

GSSI Brings You the Future of Utility Locating

UtilityScan®

www.geophysical.com

Introducing the All New UtilityScan

UtilityScan® provides a rich feature set that redefines the level of performance available in a low cost utility locating system. The compact size makes it extremely portable and easy to maneuver in tight survey areas. The simple operation is ideally suited to meet the needs of service providers, engineering contractors and state and local municipalities. Best of all, the breakthrough technology designed into UtilityScan results in high quality data sets that are second to none.

Field Proven Performance

- UtilityScan is based on GSSI's patented HyperStacking™ technology, which provides excellent near-surface resolution and increased depth penetration in all soil types.
- A new wireless antenna eliminates the need for cabling resulting in a system that can withstand challenging field conditions.
- The simplified app-based user interface ensures that UtilityScan is easy to use and quick to deploy.

Advanced Capability

- UtilityScan can be provided with the new LineTrac™ power detection module. This module is designed to identify and trace the precise location of underground and RF induced utilities.
- UtilityScan uses enhanced software features for gain control, target detection and horizontal banding reduction.

https://www.youtube.com/watch?v=7BidbKE_hhM – CLICK to watch our YouTube Video



Accurate, Easy and Lightweight

Enhanced User Experience

UtilityScan features an innovative touchscreen user interface. The app-based user interface provides two modes of operation: ScanEZ and ScanMax. The ScanEZ mode greatly simplifies operation for new users; ScanMax mode incorporates advanced features including GPS and LineTrac functionality.

Additionally, the system employs Dynamic Gain Control (DGC) which enhances ease of use by eliminating the need to repeatedly change gain settings when scanning areas with varying soil conditions. DGC monitors the system gain on the fly during data collection.

Positioning

An integrated GPS (global positioning system) is included with UtilityScan. For users requiring a higher resolution positioning system, a built-in pole mount is available for mounting GPS systems on survey poles. A Bluetooth interface is provided to facilitate communication with user-provided GPS systems.

Compact and Portable

The UtilityScan system is incredibly compact. Weighing in at only 34 pounds, UtilityScan can collapse to fit in the back of a small vehicle or even in an airline overhead compartment. For survey conditions in rough terrain, the user can remove the handle and wheels and place the capsule into the (optional) rugged cart.



- 1 Wireless touch-screen controller
- 2 Fully collapsible handle - easy to carry
- 3 350 MHz HS GPR antenna
- 4 Patented LineTrac technology

System Includes

350 HS antenna (350 MHz)
Choice of control unit with system mount: • Customized Panasonic Toughpad® FZ-B2 or, • LENOVO™ Tablet
Two batteries and two-bay battery charger
Rugged 2 m Ethernet cable
LineTrac, optional
User Manual
2-year warranty

Optional Accessories

Transit case with custom foam insert
™Battery booster kit with cable
Sunshade
Model 656 rugged cart

Authorised Agent:
Red Dog Scientific Services
reddog@geoafrica.co.za
+27-(0)82 8929771
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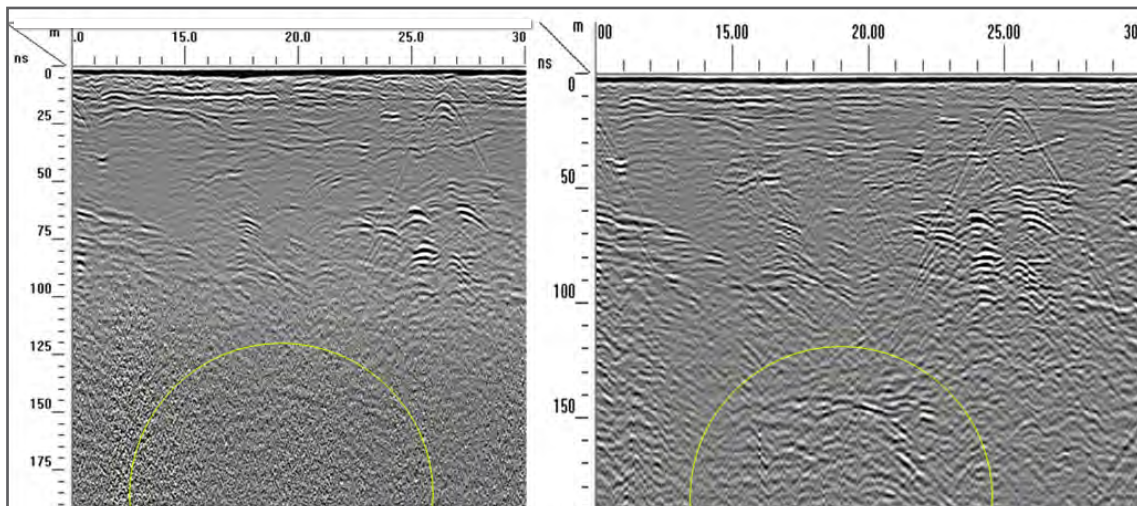


