

PRESS RELEASE

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Yokogawa Announces Functional Enhancements to STARDOM Network-based Manufacturing Solution

Faster processing in redundant CPU configuration and new HART communication-enabled modules

Tokyo, Japan - Yokogawa Electric Corporation has upgraded the autonomous controllers for its new concept, STARDOM network-based control system. The upgraded system, release 1.60, is being released onto the market today.

STARDOM is made up of function-specific control, operation, and monitoring components that can be interconnected flexibly and scalably using networking technology. The system has both the reliability and supportability of distributed control systems (DCSs) and the openness, versatility, and cost-effectiveness of systems that combine PCs, programmable logic controllers (PLCs), and other devices. STARDOM is a core building block of Yokogawa's VigilantPlant™ solutions that promise to bring operational excellence to visionary plants and create an environment where plant personnel can See Clearly, Know in Advance, and Act with Agility.

In line with Yokogawa's fundamental commitment to steadily introduce new functions and improve reliability, the Company is continually making enhancements to STARDOM. With the development of release 1.60, program handling has been enhanced in STARDOM autonomous controllers that have a redundant CPU configuration and CPU-to-CPU equalization processing has been sped up. In addition, six new HART communication-enabled modules have been added to the product lineup.

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The Company will make functional enhancements on an on-going basis, with the aim of increasing STARDOM's range of applications and expanding business.

Development Background

In the energy field, there is a growing demand for network-based monitoring and control systems at oil and natural gas extraction facilities, as well as in upstream processing equipment and pipelines. General-purpose PLCs have often proved to lack the capacity that this field requires. The demand is therefore growing for monitoring and control systems that feature high reliability, high information handling capacity, and compatibility with a wide range of networks and which can be implemented at low costs. Capital investment is also brisk with high-value added raw materials such as fine chemicals and semiconductor materials, and in the foods, pharmaceuticals, and iron and steel fields. As continuous processes (liquid processing, for example) often coexist with discrete processes (assembly and machining) in each of these fields, an increasing number of users are turning to PLC-based control systems, most of which are small to medium-scale. As an increasing number of these systems have field devices, particularly transmitters, that use the HART protocol,* it has become essential for support of this protocol to be added to STARDOM. The functional enhancements in release 1.60 are in response to these requirements.

Overview of Functional Enhancements

1. Increased Processing Speed for redundant CPU Configuration

Program processing with redundant CPU configuration is 1.5 times faster. Consequently, it is now possible to introduce the autonomous controllers to processes such as compressor control that require high reliability and fast response. CPU-to-CPU equalization processing is 20 times faster; it is now possible to replace and repair one of the CPU boards in the redundant CPU configuration while the plant is still in operation.

2. Release of Six New HART Protocol-compliant Modules

Since many field devices currently used in upstream processes such as oil and natural gas extraction and pipeline transportation employ the HART protocol, the following six HART-compliant I/O modules have been added to the product lineup:

- Collectively-isolated, 16-channel current input module
- Non-isolated, 16-channel current input module
- Individually-isolated, 8-channel current input module
- Collectively-isolated, 16-channel current output module
- Non-isolated, 8-channel current input/8-channel current output module
- Individually-isolated, 4-channel current input/4-channel current output module

*** About the HART protocol**

To enable the transmission of multiple signals, the Highway Addressable Remote Transducer (HART) protocol superimposes digital signals onto the 4–20 mA analog control signals used in many types of plants. Many control equipment manufacturers have joined the HART Communication Foundation (HCF). For more information, go to <http://www.hartcomm.org/>

Major target markets

Oil and natural gas extraction facilities, upstream process equipment and pipelines; widely-distributed facilities including water-processing plants and cogeneration equipment; small to medium-scale process-related plants including oil, chemical and water purification plants; and a wide range of small to medium-scale production facilities including food and pharmaceutical plants

Applications

The overall operation, monitoring and control of various types of equipment including:

- monitoring and control of widely-distributed production facilities
- remote monitoring and control of district heating/cooling and cogeneration equipment
- remote monitoring and control of semiconductor manufacturing equipment
- energy conservation monitoring and control

About Yokogawa

Yokogawa's global network of 18 manufacturing facilities, 82 affiliate companies, and over 650 sales and engineering offices spans 28 countries. Since its founding in 1915, the US\$4 billion company has been engaged in cutting-edge research and innovation, securing more than 7,000 patents and registrations, including the world's first digital sensors for flow and pressure measurement. Industrial automation and control, test and measurement, information systems and industry support are the core businesses of Yokogawa. For more information about Yokogawa, please visit our web site at www.yokogawa.com

About Yokogawa Corporation of America

Yokogawa Corporation of America is the North American unit of \$4 billion Yokogawa Electric Corporation, a global leader in the manufacture and supply of instrumentation, process control, and automation solutions. Headquartered in Newnan, Georgia, Yokogawa Corporation of America serves a diverse customer base with market-leading products including analyzers, flowmeters, transmitters, controllers, recorders, data acquisition products, meters, instruments, distributed control systems, and more.

For more information about Yokogawa Corporation of America, visit www.yokogawa.com/us/, call 770-254-0400, or toll-free at 800-258-2552, or e-mail info@us.yokogawa.com.