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Rugged & GIS
PRODUCT BROCHURE

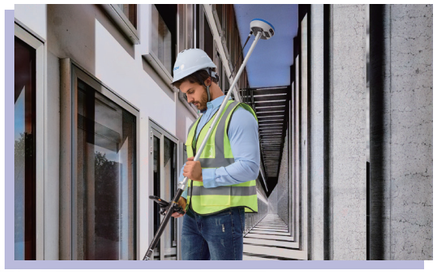
ABOUT US

Company Introduction

Guangzhou Toksurvey Information Technology Co., Ltd. was founded in 2019 by a team of R&D engineers. The company team has nearly 15 years of R&D background. At present, the company has nearly 2,500 square meters of office and factory, complete set of research equipment, and strong technical background.

Our company is committed to the R&D, production and sales of high-precision satellite positioning terminal products. More than 60% of the employees are engineers. Driven by technological innovation, the company maintains a steady growth rate of 60% every year.

At present, the company has successfully launched high-precision GNSS RTK (T5 series, T10 series, T20 series, T30 series, T40 series and T50 series), portable RTK receiver (P8 series), high-precision CORS station (NET660 series), data controller, GNSS antenna, precision agriculture, mechanical control, marking robot, USV and SLAM to the market. We not only provide trainings about our products, but also provide a series of relevant solutions.



Our Targets

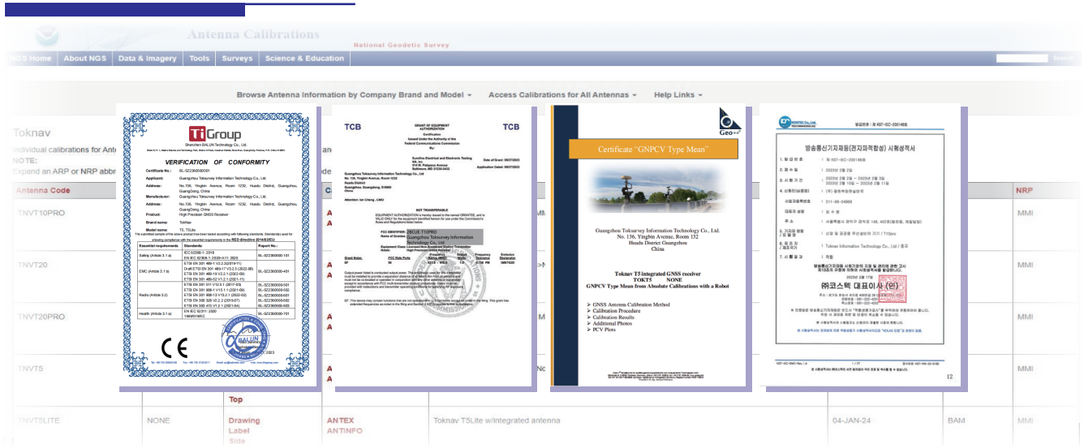
Mission	Vision	Value	Slogan
Make positioning more precise and easier.	Working together to improve global surveying quality.	To become a leader in the global surveying and mapping service.	Your reliable supplier in positioning!

Fields of Application

TOKNAV products can be widely used in precision surveying & mapping, mining operations, deformation monitoring, autonomous driving and other fields. We currently have a number of mature GNSS application solutions, such as deformation monitoring, CORS network, marking robots, precision agriculture, mechanical control and digital construction field. TOKNAV products have passed CE, FCC, KC, NGS, IGS and other certifications, and are exported to more than 100 countries and regions around the world. Our products are well received in the global market, and now we have become a system integration supplier in the global market.

