

Wireless Solutions for Exploration, Mining, Fleet Tracking & Surveillance

Mining takes place in difficult and remote environments. Extra measures need to be put in place to bring reliable wireless coverage to these settings.

From exploration to extraction to delivery, wireless has become an integral part of the process. Applications range from voice and data communications to fleet management and remote video surveillance. Multiple technology options are available, including WiFi, Cellular, and GPS.

Wireless system designers serving the Mining industry are called on to build networks that offer continuous and balanced coverage. Mechanical integrity of the antennas can be as important as electrical performance. Mobile Mark's wide range of antennas can help make that possible.



Exploration

Remote locations, such as offshore drilling platforms, will require antennas that continue to perform in harsh conditions, including salt water environments and heavy winds. These settings may also depend on satellite communications, such as Iridium[®], either as a primary or secondary means of communications. Additional antenna options for geolocation capture and data transfer, may be needed to evaluate extraction potential in new sites.



Infrastructure

Wireless connections become critical in remote exploration and mining. Rapid deployment and redundancy coverage are key for effective wireless infrastructure in isolated settings. For optimal performance, antennas can be selected to shape the radiation pattern to best fit the space available. Narrow beamwidth coverage can send the signal further down the tunnel. Omni-directional coverage with spherical radiation patterns can be used for effective base stations.



Underground wireless and asset tracking

Managing and tracking important assets can be a challenge in the field, and both RFID and WiFi offer effective wireless solutions. But bringing wireless underground poses its own set of challenges, from falling rocks or excavated materials to damp environments. Reliable antennas need to be designed to resist damage from impact or corrosive environments, and to maintain the wireless connection even if damaged.

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Vehicle control and fleet tracking

Modern mining operations rely on a battalion of vehicles, from massive extraction vehicles to more modest sized trucks to transport extracted material. These vehicles operate in tough environments where high vibration is a frequent wear and tear challenge. The MOD omni-directionals address this concern with foam-filled mobile antennas. For on-going communication and control, GPS Multi-band Fleet Management antennas cover Cellular, WiFi, GPS and GLONASS.



Remote monitoring and video surveillance

Surveillance plays an important role in maintaining secure settings. Network deployments for mining need to be low maintenance and weather resistant. RM Broadband surface mounts offer flexibility for multi-frequency coverage and are rugged and dependable. High performance YAGI antennas provide practical point-to-point connections for ISM networks. Over-molded device antennas in either straight positions or right angle positions resist moisture and dust ingress.

Mobile Mark antennas cover most commercially available wireless networks (Cellular, LTE, ISM, WiFi, GPS, RFID, and VHF/UHF) as well as specialized networks. Installers will like the fact our antennas are easy to install and service free.

If you need something special, Mobile Mark has the facilities and the experience to take a project from initial conception through to final production. Our team of design engineers have years of experience and a proven track record for developing innovative, high quality antennas.

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antenna solutions





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