# TERSUS

Affordable Centimeter Precision for Everyone

## David GNSS Receiver

### Base & Rover Kits

# Tersus David

## GNSS Receiver

**The Tersus David** is a cost-efficient, palm-sized GNSS receiver designed for UAVs, AGVs, and surveying applications. Using an external GNSS antenna, the free Tersus Survey App and post-processing software, the David GNSS receiver is a low-cost solution for all survey applications, including real-time RTK positioning and data collection for PPK.

A 4GB in-built memory makes it easy to save data for post processing. The compact size, IP67-rated enclosure and external Bluetooth module alleviates most of the inconveniences encountered in field work.

## Features

### Seamless Integration with Mobile Phone

- Free survey App available

### Versatile Communication & I/O Interface

- Easy connection to an external radio module for long range communications
- Bluetooth module establishes wireless connection in seconds

### Wide Range of Applications

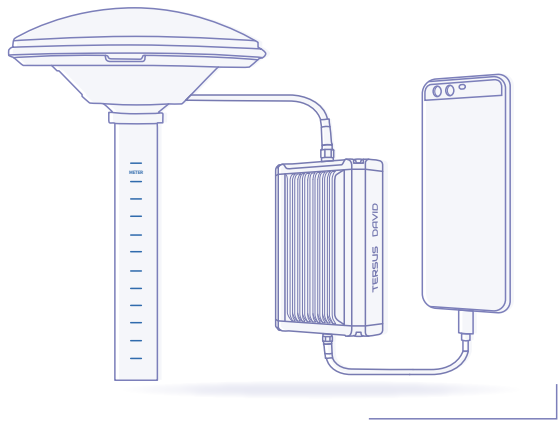
- Paired with a smartphone, the David GNSS receiver can operate as a base, rover and GIS data collector

### Convenient Connection

- Supports Ntrip protocols for receiving CORS differential data
- Tersus Ntrip Caster service available for the connection of two or more David GNSS receivers

### Multi-GNSS (GPS L1/L2, GLONASS L1/L2, BeiDou B1/B2)

- Powered by the Tersus GNSS OEM board, David GNSS receiver provides high-precision positioning performance.



