IDS GeoRadar

IBIS-FM

Real-time critical monitoring and long term planning at great operating distance



Modular long-range rapid scan Synthetic Aperture Radar

PART OF HEXAGON

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

www.idsgeoradar.com

IBIS-FM

DEVELOPED IN MINES FOR MINING

IBIS-FM is the first Synthetic Aperture Radar developed and designed specifically for real-time monitoring of mine walls. Every detail has been finely tuned to meet the demanding requirements of harsh mining environments. Constant collaboration with mining professionals ensures consistent improvements in technology and updates.

FULL COVERAGE IN TIME AND SPACE

The extremely high resolution and the proprietary multi-scale processing engine ensures that IBIS-FM accurately measures multiple scales of displacements ranging from sub-bench to overall slope movements, fast accelerations associated with the risk of collapse (cm/h) and early detection of very slow movements (mm/month) in support of mine planning and mitigation strategies. All in real time.

MAXIMUM OUTPUT, WITH MINIMAL INPUT

IBIS technology is capable of providing reliable displacement data with sub-millimetric accuracy, made possible by employing the most advanced automatic atmospheric correction algorithm available on the market today, able to adapt in real time to all the sudden weather changes typical of extreme mining conditions, even in the most challenging climates. All with no user input required.

FULL-PIT COMPLETE SITUATION AWARENESS

Integration of two or more IBIS systems with the FPM360 platform enables users to exploit the unique full-pit monitoring capability. The user is provided with a real-time universal view of the pit by stitching together multiple IBIS radar datasets in a single integrated visual platform, for complete management of slope pit hazards and perfect control of rock behavior. FPM360 reduces workload by removing the need to reproduce the same tasks on multiple workstations.

PROFESSIONAL DESIGN AND TOP CLASS AVAILABILITY

R&D and production of IBIS radars is performed completely in-house. This ensures that our customers are provided with the highest technological standards, with the maximum flexibility to move through the design and troubleshooting phases quickly and easily in order to deliver an unrivalled operational availability and the lowest maintenance costs on the market.

BE FOCUSED, WE DO THE REST

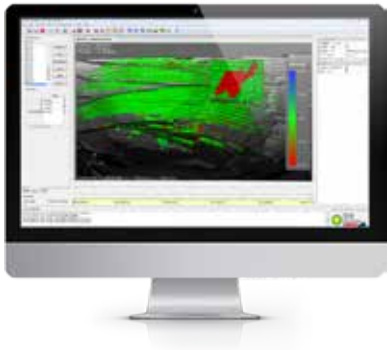
IDS GeoRadar's international network of professional engineers is able to provide a world class maintenance service: training, and complete 24/7 after-sales support, even in the most remote locations in the world.

APPLICATIONS	BENEFITS
Safety critical monitoring (rapid displacements)	One technology for tactical and strategic monitoring with full-scale coverage in time and space
Early detection of slow movements in support of mine planning and geotechnical analysis	The most advanced automatic atmospheric correction, able to react to sudden changes of atmosphere. No stable areas required and data is available from the second scan
Long-term continuous monitoring (long-term datasets within a single project)	Set-and-forget semi-permanent installation (indoor/outdoor)
Long-range (4500m) broad area coverage	Proven high in-service availability: limited number of moving parts and low maintenance requirements (minimum downtime)
Tailings dam and waste dump monitoring	Modular composition with optional tools available to fulfil the specific requirements of end users
	Common hardware components and critical parts shared among all IBIS radars, providing cost savings and quick troubleshooting
	Integration with the FPM360 full pit monitoring network

IBIS-FM

MODULAR COMPOSITION





IBIS Guardian software highlighting areas of displacement

HARDWARE FEATURES

- High spatial resolution (0.5 x 4.4m resolution cell at 1000m)
- Long operating range (from 10m to 4500m)
- Rapid scan time (3 minutes)
- Broad area coverage (around 5000m^2 at 2000m)
- Fully remote operation (wireless radio link) and optimized file size for low bandwidth
- Self-powering option using a combination of solar panels and batteries, with back-up diesel generator
- Operates in all weather conditions and temperatures (-25/-50°C* to 55°C)

*Indoor

SOFTWARE FEATURES

- Alarm generation with user-defined levels and multiple alarm criteria
- One-touch project setup with automatic geocoding
- Zero delays in data processing and alarm generation, providing a seamless workflow for immediate user reaction
- 3D interactive data handling and fully georeferenced output
- Exportability of output to most mine planning software suites and the possibility to import digital layers
- Built-in geotechnical analysis tools



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