

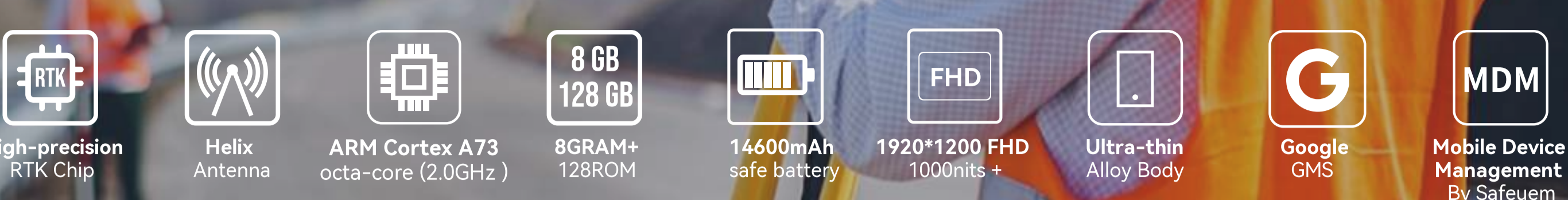
HUGEROCK G101 Version:2023

RUGGED GNSS RTK TABLET PC

10 Inch High Precision GNSS /RTK/GIS Mobile Platform

The whole series of HUGEROCK G101 use 8-core 2.0G Hz A73 processor, 10.1 inch FHD 1000nit industrial-grade ultra-bright full HD full-view display, 14600 mAh built-in large-capacity battery, IP67/MIL810G/IK05 high standard industrial protection level, built-in multiple communication methods and 8+128G large-capacity storage Unit, convenient for fast transmission and storage of various data. G101 is equipped with multi-model high-precision GNSS/RTK positioning boards, support BDS, GPS, GALILEO, GLONASS, NavIC, QZSS* systems and SBAS*, IMU* combined navigation and positioning. The high number of visible satellites enables the receiver to select the best signals. This maximizes the position accuracy, in particular under challenging conditions such as in deep urban canyons. Instantaneous RTK initialization*, support long-baseline RTK solution*, differential data RTCM format adaptive recognition*, can achieve milli-level* solution accuracy, support multi-path suppression technology, widely used in high-precision surveying and mapping, GIS information Acquisition, intelligent driving and drone control systems.

(with * for specific model support)



HUGEROCK - G101
tools for GIS

Shenzhen SOTEN Technology Co., LTD
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APPEARANCE



- Type-A (Sealed Cover)
- RS232 (Sealed Cover)
- Speaker
- Sub camera
- Ambient light sensor
- Charge light
- Menu button
- Back button
- Home button
- Search button
- Scan button
- Custom button
- Direction button
- Confirm button
- MIC
- 8pin Pogo in
- Antenna
- Power button
- TF/SIM (Sealed Cover)
- Type-C (Sealed Cover)
- Main camera
- Nameplate