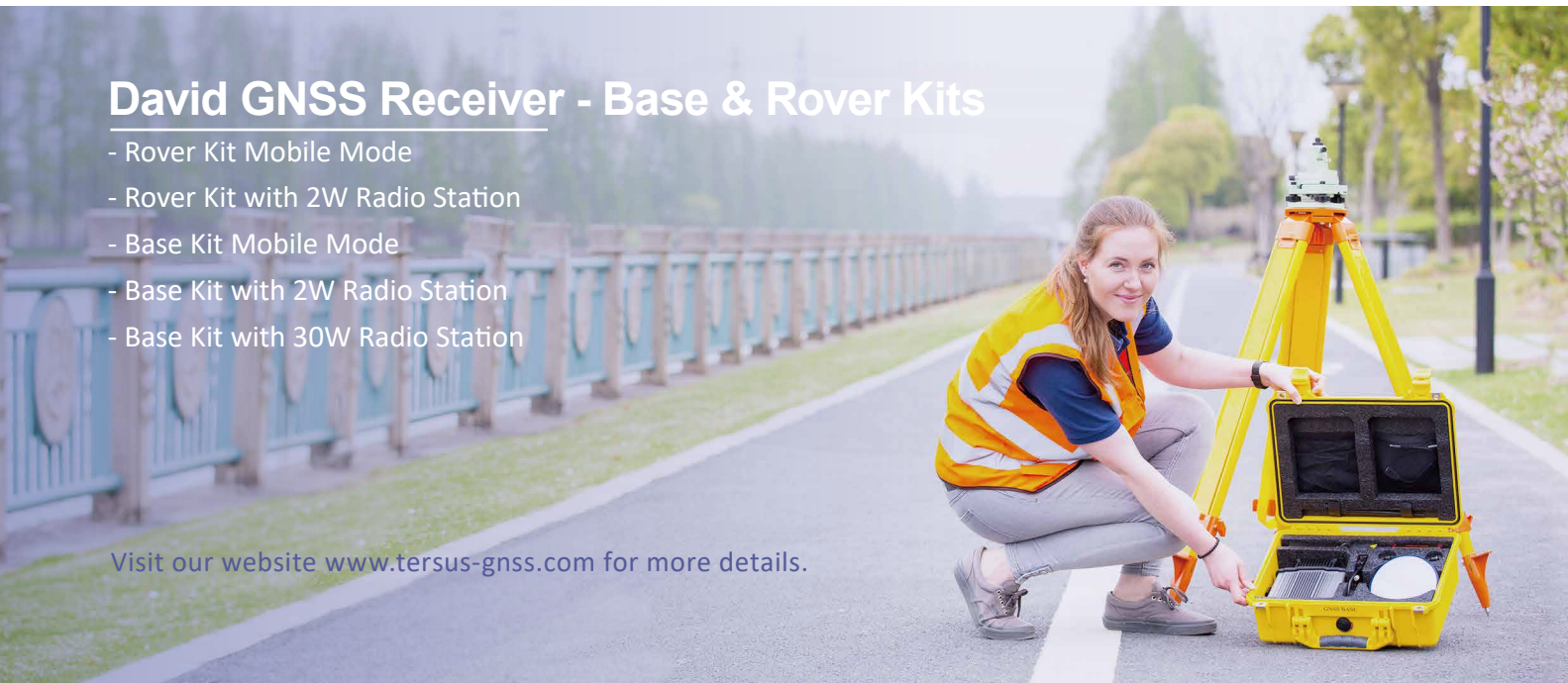

Tersus David RTK, Paired with Smartphone, Enable CM-level Accuracy.

### IP67

- Rugged casing and IP67-rated enclosure to support operations in harsh field environments

### Easy-to-use Software & App

- Intuitive software turns any Android phone or pad into an advanced field controller for David GNSS receiver.
- MicroSurvey FieldGenius supports Tersus David.



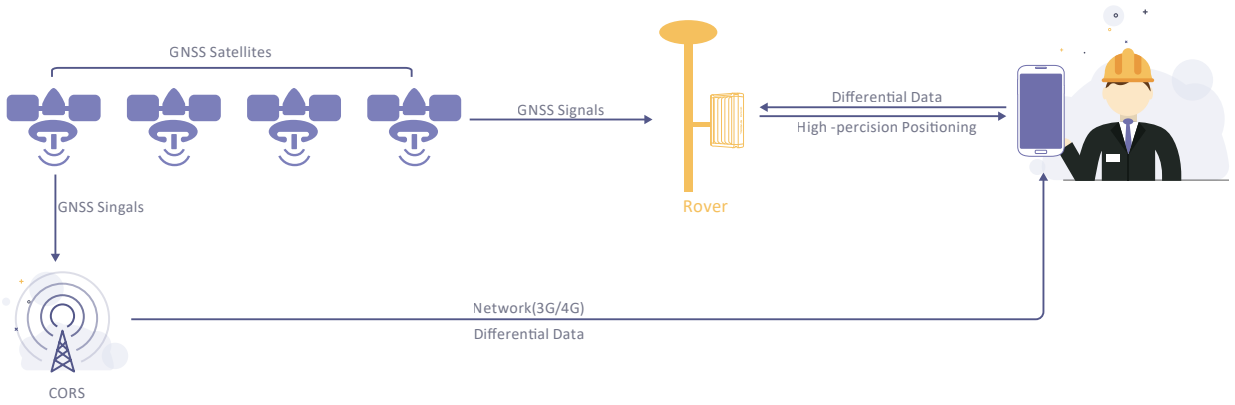
## David GNSS Receiver - Base & Rover Kits

- Rover Kit Mobile Mode
- Rover Kit with 2W Radio Station
- Base Kit Mobile Mode
- Base Kit with 2W Radio Station
- Base Kit with 30W Radio Station

