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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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TERSUS 🔖 🖊 DATASHEET

Technical Specifications

Performance

Signal Tracking:			
GPS L1, L2;	GLONASS L	1, L2; BDS B1, B2	
Channels:		384	
Single Point Positioning Accuracy (RMS):			
- Horizontal:		1.5m	
- Vertical :		3.0m	
Real Time Kinem	atic/RTK (RMS):		
- Horizontal:		10mm+1ppm	
- Vertical:		15mm+1ppm	
Initialization (Typical):		<10s ⁽¹⁾	
Initialization Reliability:		>99.9% ⁽²⁾	
Post Processed k	(inematic (RMS):		
- Horizontal:		10mm+1ppm	
- Vertical:		15mm+1ppm	
Static Post Proce	essing (RMS):		
- Horizontal:		3mm+0.5ppm	
- Vertical:		5mm+0.5ppm	
Observation Acc	uracy (zenith dire	ection):	
- 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 Accurac	y (RMS):	0.03m/s	
Differental Data	Format:	RTCM 2.x/3.x, CMR/CMR+	
Data Output:		NMEA-0183, Tersus Binary	
Data Update Rat	e:	20Hz	
Storage:		In-built 4GB	

Electrical

Input Voltage:	5~12V DC ⁽³⁾
Power Consumption(at 25°C):	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°C~ +70°C
Storage Temperature:	-40°C~ +85°C
Humidity:	95% non-condensing
Dust-& waterproof:	IP67

Optional Accessories

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

Battery bank

Note:

- 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.