



Alpha Surveying

AlphaTx

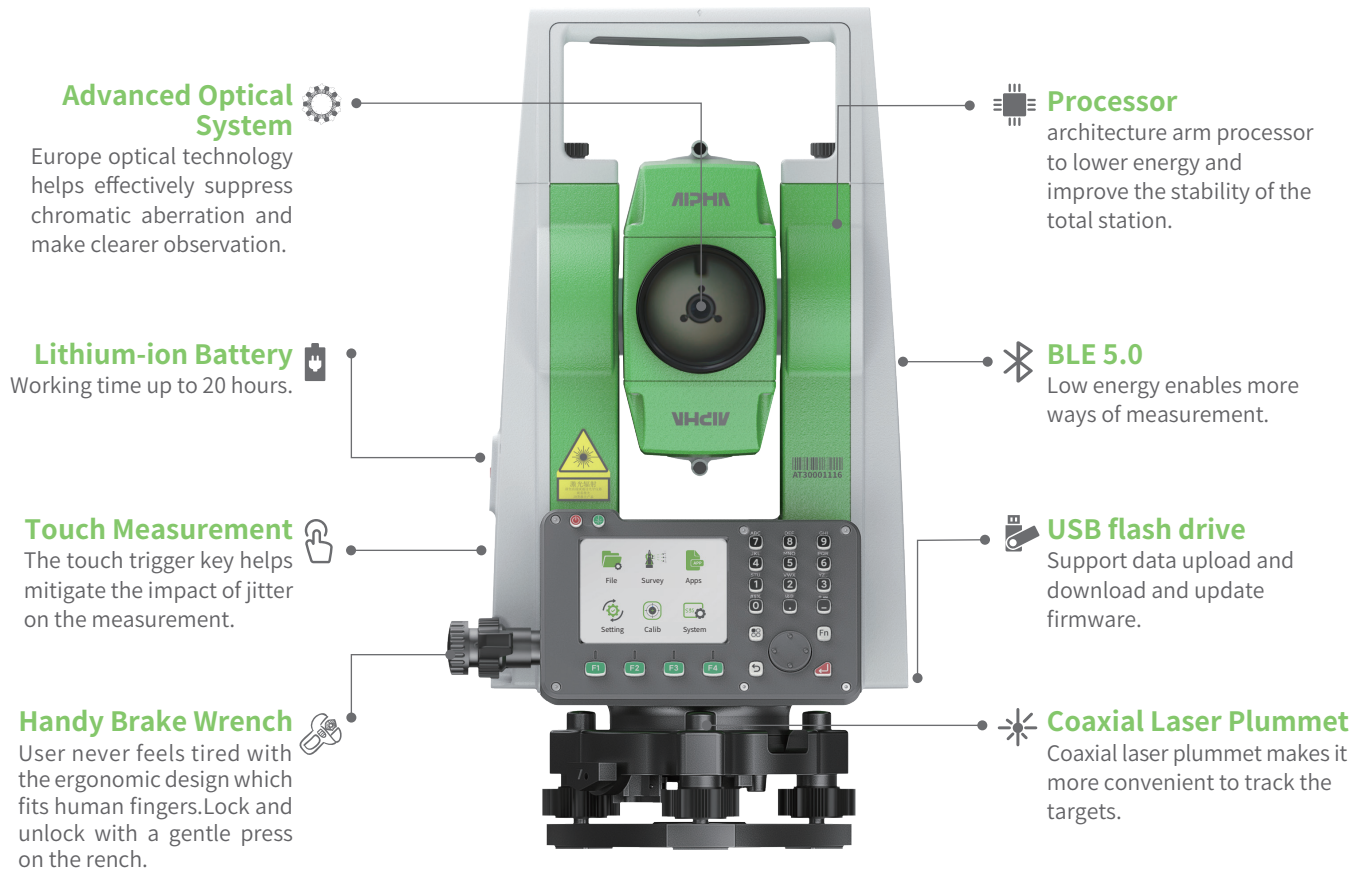
1" Total Station

Superfine Shafting | 4CCD Sub-second compensation algorithm | 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.



