontal: 8 mm + 0.5 ppm RMS Vertical: 15 mm + 0.5 ppm RMS
SBAS Positioning.....	Typically<5m 3DRMS
RTK Initialization Time.....	2~8s
IMU Accuracy.....	8mm+0.7 mm/°tilt
IMU Tilt Angle.....	Optimal accuracy within 60°

Hardware Performance

Dimension.....	105mm(φ)×58mm(H)
Weight.....	540g (battery included)
Material.....	Magnesium aluminum alloy shell
Operating Temperature.....	-45°C~+75°C
Storage Temperature.....	-55°C~+85°C
Humidity.....	100% Non-condensing
Waterproof/Dustproof.....	IP68 standard
Shock/Vibration.....	Withstand 2 meters pole drop onto the cement ground naturally
Power Supply.....	6-28V DC, overvoltage protection
Battery.....	Inbuilt 7.4v 5000mAh rechargeable Lithium-ion battery
Battery Life.....	25h (static) 25h (rover mode, optimal condition)

Communications

I/O Port.....	Type-C interface (charge+OTG+Ethernet) UHF antenna interface
Internal UHF.....	Radio Receiving
Frequency Range.....	410-470MHz
Communication Protocol.....	Farlink, Trintalk, SOUTH, CHC, Hi-target, Satel

Communication Range.....	Typically 8-10km with Farlink protocol, (12-15km in optimal condition)
Bluetooth.....	Bluetooth 5.0, Bluetooth 3.0/4.2 standard, Bluetooth 2.1 + EDR
NFC Communication.....	Support
Wifi.....	802.11 b/g/n standard

Data Storage/Transmission

Storage.....	16GB SSD internal storage Support automatic cycling storage Support external USB storage (OTG) The customizable sample interval is up to 20Hz
Data Transmission.....	Plug and play mode of USB data transmission Supports FTP/HTTP data download
Data Format.....	Static data format: STH, Rinex2.01, Rinex3.02, etc. Differential data format: RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 GPS output data format: NMEA 0183, PJK plane coordinate, Binary code Support: VRS, FKP, MAC, fully support NTRIP protocol

Sensors

IMU.....	Built-in IMU, calibration-free, 60 Degrees
Camera.....	Front Camera: 8MP, for Video Shooting & Visual takeout Bottom Camera: 2MP, for Visual Stakeout
Electronic Bubble.....	Controller software can display electronic bubble, checking leveling status of the carbon pole in real-time
Thermometer.....	Built-in thermometer sensor, intelligent temperature control technology, monitoring and adjusting the receiver temperature

User Interaction

Operating System.....	Linux
Buttons.....	Single button
Indicators.....	4, for showing Power, data, bluetooth, satellites
Web Interaction.....	With access to Web UI via WiFi or USB connection, users can monitor the receiver status and change the configurations
Voice Guidance.....	Chinese/English/Korean/Spanish/Arabic/Portuguese/Russian/Turkish/French/Italian/
Secondary Development.....	Provides secondary development package, and opens the OpenSIC observation data format and interaction interface definition
Cloud Service.....	The powerful cloud platform provides online services like remote management, firmware updates, online registers, etc.

*Reserve for future upgrade.

Remarks: Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Specifications subject to change without prior notice

K6X

Palm-sized RTK with DualCamera

- ✓ **All Constellations Tracking**
1698 Channels
- ✓ **The 5th Gen. IMU**
All- time Available
- ✓ **FarLink 2.0 Radio**
Base Lock + Move Prompt
- ✓ **Dual Engine Algorithm**
Enhanced Positioning Capability
- ✓ **Compact Design**
0.54kg, 10.5cm * 5.8cm
- ✓ **Extended Endurance**
Up to 20 Hours RTK work
- ✓ **HAS & PPP**
Precise Single Pt. Positioning
- ✓ **Video Shoot & 3D Modeling**
Upgradeable Function



Dual Camera + AR + New IMU,
More Intelligence, Higher Efficiency!



