α-GEO

ALPHA Z

GRAPHICAL STAKE OUT
CLEAR AT A GLANCE

ANDROID
TOTAL STATION





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WHERE PRECISION MEETS INNOVATION



Android Total Station ALPHA Z With Surpro 6.0 Onboard

With the advantage of Android operating system, ALPHA Z has the quick accessibility to 3rd party software like Surpro 6.0 onboard, with the powerful Surpro 6.0 software, it can turn many impossible measurement functions into reality.



Intelligent operating system

Android 12 system with open platform and strong scalability, which can customize APP according to the needs of different industries

Strong performance , smooth operation

Equipped with quad-core processor, ARM Cortex-A55 architecture, can clocked up to 2GHz

Variety of communication modes

Bluetooth, wifi, USB disk, Type-C, 4G full network

Extra memory and storage

2G RAM+16G ROM , running smoothly without lag

HD large screen

720P HD 5.5-inch large screen, 1280 "720 high resolution, clearly visible in strong light

Super endurance, efficient intelligence

Large capacity battery and intelligent power management support long working time and single and double side switching display

Advanced angle measurement system

Design of CCD array angle measurement system to effectively eliminate system errors

Multifunctional android measurement software

The new Android measurement software Surpro6.0 with rich measurement programs, easy to complete the internal and external business measurement

Convenient and fast data transfer

Easily import and export Csw/txt/dat files, support CAD drawing import, CAD lofting

