IDS GeoRadar

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

PART OF HEXAGON

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

www.idsgeoradar.com

RIS Hi-Pave

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.

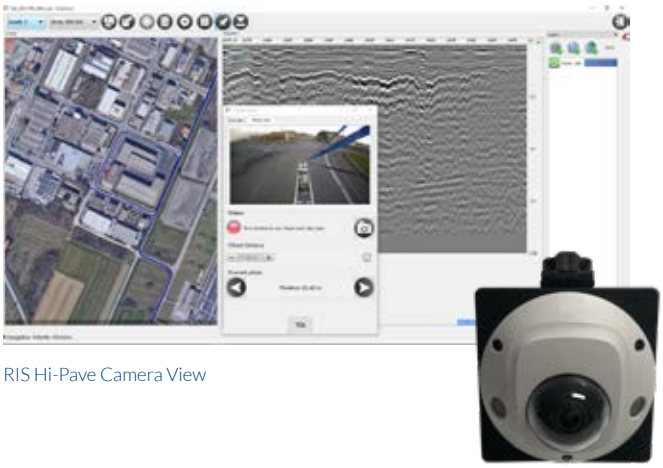
Dual horn antenna configuration

RIS HI-PAVE BENEFITS

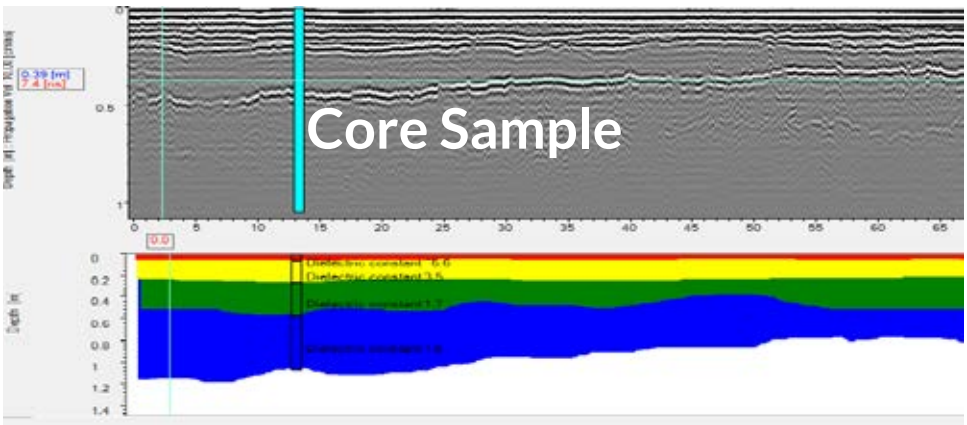
- **Pavement status evaluation** for new road construction (comparing completed pavement, grade and sub grade against design specifications).
- **Periodical status monitoring** of road and runaway conditions for preventive maintenance.
- **High-speed** GPR solution and semi-automatic layer detection 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.
- **Optional Camera Kit:** to carry out clearer and faster surveys with videos to be used during processing phase.



RIS Hi-Pave Camera View



GRED HD 3D: post-processing software for subsurface layer extraction

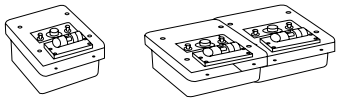
RIS Hi-Pave

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 400/900 MHz 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.

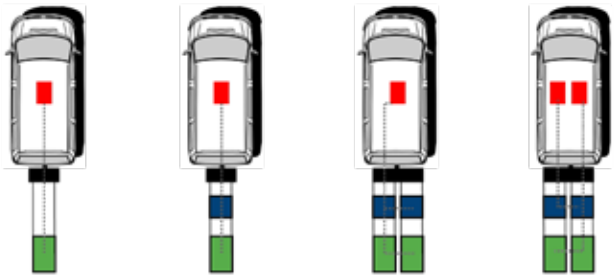
DAD
Radar Control Unit

TR600* Dual Frequency
400/900 FW



HORN 1000* or 2000

Cable



SYSTEM SPECIFICATIONS	
RECOMMENDED LAPTOP	Panasonic FZ55 (or equivalent)
MAX. ACQUISTION SPEED (@ STD. SCAN INTERVAL)	260 km/h (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
DEPENDING ON THE CONFIGURATION	
ANTENNA ENVIRONMENTAL	IP65
ANTENNA FOOTPRINT	51 x 22 cm
NUMBER OF HARDWARE CHANNELS	from 1 to 8
ANTENNA CENTER FREQUENCIES	HORN ANTENNA: 1 GHz or 2 GHz DUAL FREQUENCY: 400/900 MHz
ANTENNA POLARIZATION	Horizontal (HH)
ANTENNA TYPE	Air launched
CERTIFICATION	EC, FCC, IC

SOFTWARE SPECIFICATIONS	
ONEVISION ACQUISITION SOFTWARE	• Automatic calibration for an easy and quick start-up • Real-time visualization of radar tomography (time slices) • Connection with NMEA positioning device • Export to IDS GeoRadar GeoMap, dxf, shp and kml formats • Multilanguage support • Metric and Imperial units
GRED HD PROCESSING SOFTWARE	• 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

IDS GeoRadar Srl
Via Augusto Righi 6, 6A, 8, -56121 Ospedaletto, Pisa, Italy
Tel: +39 050 098 9300
info@idsgeoradar.com | www.idsgeoradar.com