Alpha Surveying

AlphaTx

Standard 1" Total Station

Superfine Shafting | 4CCD Sub-second compensation algorithm | 1000m non-prism



ISO
ISO9001
CE

Alpha Tx Standard 1" Total Station

Alpha Tx Standard 1" 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 observation.

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
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.

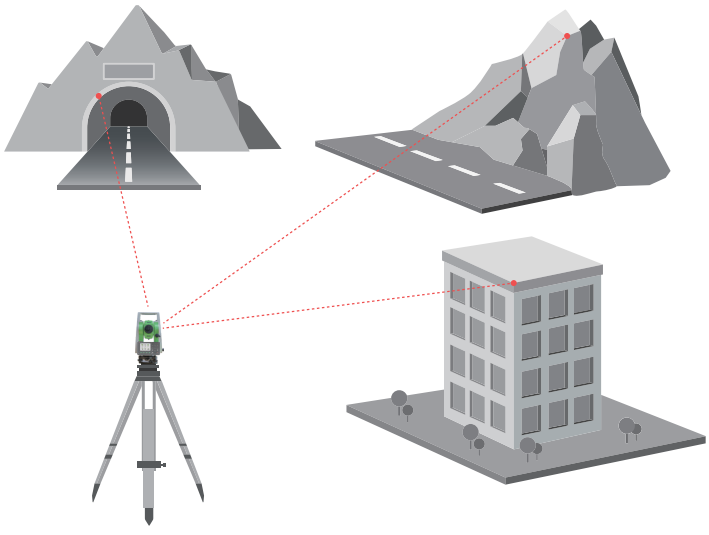
Coaxial Laser Plummet
Coaxial laser plummet makes it more convenient to track the targets.

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.

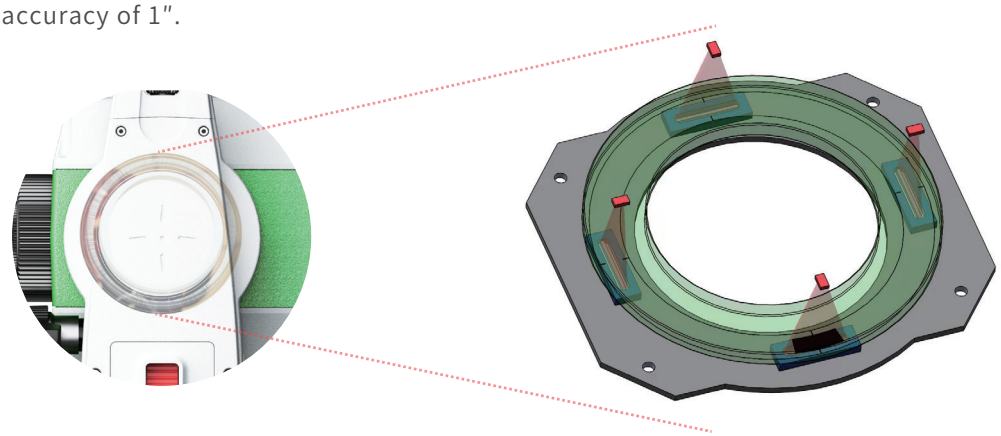
1,000m
Without Prism

5,000m
With Prism



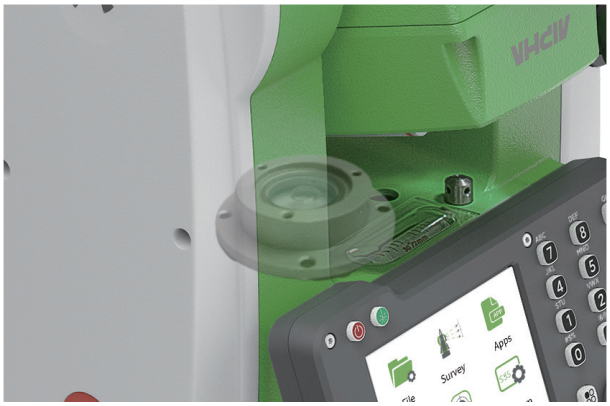
4CCD for higher angular accuracy

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 quipped 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 for work at night.

