

PRODIGY®



The new industry standard for
turbomachinery control platforms.



Single platform for all your turbomachinery control needs

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.

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)



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 runs CCC's ProOS which 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 AND CONNECTIVITY

The CCC Prodigy® platform has been certified to ISASecure® Component Security Assurance (CSA) 1.0.0 Capability Security Level 2 for conformance with ISA/IEC 62443-4-2 cybersecurity standard - the first purpose-built turbomachinery control platform to achieve this certification. 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.

CYBERSECURITY DEFENSE-IN-DEPTH

Safe, reliable, and efficient operation of turbomachinery trains is critical to the process. Prodigy helps you secure these assets with 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 a 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

CONNECTIVITY

Prodigy enables seamless integration across your turbomachinery ecosystem, supporting modern, lightweight protocols and direct device interfaces. Whether connecting to asset management systems or advanced HMI's, Prodigy ensures secure, real-time visibility across your control infrastructure.



HART

Enable direct integration with HART-capable devices. Eliminate external multiplexers and deliver standardized diagnostics to asset management systems via HART-IP protocol



Experion Interface

Standardize faceplates for intuitive turbomachinery monitoring and control within Honeywell Experion HMI environments, simplify connection, operation and lifecycle support



MQTT Sparkplug B

Supports lightweight, publish/subscribe communication for secure integration with the next generation of CCC operator HMI software

THE TRUSTED NAME FOR TURBOMACHINERY OPTIMIZATION



2 Billion
Operating
Hours



10,000+
Machines



40+
OEMs



150+
Turbomachinery
Experts



14 Worldwide
Offices



For more information

<https://process.honeywell.com/us/en/products/turbomachinery-automation-systems/ccc-pro-built/control-systems/prodigy>

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