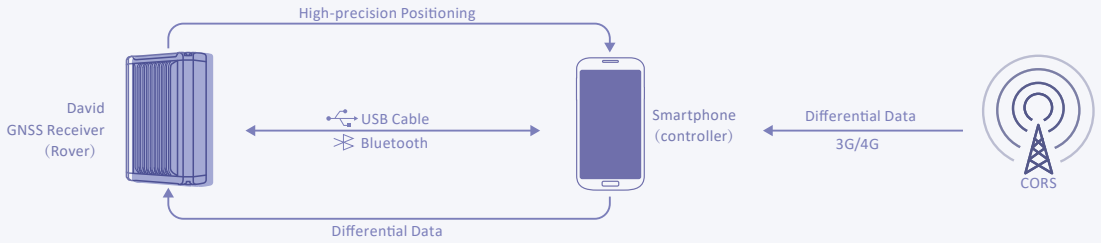
Visit our website www.tersus-gnss.com for more details.

# Working Modes

## Rover + CORS

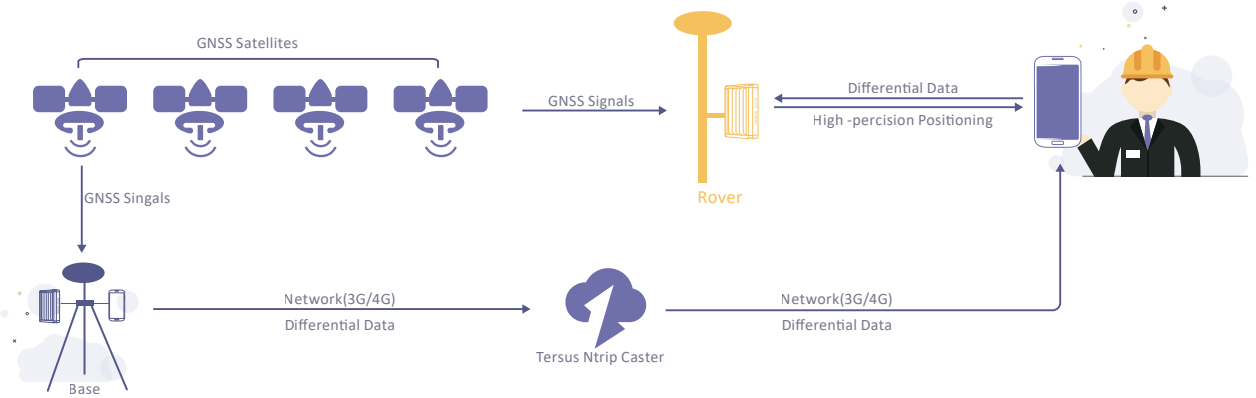



Illustration




Flow Chart

## Base + Rover + Tersus Ntrip Caster

