

David30 GNSS Receiver



Full-Constellation High Precision GNSS Receiver

Overview

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

The David30 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 576 channels

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

Flexible for integration in different applications

Data update rate up to 20Hz

Input power range is 5~36V DC

In-built 8GB storage benefits data collection

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

Supports Nuwa surveying software



Technical Specifications



Performance

| | |
|---|------------------------------------|
| Signal Tracking: | |
| GPS L1 C/A, L2C, L2P, L5; GLONASS L1 C/A, L2 C/A; | |
| BeiDou B1I, B2I, B2a, B3I; Galileo E1, E5a, E5b; | |
| QZSS L1 C/A, L2C, L5 | |
| GNSS Channels: | 576 |
| Single Point Positioning Accuracy (RMS): | |
| – Horizontal: | 1.5m |
| – Vertical: | 3.0m |
| Real Time Kinematic/RTK (RMS): | |
| – Horizontal: | 8mm+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: | <2s |
| Timing Accuracy (RMS): | 20ns |
| Velocity Accuracy (RMS): | 0.03m/s |
| Initialization (typical): | <10s |
| Initialization Reliability: | >99.9% |
| Correction: | RTCM 2.x/3.x, CMR/CMR+ |
| Data format: | NMEA-0183 and Tersus Binary format |
| Max. Data Update Rate: | 20Hz |
| Storage: | In-built 8GB |

Communication

| | |
|--------------------|-----------------|
| Serial Ports: | RS232 x2 |
| Serial Baud Rate: | Up to 921600bps |
| USB Ports: | USB 2.0 OTG x1 |
| CAN Ports: | CAN x1 |
| PPS Ports: | LVTTTL x1 |
| Event Ports: | LVTTTL x2 |
| Antenna Connector: | TNC female x1 |

Software Support

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|--|
| Tersus Nuwa |
| Other Third Party Software Support NMEA-0183 |

Electrical

| | |
|------------------------------|-----------|
| Input Voltage: | 5V~36V DC |
| Power Consumption (at 25°C): | 3.6W |

Physical

| | |
|------------|---------------|
| Dimension: | 124x79.5x37mm |
| Weight: | ≈ 360g |

Environmental

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

