



# GNSS Receiver P8/P8Pro

Portable RTK Receiver

# P8/P8Pro Portable RTK Receiver

The 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 more.

## 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

The P8/P8Pro Portable RTK Receiver is equipped with a compact and omnidirectional helical antenna. that 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, supports base station differential correction, and can integrate with the GBAS. The accuracy can reach 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

The 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

The 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. Providing positioning accuracy of less than 2cm within a tilt range of 60 degrees (P8 does not support tilt measurement).

# P8/P8Pro GNSS Receiver

## Portable RTK Receiver

141g(P8), 143g(P8Pro) | 53.8\*37\*117.5mm

Easy to carry with one hand

1408 Channel

GPS GLONASS BDS GALILEO  
QZSS SBAS

P8Pro Supports Tilt Measurement

60° IMU, error<2cm

7.4V, 1800mAh

More than 8 Hours

SDK provided

Easy for further development

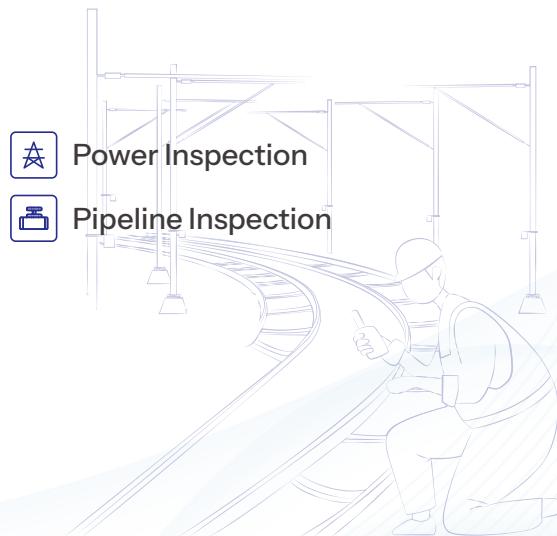


## GIS APPLICATION AREA



WIDTH | THICKNESS | WEIGHT  
53.8 mm | 37 mm | 141g

-  Engineering Survey
-  Agricultural Mapping
-  Landscaping



# SPECIFICATION

SYSTEM	
HARDWARE SYSTEM	ESP32+ASR ARM
OS	FreeRTOS
GNSS	
GPS	L1 C/A, L1C, L2P(Y), L5
GLONASS	G1, G2
BDS	B1I, B2I, B3I, B1C, B2a
GALILEO	E1, E5a, E5b
QZSS	L1/C, L2C, L5
SBAS	L1C/A
Channel	1408
Data Format	NMEA-0183
Correction I/O Protocol	RTCM 3.X
Data Update Frequency	5Hz(max)
ACCURACY	
SINGLE (RMS)	Horizontal: 1.5m / Vertical: 2.5m
RTK (RMS)	Horizontal: $\pm$ (8mm+1ppm) Vertical: $\pm$ (15mm+1ppm)
SYSTEM	
Bluetooth	BR+EDR
Network	Multi-network Compatible LTE FDD: B1, B3, B5, B8 LTE TDD: B34, B38, B39, B40, B41
INDICATOR	
Power Indicator	Show power status

Satellite Indicator	Show position status
Data Link Indicator	Show differential signal status
Bluetooth Indicator	Show Bluetooth status
ENVIRONMENT	
Operating Temperature	-20°C~+60°C
Storage Temperature	-40°C~+85°C
Protection Rating	IP67
PHYSICAL	
Materials	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
Endurance	Over 8 hours
Charging	5V/2A
ACCESSORIES	
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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Manufacturers may update parameters at any time, please refer to the latest product information.



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