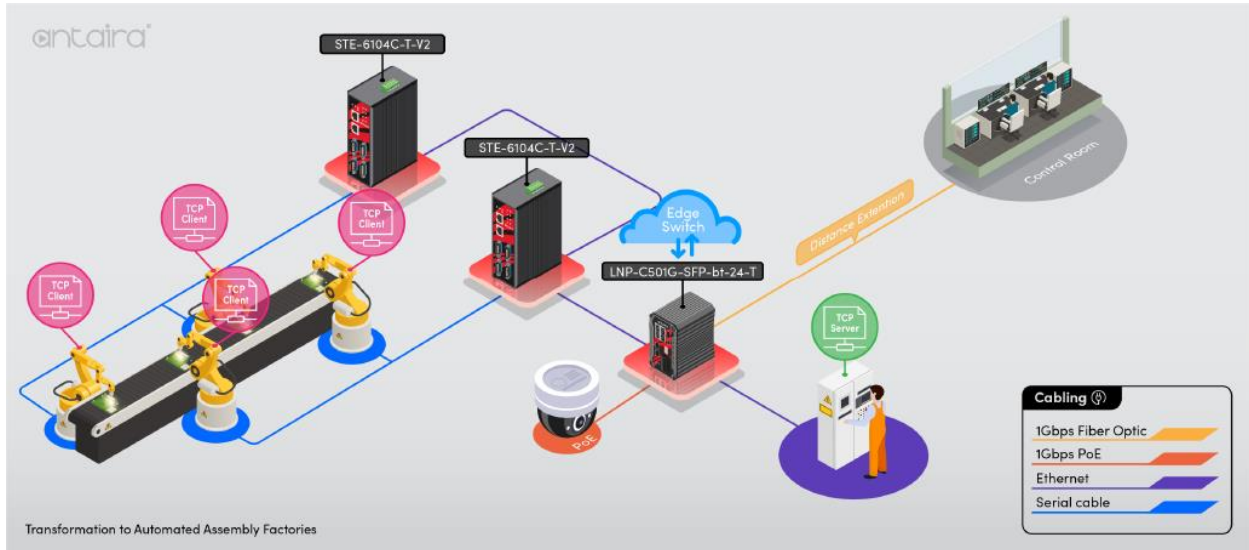




TRANSFORMATION TO AUTOMATED ASSEMBLY FACTORIES



INDUSTRY: AUTOMATION
LOCATION: SOUTH KOREA

BACKGROUND

Industry 4.0 is currently at the forefront of industrial transformation, seamlessly integrating networking, IIoT and automated production. McKinsey's recent experiences with major IDMs and OSATs demonstrate that a comprehensive back-end manufacturing transformation, encompassing aspects such as overall equipment effectiveness (OEE), digital implementation, automation, in-plant planning, supply chain coordination, total cost of performance, and output quality, can yield significant performance benefits within a 12- to 18-month timeframe. Successfully implemented measures in these areas can result in a 20 to 30 percent increase in shop floor throughput, a 20 percent reduction in unit production costs, and a 30 percent decrease in customer complaints, all achieved with minimal capital expenditure. In this context, industrial network equipment plays an important role in helping traditional manufacturing factories in achieving intelligent transformation, from quality management, equipment operation, to manufacturing-related real-time information. By converting the traditional Serial interface to IP transmission over the network, administrators can rapidly access the information related to the entire process.

THE CHALLENGE

1. Industrial reliability to withstand harsh conditions, such as extreme temperatures
2. Capability to connect legacy serial devices to TCP/IP network
3. High bandwidth for high-level image data processing for applications
4. 12-24VDC Low power voltage input support
5. Effortless network deployment for power and data communications
6. Product stability, longer MTBF and five-year warranty

THE SOLUTION

Antaira offers its customers a wide range of Industrial Ethernet products that can be easily adapted to each application. In this case, most of the industrial equipment, such as robotic arms, has RS-422/485 Serial interfaces. It can be managed and operated by PLC or IPC. Therefore, Antaira's STE-6104C-T-V2 Serial Device Servers in this application connect to the robotic arm or scanner via the DB9 interface, acting as gateways by converting serial data into network data, allowing users to remotely access and manage serial devices via the network. Integrating serial devices into network infrastructure ensures the interoperability among these networked devices. This facilitates higher levels of integration and automation.

In addition, Antaira's LNP-C501G-SFP-bt-24-T Compact PoE Switches, supporting from 9 to 55VDC low-voltage input, can meet the voltage requirements of most industrial environments. Utilizing boost technology, these switches can provide high power to power-demanding cameras, enabling effective security surveillance and the deployment of the entire factory network in a stable manner.

ANTAIRA'S PRODUCT SOLUTIONS

STE-6104C-T-V2

4-Port Industrial Serial RS232/422/485 to Ethernet Device Server

- Dual 10/100Mbps Fast Ethernet for Redundancy
- 4-Port RS232/422/485, Baud Rate up to 921 Kbps
- 15KV ESD Protection for Serial Signals
- Rigid IP30 Metal Housing

