

SingularXYZ



T8 Pro High Precision Tablet Manual

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Trademark notice

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FCC Notice

SingularXYZ® T8Pro comply with the limits for a Class B digital device, pursuant to the Part 15 of the FCC rules when it is used in the Portable Mode.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- It must accept any interference received, including interference that may cause undesired operation.

Copyright Notice

This is the V2.0 (Jun 2023) revision of the T8Pro User Guide. It cannot be copied or translated into any language without the written permission of SingularXYZ.

Technical Assistant

If you have any question and can't find the answer in this manual, please contact your local dealer from which you purchased the T8Pro. Alternatively, request technical support from SingularXYZ .Website: www.singularxyz.com or technical support email: support@singularxyz.com. Your feedback about this Guide will help us to improve it with future revisions.

Safety Information

Before using the Tablet, please make sure that you have read and understood this User Guide, as well as the safety requirements.

- Connect your devices strictly based on this User.
- Avoid falling to ground or colliding with other items.

- Please use in dry and room temperature environment.
- Do not wash it directly with water, when cleaning the tablet.
- Change the cable if damage.

Related Regulations

The tablet contains integral Bluetooth wireless technology. Regulations regarding the use of the datalink vary greatly from country to country. In some countries, the unit can be used without obtaining an end-user license. But in some countries the administrative permissions are required. For license information, please consult your local dealer.

Use and Care

The tablet can withstand the rough treatment that typically occurs in the field. However, the tablet is high-precision electronic equipment and should be treated with reasonable care.

Warning and Caution

An absence of specific alerts does not mean that there are no safety risks involved. A Warning or Caution information is intended to minimize the risk of personal injury and/or damage to the equipment.

WARNING- A Warning alerts you to a potential risk of serious injury to your person and/or damage to the equipment, because of improper operations or wrong settings of the equipment.

CAUTION- A Caution alerts you to a possible risk of damage to the equipment and/or data loss.

Warranty Notice

SingularXYZ does not warranty devices damage because of force majeure (lighting, high voltage or collision). SingularXYZ does not warranty the disassembled devices.

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1.1 About the T8Pro

Embedded with high precision GNSS module, the T8 Pro can simultaneously track all running and planned constellations including GPS, GLONASS, BeiDou, Galilei, QZSS and Navic, providing centimeter level positioning accuracy to satisfy the demands of most GIS applications.

1.2 T8Pro Features

Below is the T8Pro key features:

Features



1.3 Specifications

T8 PRO GNSS TABLET

Version 20-02-2023

SYSTEM

CPU	Qualcomm 1.8GHz, octa-core
OS	Android10
ROM	64GB
RAM	4GB
TF Card	Support
Rear Camera	13M
Front Camera	5M
Battery	- 8000mAh, 12hrs working time - QC3.0 fast charge

COMMUNICATION

WIFI	802.11 a/b/g/n/ac, 2.4GHz/5GHz
4G	GSM:850/900/1800/1900 WCDMA: B1/B2/B5/B8 TD-SCDMA: B34/B39 TDDLTE: Band38/Band39/Band40/Band41 FDDLTE: Band1/Band2/Band3/Band4/Band5/Band7/Band8/ Band17/Band20/Band28
Bluetooth	BT 4.2
SIM Card	Dual SIM & Dual standby
USB	Type C

GNSS SPECIFICATIONS

Channels	1408
Satellite Tracking	- GPS: L1C/A, L2P, L2C, L5, L1C ² - BDS(BeiDou Global): B1I, B2I, B3I, B1C, B2a, B2b ² - GLONASS: L1, L2, L3 ² - Galileo: E1, E5b, E5a, E6 ² - QZSS: L1, L2, L5 - SBAS
Single Baseline RTK	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
DGPS	0.4 m Horizontal 0.8 m Vertical
Standalone	1.5 m Horizontal 2.5 m Vertical

PHYSICAL

Size	235mm*146mm*13mm
LCD Display	8" HD Capacitive screen, 500Nits sunlight-readable
Resolution	1280*800 pixels
Weight	680g, with helix antenna
Keypad	Power, Volume up/down, F1, F2
Sensors	Speaker, Flash Light, NFC, G Sensor, Compass, Light Sensor, Gyroscope

ENVIRONMENTAL

Working Temperature	-20 C ~ 60 C
Storage Temperature	-30 C ~ 70 C
Waterproof & Dustproof	IP67
Drop Test	Survive from a 1.2m drop
Humidity	95% no condensation

SOFTWARE

Compatible with common third-party GIS and field surveying software, such as ArcGIS Collector, Mapit GIS, FieldGenius Android etc.

