

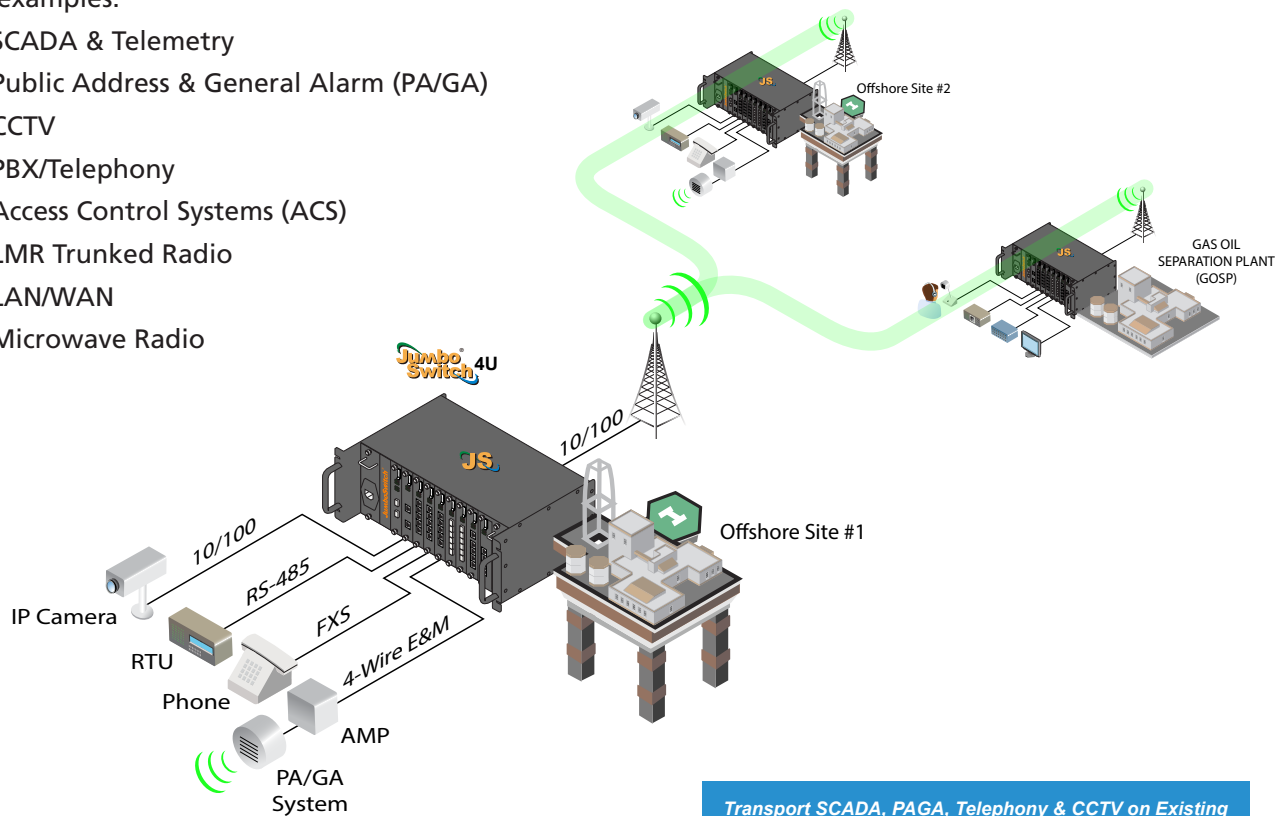
# Oil & Gas Application Overview

Maintain critical communications and connectivity to common Oil & Gas industry applications such as SCADA, telemetry, access control, radio & PBX/telephony. Utilizing multi-service Ethernet capability, the JumboSwitch® guarantees that legacy applications can be preserved or expanded in the future.

## JumboSwitch and SCADA Systems

The JumboSwitch provides the security, redundancy and industrial hardened capability that is so often critical to oil and gas applications. Here are some examples:

- SCADA & Telemetry
- Public Address & General Alarm (PA/GA)
- CCTV
- PBX/Telephony
- Access Control Systems (ACS)
- LMR Trunked Radio
- LAN/WAN
- Microwave Radio