Stakeout Intuitively with
Live-view Video Display

This new feature combines real-time image display with RTK positioning. K6X captures real-time video through its built-in camera, and users can directly see the points to be setout on the collector screen, which is accurate and intuitive.



Guide-line Powered by AR

AR technology superimposes a virtual guide-line and distance numbers on the real-time video display. Users do not need to recognize the directions themselves, they only need to follow the guide-line to find the point to be setout, which saves time and effort.



Simpler and Easier-to-Use
Inertial Tilt Measurement

In the past, surveyors would rotate the pole when changing the direction of travel or adjusting the attitude of the receiver, sometimes it disables IMU.

Now the 5th generation IMU eliminates the loss of IMU Status in most scenarios to improve the availability and productivity of IMU. The calibrate-free feature save the time of manually initializing IMU each time.



1698 Channels, Capture
Satellites As Many As Possible

K6X with 1698 channels can track more satellites at the same time and capture weak signals under canopies hence better success rate and speed of obtaining a fixed solution.

It is possible to get fixed in a few seconds where previously under the dense forest or surrounded by buildings cannot.



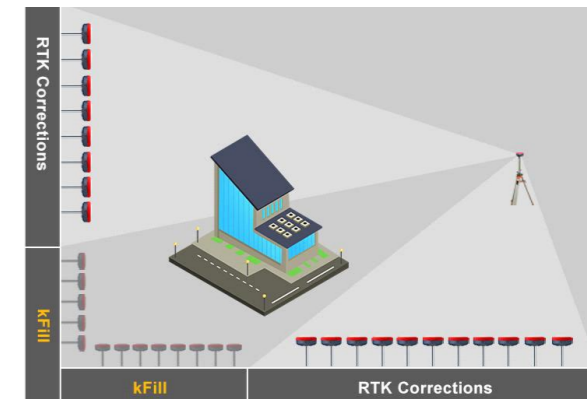
Galileo HAS and BDS PPP

By receiving corrections delivered directly from L-band satellites, K6X allows you to achieve 10 to 20 centimeter-level accuracy with only one rover on hand when base receiver or CORS service is not accessible in remote areas. (this function requires registration code, please apply from your dealers)

“kFill” Save
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.



Smaller
but More Durable

Thanks to the high-capacity battery and the intelligent power management plan, K6X can work up to 15-25 hours in RTK rover mode, up to 25 hours in static mode. The charging port is Type-C USB, users can choose KOLIDA quick charger or their own smartphone charger to recharge. Power bank also can be used as an external power supply.



Ultra Light,
Comfortable Experience

K6X is an ultra light GNSS receiver that leaves the competition behind. Its total weight is only 0.54 kg including battery, 40% even 50% lighter than a traditional GNSS receiver. The light-weight design reduces surveyor's fatigue, increase their mobility, is especially helpful to work in challenging environment.

