Subsurface Mapping GPR

GS9000

The most efficient multichannel GPR system with real-time 3D visualization

Versatility

Two interchangeable array modules, one vast array of applications. Enjoy the interoperability of the most versatile multichannel GPR subsurface mapper.

Accuracy

Best-in-class GPR & geospatial technology for the highest density of information across all three dimensions, accurately mapped in your local coordinates.

Efficiency

Easy to set up and operate. On-the-fly data visualization to avoid any interpretation errors in the field. Instantly ready for advanced analysis, even remotely.

Instrument
Tech Specs

Radar technology	Stepped-frequency GPR
Modulated frequency range	500 – 3000 MHz [2] | 30 – 750 MHz [3]
Number of channels	35 (VV) + 15 (HH) [2] | 11 (VV) [3]
Channel spacing	2.5 cm (VV), 5.5 cm (HH) [2] | 7.5 cm [3]
Scan width	0.85 m [2] | 0.82 m [3]
Scan rate	27500 scans/s [2] | 22000 scans/s [3]
Time window	35 ns [2] | 100 ns [3]
Spatial interval	Up to 100 scans/m
Dimensions	722 x 1178 x 443 mm
Weight	45 Kg [2]
Wheel encoders	2, on rear wheels
Ingress protection (IP) / sealing	IP65
Power consumption	Off-the-shelf power bank [4]
Autonomy	6 hours | Hot-swappable [5]
Operating temperature	-10° to 50°C | 14° to 122° F
Operating humidity	<95% RH, non-condensing
Connectivity	WiFi, USB-A, USB-C, Lemo [6]
GNSS satellites	Multiband GPS + Glonass + Galileo + Beidou
GNSS real-time corrections	SSR augmentation / NRTK-compatible [7]
GNSS real-time 3D accuracy	Typ. 1 - 5 cm | 0.5 - 2 in [8]
GNSS initialization time	Typ. 5 - 30 s

1. Running an up-to-date iOS version; recommended models: iPad Pro® WiFi + Cellular (2022 model or superior)
2. In combination with GX1 array module
3. In combination with GX2 array module
4. USB-C power bank with Power Delivery. Max. dimensions: W 85mm x H 28mm (recommended power: 12/15/20V - >45 W)
5. Using 2x 26,800 mAh power banks
6. For terrestrial positioning systems, an intermediate serial adapter to DB9 might be needed to output Pseudo NMEA GGA positions
7. Needs an active Internet connection on the iPad; SSR service available in Europe, USA, southern Canada, southeastern Australia and South Korea / NRTK corrections via NTRIP in RTCM3 format
8. Via NTRIP RTK or SSR corrections; the achieved accuracy is subject to atmospheric conditions, satellite geometry, observation time, etc.

Our Accessories

Image	PartNumber	Description
	393670260	
	39367250	
	39350520	Accomodates any compatible PD power bank unit. One unit included in all hardware variants.
	39350660	Stabilizes your GNSS pole in uneven terrains. Included in GS8000 Pro hardware variant.
	39350710	Included in GS8000 Pro hardware variant.
	39350404	Accomodates any iPad Pro and sun & rain cover. Included in all hardware variants.
	39350060	Accommodates an umbrella to protect the user from sun & rain.
	39350480	Protects the iPad from sun & rain. Included in GS8000 Pro hardware variant.
	39350486	Makes the tablet holder compatible with diverse accessories and cases. Included in all hardware variants.
	39350676	Connects to RS232 DB9 port to receive NMEA sentences from external positioning devices.

Standards & Guidelines	Description
AS 5488-2013 (Australia)	
NF_S70-003 (France)	
UNI/PdR 26.01:2017 (Italy)	
ASCE 38-02 (United States)	
CSA S250 (Canada)	
HSG47 (United Kingdom)	
PAS128 (United Kingdom)	
ASTM D6432-11	
NCHRP Synesis 255	
SHRP H-672	
SHRP S-300	
SHRP S-325	