



Introduction

With the advent of the digital oil & gas concept there is now an increased requirement for secure communications. A reliable and stable automation network is important for efficient production, limited downtime and effective remote management. All structures and offices throughout the oil & gas complex must have access to real time production data, field device status and other real time communications through a hardwired or wireless network. Traditional SCADA networks monitor and control the production process while a real time Ethernet backbone manages and transports larger data streams like video and data collection while providing a layer of redundancy and security.

System Requirements

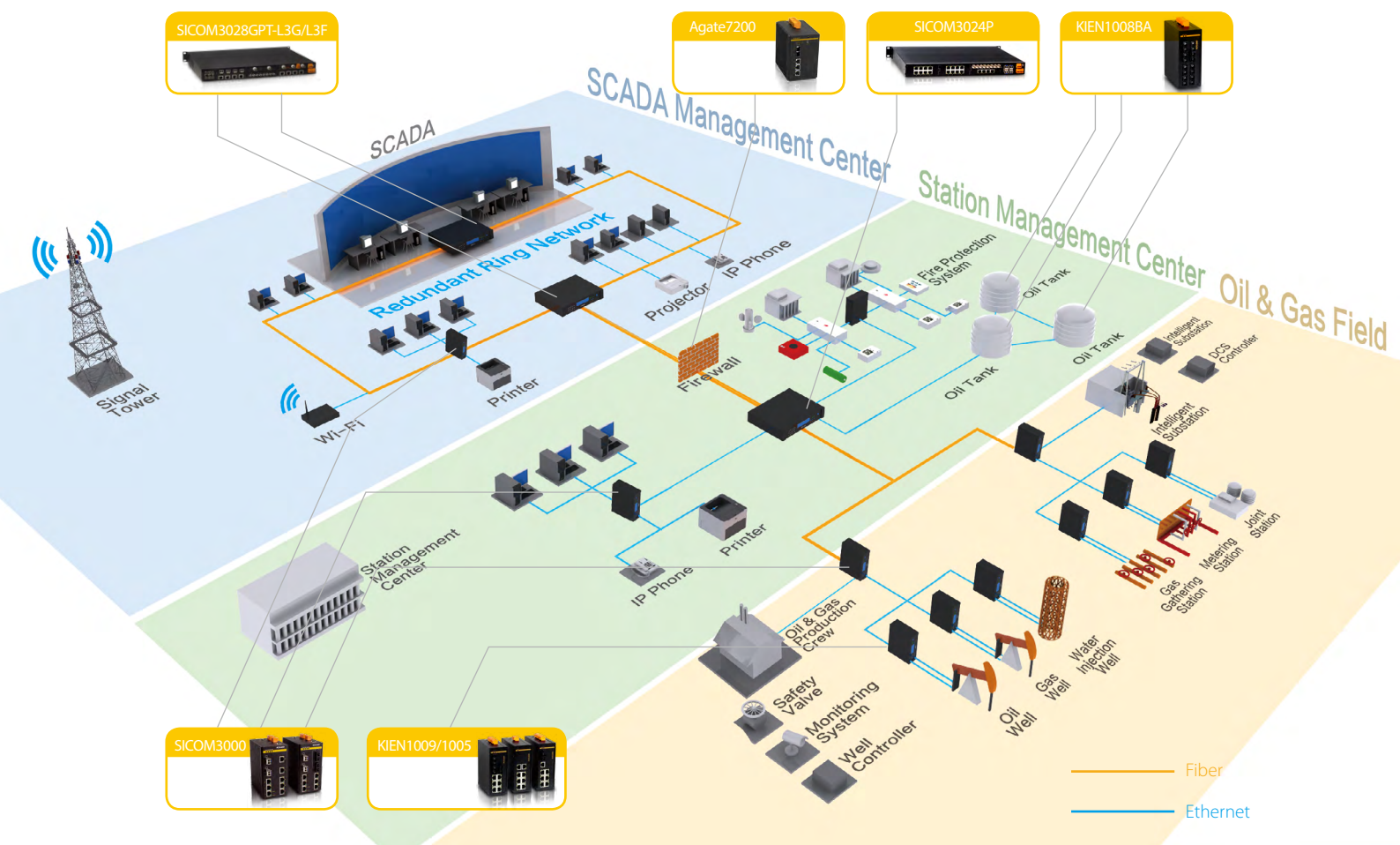
- Industrial level design offering security, reliability and stability for harsh environments
- Ethernet backbone network capable of transmitting large IP data such as video, voice and service data
- Self-healing network, quick recovery after network failure
- Secure network, protects system monitoring from deliberate attack
- Powerful network management for detection of network failures

Why Kyland

- Industrial level design, wide operating temperature -40~85°C
- Low power consumption, ATEX/IECEx certified
- Auto-negotiable gigabit network, supports Jumbo frame, real-time data collection, video and voice transmission
- Supports IEC62439-3(HSR/PRP), IEC62439-6(DRP), network recovery time < 20 ms
- Supports network security protocols, encrypted data transmission and access control, IEEE802.1X, Radius, TACACS+, etc
- Supports link detection, VCT(virtual cable test), remote maintenance and monitoring for network devices

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Digital Oil & Gas Field Communication Network Solutions



Solution Characteristics

- Reliability: EMC level 4, -40~85 °C wide operating temperature with zero package loss, independent redundant power supply, ring network recovery time < 20ms
- Real-time: switching delay < 5us, delay jitter < 1us
- Security: C/S mode authentication, different user access levels, encryption mechanisms