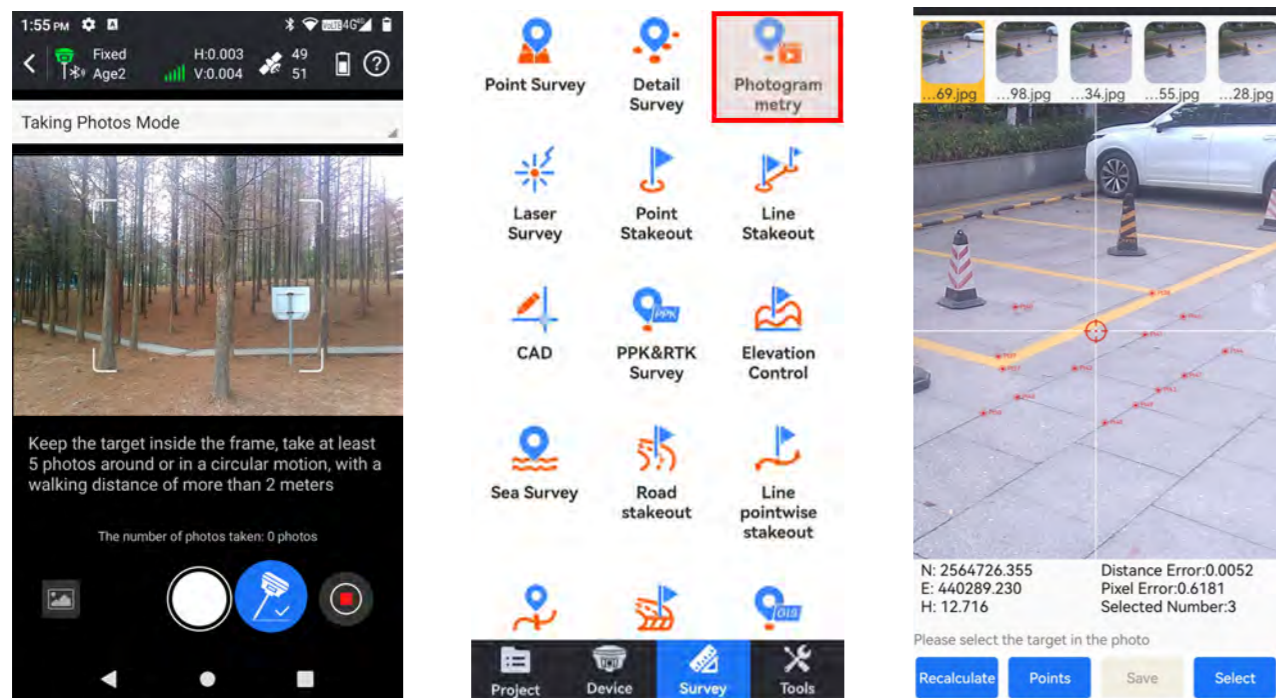


Regular RTK



Photogrammetry Measurement in Real Time — Working Easily by Video Shooting

K6X can process a set of photos or a video, acquiring coordinates for hundreds of points within minutes. It boasts a wider working range and fewer blind spots through remote measurements with the camera. Locations that were once challenging, such as spaces under rooftops and areas with obstacles, are now easily measurable. (this function is an optional upgradeable function, need to consult your local distributor)



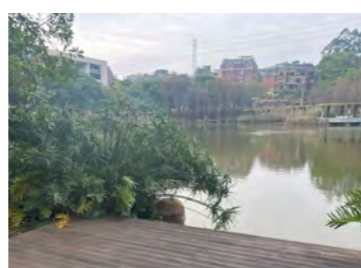
Utilizing visual positioning, surveyors can collect field data in a short time. The data can preserve safely in the device and is reusable at any time. These capabilities are particularly well-suited for distinctive GNSS measurement tasks, including documenting accident scenes and excavation sites for urban public facilities



Too Much Details to Measure



In Short of Time



Risky Terrain

Designed for Urban Surveying

--Cloud Server Online Processing

Surveyors, with a strong internet connection in urban areas, can process image data online using network and cloud servers. K6X achieves 2cm accurate coordinate data for image measurements within minutes, balancing precision and speed.

