NorthLattice SYSTEMS

Connected Control & Command Systems

Sense Faster. Decide Smarter. Act in Real Time.

Overview

NorthLattice's **Connected Control & Command Systems** solution enables organizations to centrally monitor, control, and orchestrate distributed physical systems using real-time sensor data, event intelligence, and embedded decision logic.

We design systems that connect sensors, machines, sites, and operators into a unified command layer—where events are detected instantly, decisions are prioritized intelligently, and actions are executed reliably across connected environments.

What This Solution Solves

Traditional operations rely on fragmented monitoring tools, manual escalation, and delayed responses. Control actions are often reactive, inconsistent, and disconnected across sites.

This solution addresses:

- Delayed response to critical operational events
- Disconnected control systems and manual interventions
- Lack of centralized command over distributed assets
- Poor prioritization of alarms and exceptions
- High operational and safety risk due to slow decision cycles

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Core Capabilities

Real-Time Command Centers

- Centralized monitoring of sensors, assets, and systems
- Unified operational views across sites and environments
- Role-based operational dashboards for control teams

Event & Alert Intelligence

- Real-time detection of sensor and system events
- Intelligent alert prioritization and suppression
- Correlation of events across multiple data sources

Automated Control Actions

- Rule-based and algorithm-driven control logic
- Automated responses to predefined conditions
- Safe execution with override and escalation mechanisms

Human-in-the-Loop Decision Systems

- Assisted decision-making for operators and supervisors
- Explainable recommendations with full traceability
- Seamless collaboration between humans and systems

Key Use Cases

- Central command and control centers
- Safety monitoring and incident response
- Remote operations and site orchestration
- Event-driven operational automation
- Multi-site coordination and escalation management

How It Works

1. **Connect the Environment**
   Sensors, devices, machines, and systems stream real-time data into a unified control layer.
2. **Detect & Decide**
   Events are analyzed using rules, algorithms, and AI to prioritize, recommend, or trigger actions.
3. **Act & Orchestrate**
   Decisions are executed across systems, operators, and control mechanisms with feedback loops.

Technology & Architecture (Tool-Agnostic)

- IoT, edge, and device connectivity
- Real-time event and stream processing
- Rule engines and decision logic frameworks
- AI-assisted alerting and prioritization
- Integration with control systems, enterprise platforms, and data layers
- Secure, scalable, and resilient system architecture

Typical Outcomes

- Faster response to operational and safety events
- Reduced manual intervention and errors
- Improved operational control and consistency
- Higher system reliability and resilience
- Strong foundation for autonomous operations

Who This Is For

- Industrial and infrastructure operators
- Energy, utilities, and transportation organizations
- Operations, control room, and safety teams
- Asset-intensive and distributed enterprises
- Organizations building connected and autonomous systems

Why NorthLattice

NorthLattice brings a **systems-first, control-oriented mindset**—combining engineering rigor, real-time data, and intelligent decision logic. We don't build monitoring tools; we build **command systems** designed for speed, reliability, and operational trust.

Our control and command platforms are designed to scale from human-in-the-loop operations today to autonomous systems tomorrow.

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