

TERSUS

David30-TAP

Full-Constellation High Precision
GNSS Receiver



Tersus David30-TAP

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

The David30-TAP GNSS receiver includes “TAP”, the satellite-based precise point positioning service developed by Tersus GNSS. With TAP, the GNSS rover receiver will not need to work with the local RTK base station or CORS, but directly receives corrections broadcast by the satellites, such as ephemeris error, satellite clock error, etc.

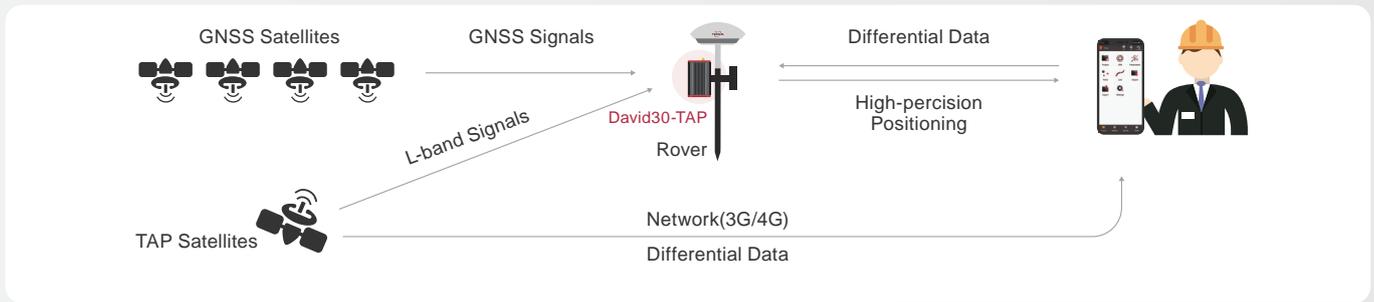


Features

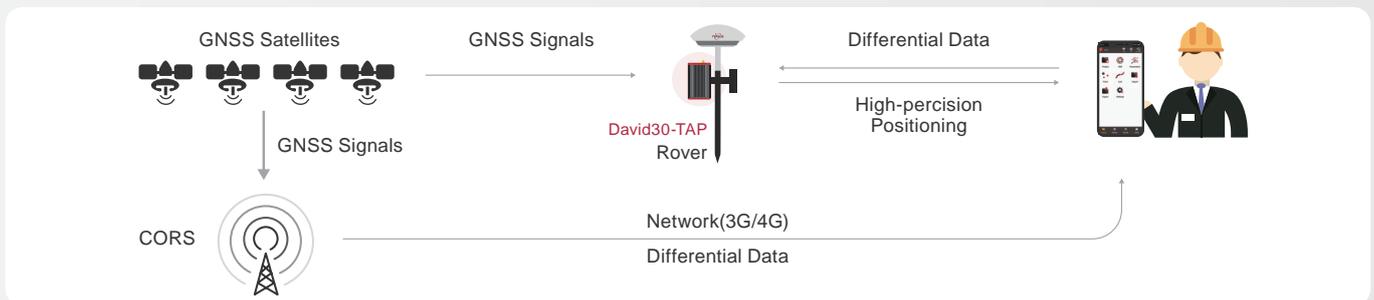
- Supports TAP Service
- Supports multi-constellation including BeiDou, GPS, GLONASS, Galileo, and QZSS
- Support 1792 channels
- Supports RTCM2.3/3.0/3.2, CMR, CMR+ corrections
- Flexible for integration in different applications
- Data update rate up to 20Hz
- Input power range is 5~36V DC
- In-built 8GB storage benefits data collection
- IP67-rated dust- & waterproof enclosure, for reliability in harsh environmental conditions