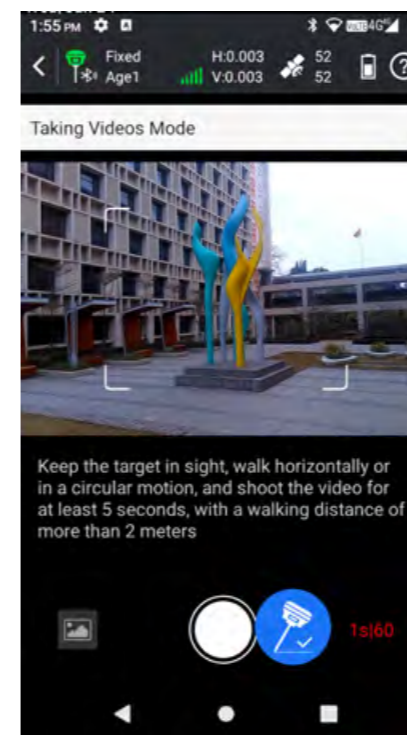
Designed for Field Surveying

--Data Controller Offline Processing

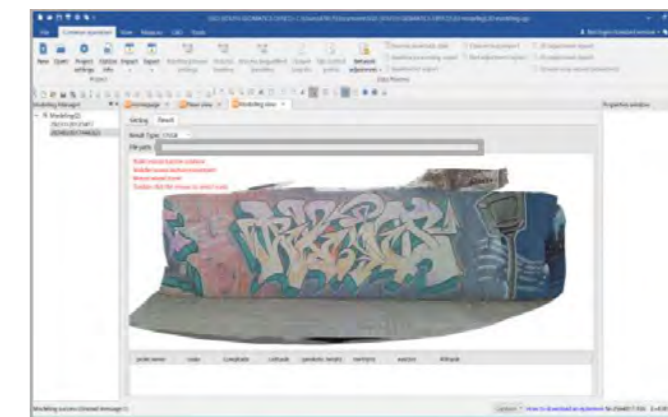
Without internet coverage, surveyors can perform offline image data processing using the data controller app. This mode offers the fastest processing speed, saving time on data uploads and delivering 2cm accuracy results within a few seconds.

3D Modeling & Post Processing — Eyes On Now, Be Prepared for Future

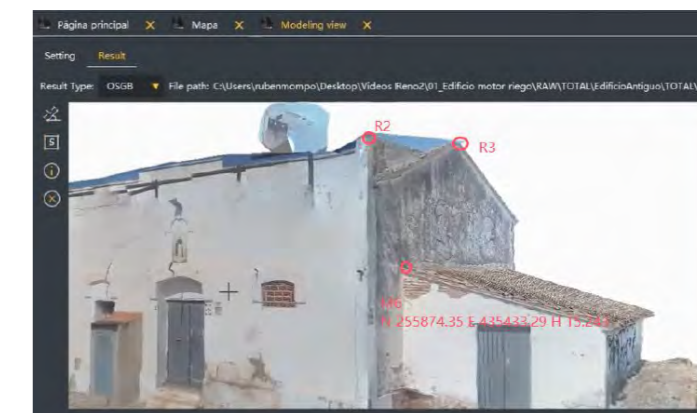
K6X enables single-user 3D modeling, on the models visually displaying geographic information like coordinates, areas, and volumes. It supports transforming model data into different formats and customize coordinate parameters for diverse applications. (this function is an optional upgradeable function, need to consult your local distributor)



Shooting a Video



Generating 3D Model



Measuring on 3D Model

Work in Your Preferred Way



Surveyors can import K6X data into KOLIDA GEO Office (on PC) or third-party software for 3D modeling. Future updates to KSurvey (Android App) will also include 3D modeling functions, allowing users to select the most suitable software for optimal work efficiency based on scenario and task requirements.

Ensuring a Smooth Journey

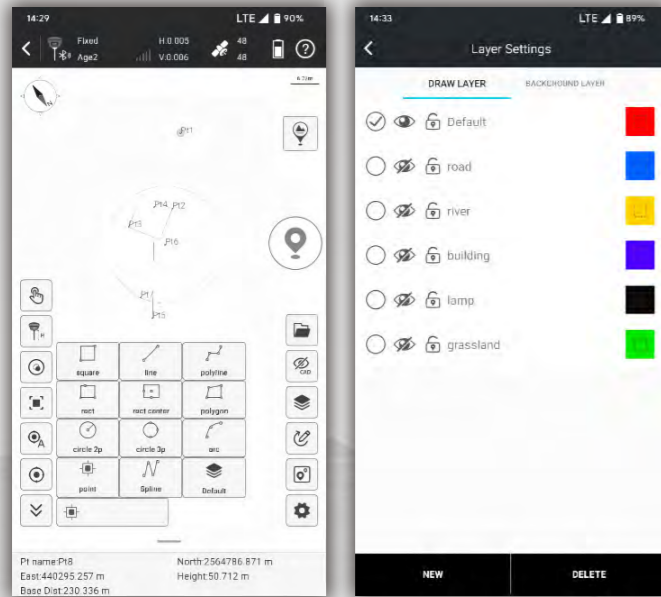


K6X harnesses KOLIDA's 3D modeling tech, seamlessly integrating image measurements with UAV data, including DJI and other brands. Overcoming data gaps in UAV surveys, K6X supplements incomplete models by collecting ground image data, improving overall survey outcomes.

