

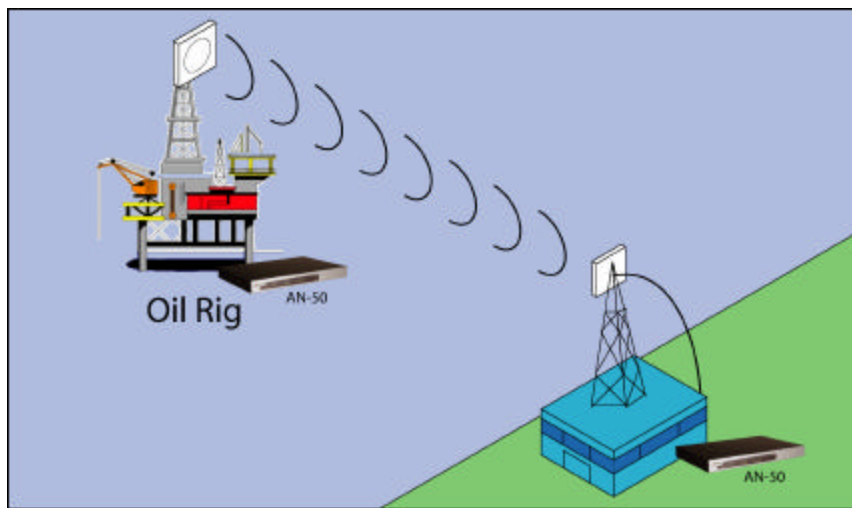


Application Note

Oil Rig Connectivity

Connecting oil rigs to high speed networks generally required a satellite connection. Now a new option is available that overcomes the performance limitations and high cost associated with satellites and provides high-speed two-way data, voice and video connections.

Wireless connectivity provides reliable high-speed network links for connecting oil rigs to shore based facilities



Business Requirement

Remote industrial centers like oil-drilling platforms require reliable (and expensive) high-speed connectivity for a variety of applications, including telecommunications services for the oil-rig's equipment and weather data. Geological data is constantly sent from the rig in real time - as video data or conference-call audio - for critical analysis by scientists on shore. For staff, broadband access allows for voice and fax services, e-mail and web browsing (for distance learning), as well as downloading videos for after-work hours.

Oil companies require a multiservice infrastructure for their oil rigs, but satellite pricing is typically \$3,500 to \$5,000 (US) per month. Satellite connections are not only expensive, they are also slow and unreliable. Clearly, a network architecture is needed that

can displace satellite by providing a reliable, high-speed, cost-effective link - one that's also tuned for long distances. Robustness is also a consideration, as the equipment may be exposed to extreme heat, cold, salt air, water reflections, etc.

Wireless Advantage

Redline's award-winning AN-50 and AN-30 broadband fixed wireless systems offer ideal solutions for high-speed access. Each product utilizes a proven advanced orthogonal frequency division multiplexing (OFDM) technology and functions at up to 72 Mbps over the air. The systems operate in the license-exempt band of 5.8 GHz and support ranges beyond 50 miles over the water.

Redline AN-50 and AN-30:

Redline's fixed wireless systems are designed to provide data and voice solutions for:

- Oil Rigs and remote Industrial Facilities
- Medium and Large Enterprises
- Carriers and Service Providers
- Local and Regional Governments
- Schools, Libraries and Hospitals
- Public Safety Organizations
- Property Management Companies

Typical Uses

- Connect Voice, video and data based equipment over long-range wireless links
- Extend head office and regional office systems out to oil rigs
- Connect telephone and broadband data connections

Key Features

- OFDM technology provides robust wireless links even in the presence of harsh multipath interference common over water
- Ability to operate in some non line of sight conditions
- Up to 48 Mbps net data rates over 100BaseT interfaces
- Ranges of 80 km (50 miles)
- Extremely low latency for high performance time sensitive applications like VoIP and video conferencing
- Carries up to 4 T1/E1 circuits plus IP data traffic simultaneously (AN-30)
- Point-to-point and point-to-multipoint configurations
- Adaptive modulation adapts to changing line conditions for robust link reliability
- Supports high speed 64 QAM modulation
- Carrier class Network Management System support
- Single or dual AC or DC power supplies for redundancy

Additional Benefits For Oil Rig Applications

- Allows a data and PBX system to be connected across miles of water
- Not affected by clouds, rain, sunspots
- Supports both voice (T1/E1) traffic, video and data traffic on a single link
- Much lower latency than satellite based service
- Proactive remote management and diagnostic tools for telephony and IT staff

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