

## RIS MF Hi-Mod

The end-to-end solution for accurate underground utility mapping and GIS map creation



Utility mapping array radar system combining both high performance and high productivity

IDS GeoRadar: The Leader in Multi-frequency and Multi-channel Ground Penetrating Radar  
[www.idsgeoradar.com](http://www.idsgeoradar.com)

RIS MF Hi-Mod is a robust high performance multi-use ground penetrating radar system capable of scanning large areas in a short period of time and providing an accurate 3D view of the subsoil with a high resolution and depth of penetration. RIS MF Hi-Mod provides a complete end-to-end solution from the initial data acquisition in the field to final output production in the form of CAD or GIS maps. RIS MF Hi-Mod's software includes automated tools which reduce the time taken to produce meaningful and unambiguous results.

## RIS MF HI-MOD BENEFITS

- **End to end procedure** ensuring professional results in mapping underground utilities and anomalies.
- **High productivity** with specific software tools for automatic target recognition and transfer to CAD/GIS maps.
- **Highest detection percentage level**, combining longitudinal and transversal scans and several frequencies.
- **Modular array**, easy to set up and reconfigure in the field.

## RIS MF HI-MOD FEATURES

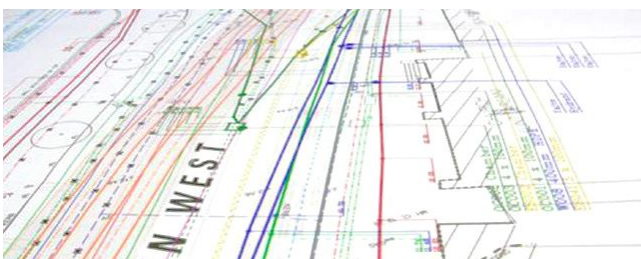
- **Deep and shallow antennas in one compact box:** Two antennas in the same box, with the option of choosing 200 MHz & 600 MHz or 400 MHz & 900 MHz, help the operator to locate pipes and cables by providing the proper frequency for a specific search parameter. It provides a real-time display of deep and shallow antennas on the same screen.
- **Modular:** Antenna boxes can be quickly added in "chain connection" while in the field (no tools required) with up to 8 in operation simultaneously. As a result, the system is able to work in any available space.
- **3D radar tomography:** Multi-frequency data fusion and a consolidated procedure to collect the data enable accurate 3D images of the subsurface to be achieved, helping the operator to distinguish individual anomalies and buried targets.
- **Professional utility mapping capability:** The result can be exported in several formats including GIS and CAD (AutoCAD or MicroStation) for a professional survey.
- **Flexible:** Powered by the IDS Multi-channel Control unit, the system can be used to drive every IDS GeoRadar antenna.
- **Advanced acquisition and navigation software** with real-time tomography and survey control with parameter editing.



RIS MF Hi-Mod: surveying on rough terrain



RIS MF Hi-Mod: 1 and 2 antenna configurations



Data can be exported to CAD and GIS digital maps

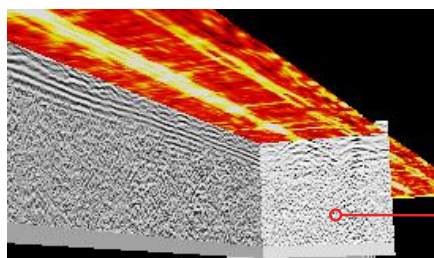


RIS MF Hi-Mod: 3 and 4 antenna configurations

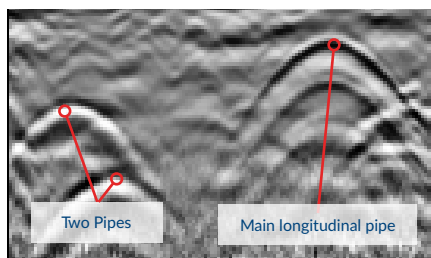


## GRED HD 3D SOFTWARE

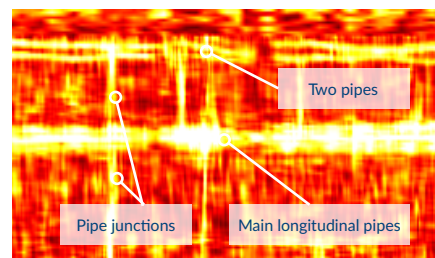
The software is able to present a 3-dimensional view of the subsurface, with a complete set of options to navigate within it, cutting it and marking anomalies. The software is also able to export 2D plan-view slices of the subsurface from which the operator can best interpret anomalies and pipes. The pipes and cables detected can be marked with a dedicated tool where the operator can specify a color for each pipe and the depth. The marked targets can be extracted into digital maps.



3D subsurface view



Single radargram



SYSTEM SPECIFICATIONS		SOFTWARE SPECIFICATIONS	
OVERALL WEIGHT (PC NOT INCLUDED)	31 kg (68 lbs ) @ 1 antenna 58 kg (128 lbs) @ 4 antennas	ONEVISION ACQUISITION SOFTWARE	<ul style="list-style-type: none"> <li>Real time tomography</li> <li>Integrated navigator</li> <li>Extensive survey management</li> <li>System and survey set up</li> <li>GPS management</li> <li>Specific RIS MF Hi-Mod features: <ul style="list-style-type: none"> <li>- "Create Grid" functionality</li> <li>- Tomographic merge of transversal and longitudinal swathes</li> </ul> </li> </ul>
RECOMMENDED LAPTOP	Panasonic CF-19 Tough-Book		
MAX. ACQUISITION SPEED (@ STD. SCAN INTERVAL)	9 kph (5.6 mph)		
POWER CONSUMPTION	13.3 W @ 1 antenna 26.6 W @ 4 antennas		
POSITIONING	Magnetic wheel and/or GPS or total station		
NUMBER OF CONTROL UNITS	1 DAD MCH FW		
SCAN RATE PER CHANNEL: (@512 SAMPLES/SCAN)	From 741 scan/sec. to 181 scan/sec.		
SCAN INTERVAL	42 scans/m		
POWER SUPPLY:	SLA Battery 12 VDC 12 AH		
ANTENNA SPECIFICATIONS		GRED HD GRED HD 3D GRED HD 3D CAD POST PROCESSING SOFTWARE	<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>CAD, GIS exportation of GPR data and target</li> <li>Synthetic map (only for the Stream family of products)</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>
ENVIRONMENTAL	IP65		
ANTENNA FOOTPRINT	38 x 43 cm (single antenna)		
NUMBER OF CHANNELS	From 2 to 8		
ANTENNAS CENTRAL FREQUENCIES	200 MHz / 600 MHz or 400 MHz / 900 MHz		
ANTENNA POLARIZATION	Horizontal (HH)		
ANTENNA SPACING	50 cm		
CERTIFICATION	EC, FCC, IC		

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