IDS GeoRadar

IBIS-ArcSAR

Next Generation Radar Revolutionizing Safety in Slope Monitoring



3D SAR Radar for a stunning 360° wall coverage

PART OF HEXAGON

IDS GeoRadar: Innovative Interferometric Radar for Mining, Environmental and Civil Engineering Applications

www.idsgeoradar.com

IBIS-ArcSAR

SLOPE STABILITY MONITORING AT A NEW LEVEL

IDS GeoRadar's unrivalled expertise in innovative slope monitoring radar has once again led to a technological revolution by introducing the next generation radar system based on the ArcSAR technology.

IBIS-ArcSAR is designed for fast deployment and robustness to ensure **the highest safety standards to manage risk conditions with confidence.** Whether it is a strategic/tactical positioning, IBIS-ArcSAR delivers unprecedented flexibility and performance to make critical decisions.

FULL 360° COVERAGE AT HIGH SPEED AND LONG RANGE

IBIS-ArcSAR is the first and only radar in the mining industry to provide 360° pit coverage capabilities from one single equipment. The system leverages the widest and longest range **(5000 meters)**, and the shortest scan time **(360° in 40s; 180° in 20s)** as well as built-in GNSS for auto-geocoding.

The outstanding **spatial resolution of 10 million pixels** sets new standards for critical safety monitoring by covering the full scale of slope instabilities from sub-bench to broad wall movements even at long distances.

HIGHEST QUALITY DATA WITH REAL-TIME IMAGES

IBIS-ArcSAR is also the first **full 3D SAR radar** system utilizing the proprietary mimo antenna array and automatic DTM survey. The system also features integrated **panoramic HD camera** providing real time imagery of pit walls and immediate visualization of critical areas.

Quality of data is always guaranteed by IDS GeoRadar's **state-of-the-art atmospheric correction algorithm** and smart data management system.

INTEGRATED MONITORING SOLUTION

Integrating seamlessly into the **Guardian FPM360 suite**, IBIS-ArcSAR can dramatically expand overlap areas of multiple IBIS radars to exploit the unique **TrueVector** capabilities, delivering a rich geotechnical environment.

One solution combines **radar data, prism displacement** and slow movement analysis into a single versatile platform without the need to invest in additional software.

BENEFITS

Safety Critical Monitoring
One single technology and equipment for strategic and tactical real-time monitoring with full scale coverage in time and space. One-touch project set-up.

Total Coverage
The widest field of view and highest spatial resolution for maximum flexibility and performance in all monitoring scenarios: short and long range, long wall and non in-pit facilities (tailings), with a scan time of seconds.

Green Power
A combined, built-in hybrid solar – diesel generator supply system, with optional wind turbine, ensuring dramatic reduction of fuel consumption and savings on genset maintenance costs.

High Availability with Low Maintenance Costs
Minimal moving parts and low profile design to guarantee robustness and maximum availability in all weather and mining conditions.

Long-term Monitoring and Planning
Early detection of slow movements, automatic integration with Total Stations & GNSS data, and advanced geotechnical analysis tools.

