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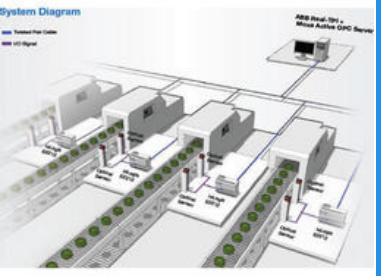
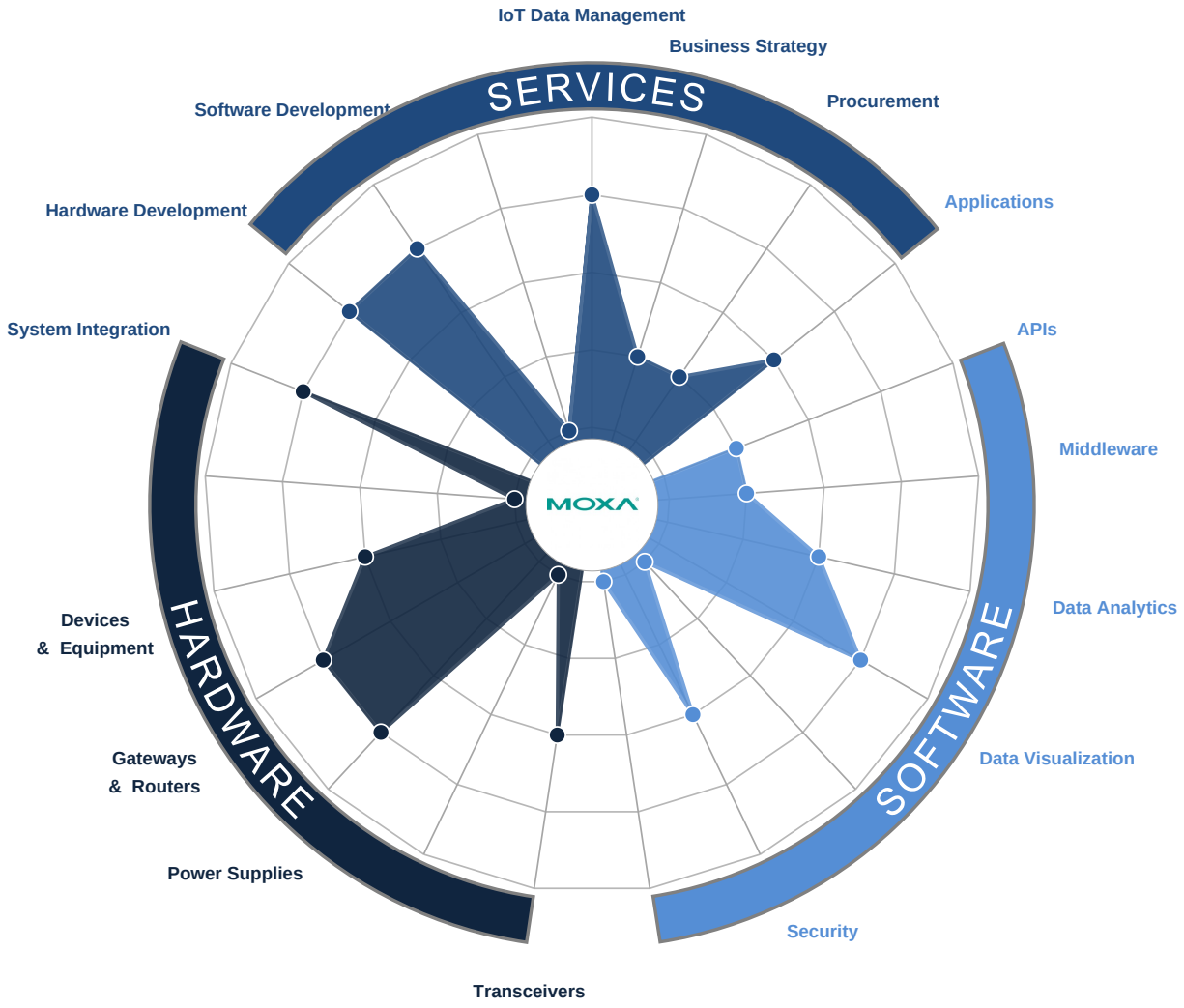


Improving Production Line Efficiency with Ethernet Micro RTU Controller



Overview

Applicable Industries

Consumer Goods

Applicable Functions

Information Technology

Maintenance

Production - Manufacturing

Connectivity Protocols

Ethernet

Modbus

Other frequency

Other Frequency

OPC UA, EtherCat

Challenge

Moxa was asked to provide a connectivity solution for one of the world's leading cosmetics companies. This multinational corporation, with retail presence in 130 countries, 23 global braches, and over 66,000 employees, sought to improve the efficiency of their production process by migrating from manual monitoring to an automatic productivity monitoring system. The production line was being monitored by ABB Real-TPI, a factory information system that offers data collection and analysis to improve plant efficiency. Due to software limitations, the customer needed an OPC server and a corresponding I/O solution to collect data from additional sensor devices for the Real-TPI system. The goal is to enable the factory information system to more thoroughly collect data from every corner of the production line. This will improve its ability to measure Overall Equipment Effectiveness (OEE) and translate into increased production efficiencies.

System Requirements

• Instant status updates while still consuming minimal bandwidth to relieve strain on limited factory networks

• Interoperable with ABB Real-TPI
• Small form factor appropriate for deployment where space is scarce
• Remote software management and configuration to simplify operations

Customer

A France-based multinational corporation, with retail presence in 130 countries, 23 global braches, and over 66,000 employees.

