

α-GEO

NetBOX2



PRECISION

As big as your pocket



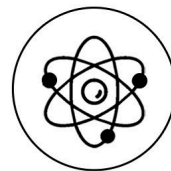
IMU TILT



UHF RADIO



WEBUI



FULL GNSS

Performance specification

Satellite signals tracked simultaneously	GPS: L1C/A, L1C, L2P(Y), L2C, L5
	GLONASS: L1, L2, L3
	BEIDOU: B1I, B2I, B3I, B1C, B2a, B2b
	GALILEO: E1, E5a, E5b, E6
	QZSS: L1, L2, L5, L6
	SBAS: L1, L5
	IRNSS: L5
Channels	1408 channels
Cold start	<60 s
Hot start	<15 s
Positioning output rate	1Hz-50Hz
Signal Reacquisition	<1s
RTK Initialization time	<5s
Initialization Reliability	>99.99%
Time accuracy	20 ns

Positioning¹

Static GNSS surveying	Horizontal: $\pm(2.5\text{mm} + 0.5\text{ppm})$
	Vertical: $\pm(5\text{mm} + 0.5\text{ppm})$
RTK Surveying	Horizontal: $\pm(8\text{mm} + 1.0\text{ppm})$
	Vertical: $\pm(15\text{mm} + 1.0\text{ppm})$

HARDWARE

PHYSICAL

Material	Magnesium alloy
Dimensions	100x100x73mm
weight	0.55kg
Operating temperature	-40°C to +75°C
Storage temperature	-55°C to +85°C
Protection IP	IP67 dust proof, protected from 30min immersion to depth of 1m
Shock	IK08, Survive 2 m drop onto the concrete
Vibration	MIL-STD-810G
Humidity	100%, condensing

IMU

IMU	Supported, 4D IMU initialization in 3 seconds
IMU update rate	400Hz
IMU accuracy	<2.5cm within 30°
IMU tilt compensation	0-60°

ELECTRYCAL

Power: 9~24 V DC external power	
Support USB Type-C fast charging	
Internal 6800mAh lithium-ion battery	
Battery Life	Rover Mode: 14 hours
	Static Mode: 20 hours

Communication & Data Storage

I/O interface	USB TypeC (support charging, data download) ; SMA radio antenna interface
WEBUI	Support WEBUI configuration
Cellular	Controller 4G, Built-in LTE

RADIO MODEM

internal radio	RX internal module (Tx/Rx optional)
internal radio frequency	410-470 MHZ
Communication protocol	Transparent transmission /TT450S

WIFI

802.11 b/g standard, access point & client mode, supports access to hotspot for correction transmission

Bluetooth

Fully integrated Bluetooth V4.0, range $\leq 50\text{m}$

Data format

Differential data	RTCM2.X, RTCM3.X
GPS output data format	NMEA 0183s RJK, Binary code
static data format	RINEX

Storage

8GB internal memory, supports cyclic storage; with ability to collect over one year raw observation based on 5 seconds interval

Others

System integration

OS system:	Intelligent LINUX operating system
Relay station	CORS relay, Radio relay
Supported controllers	All android devices with supported software

Design

Key	Double button
Indicator	Power indicator, data link indicator, satellite indicator, Bluetooth indicator
WEBUI	Support WEBUI configuration

¹ - Precision and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. The specifications stated recommend the use of stable mounts in an open sky view, EMI and multipath clean environment, optimal GNSS constellation configurations. Base lines longer than 30 km require precise ephemeris and occupations up to 24 hours may be required to achieve the high precision static specification.



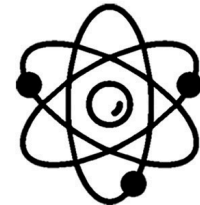
NetBOX2

Netbox2 is a compact new generation of smart GNSS receiver designed for any surveying project using the latest GNSS technology. This receiver is equipped with all modern required connectivity modules: Bluetooth, Internal radio, WIFI & 4G modem. 6800mAh Built-in battery, IMU tilt technology and WebUI are other latest technologies used in Netbox2 receivers.



■ Multi constellation

Netbox2 with its 1408 channels new generation full GNSS chipset & ability to support multiple satellite constellation including GPS, GLONASS, BEIDOU, GALILEO, QZSS, SBAS and IRNSS provides precise and accurate spatial data for all users around the world.



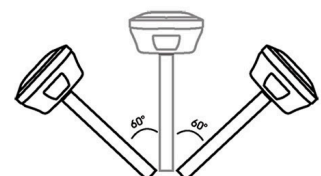
■ WiFi and WebUI

Netbox2 serves as a WiFi hotspot, so users can easily access/manage the status, set the configuration or download static and PPK raw data through advanced WebUI using computer, smartphone or other electronic devices with WiFi support without any need to third party software or cable.



■ IMU Tilt Sensor

Netbox2 is equipped with a fast initialization, calibration free & immune to magnetic interference Inertial Measurement Unit (IMU). All users can use this technology to collect or stakeout topo points up to 60°.





■ GSM & UHF radio

A fast internet connection is guaranteed with a built-in 4G module that accelerate receiving correction data using all telecommunication signals and bands. Netbox2 comes with an integrated Tx/Rx internal UHF radio that ranges from 410 MHz to 470 MHz with selectable frequency providing ability to connect and collect accurate real time data in Base/Rover mode.



■ Battery & Power

Netbox2 is delivered with an internal large capacity 6800mAh lithium-ion internal battery supporting USB type-C fast charging which allows users to work for more than 14 hours in daily field work.



■ IP67

Choosing a small, light but professional, rugged GNSS receiver has always been a concern among professional surveyors. Netbox2 with its high quality magnesium alloy body provides such advantages without decreasing quality or notable increase in price.



■ Working mode

Every surveyor needs to operate and choose suitable working method based on project requirements and required accuracy. In order to work in such condition users will need a device to be able to work in different modes such as Static, Network RTK, UHF RTK, PPK & etc. Netbox2 is offering all you need in a package!