Construction
Monitoring
Mapping & GIS
Surveying
Agriculture
Marine

Certifications



Rugged & GIS Line Overview

PRODUCTS		PCR100T	PCR500	PCR500Pro	PCR600
ITEM					
SYSTEM	Operating system	Android 11	Android 12		Android 14GMS
	CPU	8-core 2.0GHz processor	Qualcomm SM6115	Qualcomm SDM 662	
	Memory	4GB RAM + 64GB ROM			
	External storage	Micro SD, up to 512GB	Micro SD	Micro SD, up to 128GB	Micro SD, up to 256GB
INPUT/OUTPUT	Display	720*1440p	1080*1920p		
	Touch Panel	5-point capacitive touch	Multi-touch, support glove and wet hands operation		
	Camera	13MP rear, Support Flash light	Rear 13MP, AF with double white LED Flash		
	Sensors	Ambient Light Sensor and Accelerometer	Gyroscope, Accelerometer, Ambient Light and eCompass Sensor		
	Interface	Option1: 1*Nano Sim+1*Micro SD Option2: 2*Nano Sim	Type-C (USB3.0 Supports OTG) SIM: one Nano SIM card slot Indicator LED		
DATA COMMUNICATION	GNSS	GPS+BDS+GNSS+GLONASS+AGPS	Qualcomm GPS/A-GPS, GLONASS, BDS, Galileo	BDS: B1I, B2I, B3I, B1C, B2a, B2b GPS: L1C/A, L1C, L2P (Y), L2C, L5 GLONASS: L1, L2 Galileo: E1, E5a, E5b, E6* QZSS: L1, L2, L5, L6* SBAS*: L1, L5	GPS+BDS+GLONASS+AGPS non-high precision
	WIFI	802.11 a/b/g/n/ac access point mode (2.4 G / 5G)			
	Bluetooth	BT5.0 (BLE)			
	NFC	support			
ELECTRICAL	Battery	9000mAh (Support Rapid Charging) Working time: 18h Charging time: ⩽5 hours	9000mAh (Support Rapid Charging) Working time: 22 hours Charging time: Reaching 90% ⩽4 hours		9000mAh (Support Rapid Charging) Working time: 18~22 hours Charging time: Reaching 90% ⩽3 hours
PHYSICAL	Dimension	221mm*78mm*16.5mm	227.8mm*95.8mm*20.9mm		226.3mm*90.6mm*16.9mm
	Weight	410.6g	420g		412g
ENVIRONMENTAL	Temperature	Work Temperature: -20°C~+55°C Storage Temperature: -40°C~+70°C	-20°C~+65°C -30°C~+70°C		
	Work Humidity	5%~95%			
	Protection	IP68			
	Shock	1.5M	1.2M		

Manufacturers may update parameters at any time, please refer to the latest product information.

Rugged & GIS Line Overview

PRODUCTS		P8	P8Pro	P8Global
ITEM				
HARDWARE SYSTEM		ESP32 + ASR ARM		ARM Cortex-A7 1.8GHz
OS		FreeRTOS		Linux
GNSS	GPS	L1C/A, L2C, L2P(Y), L5		L1C/A, L1C, L2C, L2P(Y), L5
	GLONASS	G1, G2		G1, G2, G3
	BDS	B1I,B2I,B3I,B1C,B2a		B1I, B2I, B3I, B1C, B2a, B2b
	GALILEO	E1, E5a, E5b		E1, E5a, E5b, E6
	QZSS	L1C/A, L2C, L5		L1C/A, L1C, L2C, L5
	SBAS	L1C/A		
	NavIC(IRNSS)	\		L5(Require specialized firmware)
	Channel	1408		
	Data Format	NMEA-0183		
	Correction I / O Protocol	RTCM3.X		
	Data Update Frequency	5Hz		
POSITIONING ACCURACY	Single (RMS)	Horizontal: 1.5m		
	RTK (RMS)	Horizontal: 0.8cm+1ppm Vertical: 1.5cm+1ppm		
	Tilt compensation Accuracy(within 60°)	not support	⩽2cm	
SYSTEM	Network	Multi-network Compatible LTE FDD: B1, B3, B5, B8 LTE TDD: B34, B38, B39, B40, B41		LTE FDD:B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8
	Bluetooth	BR+EDR		
PHYSICAL	Dimension	53.8mm*37mm*117.5mm		60mm*41.3mm*126.3mm
	Weight	P8: 141g/P8Pro: 143g		176g
ELECTRICAL	Battery	7.4V 1800mAh		7.4V 2500mAh
	Work Time	More than 8 hours		More than 12 hours
ENVIRONMENTAL	Temperature	Operating Temperature: -20°C~+60°C Storage Temperature: -40°C~+85°C		
	Protection	IP67		

