SMAJAYU

SMA25R Net GNSS Receiver

Handheld RTK Receiver for various surveying application and agricultural marking

Product Introduction

The SMA25R Net GNSS receiver is a lightweight, simple, and practical high-precision performance full constellation GNSS RTK receiver. As a low-cost solution, the device combines the characteristics of small size, portability, and high-precision positioning. The SMA25R Net supports five-star and sixteen frequency positioning data, adopts a high-performance aluminum alloy body, and has a built-in Bluetooth module that can be used with Android phones. Including land surveying, construction engineering, precision agriculture, environmental monitoring, geological exploration, transportation, public safety, and marine hydrology. It is an essential tool for professionals seeking to improve work efficiency and data accuracy.

Key Features

- High Precision Positioning
- Multi-System Compatibility
- Durable Design
- Long Battery Life
- Compact and Portable
- Flexible Usage
- Advanced signal Processing
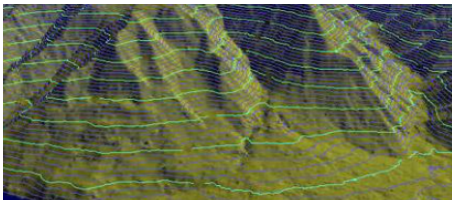- 0-60 ° Tilt Compensation

Technical Features

- Small size and high integration, the system can integrate large capacity batteries, GNSS antennas, satellite positioning modules, inertial navigation modules, Bluetooth, etc;

- Adopting the universal standard TYPE-C charging interface, supporting power bank charging and TYPE-C upgrade;

- Built in 4.0 Bluetooth module, supporting various desktop phone connections;

- The total weight of the equipment is 0.55kg, compact and lightweight, easy to carry;

- The software adopts standard or flagship measurement software, which has functions such as measurement, marking, CAD layout, etc;

- High precision and low power consumption, using Beidou GPS、GLONASS、 Galileo, QZSS and other five-star and sixteen frequency systems can ensure positioning accuracy in various complex environments;

- Standard IP54 waterproof and dustproof design;

- Ultra long battery life, low power consumption, built-in 4800mAh large capacity battery, supporting over 16 hours of battery life;

- Flexible to use, can be handheld or directly screwed onto the centering rod for measurement;

- The software supports various CORS systems;

APPLICATION

u ̇oU ̊ k ̇V GNSS receiver offers exceptional precision in land surveying, providing reliable data for boundary demarcation, topographic mapping, and land development planning. Its portability and high accuracy make it an ideal tool for both small and large-scale surveying projects.

LAND SURVEYING

With its high precision and multi-system compatibility, the SMA25R Net GNSS receiver is ideal for marking construction sites, enabling accurate placement of structures and infrastructure, minimizing errors and rework during the construction process.

CONSTRUCTION SITE LAYOUT

In precision agriculture, the SMA25R Net GNSS receiver ensures accurate mapping for field management, crop monitoring, and land preparation. It allows farmers to mark planting areas precisely, improving efficiency and minimizing errors in large agricultural fields.

AGRICULTURAL MARKING

Technical Specifications

SMA25R Net GNSS receiver

Signal Tracking	BDS	B1I/B2I/B3I/B1C/B2a/B2b
	GPS	L1C/A/L2P (Y)/L2C
	GLONASS	G1/G2/G3
	Galileo	E1/E5a/E5b/E6
	QZSS	L1/L2/L5
	Cold Start Time	<25s
	Initialization Time	<5s (typical value)
	RTK Initialization Reliability	>99.9%
	Signal Reacquisition Time	<1s
Single Point Positioning	Horizontal Precision	1.5m
	Vertical Precision	2.5m
RTK Positioning	Horizontal Precision	$\pm(8 + 1.0\times10^{-6}\times D)$ mm
	Vertical Precision	$\pm(15 + 1.0\times10^{-6}\times D)$ mm
Inertial Measurement	Tilt Angle	0-60°
	Tilt Accuracy	2.5cm (accuracy within 30°)
Data Output	Differential Data Format	RTCM3.X
	Position Data Format	NMEA-0183
Electrical Parameters	Battery Life	≥16h
	Input Voltage	DC5V ≤1A
	Battery Capacity	4800mAh
	Power Consumption	1w
Physical Properties	Operating Temperature	-45℃ ~ +75℃
	Storage Temperature	-55℃ ~ +85℃
	Physical Dimensions	165mm × 70mm
	Protection Level	IP54
	Impact & Vibration Resistance	Resistant to 2m drop
	Buttons	1 button
	Indicator Lights	2 LED indicator lights
	Weight	0.55kg
Data Interface	Data Refresh Rate	1Hz
	Baud Rate	115200
	Interface Type	Standard TYPE-C interface
	Bluetooth	BT4.0

*D is the baseline distance, measured in mm

Handheld Data collector
FP88

Screen	5.45inch high-definition high-brightness screen
	Capacitive screen, 5-point touch;
	HD hard screen, TP high aluminum white glass
	Resolution (720*1440）
SIM card type	Dual Nano Sim
Network communication	FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B12/B17/B20/B28 TDD-LTE: B34/B38/39/40/41(100M) WCDMA: B1/2/5/8 GSM: B2/B3/B5/B8
operating system	Android 11
Main control platform	MT6762/6765, octa-core 2.0GHz
Internal memory	64GB ROM+4GB RAM
Phone size	221*78*16.5mm
Features	IP68 dust and water resistance, 4G full network access smart terminal, industrial appearance design
Navigation	GPS+BDS+GNSS+GLL+AGPS
High precision	Dual-bandRTK
Charging method	TYPE-C direct charging
Fast charging	Support 2A fast charging (9V2A)
Three-proof function	Support IP68 waterproof, IP68 dustproof, professional shockproof
sensor	Gravity accelerometer, gyroscope, distance, light, electronic compass
flashlight	High-brightness professional-grade flash replacement (working current 100-150mAh);
NFC	13.56MHZ (support ID card recognition)
Speaker	8Ω 2W Speaker
Microphone	support
Earphones (optional)	TYPE-C interface intercom headset
Motor	support
Battery	9000 mAh
Operating temperature	-20℃～+50℃
Storage temperature	-40℃～+70℃
Buttons	51-key full keyboard + one custom key on the side
Camera pixels	Rear 1300W HD camera
flash	4*4 high brightness real flash light
Video Recording	Maximum support 1920*1080 pixels, 30 frames
WLAN Function	WIFI 802.11 a/b/g/n/ac, Support 2.4G/5.0G WIFI
Data Interface	Type C USB 2.0
USB interface	TYPE-C standard interface, supports 2A charging, data download, OTG and other functions;
Bluetooth transmission	BT5.0
External interface	Side USB port,
Wristband	support

Information and related materials are subject to change without notice.