Wireless Connectivity Enables Effective Communication in Open-pit Mines

Wireless broadband provides the communication backbone required by every open-pit mining operation. Fast, secure data transfer, VoIP telephony and video surveillance are all supported by a single wireless communication platform from Netronics. Built to perform in extreme environments, Netronics high-capacity wireless systems offer the fast, reliable and always available connectivity that is essential for efficient communication and productivity for the industry.

Open-pit Mining Application

Wireless Communication Enables the "Digital" Open-pit Mine

A profitable open-pit mining operation depends on effective communication, efficiency and safety. A high-capacity wireless broadband network is the key to achieving these objectives. Wireless technology enables continuous online planning and real-time monitoring of the geological and production activities throughout the operation.

The hazards of explosives, heavy equipment and steep slopes which are often unstable make injury and loss of life a very real danger. It is vital to have a fast communication network that is reliable and always available, even in difficult terrain and harsh weather conditions, to protect the crew as well as assets on-site.

Mining has become a communication technology-dependent industry. Operations are supported by software applications accessed through a network. When a data network shuts down or becomes unavailable, safety and productivity are compromised. The entire operation must be suspended. Only wireless broadband technology enables the "digital" workplace by providing fast, secure and reliable wireless communication for all the network access and safety systems of the open-pit mine.

Today's advanced mining software requires high bandwidth. They include equipment-health diagnostics, equipment location monitoring, Doppler radar data, precision GPS data, high-resolution mapping and graphics, and video and voice communication; all being delivered over the net.

The Netronics Solution: the Best Platform for the Open-pit Mine

Well-known for rugged and resilient products of Netronics units have been deployed thousands on icy mountain tops, in humid rainforests, wind swept plains and obstructed and noisy cities. Netronics products are certified to the wireless industry's strictest standards.

Netronics products featuring point-to-multipoint NLOS (Non-Line-Of-Sight) capability offer the best coverage and greatest capacity for a cost-effective, secure and flexible solution. Over 480 square kilometers are covered per cell, delivering up to 128 Mbps data throughput. A small number of stand-alone base stations can provide full high-capacity network communication to the entire open-pit terrain and its surrounding area.

The network is easily expanded and connectivity is ensured through redundancy as base station links are relocated and new mine walls are formed.

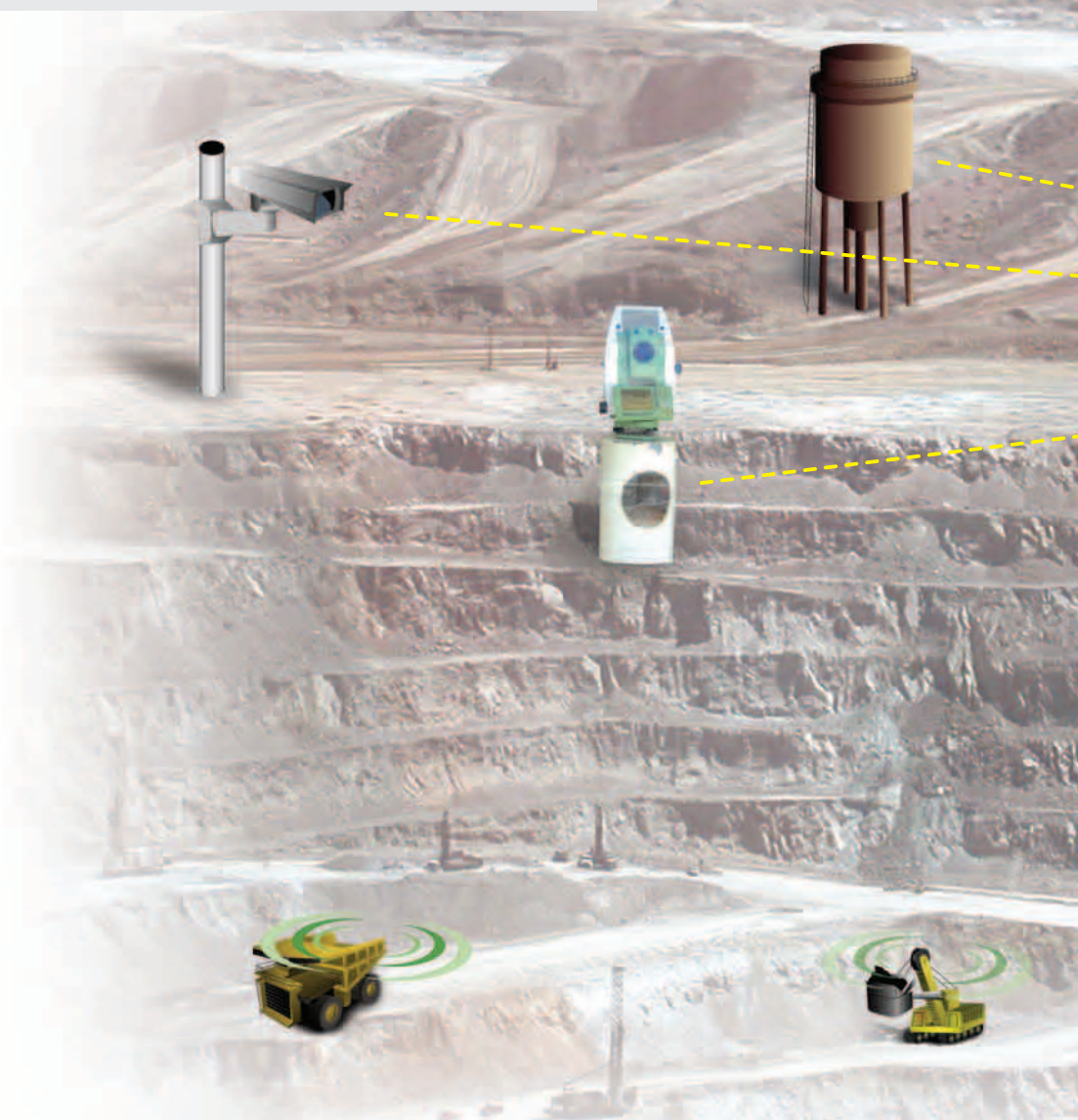
Serving mobile users is a key benefit of the Netronics wireless network solution. Access to mining applications, network data and VoIP telephony are available to vehicles moving throughout the mine and remote on-site offices for complete connectivity to the workforce.

