



# Alpha **Ta**

## Android Total Station

2" Accuracy +1000m | 5.5 Inches Touch Screen | Professional Software



# Alpha Ta Android Total Station

Originated from European optical technology, with special dense bead shaft system, center compensator, new generation measuring ruler and the static absolute encoding disc, Alpha Ta Android Total Station comes with higher quality, accurate and stable performance.

## Lithium-ion Battery

Default 2 batteries Working time up to 8 hours.

## Touch Measurement

The patented 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.

## Laser Plummet

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

## Advanced Optical System

Europe optical technology helps effectively suppress chromatic aberration and make clearer observation.

## BT5.0/BLE

For external device access and data transmission.

## Efficient Processor

With advanced architecture processor to lower energy consumption and improve the stability of the total station.

## Type-C

Support data upload and download through Type-C interface, and firmware upgrades.

## Precise Distance Measuring Technology

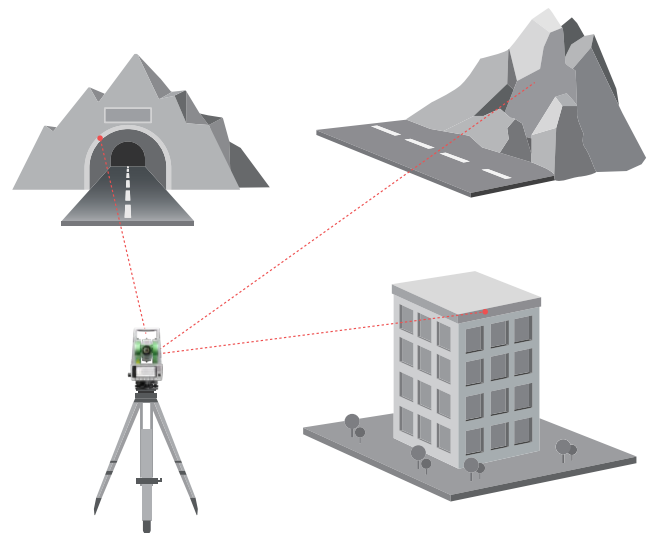
Alpha Ta can achieve fast and accurate distance measurement through built-in eight adaptive high-frequency measuring rulers and advanced phase laser ranging algorithms, meeting the accuracy requirements of various advanced engineering measurements.

