Tersus GeoBee30

Cost-effective Solution for Ntrip Corrections
Upgraded Version of Tersus GeoBee

Overview

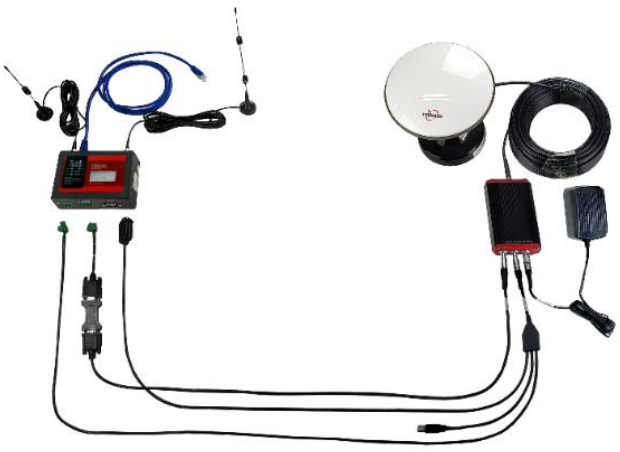
The Tersus GeoBee30 is a dedicated and cost-effective solution to transmit or receive Ntrip corrections. With Tersus Ntrip Caster Service, Ntrip Modem and David30 GNSS Receiver, the GeoBee30 opens the possibility for users to transmit Real Time Kinematic (RTK) corrections via Internet (Ethernet or 2G/3G/4G) in a simple, user-friendly way, just using a SIM card or Ethernet cable without any need of a static IP. GeoBee30 can also work as GNSS Rover to receive RTK corrections from Tersus Ntrip Caster or any CORS service.

Ntrip server mode: use David30 GNSS receiver to create a base station. This temporary base or CORS are for surveying, agriculture, UAV, machine control, and etc. It is also ideal for deformation monitoring. Tersus GNSS Inc. provides Ntrip Caster to transfer data.

Ntrip client mode: connect David30 or other Tersus GNSS receivers to Tersus Ntrip Caster or any Ntrip/CORS service. David30 is mainly used for surveying, and also used as a GNSS sensor in various applications, such as mobile mapping, machine control, precision agriculture, and etc.

Key Features

- Supports multi-constellation including BeiDou, GPS, GLONASS, Galileo, and QZSS
- Supports 576 channels
- Supports RTCM2.3/3.0/3.2, CMR corrections
- Supports 8GB internal storage
- Rapid RTK integer ambiguity resolution
- Supports stable, high-precision measurement output
- Supports Ethernet is default while 2G/3G/4G is hot standby
- Supports Ntrip Server and Ntrip Client protocol
- Supports RS232 and RS485
- Supports remote access and operation



GeoBee30 System Structure

Technical Specifications - David30 GNSS Receiver

Performance

Signal Tracking: GPS L1 C/A, L2C, L2P, L5; GLONASS L1 C/A, L2C/A; BeiDou B1, B2, B3, support BDS-3; 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:	0.25m
– Vertical:	0.5m
High-Precision Static (RMS):	
– Horizontal:	2.5mm+0.1ppm
– Vertical:	3.5mm+0.4ppm
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 memory

Communication

Serial Ports:	RS232 x2
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

Software Support

Tersus Nuwa
Other Third Party Software Support NMEA-0183

Electrical

Input Voltage:	5V~36V DC
Power Consumption (at 25℃):	3.6W

Physical

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

Environmental

Operating temperature:	-40℃ ~ +70℃
Storage temperature:	-40℃ ~ +85℃
Humidity:	95% non-condensing
Dust- & Waterproof:	IP67

Website | www.tersus-gnss.com
Sales Inquiry | sales@tersus-gnss.com
Technical Support | support@tersus-gnss.com

Technical Specifications - Ntrip Modem TR600

Performance

Input Voltage:	12V~48V DC
Operating Current:	350mA @ +12V DC
Standby Current:	250mA @ +12V DC
Power Consumption (typical): 4.2W	

Physical

Dimension:	118x91x34mm (w/o connectors)
Weight:	335g
Operating Temperature:	-30℃ ~ +80℃
Relative Humidity:	95% @ +40℃

Interfaces

Serial Port:	RS232 x1, RS485 x1
Ethernet:	RJ45 x2 (LAN, LAN/WAN)
Antenna Connector:	SMA Female x2 (4G, WiFi)

Communication

Network:
Chinese version:
- 2G: GSM/GPRS/EDGE/CDMA2000 1x
- 3G: UMTS/WCDMA/HDSPA/HSPA+/TD-SCDMA /CDMA2000 EVDO
- 4G: TDD-LTE/FDD-LTE

Eurasian version (Europe, Middle East, Africa, South Korea, Thailand):
- 2G: GSM/GPRS/EDGE
- 3G: UMTS/WCDMA/HDSPA/HSPA+
- 4G: TDD-LTE/FDD-LTE

North American version:
- 3G: UMTS/WCDMA/HDSPA/HSPA+
- 4G: FDD-LTE

Australian version (New Zealand, Australia, South America):
- 2G: GSM
- 3G: WCDMA
- 4G: FDD-LTE/TDD-LTE

Operating Frequency:
Chinese version:
- TDD-LTE B38/B39/B40/B41
- FDD-LTE B1/B3/B8
- UMTS/HSDPA/HSPA+ B1/B8
- TD-SCDMA B34/B39
- CDMA2000 1x/EVDO BC0
- GSM/GPRS/EDGE 900/1800 MHz

Eurasian version:
- TDD-LTE B38/B40
- FDD-LTE B1/B3/B7/B8/B20
- UMTS/HSDPA/HSPA+ B1/B8
- GSM/GPRS/EDGE 900/1800 MHz

North American version:
- FDD-LTE B2/B4/B5/B17
- UMTS/HSDPA/HSPA+ B2/B5

Australian version:
- FDD-LTE B1/B2/B3/B4/B5/B7/B8/B28
- TDD-LTE B40
- WCDMA B1/B2/B5/B8
- GSM 850/900/1800/1900

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