Ksurvey APP

Field Data Collection & Mapping: The Most Advanced is Here

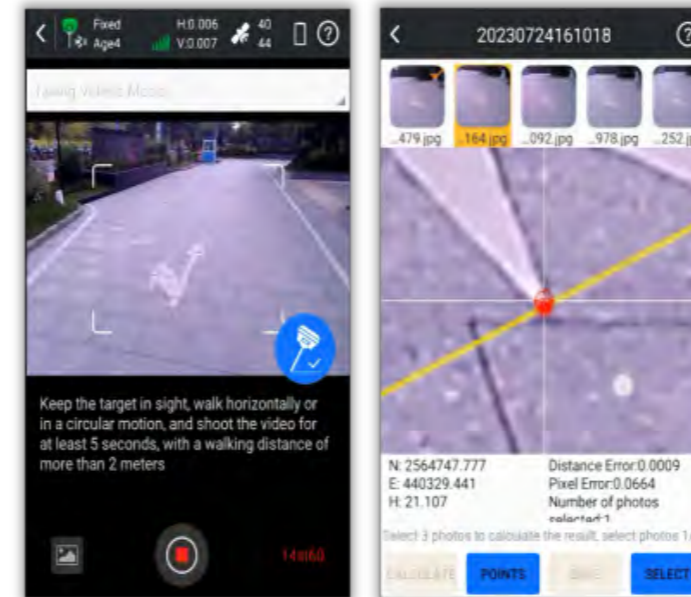
Measure & Draw : Save Time in Field work and Office



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.

Visual Positioning : Industry-Leading Non-Contact Measurement Technology

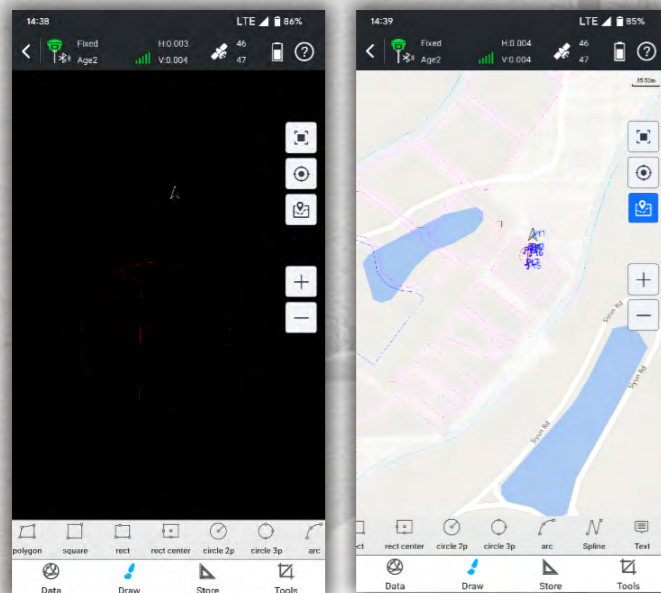


Photogrammetry Measurements can be conducted by taking pictures or videos. Coordinates of all points in the photos can be acquired.

- 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.