HyperStacking™

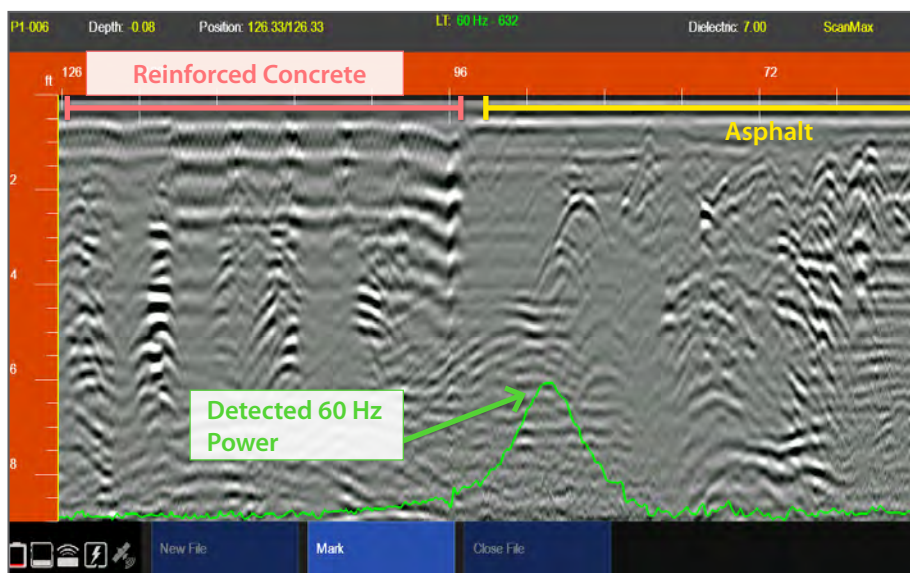
HyperStacking provides superior near surface resolution, deeper depth penetration and vastly improved RF noise immunity when compared to traditional GPR antennas. HyperStacking (HS) is a patented real-time sampling technique that improves performance while maintaining measurement speed and minimizing radiated emissions. This technique uses multiple stacking (averaging) during data acquisition in order to reduce random noise and improve data quality.

Data Collected with Standard GPR Technology

UtilityScan Data using HyperStacking Technology



Data illustrates several utilities and geological features at various depths. UtilityScan data (on right) locates deeper targets not visible with standard GPR technology. GPR data has been post-processed in RADAN® 7 software.

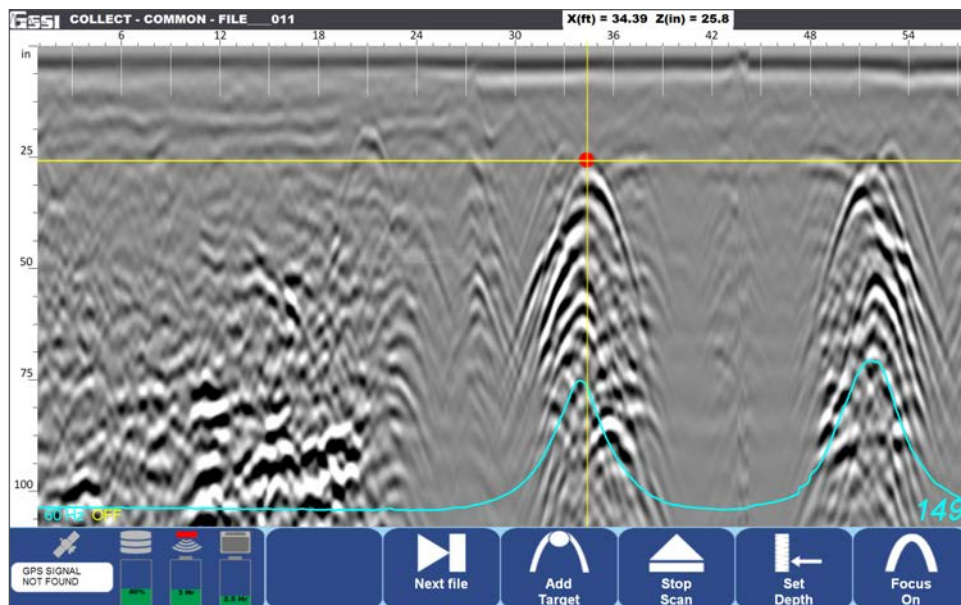


Dynamic Gain Control

The Dynamic Gain Control function recognizes a difference in subsurface conditions and automatically modifies the display gain. This eliminates the need for users to continually adjust the gain during surveys and provides a clearer, consistent data image.