High-precision Ranging Technology

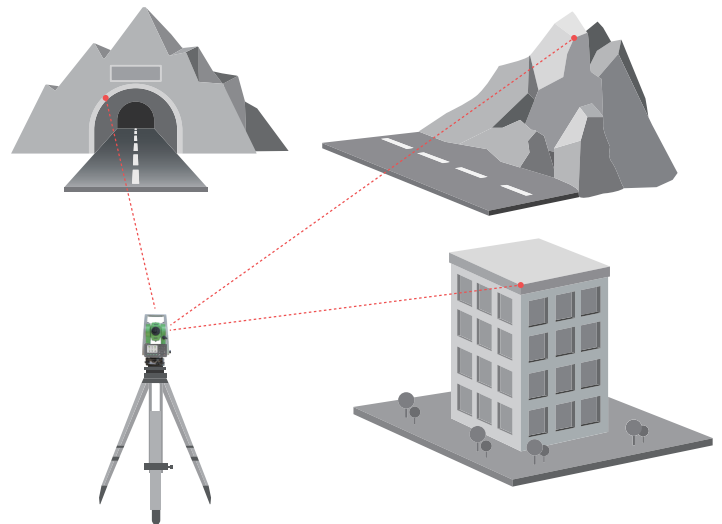
Alpha Tx can achieve fast and accurate ranging through built-in eight adaptive high-frequency measuring rulers and advanced phase laser ranging algorithm, meeting the accuracy requirements of various advanced engineering measurements.

1,000m

Without Prism

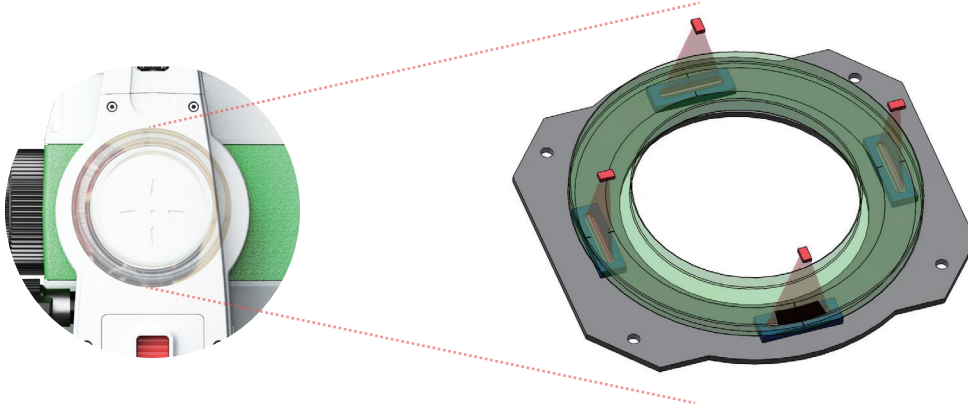
5,000m

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 Compensation For 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.



User-friendly total station



Alpha Tx is equipped with a full-featured operation panel, 3.2-inch bright colour screen, and buttons with comfortable spacing and without sound. Built-in commonly used measurement functions, standard Bluetooth 5.0 for convenient data transmission, and the third-party application. Outstanding hardware and software double the efficiency of Alpha Tx.

3.2-inch Color Screen

Larger screen brings more data display and good viewing experience.

Rounded backlight button

The rounded backlight button makes it easier to work at night.

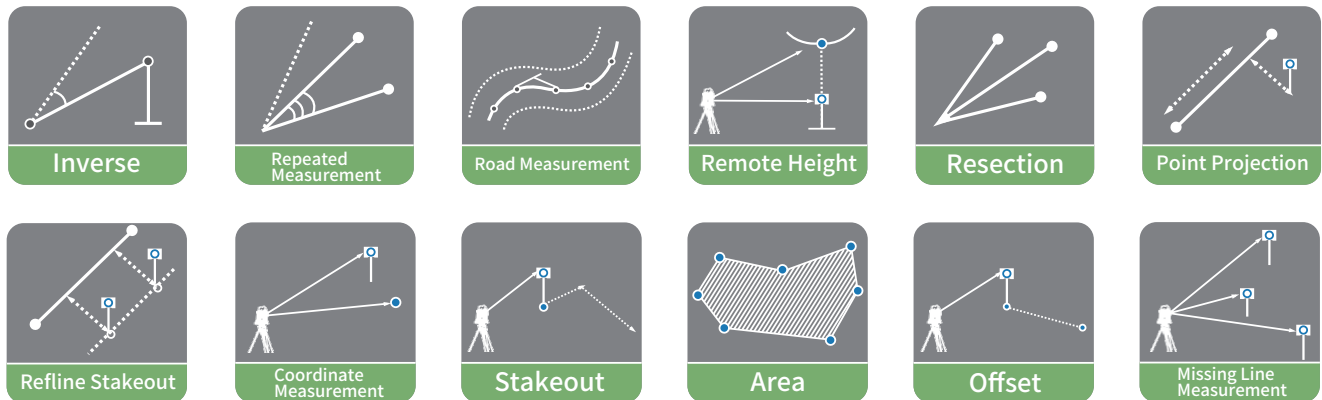
Customized Fn Function Key

The customized function key for a personalized total station.

