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
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.
- 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 BENEFITS

- 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.

RIS HI-PAVE FEATURES

- Dual horn antenna configuration
- RIS Hi-Pave with high and medium frequency antennas

Color test
Stratigraphic layers
Cavities

GRED HD: subsurface layer extraction
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**

<table>
<thead>
<tr>
<th>RECOMMENDED LAPTOP</th>
<th>Panasonic CF-19 Tough-Book</th>
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</thead>
<tbody>
<tr>
<td>MAX Acquisition Speed (@ STD. SCAN INTERVAL)</td>
<td>260 kph (150 mph)@1 antenna</td>
</tr>
<tr>
<td>POWER CONSUMPTION</td>
<td>13.3 W @ 1 antenna</td>
</tr>
<tr>
<td>POSITIONING</td>
<td>Survey wheel and/or GPS</td>
</tr>
<tr>
<td>NUMBER OF CONTROL UNIT</td>
<td>Depending on the configuration</td>
</tr>
<tr>
<td>SCAN RATE PER CHANNEL: (@512 SAMPLES/SCAN)</td>
<td>724 scans/sec. @ 1 antenna</td>
</tr>
<tr>
<td>SCAN INTERVAL</td>
<td>10 scans/m</td>
</tr>
<tr>
<td>POWER SUPPLY</td>
<td>SLA Battery 12 VDC 12 AH</td>
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<tr>
<td>ENVIRONMENTAL</td>
<td>IP65</td>
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<tr>
<td>ANTENNA FOOTPRINT</td>
<td>51 x 22 cm</td>
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<tr>
<td>NUMBER OF HARDWARE CHANNELS</td>
<td>From 1 to 8</td>
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<tr>
<td>ANTENNA CENTER FREQUENCIES</td>
<td>1 GHz* or 2 GHz</td>
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<tr>
<td>ANTENNA POLARIZATION</td>
<td>Horizontal (HH)</td>
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<tr>
<td>ANTENNA TYPE</td>
<td>Air launched</td>
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<tr>
<td>CERTIFICATION</td>
<td>EC, FCC, IC</td>
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</table>

**SOFTWARE SPECIFICATIONS**

- Tomographic map view (C-Scan) including radar scan fusion
- 3D data visualization
- Advanced targeting using radarscan and tomographic view
- Radarscan viewer, filter and advanced filtering macros, multiple radar scan viewer
- Layer picking for automatic analysis of sub-layers
- GPS and map track viewer including X, Y and Z axis and digital map importation
- Video handling (option)

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