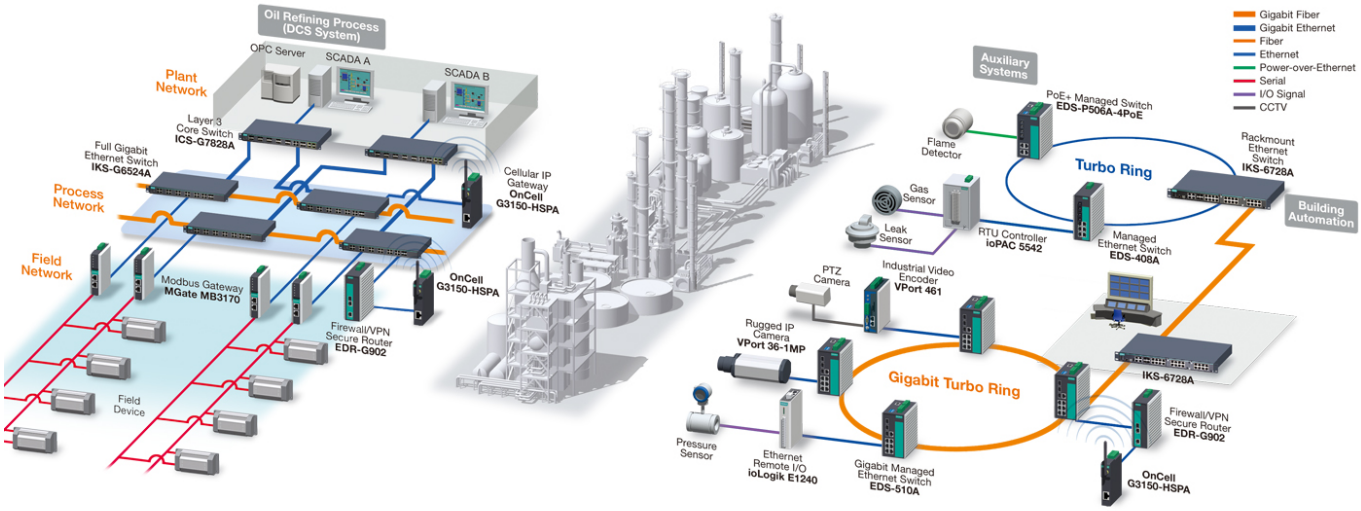
# Downstream Oil and Gas Solutions

## Downstream Oil and Gas Solutions - 24/7 Sustainable Production with Industrial Ethernet

**Downstream Oil and Gas Solutions - 24/7 Sustainable Production with Industrial Ethernet**

Oil refineries are large-scale plants that process large quantities of crude oil and feature a complicated production process with a great number of intelligent equipment devices. Because of the high capacity, many of the units operate continuously for long periods of time. The distributed control system (DCS) is the main control system, and is connected to the controller elements by Ethernet networks to manage and monitor the plant?s output and performance. Since non-stop 24/7 operation is crucial to the entire process, the Ethernet network system must have reliable redundancy to achieve high data availability and optimal productivity. In addition, a reliable and secure auxiliary system is used to detect and track unsafe events such as leaks to maintain safe operations.




## Network Requirements

- A highly reliable and flexible industrial Ethernet communication network for the entire DCS.
- Dual redundant network for SCADA system, controllers and field devices to provide maximum uptime.
- IP video surveillance and remote automation solution integration are required to enable remote monitoring.
- Cellular solutions to easily connect field devices at remote sites for mobile management.
- Enable secure network access and critical device protection.

## Moxa Downstream Oil and Gas Solutions

- Full Gigabit Layer 3/Layer 2 rackmount switches supporting up to 4 10GbE ports and Turbo Ring/Turbo Chain redundant technology.
- Comprehensive device networking solutions, such as cellular IP gateways, fieldbus-to-Ethernet gateways, and media converters.
- A vast range of industrial Ethernet switches, including high-port-density rackmount switches for control centers, Gigabit Ethernet switches for video surveillance, and PoE+ solutions for high power PoE sensors.
- Industrial IP cameras, event-based RTU controllers, and remote I/Os provide

integrated service for real-time data acquisition and monitoring.
- Gigabit performance secure routers to protect critical devices and remote access from broadcast packets and unauthorized access.