Alpha Surveying

Alpha 400

Visual Positioning RTK

Visual 2cm accuracy | Dual radio | Dual AR | 680g



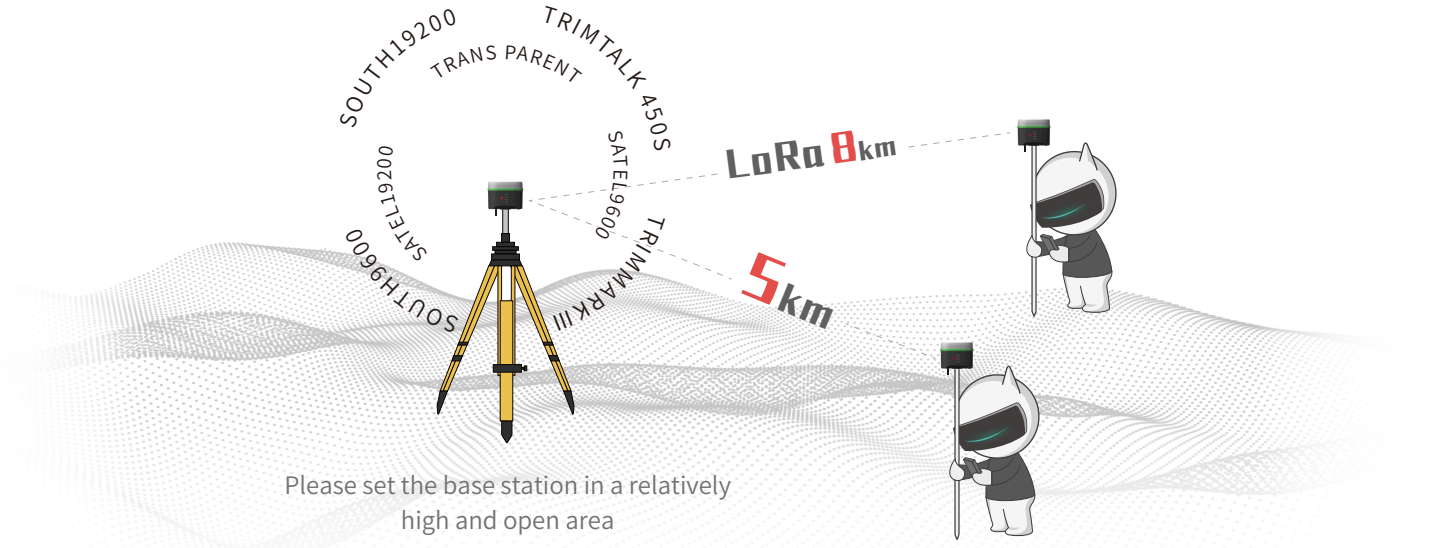
ISO ISO9001 CE

Alpha 400

Alpha 400 Visual Positioning RTK



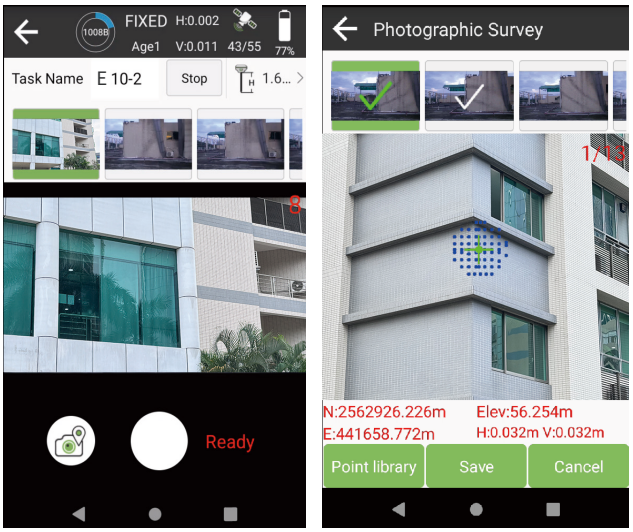
Alpha 400 is a lightweight imaging RTK. Unlimited IMU, no initialization required, enter the inertial navigation mode after a few steps; dual-mode radio, built-in 2W full compatibility and LoRa low-power long-range dual-mode radio, compatible with global mainstream protocols. The strongest image measurement processing capability to date, and also has AR dual-camera stake-out function.