Data shows varying subsurface conditions and multiple unknown targets. Green LineTrac peak indicates presence of live power and aids the user in confirming a valid target identification.

LineTrac Data



Power Mode

Data illustrates two power lines entering a large commercial building.

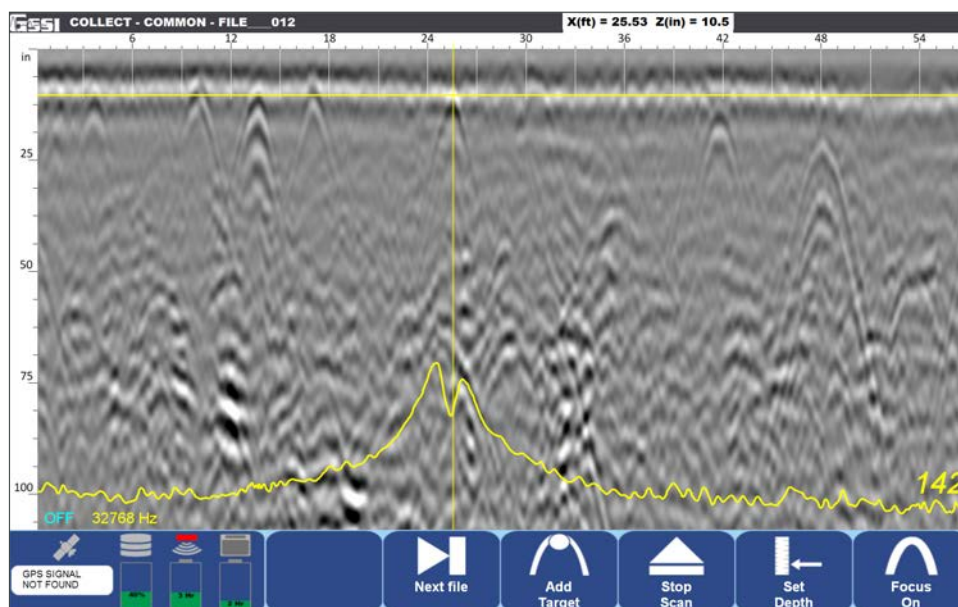
Data collected with:
UtilityScan HS

Frequency Mode

Data illustrates a small electrical conduit buried among multiple tree roots.

Crosshairs indicates position of conduit.

Data collected with:
UtilityScan HS



Authorized Agents:
Red Dog Scientific Services
reddog@geoafrica.co.za
www.RedDogGeo.com
+27- (0)82 8929 771

Specifications

Power Mode Frequencies	50/60 Hz
Frequency Mode Presets	1, 8, 16, 33 KHz
User-selectable Frequencies	20 Hz to 50 KHz
Ingress Protection	IP-65
Compliance	FCC, RSS, RoHS, CE
Operating Temperature	-20°C to 40°C (14°F to 122°F)
Warranty	2 years

sales@geophysical.com

40 Simon Street • Nashua, NH 03060-3075
Tel: 603.893.1109 • Toll Free: 800.524.3011 • Fax: 603.889.3984

Geophysical Survey Systems, Inc.

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UtilityScan®

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The UtilityScan Advantage

Reliable mark outs, paper records, and as-builts on buried utilities are rare. Damaging utilities can be costly, leading to cost overruns, project delays, and safety concerns. Recent specifications from ASCE and PAS 128, require that contractors and municipalities have accurate and up-to-date information on active and abandoned utilities. UtilityScan can quickly identify the location and depth of service utilities such as gas, communications, and sewer lines – as well as other metallic and nonmetallic targets including underground storage tanks and PVC pipes.



MAX DEPTH 10 m (35 feet)	ANTENNA FREQUENCY 350 MHz
WEIGHT 15.4 kg (34 pounds)	STORAGE CAPACITY 64 GB
OPTIONAL SOFTWARE RADAN 7 for UtilityScan, RADAN 7	ACCESSORIES Transit Case with custom foam insert, Battery booster kit for NVidia Shield™, Sunshade for NVidia Shield, Model 656 Rugged Cart



See our website for more information and detailed specifications: www.geophysical.com

UTILITYSCAN FEATURES

Compact and Portable

The UtilityScan is incredibly compact. Weighing in at only 34 pounds, UtilityScan can collapse to fit in the back of a small vehicle or even in an airline overhead compartment. For survey conditions in rough terrain, the user can remove the handle and wheels and place the capsule into the (optional) rugged cart.

