

Rock bursts and Fall of Ground (FoG) events are among the main reasons for injuries, fatalities and production disturbancies in mining.

Therefore, ThingWave has developed an advanced IoT solution for ground support monitoring. Anomalies are detected and transmitted in real-time to ThingWave Cloud, and alarms are sent out to mine's staff. ThingWave's technology increases safety for workers and ensures that production runs smoothly.

- Wireless rock bolt sensors (Wi-Fi, mesh, 5G).
- Keeps tunnels under surveillance 24/7.
- Real-time visualization of sensor data.
- Automatic alarms generation if anomalies occur.
- Deformations up to 350 mm can be detected.
- Convergence monitoring with 1 mm resolution.
- Suitable for different types of rock bolts:
 - standard rock bolts
 - cable bolts
 - high-performance bolts



