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*	Reserved

Positioning Accuracy

Code Differential GNSS Positioning	Horizontal: ±0.25m+1ppm Vertical: ±0.50+1ppm
SBAS Positioning	Typically<5m 3DRMS
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
Positioning Rate	1Hz-20Hz
Inertial Measurement	Tilt Angle: up to 60 degrees Accuracy: down to 2cm

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 External Radio\Base WIFI
Rover	Rover UHF\Rover Bluetooth
Static	Static\PPK

UHF Radio Chracteristics

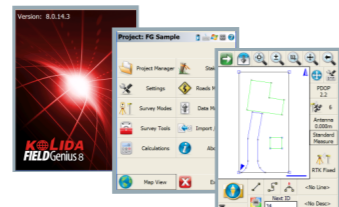|	
TX\RX	Only Receiving
Frequency Range	410-470MHz
Protocols	Farlink\Trimtalk\SOUTH(KOLIDA)
Channels	60 channels for Farlink protocol 120 channels for other protocols

Hardware

Size	137mm*60mm
Weight	690g
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 Soc System WEB UI WIFI: 802.11 b/g/n standard Bluetooth 4.2 standard and Bluetooth 2.1+EDR 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, 5000mAh unremovable battery
Battery Life	12-15 hours
Fast Charge	4 hours charge to full power
USB charge	Type-c USB/Power Bank

Field Software
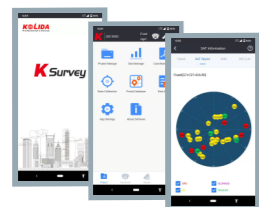
K Survey

Field Genius

Surv X

KOLIDA
Professional's Choice

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Add: 7/F, South Geo-information Industrial Park, No.39 Si Cheng Road, Tian He IBD, Guangzhou 510663, China
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KOLIDA
Professional's Choice

K3 IMU
Light, Fast, Powerful

* 1598 GNSS channels, best-in-class signal tracking capability
* GPS + GLONASS + BDS + GALILEO + QZSS
* System-On-Chip, faster and more reliable than ever
* Inertial Measurement up to 60° tilt angle down to 2cm accuracy
* 5 minutes kFill
* 12 to 15 hours working after one time recharging.
* 0.69 kg include battery, work without fatigue

An Ultra Light and Powerful GNSS ROVER that Covers Your Current and Future Needs.

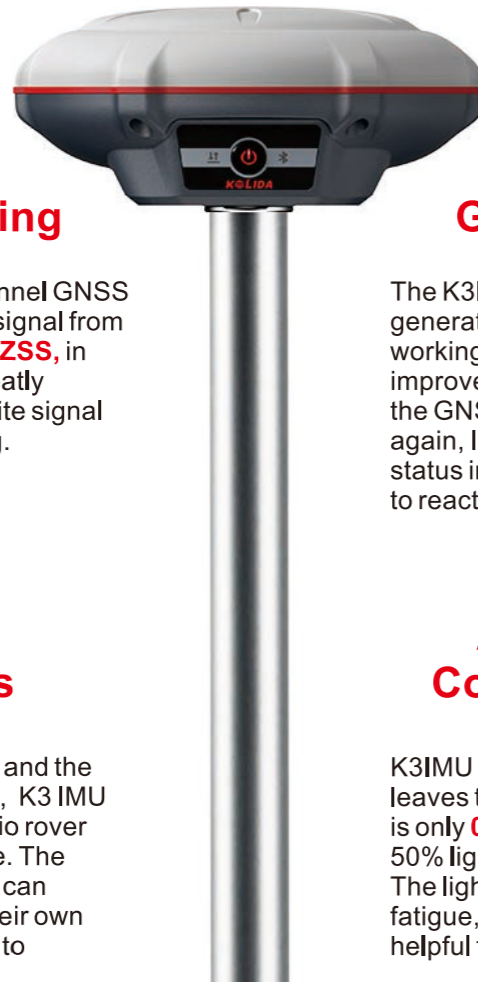K3IMU is an ultra light GNSS receiver that leaves the competition behind.

