


# Alpha Tx

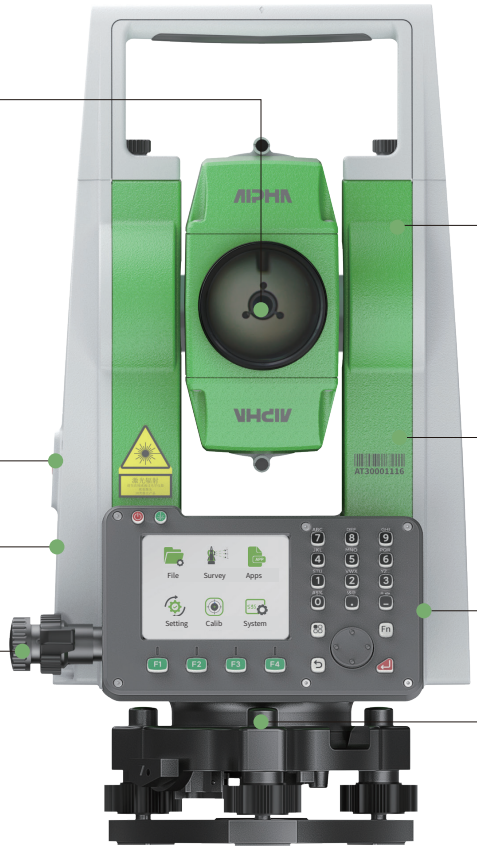
## Alpha Tx 1" Total Station

*4CCD and Superfine Shafting For 1"Accuracy  1000m Non-Prism*

# Alpha Tx Total Station

Alpha Tx 1″ High-precision Total Station, boasts high quality and high performance with its outstanding design, advanced encoding technology and stable alloy axis. It has achieved 1″accuracy measurement and is applied to control measurement, industrial measurement, tunnel engineering, and deformation monitoring





### Advanced Optical System
Europe optical technology helps effectively suppress chromatic aberration and make clearer observatio

### Lithium-ion Battery
Working time up to 20 hours

### Touch Measurement
The touch trigger key helps mitigate the impact of jitter on the measurement

### Handy Brake Wrench
User never feels tired with the ergonomic design which fits human fingers.Lock and unlock with a gentle press on the rench

### Processor
Equipped with ARM architecture arm processor to lower energy and improve the stability of the total station.

### BLE 5.0
Low energy enables more ways of measurement

### USB flash drive
Support data upload and download and update firmware

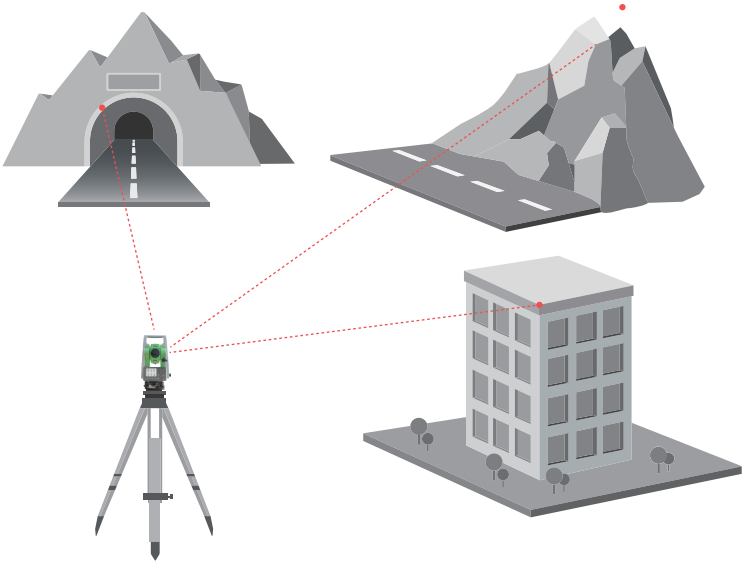
### Coaxial Laser Plummet
Coaxial laser plummet makes it more convenient to track the targets

## High-precision Ranging Technology

Alpha Tx can achieve fast and accurate ranging through built-in eight adaptive high-frequency measuring rulers and advanced phase laser ranging algorithm, meeting the accuracy requirements of various advanced engineering measurements