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SPECIFICATION

Model: G101

Hardware	Communications & Networking
CPU: ARM Cortex A73 octa-core (2.0GHz)	Phone Call: GSM /WCDMA/CDMA 1X/VoLTE
GPU: ARM Mali-G72 MP3	2G: GSM/CDMA 1X/EDGE/GPRS/WAP
RAM: 8G	2G Band: GSM (B2/3/5/8)
Internal Memory: 128G	3G: WCDMA 3.75G (HSDPA+42.2Mbps, HSUPA+11.5Mbps), EVDO
External Memory: Micro SD card(T-FLASH card), max 256GB	3G Band: WCDMA(B1/2/5/8), Evdo: BC0/BC1 CDMA: BC0/BC1
Main Camera: 13.0MP(AF)with flash led	4G: FDD: 150Mbps down, 50Mbps UP TDD: 150Mbps downlink, 50Mbps uplink
Sub Camera: 5.0MP	4G Band: TD-LTE(B38/39/40/41); FDD LTE(B1/2/3/4/5/7/8/12/17/20/28)
Battery: 14600mAh	Wi-Fi: Dual-band WIFI(2.4GHz/5GHz)/single stream 802.11 a/b/g/n/ac
Display: 10.1 inch IPS/AFFS 1920*1200 FHD industrial 1000nit Sunlight Readable	Bluetooth: 5.0 Low Energy (LE)
Touch Panel: Capacitive/frosted tempered film supports glove touch/spray/active capacitive pen	Industrial & Reliability Design
IO/Sensor/Navigation	Shake-proof: 1-19Hz/1.0mm; 19-200Hz/1.0g
SIM Card: Nano sim card*2	Dropproof /IK: MIL-STD-810G/Method516.6/Procedure IV & Touch Panel IK05
TF Card: Micro SD card(T-FLASH card); max 256GB	Waterproof: Class 5 (IEC 60529)
Charging interface: Type-C & 8pin pogo pin	Dustproof: Class 6 (IEC 60529)
Data interface: USB Type-A(Host)*2, Type-C*1, RS232*1	Reliability: MTBF>5000h; MTTR<0.5h
Gravity sensor: support	Operating temperature: -20°C to 55°C
Motion sensor: support	Storage Temperature: -40°C to 80°C
Direction Sensor: support	RH: 5% to 95%
Magnetic Field Sensor: support	Operating Altitude: Max: 4,500 m (15,000 feet)
Gyro sensor: support	Certification/OS/Software
Rotation Vector: support	Certification: 3C /FCC/CE/ROHS/IP65(IEC 60529)
Light-sensor: support	Language: English, Spanish, Portuguese (Brazil), Portuguese (Portugal), Italian, German, Dutch, French, Polish, Romanian, Turkish, Russian, Arabic, Indonesian, Malay, Thai, Vietnamese, Hindi, Hebrew, Simplified, Chinese, Chinese Traditional, etc
Acceleration sensor: support	OS: Android 11
Charger: 5.0V 2A-10W	Package/Warranty terms
Navigation: GPS+Beidou+Glonass+AGPS+SBAS (EPO 2.5m)	Warranty: 24 months
Appearance	Package: USB cable / Charger 5V 2A / Introduction manual / Screen protector / Aircraft box / Toolkit / SIM Card Ejector x 1
Size: 320*228*12mm (L*W*H)	
Weight: 1360g	
Color & Material: Blue(Titanium alloy+ABS+PC)+black(TPU)	

**According to the actual model, GNSS receivers receive different types of signals. Please check the performance list of GNSS receivers of the model.



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DIFFERENCES BETWEEN PRODUCT TYPES



TOOL KIT The packing list is different according to the specific model configuration, the actual one shall prevail.



Model: **G101N**
Multi-satellite single frequency meter-level RTD

EXTERNAL HELIX ANTENNA ITEMS	
Antenna	Multi-satellite single frequency
Antenna Frequency Band	BDS B1; GPS L1; GLONASS G1; GALILEO E1
Antenna Size	φ18.5mm*50mm
Installation Method	SMA
Horizontal Coverage	360°
Impedance Matching	50 Ω
Polarization Mode	Right-handed circular polarization (RHCP)
Spindle Ratio	≤3dB
Gain	30±2dB
Maximum Gain	±1.5dBi
Noise Factor	≤1.5 dB
FEATURES OF THE POSITIONING RECEIVER	
Module	High-precision multi-mode GNSS positioning module(meter-level RTD)
Signal (tracking Frequency)	BDS: B1I; GPS: L1 C/A; GLONASS: L1 OF; Galileo: E1B/C; QZSS: L1 C/A/S; SBAS L1 C/A; WAAS, EGNOS, MSAS, GAGAN
Channel	92-channel
Single-point Positioning Accuracy	1.5 m CEP (with SBAS); 2.0 m CEP (without SBAS)
RTD Accuracy	1.5 m CEP (with RTD)
Nav. Update Rate	1-25 Hz
Cold Start	24 s
Hot Start	2 s
Aided Start	2 s
Cors Data	RTCM 3.3
Data Format	NMEA 4.10, UBX binary, RTCM 3.3
Inertial Navigation	none



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DIFFERENCES BETWEEN PRODUCT TYPES



Model: **G101F**
Multi-satellite dual frequency centimeter level RTK

EXTERNAL HELIX ANTENNA ITEMS	
Antenna	Multi-satellite dual frequency
Antenna Frequency Band	BDS B1/B2/B3; GPS L1/L2; GLONASS G1/G2; GALILEO E1/E5b
Antenna Size	φ27.5mm*55.5mm
Installation Method	SMA
Horizontal Coverage	360°
Impedance Matching	50 Ω
Polarization Mode	Right-handed circular polarization (RHCP)
Spindle Ratio	≤3dB
Gain	30±2dB
Maximum Gain	2.5dBi
Noise Factor	≤1.5 dB
FEATURES OF THE POSITIONING RECEIVER	
Module	High-precision multi-mode dual-frequency module (centimeter level RTK)
Signal (tracking Frequency)	BDS: B1I/B2I; GPS: L1C/A; L2C; GLONASS: L1OF; L2OF; Galileo: E1B/C; E5b; QZSS: L1C/A; L1S; L2C; SBAS: L1C/A
Channel	184-channel
Single-point Positioning Accuracy	0.8m CEP
Rtk Accuracy	≤ 10mm + 1 ppm CEP
Nav. Update Rate	1-20 Hz
Cold Start	24 s
Hot Start	2 s
Aided Start	2 s
Cors Data	RTCM v. 3.3, SPARTN v. 2.0
Data Format	NMEA, UBX binary, RTCM v. 3.3, SPARTN v. 2.0
Inertial Navigation	none



