GNSS Antenna

David GNSS
Receiver
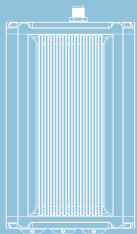
12V DC

Ntrip
Modem

SIM

2/3/4G

TERSUS
GNSS

Tersus GeoBee

Cost-effective Solution for Ntrip Corrections

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Cost-effective Solution for Ntrip Corrections

David GNSS
Receiver

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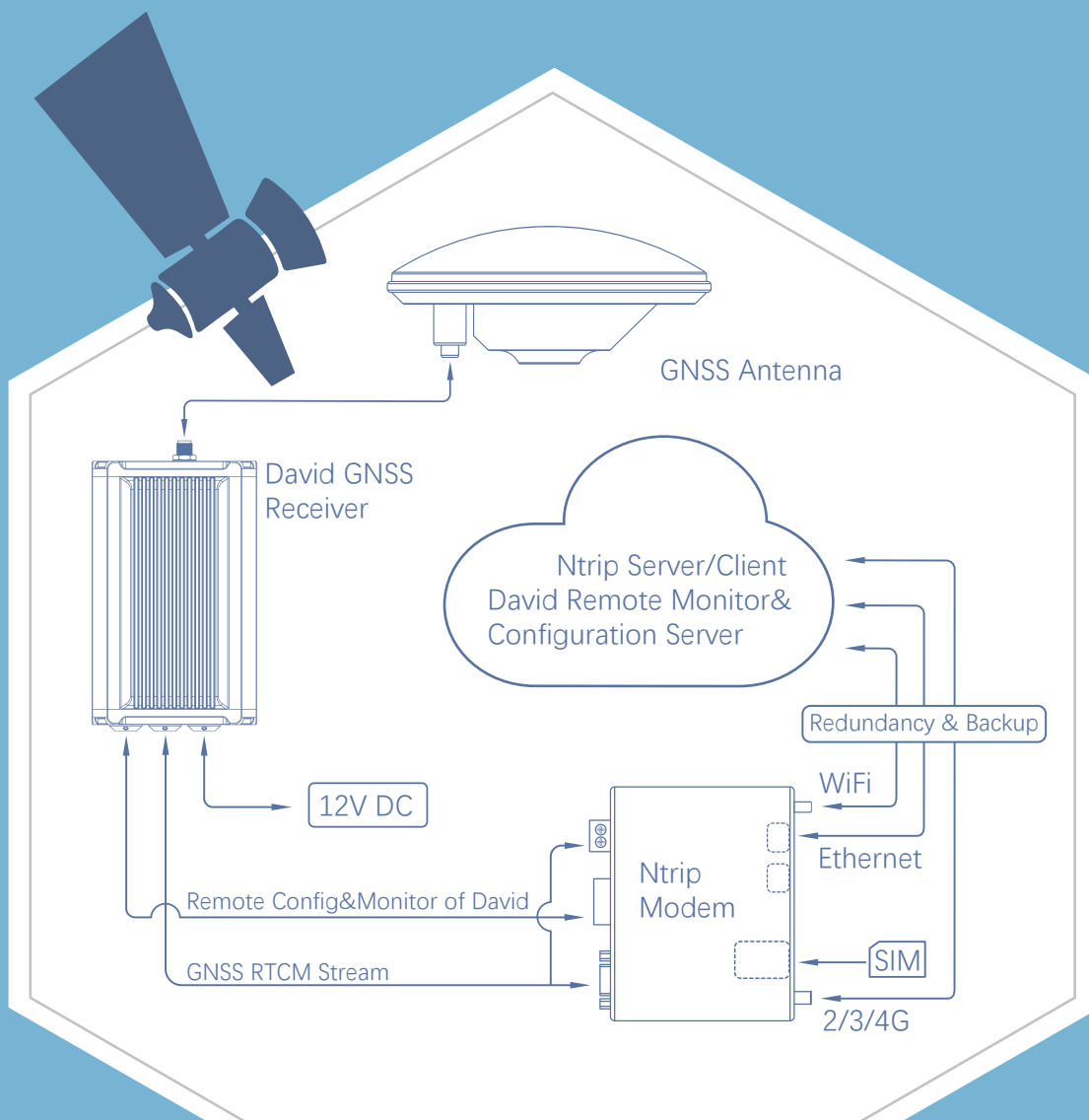
Ntrip client mode: connect David or other Tersus GNSS receivers to Tersus Ntrip Caster or any Ntrip/CORS service. David is mainly used for surveying, and also used as a GNSS sensor in various applications, such as mobile mapping, UAV, machine control, agriculture, and etc.