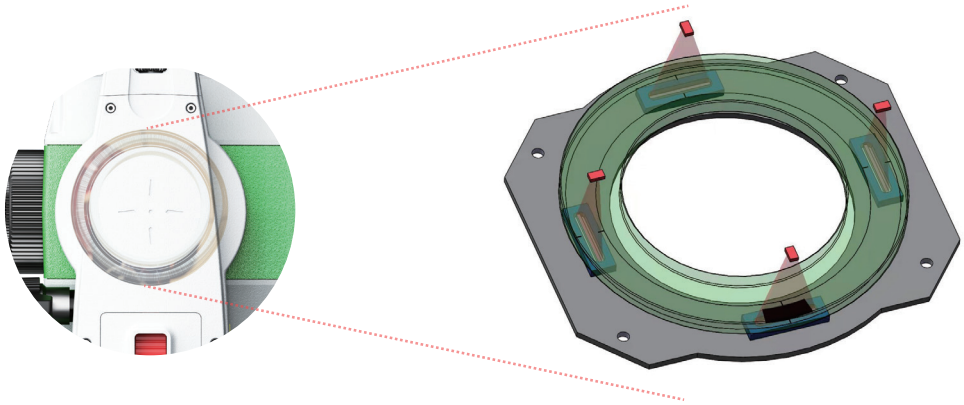
**1000m**
Without Prism

**5000m**
With Prism



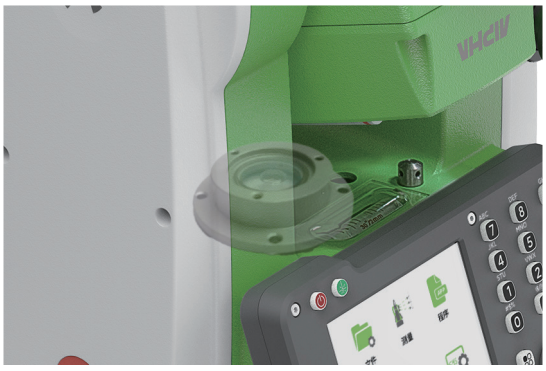
# 4CCD for higher angular accuracy

The self-developed four-quadrant precision angle sensor design, error compensation algorithm, combined with photoelectric decoding, top-notch precision photolithographic absolute coding disk, brings stable and reliable accuracy of 1″



## Coaxial Comprehensive CompensationFor 1″Accuracy

The compensator is located just above the vertical axis, and the accurate compensation is obtained quickly between rotations. At the same time, the CCD is used for accurate calibration, and the compensation range is as high as 4', high operation efficiency.



## Superfine Shafting For 1″Accuracy

The high-quality alloy steel is heat-treated several times being processed with a specially designed ultra-high precision grinder. The G3 top-grade steel balls are selected and ground through dozens of procedures to meet the strict requirements of 1″ accuracy instruments.



# Strong Protection

Powerful and precise electronic compensation and high redundancy angle measurement algorithm enable the total station to work efficiently and reliably in all kinds of extreme environments.



## Package includes



| | |
|---|---|
| Tx | X1 |
| Battery | X2 |
| Charger | X1 |
| Tool bag | X1 |
| Manual | X1 |
| Warranty Card | X1 |
| Certificate | X1 |
| USB flash drive | X1 |
| RP60 reflector | X1 |
| RP30 reflector | X1 |
| Objective cap | X1 |

## Technical Specification

| | | | |
|---|---|---|---|
| Telescope | Image | Right-reading | |
| | Magnification | 30x | |
| | Field Of View | 1°30′ | |
| | Minimum Focus | 1.7m | |
| | Resolution | 2.8″ | |
| Angle Measurement | Accuracy | 1" | |
| | Reading System | Absolute Encoders | |
| | Minimum Reading | 0.2″ | |
| Distance Measurement | Measuring | Non-Prism | 1000m |
| | | Reflector | 2000m |
| | | Single Prism | 5000m |
| | Measuring Accuracy | Non-Prism | ±(3mm + 2 × $10^{-6}$× D) |
| | | Reflector | ±(3mm + 2 × $10^{-6}$× D) |
| | | Single Prism | ±(1mm + 1 × $10^{-6}$× D) |
| | Time | Fine：0.7s Rapid：0.5s Tracking：0.3s | |
| | Minimum Display | Fine/Tracking:0.1mm | |
| Compensator | Compensator Type | Dual axis | |
| | Compensator Range | ±4′ | |
| | Compensator Resolution | 1″ | |
| Laser Plummet | Accuracy | 1.5mm@1.5m | |
| | Wavelength | 635nm | |
| | Safety | Class2 | |
| | Output Power | 0.7-1.0nw | |
| Level Vial Sensitivity | Tubular Level | 30″/2mm | |
| | Circular Level | 8′/2mm | |
| Keyboard | Screen | 3.2-inch colour screen | |
| | Key | x26 | |
| | Backlight | Support | |
| Communication | Port | USB、Bluetooth | |
| | Data Memory | 40000 points | |
| Power | Battery | 2600mAh Li-ion battery | |
| | | Low voltage alert | |
| | Working Time | 25 hours angle | |
| | | 20 hours angle and distance | |
| Physical | Operating Temperature | -20℃ ~ +50℃ | |
| | Storage Temperature | -30℃ ~ +55℃ | |
| | Water/Dust Proof | IP65 | |

*The above technical parameters are for your reference.The company reserves the right to change the design and planning of the product based on the actual product


alpha surveying

Guangzhou Alpha Surveying Technology Co.,Ltd.

NO.203 Kezhu Road,Science City Huangpu District, Guangzhou

www.alpha-surveying.com

info@alpha-surveying.com

+86-20-82108930