



Meridian

SuperBase Long-Lasting Smart GNSS Base

The SuperBase features a built-in 5W high-power radio with a maximum coverage distance of up to 35 km. With one person, one data collector, and one SuperBase, on-site setup is as easy as setting up a tripod—setup efficiency is boosted by 3x, giving you more time for surveying and less for debugging. Paired with dual removable batteries, it delivers up to N hours of runtime and supports hot-swapping without powering off, enabling unlimited continuous surveying. The high-definition touch-screen provides real-time base station status at a glance—everything is managed on a single screen.



Up to 15 Hours of Operating Time as a Base Station

When used as a base station, the SuperBase with dual removable batteries delivers up to 15 hours of uninterrupted operation on a single charge, completely eliminating the need for external batteries or frequent battery swaps.



Dual Hot-swappable Batteries

Dual removable 7000mAh lithium batteries support hot swapping without shutdown, eliminating the need for external batteries and reducing downtime.



Up to 35 km Working Distance

The 5W high-power radio, paired with our dedicated protocol Meridian Link, can work at a maximum distance of up to 35km, extending base station range for uninterrupted surveying.



HD Touchscreen, Everything at a Glance

The 1.39-inch HD touchscreen displays satellite tracking, coordinates, battery level, and communication status in real time. The screen features guided, tap-based interaction throughout—no need to memorize any parameters. Even without a controller, you can easily complete all instrument setup operations.



1408 Channels, Lock Every Satellite

SuperBase works with any satellite and any frequency, supporting GPS, GLONASS, Galileo, BeiDou, QZSS, and SBAS satellite systems as well as PPP services, delivering reliable RTK corrections to improve both surveying accuracy and efficiency.



Meridian SuperBase Specification

GNSS Signal	Channel	1408
	BDS	B1I, B2I, B3I, B1C, B2a, B2b*
	GPS	L1C/A, L1C, L2P(Y), L2C, L5
	GLONASS	L1, L2, L3*
	GALILEO	E1, E5a, E5b, E6*
	QZSS	L1C/A, L1C, L2C, L5, L6*
	SBAS	L1, L5*
	NavIC(IRNSS)*	L5
	L-band	B2b PPP (Only for the Asian-Pacific Region) & HAS*
	Data Format	CMR, CMR+, RTCM2.X, RTCM3.X
	Data Output	NMEA-0183, RINEX, TXT
	Data Updating Rate	Up to 20Hz
	Time to Recapture	<1s
	Cold Start	<40s
Positioning Performance	Single Point Positioning (RMS)	Horizontal: 1.5m Vertical: 3.0m
	DGPS (RMS)	Horizontal: 0.4m Vertical: 0.8m
	Real-Time Kinematic (RMS)	Horizontal: ± (8mm+1ppm) Vertical: ± (15mm+1ppm)
	Speed Accuracy (RMS)	0.03m/s
	Static Accuracy (RMS)	Horizontal: ± (2.5mm+0.5ppm) Vertical: ± (5mm+0.5ppm)
	Time Accuracy (RMS)	20ns
	Speed Accuracy	≥0.03m/s
	Tilt Compensation Accuracy	≤2cm(Tilt Angle≤60°), no tilt angle limitation
	IMU Update Frequency	200Hz
Communication	Bluetooth	V5.2 Dual Mode: 2.4GHz@+5dBm
	WiFi	IEEE 802.11b/g/n
	Cellular	LTE FDD: B1/3/5/7/8/20
		LTE TDD: B38/40/41
		UMTS/HSPA+: B1/8
	Storage	GSM/GPRS/EDGE: 900/1800 MHz
		32GB, Up to 64GB
Battery	Internal Radio	Transmitting power: 5W, 2W, 1W
		Frequency: 410~470MHz
	Specifications	Protocol: SOUTH, TRIMTALK 450S, TRIMMK III, TRANSEOT, SATEL, MERIDIANLINK
		Air Baud Rate: 9600, 19200, 11000
	Operating Times	7.4V,7000mAh*2 lithium-ion removable Battery
		RTK Base: Up to 15 hours(5W)
	Charging	RTK Rover: Up to 50 hours(Typical Power Consumption)
Environment	Weight	Static: Up to 77 hours (Typical Power Consumption)
	Operating Temperature	Support USB PD 15V/2A (Supports Quick Charging Adapter)
	Storage Temperature	225g/pcs
	Anti-seismic	-40°C~+85°C
	Dust & waterproof	-55°C~+85°C
Control Panel	Display	2m Pole Drop Onto Concrete
	LED Lamp	IP68
	Physical button	1.39" HD Touchscreen
Physical	I/O Interface	Signal, Power
	Dimensions	2
	Weight	1×USB type-C port;1×TNC antenna port; 1×SIM card slot; 1×5 pin LEMO port

*All specifications are subject to change without notice.

(1) Compliant, GLONASS L3, Galileo E6, Galileo E6 High Accuracy Service (HAS), BDS B2b and SBAS L5 will be provided through future firmware upgrade.

(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. PPP accuracy is subject to the region, environment, and convergence time. High-precision static requires a minimum of 24 hours of long-term observation and precise ephemeris.



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