Model: **G101M**
Multi-satellite multi-frequency omnidirectional mm-level RTK

EXTERNAL HELIX ANTENNA ITEMS	
Antenna	Multi-satellite multi-frequency omnidirectional
Antenna Frequency Band	BDS B1/B2/B3; GPS L1/L2; GLONASS G1/G2; GALILEO E1/E5b
Antenna Size	φ27.5*107.5mm
Installation Method	SMA 90 degree omnidirectional
Horizontal Coverage	0°-360°
Impedance Matching	50 Ω
Polarization Mode	Right-handed circular polarization (RHCP)
Spindle Ratio	≤3dB
Gain	30±2dB
Maximum Gain	2.5dBi
Noise Factor	≤1.5 dB
FEATURES OF THE POSITIONING RECEIVER	
Module	High-precision multi-mode full-band module (mm-level RTK)
Signal (tracking Frequency)	BDS B1I/B2I/B3I/B1C/B2A/B2b* GPS L1C/A/L1C/L2P (Y)/L2C/L5 GLONASS G1/G2/G3* Galileo E1/E5a/E5b/E5* QZSS L1/L2/L5
Channel	1408 channels, based on NebulasIV
Single-point Positioning Accuracy	P:1.5m E: 2.5m CEP (with SBAS)
Rtk Accuracy	P:0.8cm + 1 ppm CEP E:1.5cm + 1 ppm CEP
Nav. Update Rate	20 Hz
Cold Start	<30s
Hot Start	<20s
Aided Start	< 1s
Cors Data	RTCM V3.X
Data Format	NMEA-0183, Unicore
Inertial Navigation	none



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GNSS Measurement Antenna (Optional)

Multi-frequency RTK Antenna HG-BA600	Multi-frequency RTK Antenna HG-BA800
Passive antenna characteristics passive	Passive antenna characteristics
Support satellite signal: BDS: B1, B2, B3; L1, L2; GLONASS: G1, G2; Galileo: E1, E5b	Support satellite signal: BDS: B1, B2, B3; GPS: L1, L2, L5; G1, G2; GALILEO: E1, E2, E5a, E5b, E6, L-Band
Operating frequency band: 1197MHz-1278MHz; 1529MHz-1605MHz	Operating frequency band: 1164MHz-1300MHz; 1520MHz-1615MHz
Impedance matching: 50 Ω	Impedance matching: 50 Ω
Polarization mode: Right-handed circular polarization (RHCP)	Polarization mode: right-handed circular polarization (RHCP)
Spindle ratio: ≤3dB	Spindle ratio: ≤3dB
Horizontal coverage: 360°	Horizontal coverage: 360°
Maximum gain: ≥5.5dBi	Maximum gain: ≥5.5dBi
Low noise amplifier characteristics	Low noise amplifier characteristics
Low noise amplifier gain: 40±2dB	Low noise amplifier gain: 40±2dB
Noise factor: ≤2.0dB	Noise factor: ≤2.0dB
Output standing Wave Ratio: <2.0	Output standing Wave Ratio: <2.0
Intra-band flatness: ±2dB	Intra-band flatness: ±2dB
Operating voltage: 3.0-16V DC	Operating voltage: 3.0-16V DC
Operating current: ≤45mA	Operating current: ≤35mA
Adaptability of machine & structure & environment	Adaptability of machine & structure & environment
Joint type: TNS negative head	Joint type: TNS negative head
Antenna size: φ132mm*45mm	Antenna size: φ132mm*55.14mm
Operating temperature: -40°C~+80°C	Operating temperature: -40°C~+80°C
Storage temperature: -45°C~+85°C	Storage temperature: -45°C~+85°C
Storage humidity: 95% no condensation	Storage humidity: 95% no condensation
Color: white	Color: white
Installation method: TNS screw installation	Installation method: TNS screw installation
Weight: ≤320g	Weight: ≤350g
Phase center error: ±2mm	Phase center error: ±2mm
Dual frequency delay difference: ≤5ns	Dual frequency delay difference: ≤5ns



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