Ntrip
Modem
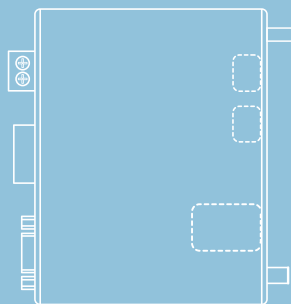
Features

- 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

GNSS Antenna

David GNSS Receiver

Ntrip Server/Client
David Remote Monitor&
Configuration Server

Redundancy & Backup

WiFi

Ethernet

12V DC

Remote Config&Monitor of David

GNSS RTCM Stream

Ntrip Modem

SIM

2/3/4G

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	4.9W(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
Antenna Connector	SMA female x1
Active Antenna Input Impedance	50Ω
COM Baud Rate	Up to 460800bps

Physical

Dimension	104x65x31mm (David only)
Weight	≈250g (David only)
Operating Temperature	-40°C ~ + 85°C
Dust & Waterproof	IP67

Optional Accessory

Radio	2W 460MHz
	30W 460MHz
Battery	Battery bank

Software Support

Tersus Nuwa	
MicroSurvey FieldGenius	
Other Third Party Software Support NMEA-0183	
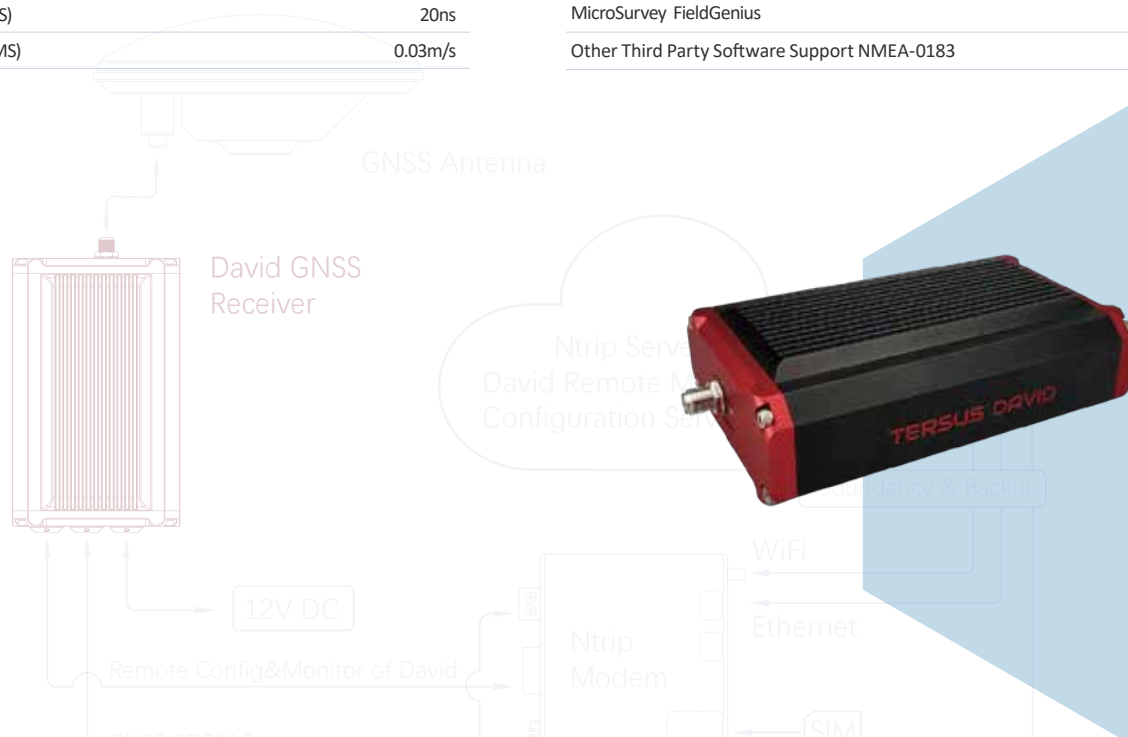
Tersus GeoBee

