

antaira[®]
making connectivity simple...



Industrial Networking Guide for Oil & Gas



Antaira Worldwide



About Antaira

Antaira Technologies is a leading global developer and manufacturer of high-quality industrial networking and communication product solutions. Since 2005, Antaira has offered a full spectrum of product lines that feature reliable Ethernet infrastructures, extended temperature tolerance, and rugged enclosure designs. Our product lines range from industrial Ethernet switches, industrial wireless devices, Ethernet media converters, and industrial serial communications. Our vast professional experience has allowed us to deploy a wide array of products worldwide in mission-critical applications across various markets, such as, automation, transportation, security, oil and gas, power/utility and medical.

Mission Statement

As a leader and trusted partner in the industrial device networking field, Antaira is committed to providing quality products and value-added service to its customers and channel partners to create solutions that deliver a worldwide advancement for a wide array of applications.

Our Commitment

- Customer Service & Technical Support**

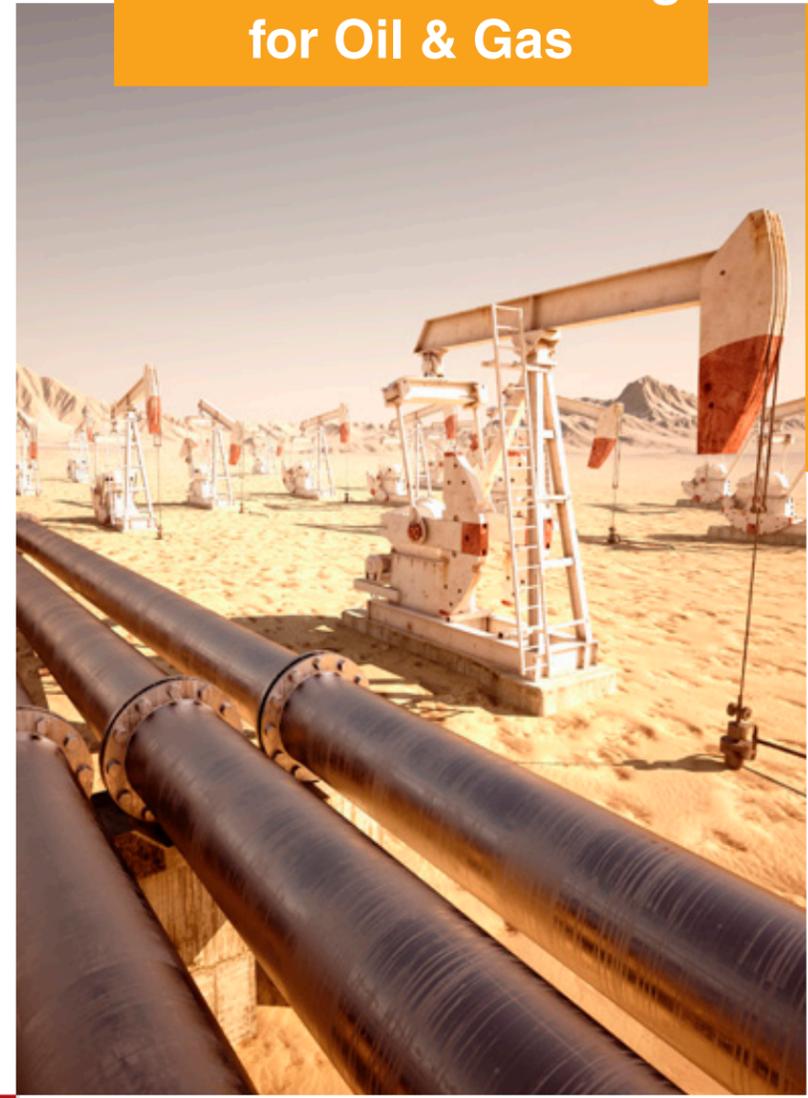
Antaira's dedicated and competent team takes pride in delivering high-quality and prompt service to our customers. We go one step further when it comes to service. All incoming calls are routed to a live representative who can answer all inquiries quickly, whether it be pre-sales, post-sales or technical services. Antaira's technical support and RMA team have elite industry knowledge to ensure all issues are professionally and thoroughly resolved.
- Satisfaction Guarantee**

At Antaira, we strive to meet our customers' needs by going above and beyond industry standards. Every sale is backed by our 45-day satisfaction guarantee. If for any reason our customers are unsatisfied with their experience or their expectations were not met, Antaira will provide a full refund within 45 days of the purchase date. Our friendly customer service representatives are available to help clarify any questions, comments or concerns regarding all transactions.
- 5-Year Warranty**

All Antaira products are backed with a warranty of up to five years. We warrant products against defects in material and workmanship for up to five years from the date of purchase. This means that Antaira will happily repair or replace the defective products within warranty, provided the products were installed and used within proper specifications. Antaira is committed and will stand behind all of its products assuring customers will receive the highest quality and most reliable products possible.
- RoHS Directive**

Antaira recognizes its environmental responsibility as a manufacturer and is dedicated to preserving the environment for future generations. We make it a priority to ensure that all our products are environmentally friendly. At Antaira, we not only make sure that our products are RoHS 2.0 compliant, but also all of our packing materials used to ship our products are compliant as well.

