Tersus GeoBee

Cost-effective Solution for Ntrip Corrections

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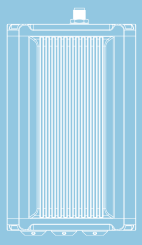
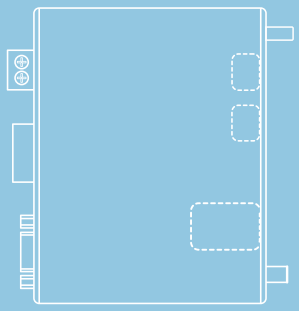


David GNSS Receiver



Ntrip Modem

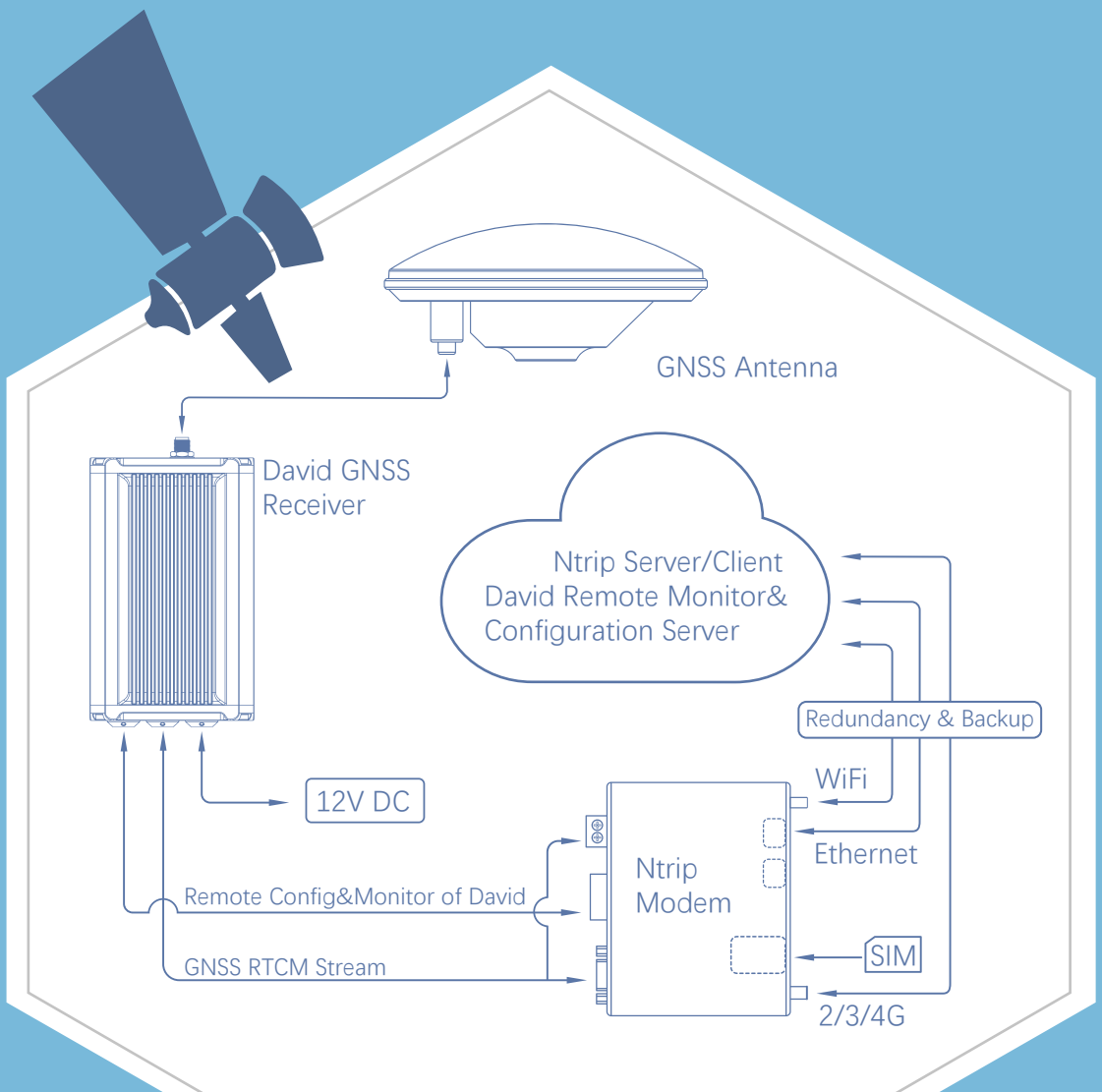
The Tersus GeoBee is a dedicated and cost-effective solution to transmit or receive Ntrip corretions. With Tersus Ntrip Caster Service, Ntrip Modem and David Receiver, the GeoBee opens the possibility for users to transmit Real Time Kinematic (RTK) corrections via Internet (Ethernet or 2G/3G/4G) in a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

Ntrip server mode: use David GNSS receiver to create a base station. This temporary base or CORS is 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 David or other Tersus GNSS receivers to Tersus Ntrip Caster or any Ntrip/CORS service. David is mainly used for surveying, and also used as a GNSS sensor in various applications, such as mobile mapping, UAV, machine control, agriculture, and etc.