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

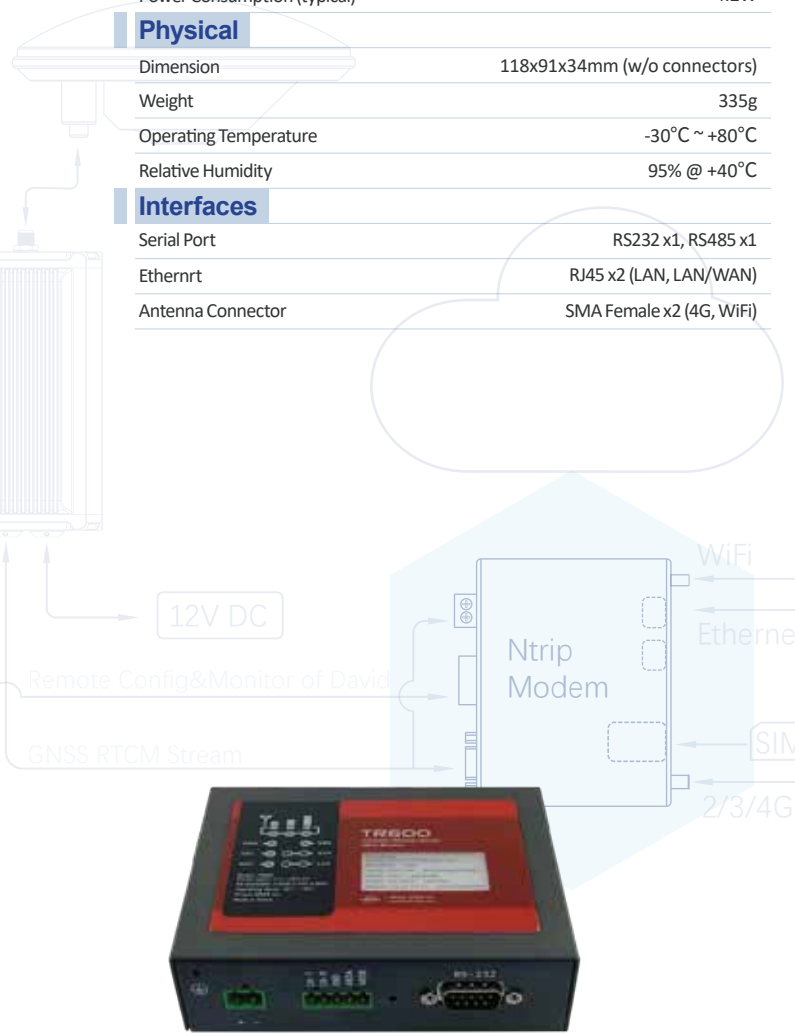|	
Serial Port	RS232 x1, RS485 x1
Ethernrt	RJ45 x2 (LAN, LAN/WAN)
Antenna Connector	SMA Female x2 (4G, WiFi)

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

WiFi

Ethernet

SIM

2/3/4G

Ntrip Modem

12V DC

Remote Config&Monitor of David

GNSS RTCM Stream

TR600

Tersus GNSS Inc.

Global Accuracy Easier

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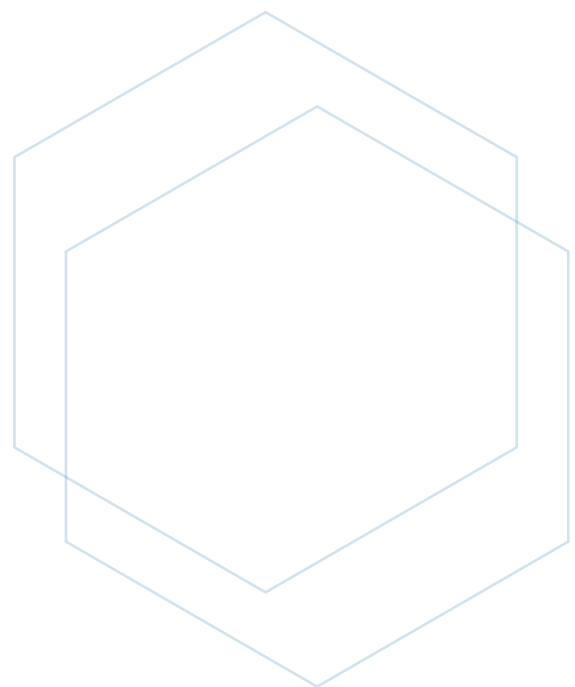
To learn more, visit: www.tersus-gnss.com
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