Industrial Networking for Oil & Gas



The oil and gas industry makes up the world's largest energy supply. It is considered to be the biggest sector in the world in terms of dollar value, as oil and gas are utilized in everyone's daily lifestyle from operating a vehicle, to heating up a home, and even cooking food. Together, they supply more than 60 percent of the nation's energy.

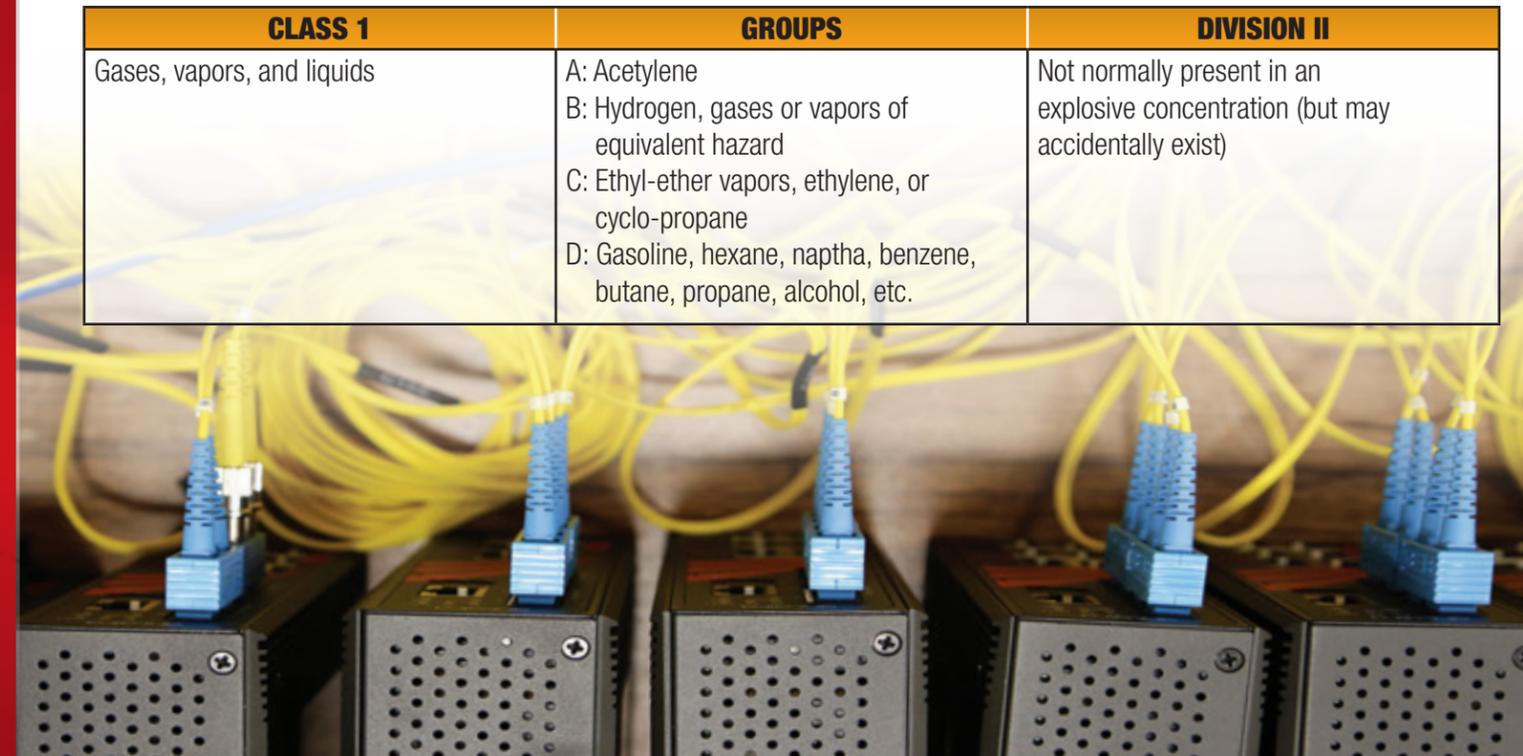
From market research to advancement in drilling, the process for constructing a reliable and efficient way to accurately monitor control systems is critical in the oil and gas industry. Applications that monitor systems for offshore platforms, oil refineries, pipelines, pump jacks, and tank storages undergo demanding environmental conditions and challenges, such as, high vibration and shock, electromagnetic interference, ambient weather conditions, explosive atmospheres, and extreme operating temperatures. Antaira Technologies can provide rugged and reliable products to ensure dangerous applications have a safe and efficient networking system.

