



# HOLCON®



WRC is a Rockwell Automation Encompass Partner for Gateway, Bus Extender and signal conditioning products.

### Application:

Turbine Generator Platforms are selected based on the turbine generator performance, but their overall success also depends on the control system supplied.

The requirements often include:

- Ethernet or other communications connection
- Distributed I/O
- Ability to integrate with existing controls
- Modern programming language - more than relay-logic
- Computational ability
- Reliability and potential for back-up
- Standards Compliant

Western Reserve Controls Holocon™ Controller fulfills all of these requirements.

### Solution:

WRC's Holocon Controllers are compliant with IEC61499 a new international standard for highly distributed function block controls. It provides an event-driven mechanism for proper sequencing over multiple device nodes. It supports real-time function block control, embedded JAVA, CAN, Ethernet, Discrete I/O, analog I/O and RS232.

Programming the W2 controller is via the Function Block Development Kit (FBDK), implementation tools of the IEC61499 standard licensed from Rockwell Automation. Over 400 function blocks are available to select from as well as a growing library; including network, math, display, and control blocks

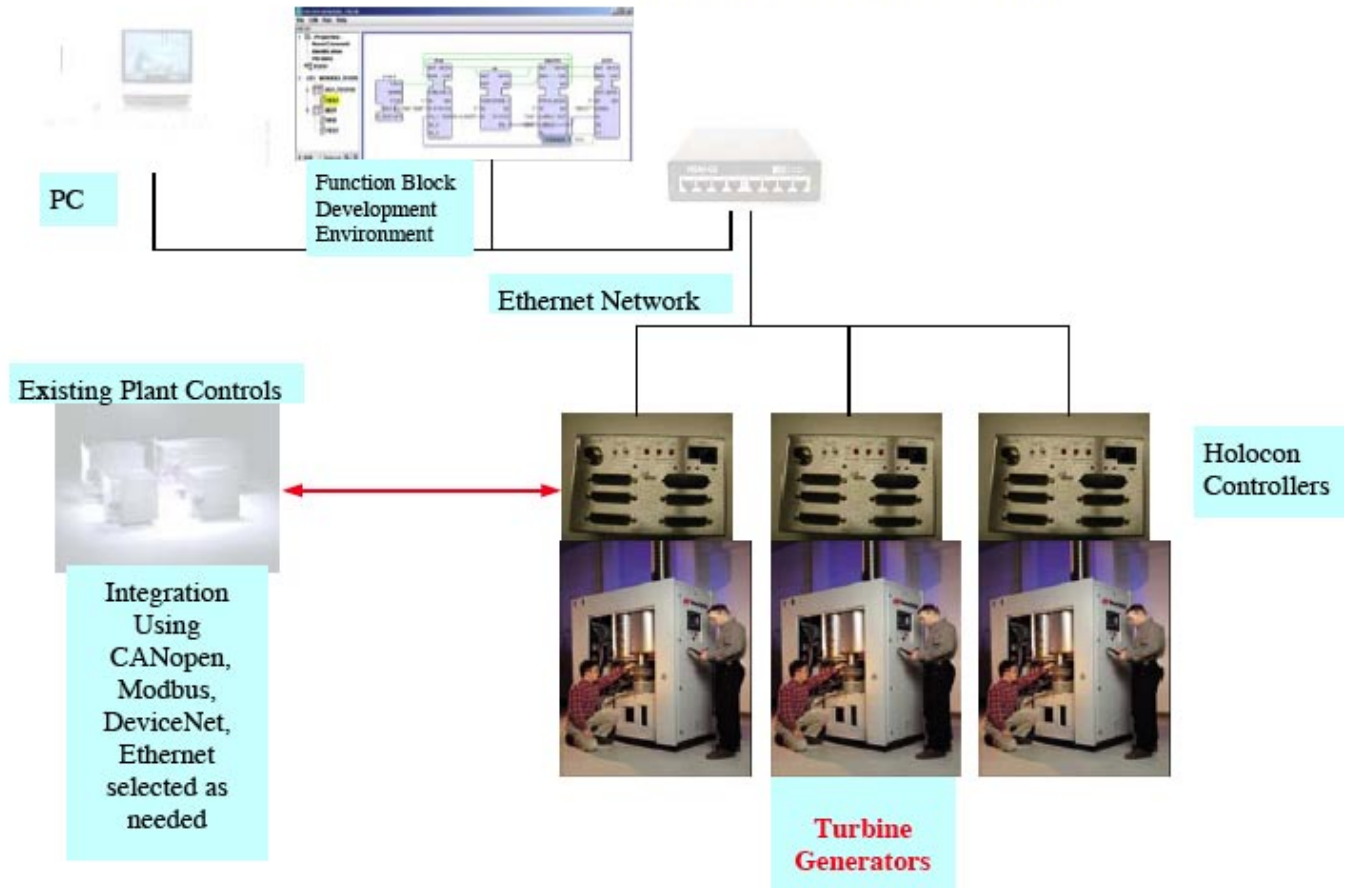
For this application of Turbine Generator Controls, the options that would be selected include:

- Ethernet
- CANopen
- Discrete I/O
- Analog I/O
- Multiple controllers that can be distributed using Ethernet.
- W2-FBDK Function Block Development Kit
- User programming of custom applications using JAVA.
- Embedded web server

### Benefits:

- Easy to interface using TCP/IP, XML and/or Function Blocks lowers application engineering and ongoing support costs.
- Common Ethernet networking solution to PCs and other intelligent devices lowers capital costs.
- Optional communication networks such as CANopen and Modbus supports integration with existing controls and reduces integration costs.
- Standards compliance simplifies start-up and long-term support lowers total cost.
- Embedded web server allows user access via browser - an expensive operator interface software package is not required.
- Embedded web server supports remote diagnostics and maintenance
- Robust selection of I/O to meet application requirements.
- Event-Driven processing reduces network traffic, speeds response time, and opens the door for other options such as redundant controls.
- Graphic Development Environment is intuitive and easy to use - lowering costs.
- Floating point math and large memory space expands the range of applications without adding cost.

## W2 Series - Holocon Controller Power Generation Application



The illustration above displays:

- Multiple, distributed Holocon Controllers providing integrated logic and I/O with each individual turbine generator set
- Integration between Holocon Controllers to provide load sharing, load shedding, and automatic backup
- Ethernet networks for common communication within the control system
- Optional communication networks supports integration with existing controls
- Graphical Function Block Development Environment
- PC for other functions including:
  - Data logging
  - Performance Analysis
  - Operator Interface

The Holocon controllers can be used for:

- Function Block Controls
- Data Acquisition and SCADA

- Optional Add in user developed embedded JAVA functions for analysis, data logging, floating point calculations, arrays, or other real-time features.

The Holocon Controller Family is especially attractive to OEMs. With a common platform, customized, real-time, embedded performance is available that is easily interfaced to a wide variety of existing plant controls.

This simplifies the OEMs efforts to service a broad customer base. Embedded JAVA means that an OEM may develop and implement proprietary, protected technology in the Holocon Controller that is easily ported to other platforms.

Additionally, built in logic and I/O extends the space an OEM can service, thus increasing revenues and maintaining greater control of system performance. IEC 61499 compliance demonstrates the OEMs commitment to fully support and service their customer-base.