Features

- Supports multiple constellations & frequencies
  - GPS L1/L2
  - GLONASS L1/L2
  - BeiDou B1/B2
- Support 384 channels
- Supports RTCM2.3/3.x, CMR, CMR+ corrections
- Supports 4GB 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 remote access and operation



Tersus GeoBee

Technical Specifications - David

Signal Tracking

GNSS	GPS L1/L2 GLONASS L1/L2 BeiDou B1/B2
GNSS Channels	384

Positioning

Single Point Positioning Accuracy (RMS)		
	Horizontal	1.5m
	Vertical	3.0m
Real Time Kinematic (RMS)		
	Horizontal	10mm+1ppm
	Vertical	15mm+1ppm
Post Processed Kinematic (RMS)		
	Horizontal	10mm+1ppm
	Vertical	15mm+1ppm
Static Post Processing (RMS)		
	Horizontal	3mm + 0.5ppm
	Vertical	5mm + 0.5ppm

Observation (zenith direction)

C/A Code	10cm
P Code	10cm
Carrier Phase	1mm

Performance

Time to First Fix		
	Cold Start	<50s
	Warm Start	<30s
Timing Accuracy (RMS)		20ns
Velocity Accuracy (RMS)		0.03m/s
Initialization (typical)		<10s
Initialization Reliability		>99.9%

Electrical

Input Voltage	5V ~ 12V DC
Power Consumption	3.2W(David only)

Data

Storage	4GB in-built Memory
Correction	RTCM2.3/3.x, CMR, CMR+
Max. Update Rate	20Hz

Communication

Serial Ports	RS-232 x 2
USB Ports	USB 2.0 device x1

Physical

Dimension	104x65x31mm (David only)
Weight	≈250g (David only)
Active Antenna Input Impedance	50Ω
Antenna Connector	SMA female x1
COM Baud Rate	Up to 921600bps
Operating Temperature	-40°C ~ + 85°C
Dust & Waterproof	IP67

Optional Accessory

Radio	2W 460MHz 30W 460MHz
Battery bank	

Software Support

Tersus Nuwa	
MicroSurvey FieldGenius	

Tersus GeoBee

Technical Specifications - Ntrip Modem TR600

Performance

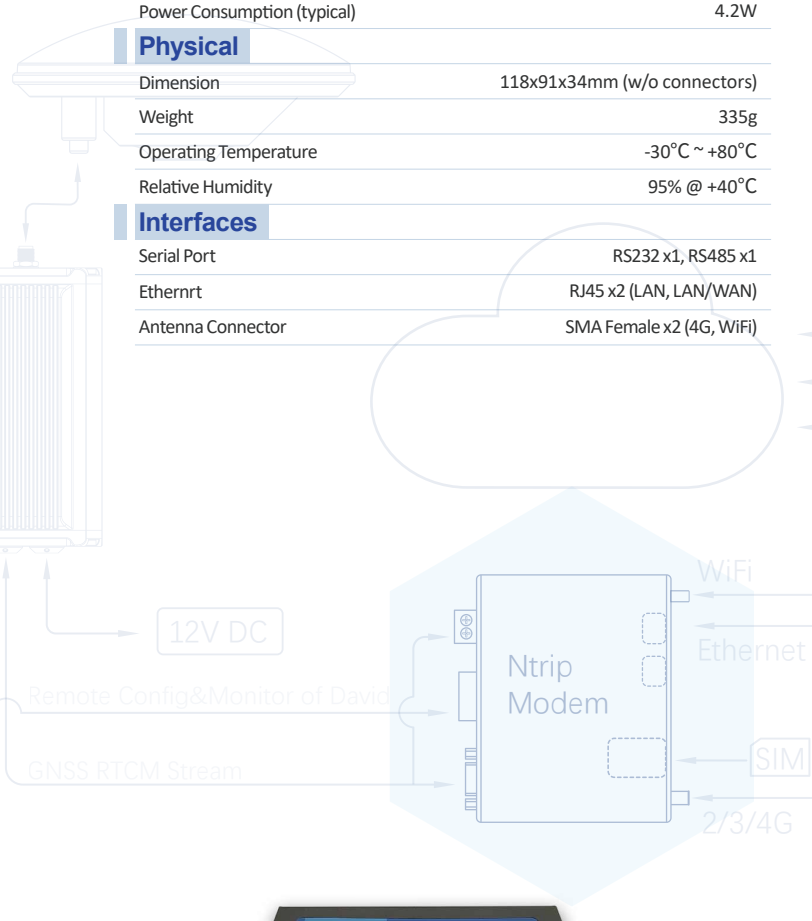
Input Voltage	12V ~ 48V DC
Operating Current	350mA @ +12V DC
Standby Current	250mA @ +12V DC
Power Consumption (typical)	4.2W

Physical

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

Interfaces

Serial Port	RS232 x1, RS485 x1
Ethernrt	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

Communication (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

Tersus GNSS Inc.

Affordable Centimeter Precision

Tersus is a leading GNSS RTK solution provider. Our engineers have been pioneers in the design of GNSS products to support high-precision positioning applications.

Our products include GNSS RTK & PPK OEM boards and receivers, as well as integrated solutions such as the David GNSS Receiver, Oscar Receiver, MatrixRTK, and GNSS-aided Inertial Navigation System.

Designed for easy and rapid integration, our GNSS solutions offer centimeter-level positioning accuracy and flexible interfaces for a variety of applications including: unmanned aerial vehicle (UAVs), surveying, mapping, construction engineering, and precision agriculture.

To learn more, visit: www.tersus-gnss.com
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