



GE Fanuc Automation

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GE Fanuc Automation Delivers All Ethernet-Based High-Availability Control Systems to Avoid Downtime in Mission Critical Applications

IEEE 802.3 Standards Based I/O Network With Improved Performance

Proven Experience Delivering Fault-Tolerant Control Systems for Metals, Oil & Gas, Semiconductor, Transportation, Energy and Water/Wastewater

CHARLOTTESVILLE, Va. — August 8, 2006 — GE Fanuc Automation, Inc., a unit of GE Industrial, is announcing the availability of its All Ethernet High-Availability Solution, designed to mitigate the risks of downtime, safety concerns, and reduce total cost of ownership (TCO). The solution, based on GE Fanuc's PACSystems Rx7i and Rx3i control platforms, provides the ability to manage a large number of mission critical I/O at high speed in a distributed architecture.

"Unscheduled downtime in mission critical manufacturing and infrastructure operations can be catastrophic to the business, resulting not only in loss of revenue, but sometimes compromising the safety of the operation," said Jerry Simons, Director of Applied Solutions for GE Fanuc. "With the combination of a high-performance central processor, distributed I/O and a 100 Mbps network, users will be able to manage a larger number of I/O and a larger number of remote drops at speeds far greater than was previously possible."

These applications would typically be deployed in metals, oil & gas, semiconductor, transportation, energy and water/wastewater industries, where customers demand 24x7 uptime.

Depending on user criteria such as number of I/O, scan time requirements, primary to secondary failover time, fault tolerance needs of the I/O LAN, and cost, several options for architecting an All Ethernet High-Availability Solution exist:

Components of the solution could include:

- RX3i-Based Hot Standby Architectures offer users a low-cost high-availability option.
- RX7i-Based Hot Standby Architectures offer users high availability with bumpless failover from primary to secondary controllers. The system offers synchronized logic scanning to assure that the master and backup are truly identical during switchover.
- As an unique feature, the RX3i Ethernet Network Interface Unit (ENIU) allows users to implement local decision making in distributed I/O nodes to manage I/O data as it

GE Fanuc Announces High-Availability Ethernet Applied Solution

communicates with the master and standby controllers. For example, high speed data logging used for Sequence of Events analysis.

- The RX3i Ethernet remote I/O solution (ENIU) also provides gateway capabilities to industry standard protocols like Profibus DP, DeviceNet, Genius and Modbus.
- Support for remote I/O Hot-swap capability means there is no need to shut down the controller or remote node to replace a faulty I/O module. This affords the user ease of maintenance and zero downtime.
- The VersaMax Ethernet Network Interface provides users with great cost per point benefits while taking advantage of Ethernet I/O in a high-availability application.

The ease of interoperability offered by the use of Ethernet as the I/O communication backbone and the rock solid EGD (Ethernet Global Data) protocol are the key components of this solution based on the IEEE 802.3 industry standard and mass market protocol. Ethernet technology is continuously evolving in performance and speed and 10GB network technologies are in the works, providing a clear low cost, high performance roadmap for future enhancements.

The All Ethernet High-Availability Solution consisting of I/O, Control and SCADA can be integrated using a common homogeneous network technology allowing fast high-volume data transfers between automation layers. Time critical data for time critical decisions is a "MUST HAVE" in today's 24x7 operating environment.

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About GE Fanuc Automation

GE Fanuc Automation Corporation, a joint venture between GE and FANUC LTD of Japan, delivers automation hardware and software designed to help users reduce costs, increase efficiency and enhance profitability. With solutions and services catering to virtually every industrial segment, GE Fanuc Automation provides a diverse array of capabilities and products, including controllers, embedded systems, advanced software, motion control, CNCs, operator interfaces, industrial computers, and lasers. Headquartered in Charlottesville, VA, GE Fanuc Automation is a part of GE Industrial and combines the diverse global strengths of the GE family with the local presence customers need to design, develop and maintain their automation investments.

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