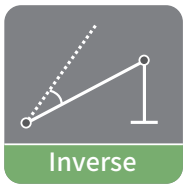
Customized Fn Function Key

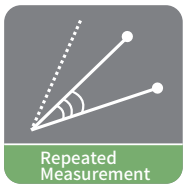
The customized function key for a personalized total station.

One-touch Laser Fixed

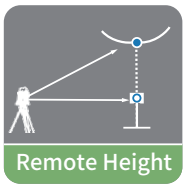
One touch, rapid centring and leveling up for measurement.

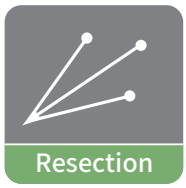
On-board Measurement Software

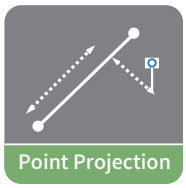


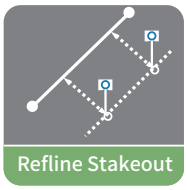


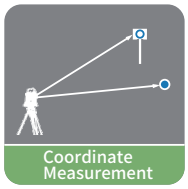


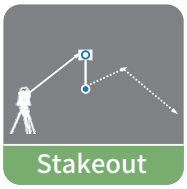


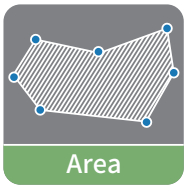


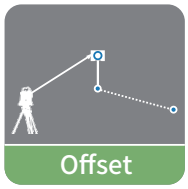


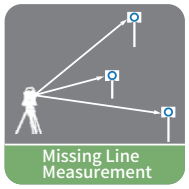










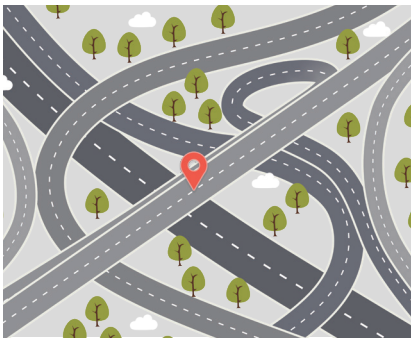


Compatible with third-party APP

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

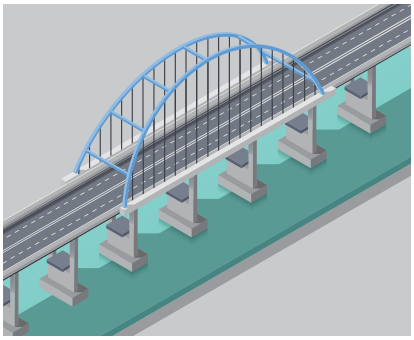


Road

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 60% 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.

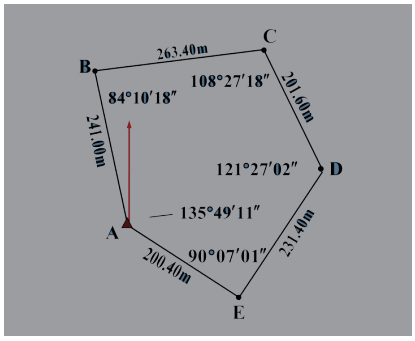


Online power supply and debug.



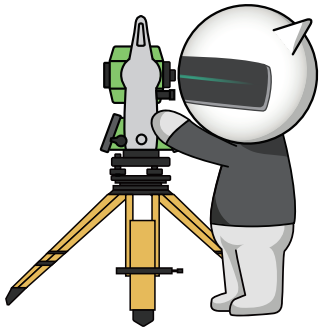
Tunnel

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



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	×1
Battery	×2
Charger	×1
Tool bag	×1
Manual	×1
Warranty Card	×1
Certificate	×1
USB flash drive	×1
RP60 reflector	×1
RP30 reflector	×1
Objective cap	×1

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	±(1mm+1×10^{-6}×D)
		Non-Prism	±(3mm+2×10^{-6}×D)
		Reflector	±(3mm+2×10^{-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
Power	Battery		Type: 2600mAh Li-ion battery
	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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