

VENUS T3



- 440 channels
- Dual battery onboard
- 8km radio link range
- WebUI, WiFi and OTG
- Android software compatible
- RepeaterLink™

Specification

GNSS characteristics

- **440 GNSS channels**
 - GPS L1/L2/L5
 - GLONASS L1/L2/L3
 - BDS B1/B2/B3
 - GAL E2-L1-E1/E5a/E5b/E6/AltBOC
 - SBAS L1C/A, L5
 - EGNOS, WAAS
- **Initialization:** time <10s, reliability >99.99%
- **Supported data formats:**
RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2, CMR+, CMRx
- **Output data formats:**
NMEA 0183, PJK plane coordinates, Binary code, Trimble GSOF

Positioning Accuracy

Code differential GNSS positioning

- Horizontal: $\pm 0.25\text{m} + 1\text{ppm}$
- Vertical: $\pm 0.50\text{m} + 1\text{ppm}$
- SBAS positioning accuracy: typically <5m 3DRMS

Static (Long)

- Horizontal: $\pm 3.0\text{mm} + 0.1\text{ppm}$
- Vertical: $\pm 3.5\text{mm} + 0.4\text{ppm}$

Real-time kinematic (RTK)

- Horizontal: $\pm 8\text{mm} + 1\text{ppm}$
- Vertical: $\pm 15\text{mm} + 1\text{ppm}$

Network/RTK

- Horizontal: $\pm 3\text{mm} + 0.5\text{ppm}$
- Vertical: $\pm 10\text{mm} + 0.8\text{ppm}$

RTK initialization time

- 2~8s

Physical characteristics

Size

- 17.5 x 17.5 x 8.3 cm

Weight

- 1.33 kg (2 batteries included)

User interface

- Five Indicator lights
- Two buttons

I/O interface

- 5PIN LEMO external power port+RS232
- 7PIN external USB(OTG)+Ethernet
- Bluetooth 2.1+EDR standard
- Bluetooth 4.0 standard, support android, ios connection

Memory

- 8GB SSD internal storage
- Support external USB storage (up to 32 GB)
- Automatic cycle storage
- Changeable record interval
- Up to 50Hz raw data collection

Operation

- RTK rover & base
- RTK network rover: VRS, FKP, MAC
- NTRIP, Direct IP
- Post-processing

Environmental characteristics

- Operating temperature: -45°C to $+65^{\circ}\text{C}$
- Storage temperature: -55°C to $+85^{\circ}\text{C}$
- Humidity: 100% condensing
- IP67 waterproof, sealed against sand and dust
- Drop: 2m pole drop on concrete

Power characteristics

- Two Li-Ion batteries, 7.4 V, 3400 mAh
- Battery life: up to 20h (static)
up to 18h (RTK base)
up to 16h (RTK rover)
- External DC power: 9-25 V

UHF Radio characteristics

- Built-in radio
- Frequency Range 410-470MHz
- Protocol:
TrimTalk450s, TrimMark3, SOUTH (SANDING)
- 1W/2W/3W switchable
- typically working range 7-8km
- "Barrier-Free" Measurement Technology:
Repeater/ Router/ CSD mode

Cellular module characteristics

- WCDMA/CDMA2000/TDD-LTE/FDD-LTE 4G
- Compatible with 3G GPRS/EDGE

WebUI

- Configure and monitor receiver by web server via Wi-Fi or USB cable

NFC

- Close range (shorter than 10cm) automatic pair between receiver and controller (need NFC chip in controller)

Wifi

- 802.11 b/g standard
- Hotspot: allow device to access in
- data link: broadcast differential data

Voice Guide

- intelligent voice technology provides status indication and operation guide
- Chinese, English, Korean, Russian, Portuguese, Spanish, Turkish and user define

Standard system components

- VENUS T3 Receiver
- Li-Ion battery
- Charger and adapter
- All-direction antenna
- Tape measure
- 30 cm pole extension
- 7-pin to OTG cable
- Engineering Star (Windows)
- Engineering Star (Android)
- 1 year warranty

Optional system components

- External Radio (410-470 MHz, 5-35W)
- Battery Case SA-6003
- Data collectors
 - S720 (Windows)
 - H3 plus (Android)
 - T17 (Windows)
 - X11 pro (Windows)
- Field software
 - Field Genius (Windows)
 - SurvX (Android)
- 1 2 year warranty extension

Dealer Locate:

SANDING GEO OFFICE
Office Suite for Data Processing.

SANDING SurvX
FieldSoftware for Android Device