Graphical stake out, clear at a glance

Supports CAD graphics stake out,making stake out more efficient

PRODUCT **FEATURE**



GRAPHICAL STAKE OUT CLEAR AT A GLANCE

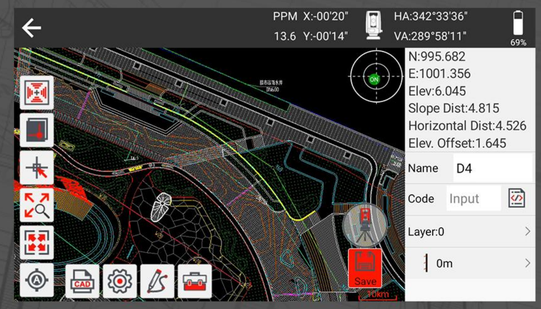
SUPPORTS CAD GRAPHICS STAKE OUT, MAKING STAKE OUT MORE EFFICIENT



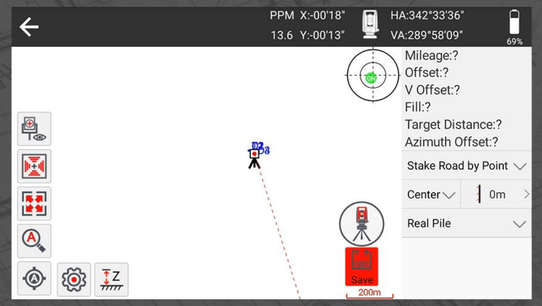
SOFTWARE INTERFACE



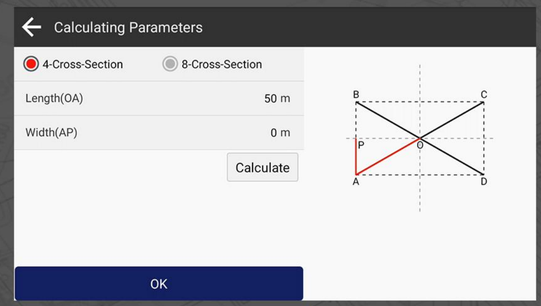
CAD Stakeout



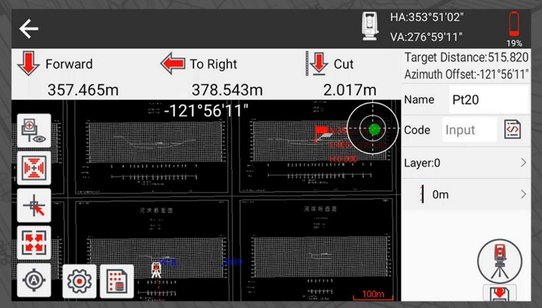
CAD Mapping



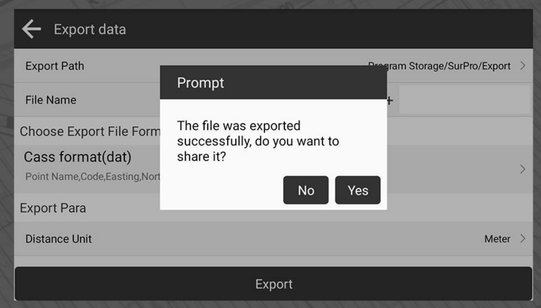
Road Stakeout



Tower Stakeout



Point Stakeout

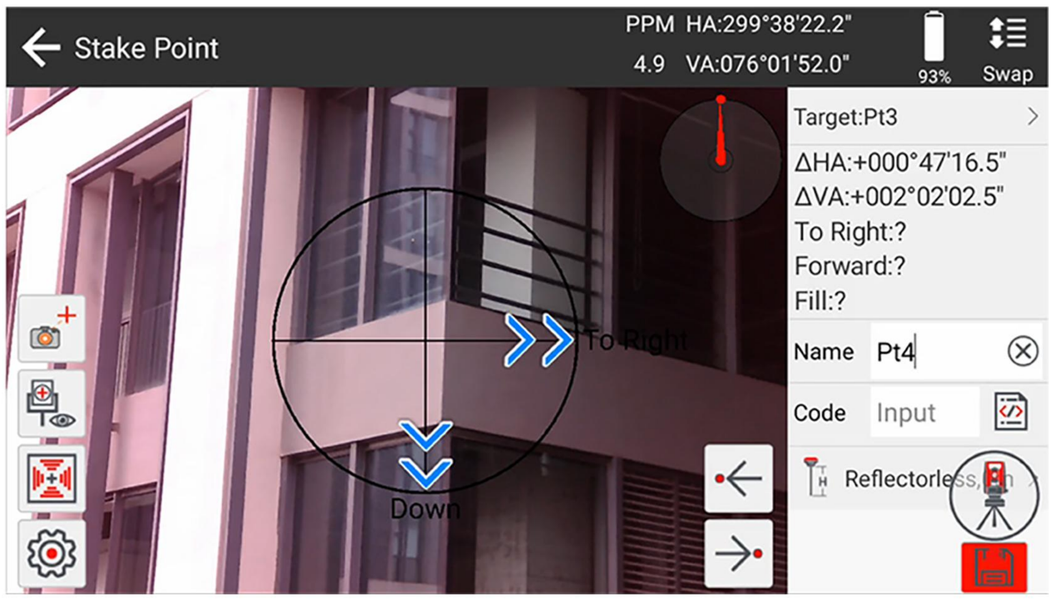


Data Share

Camera







Have you ever seen a Total Station with its own eyes?

The Alpha Z intelligent visual total station is equipped with a built-in auxiliary aiming camera and image processing algorithm. Combined with the powerful Surpro 6.0 software, it can achieve fast target aiming and realize fast stakeout, which greatly improving work efficiency.

●Rapid and Precise Aiming

Operators no longer need to spend significant time and effort searching and roughly aligning targets through traditional eyepieces. The auxiliary camera quickly captures and identifies targets (such as prisms, reflectors, or specific markers), while powerful image processing algorithms analyze the image in real-time, intelligently locking onto the target center. This drastically reduces aiming time, especially offering significant advantages in challenging conditions like poor visibility, long distances, or complex backqrounds.

●Fast Stakeout

Integrated with the industry-leading Surpro6.0 professional surveying software, this vision system achieves a high degree of process automation. The software not only receives precise coordinate data measured by the instrument but also seamlessly integrates visual recognition information. During stakeout operations, the system can intuitively display the real-time image captured by the instrument on the software screen, overlaying directional arrows or deviation information to guide the operator inquickly and intuitively moving the prism to the design point, Operators simply follow the visual guidance on the screen, greatly reducing the time spent on trial-and-error and manual deviation calculations.