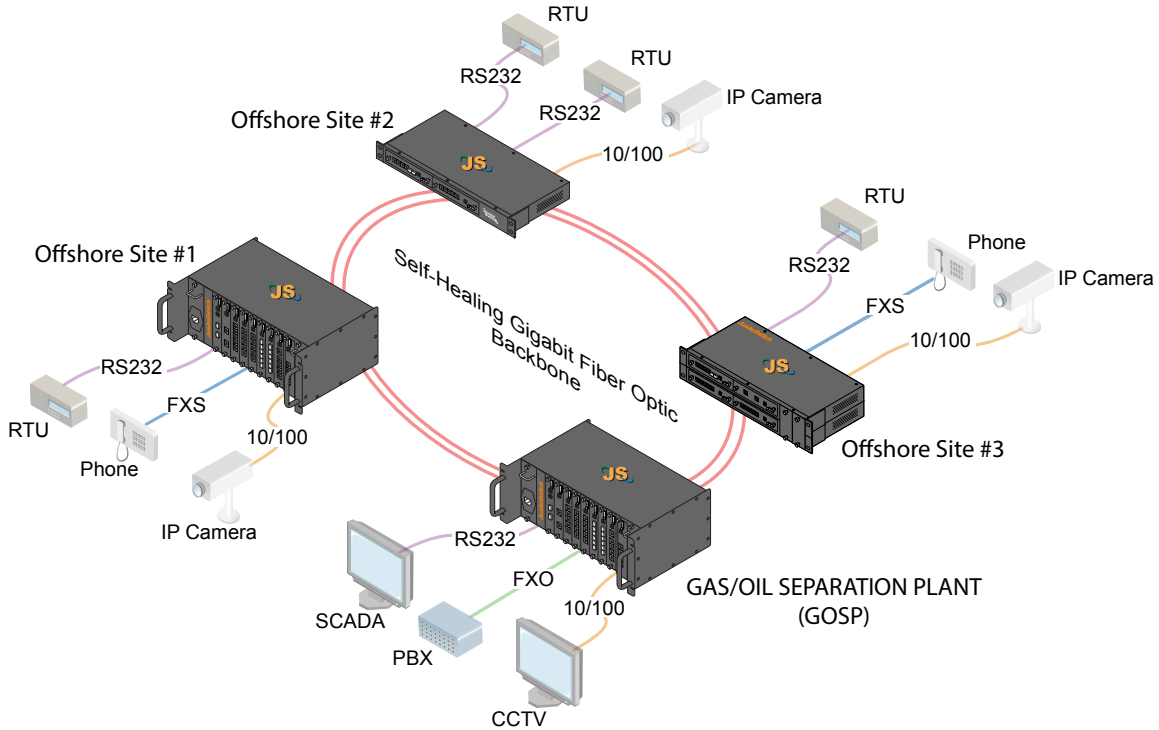
*Transport SCADA, PAGA, Telephony & CCTV on Existing Microwave Network using JumboSwitch®*

Moreover, the JumboSwitch's modular design offers users the flexibility to pay as they grow; its VoIP and TDM-over-IP capability (10/100/1000 Ethernet, Fiber, T1/E1, 2/4-Wire E&M, RS-232, RS-485, etc.) gives users the ability to expand their communications networks as needed in the future.

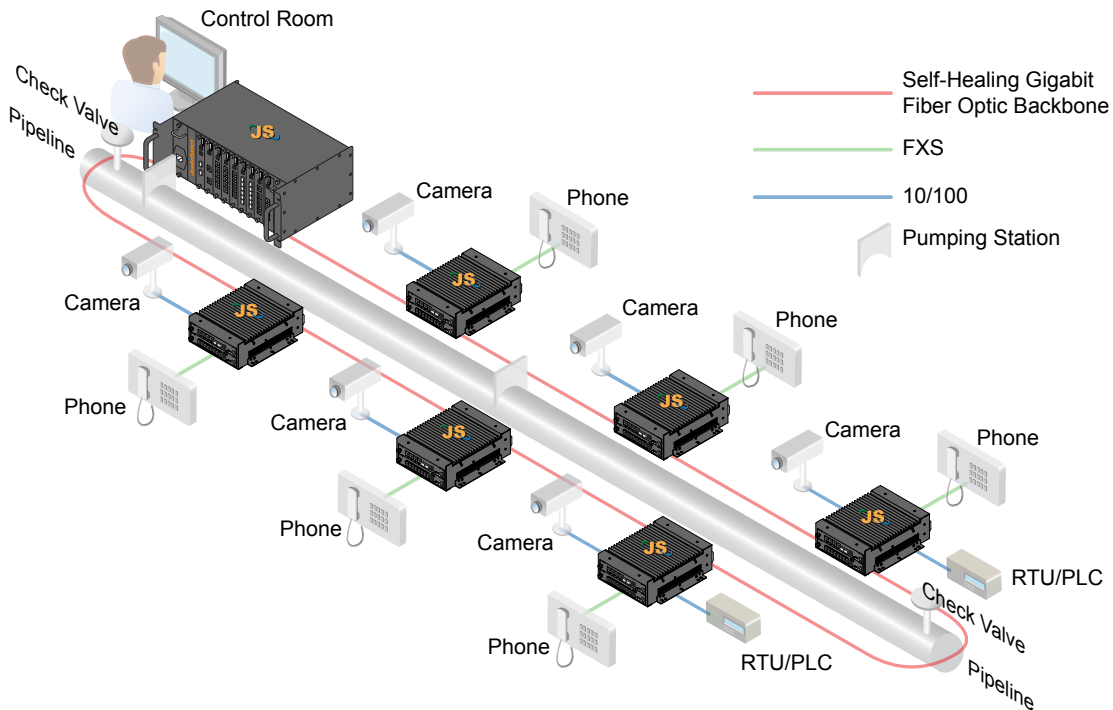
## Multi-Service Ethernet

As a Multi-Service Ethernet Platform (MSEP), the JumboSwitch provides unequalled IP-Based Ethernet, Voice and Data integration. It is a highly efficient networking solution for the oil, gas and petrochemical industries.

# Transport SCADA, Telephony & CCTV on Redundant Fiber Network Using JumboSwitch



# Pipeline Monitoring & Control Application Using JumboSwitch



The JumboSwitch is available in a full Industrial hardened version that ensures reliable operation in the event of wide temperature swings, electromagnetic interference (EMI), radio interference, vibrations, or moisture and humidity fluctuations. Conformal coating is optional. TC's Engineering Department features a variety of sophisticated testing equipment to verify that its Industrial Grade products meet the most demanding environmental and EMI requirements.

Information Contained is Subject to Change Without Prior Notice LT141021 - Rev 102114