



IMPROVING OPERATIONAL RESILIENCE IN MINING

Bridge the traditional divide between the programmable logic controller (PLC) and distributed control system (DCS) environments with ControlEdge™ PLC and Experion® PKS.

ControlEdge PLC

Honeywell

MODERNIZE CONTROL SYSTEMS AT YOUR OWN PACE

Scale up control systems, securely integrate third party equipment and establish a resilient foundation for future digital and remote operations.

TRENDS IN MINING

Mining operations today face mounting pressure to improve operational resilience while navigating complex distributed assets, aging control infrastructure and increasing cybersecurity risks. Remote locations, long equipment life cycles and reliance on third party systems further complicate the challenge of maintaining safe, efficient and connected operations.

The mining industry is also evolving toward more digitalized operating models—such as integrated operations centers, centralized monitoring and enterprise level data visibility.

These models demand modern control platforms that are flexible, secure by design and capable of integrating legacy systems without disrupting production.

Control System Integration

ControlEdge PLC, natively integrated with the Experion platform, addresses these needs by bridging the traditional divide between PLC and DCS environments.

It enables mining companies to modernize control systems at their own pace, securely integrate third party equipment and establish a resilient foundation for future digital and remote operations.



ControlEdge PLC

Explore how ControlEdge PLC and Experion together support operational resilience in mining through standardized architectures, secure connectivity, controlled migration strategies and edge level data integration.



CONTROL PLATFORMS DESIGNED FOR SECURE INTEGRATION AND SCALABILITY

Mining organizations are pursuing digital transformation initiatives to improve decision making, reduce downtime and centralize operational visibility.

DRIVE TO DIGITAL

Mining is one of the most operationally demanding industries in the world. Process continuity, personnel safety, asset protection and production efficiency are critical not only for profitability, but also for long-term business sustainability. These challenges are amplified by:

- Geographically distributed operations
- Remote and hard to access assets

- Harsh environmental conditions
 - Control systems with life cycles spanning decades
- In parallel, mining organizations are pursuing digital transformation initiatives to improve decision making, reduce downtime and centralize operational visibility.

Integrated control rooms, remote operations centers and enterprise analytics now require reliable,

secure and near real-time access to process data across sites.

Meeting these demands requires more than incremental automation upgrades. Mining operations need control platforms designed for secure integration, scalability and coexistence with both legacy and modern systems.



EVOLVING MINING CONTROL FOR CONNECTED AND SECURE OPERATIONS

ControlEdge PLC is a next generation control platform designed for native integration with Experion, delivering a unified solution for control, monitoring and secure connectivity across mining operations.

BRIDGING PLC AND DCS ENVIRONMENTS

A unique advantage of ControlEdge PLC is its ability to operate across both PLC and DCS domains. Mining organizations are often divided into separate technical disciplines—PLC focused teams and DCS focused teams—each with established tools, standards and workflows.

MODERNIZING LEGACY SYSTEMS THROUGH CONTROLLED MIGRATION

Mining assets are built to last, and many operations still depend on PLCs that are obsolete or no longer supported. These legacy systems increase operational, maintenance and cybersecurity risks, yet full system replacements can be costly and disruptive.

ControlEdge PLC bridges these worlds through a flexible architecture:

- The same hardware can function as a traditional PLC using familiar PLC engineering tools.
- It can also be configured as a unit operations controller (UOC) within Experion, aligning with DCS operating models.

This dual capability enables standardization without forcing a single control philosophy. PLC specialists and DCS engineers can work within their preferred environments while sharing a common, integrated control platform. The result is reduced organizational friction, simplified system architectures and greater long-term resilience.

ControlEdge PLC provides structured migration options designed to reduce

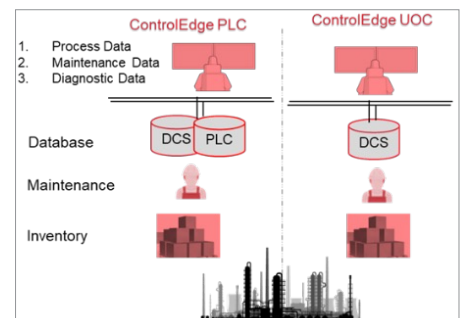
downtime and protect existing investments:

- I/O migration kits allow existing field wiring and modules to be retained.
- Phased migration strategies enable gradual modernization rather than disruptive rip-and-replace projects.
- Configuration migration tools and services support the transition from legacy PLCs to ControlEdge PLC or to Experion integrated UOC architectures.

This approach allows mining organizations to modernize at their own pace while improving system availability, maintainability and security.

Built on open standards such as OPC UA, ControlEdge PLC enables robust, reliable and secure communications in environments characterized by:

- Long distances and remote assets
- Distributed operations
- Limited onsite personnel



ControlEdge Integrated Architectures

A RESILIENT, FLEXIBLE AND SECURE FOUNDATION

ControlEdge PLC represents a natural evolution of control systems for the mining industry.

By unifying PLC and DCS capabilities, enabling secure integration of legacy and third-party systems and supporting controlled modernization, it directly addresses the operational realities of mining environments.

Together with Experion, ControlEdge PLC provides a resilient, flexible and secure foundation that allows mining organizations to modernize confidently—without sacrificing availability, safety or control.

As the mining industry continues its transition toward connected, digital and remotely operated models, ControlEdge PLC stands as a foundational technology to support safer, more efficient and more resilient mining operations.

ControlEdge PLC enables the modernization and secure integration of mining control systems

For more information

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