

- Licence-free operation
- ARQ error recovery
- Multiple repeater station coverage
- High speed data transfer

Wireless Mining Vehicle Diagnostics

In the mining industry it is important to keep machinery operational as downtimes can cost mining companies millions of dollars in lost production every day. Lost production can affect ore processing, train or sea shipments and many other processes down the line.



To minimise the possibility of machine failure, mine sites implement preventative maintenance strategies and one important emerging tool is real-time monitoring. Traditionally a mine site worker would climb onto a vehicle and download the operational information for the day, a time consuming and sometimes dangerous task. Now mine sites can implement a wireless system that downloads information from a mining vehicle wherever it is within a mine site.

STI Engineering developed the RFI-Minelink system to download vehicle operational data from Caterpillar™ trucks in open-pit mines. The system consists of PC based controlling software in a master control room, wireless remote repeater stations and truck unit. The system utilises a specialised version of the RF Innovations RFI-9256 radio modem.

A traditional problem associated with wireless networks in mining applications is that a mine site is constantly changing, and as the mine site changes so does your coverage. The RFI-Minelink system overcomes this problem with self-contained portable repeater stations. Repeaters can be easily shifted as required to cover problem areas as they arise.

The license-free radio is able to transfer high-speed data through multiple (optional) repeater stations to a central site for processing.

The RFI-Minelink system allows for immediate connection from the base, or scheduled downloads of information. Site technicians can use the system to download data for trend analysis on the operation of the vehicles and determine whether they are operating within required thresholds.

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