SPECIFICATIONS

GNSS Performance

Channels	896 (1760 channels is optional)
GPS	L1C/A, L1PY, L2C, L2P, L5
GLONASS	L1CA, L2CA, L2P, L3 CDMA
BeiDou	B1I, B1C, B2a, B2I, B3[11]
Galileo	E1, E5a, E5b, E5 AltBoc
QZSS	L1C/A, L2C, L5
SBAS	Egnos, WAAS, GAGAN, MSAS, SDCM (L1, L5)
Navic	L5
L-Band	Reserve

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: ±6mm+0.5ppm Vertical: ±10mm+1ppm
Network RTK (VRS, FKP, MAC)	Horizontal: ±6mm+0.5ppm Vertical: ±10mm+1ppm
RTK Initialization Time	7s
Positioning Rate	1Hz-50Hz
Inertial Measurement	Tilt Angle: up to 60 degrees Accuracy: down to 2-5cm

Data Formats

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

Operation Mode

Base	Internal or External radio\ Wifi
Rover	Rover UHF\Rover Bluetooth
Static	Static\PPK

UHF Radio Chracteristics

TX\RX	2 Watt Transmitting & Receiving
Frequency Range	410-470MHz
Protocols	Farlink\Trimtalk\SOUTH(KOLIDA)
Channels	60 channels for Farlink protocol 120 channels for other protocols

Hardware

Size	13cm*8cm
Weight	0.8kg
Data Storage	4GB SSD internal storage Support external USB storage (up to 32 GB) Automatic cycle storage Changeable record interval Up to 20Hz raw data collection
Communication	5 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	7.4V, 6800mAh unremovable battery
Battery Life	Up to 12-15 hours in rover mode
Fast Charge	4 hours charge to full power
USB charge	Type-c USB/Power Bank

Field Software

K Survey

Field Genius

Surv X

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K9X

Palm Size, Higher Efficiency!

896
GNSS Channels

Inertial Measurement
Tilt Compensation

Compact
13 cm x 8 cm

GPS/GLONASS/Galileo/ BeiDou/QZSS/SBAS/Navic
constellation support

Farlink UHF Radio
up to 2 Watt TX

4 GB SSD
Internal Memory

Light Weight
0.8 kg

Bluetooth, Wi-fi, NFC
wireless communications
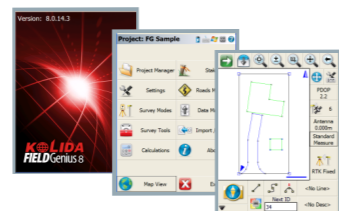
XSERIES

The Newly Developed X SERIES GNSS Engine
Ensuring You Uncompromisable RTK performance

The X-Series GNSS Engine

The all new "X-Series" GNSS Engine and the advanced technologies inside improve your ability to measure in more place than ever before and allow you to carry on with the highest possible efficiency.

Tilt Measurement by Inertial Navigation

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.

Multipath Effect Mitigation Technology

This feature is to disentangle direct signal and those reflected from nearby structures, it ensures the accurate result when you are measuring close to buildings or water area.

Electromagnetic Interference Mitigation

This feature is to help the receiver to keep obtaining correction data signal with high quality, even there is a interference source nearby.

Anti-vibration Shock

This feature is for robust tracking during high vibrations and shocks. It increases the accuracy stability when you are working on the busy road or construction site or mining site where the heavy vehicles and machinery often pass by.

Protection Against Ionospheric Disturbances

This feature is to make correction to Ionospheric delay error, and upgrade the positioning accuracy when you are doing network RTK positioning over a long distance (10-40 km).

Constantly Updated GNSS Positioning Engine

K9X enjoys a powerful 896-channel GNSS Engine that delivers the more advanced satellite tracking algorithm.

This all-new Kolida "X-Series" GNSS Engine is able to track signal from 5 satellite constellations (GPS, Glonass, Beidou, Galileo, QZSS), process signal of more than 20 frequencies. When compared to traditional GNSS RTK, K9X is more capable to work in challenging environment and can provide more accurate result.

"Farlink" Radio Transmitting and Receiving

When GNSS receiver is using signal of bigger number of satellites, the data amount to send and receive by UHF radio increased greatly. 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 K9X can catch the very weak signal from a base station far way.

Smaller but More Durable

Thanks to the high-capacity battery and the intelligent power management plan, K9X 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.

Ultra Light, Comfortable Experience

K9X is an ultra light GNSS receiver that leaves the competition behind. Its total weight is only 0.8 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.