IDS GeoRadar

Stream EM

The vehicle towed solution for extensive 3D utilities mapping

Arrays of multi-frequency, multi-polarized antennas setting new standards for accuracy and productivity

PART OF HEXAGON

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

www.idsgeoradar.com

Stream EM

Stream EM is a vehicle towed radar solution for extensive 3D mapping of underground utilities and features. To accomplish this task it uses massive arrays of multi-polarized, multi-frequency antennas. The use of a massive array enables it to perform fast scans of large areas while maintaining a high level of accuracy. Being multi-polarized provides optimal detection of both longitudinal and transversal features without the need to perform multiple scans.

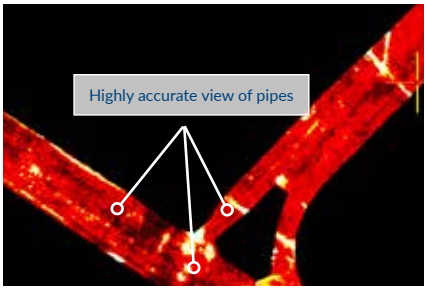
STREAM EM BENEFITS

- **Cost and time reduction** with no need to block trafficor perform surveys during the night.
- **Increase in accuracy** with a detection accuracy of as little as 5 cm (2 inches).
- **Increase productivity** and able to detect every buried target.
- **Highly modular structure** allows it to be reconfigured to map sidewalks and difficult to access areas.

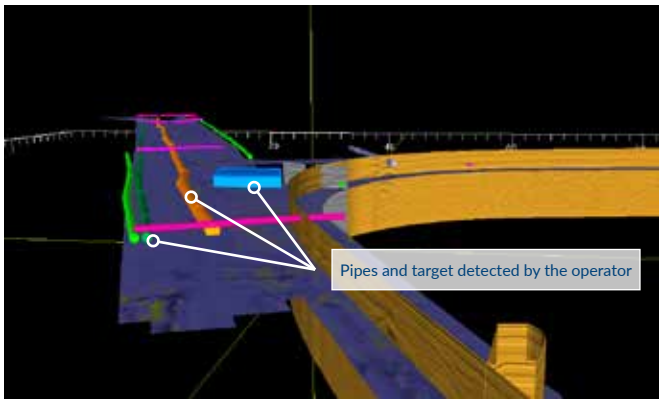
STREAM EM FEATURES

- **Massive array of 40 antennas in two polarizations:** This results in accurate 3D modeling of the subsurface and ease of detecting buried targets and anomalies. The use of both polarizations provides optimal detection of main and junction pipes at the same time.
- **Speed:** Stream EM can be towed by a vehicle up to 15 km/h (9 mph) and can be run continuously without blocking traffic.
- **Accurate to as little as 5 cm (2 inches):** Stream EM can be interfaced with GPS or a total station in order to accurately geo-locate the surveyed area and to individually distinguish all pipes, cables and anomalies detected.
- **Professional subsurface survey:** Pipes, cables and buried objects can be automatically transferred to CAD and GIS formats allowing a complete subsurface GIS-based digital map to be produced in just a few days.
- **Advanced acquisition and navigation software** with real-time tomography and survey control with parameter editing.

Stream EM



GRED HD 3D CAD: subsurface time slice view



GRED HD 3D CAD: 3D post processing results

Automatic CAD-and GIS transfer

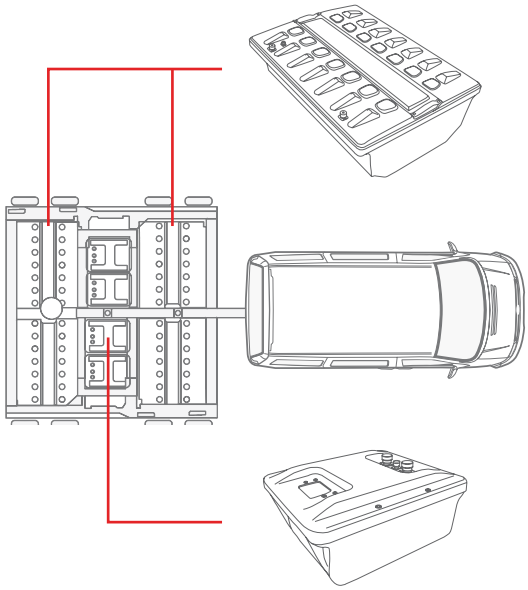
Stream EM Configuration:

Stream X and RIS MF Hi-Mod

Stream EM is a modular system which can quickly be reconfigured with optional frames to suit particular requirements or constraints. It is composed of 2 vertical 200 MHz Detection of Main Line (DML) arrays for detecting main pipes along the road and 4 horizontal dual frequency 200 MHz & 600 MHz Detection of Connection Line (DCL) arrays for the detection of shallow and deep junctions.

Stream X
the DML arrays can be extracted from the Strea EM to be used in the Stream X configuration for archaeology or environment surveys

RIS MF Hi-Mod
the DCL array can be extracted from the Stream EM to be used in the RIS MF Hi-Mod configuration for mapping sidewalks and areas with difficult accessibility



SYSTEM SPECIFICATIONS	
OVERALL WEIGHT (PC NOT INCLUDED)	228 kg (500 lbs)
RECOMMENDED LAPTOP	Panasonic CF-31 Tough-Book or similar
MAX. ACQUISTION SPEED (@ STD. SCAN INTERVAL)	15 kph (9 mph)
POWER CONSUMPTION	72 W
POSITIONING	Survey wheel and/or GPS or total station
NUMBER OF CONTROL UNITS	3 synchronized DAD MCH FW
SCAN RATE PER CHANNEL: (@512 SAMPLES/SCAN)	87 scans/sec
SCAN INTERVAL	17 scans/m @ 200 MHz 33 scans/m @ 600 MHz
POWER SUPPLY:	SLA Battery 12 VDC 100 Ah

ANTENNA SPECIFICATIONS	
ENVIRONMENTAL	IP65
ANTENNA FOOTPRINT	Width 1.84 m
NUMBER OF CHANNELS	38
ANTENNAS CENTRAL FREQUENCIES	200 MHz (34 channels) and 600 MHz (4 channels)
ANTENNA POLARIZATION	Horizontal (HH) and Vertical (VV)
ANTENNA SPACING	6cm
CERTIFICATION	EC, FCC, IC

SOFTWARE SPECIFICATIONS	
ONEVISION ACQUISITION SOFTWARE	• Tomographic map view (C-Scan) including radar scan fusion • 3D data visualization • Advanced targeting using radarscan and tomographic view
GRED HD 3D CAD POST PROCESSING SOFTWARE	• Tomographic map view (C-Scan) including radar scan fusion • 3D data visualization • Advanced targeting using radarscan and tomographic view • CAD, GIS exportation of GPR data and target • Synthetic map (only for the Stream family of products) • 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)

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