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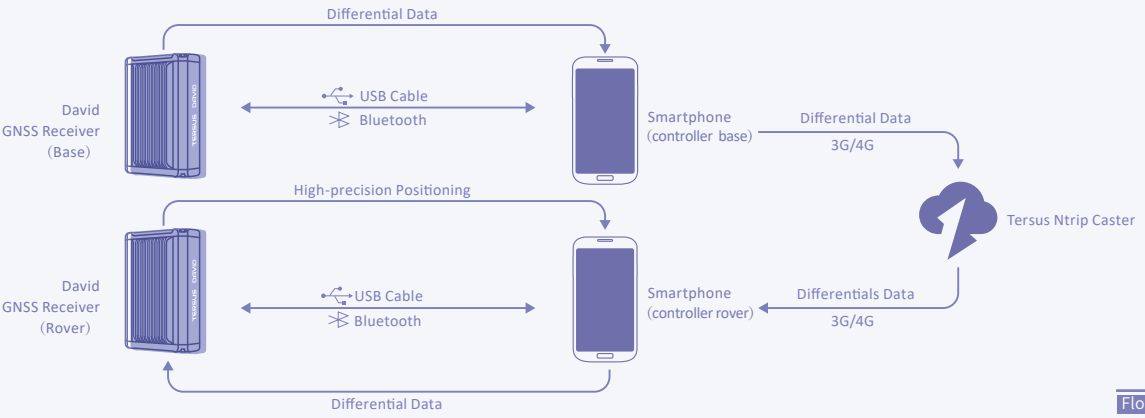
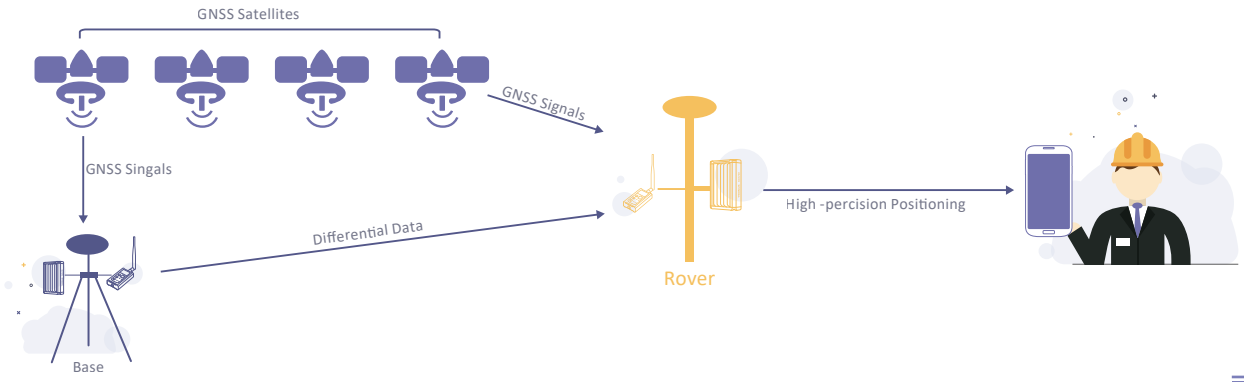



Flow Chart

## Base + Rover + Radio

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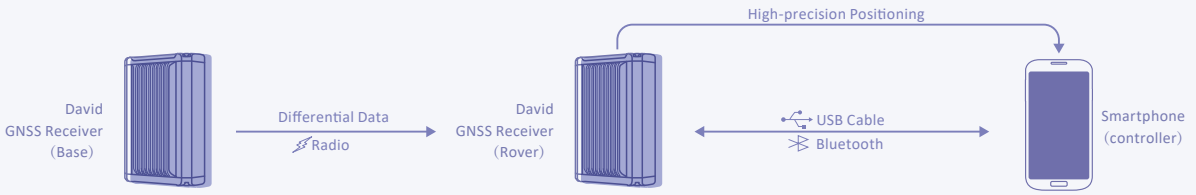
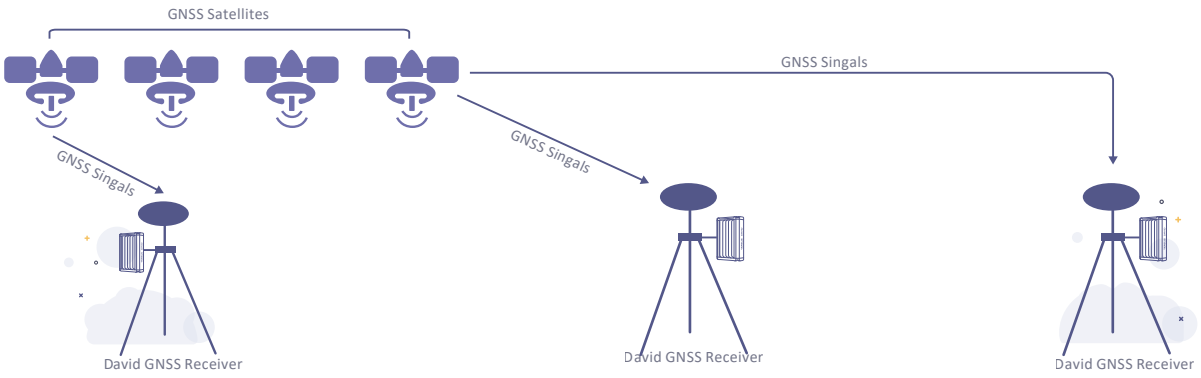



