SPECIFICATION

Surveying Performance
- 220 Channels
- Signal Tracking
  - GPS L1C/A, L1C, L2C, L2E, L5
  - BDS B1, B2, B3
  - GLONASS L1C/A, L1P, L2C/A, L2P, L3
  - SBAS L1C/A, L5 (only for the satellites supporting L5)
  - Galileo GIOVE-A, GIOVE-B, E1, E5A, E5B
  - QZSS, WAAS, MSAS, EGNOS, GAGAN, SBAS
- GNSS Features
  - Positioning output rate: 1Hz~50Hz
  - Initialization time: <10s
  - Initialization reliability: >99.99%

Positioning Precision
- Code Differential GNSS Positioning
  - Horizontal: ±0.25 m + 1 ppm
  - Vertical: ±0.50 m + 1 ppm
  - SBAS positioning accuracy: typically<5m 3DRMS
- Static GNSS Surveying
  - Horizontal: ±2.5 mm + 0.5 ppm
  - Vertical: ±5 mm + 0.5 ppm
- Real-Time Kinematic Surveying (Baseline<30km)
  - Horizontal: ±8 mm + 1 ppm
  - Vertical: ±15 mm + 1 ppm
- Network RTK
  - Horizontal: ±8 mm + 0.5 ppm
  - Vertical: ±15 mm + 0.5 ppm
  - RTK initialization time: 2~8s

Physical
- Dimension: 12.9 cm X 11.2cm
- Weight: 970g (including installed battery)
- Material: Magnesium aluminum alloy shell

Environmental
- Operating: -45℃ ~ +60℃
- Storage: -55℃ ~ +85℃
- Humidity: Non-condensing
- Waterproof/Dustproof
  - IP67 standard, protected from long time immersion to 1m depth
  - IP67 standard, fully protected against blowing dust
- Shock and Vibration
  - OFF Status: Withstand 2m pole drop onto the cement ground
  - ON Status: Withstand 40G 10 milliseconds sawtooth wave impact test

Electrical
- Power Consumption: 2W
- Power supply: 9-25V DC, over-voltage protection
- Battery
  - Rechargeable, removable Lithium-ion battery, 7.4V, 3400mAh
- Battery Life
  - Single battery: 7h (static) 5h (base UHF) 6h (rover)
- WiFi Hotspot/Datalink
  - WiFi hotsport allows smart terminal to connect internal webserver To control and monitor receiver
  - T66V is able to broadcast and receiver differential data via WiFi

Certification
CE Mark approval
EU Identification No.0700
FCC Identifier 2ADPC-T66
Class B Part 15
ISO9001/14001

Communications and Data Storage
- I/O Port
  - 5PIN LEMO external power port + Rs232
  - 7PIN LEMO RS232 + USB (OTG)
  - 1 network/radio data link antenna port
  - SIM card slot
- Wireless Modem
  - Integrated iDatalink™ technology
  - Internal radio transceiver 1/2/3W, up to 8km
  - External radio transmitter 5/25W, up to 20km
- Working frequency: 410-470MHz
- Communication protocol
  - TrimTalk450s, TrimMark3, PCC EOT, SOUTH
- Cellular Mobile Network
  - TDD/FDD-LTE 4G
  - WCDMA 3.5G module, GPRS/EDGE compatible, CDMA2000/EVDO 3G optional
- Double Module Bluetooth
  - BLEBluetooth 4.0 standard, supports Android and iOS
  - Bluetooth 2.1 + EDR standard
- NFC Communication
  - Realizing close range (<10cm) automatic pair between T66V and controller (equipped with NFC wireless communication module required)
- Data Storage/Transmission
  - 8GB SSD internal storage, more than 6 years raw observation data (about 1.4M/day), based on recording from 14 satellites plug and play, OTG function supported
- Data Format
  - Differential: CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
  - GPS output: NMEA 0183, PJK plane coordinates, binary code
  - Network model support: VRS, FKP, MAC, supporting NTRIP protocol

Inertial Sensing System
- Tilt Survey
  - Built-in tilt compensator, correcting coordinates automatically according to the tilt direction and angle of the centering rod
- Electronic Bubble
  - Controller software display electronic bubble, checking leveling status of the centering rod real time

User Interaction
- Buttons
  - One-button and 3 indicators operation, embedded Linux OS
- Thermometer
  - Built-in thermal sensor and intelligent temperature system which can monitor and control receiver temperature in real-time
- WebUI, iVoice© Guide