Premium Features, Entry Level Price

UtilityScan is based on GSSI's patented HyperStacking technology, which provides excellent near-surface resolution and increased depth penetration in all soil types. A new wireless antenna eliminates the need for cabling, resulting in a system that can withstand challenging field conditions.

Advanced Capabilities

UtilityScan can be provided with LineTrac power detection module. This module is designed to identify and trace the precise location of underground electric and RF induced utilities. Another feature of this system is the integrated GPS and built in GPS adapter for an additional GPS pole (customer provided).

ACCESSORIES



Transit Case

This custom foam Pelican case is designed for the UtilityScan system and all its accessories. This case is designed for users who need to ship or protect the system from wet or hazardous environments.



Model 656 Rugged Cart

The Model 656 rugged four-wheel cart is specifically designed for the UtilityScan system. This cart is meant for rugged variable terrain.

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TYPICAL USES

Scan utilities – metallic and non-metallic

Locate water lines

Detect voids and underground storage tanks (USTs)

Identify soil and foundation characteristics

Locate shallow objects for archaeology

FCC, RSS-220 and CE Certified

Geophysical Survey Systems, Inc.

40 Simon Street • Nashua, NH 03060-3075 USA • www.geophysical.com



ADVANCED PRODUCT SPECIFICATIONS

Controller	Panasonic Toughpad FZ-A2	Lenovo Tab4 Plus
Data Storage Internal Memory	80 GB	64 GB
Display	10.1-inch WUXGA 1920x1200, Touch	8 inch, 1920x1200 LCD Touch
Processor	Intel® Atom x5-Z8550; Android 6.0.1	Qualcomm Snapdragon 265 (2.0 GHz)
Ports	USB 3.1 Type-C, USB A 3.0, HDMI output	Type C USB
Battery / Operation Time	Standard 9-hour, hot-swap battery	19.75 Watt hour / 3 hours
Operating Temperature	-28°C to 60°C (-20°F to 140°F)?	Consumer Grade
Environmental	IP-65	Consumer Grade
Durability	MIL-STD-810G	Consumer Grade
System		
Frequency	350 MHz	
Sampling Rate	up to 500,000,000 samples/sec	
Scan Speed	250 scans/sec	
RF Noise Reduction Method	Patented Transmit Signal Dithering	
Typical Range	12 ft / 6 m (media dependent)	
Maximum Range	35 ft / 10 m (media dependent)	
Horizontal Measurement (Precision)	0.8 cm (0.3 in)	
Typical Vertical Measurement (Precision)	4.0 mm (0.16 in)	
Communication Interface	WiFi or Ethernet	
Antenna Orientation	Perpendicular Dipole	
PRF	up to 1 MHz (Regulatory Environment Dependent)	
LineTrac AC Current Detection	Yes (optional)	
Languages	English, French, Spanish, Portuguese, Chinese	
GPS	Internal (Tablet) and External (Bluetooth)	
Connectors	Rugged Ethernet, Survey Wheel	
GPR - Battery/Battery Life	Lithium-Ion/8 hour	
Power Consumption	13.8 watts	
Operating Temperature	-20°C to 40°C (-4°F to 104°F)	
Storage Temperature	-40°C to 60°C (-40°F to 140°F)	
Weight With Tablet	34 lbs (15 kg)	
Dimensions (folded)	22 x 19.25 x 12.5 in (56 x 49 x 32 cm)	
Environmental	IP65	
Durability	3 Axis 30G shock tested, Vibration tested (20-2,000 Hz)	
Software		
Data Collection Modes	ScanEZ and ScanMax	
Data Format	RADAN (.dzt)	
Scan Density	Low: 12 scans/ft (40 scans/m) Medium: 18 scans/ft (60 scans/m) High: 24 scans/ft (100 scans/m)	
Data Resolution	32 bit	
Depth Ranges	3, 6, 9, 12, 15, 25, 35 ft (1, 2, 3, 4, 5, 8, 10 m)	
Data Collection Speed	up to 3.5 mph (5.6 km/h)	
Gain	Dynamic Gain Control (Variable Display Gain)	
Real-time Filters	Band Filter	
Display Modes	Linescan Mode: Data displayed with option to show LineTrac overlay Focus Mode: Data displayed in split screen view	
Depth Scale Calibration	Hyperbola Matching or Manual	
Diagnostic	Status Indicators For: GPS quality, system battery, hard disk capacity, WiFi, LineTrac	