**1,000 m**

Non-Prism Distance Measurement

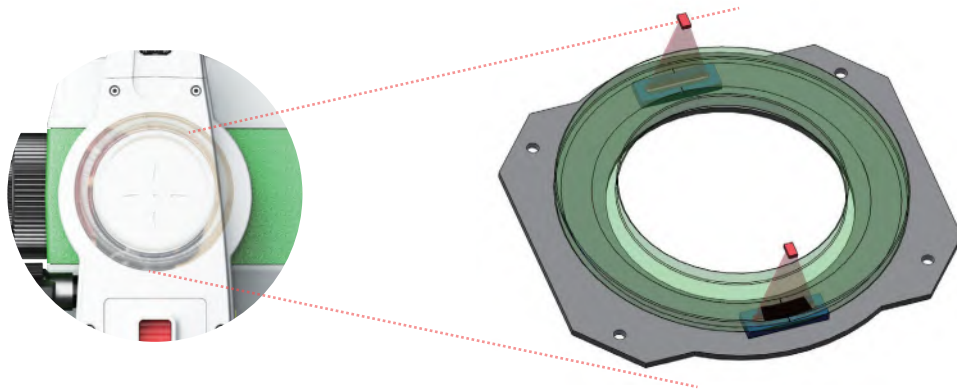
**4,000 m**

Single Prism Distance Measurement



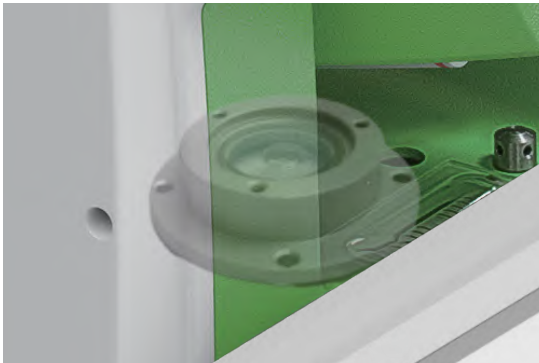
# Precise Angle Measuring Technology

Self-developed high-precision angle measurement system technology includes coding, high-precision code disc, linear array CCD photoelectric measurement, decoding, redundancy, calibration, multi-sensor combination algorithm and other sub-technologies, providing on-site jobs with high stability and fault tolerance.



## Coaxial comprehensive compensation

Compensator is located directly above the vertical axis. It can quickly and accurately compensate during rotation. At the same time, CCD is used for precise calibration. The compensation range is up to 4', and the operation efficiency is extremely high.



## Special Grade Dense Bead Shaft System

Using customized ultra-high-precision grinder precision processing technology, the carefully selected top-grade G3 steel balls are processed through dozens of processes to create a special-grade dense ball shaft system that can meet the stringent requirements of 1"-level instruments.

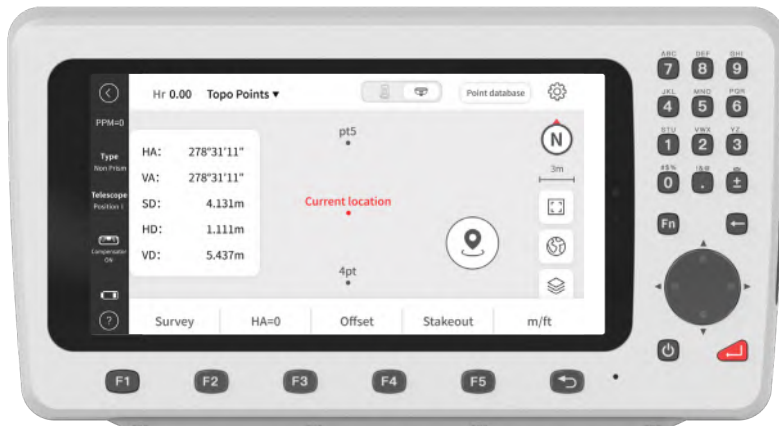


## Strong Protection

Excellent protective performance, powerful precision shafting electronic compensation technology and high redundancy. The angle measurement decoding algorithm allows the total station to be used in various extreme engineering environments, making measurements stable and reliable.



# Powerful System



## Android System

Android 11.0, 8-Core 2GHz CPU, 4G RAM+64G ROM.



## Semi transparent and reflective screen

5.5" semi transparent reflective touch screen, clearly visible under sunlight.



## Physical Buttons

Sleek and comfortable backlit keys, supports all-weather operations.

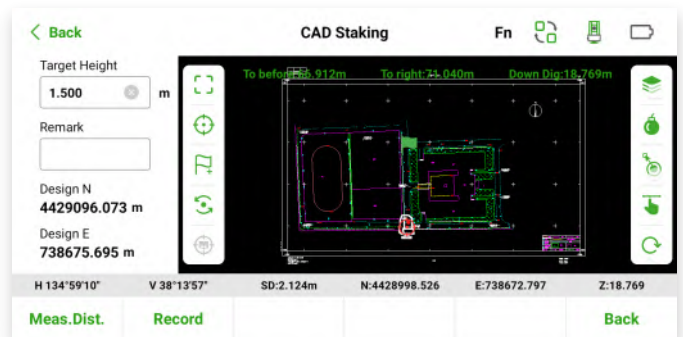
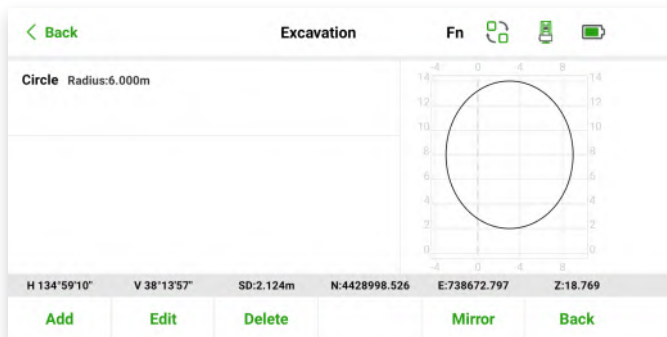