Flow Chart

## Static Surveying

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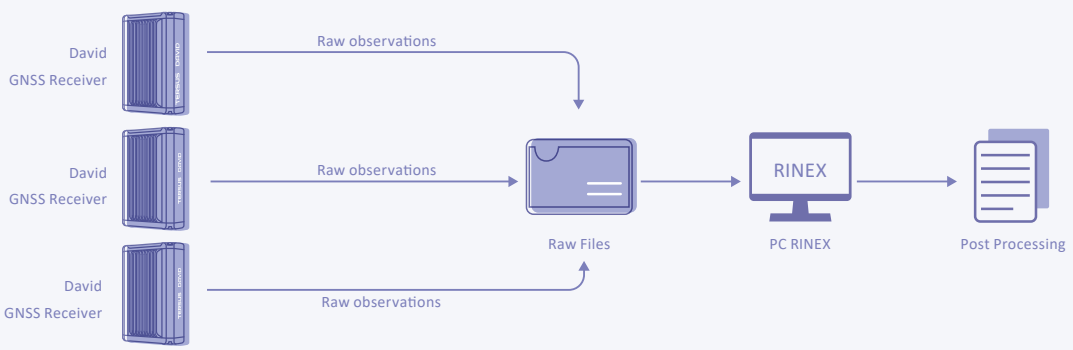



Flow Chart

# Specifications

## Signal Tracking

| | |
|---|---|
| GNSS | GPS L1/L2<br>GLONASS L1/L2<br>BeiDou B1/B2 |

## 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 |

## 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

| | |
|---|---|
| Size | 104x65x31mm |
| Weight | 250g (David only)<br>360g (David + BT+PW/USB Cable) |
| Active Antenna Input Impedance | 50Ω |
| Antenna Connector | SMA female x1 |
| COM Baud Rate | Up to 921600bps |
| Operating Temperature | -40°C ~ + 85°C |
| Dustproof & Waterproof | IP67 |

## Optional Accessory

| | |
|---|---|
| Radio | 2W 460MHz<br>30W 460MHz |
| Battery | Battery bank |

## Software Support

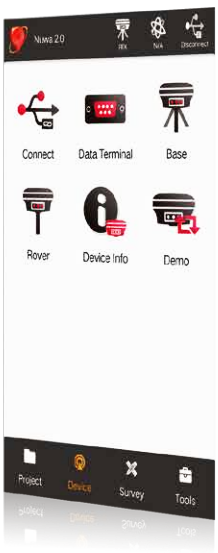
Tersus Nuwa

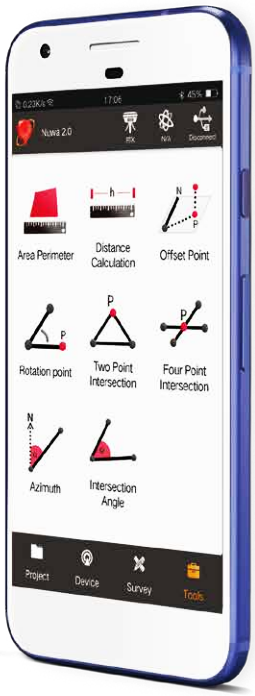
MicroSurvey FieldGenius

# Nuwa App

## Features

- Supports Bluetooth/USB connection
- Graphical Interface for surveying and stakeout
- Data Management (import/export multiple formats)
- Configures Base, Rover and Static Survey
- Various built-in tools
- Supports background map (online/import)





# Tersus GNSS Inc.

## Affordable Centimeter Precision for Everyone

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, NeoRTK, MatrixRTK, GNSS-aided Inertial Navigation System, and AutoSteer 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
Sales inquiry : sales@tersus-gnss.com
Technical support : support@tersus-gnss.com

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