

Tersus GNSS

David30-D GNSS Receiver

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 1408 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 challenging environmental conditions



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Technical Specifications

Performance

Signal Tracking:		
GPS L1, L2, L5; Galileo E1, E5a, E5b;	GLONASS L1, L2; QZSS L1, L2, L5	BDS B1I, B2I, B3I;
Channels:	1408	
Single Point Positioning Accuracy (RMS):		
- Horizontal:	1.5m	
- Vertical :	2.5m	
DGPS Positioning Accuracy (RMS):		
- Horizontal:	0.4m	
- Vertical:	0.8m	
Real Time Kinematic/RTK (RMS):		
- Horizontal:	8mm+1ppm	
- Vertical:	15mm+1ppm	
Initialization (Typical):	<5s ⁽¹⁾	
Initialization Reliability:	>99.9% ⁽²⁾	
Observation Accuracy (zenith direction):		
- C/A Code:	10cm	
- P Code:	10cm	
- Carrier Phase:	1mm	
Time To First Fix (TTFF):		
- ColdStart:	<30s	
- WarmStart:	<5s	
Re-acquisition:	<1s	
Timing Accuracy (RMS):	20ns	
Velocity Accuracy (RMS):	0.03m/s	
Heading Accuracy:	0.1 degree/1m baseline	
Differential Data Format:	RTCM v2.x/3.x	
Data Output:	NMEA-0183, Tersus Binary	
Data Update Rate:	20Hz	

Website: www.tersus-gnss.com
Sales Inquiry: sales@tersus-gnss.com
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Electrical

Input Voltage:	5~12V DC ⁽³⁾
Power Consumption(at 25°C):	2.8W without external radio

Software Support

Tersus GNSS Center
Other third party software support NMEA-0183

Communication

Serial Ports:	RS232 x3
Serial Baud Rate:	9600, 19200, 38400, 57600, 115200(default), 230400, 460800bps
CAN Port:	CAN x1
PPS Port:	LVTTTL x1
EVENT Ports:	LVTTTL x2
Antenna Connectors:	TNC Female x2

Physical

Dimension:	124x79.5x37mm
Weight:	≈360g ⁽⁴⁾

Environmental

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

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.