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 multiple constellations & frequencies:
- GPS L1, L2
- GLONASS L1, L2
- BeiDou B1, B2

Supports 384 channels

Supports RTCM2.3/3.x, CMR, CMR+ corrections

Easy to connect an external powerful radio for long range communication

Flexible for integration in different applications

20Hz raw measurement output for post processing

The carrier phase accuracy down to 1mm

In-built 4GB eMMC for data recording

Input power range is 5~12V DC

IP67-rated dust- & waterproof enclosure, for reliability in harsh environmental conditions

Supports Nuwa & FieldGenius surveying software

Technical Specifications

Performance

Signal Tracking For Antenna: GPS L1, L2; GLONASS L1, L2; BeiDou B1, B2	
GNSS Channels:	384
Single Point Positioning Accuracy (RMS):	
– Horizontal:	1.5m
– Vertical:	3.0m
Real Time Kinematic (RMS):	
– Horizontal:	10mm+1ppm
– Vertical:	15mm+1ppm
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):	
– Cold Start:	<50s
– Warm Start:	<30s
Timing Accuracy (RMS):	20ns
Velocity Accuracy (RMS):	0.03m/s
Initialization (typical):	<10s
Initialization Reliability:	>99.9%
Max. Measurements Update Rate:	20Hz
Input Voltage:	5V~12V DC[1]
Power Consumption (at 25℃):	4.9W (David only)
Active Antenna Input Impedance:	50Ω
Storage:	In-built 4GB memory

Communication

Serial Ports:	RS232 x2
USB Ports:	USB 2.0 device x1
Antenna Connector:	SMA female x1
COM Baud Rate:	Up to 460800bps

Software Support

Tersus Nuwa

MicroSurvey FieldGenius

Other Third Party Software Support NMEA-0183

Physical

Dimension:	104x65x31mm (David only)
Weight:	≈ 250g (David only)
Operating Temperature:	-40℃ ~ +85℃
Dust- & Waterproof:	IP67

Optional Accessories

2W 460MHz/30W 460MHz radio to transmit/receive RTK corrections

Battery bank

Note: 1. It is recommended using 2A instead of 1A when the external power is 5V.

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