Alpha Surveying

Alpha XBase

RTK Super Base Station

7W Dual radio | 20km | 190Wh | 15h working time



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RTK super base station

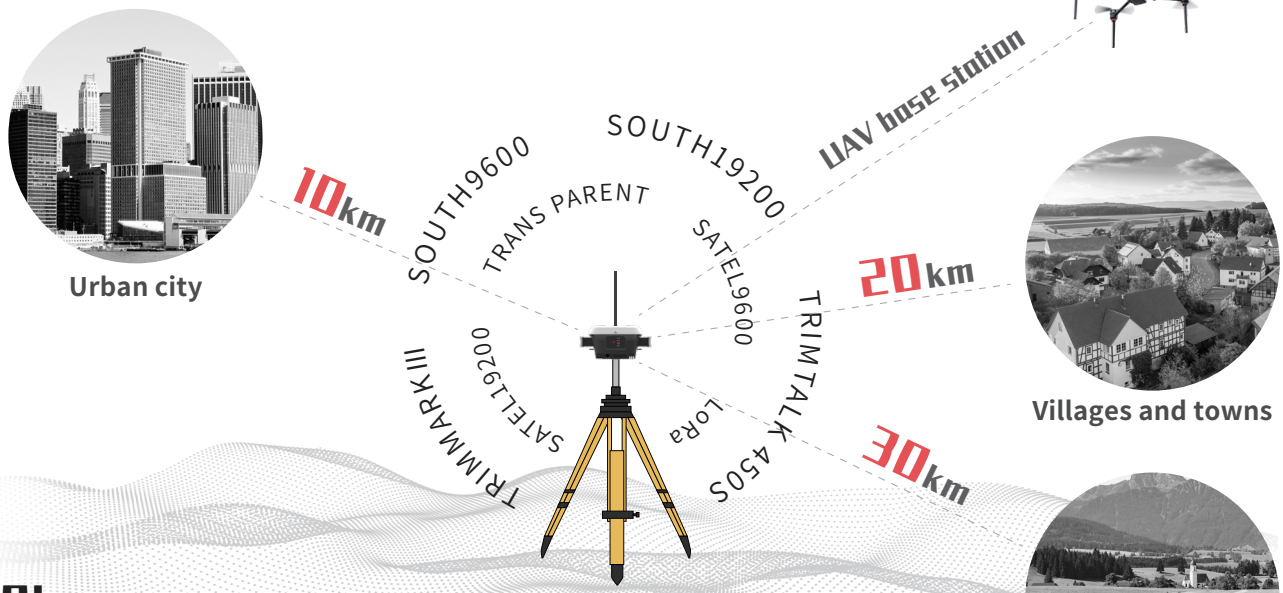


Alpha XBase features a built-in 7W dual-mode radio. In real-world tests, the typical transmission range reaches around 20km in towns, 30km in open outdoor areas, and 10km in dense urban environments.



15h working time

Alpha XBase features an innovative external plug-in power supply design. Its two high-density battery packs provide a total capacity of 190Wh, around three times that of comparable products. In real-world testing, the radio can continuously transmit for up to 15 hours. With hot-swappable battery rotation, XBase can keep working without interruption for virtually unlimited endurance. Both battery packs also have built-in power indicators, so the remaining battery level is clear at a glance.



20km range

It uses Alpha' s proprietary Di-Link protocol and also supports globally compatible protocols as well as LoRa mode. The high-performance pole antenna improves signal gain by around 50%. XBase also features Alpha' s original " hamburger " thermal design. The high-heat radio module and PCBA are closely integrated with a metal heat-dissipation plate at the bottom, creating a targeted heat-transfer path. This helps the radio maintain stable long-distance transmission without range degradation during continuous operation.

Special scene



When Alpha XBase is used for control surveying, its tested static operating time exceeds 80 hours.



XBase also supports operation in extremely low temperatures. At -30°C, it can continuously transmit for more than 10 hours.



For special environments such as polar expeditions or remote unmanned areas, multiple battery packs can be used to support ultra-long-duration field operations.



More convenience

Alpha XBase features a built-in full-frequency GNSS antenna supporting seven satellite constellations, with excellent out-of-band rejection, interference resistance, and L-band reception.It supports BeiDou and Galileo satellite-based correction services, so even in deserts, on remote islands, or in areas without control points or reliable communication coverage, it can still deliver centime-ter-level RTK positioning accuracy.Alpha XBase comes standard with a 4G module and supports Network base and rover system.It also includes a professional IMU, base-station movement alerts, and it can be used as a professional rover in emergency situations.A standard 5-pin interface supports external power supply, allowing XBase to work as a split-type system for applications such as water-based surveying.The battery pack has a built-in smart chip and supports mainstream fast-charging protocols, so it can also be used as a power bank for different smartphones and other surveying equipment.

Professional Set



XBase Receiver	×1
Battery	×2
Radio Antenna	×1
Adapter	×2
Receiver Cable	×2
Studdle	×1
Circular tray	×1
Instruction	×1
Carrying Case	×1

Technical Specification

GNSS	Channels	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
	High Precision Static	H: ±(2.5+0.5×10^{-6}D)mm
		V: ±(5+0.5×10^{-6}D)mm
	RTK	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	Operating System	Linux
	Built-in Storage	32G
	Data Record	DAT、Rinex
	Cellular Network	4G
	WiFi	802.11a/b/g/n/ac
	Bluetooth	BLE 5.2+BR/EDR
Radio	Power	7W adjustable
	Frequency	410-470MHz
	Operation Mode	Transceiver
Power	Voltage	7.2V
	Battery Capacity	95Wh*2
	Working Time	15h Base
Port / Indicator	TNC	For connecting external radio antenna
	SIM card slot	For sim car or internal 4G network
	Type-C	For charging & transmission, external port output
	Indicator Lights	Satellite, Datalink, Bluetooth, Battery
	Loudspeaker	Voice supported
Physical	Dimension	184*200*90mm(with Battery)
	Weight	2100g
Environmental	Operating Temperature	-20℃ ~ +60℃
	Storage Temperature	-30℃ ~ +70℃
	Water/Dust Proof	IP67
	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.

Alpha Surveying Technology Co.,Ltd.
NO.33 Kefeng Road, Huangpu District, Guangzhou
info@alpha-surveying.com
www.alpha-surveying.com