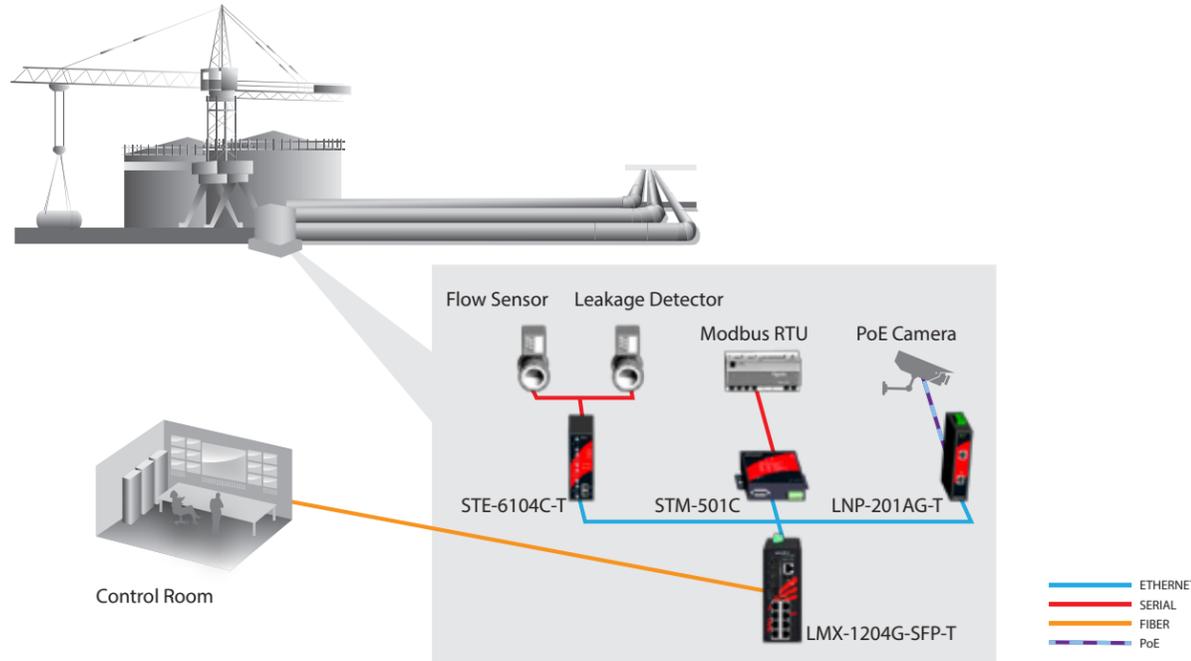
Certification Definition Class I, Division 2

The National Electric Code (NEC) defines hazardous locations as areas where flammable liquids, gases, vapors, combustible dusts, or ignitable fibers/flyings are present in the air in quantities sufficient to produce an explosion or fire. There are three "types" of hazardous locations – Class I (gases, vapors, and liquids), Class II (dusts), and Class III (fibers/flyings). Division II specifies flammable materials are handled, processed, or used in the defined hazardous location, but are not normally present in concentrations high enough to be ignitable but may accidentally exist.

Class I application locations within the oil and gas industry include petroleum refineries, gasoline storages, dispensing areas and utility gas plants. Division II has four groups (A, B, C, D) within it containing different levels of flammability and combustibility of the gases, liquids, or vapors. It is vital that Class I Division II industrial networking devices are used within rugged temperature extreme environments in the oil and gas industry to maintain a high level of safety.

CLASS 1	GROUPS	DIVISION II
Gases, vapors, and liquids	A: Acetylene B: Hydrogen, gases or vapors of equivalent hazard C: Ethyl-ether vapors, ethylene, or cyclo-propane D: Gasoline, hexane, naptha, benzene, butane, propane, alcohol, etc.	Not normally present in an explosive concentration (but may accidentally exist)





Application

Build a reliable and secure oil pipeline network capable of remote monitoring.