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

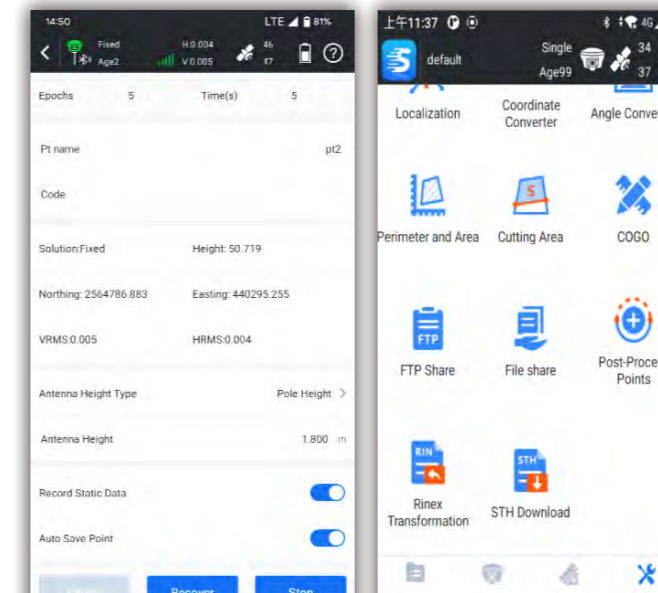
CAD Draw : Drafting without a PC



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.

- 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.

Static & PPK Measurement : More Assistance Now is Available



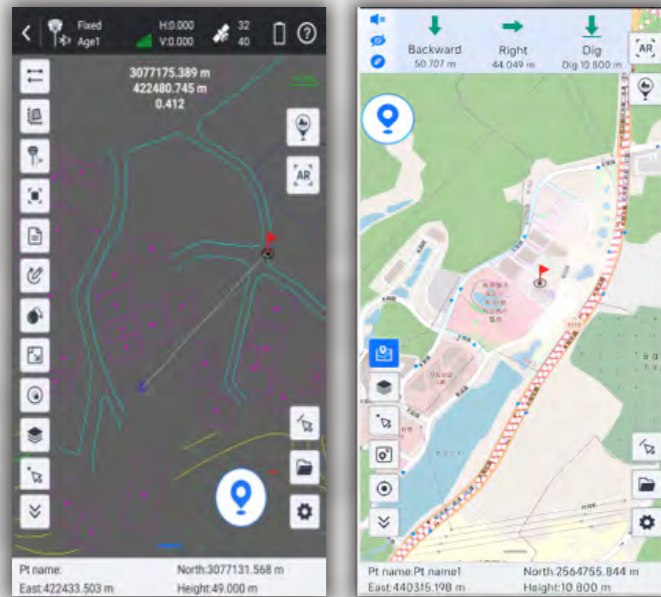
The software provides both static and PPK data collection capabilities.

- 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.

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



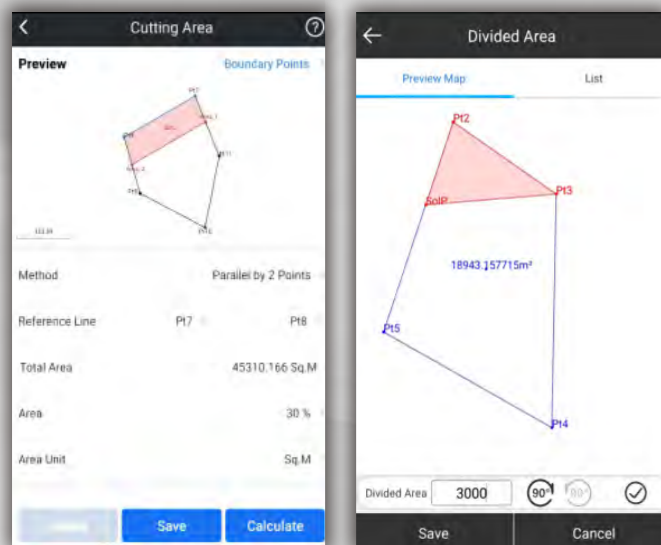
Users utilize the real-time imagery captured by the camera at the bottom of the receiver and the AR guide lines displayed by the software, to locate the target points.

- 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.

