



## IBIS-ArcSAR

Next Generation Radar Revolutionizing Safety  
in Slope Monitoring



3D SAR Radar for a stunning 360° wall coverage

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

[www.idsgeoradar.com](http://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.



#### Long-term Monitoring and Planning

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



#### 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.



#### 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.



#### 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.



#### 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.



#### 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.



#### Full integration with FPM360 TrueVector

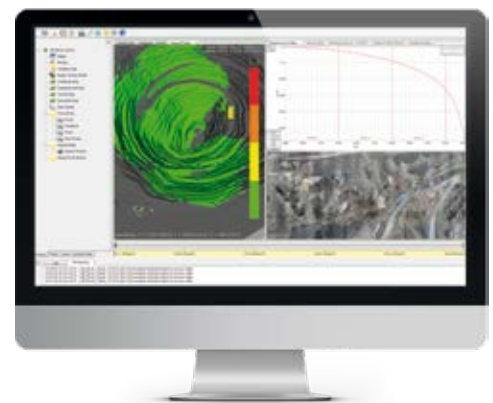
providing seamless connection of multiple monitoring sensors (IBIS radar, TPS, GNSS) in one solution.

**MODULAR COMPOSITION**



**FEATURES**

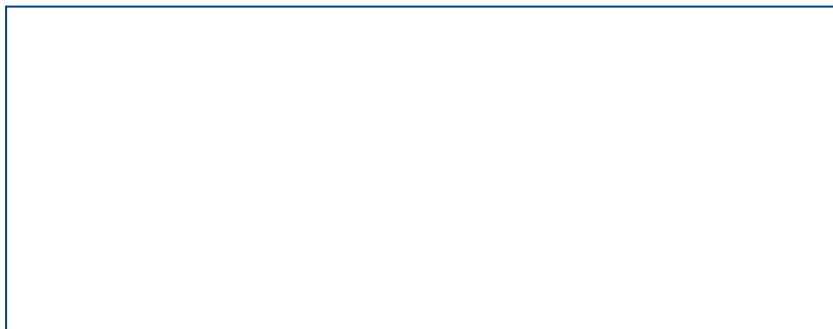
- Scan range: up to 5000m
- Maximum coverage: 360° H x 120°V (70°V per session)
- Scan time: 360° in 40s; 180° in 20s
- Resolution: 10 million pixels for full resolution scan
- Integrated solar panels, diesel generator and optional wind turbine
- 3D SAR<sup>1</sup> and automatic DTM survey
- Built-in HD camera on rotating radar head (with link to radar data)
- Integrated GNSS
- Operates in all weather conditions and temperatures (-20°C/-50°C<sup>2</sup> 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**

<sup>1</sup> Patented

<sup>2</sup> With low-temperature kit



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