Tersus GNSS
David GNSS Receiver

Overview

The Tersus David is a cost-efficient, palm-sized GNSS receiver designed for surveying, UAVs, AGVs, and agricultural applications. Working with an external GNSS antenna, the free Tersus Survey App and post-processing software, the David GNSS receiver is a low-cost solution for all survey applications, including real-time RTK positioning and data collection for PPK.

A 4GB in-built memory makes it easy to record data for post processing. The compact size, IP67- rated enclosure, and external Bluetooth module alleviates most of the inconveniences encountered in field work.

Key Features

✓ Supports multi-constellation including BeiDou, GPS and GLONASS
✓ Supports 384 channels
✓ Supports RTCM2.x/3.x, CMR/CMR+ corrections
✓ Flexible for integration in different applications
✓ Data update rate up to 20Hz
✓ In-built 4GB storage benefits data collection
✓ IP67-rated dust- & waterproof enclosure, for reliability in challenging environmental conditions
✓ Supports Nuwa surveying software

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Technical Specifications

Performance

Signal Tracking:	
GPS L1, L2; GLONASS L1, L2; BDS B1, B2	
Channels:	384
Single Point Positioning Accuracy (RMS):	
- Horizontal:	1.5m
- Vertical :	3.0m
Real Time Kinematic/RTK (RMS):	
- Horizontal:	10mm+1ppm
- Vertical:	15mm+1ppm
Initialization (Typical):	<10s[1]
Initialization Reliability:	>99.9%[2]
Post Processed Kinematic (RMS):	
- Horizontal:	10mm+1ppm
- Vertical:	15mm+1ppm
Static Post Processing (RMS):	
- Horizontal:	3mm+0.5ppm
- Vertical:	5mm+0.5ppm
Observation Accuracy (zenith direction):	
- C/A Code:	10cm
- P Code:	10cm
- Carrier Phase:	1mm
Time To First Fix (TTFF):	
- ColdStart:	<50s
- WarmStart:	<30s
Re-acquisition:	<2s
Timing Accuracy (RMS):	20ns
Velocity Accuracy (RMS):	0.03m/s
Differential Data Format:	RTCM 2.x/3.x, CMR/CMR+
Data Output:	NMEA-0183, Tersus Binary
Data Update Rate:	20Hz
Storage:	In-built 4GB

Electrical

Input Voltage:	5~12V DC[3]
Power Consumption(at 25℃):	3.65W (David only)
Active Antenna Input Impedance:	50Ω

Software Support

Tersus GNSS Center
Other third party software support NMEA-0183

Communication

Serial Ports:	RS232 x2
Serial Baud Rate:	up to 460800bps
USB Port:	USB 2.0 Device x1
Antenna Connectors:	SMA Female x1

Physical

Dimension:	104x65x31mm
Weight:	≈250g[4]

Environmental

Operating Temperature:	-40℃~ +70℃
Storage Temperature:	-40℃~ +85℃
Humidity:	95% non-condensing
Dust-& waterproof:	IP67

Optional Accessories

2W/28W 410-470MHz radio to transmit/receive RTK corrections
Battery bank

Note:
(1) The initialization time depends on various factors, including the number of satellites, observation time, atmospheric conditions, multi-path, obstructions, satellite geometry, etc.
(2) The initialization reliability may be affected by atmospheric conditions, signal multipath, and satellite geometry.
(3) It is recommended using 2A instead of 1A when the external power is 5V.
(4) The actual size/weight may vary depending on the manufacturing process and measurement method.