Alpha Surveying

# Alpha Zero

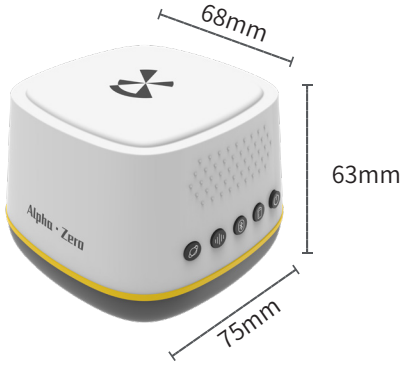
## Portable laser RTK

Professional Antenna + IMU | Laser Positioning 3cm | 75×63mm | 280g



# Alpha Zero

Alpha Zero is an ultra-compact handheld laser RTK integrated with a full satellites and full frequency solution chip and antenna, as well as professional inertial navigation. Eliminating the need for a centering rod, it can obtain centimeter-level high-precision coordinates by simply aiming the laser at the target point and touching to measure. Alpha Zero is engineered to make professional RTK accuracy easily accessible for applications such as navigation, spatial measurement, resource management, GIS data collection, mechanical control, agriculture and sports.




**280g**

- RTOS System
- Calibration-free IMU
- Satellite-Based Augmentation System (SBAS)
- 12 Hours Working Time
- Web UI (Optional)
- Base Station for UAV (Optional)

## Full Satellites and Full Frequency

| Satellite System | Frequency Bands/Signals |
|---|---|
| GPS | L1/L2/L5 |
| BDS | B1/B2/B3 |
| GLONASS | L1/L2 |
| GALILEO | E1/E5a/E5b |
| L_Band | |

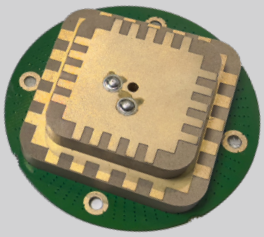



## Calibration-free IMU

No initialization required; shake gently to activate inertial navigation mode. Achieves 2cm accuracy at a 60° tilt angle and supports 90° horizontal point measurement.

## Ceramic Dielectric Antenna

Supports GPS, GLONASS, GALILEO, BDS and satellite-based augmentation systems. Boasts a wide-beam circular polarization pattern for more stable performance and a multi-feed design for higher relative centering and elevation accuracy.



# One-Click Laser Positioning

Alpha Zero enables effortless conventional surveying and staking out, and can be integrated with agricultural, mechanical and construction equipment. It fuses laser ranging, high-precision inertial navigation and RTK positioning, removing the need for a centering rod and enabling short-range laser positioning—ideal for ground point measurement within 5 meters.



Laser Mode

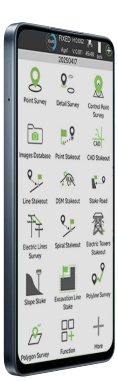




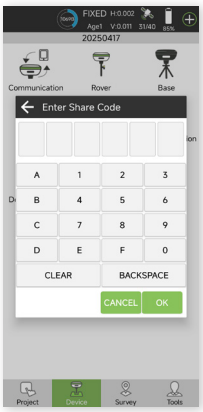

Centering Rod Mode

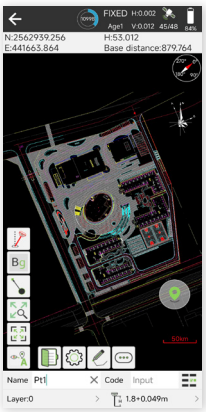
# Professional Field Software DiMap Pro

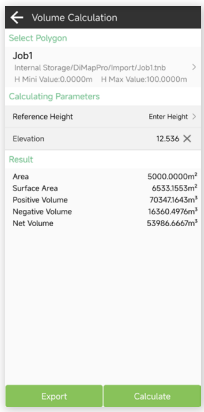
In addition to point measurement, detailed measurement, control point measurement, point stakeout, CAD mapping, road design stakeout, power survey, and elevation site control, it also supports line measurement, surface measurement, curve stakeout, tower base stakeout, photovoltaic stakeout, earthwork measurement, etc.

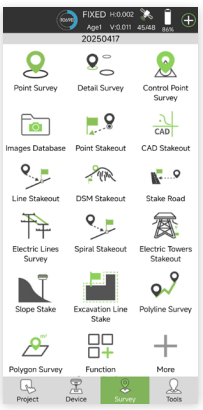


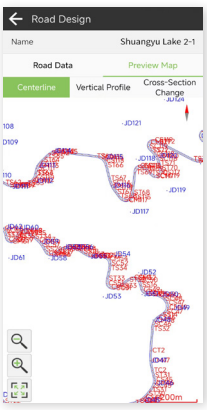


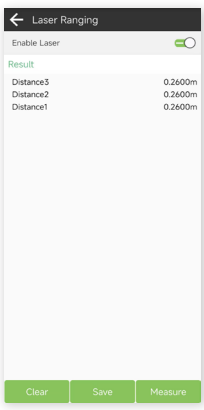


## Professional Set




| | |
|---|---|
| Alpha Zero Main Unit | ×1 |
| Adapter | ×1 |
| Data cable | ×1 |
| Warranty Card & Manual | ×1 |
| Paper Box Packaging | ×1 |

## Custom Versions



Customization options include a BDS-only version, a standard laser-free version, and more cost-effective solutions.

## Technical Specification

| | | |
|---|---|---|
| GNSS | Channel | 1408 |
| | Signal Tracking | GPS: L1/L2/L5 |
| | | BDS: B1/B2/B3 |
| | | GLONASS: L1/L2 |
| | | GALILEO: E1/E5a/E5b |
| | | L_Band |
| | RTK Accuracy | H: ±(8+1×10$^{-6}$D)mm |
| | | V: ±(15+1×10$^{-6}$D)mm |
| Tilt Compensation | Accuracy | ± (8+0.3TILT) mm |
| | *Angle | 0~90° |
| | Update Rate | 100Hz |
| System Parameters | Operation System | RTOS |
| | Storage Memory | 1G |
| | Indicator Light | satellite, datalink, bluetooth, battery |
| | Bluetooth | BT 5.0 (backward compatible) |
| Power | Input Voltage | 12V PD Protocol |
| | Battery capacity | 3.7V，4800mAh |
| | Working Time | 12h |
| Laser Measurement | Measuring range | 30m |
| | Ranging accuracy | 2mm |
| Physical | Dimensions | 75mm*75mm*63mm |
| | Weight | 280g |
| Environmental Performance | Operating temperature | -20°C ～ +60°C |
| | Storage temperature | -30°C ～ +70°C |
| | IP rating | IP65 |
| | Drop resistance | Withstands 1.6m rod drop onto hard ground at room temperature |
| | Humidity resistance | Resists 100% condensation |

*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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