It is powered by the industry leading GNSS Positioning technology, Inertial Measurement technology, System Integration technology. It can seamlessly connect to RTK GNSS networks via Android controller or smartphone with KOLIDA field data collection software, to work as a network rover, also can be worked as UHF radio rover by using its internal radio modem..

Best-in-Class GNSS Signal Tracking

The integrated advanced **1598**-channel GNSS technology helps K3IMU to collect signal from **GPS, Glonass, Beidou, Galileo, QZSS,** in particular the latest BeiDou III. It greatly improved the data quality and satellite signal capturing speed of GNSS surveying.
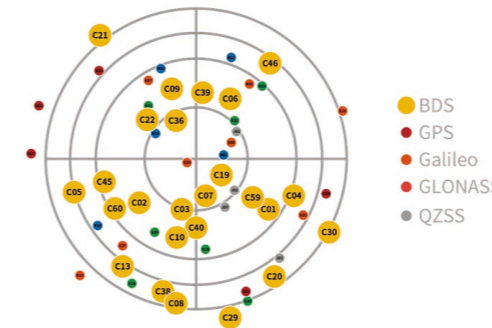
Constantly Updated GNSS + IMU Technology

The K3IMU is equipped with KOLIDA's 3rd generation inertial sensor and algorithm. The working speed and stability have been improved for 30% from the last version. When the GNSS fixed solution is lost and recovered again, Inertial sensor can remain the working status in a few seconds, no need to spend time to reactivate it.

A Huge Leap In Working Hours

Thanks to the high-capacity battery and the intelligent power management plan, K3 IMU can work up to **12 hours** in RTK radio rover mode, up to **15 hours** in static mode. The charging port is Type-C USB, users can choose KOLIDA quick charger or their own smartphone charger or power bank to recharge.

A Lightest Receiver, Comfortable Experience

K3IMU is an ultra light GNSS receiver that leaves the competition behind. Its total weight is only **0.69 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.

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

1598? What are so many channels for?

- 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.

- K3IMU 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, K3 IMU's accuracy is higher, get fixed solution faster, the working performance in forest and city center is better.

SOC? What is the benefit ?

SOC means "System-on-Chip", this new design integrates several individual hardware modules into one microchip.

- The receiver can be much lighter and smaller,
- System runs more stable and faster
- The power consumption is low, receiver can work 12-15 hours.
- Bluetooth connection speed is faster.
- The "High-Low Integration" antenna can effectively restrain the interruptive signal

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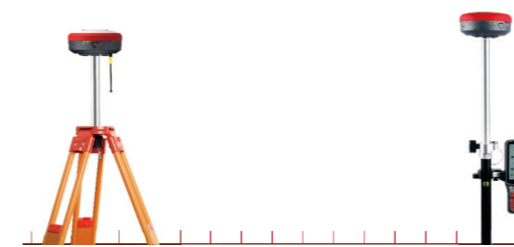
- When GNSS receiver is using signal of bigger number of satellites, the data amount to send and receive by UHF radio increased greatly. The traditional radio protocol is unable to meet the demand. Farlink technology is developed to send large number of data and avoid data loss.

- Farlink technology improves the signal-catching sensitivity from -110db to -117db, so K3IMU can catch the very weak signal from a base station far way.

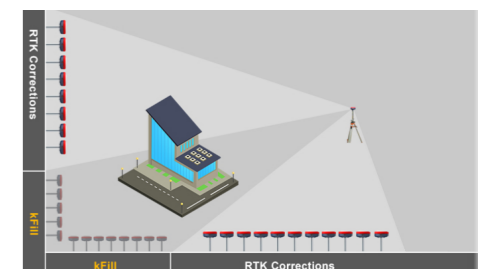## What is new of the 3rd generation IMU ?

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

60°

What is kFill? How it benefit the work?

Kolida's kFill technology is able to provide a 5-minutes sustainable high accuracy service during a temporary RTK or VRS signal coverage outtages. After the correction data signal recovers, receiver will switch to real time correction data connection seamlessly.