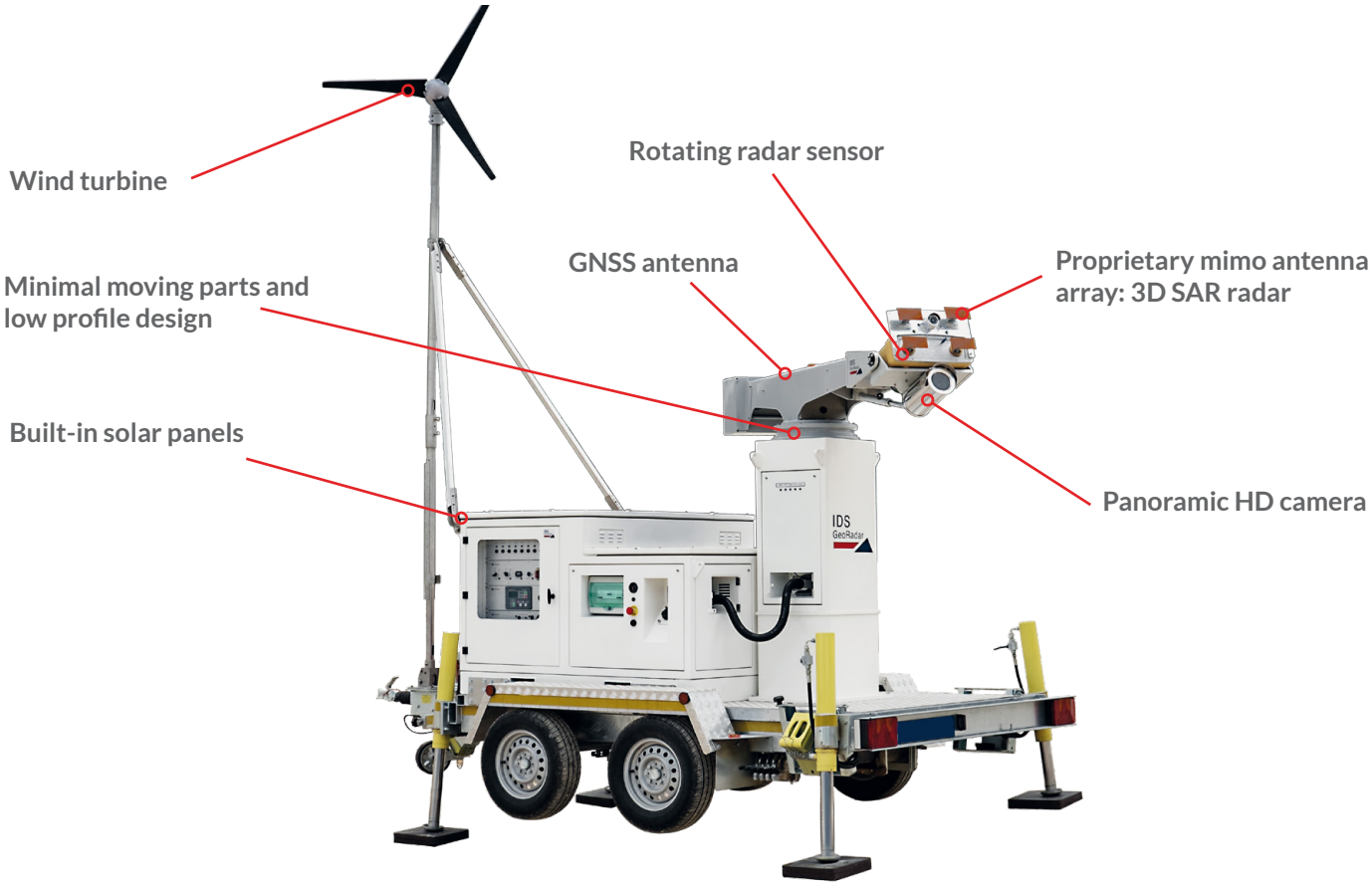
Multiple Information at a Glance
Enhanced data interpretation with instant HD picture of monitored area. Built-in GNSS for automatic geocoding of radar data. Real time DTM survey.

Reliable Data in All Weather
The most advanced atmospheric correction algorithm available in the market delivering the cleanest and most accurate data for real-time reliable alarming, with no user input required. Real-time data is available from the second scan.

Full integration with FPM360 TrueVector
providing seamless connection of multiple monitoring sensors (IBIS radar, TPS, GNSS) in one solution.

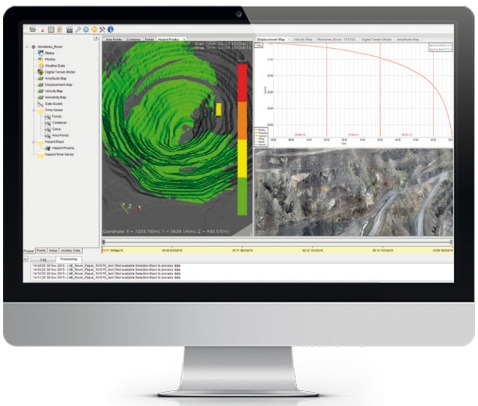
IBIS-ArcSAR

MODULAR COMPOSITION



FEATURES

- Scan range: up to 5000m
- Maximum coverage: 360° H x 120°V (70°V per session)
- Scan time: 360° in 40s; 180° in 20s
- Resolution: 10 million pixels for full resolution scan
- Integrated solar panels, diesel generator and optional wind turbine
- 3D SAR[1] and automatic DTM survey
- Built-in HD camera on rotating radar head (with link to radar data)
- Integrated GNSS
- Operates in all weather conditions and temperatures (-20°C/-50°C[2] to +55°C)
- Fully remote operation (wireless radio link) and optimized file size for low bandwidth
- Alarm generation with user-defined levels and multiple alarm criteria
- Zero delays in data processing and alarm generation
- Exportability of georeferenced output to mine planning software
- Built-in geotechnical analysis tools
- Integration in FPM360 TrueVector suite



IBIS Guardian feature-rich monitoring and alarming platform

[1] Patented
[2] With low-temperature kit

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