SCREENING EAGLE | proceq

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.

Proceq GPR Subsurface App
Tech Specs

Field Methodology	Free Path Superline
Live Image Processing	Time Slice View (georeferenced) Hilbert migration Depth range adjustment Dynamic Gain / Manual Gain Sensitivity filter Background removal filter Noise cancellation filter Frequency filter
Live Display Options	Satellite imagery GNSS trajectory CAD object layers Spectral / seismic color palettes
On-site Annotations	Tags Points of interest Photos Voice markers Markups Linework
Field Calibration	Odometer calibration Velocity by hyperbola fitting Velocity for multiple layers
Cloud Services	Live data synchronization to Workspace[9] Permanent data storage Raw data export to SEG-Y Instant CAD / SHP / KML generation Instant report generation Share via url
Coordinate System	EPSG global database Local grid models Geoid models
Languages	English Spanish French German Italian Chinese Japanese Korean
Display unit	Any iPad® or iPad Pro® [1] Recommended: iPad Pro WiFi + Cellular Screen resolution: up to 2732 x 2048 pixels Storage capacity: up to 2 TB

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	45 ns [2] | 130 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.
9. Up to 1 TB of personal space per user ID