1. The helix antenna of T8 Pro is detachable, which can be replaced with geodetic antenna, providing better GNSS signal quality for land surveying solution.
2. The GPS L1C, BDS B2b, GLONASS L3 and Galileo E6 are reserved for future upgrade.

All specifications are subject to change without notice.

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This section provides overall T8Pro tablet parts list, including basic supplies and customized kits based on your requirements.

2.1 Basic supply kit

Item	Picture
T8Pro Tablet	 A black, rectangular tablet device with a dark screen and a visible camera lens on the top edge.
Type-C Cable	 A black, coiled USB Type-C cable with a standard USB-A connector on one end and a USB-C connector on the other.
Battery Charger	 A black, rectangular battery charger with two prongs on the left side and a USB-C port on the right side.

2.2 Optional Choices

Item	Picture
Helix Antenna	 A small, black, cylindrical antenna with a USB connector on one end.
Geodetic Antenna (optional)	 A white, dome-shaped geodetic antenna with a black connector on the bottom.

Bracket	
Range Pole	

Chapter 3

Installation and Setup

This section shows T8Pro installation in difference work mode, including use the helix antenna and geodetic antenna.

3.1 Helix antenna

Below picture is about how T8Pro connect with Helix antenna. Then can conduct the position collection work after fixed the helix antenna well. Suggest make the antenna head to sky.



3.2 Geodetic antenna

Below shows how T8Pro connect with the geodetic antenna. Use the provided cable make the connections.