Working Modes

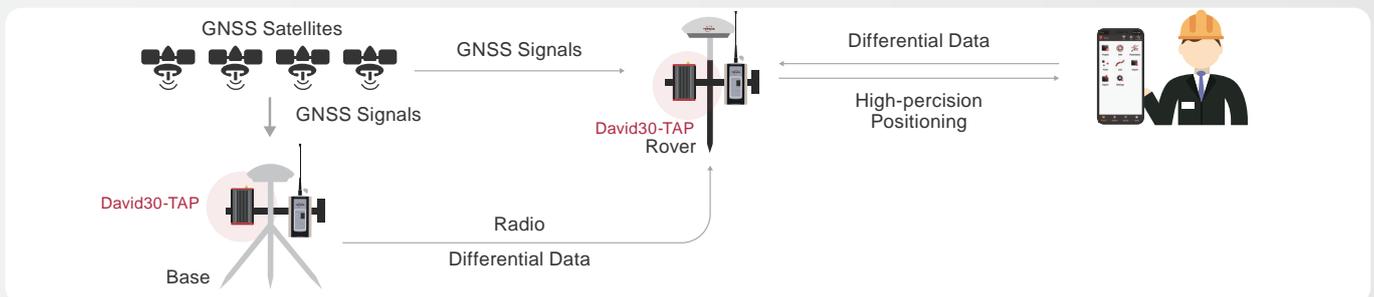
TAP Service



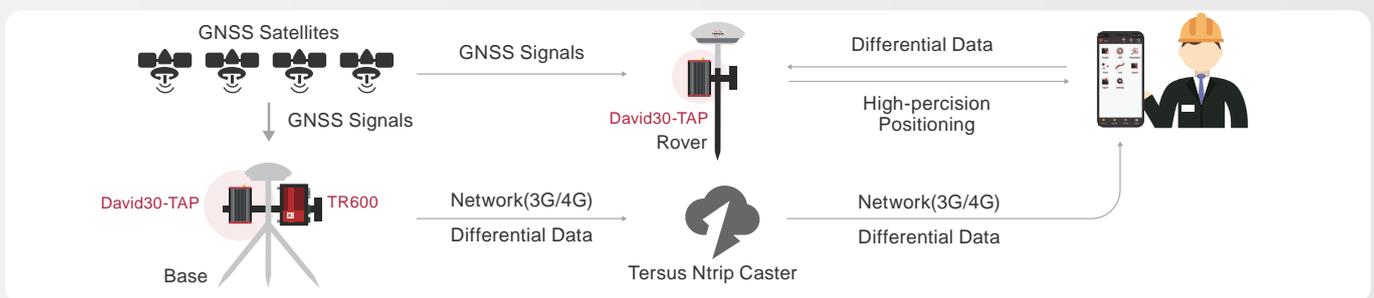
Rover + CORS



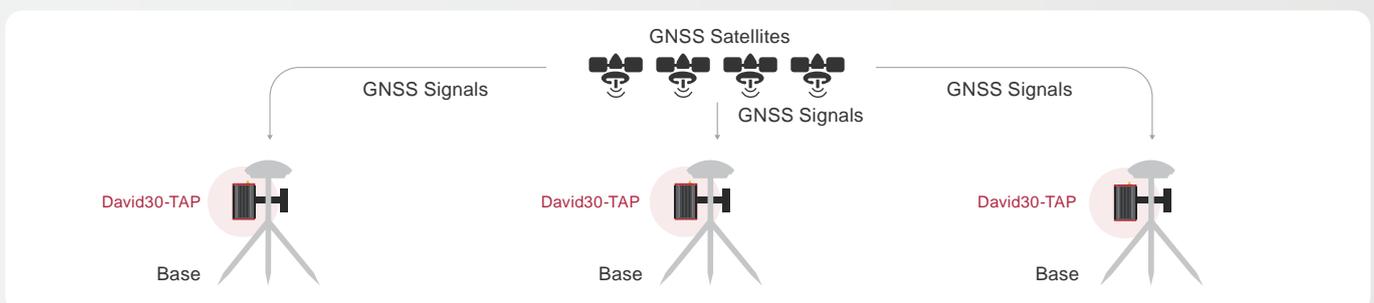
Base + Rover + Radio



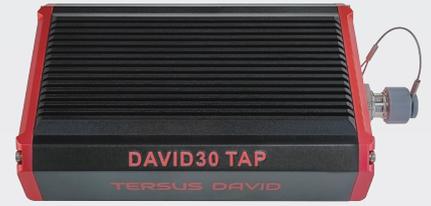
Base + Rover + Tersus Ntrip Caster



Static Surveying



Technical Specifications



David30-TAP

Performance

Signal Tracking:	
GPS L1 C/A, L2C, L2P, L5; GLONASS L1 C/A, L2 C/A BDS B1, B2, B3, supports BDS-3; Galileo E1, E5a, E5b; QZSS L1 C/A, L2C, L5; SBAS supports WAAS, EGNOS, GAGAN, SDCM, MSAS; L-Band	
GNSS Channels:	1792
Single Point Positioning Accuracy (RMS):	
- Horizontal:	1.5m
- Vertical:	3.0m
DGPS Positioning Accuracy (RMS):	
- Horizontal:	0.25m
- Vertical:	0.5m
High-Precision Static (RMS):	
- Horizontal:	2.5mm+0.1ppm
- Vertical:	3.5mm+0.4ppm
Post Processed Kinematic (RMS):	
- Horizontal:	2.5mm+1ppm
- Vertical:	5mm+1ppm
Real Time Kinematic/RTK (RMS):	
- Horizontal:	8mm+1ppm
- Vertical:	15mm+1ppm
Initialization (Typical):	4s ⁽¹⁾
Initialization Reliability:	>99.9%

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
Re-acquisition:	<2s
Timing Accuracy (RMS):	20ns
Velocity Accuracy (RMS):	0.03m/s
TAP Positioning Accuracy (RMS):	
- Horizontal:	15mm
- Vertical:	30mm
TAP Convergence Time:	3 minutes
TAP Coverage:	Globa
TAP Signal Stability:	99.99%
Correction:	RTCM 2.x/3.x, CMR/CMR+
Data Output:	NMEA-0183, Tersus Binary
Max. Update Rate:	20Hz
Storage:	Built-in 8GB
Software Support	
Tersus Nuwa	
Other Third Party Software Support NMEA-0183	

Communication

Serial Ports:	RS-232x2
Serial Baud Rate:	Up to 921600bps
USB Ports:	USB 2.0 OTG x1
CAN Ports:	CAN x1
PPS Ports:	LVTTL x1
Event Ports:	LVTTL x2
Antenna Connector:	TNC female x1

Electrical and Physical

Input Voltage:	5V~36V DC ⁽²⁾
Power Consumption (at 25°C):	6.8W
Dimension:	124x79.5x37mm
Weight:	≈ 360g

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) Input of 28~36V DC can be customized.

Tersus GNSS Inc.

Right to the point.

Tersus is a leading GNSS solution provider – we research, engineer, and manufacture GNSS products for high-precision positioning applications. The product family spans a broad spectrum, from GNSS OEM boards to integrated solutions, such as the David GNSS Receiver, Oscar GNSS Receiver, MatrixRTK, and GNSS Aided Inertial Navigation System. Tersus GNSS products have been widely adopted in numerous industries: surveying, GIS, construction, UAV, automation, precision agriculture...the list continues.

Descriptions, specifications and related materials are subject to change.
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