	Vanguard T66V	Pioneer T66	Pioneer T66 Lite
IDatalink™ tech.	√		
UHF Radio	1/2/3W, >8km	0.5/2W, 5km	Optional
Lean&GO	√	√	
Intelligent System	√		
Web Interface	√		
WiFi	√		
Memory	8Gb SSD	4Gb	4Gb

DEALER

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SANDING
Every Point Matters

Sanding Positioning System

Vanguard T66V

- Sanding iDatalink™ technology
- Intelligent Embedded LinuxOS
- Precision GNSS base station
- Intuitive Webserverinterface
- OTG and SMS control

Vanguard T66V

Work it differently

Sanding Vanguard T66V can utilize more GNSS constellations, satellites, and signals than traditional GPS. It provides better accuracy even under tree or building canopy, more productivity for on-field crews.

Revolutionary Updates

- iDatalink™ technology
- R=8km radio coverage
- SMS service
- OTG function
- Tilt survey
- Electric Bubble
- Full constellations
- iVoice® Guide
- WiFi and webUI
- Full-band 410-470Mhz
- 8G onboard memory

X11

Field software

Sanding Engineering Star

Our own program Sanding Egstar turns complex surveying process into six simple button on one screen.

- Standard/Control point survey
- Support DXF/SHP import and export
- Sealess control iDatalink™ technology
- Versatile COGO program

Sanding Field Genius

FieldGenius gives you a competitive advantage in the field. Some customers have reported up to a 30% time reduction.

- Map-driven instead of menu-driven workflow
- Code-free linkwork, but clear sketch
- Powerful roading and advanced module
- GPS/TS supported, standard/premium

Controller

X11 Lite

- Windows Mobile 6.5
- 1Ghz CPU, RAM 512
- ROM 8GB, SD expansion upto?32G
- Numeric Keyboard
- Weight 600g only
- 7.2V removable Li-ion, 3400mAh
- 3.7inch 480x680VGA, LED backlight
- MIL-STD-810G and Ip67
- OTG function

Additional Functions of X11 pro

- 72 channels GNSS chip
- AutoFocus 5MP camera
- Navigation update rate 4Hz
- WCDMA network module

Android solution package

H3 Controller

- Android 4.4, 1.5G CPU
- 4.3” capacitive, sunlight screen
- 6500mAh, 10h duration
- Variable sensors, dual standby SIM
- 8 megapixel camera
- IP68

SurvX software

- Modularized function management
- Predefine Coord. System for countries
- Clear S/O UI design
- Cloud technology embedded
- RTK and PPK

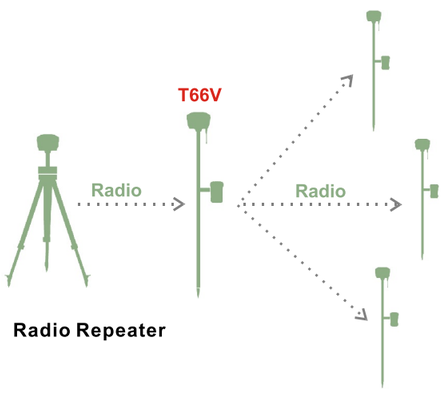
H3 Plus

Surv X

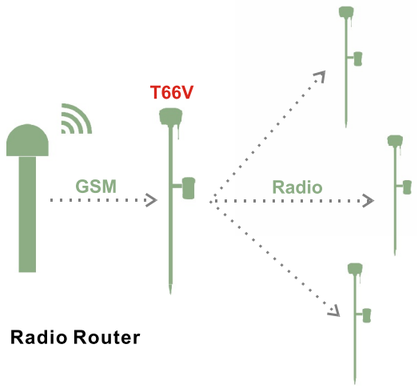
What’s iDatalink™ technology?

As we know, the link between base and rover is the lifeline of RTK surveying. Its stability and coverage concern the quality of data accuracy and stakeout. You’re looking for solutions on the market.

Now you have it. Vanguard T66V powerful 3W internal radio makes your field work more flexible and versatile. It can link up more than 10 rovers simultaneously using GSM rover with Sanding iDatalink™ technology. Moreover, Vanguard T66V help to repeat base radio signal to other rovers. All the connectivity to correction base are guaranteed, for you to make every point matter.



Radio Repeater



Radio Router

Optional accessories

4-in-1 compartment
Fit in 4x standard RTK batteries. 5-pin output for internal UHF base

Tribranch&Adapter
Setup base on tripod. Optical/Laser plummet available

External battery SA6001
2-pin charging and 5-pin output, 11.1V, 11000mAh

Bipod
Useful when casually fixing rover or calibrate level bubble