



ROBUST

high-performance

tBase RTK Receiver



Characteristics

- ▶ Concurrent Data Links
- ▶ 13800mAh, 15h battery backup
- ▶ Remote VPN
- ▶ 2.5mm static accuracy
- ▶ 5W Radio
- ▶ 60°IMU
- ▶ 1408 channels
- ▶ Full Netcom 4G
- ▶ IP68 design

YOUR RELIABLE SUPPLIER IN POSITIONING

Advanced Surveying Instruments (India) Pvt.Ltd., New Delhi, INDIA

tBase GNSS Receiver

The tBase is developed specifically for professional base station applications. It features a high-precision positioning module, supporting full-system, multi-frequency satellite signal tracking. Equipped with 4G, Bluetooth, WiFi, a 5W radio, and a large-capacity battery, it meets the demands for concurrent data links at base stations and alleviates the endurance concerns typical of built-in radio work modes, making measurements more convenient and efficient.



Characteristic

Linux Smart System

Runs on a Linux+ARM Cortex-A7 platform, offering high-efficiency computing and infinite scalability of product functions.

Full System GNSS Reception

The receiver integrates a high-precision positioning module, utilizing 1408 channels to support a comprehensive range of signals including BDS (B1I/B2I/B3I/B1C/B2a/B2b), GPS (L1/L2/L5), GLONASS (L1/L2/L3), Galileo (E1/E5a/E5b/E6), and QZSS (L1/L2/L5)

Extended Range and Battery Life

Features a built-in radio capable of 5W transmissions and a 13800mAh battery, ensuring operational distances over 15km and continuous operation up to 15 hours.

Concurrent Data Links

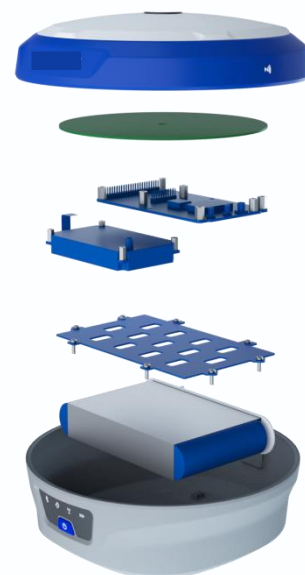
The integrated 4G and 5W radio enable simultaneous network and radio differential transmission, streamlining operations by eliminating the need to choose between radio and network.

Remote VPN Management

With an integrated VPN, the receiver allows remote configuration of various functions without the need to return to the base station setup point, facilitating flexible adjustment of work requirements in complex environments.

IP68 Design

Industrial-Grade Design, Robust Magnesium Alloy Casing, Meeting IP68 Standards for Durability and Reliability.



Office Address

H-10/103, 1st Floor, Express Arcade,
Near P. P. Trade Center, Netaji Subhash
Place, Pitampura, New Delhi - 110034, INDIA



tBase GNSS Receiver

ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		Qualcomm Cortex-A7	
OS		Linux	
GNSS	GPS	L1 C/A, L1C, L2P(Y), L2C, L5	
	GLONASS	L1, L2, L2C, L3	
	BDS	B1I, B2I, B3I, B1C, B2a, B2b, B1, B1C, B2, B2A and B3I	
	GALILEO	E1, E5a, E5b, E5ab, E6	
	QZSS	L1, L2, L5	
	SBAS	L1, GAGAN	
	NavIC (IRNSS)*	L5	
	Channel	1408	
	Standard Output	NMEA-0183	
	Correction I/O Protocol	RTCM 3.X	
	Frequency	20Hz	20Hz Max
	Reacquisition Time	<1s	
	Cold Start Time	<40s	
ACCURACY	SINGLE (RMS)	Horizontal: 1.5m / Vertical: 2.5m	
	DGPS (RMS)	Horizontal: 0.4m / Vertical: 0.8m	
	RTK (RMS)	Horizontal: \pm (8mm+1ppm) Vertical: \pm (15mm+1ppm)	
	Timing Precision (RMS)	20ns	
	Static Mode Precision (RMS)	Horizontal: \pm (2.5mm+1ppm) Vertical: \pm (5mm+1ppm)	
	Velocity Estimation (RMS)	0.03m/s	
	Tilt Correction (Within 60°)	<2cm	
SYSTEM PLATFORM	Bluetooth	BR+EDR+BLE	
	WIFI	802.11 b/g/n	
	Network	LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8	CORS Station: ENABLE VRS Station: ENABLE Independent Accuracy in PPP with 4cm Accuracy
	Radio	Integrated high-power transceiver Frequency Range: 410~470MHz Power: 5W(37 \pm 1dBm) 1W(30 \pm 1dBm) Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200	
	Storage	32GB storage Data Output Port: C Type, Bluetooth, WebUI	
INDICATOR	Power Indicator	Indicates power and charging status	
	Differential Signal Indicator	Indicates differential signal transmission status	
	Satellite Indicator	Indicates satellite reception status	
	Bluetooth Indicator	Indicates Bluetooth connection status	
BATTERY/CHARGE	Capacity	7.2V, 13800mAh	
	Endurance	Over 15 hours (In high-power build-in radio transmission mode)	Pole Battery & Car Battery with External Power Cable
	Charging	Supports USB PD 15V/2A and 5V/3A	With adaptive dynamic current adjustment



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ENVIRONMENT	Operating Temperature	-20°C~+65°C	
	Storage Temperature	-40 °C~+85 °C	
	Shock Resistance	Can withstand a 1.5m drop at normal temperatures	MIL-STD-80G Standard
	Protection Rating	IP68	
PHYSICAL	Materials	Magnesium alloy casing with ABS/PC plastic top cover	
	Dimensions	Φ 174.9 * 104.9mm	
	Weight	≤2kg	TBD
ACCESSORIES	tBase	1 Unit	
	Power adapter	1 PCS	
	USB A To Type-C Data Cable	1 PCS	
	Radio Antenna	1 PCS	

▲ Manufacturers may update parameters at any time, please refer to the latest product information.



ISO 14001:2015

ISO 9001:2015



Standard Compliance



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