



# UtilityScan™ DF

## Locate and Map Underground Utilities with GPR

### Designate Targets

- Real-time data collection
- Back-up cursor and cross-hair cursor allow the user to accurately locate targets
- Multiple techniques to calculate depth of targets

### Integrated System

- Dual-frequency digital antenna offers superior resolution for shallow and deep targets
- Easy-to-use, user selectable text or icon-based interface
- Full GPS integration

### Premium Mobility

- Rugged, four-wheel cart design able to withstand the toughest conditions
- Compact cart design is easy to transport and assemble
- Fast data collection, up to 10 km/h (6.25 mph)

### Superior Data Quality

- System optimized for increased depth of penetration
- Advanced display modes and signal floor tracking



- |                                    |   |
|------------------------------------|---|
| 1 Touch-screen control unit        | 4 Ergonomic handle and flexible mount       |
| 2 Interior, dual-frequency antenna | 5 Rugged, removable wheels                  |
| 3 Adjustable, protective capsule   | 6 Internal, integrated survey wheel encoder |



[www.geophysical.com](http://www.geophysical.com)

# UtilityScan DF Features

The UtilityScan DF is ideal for locating the position and depth of metallic and non-metallic objects, including service utilities such as gas, communications, sewer lines as well as underground storage tanks and PVC pipes in various soils. The UtilityScan DF is purpose-built and offers an easy-to-use touchscreen interface to view shallow and deep targets simultaneously in a single scan.

The new dual-frequency 300 MHz and 800 MHz antenna is GSSI's first digital antenna, allowing the operator to locate targets at depths of up to 5 m/16 ft. (in North America). With an operation life of up to eight hours and survey speed up to 10 km/h (6.25 mph), data collection is fast and efficient.

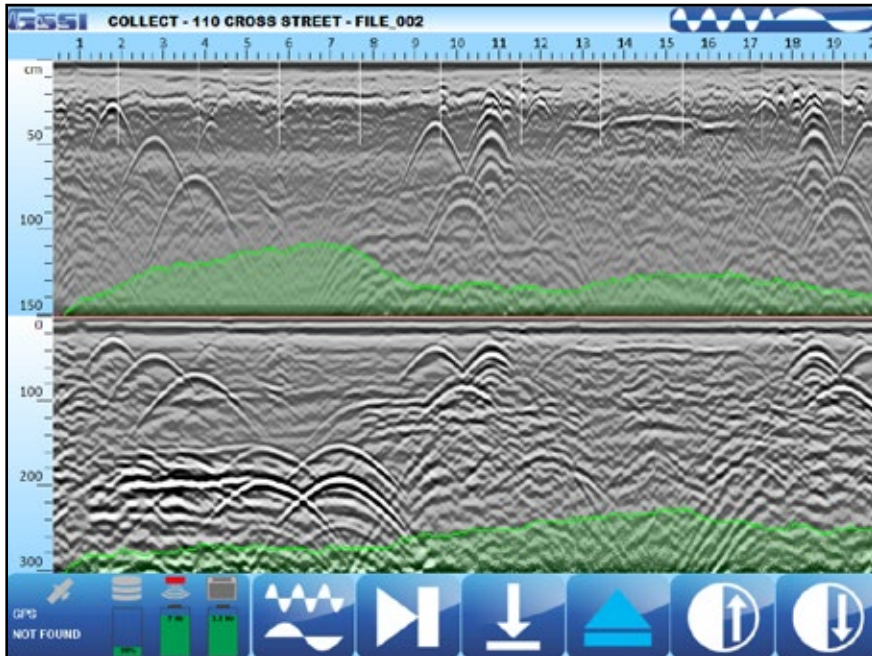
Advanced software features offer the user several options to view the data; each channel individually, both channels separated via split screen, or our patent-pending Blend mode. The UtilityScan DF also provides advanced signal processing tools such as stacking, signal floor tracking and background removal.



## System Includes

- Dual-frequency antenna (300 and 800 MHz)
- Customized Panasonic ToughBook® H2 control unit
- Rugged terrain survey cart with encoder wheel
- 2.0 meter control cable
- Transit case for control unit
- Four batteries and four-bay battery charger: Control Unit
- Two batteries and two-bay battery charger: Antenna
- User manual

