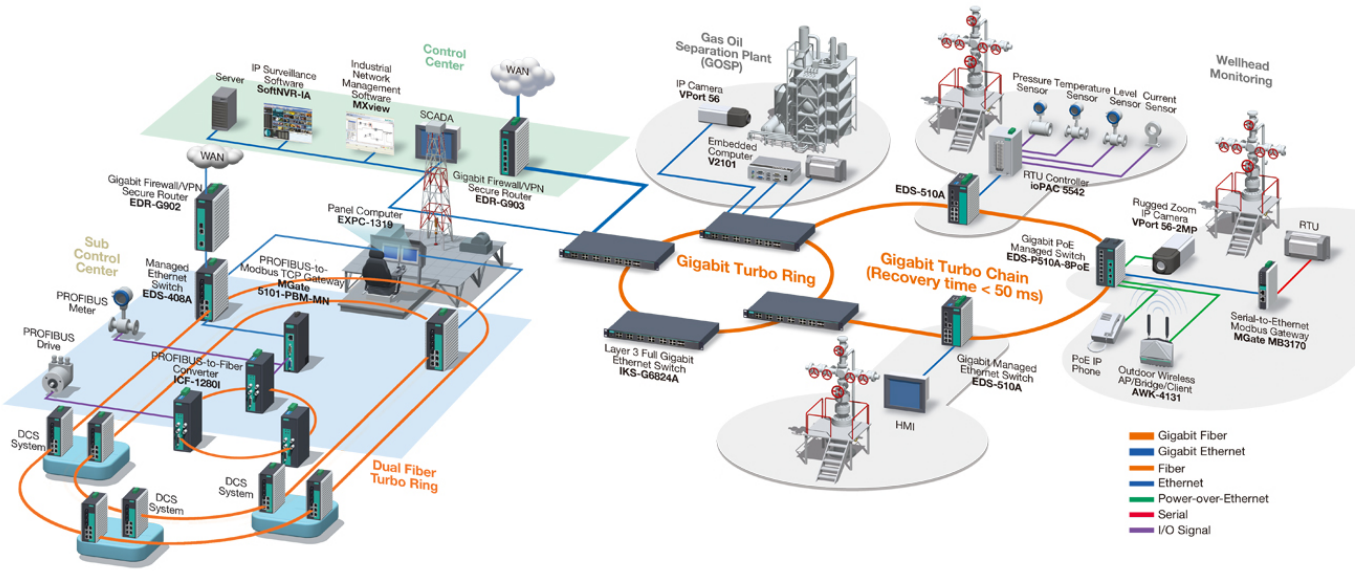
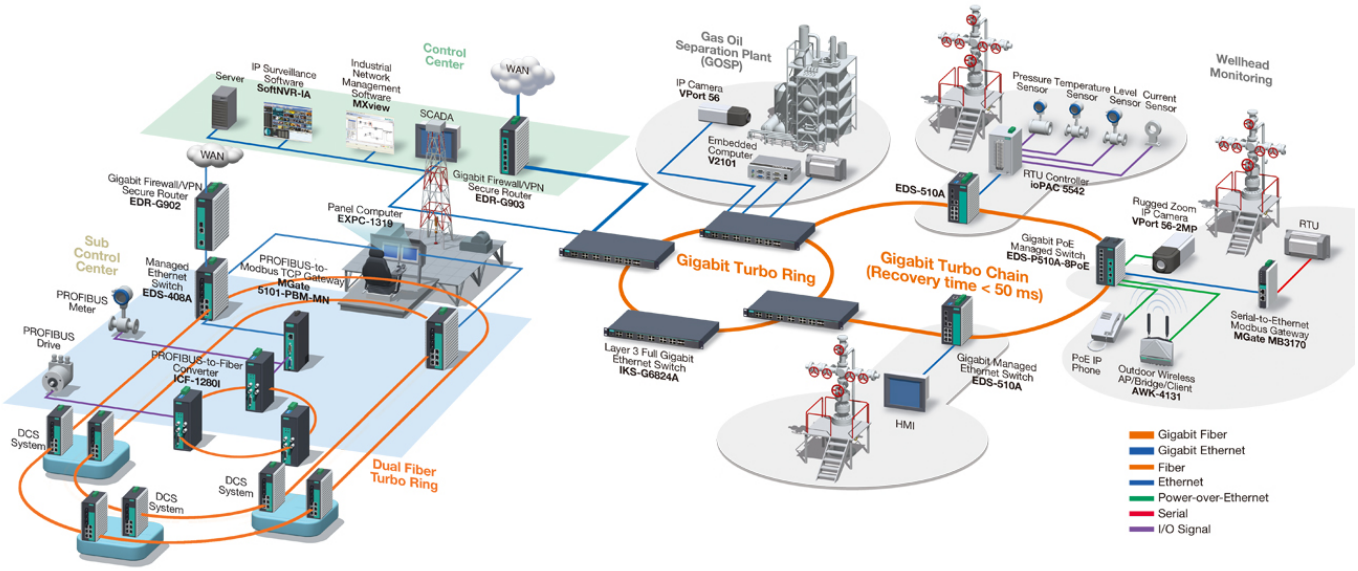
Upstream Onshore - Drilling Rig and Wellhead Automation

Onshore Oil and Gas Communication Solutions for Drilling Rig and Wellhead Automation



Onshore Oil and Gas Communication Solutions for Drilling Rig and Wellhead Automation

Intelligent oil rig and wellhead automation can be achieved with a reliable Ethernet control and monitoring system that supervises operations from the rigs, wellheads, or Gas Oil Separation Plant (GOSP) in a SCADA-based control center. This system combines field site drilling data transmission and acquisition and video monitoring, and requires a stronger backbone with non-stop redundant reliability and real-time performance. Since onshore operations face environmental hazards such as corrosion, temperature extremes, and risk of explosion, network equipment must be able to withstand hazardous environments and comply with ATEX standards.



Network Requirement

- A reliable Ethernet-based control network to remotely manage and access data at the SCADA hosts.
- Direct data monitoring of many industrial fieldbus devices.
- High bandwidth Gigabit backbone for video, voice, and data transmission.
- Network redundancy to enhance communication efficiency and reliability.
- Fiber optic cable for long-distance transmission to deliver superior EMI/noise immunity.
- A secure network that protects monitoring system and critical oil rigs and wellheads.
- Management software for easy network troubleshooting and maximum system uptime.

Moxa Solutions

- Moxa onshore oil and gas solutions offer Modbus, PROFINET, and EtherNet/IP gateways for efficient oil and gas communication.
- Comprehensive solutions for remote monitoring and maintenance, including media converters, IP cameras, RTUs, panel PCs, and wireless products.
- Turbo Ring and Turbo Chain network redundancy technologies deliver integrated Ethernet rings that recover in 20 ms or less.
- Gigabit secure routers form a trusted industrial network.
- Network management software and OPC-enabled solutions for seamless integration with SCADA/HMI systems.

- A complete line of ATEX Zone 2-certified networking, computing, and monitoring solutions.