Solution

Moxa's ioLogik E2212 with included Active OPC Server software perfectly met the customer’s requirements. Part of Moxa's Ethernet Micro RTU Controller family, the ioLogik E2122 continues of Moxa's tradition of offering intelligent I/O solutions with active communications architecture. With active "push" architecture, the ioLogik will proactively communicate with the central Real-TPI system instead of waiting for slower and bandwidth-consuming poll-and-response messaging. Moxa's support for active "push" communications helps the customer conserve the limited available bandwidth in factory networks and maintain a constant up-to-date stream of data from connected devices.

The other unique component of Moxa's solution is Active OPC Server, which is included with Moxa's I/O products. Moxa's Active OPC Server supports push architecture and allows seamless connections with most SCADA software, including ABB Real-TPI. Compared to third-party OPC servers, the Active OPC Server is a convenient solution designed to work with Moxa's I/O devices that can be freely downloaded from the Moxa website.

After evaluating these features, the customer installed ioLogik E2212 units on their production line to interface with optical sensors that maintain a count of how many units are produced. The ioLogik is configured to proactively transmit the counter value to the Active OPC Server every time the value hits a certain threshold, which ensures that an up-to-date count is available to the ABB Real-TPI system.

Product Solutions:
1. Active OPC Server
Seamlessly connect ioLogik/ioPAC to your SCADA system

2. ioLogik E2212
Smart Ethernet Remote I/O with 8 DIs, 8 DOs, 4 DIOs

Data Collected

CNC machine data (positioning, production rate, temperature, vibration).

Solution Type	IOT
Solution Maturity	Mature (technology has been on the market for > 5 years)

Operational Impact

Impact #1	Seamless integration between the ioLogik I/O device and ABB Real-TPI with Moxa's Active OPC server. Effortless, One-Click method to generate I/O tags on the Active OPC Server simplifies initial system setup.
Impact #2	Reduce network traffic with Active communications architecture
Impact #3	Active OPC Server included free, to save deployment costs

Quantitative Benefit

Benefit #1	Labor costs reduced by 13% due to remote access.
Benefit #2	Capital equipment lifeline increased by 8%.

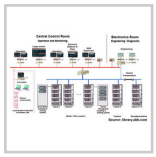
Technology

Software

MX-AOPC UA Suite

MOXA

The MX-AOPC UA Suite includes the MX-AOPC UA Server, Viewer*, and Logger*, which are all based on the OPC UA (Unified Architecture) standard. OPC UA is the next generation OPC standard (IEC 62541), wh ...



System 800xA

ABB

System 800xA is not only a DCS (Distributed Control System) it's also an Electrical Control System, a Safety system and a collaboration enabler with the capacity to improve engineering efficiency, o ...

Hardware

MOXA - ioLogik E2212

MOXA

Moxa's ioLogik E2200 is a new type of Ethernet micro RTU controller, which is a PC-based data acquisition and control device that uses proactive, event-based reporting to control I/O devices. Unlike ...

Partner

ABB

ABB is a global leader in power and automation technologies. Their solutions improve the efficiency, productivity and quality of their customers’ operations while minimizing environmental impact ...

Improving Production Line Efficiency with Ethernet Micro RTU Controller

2010-09-30

Location / Country : France

Product Solutions :
Active OPC Server
Seamlessly connect ioLogik/ioPAC to your SCADA system

ioLogik E2212
Smart Ethernet Remote I/O with 8 DIs, 8 DOs, 4 DIOs

Applications
- Railway
- Intelligent Transportation System
- Smart Grid
- Oil & Gas
- Maritime
- Utilities
- Factory Automation
- Building Automation and Security
- ATM, POS, Kiosk
- Telecom and IT
- Medical and Healthcare
- Process Automation
- Monitoring and Control Systems
- Others

Introduction

Project Introduction

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Moxa Solution

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Feedback

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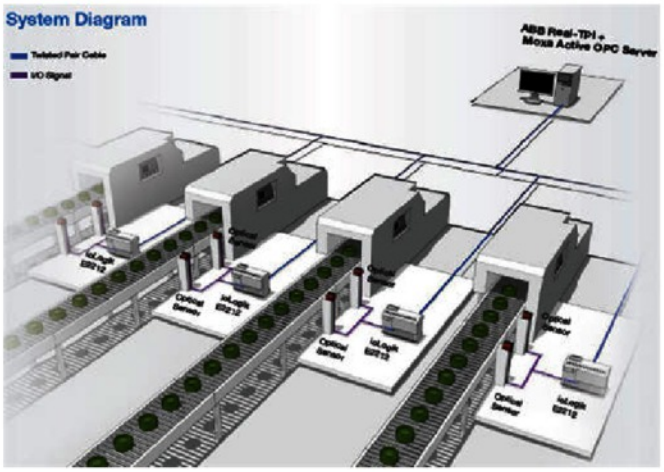

Why Moxa

• Seamless integration between the ioLogik I/O device and ABB Real-TPI with Moxa's Active OPC server
• Effortless, One-Click method to generate I/O tags on the Active OPC Server simplifies initial system setup
• Reduce network traffic with Active communications architecture
• Active OPC Server included free, to save deployment costs

Product

ioLogik E2212
• Intelligent Click&Go logic for local control
• Active tag function to reduce network bandwidth
• Flexible I/O combination with 8DIs/8DOs and 4 configurable DIOs

Active OPC Server
• Active tag function to reduce network bandwidth
• Available free of charge
• Standardized OPC Server API, broadly compatible with existing software

IoT ONE Featured Case Study

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