One-touch Laser Fixed

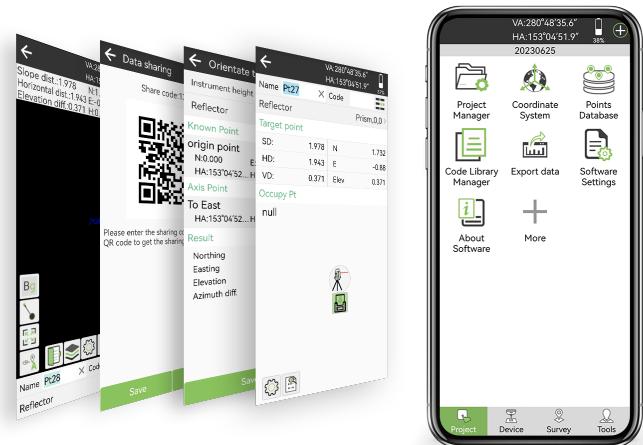
One touch, rapid centring and leveling up for measurement.

On-board Measurement Software

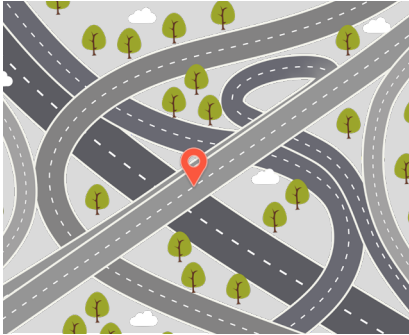


Compatible with third-party APP

Alpha Tx supports mobile phone communication via Bluetooth with third parties APP such as DiMap Pro or Surveyor software to realize the function of intelligent total station.



Accuracy that high-class projects can trust

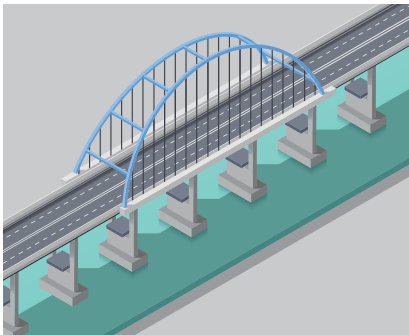


Road

Alpha Tx has excellent angle measurement accuracy, distance measurement accuracy and compensator accuracy, and is suitable for highways and high-precision rail transit.



Unique coding design and highly fault-tolerant photoelectric decoding technology allow the code disc to accurately measure angles even when 70% of them are blocked, achieving accurate readings without fear of moisture and dust.



Bridge

Alpha Tx has excellent distance measuring performance. It has fast short-distance measurement speed and high long-distance accuracy. It is suitable for bridge installation and construction.

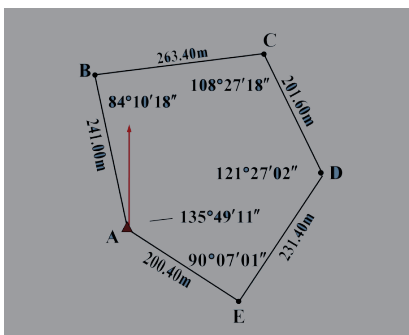


Tunnel

Unique angle measurement technology, no fear of dust and condensation, with laser indicator and keyboard backlight, Alpha Tx is fully qualified for tunnel measurement.

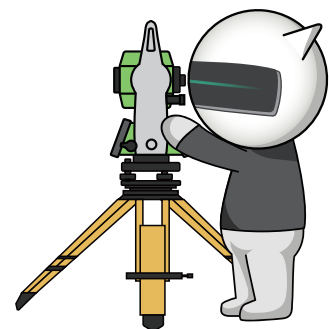


Online power supply and debug.



Traverse survey

Alpha Tx has stable angle measurement accuracy and distance measurement accuracy, strong consistency, and is suitable for traverse survey.



Professional Set



Total station	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	
	Accuracy	Single Prism	$\pm (1\text{mm}+1\times 10^{-6}\times D)$	
		Non-Prism	$\pm (3\text{mm}+2\times 10^{-6}\times D)$	
		Reflector	$\pm (3\text{mm}+2\times 10^{-6}\times D)$	
	Time	Fine :0.7s	Rapid:0.5s	Tracking:0.3s
Minimum Display	Fine/Tracking:0.1mm			
Compensator	Compensator Type	Dual axis		
	Compensator Range	$\pm 4'$		
	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		
Power	Battery	Type: 2600mAh Li-ion battery		
		Low voltage alert: Shut down in 10 mins		
	Working Time	Angle Measuring: 25h		
Distance + Angle Measuring: 20h				
Physical	Operating Temperature	-20°C ~ +50°C		
	Storage Temperature	-30°C ~ +55°C		
	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.

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