

P8/P8Pro Portable RTK Receiver

P8/P8Pro is a portable intelligent positioning terminal developed based on BDS high-precision positioning technology. The main unit is lightweight and compact, making it easy to carry around. It supports tracking of signals from all satellite constellations with 1408 channels, providing centimeter-level positioning accuracy. It caters to various measurement and layout tasks such as road construction, power line surveying, site leveling control, CAD applications, railway stakeout, and etc.



CHARACTERISTIC

- ### Integrated Hardware & Software

Based on fully autonomous domestic hardware and the FreeRTOS intelligent system platform, this device provides users with efficient computing power and the ability to expand product functionality infinitely.
- ### Centimeter-Level Positioning

P8/P8Pro Portable RTK Receiver is equipped with a compact and omnidirectional helical antenna. It supports tracking signals from all constellations and frequencies. With 1408 channels, it can simultaneously receive BDS, GPS, GLONASS, GALILEO, QZSS and SBAS signals. It enables full constellation positioning and supports base station differential correction. It can integrate with the GBAS. The accuracy can reach to centimeter-level precision.
- ### Multipurpose

The Receiver supports 4G CAT1 network, Bluetooth connectivity for communication and control purposes. It can be combined with a cloud server to enable remote monitoring, configuration, and alerts for the main unit.
- ### Compact & Portable

P8/P8Pro Portable RTK Receiver weighs only 141g, making it convenient for portable use. It also has low power consumption. With a built-in 1800mAh lithium battery, the device can work continuously for over 8 hours.
- ### Tilt Measurement

P8Pro is equipped with a built-in intelligent high-precision inertial navigation module, providing real-time tilt compensation that enhances the accuracy of RTK measurements. It provides positioning accuracy of less than 2cm within a tilt range of 60 degrees. (Note: P8 does not support tilt measurement)
- ### IP67 Design

Industrial design, in line with IP67 design requirements, safe and reliable.

TECHNICAL PARAMETERS

ITEM		SPECIFICATION
HARDWARE SYSTEM		ESP32 + ASR ARM
OS		FreeRTOS
GNSS	GPS	L1C/A, L2C, L2P(Y), L5
	GLONASS	G1, G2
	BDS	B1I, B2I, B3I, B1C, B2a
	GALILEO	E1, E5a, E5b
	QZSS	L1C/A, L2C, L5
	SBAS	L1C/A
	Channel	1408
	Data Format	NMEA-0183
	Correction I / O Protocol	RTCM3.X
	Data Update Frequency	5Hz
POSITIONING ACCURACY	Single (RMS)	Horizontal: 1.5m ; Vertical: 2.5m
	RTK(RMS)	Horizontal: 0.8cm+1ppm Vertical: 1.5cm+1ppm
SYSTEM	Network	Multi-network Compatible LTE FDD: B1, B3, B5, B8 LTE TDD: B34, B38, B39, B40, B41
	Bluetooth	BR+EDR
INDICATOR	Power Indicator	Show Power Status
	Satellite Indicator	Show Position Status
	Data link Indicator	Show Differential Signal Status
	Bluetooth Indicator	Show Bluetooth Status
ENVIRONMENTAL	Work Temperature	-20°C~+60°C
	Storage Temperature	-40°C~+85°C
	Protection	IP67
PHYSICAL	Material	PC+ABS
	Dimension	53.8mm*37mm*117.5mm (Height Including Helical Antenna)
	Weight	P8: 141g/ P8Pro:143g (Weight Including Helical Antenna)
BATTERY	Battery	7.4V 1800mAh
	Work Time	More than 8 hours
	Charge	5V 2A
A FULL SET	P8/P8Pro Device	1 SET
	Full-band Helical Antenna	1 PCS
	Plumb Rod Adapter	1 PCS
	5V/2A USB Power Adapter	1 PCS

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