Manufacturers may update parameters at any time, please refer to the latest product information.

PCR100T Data Controller

The PCR100T is a flagship RTK measurement control terminal designed specifically for the surveying industry. It boasts an impressive battery life of over 18 hours, a 5.45-inches sunlight-readable screen for easy outdoor viewing, and operates on the Android 11 system for smooth performance. It features a digital keyboard and offers IP68-level protection against the elements. With professional surveying software, it empowers users to effortlessly tackle various surveying scenarios.

WIDTH	THICKNESS	WEIGHT
78 mm	16.5 mm	410.6 g

CHARACTERISTIC

Powerful System

Equipped with an Android 11 operating system, an 8-core 2.0GHz processor, 4GB of RAM with 64GB of storage, configure 13MP rear camera.

Display Excellence

The device boasts a 5.45-inch display, with a resolution of 720*1440px. It offers a seamless touch experience with support for up to 5-point capacitive touch. What's more, it enables effortless operation even with gloved or wet hands.

Smooth Operation

The device features an ergonomic design that provides a comfortable grip and an exceptional user experience during operation.

Various Data Communication Methods

The PCR100T Data Controller supports multiple communication methods such as Wi-Fi, Bluetooth, NFC and 4G, which satisfies the needs of users in most regions of the world.

Long Endurance

Built-in high-capacity lithium battery ensures continuous working time of more than 18 hours under normal operation.

Robust Device Protection

The device is designed to withstand harsh environments and is tested to meet IP68 waterproof and dustproof standards. It is also built to withstand drops from a height of 1.5 meters, ensuring durability and reliability in challenging conditions.

SPECIFICATION

SYSTEM	
OS	Android 11
CPU	8-core 2.0GHz processor
Memory	4GB RAM + 64GB ROM
External storage	Micro SD, up to 512GB
PHYSICAL PARAMETERS	
Display	Screen size : 5.45 inch Resolution: 720*1440p
Touch Panel	5-point capacitive touch
Button	Standard English full keypad
Camera	Rear 13MP, Support Flash light
Sensors	Ambient Light Sensor and Accelerometer
Notification	Audio, Vibration, and LED Indicators
Interface	Option1: 1*Nano Sim+1*Micro SD Option2: 2*Nano Sim
DATA COMMUNICATION	
GNSS	GPS+BDS+GNSS+GLONASS+AGPS
WIFI	IEEE 802.11 a/b/g/n/ac Dual-band: 2.4G/5G
Network	FDD -LTE: B1/B2/B3/B4/B5/B7/B8 /B12/B17/B20/B28/ TDD -LTE: B34/B38/B39/B40/B41 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8 TD-SCDMA: B34/39
Bluetooth	BT5.0 (BLE)
NFC	Supported
ELECTRICAL	
Battery (non-removable)	9000mAh (Support Rapid Charging) Working time: 18h Charging time: ≤5 hours
PHYSICAL	
Dimension	221mm*78mm*16.5mm
Weight	410.6g
ENVIRONMENTAL	
Temperature	Work Temperature: -20°C~+55°C Storage Temperature: -40°C~+70°C
Humidity	5%~95%
Protection	IP68
Shock	Withstand 1.2M pole drop
ESD	Air discharge: ±15kV Contact discharge: ±8kV

Manufacturers may update parameters at any time, please refer to the latest product information.

