SPECIFICATIONS

Receiver Part

Measurements
- 220 channels, by advanced Pacific Crest Maxwell 6 Custom Survey GNSS technology
- High precision multiple correlator for GNSS pseudo range measurements
- Unfiltered, uncorrected pseudo range measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with 1 ppm in a 1Hz bandwidth
- Signal-2-Noise ratios reported in dB-Hz
- Proven Pacific Crest low elevation tracking technology

Satellite signals tracked simultaneously
- GPS: Simultaneous L1C/A, L2E, L2C, L5
- GLONASS: Simultaneous L1 C/A, L1 P, L1 C/A (GLONASS M Only), L2 P
- SBAS: Simultaneous L1 C/A, L5
- Galileo: Simultaneous L1 E1A, E5a, E5b, E5A/B/C
- Compass: B1I, B2
- QZSS: L1 C/A, L1 L1SAF, L2C, L5

Code differential GNSS positioning
- Horizontal: 27cm +1ppm RMS
- Vertical: 50cm +1ppm RMS
- SBAS differential positioning accuracy typically <5m 3DRMS

Static and Fast Static GNSS surveying
- Horizontal: 3mm +1ppm RMS
- Vertical: 5mm +1ppm RMS

Realtime Kinematic surveying
- Horizontal: 8mm +1ppm RMS
- Vertical: 15mm +1ppm RMS
- Initialization time: typically <1s
- Initialization reliability: typically >99.9%

Hardware
- Dimension (LxWxH): 190mm x 190mm x 64mm (7.48 x 7.48 x 2.56"
- Weight: 1.5kg (including built-in radio module and installed battery)

Environmental
- Operating: -40° C to +60° C (40°F to 140°F)
- Storage: -55° C to +85° C (-67°F to 185°F)
- Humidity: 100%, noncondensing
- Water/Dustproof: IP67 standard, protected from long time immersion to depth of 1m (3.28)
- Shock and vibration: designed to survive a 2.5m (8.2ft) drop onto concrete

Electrical
- Power 12-15V DC external power input
- Rechargeable, removable 7.4V, 3400mAh Lithium-ion battery in internal battery compartment
- Battery life: 6-10 hours for 2 batteries from standard supply (varies with temperature and working mode)

Communications and Data Storage
- Standard USB 2.0 port
- RS-232 port: baud rates up to 115200
- Trimble’s BlueMix-B20 inside for Bluetooth function
- Fully sealed and integrated 2.4GHz connection Bluetooth port
- UHF receiving antenna port and GPS/DR/GSM signal antenna port
- Fully sealed and integrated radio receiver/transmitter 410-470MHz
- Radio RTK performance: integrated radio transmitter only: 1-km (varies with terrain and temperature)
- with external radio: 8-km (varies with terrain and temperature)
- Fully sealed and integrated internal SYSTEMS MOD GPS/DR/GSM module
- External-cellphone support for GPS/DR/GSM (2G default, 3G optional module for network RTK, CORS operations)
- Network RTK (via CORS) performance: 25-50km (varies with temperature and GPS/DR data rate)
- Data storage: internal memory 4GB
- Update rate: 1Hz, 2Hz, 5Hz, 10Hz, 20Hz & 50Hz positioning outputs (depends on installed option, default 1Hz)
- Reference outputs: CMR, CMR+, RTCM 2.1, RTCM 2.2, RTCM 2.3, RTCM 3.0, RTCM 3.1

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. Refer to separate brochures for more details of optional controller models, S1G/WA3/PS336.
Specifications subject to change without prior notice.

Controller Part

<table>
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<tr>
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<th>S10</th>
<th>Pelion WA3</th>
<th>Getac-PS336</th>
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<tbody>
<tr>
<td>CPU</td>
<td>524 MHz</td>
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<td>524 MHz</td>
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<tr>
<td>Memory</td>
<td>256 MB RAM</td>
<td>256 MB RAM</td>
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<tr>
<td>Storage</td>
<td>Up to 8 GB</td>
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<td>Operating System</td>
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<tr>
<td>Screen</td>
<td>3.7” Touch 640x480 VGA</td>
<td>3.7” Touch 640x480 VGA</td>
<td>3.7” Touch 640x480 VGA</td>
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<td>Yes</td>
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<tr>
<td>Weight and Battery</td>
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<td>590 g</td>
<td>531 g</td>
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<tr>
<td>Environmental Rating</td>
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<tr>
<td>Size</td>
<td>160 x 94 x 30 mm</td>
<td>223 x 130 x 42 mm</td>
<td>178 x 69 x 30 mm</td>
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</table>