Application Requirements

- Provides the capability to remotely monitor, access and control field site equipment, and surveillance systems of an oil pipeline network from a control center
- Network equipment that is suitable for wide temperature ranges, high humidity, dust and even explosive environments
- Fiber optics for long distance transmission of data across miles

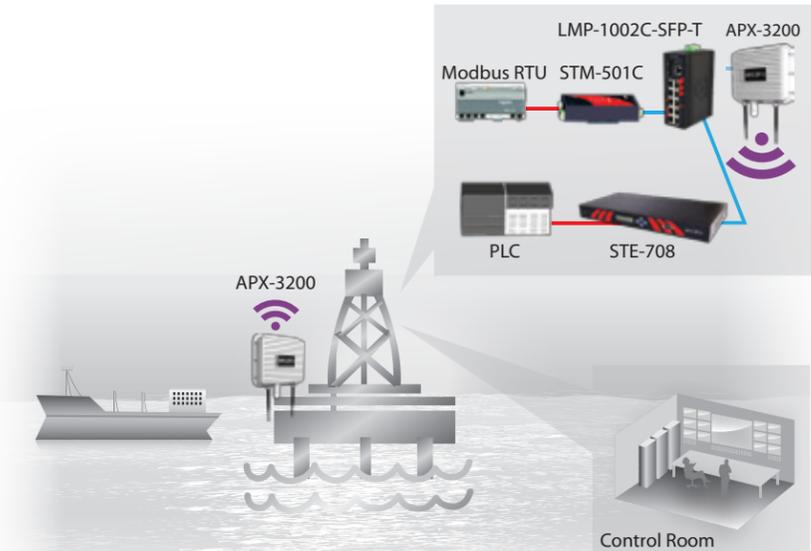
Solution

STE-6104C-T: Provides serial connectivity to the network for multiple serial devices, such as serial sensors/detectors.

STM-501C: Provides a Modbus gateway solution for Modbus RTU/ASCII/485 devices to a Modbus TCP network.

LNP-201AG-T: Provides remote PoE power injection to power IP surveillance cameras and transmit data.

LMX-1204G-SFP-T: Provides a redundant network infrastructure solution for all edge networking devices, high-density port counts and wide Gigabit bandwidths.



Application

Safely monitor and control devices on an offshore platform via a control room.

Application Requirements

- Continuous monitoring of devices and the ability to support high bandwidths
- Wide operating temperature for reliability in harsh environments
- Wireless link across the oil platform

Solution

APX-3200: Eliminate hazardous cables by wirelessly linking a central control room and on-rig devices for data monitoring and transfer with a pair of bridge/router/access point units.

STM-501C: Modbus gateway solution to connect Modbus RTU/ASCII/485 devices to a Modbus TCP network.

STE-708: Provides multiple ports of serial connectivity to bring the PLC and other serial data back to an Ethernet network.

LMP-1002C-SFP-T: Provides a redundant network infrastructure solution for all edge networking devices with a PoE/PoE+ power source to power the APX-3200.

Key Products

STE-6104C-T Industrial Serial to Ethernet Device Server



- 4-port RS232/RS422/RS485, baud rate up to 921 Kbps

LMX-1204G-SFP-T Industrial Gigabit Managed Ethernet Switch



- 8*10/100/1000TX + 4*100/1000 gigabit fiber SFP slots

LNP-201AG-T Industrial Gigabit PoE+ Injector



- 10/100/1000 PoE injector
- Power input 24/48 VDC

Key Products

STM-501C Modbus TCP to Serial RTU/ASCII Gateway



- Supports up to 8 Modbus TCP master to modbus ASCII/RTU/485

LMP-1002C-SFP-T Industrial PoE/PoE+ Gigabit Managed Ethernet Switch



- 10-port full management Ethernet switch w/ 8*10/100Tx + 2*100/1000Fx dual rate SFP slots

STE-708A Industrial Serial to Ethernet Device Server



- 8-port RS232/RS422/RS485, baud rate up to 921 Kbp

Industrial Unmanaged Ethernet Switches



Industrial Wireless



IMC-100A Series
Industrial Ethernet-Fiber Media Converter with 1-Port 10/100TX to 100FX Fiber



LNX-500A Series
5-Port 10/100TX Unmanaged Ethernet Switches



LNX-0602 Series
4-Port 10/100TX & 2-Port 100FX Fiber Unmanaged Ethernet Switches



LNX-0702G-SFP Series
5-Port 10/100/1000TX & 2-Port 100/1000 Fiber SFP Unmanaged Ethernet Switches



