PRODIGY®

The new industry standard for turbomachinery control platforms.

Built upon 50 years of institutional knowledge and experience in controlling some of the most challenging turbomachinery trains in the world, Prodigy® has been designed to reduce total lifecycle cost, optimize production throughput, and reduce maintenance costs. Prodigy is the platform you can trust for the most demanding processes where ease-of-use is a paramount requirement of operation and maintenance personnel.

Single platform for all your turbomachinery control needs

Prodigy is a highly scalable hardware platform that can be deployed as a simplex small I/O system for controlling auxiliary machines to a duplex large I/O system for controlling a gas turbine driven compressor. In addition to supporting the field-proven standard control applications, Prodigy also supports custom logic programming by user based on IEC 61131-3 standards. This eliminates the need to have a separate PLC for sequencing and auxiliary control purposes – simplifying the solution architecture and saving space. The following IEC 61131-3 programming language standards are supported:

- Ladder diagram (LD)
- Function block diagram (FBD)
- Structured text (ST)
- Instruction list (IL)
- Sequential function chart (SFC)

Cybersecurity and Connectivity

The CCC Prodigy® platform is designed and tested to the standard of ISA/IEC 62443-4-2 SL2 requirements. The control platform provides secure connectivity with CCC supervisory systems and 3rd party systems. Prodigy supports MQTT Sparkplug B communication for lightweight Publish/Subscribe communication for integration with next generation of CCC operator HMI software.

Fully Integrated Platform for Your Challenging Turbomachinery Control Needs

Prodigy has been designed to save space by integrating field termination assemblies (FTAs) into its compact 19 inch form factor. A full duplex chassis with 96 I/O channels has a similar footprint of a typical 22 inch widescreen monitor.

Prodigy has also been certified for installation in Class 1, Div 2 environment as well as carrying conformal coating to withstand Severity Class G3 environmental conditions.

Designed for maximum availability

Prodigy run CCC's **Pro**OS that improves system availability and maintenance ease-of-use.

Flexible switching

Fully symmetrical modular redundancy at every level – from power supplies, communication, main processors, to I/O processors

Self-learning

Plug and play replacement of faulty card without the need to manually load configuration files

Better diagnostics

Higher-resolution archiving with 1millisecond Sequence of Events (SoE) with event-triggered High Density Archiving

Cybersecurity defense-in-depth

Safe, reliable, and efficient operation of turbomachinery trains is critical to process. Prodigy helps you secure these assets with the following industry-leading cybersecurity features while enabling secure connectivity.

Secure Boot

Fully symmetrical modular redundancy at every level – from power supplies, communication, main processors, to I/O processors

Encrypted Communication

Prevent network sniffing of sensitive data like credentials

Communication Robustness

Certified for GE Digital Achilles Communications Certification Level 1 to defend against denial of service attacks.

Security Logs

Ensure traceability of security events

Hardening Options

Further harden the device by optionally disabling non-essential functions

MQTT Sparkplug B

Lightweight Publish/Subscribe secure communication for integration with next generation of CCC operator HMI

The Trusted Name for Turbomachinery Optimization.

2 Billion Operating Hours

10,000+ Machines

40+ OEMs

150+ Turbomachinery Experts

14 Worldwide Offices

Des Moines, IA, USA

Amsterdam, Netherlands

Dammam, Saudi Arabia

Beijing, China

Houston, TX, USA

Milan, Italy

Cairo, Egypt

Abu Dhabi, UAE

Mumbai, India

Hyderabad, India

Kuala Lumpur, Malaysia

Singapore, Singapore

Perth, Australia

Rio De Janeiro, Brazil

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