PCR500 Data Controller

PCR500 is Toknav brand-new Android 12 data controller featuring the latest industrial-grade processor from Qualcomm. With its slim form factor and an innovative English keypad, it is designed for complex mobile office scenarios. Besides, the 5.5-inch 1080P display utilizes Gorilla Glass, enhancing durability while ensuring excellent readability in sunlight so as to enhance outdoor data collection visibility.

WIDTH	THICKNESS	WEIGHT
95.8mm	20.9mm	420g

CHARACTERISTIC

Powerful System

PCR500 is equipped with the Qualcomm SM6115 processor, designed with an 11nm fabrication process, providing powerful performance for smooth CAD drawing management and base map display, greatly enhancing productivity.

Display Excellence

With its slim form factor and an innovative English keypad, it's specifically designed for field measurements and mapping operations. The 5.5-inch 1080P resolution industrial display with 500 nits brightness enhances outdoor data collection visibility even in sunlight.

Standard English Full Keypad

The brand-new British-style keypad design has been optimized, allowing for fast data input without changing user's habits. Moreover, without increasing the device's size, we've thoughtfully reserved multiple shortcut buttons to assist user in swiftly completing various operations in industry applications. The large-capacity battery design ensures uninterrupted data collection tasks, making PCR500 an efficient handheld terminal for measurement and mapping applications.

Various Data Communication Methods

PCR500 provides various connectivity options, including Bluetooth 5.0, dual-band 2.4G and 5G Wi-Fi, and a 4G modem supporting global network, ensuring seamless and reliable connectivity with user's preferred GNSS receivers and RTK network correction sources. The built-in 9000mAh battery provides long-lasting working performance.

Robust Device Protection

Designed for extreme durability, it can withstand drops from up to 1.2 meters high and comply with stringent IP68 standards. PCR500 excels in challenging environments, making data collection tasks easier and more efficient.

SPECIFICATION

SYSTEM	
OS	Android 12
CPU	Qualcomm SM6115 Kryo Gold: quad high-performance cores 2.0 GHz Kryo Silver: quad low-power cores 1.8 GHz
Memory	4GB RAM + 64GB ROM
External storage	Micro SD

PHYSICAL PARAMETERS	
Display	Screen size : 5.5 inch,500nit Resolution:1080*1920p
Touch Panel	Multi-touch, support glove and wet hands operation
Button	QWERTY keyboard, Power Key, Function key etc. Supported key light
Back Camera	Rear 13MP, AF with double white LED Flash
Sensors	Gyroscope, Accelerometer, Ambient Light and eCompass Sensor
Other equipment	Speaker & Mic Support Motor Support Hand band Support Passive Stylus Support Charger, Replaceable interface
Audio	Audio PA
Interface	Type-C (USB3.0 Supports OTG) SIM: one Nano SIM card slot Indicator LED

DATA COMMUNICATION	
GNSS	Qualcomm GPS/A-GPS, GLONASS, BDS, Galileo
WIFI	IEEE 802.11 a/b/g/n/ac Dual-band: 2.4G/5G
Network	GSM: 850/900/1800/1900 WCDMA: B1/B2/B4/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B20/B25/B26/B28
Bluetooth	BT5.0 (BLE)
NFC	Supported

ELECTRICAL	
Battery (non-removable)	9000mAh (Support Rapid Charging) Working time: 22 hours Charging time: Reaching 90% ≤ 4 hours

PHYSICAL	
Dimension	227.8mm*95.8mm*20.9mm
Weight	420g

ENVIRONMENTAL	
Temperature	Work Temperature: -20°C~+65°C Storage Temperature: -30°C~+70°C
Protection	IP68
Shock	Withstand 1.2M pole drop
ESD	Air discharge: ±10kV Contact discharge: ±8kV (External interface Contact discharge: 6KV, Air discharge: 8KV)

ENVIRONMENTAL	
Regulatory Compliance	CCC, CTA, SRRC, CE, FCC

Manufacturers may update parameters at any time, please refer to the latest product information.

