MELSEC iQ-R, enabling manufacturers to achieve a high speed, information driven, operation

Mitsubishi Electric is pleased to announce that its revolutionary next generation iQ Platform, the iQ-R Controller Series is now available. Today's manufacturing environment is already complex and fraught with competitive challenges, but tomorrow, the year after and four years after that will be even more taxing, especially as manufacturers contemplate concepts such as Big Data and the Internet of Things (IoT). However, with Mitsubishi Electric's e-F@ctory concept re-enforced with the new iQ-R series, manufacturers can approach these challenges better prepared and can get ahead of their competitors, while benefiting from iQ-R's advanced concepts and designs purporting to over 47 new patents – iQ-R is truly revolutionary.

Enabling manufacturers to successfully implement information driven manufacturing solutions

Protection from all sides

Protection of your business, knowhow and manufacturing processes are increasingly important and iQ-R has been designed to meet these needs bringing peace of mind to its users. The continuing threat from external unauthorized access to control systems has led Mitsubishi Electric to design the iQ-R with various protective features such as IP address filtering to prevent unapproved access to the system; knowhow is protected with strengthened password and program encryption and finally

production can be protected by easy, flexible and cost effective system configuration with redundant CPUs using standard CPU technology. Added to this is Mitsubishi's well known focus on backward compatibility where existing installed hardware can continue to be utilized well in to the future and you have a picture of a programmable control concept that is designed to reduce Total Cost of Ownership (TCO) from all facets of the business. This is also true for programming support as the new GX Works3 compliments iQ-R perfectly with its multi-language interface which will be ideal for companies with international export business, while its other innovative functions help significantly reduce development time through effective reuse of existing software assets.

Speed, performance, excellence

Speed is also a keyword with iQ-R Series. Not only are the processors optimized for consistent, reliable manufacturing operation, and are up to eight times faster than the proceeding QCPU, but when combined with the new high speed bus, users will see an increased throughput of around 40 times the current iQ Platform which was already one of the fastest systems on the market. This massive speed increase means manufacturing with greater response which can be used to increase quality through more rapid reaction to changes in parameters, perform greater control and co-ordination between complex motion tasks or even greater resolution for energy management tasks such as load balancing or peak management for example. iQ-R really is putting its users in control.

MELSEC iQ-R: Advanced technology, thoughtful design

Reduced engineering time means faster to market

The deliberate and structured reduction in engineering load starts with the programming interface GX Works3 which increases program reusability while at the same time provides advanced options for monitoring and fault diagnosis but also increased options for protecting and managing the users programming assets. Additionally, iQ-R series has new features for auto-saving operational data especially error flags and occurrences so that maintenance engineers can quickly diagnose operational performance from the stored historical data. The new memory dump feature allows active information to be automatically saved to the SD card detailing timing and error conditions, and status information; protecting this vital data even if the most serious event occurs.

In summary, MELSEC iQ-R Series is a proud successor of the original iQ Platform extending its features and functions while reducing engineering effort. It has been designed to optimize all aspects affecting TCO while delivering outstanding performance. Its data management, processing and programming flexibility along with the future roadmap of extensive functions, modules and options while continuously supporting existing legacy systems means that iQ-R should be in the toolbox of any serious automation engineer who wants to tackle the future challenges.

Key figures/data:

Product shipping date: June 2014

CPU options: 5 models with varying program capacity from 40 to 1200k Steps

Typical processing speed: Basic instruction 0.98ns

Memory: SD card and optional SRAM cassette

Programming environment: GX Works3

Compatibility: backward compatible with iQ Platform

Design patents: 47 domestic patents, 31 pending overseas

Typical use: Offers a wide range of use, particularly well-suited to high speed processing of data, positional operations and process industries and complex machine control

Note: The release schedule for the redundant CPU function will be announced separately.

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About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment.

Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,054.3 billion yen (US$ 39.3 billion**) in the fiscal year ended March 31, 2014.

For more information visit http://www.MitsubishiElectric.com.

**At an exchange rate of 103 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2014

About Mitsubishi Electric Factory Automation Business Group

Offering a vast range of automation and processing technologies, including controllers, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computerized numerical controllers, and industrial robots, Mitsubishi Electric helps bring higher productivity – and quality – to the factory floor. In addition, our extensive service networks around the globe provide direct communication and comprehensive support to customers.

About e-F@ctory

e-F@ctory is Mitsubishi Electric's integrated concept to build reliable and flexible manufacturing systems that enable users to achieve many of their high speed, information driven manufacturing aspirations. Through its partner solution activity, the e-F@ctory Alliance, and its work with open network associations such as The CC-Link Partners Association (CLPA), users can build comprehensive solutions based on a wide ranging "best in class" principle.

In summary, e-F@ctory and the e-F@ctory Alliance enable customers to achieve integrated manufacturing but still retain the ability to choose the most optimal suppliers and solutions.

(IoT = Internet of Things)

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All enquiries should be directed to the same or your local Mitsubishi Electric Factory Automation sales office (see link).