KOLIDA New Generation GNSS

- Totally New Design
- World Class Mainboard
- Flexible Working Mode
- Superior Proof Ability

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K96-T — KOLIDA Third Generation GNSS Receiver

As the latest fruit of years of research and development of KOLIDA, and a fusion of leading hardware design, excellent operation stability and powerful accompanying software, K96-T will bring you the best product experience.

**Main Features**

**All-frequency Antenna**

K96-T GNSS antenna has been enhanced to all-frequency antenna, which supports GPS, GLONASS, COMPASS, SBAS signals. After Galileo Positioning System completely comes to use in the future, K96-T need no modification in hardware, but only some upgrade in firmware to trace and analyze its signals.

**World First Class High-precision Mainboard**

220 channels, support GPS, GLONASS, COMPASS, GALILEO and SBAS satellites: Static Horizontal Precision: 3mm+2ppm RMS, RTK horizontal Precision: 3mm+2ppm RMS. Initialising time for RTK Mode: ≤10s, Reliability: 99.9%.

**Flexible Working Mode**

Built-in radio has integrated with receiving and emitting functions. It is compatible to all brands receiver, and meets the requirements for wireless transmission in short distance. World’s famous brands of GPRS module seamlessly support mobile network of more than 95% countries and districts of the world. Even if there is no CORS or Radio nearby, K96-T can also provide connection from base to rover, under the TCP/IP agreements.

**Powerful Software**

KOLIDA provides full support in field software. KOLIDA E-Star, as standard configuration for free of charge, could meet the basic demands from surveyors. FG and SuniCE, as third party software from professional software development companies, are also supported for advanced requirements, such as base map import, GIS data attribute save and edit.

**Application**

KOLIDA GNSS products are very popular in more than 50 countries in the world. It is widely used in control survey, topographic survey, stake-out, completion survey, and many other areas.

- Control Survey
- Data Collection
- Road Survey
- Completion Measurement
- CORS application
- Stake-out

**New Features**

**New Central Processor CORTEX M4**

The processing speed of K96-T increased for 100% when compared with K95, at the same time its energy consumption decreased for 15%, the stability of data processing is also increased significantly.

**Upgraded Firmware Architecture**

The firmware has been re-designed, and we can control all the electronic components with one file. Maintenance and upgrade become very easy. What’s more, K96-T supports to switch working mode (Static/Base/Rover/Radio/Network/External Devices) without powering off, which saves operation times.

**Enhanced Disk Management System**

Compared with K9-7, the enhanced Disk Management System for K96-T are much more reliable. The system errors caused by disc virus have been eliminated, which greatly improves the safety of the surveying data.

**Support 2G/ 3G/ 3.5 GPRS module**

Equipped with world’s famous brands of modules (SIEMENS, HUAWEI, TELIT, etc.), K96-T can smoothly work in more than 95% countries over the world.

**Effective Built-in Transceiver Radio**

With built-in transceiver radio, K96-T is able to transfer radio signal within 1-5km range without external battery and external radio.

**Larger Internal Memory**

Internal Memory has been increased from 64MB (K9-7) to 4GB (K96-T), which supports static data collection of super long time. For observation with >1s interval, K96-T supports continuous static survey for more than 1 month.

**Brief Introduction of Software**

As KOLIDA self-developed data collection software, EG Star has a clear interface, with simple and easy to operate configuration, transinformation parameters calculation, data collection, stake-out, and many other functions, which meets the requirements for basic survey.

Developed by Carbon from US, SuniCE is seamless compatible with KOLIDA K96-T, and is visibly used all around the world. SuniCE has a powerful GIS data collection utility, and support to save data throughout the whole measurement.

Field Genius is a powerful survey data collection software from Centeka. Advanced Linework, Smart Points and GPRS support and the continuous map feature give users the choice of organizations that value productivity. Multi-language is available.