## SPECIFICATIONS

| | | | |
|---|---|---|---|
| **GNSS Features** | | Bluetooth | Bluetooth 3.0/4.1 standard, Bluetooth 2.1 + EDR |
| Channels | 1598 | NFC Communication | Realizing close range (shorter than 10cm) |
| GPS | L1, L1C, L2C, L2P, L5 | | automatic pair between receiver and |
| GLONASS | L1C/A,L1P,L2C/A,L2P,L3* | | controller (controller requires NFC |
| BDS | BDS-2: B1I, B2I, B3I | | wireless communication module else) |
| | BDS-3: B1I, B3I, B1C, B2a, B2b* | **WIFI** | |
| GALILEOS | E1, E5A, E5B, E6C, AltBOC* | Modem | 802.11 b/g standard |
| SBAS | L1* | WIFI hotspot | AP mode, Receiver broadcasts its hotspot form |
| IRNSS | L5* | | web UI accessing with any mobile terminals |
| QZSS | L1, L2C, L5* | WIFI datalink | Client mode, Receiver can transmit and receive |
| MSS L-Band | BDS-PPP | | correction data stream via WiFi datalink |
| Positioning output rate | 1Hz~20Hz | **Data Storage/Transmission** | |
| Initialization time | < 10s | Storage | 4GB SSD |
| Initialization reliability | > 99.99% | | Automatic cycle storage (The earliest data |
| **Positioning Precision** | | | files will be removed automatically while the |
| Code differential GNSS positioning | Horizontal: 0.25 m + 1 ppm RMS | | memory is not enough) |
| | Vertical: 0.50 m + 1 ppm RMS | | Support external USB storage |
| GNSS static | Horizontal: 2.5 mm + 0.5 ppm RMS | Data transmission | Plug and play mode of USB data transmission |
| | Vertical: 5 mm + 0.5 ppm RMS | | Supports FTP/HTTP data download |
| Real-time kinematic | Horizontal: 8 mm + 1 ppm RMS | Data format | Static data format: STH, Rinex2.01, Rinex3.02 and etc. |
| (Baseline<30km) | Vertical: 15 mm + 1 ppm RMS | | Differential format: RTCM 2.3, RTCM 3.0, |
| SBAS positioning | Typically < 5m 3DRMS | | RTCM 3.1, RTCM 3.2 |
| RTK initialization time | 2 ~ 8s | | GPS output data format: NMEA 0183, PJK plane |
| IMU tilt compensation | Additional horizontal pole tip uncertainty typic- | | coordinate, SANDING Binary code |
| | ally less than 10mm + 0.7 mm/° tilt down to 30° | | Network model support: VRS, FKP, MAC, |
| IMU tilt angle | 0° ~ 60° | | fully support NTRIP protocol |
| **Hardware Performance** | | **Sensors** | |
| Dimension | 130mm(W) ×130mm(L) × 80mm(H) | Electronic bubble | Controller software can display electronic |
| Weight | 790g (battery included) | | bubble, checking leveling status of the |
| Material | Magnesium aluminum alloy shell | | carbon pole in real-time |
| Operating temperature | -45° C~ +75° C | IMU | Built-in IMU module, calibration-free |
| Storage temperature | -55° C ~ +85° C | | and immue to magnetic interference |
| Humidity | 100% Non-condensing | Thermometer | Built-in thermometer sensor, adopting intelligent |
| Waterproof/Dustproof | IP68 standard, protected from long | | temperature control technology, monitoring |
| | time immersion to depth of 1m | | and adjusting the receiver temperature |
| | IP68 standard, fully protected against | **User Interaction** | |
| | blowing dust | Operating system | Linux |
| Shock/Vibration | Withstand 2 meters pole drop onto | Buttons | One button |
| | the cement ground naturally | Indicators | 5 LED indicators(Satellite, Charging, |
| Power supply | 6-28V DC, overvoltage protection | | Power, Datalink, Bluetooth) |
| Battery | Inbuilt 7.4V 6800mAh rechargeable, | Web interaction | With the access of the internal web interface |
| | Li-ion battery | | management via WiFi or USB connection, users |
| Battery life | 15h(Rover Bluetooth mode) | | are able to monitor the receiver status and |
| **Communications** | | | change the configurations freely |
| I/O Port | 5-PIN LEMO external power port + RS232 | Voice guidance | It provides status and operation voice guidance, |
| | Type-C(charge, OTG to USB disk, | | and supports Chinese/English/ |
| | data transfer with PC or phone, Ethernet) | | Korean/Spanish/Portuguese/Russian/Turkish |
| | 1 UHF antenna TNC interface | Secondary development | Provides secondary development |
| Internal UHF | Receive and transmit, 2W | | kit, and opens the OpenSIC observation |
| Frequency range | 410 - 470MHz | | data format and interaction interface definition |
| Communication protocol | Farlink, Trimtalk450s, SANDING, | Cloud service | The powerful cloud platform provides online |
| | HUACE, Hi-target, Satel | | services like remote manage, firmware update, |
| Communication range | Typically 8km with Farlink protocol | | online register and etc. |