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

Additional Features

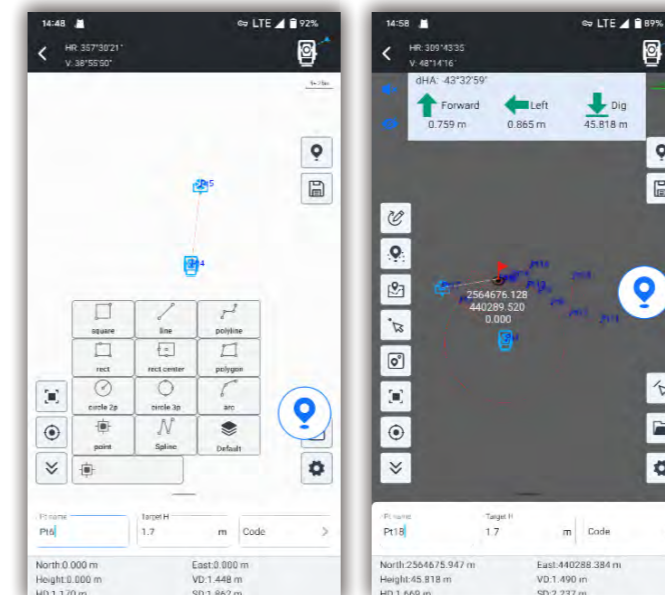
Area Division : Developed for Professional Cadastral Survey and Stake Out



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.

Compatible with Multiple Devices



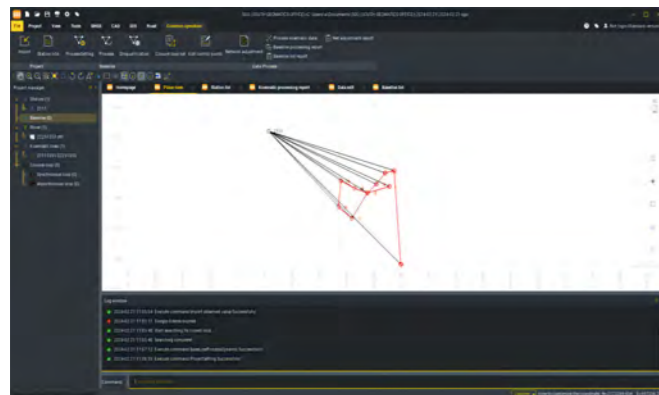
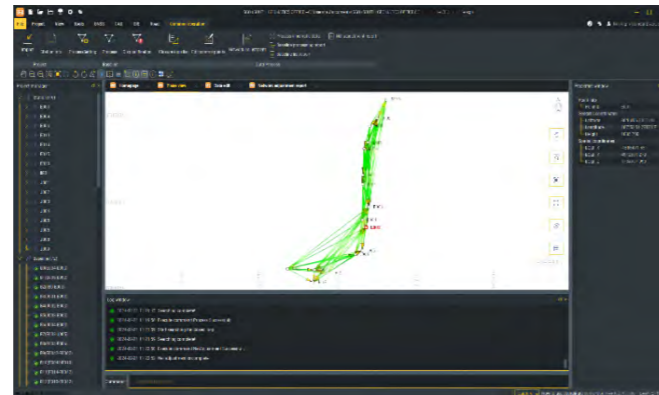
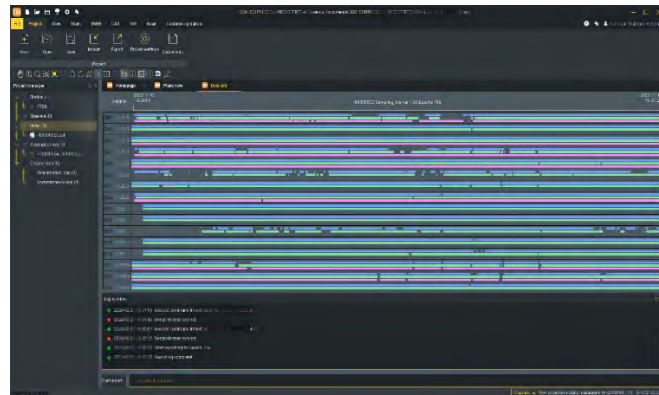
Innovations for Better User Experience

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

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

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.

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.

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.

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.