LNX-0802C-SFP Series
6-Port 10/100TX + 2-Gigabit Combo Port (RJ45/SFP) Unmanaged Ethernet Switches



APN-210N Series
Industrial 802.11b/g/n Wireless AP/Client/Bridge



APN-310N Series
Industrial 802.11a/b/g/n Wireless AP/Client/Bridge w/MIMO



APN-320N Series
Industrial Dual Radio 802.11a/b/g/n Wireless AP/Client/Bridge w/MIMO



APR-3100N Series
Industrial 802.11a/b/g/n Wireless AP/VPN/Router



APX-110N5
Outdoor IP67 802.11a/n 5GHz Wireless AP/Client/Bridge w/Built-in 19dBi Antenna



LNX-1002G-SFP Series
8-Port 10/100/1000TX & 2-Port 100/1000 SFP Unmanaged Ethernet Switches



LNX-1202G-SFP Series
10-Port 10/100/1000TX & 2-Port 100/1000 SFP Unmanaged Ethernet Switches



LNX-1204G-SFP Series
8-Port 10/100/1000TX & 4-Port 100/1000 Fiber SFP Unmanaged Ethernet Switches



LNX-1604G-SFP Series
12-Port 10/100/1000TX & 4-Port 100/1000 Fiber SFP Unmanaged Ethernet Switches



LNX-2602G-SFP Series
24-Port 10/100/1000TX + 2-Gigabit Combo Port (RJ45/SFP) Unmanaged Ethernet Switches



APX-120N5
Outdoor IP67 802.11a/n 5GHz Pre-Configured (a Pair) Wireless AP/Client/Bridge w/Built-in 19dBi Antenna



APX-3200
Outdoor IP67 802.11b/g/n Wireless AP/Client/Bridge



APX-5200
Outdoor IP67 802.11b/g/n 2.4GHz Wireless AP/Client/Bridge with Dual Gigabit Ethernet Ports



APX-5500
Outdoor IP67 802.11a/n 5GHz Wireless AP/Client/Bridge with Dual Gigabit Ethernet Ports



APX-5700
Outdoor IP67 802.11b/g/n 2.4GHz Wireless AP/Client/Bridge with Dual Gigabit Ethernet Ports

Industrial Managed Ethernet Switches



Industrial Serial Connectivity



LMX-0500 Series
5-Port 10/100TX Managed Ethernet Switches



LMX-0501G-SFP Series
4-Port 10/100/1000TX & 1-Port 100/1000 Fiber SFP Managed Ethernet Switches



LMX-0602 Series
4-Port 10/100TX & 2-Port 100FX Fiber Managed Ethernet Switches



LMX-0800 Series
8-Port 10/100TX Managed Ethernet Switches



LMX-0802 Series
6-Port 10/100TX + 2-Port 100FX Fiber Managed Ethernet Switches



UTS-1110A
1-Port RS232 USB to Serial Cable



STF-401C Series
1-Port RS232/422/485 to 100FX Fiber Serial Media Converters



STF-501C/502C Series
1-Port RS232/422/485 to 1 or 2-Port 100FX Fiber Serial Media Converters



STE-501C
1-Port RS232/422/485 to Ethernet Device Server



STE-502C
2-Port RS232/422/485 to Ethernet Device Server



LMX-1002G-SFP Series
8-Port 10/100/1000TX & 2-Port 100/1000 SFP Managed Ethernet Switches



LMX-1202G-SFP Series
10-Port 10/100/1000TX & 2-Port 100/1000 SFP Managed Ethernet Switches



LMX-1204G-SFP Series
8-Port 10/100/1000TX & 4-Port 100/1000 Fiber SFP Managed Ethernet Switches



LNX-1604G-SFP Series
12-Port 10/100/1000TX & 4-Port 100/1000 Fiber SFP Managed Ethernet Switches



LNX-1802GN Series
16-Port 10/100TX + 2-Gigabit Combo Port (RJ45/SFP) Managed Ethernet Switches



STE-6104C-T
4-Port RS232/422/485 to Ethernet Device Server, with Dual 10/100TX LAN



STE-708 Series
8-Port RS232/422/485 to Ethernet Device Server, with Dual 10/100TX LAN



STE-716 Series
16-Port RS232/422/485 to Ethernet Device Server, with Dual 10/100TX LAN



STW-611C/612C
1 or 2-Port RS232/422/485 to 802.11b/g/n Wireless Device Server, with 3-Way Communication



STM-501C
1-Port RS232/422/485 Modbus Serial/ASCII/RTU to Modbus TCP Gateway



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