## Temperature and Atmospheric Pressure Sensing

Built-in temperature and atmospheric pressure sensor, automatically corrects parameters during high-precision measurement.

Based on the actual needs of front-line surveyors, Alpha Ta Android total station panel is designed with a 5.5" touch screen + temperature and pressure sensing physical buttons, which takes advantage of Android system and is more in line with measurement habits. Outstanding hardware and professional software make measurements easier.

# Support Classic Functions



# Versatile Functions (take road stakeout for example)



Engineering Management



Job Management



Line Management



Record



Point Database



Stakeout Database



Line Database



Area Database

# Accuracy that high-class projects can trust



## Road

Alpha Ta 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 Android total station 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.



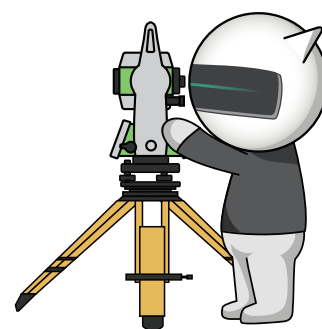
## Tunnel

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



## Traverse Survey

Alpha Android total station 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
Data Cable	X1

## Alpha Tc Super Station



Alpha Android total station can combine with Alpha RTK to form a Super Station. With upgraded software, it can achieve one-stop measurements, offering convenience for forestry, tunneling, education, national defense, etc.

## Technical Specification

<b>Telescope</b>	Image	Right-reading	
	Magnification	30x	
	Field Of View	1°30'	
	Minimum Focus	1.7m	
<b>Angle Measurement</b>	Resolution	2.8"	
	Accuracy	2"	
	Reading System	Absolute Encoders	
<b>Distance Measurement</b>	Minimum Reading	1"	
	Measuring	Non-Prism	1000m
		Reflector	2000m
		Single Prism	4000m
	Single Prism	$\pm(2\text{mm}+2\times10^{-6}\times D)$	
	Accuracy	Non-Prism	$\pm(3\text{mm}+2\times10^{-6}\times D)$
		Reflector	$\pm(3\text{mm}+2\times10^{-6}\times D)$
<b>Compensator</b>	Time	Fine: 0.7s Rapid: 0.5s Tracking: 0.3s	
	Minimum Display	Fine / Tracking: 0.1mm	
	Compensator Type	Dual axis	
	Compensator Range	$\pm 4'$	
	Compensator Resolution	1"	
<b>Laser Plummet</b>	Accuracy	1.5mm@1.5m	
	Wavelength	635nm	
	Safety	Class2	
<b>Level Vial Sensitivity</b>	Output Power	0.7-1.0nw	
	Tubular Level	30"/2mm	
	Circular Level	8"/2mm	
<b>Panel</b>	Screen	5.5" semi transparent reflective touch screen	
	Key	x26	
	Backlight	Support	
<b>Power</b>	Battery	Type	3400mAh*2 Li-ion battery
		Low voltage alert	Shut down in 10 mins
	Working Time	Angle Measuring	single screen 20h double screen 12h
		Distance Measuring + Angle Measuring	single screen 12h double screen 8h
<b>Environment</b>	Operating Temperature	-20°C ~ +50°C	
	Storage Temperature	-30°C ~ +55°C	
	Water/Dust Proof	IP54	

\*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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