The Netronics solution offers cost-efficiency through reliability and easy deployment. A mining operation has a low tolerance for installation re-trials and network malfunctions. The Netronics solution is easy to deploy the first time out, provides uptime of nearly 100% over time and offers a proven 11 year MTBF (Mean Time Between Failure) rate. It is the secure and reliable network you can depend on.

Critical mining operations worldwide rely on the Netronics solution for wireless connectivity, from the world's largest open-pit mine in Chile to the most remote sites in Botswana, Africa. This is the ultimate network platform for the open-pit mining industry, offered by the market leader of wireless broadband communication.

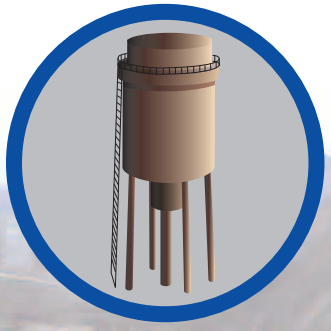
Netronics Wireless Broadband

Enables Efficient Communication in Open-pit Mines



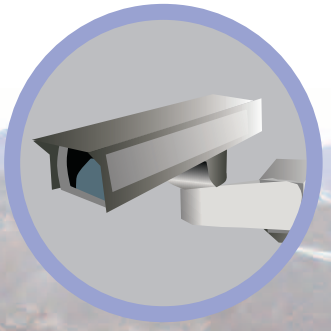
Structure Stability Monitoring

Safety is a major concern as pit slopes and benches are being shaped with the use of explosives and heavy equipment. Wireless broadband enables data from Doppler radar systems to be streamed directly to headquarters in real time. An alarm is immediately sounded should there be an unexpected slump or collapse in the pit wall, keeping workers out of danger.



Remote Control

Water levels and operations at remote pump houses are monitored from headquarters, saving manual effort while ensuring continued operation.



Video Surveillance and Monitoring

Video cameras are the most practical and efficient way to visually monitor overall activity in large pit operations, particularly around the use of explosives. Wireless broadband enables video images to be streamed to the control room in real time.

On-site Office Solution

Work crews using small vehicles can connect to VoIP and access mining applications while on site.

Vehicle Dispatch

Wireless communication improves productivity through easy control and monitoring of trucks and tractors. Vehicles are assigned using the Dispatch software for quick and efficient deployment.

GPS Positioning

Maintain accurate positioning by accessing real-time online 3D geological maps. This enables cross-checking of the reported physical GPS location to ensure collection of the appropriate material.

Real Time Geological Data

Real-time geological data is a major asset in the constant-shaping pit mine structure. Netronics wireless communication supports large volume files, making it easy to send on-site test results to headquarters for analysis. This saves travel time and makes updates faster.

About Netronics

Netronics® is a leading designer and manufacturer of networking and communications equipment based in Vancouver, Canada. Our product portfolio consists of data and voice communications and networking equipment based on the latest radio and wireless communication technologies.

Netronics have provided its market with high quality and highly reliable carrier class equipment serving the different market sectors from large government organizations, to enterprises in oil and gas and banking sector, to telecom service providers, and down to small Internet service providers.

As a provider of wireless communications and voice/data transmission equipment needed for today's bandwidth thirsty market, Netronics have successfully leveraged its technical knowledge in provision of connectivity to urban and rural areas in many developing countries, where wireless communications is the most suitable connectivity solution.

Our rich portfolio includes the performance leading NetMAX, the complete WiMAX solution with migration path from Wi-Fi to WiMAX.
The high throughput and extremely reliable NetLink F series and the low cost and feature-rich NetLink L series made it possible for our clients to provide high availability high speed solutions to their users with one of the best price/performance ratios in the market.

Netronics: Wireless Connectivity Enables Effective Communications in Open-pit Mines
The following field-proven Netronics systems are ideal for mining operations:
NetLink F, NetLink MP, NetMAX™, NetPoint, NetStream.

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