

## RIS Hi-Pave

The fastest and most flexible solution  
for road assessment surveys



Providing a **complete assessment of road conditions** at unsurpassed speed with a **dedicated array of multi-frequency antennas**

IDS GeoRadar: The Leader in Multi-frequency and Multi-channel  
Ground Penetrating Radar

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

RIS Hi-Pave is a ground penetrating radar solution designed for high speed road and/or runway assessment surveys. The system is able to operate with several antennas at the same time providing a complete assessment of conditions, including:

- Pavement thickness measurement.

- Surface, base and sub-base road course assessment.
- Detection of cavities, voids and delamination.
- Detection of subsurface water saturated areas.
- Airport runway condition assessment.

**RIS HI-PAVE BENEFITS**

- **Pavement status evaluation** for new road construction (comparing completed pavement, grade and sub grade against design specifications).
- **Periodical status monitoring** of road and runway conditions for preventive maintenance.
- **High-speed** GPR solution and semi-automatic layer detection software tools, minimizing survey and processing time.
- **Flexible solution** that can integrate up to 8 GPR antennas.

**RIS HI-PAVE FEATURES**

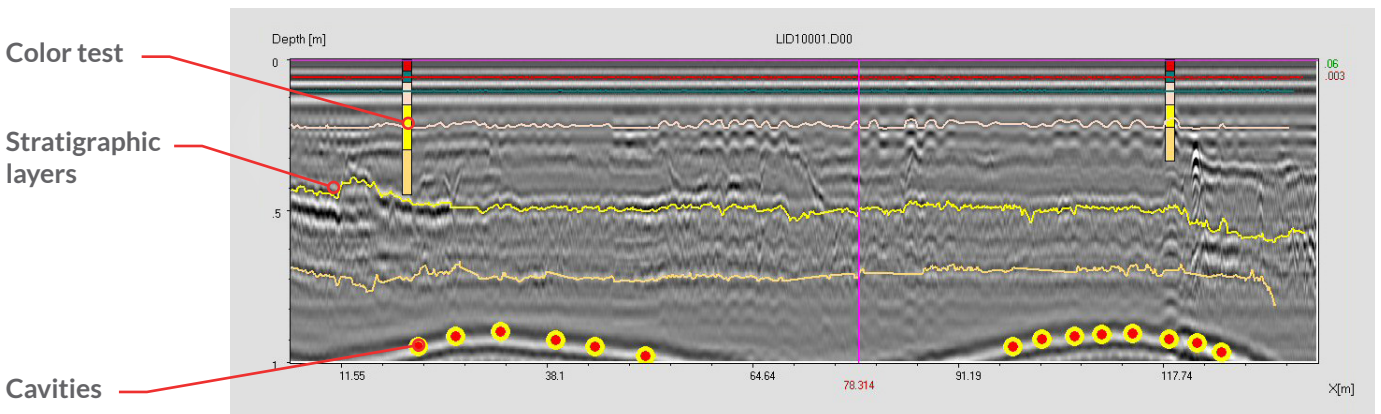
- **Horn Antennas:** Hi-Pave is equipped with air launched horn antennas that can be used without contact with the surface.
- **Speed:** Hi-Pave is the fastest ground penetrating radar for road evaluation. It can reach up to 260 km/h with a single antenna configuration and 10 cm data sampling or 130 km/h with a dual antenna configuration and 10 cm data sampling.
- **Semi-automatic procedure for layer recognition:** The post processing software uses a semi-automatic procedure to collect information of road subsurface layers.
- **Modular:** Hi-Pave can operate with up to 8 antennas in a chain connection using the same control unit.



