

Banff-BASE

GNSS RECEIVER

Built for Distance, Built for Base



STRONG GNSS PERFORMANCE

Powered by a 1408-channel GNSS engine, Banff-BASE supports full-constellation tracking for reliable positioning. Its advanced anti-interference algorithms secure reliable positioning even in complex environments, ensuring uninterrupted base station correction data. Designed for continuous RTK service, Banff-BASE delivers the stable and consistent performance professionals can depend on.

SUPERIOR BASE STATION DESIGN

Purpose-built as a base station, Banff-BASE integrates top-mounted radio antenna design and a built-in 5-watt radio modem, extending the working range up to 25km in ideal conditions without external radios. Compatible with mainstream radio protocols and supporting internal GSM mode, Banff-BASE works seamlessly as both radio base and network base, adapting to your workflow with ease.

RUGGED & USER-ORIENTED DESIGN

Built for the field, Banff-BASE combines IP68 protection, a magnesium-aluminum housing with heat-dissipating fins, and solid drop resistance. Its 13200mAh battery powers all-day operation, while the 1.1" front display enables quick setup and monitoring. Plus, with flexible connections via WiFi webpage, Bluetooth, USB and RS232, Banff-BASE delivers a durable, efficient and user-friendly base experience.

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SATELLITES TRACKING

Channels	1408
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GPS	L1C/A, L1C, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
Galileo	E1, E5a, E5b, E6
QZSS	L1C/A, L1C, L2C, L5
NaviC	L5
SBAS	WAAS, EGNOS, SDCM, BDSBAS, GAGAN
L-Band	Support
Cold start	<30s
RTK Initialization Time	<5s (typical)
RTK initialization reliability	>99.9%
Re-acquisition	<1s

ACCURACY

Standalone	1.5m Horizontally 2.5m Vertically
DGPS	0.4m Horizontally 0.8m Vertically
Static post-processing	2.5mm+0.5ppm Horizontally 5mm+0.5ppm Vertically
RTK	8mm+1ppm Horizontally 15mm+1ppm Vertically
PPP	5cm Horizontally 10cm Vertically
SBAS	< 1.0 m 3D RMS
Time Accuracy	20ns
Tilt Surveying (optional)	<±2.5cm, within 60° tilt range

DATA FORMAT

Data output format	- NMEA-0183 - RINEX 3.02/3.04 - Binary format *.xyz
Data update rate	1 ~ 10Hz selectable
Correction data format	RTCM 3.2/3.0/2.3
Supported protocols	Ntrip Server, Ntrip Caster, TCP, UDP

USER INTERACTION

Indicators	2 LEDs indicating satellite tracking and correction data transmission
Button	2 buttons for power and function
Display	1.1" OLED display
WebUI	Access via Wi-Fi

COMMUNICATION

UHF modem	- Frequency range: 410-470MHz - Protocol: TRIMATLK, SATEL, TRANSEOT, TRIMMARK3, CSS, etc. - Channel spacing: 25KHz - Transmit power: 2W~5W selectable
Bluetooth	BT4.0 dual mode
NFC	Support
Interface	- 1 7-pin lemo port for RS232 transmission and power supply - 1 SMB connector for UHF antenna - 1 Type-C USB port for static data downloading & firmware upgrading - 1 SIM card slot for 4G
4G	FDD-LTE B1/B3/B5/B7/B8 TDD-LTE B38/B39/B40/B41 TDSCDMA B34/B39 WCDMA B1/B2/B5/B8 GSM B2/B3/B5/B8 CDMA1x/CDMA2000 BC0/BC1
WiFi	IEEE 802.11 b/g/n (2.4 GHz default, 5 GHz 802.11 a/b/g/n/ac firmware upgradeable)

ELECTRICAL

Power consumption	12W ¹
Battery	13200 mAh, over 7-8 hours working time in radio base mode
Input voltage	DC 9~24V

PHYSICAL

Size	Φ145mm × 93mm
Weight	1204g
Storage	8GB ²
Housing material	Magnesium-aluminum alloy

ENVIRONMENTAL

Working temperature	-30 °C to + 65 °C
Storage temperature	-55 °C to + 85 °C
Humidity	100% non-condensing
Waterproof & dustproof	IP68
Drop	Designed to survive a 2m drop onto concrete

1. The power consumption of Banff-BASE varies with user settings.
2. Storage can be expanded to 32GB according to user demands.

All specifications are subject to change without notice.

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