PCR500Pro Data Controller

The PCR500 Pro series handheld terminal is the ultimate solution for enhancing efficiency and productivity in mobile field operations. Equipped with a 5.5-inch sunlight-readable display, users can easily view GIS data tables, complex vector and raster maps, and high-resolution images even in bright sunlight and high-light conditions. Its industrial design, compliant with the IP68 standard, ensures reliable performance in extreme and challenging environments, making it the preferred choice for field professionals, particularly those with demanding equipment requirements.

The PCR500 Pro series integrates precision GNSS positioning technology and long-range RFID technology, empowering efficient data collection for both individual operators and large field teams.

WIDTH	THICKNESS	WEIGHT
95.8mm	20.9mm	420g

CHARACTERISTIC

Powerful System

Powered by Android 12 OS with GMS Certification. The PCR500 Pro is equipped with the Qualcomm 662 processor, designed with an 11nm fabrication process, providing powerful performance for smooth CAD drawing management and base map display, greatly enhancing productivity.

Display Excellence

The 5.5-inch 1080P resolution industrial display with 500 nits brightness enhances outdoor data collection visibility even in sunlight.

High - Precision Positioning Function

Interference-resistant antenna, worry-free operation in complex environments. Enjoy centimeter-level positioning services anytime, anywhere with a full constellation and full frequency point matching, coupled with a four-wall helical antenna. Eliminate cumbersome installations, easily portable, and make outdoor measurements more effortless.

Exceptional Operational Experience

The PCR500 Pro features a popular slim and lightweight design, yet it comes equipped with a high-capacity 9000mAh battery, weighing just a light 420 grams. The brand-new British-style keyboard design has been optimized, allowing for fast data input without changing user habits. Moreover, without increasing the device's size, we've thoughtfully reserved multiple shortcut buttons to assist you in swiftly completing various operations in industry applications. The large-capacity battery design ensures uninterrupted data collection tasks, making the PCR500 Pro an efficient handheld terminal for measurement and mapping applications.

SPECIFICATION

SYSTEM	
OS	Android 12 GMS support
CPU	Qualcomm SDM 662 octa-core 2.0 GHz
Memory	4GB RAM + 64GB ROM
External storage	MicroSDHC up to 128GB

PHYSICAL	
Size(L × W × H)	228 mm × 96 mm × 21 mm
Weight	420 g (14.42 oz) with battery
Environment	Operating: -20°C to +65 °C (-4°F to +149°F) Storage: -30°C to +70°C (-22°F to +158°F)
Dust and water proof	IP68
Humidity	5% ~ 95% (non-condensing)
Shock and vibration	1.2 m (4 ft) fall on concrete
Display	5.5" IPS LTPS LCD capacitive multi-touch 1920 × 1080 pixels HD+ 401 ppi Brightness 500 nit
Keypad	QWERT KEY

RTK GNSS	
Channel	1408
Constellation	BDS: B1I, B2I, B3I, B1C, B2a, B2b GPS: L1C/A, L1C, L2P (Y), L2C, L5 GLONASS: L1, L2 Galileo: E1, E5a, E5b, E6* QZSS: L1, L2, L5, L6* SBAS*: L1, L5
RTK	2 cm HRMS
SBAS	< 1 m HRMS

Sensors and Multimedia	
Camera	13 MP Primary Camera, supporting high-speed autofocus and AR measurement.
Sensors	G-sensor, Gyroscope, E-compass, Microphone
Light sensor	Support
Speaker	120dB High-Fidelity Speaker

Communications	
SIM Card Type	Nano-SIM card
Network modem	GSM: 850/900/1800/1900 WCDMA: B1/B2/B4/B5/B8 LTE-TDD: B34/B38/39/B40/B41 LTE-FDD: B1/B2/B3/B4/B5/B7/B8 /B12/B13/B17/B20/B25/B26/B28/B66
Wi-Fi	802.11 a/b/g/n/ac access point mode (2.4 G / 5G)
Bluetooth	5.0
USB	Type C, OTG supported
NFC	Support