Dual horn antenna configuration



RIS Hi-Pave with high and medium frequency antennas

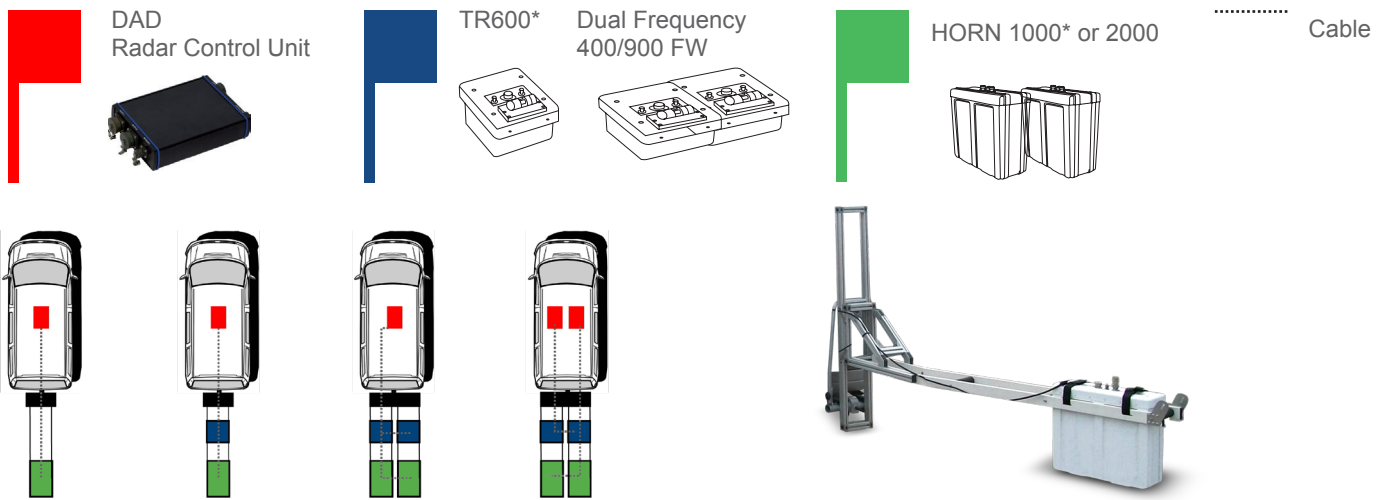


GREED HD: subsurface layer extraction



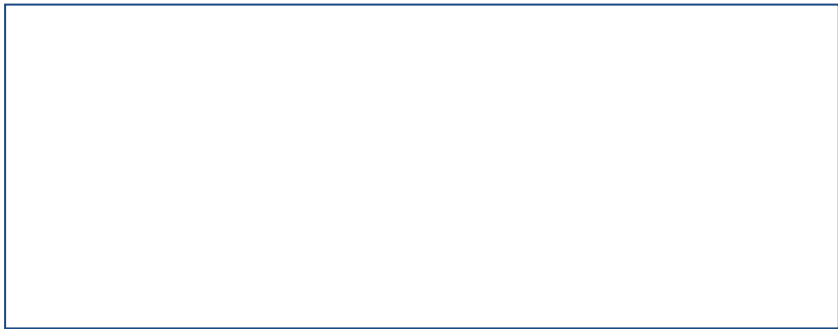
## RIS HI-PAVE CONFIGURATION

RIS Hi-Pave is a modular system which can be tailored to meet different requirements. The basic RIS Hi-Pave configuration consists of a single 1GHz or 2GHz horn antenna and a DAD FastWave radar control unit. A 600MHz antenna can be added to this to provide a complete road or runway evaluation, including grade and subgrade evaluations as well as the pavement. The number of antennas can be doubled to provide a wider survey path and hence require fewer scans to be performed and the system can also be used with a second control unit to provide a denser sampling rate to allow more accurate scans or scans to be performed at a higher speed.



SYSTEM SPECIFICATIONS		SOFTWARE SPECIFICATIONS	
RECOMMENDED LAPTOP	Panasonic CF-19 Tough-Book	GRED HD BASIC GRED HD 3	<ul style="list-style-type: none"> <li>Tomographic map view (C-Scan) including radar scan fusion</li> <li>3D data visualization</li> <li>Advanced targeting using radarscan and tomographic view</li> <li>Radarscan viewer, filter and advanced filtering macros, multiple radar scan viewer</li> <li>Layer picking for automatic analysis of sub-layers</li> <li>GPS and map track viewer including X, Y and Z axis and digital map importation</li> <li>Video handling (option)</li> </ul>
MAX. ACQUISITION SPEED (@ STD. SCAN INTERVAL)	260 kph (150 mph)@1 antenna		
POWER CONSUMPTION	13.3 W @ 1 antenna		
POSITIONING	Survey wheel and/or GPS		
NUMBER OF CONTROL UNIT	Depending on the configuration		
SCAN RATE PER CHANNEL: (@512 SAMPLES/SCAN)	724 scans/sec. @ 1 antenna		
SCAN INTERVAL	10 scans/m		
POWER SUPPLY	SLA Battery 12 VDC 12 AH		
DEPENDENT ON THE CONFIGURATION			
ENVIRONMENTAL	IP65		
ANTENNA FOOTPRINT	51 x 22 cm		
NUMBER OF HARDWARE CHANNELS	from 1 to 8		
ANTENNA CENTER FREQUENCIES	1 GHz* or 2 GHz		
ANTENNA POLARIZATION	Horizontal (HH)		
ANTENNA TYPE	Air launched		
CERTIFICATION	EC, FCC, IC		

\* This antenna is not FCC or IC approved for use in the USA or Canada



**IDS GeoRadar Srl**  
Via Augusto Righi, 1-2 -56121 Ospedaletto, Pisa, Italy  
Tel: +39 050 89 34 100  
[www.idsgeoradar.com](http://www.idsgeoradar.com)  
[info@idsgeoradar.com](mailto:info@idsgeoradar.com)