IIOT CONTROL — LAYER 1

Adaptive Real-Time Control

Overview

IIoT Control brings resilient, edge-resident automation to the MIP Stack, enabling adaptive control logic, setpoint management, and state-based sequencing. Integrating live process signals with operator input via the Visionary™ user interface (UI), it applies machine learning (ML) enhanced logic to augment traditional control, delivering fast, modular execution that remains cloud-independent and production-ready.

Key Features

- Configurable state-machine logic blocks and transitions
- Visionary™ UI interface for operator and supervisor overrides
- ML-enhanced decision logic executed at the edge
- Cloud-independent execution with local failover
- Event-driven triggers for adaptive, real-time control sequences

How it Works

Control deploys edge-resident logic blocks that monitor process signals and respond to rule-based or operator triggers. It builds on the structure of PLC/DCS systems but introduces a more modular, user-friendly framework for defining and sequencing automation. Visionary™ UI provides local override, supervision, and traceability.

Use Cases

- Apply adaptive logic to continuous, discrete, and state-driven processes
- Coordinate state-based sequences using Visionary™ UI
- Enhance or replace PLC, PAC, or DCS systems with ML-augmented logic
- Execute edge-resident control routines independent of cloud connectivity
- Support event-based execution and logic handoff across distributed units

Advantages

- Improves control, responsiveness, and resiliency
- Simplifies logic updates and operator overrides
- Reduces manual interventions and operational errors
- Supports distributed and event-driven execution
- Enhances traditional PLC systems with AI flexibility

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