Tersus

David30-D GNSS Receiver

High Precision RTK Positioning and Heading

Overview

The Tersus David30-D is a multi-constellation high precision RTK positioning and heading GNSS receiver which offers centimeter-accurate positioning. It is designed for intelligent transportation, construction, machine control, precision agriculture, and navigation applications.

The David30-D GNSS receiver is built for outdoor environments with IP67-rated enclosure. The compact palm size makes it easy to integrate with various application systems.

Key Features

✓ Supports multi-constellation including BeiDou, GPS, GLONASS, Galileo, and QZSS
✓ Supports RTK positioning and heading
✓ Supports 432 channels
✓ Supports RTCM v2.x/3.x corrections
✓ Flexible for integration in different applications
✓ Data update rate up to 20Hz
✓ IP67-rated dust- & waterproof enclosure, for reliability in harsh environmental conditions

Technical Specifications

Performance

Signal tracking:	
GPS L1, L2; GLONASS L1, L2;	
BDS B1, B2; Galileo E1, E5b; QZSS L1, L2	
GNSS channels:	432
Single Point Positioning Accuracy (RMS):	
- Horizontal:	1.5m
- Vertical:	3.0m
Real Time Kinematic/RTK (RMS):	
- Horizontal:	10mm+1ppm
- Vertical:	15mm+1ppm
DGPS (RMS):	
- Horizontal:	0.4m
- Vertical:	0.8m
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
Reacquisition:	<5s
Timing accuracy (RMS):	20ns
Velocity accuracy (RMS):	0.03m/s
Heading Accuracy:	0.2 degree/1m baseline
Initialization (typical):	<10s
Initialization reliability:	>99.99%
Correction:	RTCM V2.x/3.x
Data format:	NMEA-0183, Tersus binary
Max. data update rate:	20Hz

Communication

Serial ports:	RS232 x2
Serial baud rate:	Up to 921600bps
CAN ports:	CAN x1
PPS ports:	LVTTL x1
Event ports:	LVTTL x2
Antenna connector:	TNC female x2

Software Support

Tersus GNSS Center
Other third party software support NMEA-0183

Electrical

Input voltage:	5V~12V DC
Power consumption (at 25°C):	
	6.8W Without External Radio

Physical

Dimension:	124x79.5x37mm
Weight:	$\approx$ 360g

Environmental

Operating temperature:	-40°C ~ +70°C
Storage temperature:	-40°C ~ +85°C
Humidity:	95% non-condensing
Dust- & waterproof:	IP67

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