

The MSR Series



Safety and productivity through accuracy and reliability

Effective and accurate slope stability monitoring on any scale

At Reutech Mining, our goal is simple: to increase safety and productivity at mining operations. Since its first release in 2006, the MSR series has earned a reputation for trust in the open pit slope stability monitoring industry. It provides the capability for both critical and strategic monitoring, as well as scanning through rapid atmospherics. Our radar products provide the key instrumentation required for informed and effective slope monitoring programs, enabling effective risk management strategies and life-of-mine plans.

The MSR series is the most advanced slope monitoring radar systems, with unmatched accuracy and reliability. It enables effective risk management strategies and life-of-mine plans that limit personnel and equipment exposure to geotechnical hazards by increasing productivity and allowing for pit slope optimisation through design calibration and verification, utilising monitoring data.

MSR Modular

The primary emphasis of the MSR Modular is on its modular design. It provides flexibility in terms of module types, power alternatives, mounting options, and area coverage.

This system is most suitable for operations that requires a system to grow with the pit, it is easy to move around the site, and is able to conduct critical and strategic monitoring simultaneously.

MSR^{IV} Esprit

The MSR^{IV} Esprit is specifically designed for challenging operations, including those that involve brittle failures, rapid changing slopes, and atmospherics. To ensure maximum effectiveness, the system boasts an impressive scan time of less than 2 seconds, providing quick and accurate results that mitigate these potential obstacles.

Integration of External Sensors

To ensure stable slopes in mines, different sensors are used to measure how much the slopes are moving. By integrating and comparing external data with MSR data, the total movement and direction of a slope can be determined more accurately.

Leica GeoMos
Trimble 4D
QuickSlope
SlideMinder
Rocscience

Georeferencing

The MSR series can be georeferenced into the local mine coordinate system in two ways:

- Manual by use of a total station
- Auto- georeferencing: an integrated GPS with full GNSS capability now allows for quick and easy georeferencing of the radar into the local mine coordinate system without the need for a total station.

Long-term database

Geotechnical engineers benefit from accessing long-term databases or historical data sets, which provide a comprehensive overview of slope behaviour. By analysing pit slope performance through back analysis, geotechnical engineers can gather additional information to select appropriate alarm thresholds that can cover various geotechnical scenarios.

Rapid Align™

The Rapid Align™ software allows the MSR series to generate long-term databases. This software automatically re-aligns scan regions once a system has been georeferenced and the system is scanning the same scan region, allowing for data acquisition in the same database used previously.

Software

The software of MSR series offers a feature rich HMI with multiple movement assessment, data analysis and data integration tools. This provides users with two sets of alarm thresholds namely, critical and geotechnical alarms, that can be applied to relative range, average velocity and velocity delta. These provisions ensure users receive the optimal warning of changing pit slope conditions.

Slope Vision

Slope Vision is a high-definition georeferenced camera system. The camera is used in conjunction with the MSR series to provide additional visual data such as images and video material to users, without interrupting the operation of the radar.

Support

The 24/7 support infrastructure provides clients with a comprehensive and specialized support team, ensuring optimal performance and productivity within critical operations. Additionally, the MSR series is inclusive of a full-service package as well as geotechnical support.