



# Digital HyperStacking™ Technology

## 350 HS Antenna

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

Ground-penetrating radar (GPR) is an electromagnetic imaging technique that allows users to see beneath the surface through soil, pavement, concrete, ice, and even water. To prevent disruption to other technologies that share the same spectra, for example, wireless communications and global positioning systems, regulatory agencies place stringent power emission limits on GPR equipment.

Now, new technology has been developed that meets even the most stringent GPR emissions regulations, including those of the U.S. Federal Communications Commission (FCC) and the European Telecommunications Standards Institute (ETSI), while operating at similar or faster speeds than conventional systems. This new HyperStacking technique allows users to see deeper targets and operate in conditions considered too "noisy" for conventional systems.

### HyperStacking™ Technology Explained

HyperStacking (HS) is a revolutionary real-time sampling (RTS) technique patented by GSSI, which greatly improves the receive performance of a GPR system while maintaining the measurement speed and radiated emission limits. It is achieved by a method of averaging (i.e., stacking) the results of many individual scans that allows for clearer images.

### Technology Benefits

- Patented HyperStacking technology
- Digital GPR antenna
- High resolution data
- RF noise immunity
- Better depth penetration than traditional GPR antennas\*

\* in low loss conditions

#### Specifications

Center Frequency	350 MHz
Typical Range	20 ft / 6 m
Maximum Range	40 ft / 12 m
Compatible GSSI Controllers	SIR 4000 Customized Panasonic Toughpad® FZ-G1

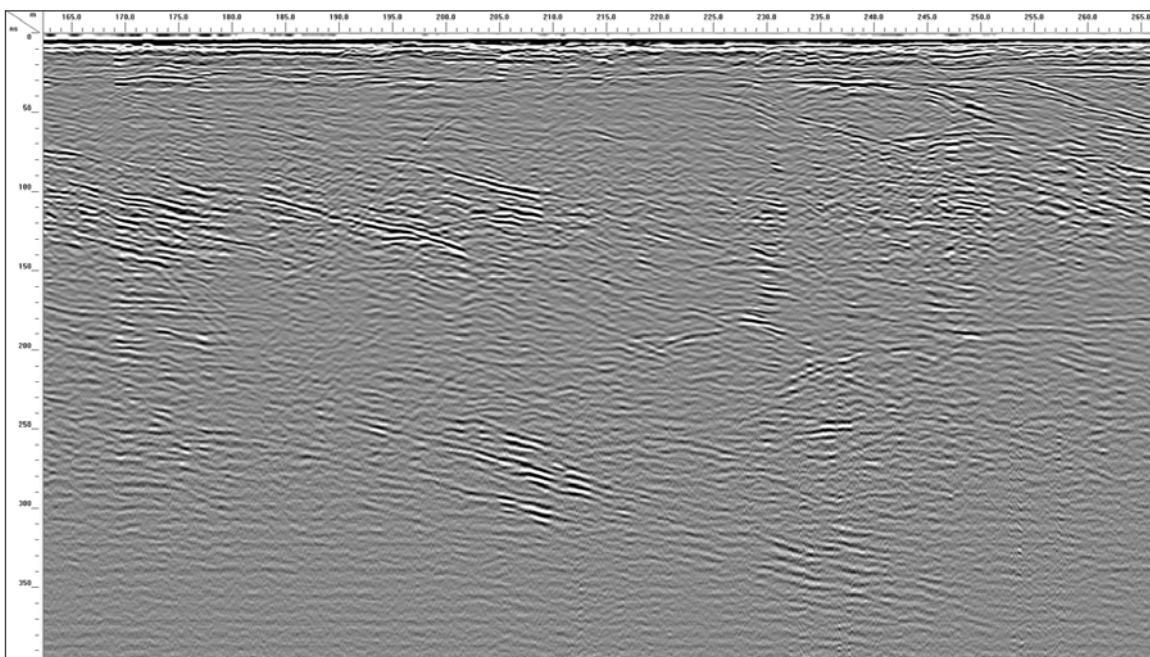




GSSI SIR 4000 system

## 350 HS Data

The 350 HS is a state-of-the-art digital antenna using our patented HyperStacking technology and works seamlessly with GSSI's SIR 4000 control unit or customized Panasonic G1 tablet. It is easily configurable to accommodate a variety of applications including archaeology, geophysics, utility locating, and more. Our HyperStacking technology greatly improves the performance of traditional RTS technologies. Illustrated below is data collected along the edge of a soccer field in low-loss soils. Compared to a traditional GPR antenna, we can see a clearer image in addition to a 50% improvement in depth penetration.



Data illustrates a terminal end moraine deposit with visible stratigraphy greater than 375 nanoseconds.

Data collected with the SIR 4000 and 350 HS antenna.

### Antenna Accessories

Extension handle with marker switch

Multiple cart options



Accessory handle sold separately

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