

EcoStruxure Power and Process Control System

Help reduce capital cost and minimize risk with an integrated and robust architecture for process industries

Processing plants are more complex and more integrated than ever. Whether in the field of oil and gas, mining, energy generation, or water treatment, **securely unifying the Distributed Control System (DCS) and the Electrical Management Control System (EMCS) into one simplified architecture is key in reducing project capital expenditure, minimizing project risks, and consequently improving plant performance for end users.**

EcoStruxure™ Power and Process Control System connects the process control network and the electrical network without the need for hardwired motor controls or additional gateways.

Bridging the gap between the process and electrical worlds can reduce design complexity and engineering hours, helping you commission plants faster while reducing total costs and risks.

For end users, this architecture is an opportunity to reduce unplanned downtime by improving situational awareness.

Reduce project capital expenditure by up to 20%

The EcoStruxure Electrodynamical Controller is at the center of this system, facilitating the integration of power systems and Intelligent Electronic Devices (IEDs). The controller significantly reduces the number of interface components, cabinets, and gateways required in the architecture, allowing for a transition from a hardwired system to a softwired system.

Implementing this architecture can significantly reduce engineering time and costs for your team, resulting in improved project performance and delivery.

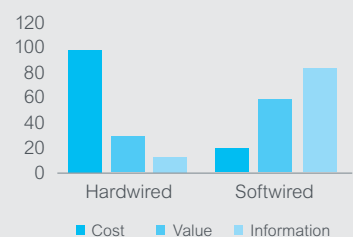
A unified, single end-to-end cybersecurity solution

We are providing one cybersecurity experience for power and process systems, complying with IEC 62443 **ISASecure SSA-L1**. This reduces the number of security assets, and therefore the project costs, while helping to ensure strong network security with a zone-driven approach.

More efficiency with less complexity

Unifying power and process systems with a simplified architecture offers these benefits:

- Reduce project capital expenditure by up to 20%
- Reduce unplanned downtime by as much as 15%
- Incorporate unified end-to-end cybersecurity, IEC 62443 compliant



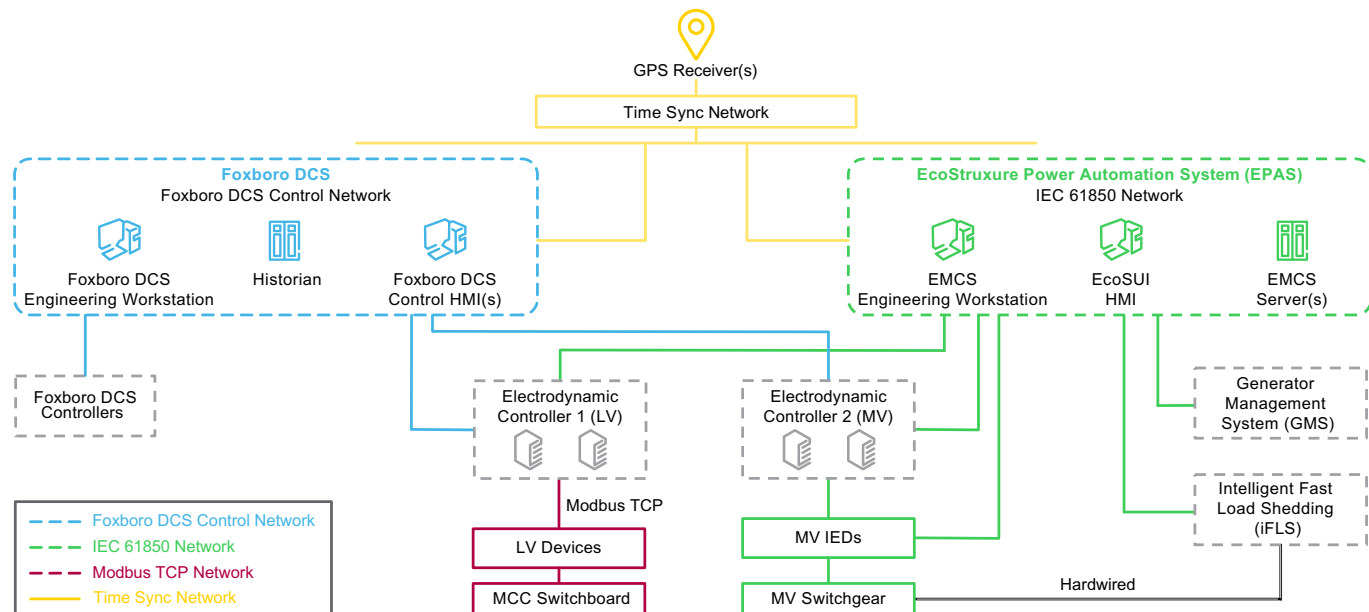
From hardwired to softwired



A smart and simplified architecture

EcoStruxure Power and Process Control System offers these benefits to your project:

- Simplified system checkout and modifications through highly developed engineering workflows
- Consistent change management in the final stages of project implementation
- Streamlined FAT, iFAT, SAT and simplified plant startup



The EcoStruxure Electrodynamic Controller is the first controller providing direct integration of electrical substations to the Foxboro DCS for improved operational efficiency and uptime.

Efficient engineering

First Foxboro DCS Control Network controller with advanced data integration, time synchronization, and programming capabilities that can control and monitor the electrical distribution system from the DCS.

Foxboro DCS Control Network connectivity

DCS function block execution, DCS alarms and event generation, peer-to-peer communication.

Cybersecurity and environment

Common cybersecurity approach, services, and certification level IEC 62443 3-3 SSA-L1, designed for direct integration within electrical substations.

Dual citizenship

Can be citizen of the Foxboro DCS and citizen of the EcoStruxure Power Automation System (EPAS) at the same time.

High availability

Effectively matches DCS fault tolerance with EMCS parallel redundancy.

IEC 61850 connectivity

Provides vertical and horizontal IEC 61850 hierarchical integration for both DCS and EMCS domain. IEC 61850 server support for LV and DCS republication.

Hardwired IO

Auxiliary local electrical input/output with 1 ms Sequence of Events (SOE) recording.

Key benefits of EcoStruxure Power and Process Control System

CAPEX – Up to 20% cost reduction	OPEX – Up to 15% reduction unplanned downtime	
Simplified architecture From hardwired to software • Reduction of interface components and cabinets Unified end-to-end cybersecurity • Fewer network security assets	Faster diagnostic • SOE • Electrical group alarms • Derived power information • Improved decision making through Control HMI enhanced state view	Improved control • Direct motor control • Circuit breaker open/close/trip • Automatic transfer switch control • Custom function block automation

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