# UtilityScan DF Data



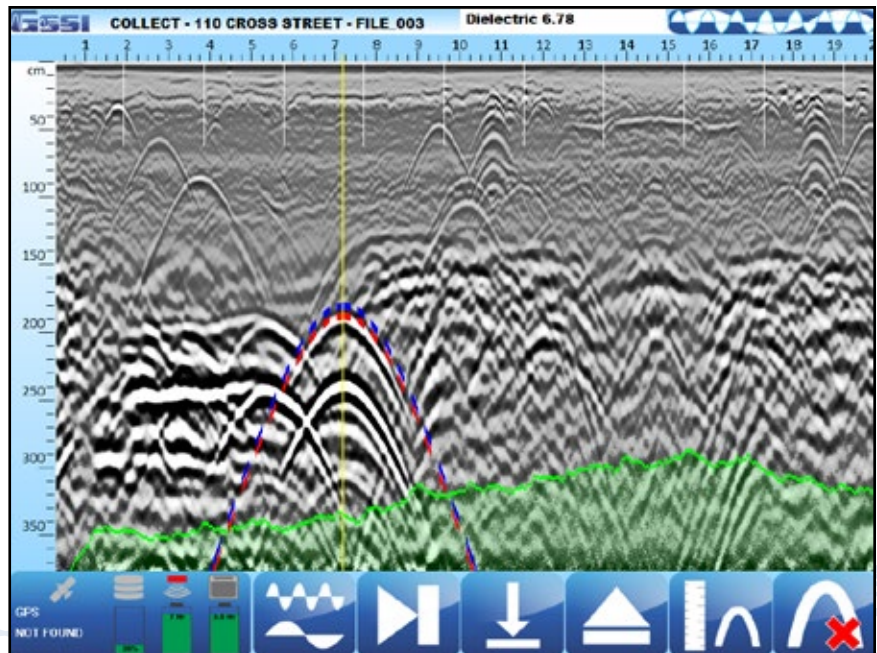
## Split Mode

The UtilityScan DF has several modes to view the data. Split mode allows the user to view the two channels simultaneously, exclusive from one another in the same view.

*Data illustrates several metallic and non-metallic targets at various depths in Split mode. Green shaded area represents estimated signal floor.*

## Blend Mode

The UtilityScan DF features a patent-pending method to view the data, called Blend mode. Blend mode combines the high resolution near-surface data with lower depth detail in a single view.



*Data illustrates several metallic and non-metallic targets at various depths in Blend mode. Green shaded area represents estimated signal floor. Red/blue dotted line identifies the soil velocity calculation tool.*

# UtilityScan DF System Specifications

Controller	
System	Panasonic ToughBook® H2
Data Storage Internal Memory	128 GB SSD
Display	Enhanced 10.1 XGA sunlight-readable LED, 1024 x 768 Dual Touch Display
Processor	Intel® Core i5-2557M vPro
Ports	USB 2.0, Ethernet and Serial
Batteries	Hot-swappable Li-Ion battery packs (four total)
Operating Temperature	-28°C to 60°C (-20°F to 140°F)
Environmental	IP65
Drop Spec	MIL-STD-810G

GSSI System Software	
Scan Rate	150 scans/sec at 512 samples/scan
Scan Intervals	50 or 100 scans/meter (15 or 30 scans/foot)
Output Data Resolution	32-bit
Operating Mode	Survey wheel
Depth Ranges	Five selectable ranges*
System Speed	up to 600 kHz, 200 kHz per channel in North America
Data Collection Speed	up to 10 km/h (6.25 mph)
Gain	Manual or automatic, 1-8 gain points (-42 to + 126 dB)
Real-time Filters	Stacking, Background Removal
Advanced Real-time Filter	Signal floor tracking
Display Mode	<b>Linescan Mode:</b> high frequency data only or low frequency data only displayed <b>Split Mode:</b> high and low frequency data displayed in split screen view <b>Blend Mode:</b> high and low frequency data combined in single view
Data Format	RADAN (.dzt)
Diagnostic	GPS and quality indicator status, battery, hard disk capacity

Digital Dual Frequency Smart Antenna	
Number of Hardware Channels	2 (two)
Frequencies	300 and 800 MHz
Typical Range	4 m / 12 ft
Minimum/Maximum Range	.5 m - 5 m (20 in - 16 ft)
Connectors	Digital control, power, survey wheel, marker, serial RS232, accessory connector
GPS	Data stored internally
Operating Temperature	-10°C to 50°C (14°F to 122°F)
Weight	5 kg (12 lbs)
Dimensions	33.5 x 31 x 15 cm (13.2 x 12.2 x 5.9 in)
Environmental	IP65

Cart	
Model 652	<ul style="list-style-type: none"> <li>4-wheel compact survey cart</li> <li>Internal, integrated survey wheel encoder</li> <li>Removable, 12-inch wheels</li> <li>Compact, weather resistant design</li> <li>Antenna centerline to front of cart: 38.2 cm (15 in)</li> </ul>
Dimensions	61.7 x 100 x 102.4 cm (24.3 x 39.4 x 40.3 inches)
Weight	21.7 kg (48 lbs) <b>Total System Weight:</b> 29 kg (66 lbs)

\* Visit [www.geophysical.com](http://www.geophysical.com) for more details

[www.geophysical.com](http://www.geophysical.com) • [sales@geophysical.com](mailto:sales@geophysical.com)

