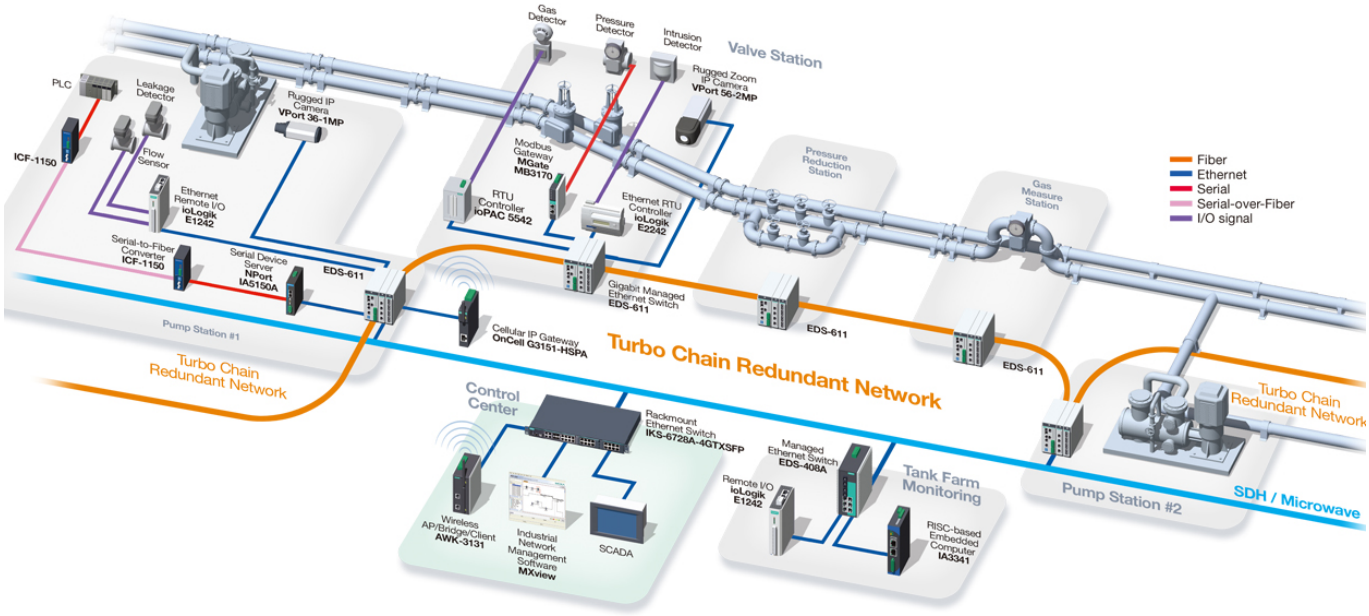
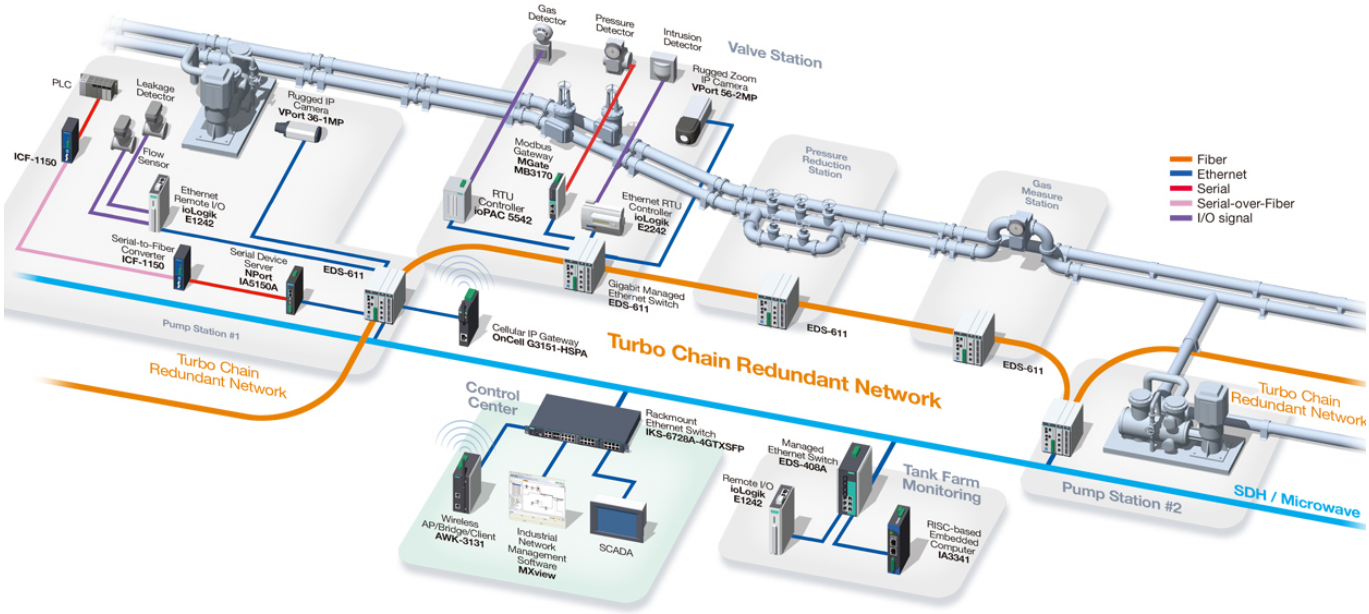
Midstream Oil and Gas Solutions

Midstream Oil and Gas Solutions SCADA Systems Real-time Monitoring of Oil Pipeline



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The role of oil pipelines is to distribute the crude oil from drilling rigs to oil storage tanks and then to refineries. Typically, pipelines span several thousand miles over harsh terrain and require a central SCADA system based on Synchronous Digital Hierarchy (SDH) and microwave architecture to measure, monitor, and control the status of field instruments across the entire oil flow. Multiple pumping stations, such as block valve stations and compressor stations, keep the pressure in the pipeline constant. Operators can quickly detect, locate, and prevent or resolve leaks, damages, and breaks by deploying a rugged, extendable fiber-optic Ethernet network. The network must be robust, highly available, and include an integrated remote monitoring and surveillance service for pipeline operation to improve safety and reliability and reduce the total cost of the pipeline.



Network Requirements

- The SCADA system and network management software at the control center receive and monitor the pipeline?s operational status.
- A reliable wired or wireless network that seamlessly connects the remote data monitoring system to the control center.
- Network with Gigabit performance and fiber support for real-time long-haul video, voice, and data transmission over vast distances.
- Flexible and extensive network with easy deployment and expansion for large-scale and changeable pipeline applications.
- Industrial-grade devices that operate in hazardous locations, to guarantee system safety.

Moxa Midstream Oil and Gas Solutions

- Moxa offers highly integrated network solutions, including Ethernet switches, wireless LAN and WAN products, Ethernet gateways, IP cameras, RTU controllers, embedded computers, and network management software.
- Easily troubleshoot the entire network with Moxa´s MXview industrial NMS to maximize system uptime.
- Gigabit-performance Ethernet switches with single-mode and multi-mode fiber optic interfaces available.
- Turbo Ring and Turbo Chain network redundancy technologies deliver

integrated Ethernet rings that recover in 20 ms or less.

- All of Moxa´s oil and gas solutions feature a wide temperature operating range, high MTBF, fanless operation, high-EMI noise immunity, and industrial design to ensure long-term operations.