The combination of "Intelligent Visual Aiming" and "Software-Guided Stakeout creates a highly efficient workflow loop. It significantly reduces operation time per station, lowers aiming error rates, simplifies the operation process (especially making it more user-friendly for novices), and reduces operator visual fatigue and physical strain. The end result is a leap in overall work efficiency, shortened project timelines, and optimized labor costs.

Alpha Z integrates Google Services: Real-Time Field Data Capture, nstant Global information Access.

Alpha Z Total Station + Google Services = Productivity Leap! Field data captured in real-time, processed in seconds in the cloud, results shared globally. Simplify complex projects and significantly compress timelines.

- **Geospatial Database Integration:** Directly connects to GoogleE arth Engine, accessing global historical imagery and terrain data. Background basemaps are automatically overlaid during field surveys, enabling "What You See ls What You Survey.
- **Al Model Empowerment:** Integrates the Google Vertex Al platform, supporting intelligent analysis like semantic segmentation (e.g., automatic feature boundary recognition) and change detection (e.g., construction progress comparison), transforming raw data into structured information.
- **Global Service Support:** Leverages Google Cloud's global nodes to ensure offline data synchronization in field environments without network coverage, with seconds-level upload to the cloud upon network restoration.






4G full network connectivity
High precision handwheel
Image assisted
measurement
Trigger Key
Rich data communication interface


Alpha GEO


α-GEO

SPECIFICATIONS

Telescope	
Length	156mm
Image	Erect
Objective aperture	Telescope:Φ45mm(meas.dist.:Φ50mm)
Magnification	30x
Field of view	1°30'
Minimum focus	1m
Resolution	4"
Angle measurement	
Angle method	Absolute encoding
Accuracy	2"
Detection method	Mirror 2 channel linear array CMOS
Angle unit	360°/400gon/6400mil,selectable
Minimum reading	0.1"/1" selectable
Distance measurement	
Laser class (IEC60825-1)	
Reflectorless[3]	Class 3R
Reflective sheet/RP60	Class 3R
Prism	Class 1
Measurement range(Good condition)[2]	
Single prism	5000m
Reflective sheet/RP60	1000m
Reflectorless	1000m
Accuracy	
Prism	2mm+2ppm
Reflective sheet/RP60	2mm+2ppm
Reflectorless	3mm+2ppm
Measuring time	
Precision measurement	0.5s
Fast measurement	0.3s
Tracking measurement	0.25s
Others	
Minimum reading	0.1mm/1mm selectable
PPM correction	Automatic temperature and pressure correction
Prism constant correction	-99.9mm ~ +99.9mm
Compensator	
Compensating sensor	Dual-axis
Compensation range	±6'
Accuracy	±2"/1'

Level vial sensitivity	
Plate level vial	30"/2mm
Circular level vial	8'/2mm
Laser plummet(Standard)[4]	
Accuracy	±1mm/0.8m-1.5m
Spot size	≤2.0mm/0.8m-1.5m
Power	
Battery	3200mAh Li-ion rechargeable battery
Output voltage	7.4V DC
Continuous operating time	Approx. 6 hours (at +20℃)
Charging time	Approx. 3 hours (at +20℃)
Third Party software supported	
Onboard software	SurPro6.0
General	
Display	5.5-inch capacitive touch screen with 1280*720 resolution
Operating system	Android 12
CPU	Quad-core Cortex-A55, 2.0GHz
Memory	2GB RAM + 16GB ROM
Keyboard	15 keys under the display
I/O interface	1*USB Type-A 1*USB Type-C 1*Nano SIM card slot 1*Trigger key
Communication	Virtual RS-232 (Type-C), Bluetooth, WiFi, cellular 4G
Operating temperature	-20℃~+50℃
Storage temperature	-40℃~+55℃
Water and dust protection	IP55 (IEC60529)
Weight	5.8 kg (with battery)

[1] Standard deviation based on ISO17123-3.
[2] Good conditions: no haze, visibility about 40km, not heat shimmer, breeze.
[3] Reflector: white side of Kodak Gray Card with 90% reflective.
[4] Laser plummet mounted at the bottom of the vertical axis.

Illustrations, descriptions and technical specifications are not binding and may change.