Electrical	
Li-ion battery capacity	9000 mAh Working Hours (1) 22 Hours* Typical Value
Charging time	

Other	
Sensors and Multimedia	13 MP rear camera with auto-focus and flash GNSS (BDS, GPS, GLONASS) A-GPS support G-sensor, Gyroscope, E-compass, Light sensor, Microphone
Standard Accessories	A/C charger, USB cable, Stylus, Handstrap
Certifications	CCC SRRC, CE, FCC, UN38.3, MSDS

Manufacturers may update parameters at any time, please refer to the latest product information.

PCR600 Data Controller

PCR600 is a full-keyboard surveying data collector specifically designed for the surveying industry. Equipped with a 9000mAh high-capacity battery, it achieves 22 hours of continuous operation. Featuring a 5.5-inch 500nit high-definition sunlight-readable display, it can withstand 1.5-meter drop without damage and has an IP68 waterproof rating, making it suitable for all-weather outdoor use. Powered by an 8-core 2.0GHz industrial-grade processor and DDR4 high-speed memory, installed with Android 14 system, it can run various surveying software smoothly, helping users cope with various surveying scenarios.

WIDTH	THICKNESS	WEIGHT
78 mm	16.5 mm	410.6 g

CHARACTERISTIC

Powerful System Configuration

Android 14 + AR Core 8-core 2.0Hz intelligent system platform, 4G SDRAM + 64G ROM high-speed memory, bringing users efficient computing and unlimited expansion of functions.

Excellent Screen Display

PCR600 is equipped with a 5.5-inch 500nit high-definition sunlight-readable display with a resolution of 1080*1920, which is not afraid of harsh environments. Equipped with a physical surveying full keyboard, the blind operation efficiency is increased by 40%. The LCD multi-touch screen supports touch with gloves or wet hands, allowing users to perfectly control the data collector in any situation.

Global High-Speed Connectivity

Bluetooth 5.0 + dual-band WiFi + 4G global roaming, featuring good compatibility, fast response to GNSS/RTK devices, strong signal, high network speed and stable connection.

Long Battery Life

PCR600 is equipped with a 9000mAh high-capacity pure cobalt battery, supporting users to work continuously outdoors for 22 hours, freeing users from battery anxiety.

Comprehensive Protection

PCR600 supports IP68 dust-proof and waterproof, with a waterproof charging port itself, and can withstand 1.5-meter drop without damage. The magnesium-aluminum alloy frame achieves a military-grade impact-resistant structure, which can effectively resist harsh outdoor environments and ensure the stable use of users in complex scenarios.

SPECIFICATION

SYSTEM	
OS	Android 14 GMS
CPU	Media Tek G85 8-core 2.0GHz
Memory	4GB RAM + 64GB ROM
External storage	Micro SDHC, up to 256GB
PHYSICAL PARAMETERS	
Display	Screen size : 5.5 inch 16:9 Resolution: 1080*1920p Maximum brightness: 500nit
Touch Panel	IPS FHD LCD multi-touch capacitive screen (Supports glove and stylus modes)
Button	Full numeric + English alphabet keyboard and one side custom key
Camera	13MP AF camera, Supports high-speed autofocus and AR measurement
Flash light	Supported
Sensors	Gravity sensor, light sensor, gyroscope, electronic compass
Loudspeaker	2W 120dB
Slot	Dual Nano SIM standby or single SIM card/TF card combination
DATA COMMUNICATION	
GNSS	GPS+BDS+GLONASS+AGPS non-high precision
WIFI	IEEE 802.11 a/b/g/n/ac Dual-band: 2.4G/5G
Network	GSM：850/900/1800/1900 WCDMA：B1/B2/B4/B5/B8 TDD-LTE：B34/B38/B39/B40/B41 FDD-LTE：B1/B2/B3/B4/B5/B7/B8/ B12/B13/B17/B20/ B25/B26/B28/B66
Bluetooth	BT5.0 (BLE)
NFC	Supported
USB	Type-C, OTG Supported
ELECTRICAL	
Battery (non-removable)	9000mAh (Support Rapid Charging) Working time: 18h~22h Charging time: ≤3 hours
PHYSICAL	
Dimension	226.3mm*90.6mm*16.9mm
Weight	412g
ENVIRONMENTAL	
Temperature	Work Temperature: -20°C~+65°C Storage Temperature: -30°C~+70°C
Humidity	5%~95%
Protection	IP68
Shock	Withstand 1.5M pole drop