*Items marked with * will be upgraded along with the update of assigned firmware version*

*The data comes from the SANDING GNSS Product Laboratory, and the specific*

CE FC MIL-STD 810G

SANDING
EVERY POINT MATTERS

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# Aqua T5

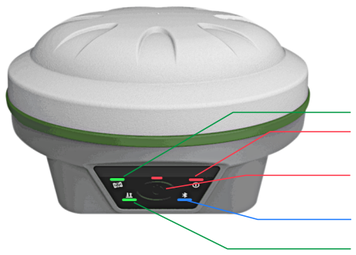
## - Supercharged pocket RTK -

## Lighter and Faster

Only 790g in weight, T5 is still packaged with the magnesium alloy shell. Highly intergrated design, smaller and lighter, easy to use in the field.

## IMU for tilt survey

Aqua T5 is intergrated with the latest **Inertial Measurement Unit (IMU)**. Featured with anti-magnetic chracteristic, you can start the tilt survey in any place. Shaking to initialize the IMU sensor, no need to calibrate. Up to 200Hz IMU data output rate, boosting the speed of field work.

## Colourful LED indicators

**The colorful LED indicators can briefly show the current status.**

**Tracking Satellites:** Green Indicator flashes when tracking satellites.
**On:** Red indicator will on when receiver turning on.

**External power:** when connecting to external power, Red indicator will on.if the battery has been fully charged, Green Indicator will on.
**Bluetooth:** Blue Indicator will on when connecting.
**Receiving corrections:** When receiving corrections,green Indicator flashes, otherwise the Red indicator flashes

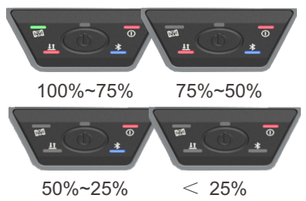
## Longer battery life

Thanks to the SOC technology, T5 achives higher performance and lower power consumption. The built-in **6800mAh** Li-ion battery can continuously work 15 hours(Rover Bluetooth mode).

T5 adopts Type-C charging interface which supports PD protocol quickly charging, the battery can be fully charged in **3 hours** and then supports full-day work.

Now T5 also supports the external phone portable battery, to continue the work even internal battery is used.

**6800mAh**
**Fast-Charge**

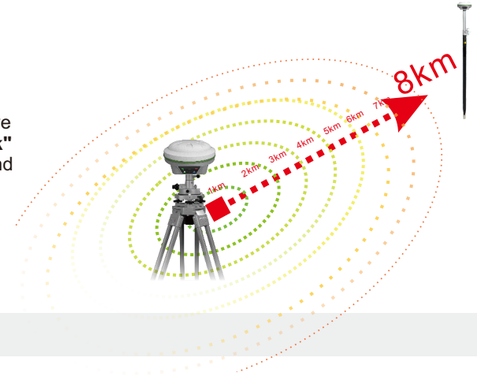



## Battery life checking

We can quickly check the battery life by pressing the button, after pressing the button, some of the Indicators will turn on.

## Super radio and Farlink protocol

Aqua T5 is packaged with SANDING "Beaver" super radio and the exclusive "Farlink" protocol. The "Beaver" super radio is more power saving, **"Farlink"** protocol has larger bandwidth. The combination of "Beaver" super radio and "Farlink" protocol makes better performance on signal capturing.





## Supercharged by SoC technology

Aqua T5 is a new product from SANDING SoC platform, most components of T5 (GNSS module, Wi-Fi, Bluetooth, etc.) are integrated on one circuit board. T5 has lower power consumption, and efficiently improves the ability of receiving higher quality satellites signals.

Powerd by the new SoC GNSS board, new generation sensitivity satellite antenna, new ROS platform and GNSS RTK engine, T5 can fully track GPS, GLONASS, BDS, GALILEO and QZSS toobtain centimeter-level positioning in few seconds.

Now T5 supports the BeiDou-3 B2b L-band BDS-PPP corrections to get real-time centimeter level positioning services.

Thanks to the new function "Fixed-keep", now it is possible for T5 to keep centimeter-level accuracy for few minutes when the RTK corrections is missing.

## Recommended Partners

### Survx Field Software

- Android software SurvX easy-to-use work flow
- Useful survey tools
- Google map supported
- DXF, DWG import & display
- Advanced roading, surfacing, slope staking.
- Multi-lanuage is available

### H6 Data Collector

- Android 8.1 OS,5.0 inch touch screen, google service is fully usable.
- 9200mAh, typical battery life is more than 20h, standby time is up to 240h.
- Fast charging.Be fully charged within 4 hours.
- Full-featured numeric and letter physical keyboard speeds up your data input.
- Octa-core 2.0GHz CPU, 4GB RAM,64GB storage memory, ensures a smooth operation.
- 4G network communication, reliable data transmission.
- P67 water/dust proof, built to work in challenging environment.