

# 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, 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 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:	LVTTTL x1
Event Ports:	LVTTTL 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°C):	6.8W

### 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





# Technical Specifications - Ntrip Modem TR600

## Performance

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

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## Physical

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

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## Interfaces

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

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## Communication

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Network:
Chinese version:
2G: GSM/GPRS/EDGE/CDMA2000 1x
3G: UMTS/WCDMA/HSDPA/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/HSDPA/HSPA+
4G: TDD-LTE/FDD-LTE
North American version:
3G: UMTS/WCDMA/HSDPA/HSPA+
4G: FDD-LTE
Australian version (New Zealand, Australia, South America):
2G: GSM
3G: WCDMA
4G: FDD-LTE/TDD-LTE

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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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