Manufacturers may update parameters at any time, please refer to the latest product information.

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.

WIDTH	THICKNESS	WEIGHT
53.8mm	37 mm	141g

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.

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: ± (8mm+1ppm) Vertical: ± (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

Equipped with electronic fence system, Toknav's product have area code restrictions.
Any issue please contact Toknav or local dealers to verify the specific details.

Manufacturers may update parameters at any time, please refer to the latest product information.

P8Glo Portable RTK Receiver

P8Global 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, built-in high-precision IMU supports tilt measurement, 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.

WIDTH	THICKNESS	WEIGHT
60mm	41.3mm	176g

CHARACTERISTIC

Linux Intelligent System

ARM Cortex-A7 + Linux, the intelligent system platform, brings efficient computing and unlimited expansion of product functions to users.

Centimeter-Level Positioning

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, SBAS and NavIC(IRNSS) 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.

Qualcomm 4G Full Band Modem

The Receiver supports Qualcomm 4G Full Band Modem, 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

P8Global Portable RTK Receiver weighs only 176g, making it convenient for portable use. It also has low power consumption. With a built-in 2500mAh lithium battery, the device can work continuously for over 12 hours.

Tilt Measurement

P8Global 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.

IP67 Design

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

SPECIFICATION

SYSTEM	
HARDWARE SYSTEM	ARM Cortex-A7 1.8GHz
OS	Linux
GNSS	
GPS	L1 C/A, L1C, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
BDS	B1I, B2I, B3I, B1C, B2a,B2b(PPP)
GALILEO	E1, E5a, E5b, E6(PPP)
QZSS	L1/C/A, L2C, L2C, L5
SBAS	L1C/A
IRNSS	L5(Require specialized firmware)
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: ± (8mm+1ppm) Vertical: ± (15mm+1ppm)
Tilt Compensation Accuracy(within 60°)	<2cm
SYSTEM	
Bluetooth	BR+EDR+BLE
Network	LTE FDD:B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD:B38/39/40/41 WCDMA:B1/2/4/5/6/8/19 GSM:B2/3/5/8

INDICATOR	
Power Indicator	Show power status
Satellite Indicator	Show position status
Data Link Indicator	Show differential signal status
Bluetooth Indicator	Show Bluetooth status
ENVIRONMENT	
Work Temperature	-20°C~+60°C
Storage Temperature	-40°C~+85°C
Protection	IP67
PHYSICAL	
Materials	PC+ABS
Dimension	60mm*41.3mm*126.3mm (Height including helical antenna)
Weight	176g (Weight including helical antenna)
BATTERY	
Battery	7.4V, 2500mAh
Endurance	More than 12 hours
Charging	5V/2A

ACCESSORIES	
P8Global Device	1 SET
Full-band Helical Antenna	1 PCS
Plumb Rod Adapter	1 PCS
5V/2A USB Power Adapter	1 PCS

Equipped with electronic fence system, Toknav's product have area code restrictions.
Any issue please contact Toknav or local dealers to verify the specific details.

Manufacturers may update parameters at any time, please refer to the latest product information.