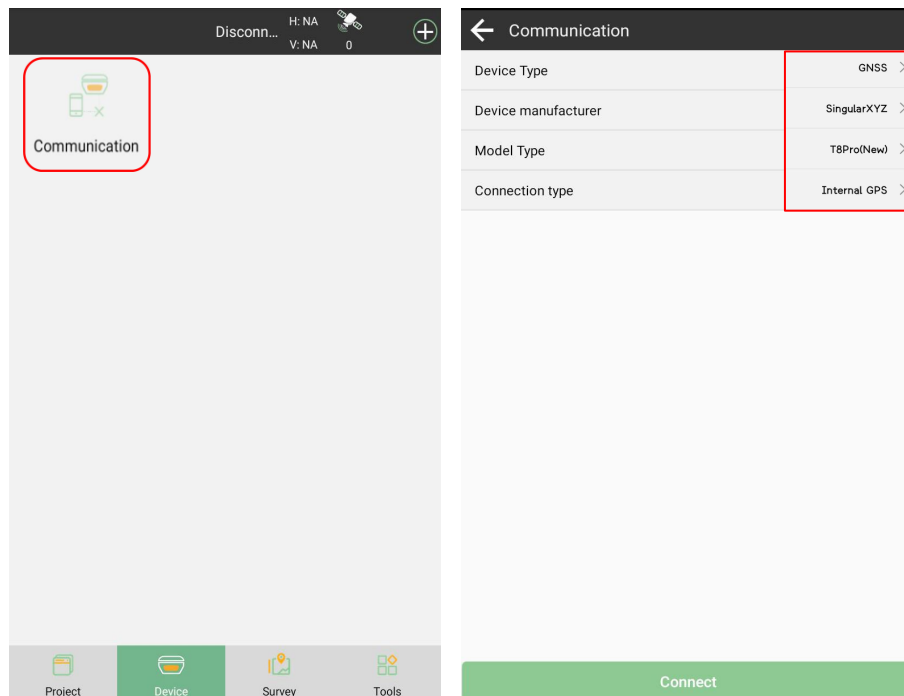
Chapter 4

Operation

4.1 SingularPad software

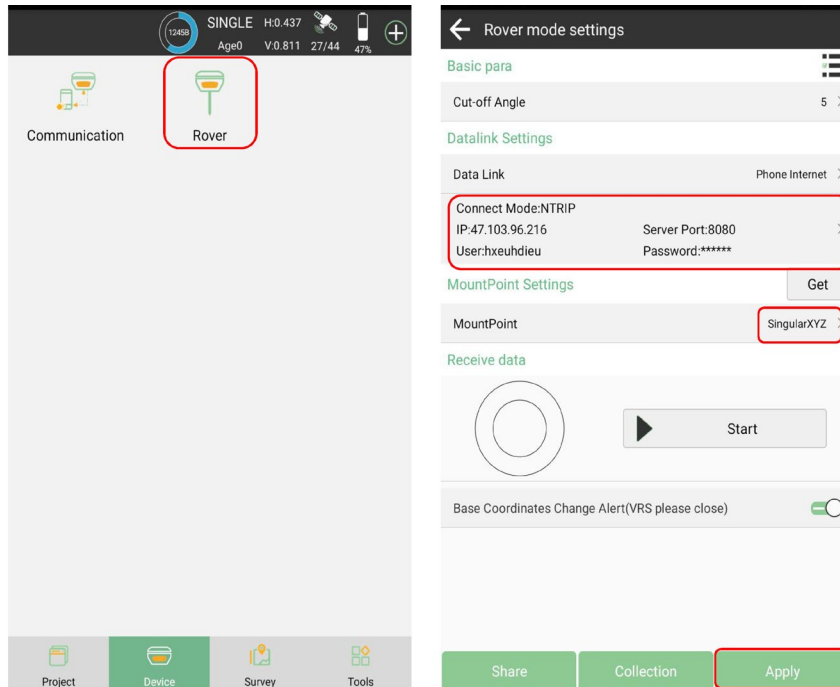
SingularPad can connect to internal OEM board and set work mode directly.

4.1.1 Connection



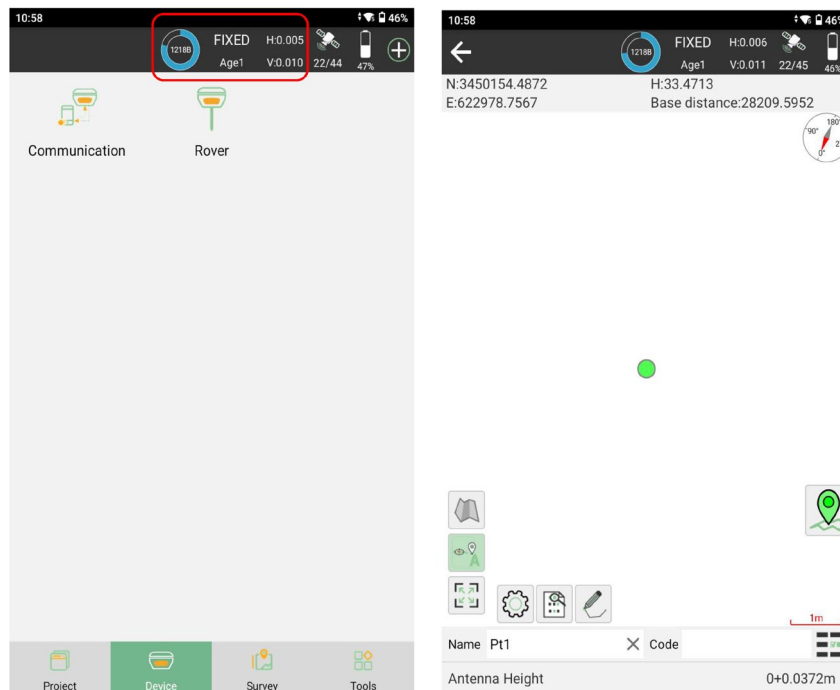
4.1.2 Set work mode

After connection, it will show an icon in the software as Rover, click and set CORS parameters: IP, Port, User, Password and Mountpoint. Finally remember to apply it.



4.1.3 Survey and Stakeout

Then the status will get fixed, and you can start your work.



4.2 Other 3rd Party GIS software

For GIS software which supports read the tablet location, all can work by T8 PRO high precision tablet. Blow shows some samples. (Mapit GIS, Collector, SW maps)