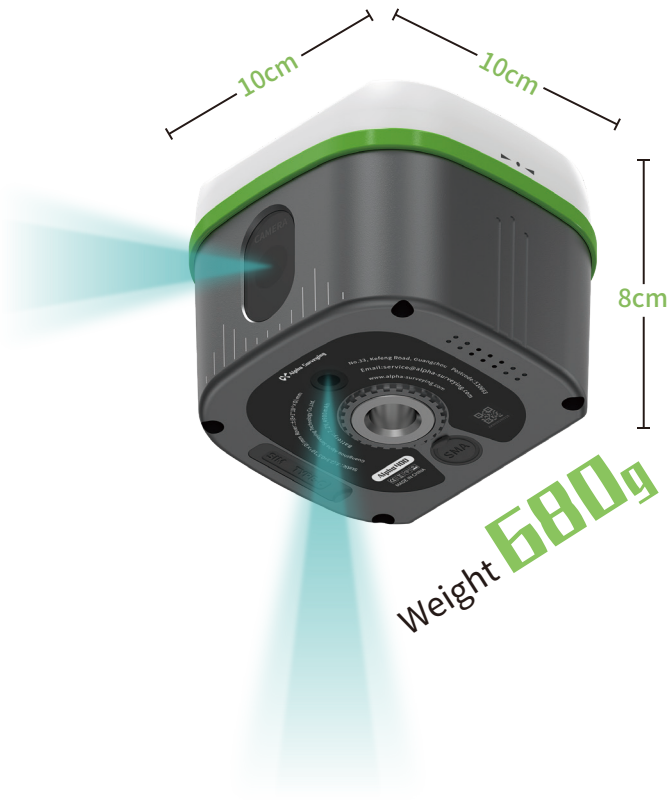


Please set the base station in a relatively high and open area

Visual Positioning

Photoelectric measuring Integrated with satellite, IMU, and visual technologies. Get what you see with professional camera, and measure in backlighting. Equipped with a professional image processing engine, real-time coordinate data can be obtained by clicking on the screen, achieving 2cm measurement accuracy.



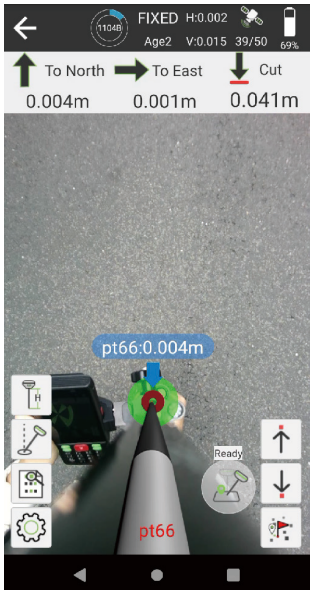


AR Visual Stakeout

Immersive real-scene stake-out, dual AR stake-out guidance, transitioning from long-range to close-up AR around 5m (adjustable distance). 360° real-time clear display under strong outdoor light, combining design data with real-world images, so that what you see is what you get. Image-level lens, small optical distortion, combined with professional algorithms, to achieve 1cm accuracy in real-scene point finding.



Long-range AR stake-out Guidance



Close-up AR stake-out Guidance

Drone Base Station



Supports UAV base station functionality and customizable serial port configurations, enabling integrated positioning solutions for unmanned systems, LiDAR, and related technologies.

Professional Set



Alpha 400	×1
Radio Antenna	×1
Host Adapter	×1
Host Cable	×1
Controller	×1
Controller Adapter	×1
Controller Cable	×1
Centering Pole	×1
Bracket	×1
Instruction	×1
Carrying Case	×1

Technical Specification

GNSS	Channel	1408
	Signal Tracking	GPS: L1C/A, L1C, L2C, L2P, L5
		BDS: B1I, B2I, B3I, B1C, B2a, B2b
		GLONASS: G1, G2, G3
		Galileo: E1, E5a, E5b, E6
		QZSS: L1C/A, L1C, L2C, L5
		SBAS: L1
		NAVIC: L5
	Static Accuracy	H: ±(2.5+0.5×10^{-6}D)mm
		V: ±(5+0.5×10^{-6}D)mm
	RTK Accuracy	H: ±(8+1×10^{-6}D)mm
		V: ±(15+1×10^{-6}D)mm
Tilt Compensation	Compensation Accuracy	±(8+0.3TILT)mm
	*Compensation Angle	0~60°
	Update Rate	200Hz
System Parameters	Operating System	Linux
	Memory	32G
	Data Record	DAT、Rinex
	Network	4G
	WiFi	802.11a/b/g/n/ac
	Bluetooth	BT5.0 backward compatibility
Radio	Power	2w
	Frequency	410-470MHz
	Global Communication Protocol	TRIMTALK 450S 、TRIMMARKIII 、SOUTH9600、SOUTH19200、SATEL9600、SATEL19200、TRANS PARENT、LoRa
	Operation Mode	Transceiver
Power	Voltage	9 - 20V Power Delivery
	Working Time	18h (Ntrip)、15h (Radio Receiving)、8h (Radio Transmitting)
AR Stakeout	Pixel	2M Pixels
	Field Angle	75°
	Accuracy	1cm
Port Indicator	SMA	Radio UHF Antenna
	Type-C	Charging, data transmitting, external port connection
	Indicator Lights	Satellite, Datalink, Bluetooth, battery light
	Loudspeaker	Support intelligent voice
Physical	Dimension	100mm*100mm*80mm(Excluding 5/8 pin interface)
	Weight	680g
Environmental	Operating Temperature	-30℃ ~ +70℃
	Storage Temperature	-40℃ ~ +80℃
	Water/Dust Proof	IP67
	Shock	Normal temperature resistance of 1.6 m drop (hard ground)
	Humidity	Up to 100%

*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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