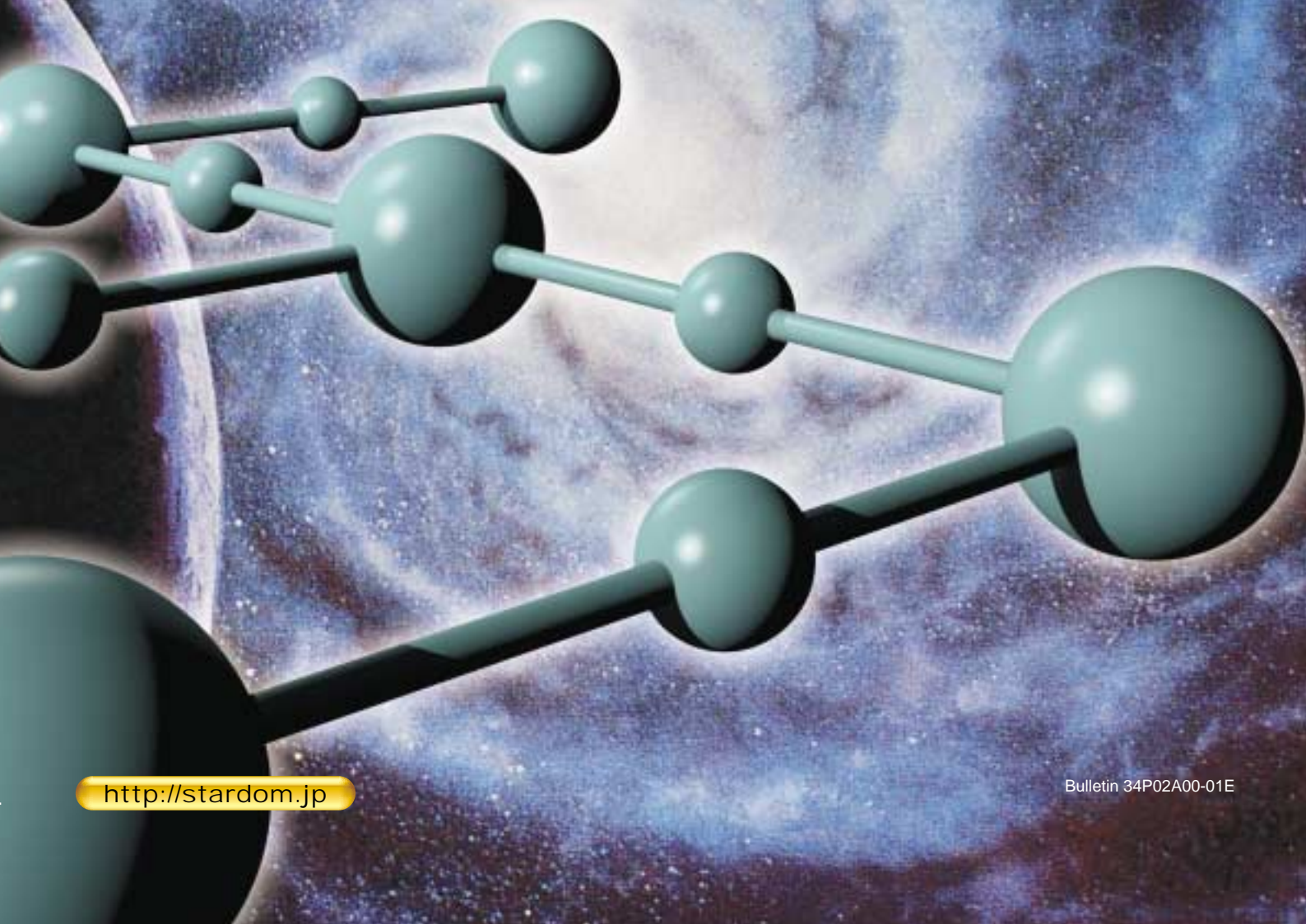


YOKOGAWA 

Network Based Control System

STARDOM™



<http://stardom.jp>

Bulletin 34P02A00-01E



Welcome to Stardom!

After 85 years of innovation in measurement and process control including the first ever DCS system, we have the pedigree.

Today more than ever the real need of automation is open and powerful communication without limits.

The challenge is to maximize return on customers' assets through the simple implementation of the latest Information Technology.

The answer, **STARDOM**. The Network based Control System" (NCS).



Stardom consists of a group of highly functional components including autonomous controller, data server software, and application portfolios. It features small, scalable architecture which is capable of being highly distributed, both within a facility and also geographically.

Operation and monitoring functions adopt standard general purpose Web browser and Windows technology, which can be applied over local networks, intranets, extranets and the Internet.



The Ultimate Industrial Control Solution!

eConnectivity for eBusiness

- ◆ Based on standards - TCP/IP, OPC
- ◆ Visual basic, JAVA programming

Languages Available

- ◆ SQL server / Oracle

Network Security

- ◆ Firewall
- ◆ Standard Protocols SSL / SNMP / SNTF
- ◆ Password protection

Commercial-Off-The-Shelf (COTS) Components

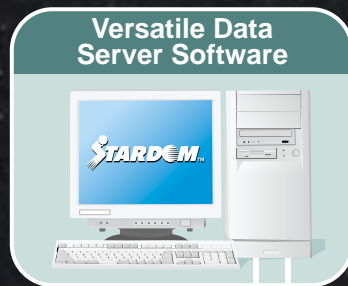
- ◆ HMI server and client platforms
- ◆ HMI client software
- ◆ Network infrastructure components

VDS graphic windows run on a general Web browser, so special dedicated software for an HMI client is not needed. Just a personal computer with Internet access can be used as an HMI client to access the site and perform operations and monitoring anytime, anywhere.

Object-oriented engineering tools for all engineering tasks from defining I/O device connections and data acquisition specifications up to creation of graphic windows make application development more efficient.

COTS

A standard personal computer can be used to run VDS software and as an HMI client, and a general purpose TCP/IP network is used for controllers and devices. An HMI client is a thin client requiring no special or dedicated software. Total cost of ownership is greatly reduced.



VDS

TCP/IP (FDDI, ETHERNET 10/100 MBPS etc.)

FCN



Autonomous Controller Field Control Node



Autonomous Controller Field Control Junction

FCJ

In addition to regulatory and sequence control, the Stardom FCN and FCJ autonomous controllers feature a highly independent architecture for linking distributed controllers and devices and transmitting information without relying on the presence of HMI or SCADA software. i.e. a human machine interface is not required to be present.



The Ultimate Communicator!

Vertical

- ◆ Web servers everywhere!
- ◆ High Speed Ethernet -TCP/IP
- ◆ OPC

Horizontal

- ◆ High Speed Ethernet - TCP/IP
- ◆ OPC
- ◆ Communication drivers

Field Network

- ◆ FOUNDATION Fieldbus
- ◆ Profibus (plan)
- ◆ Modbus (plan)

Network Based Control System **STARDOM™**

eConnectivity



Engineering Cost Saving

- ◆ Ladder Logic, SFCs, Structured Text, Instruction List, Function Blocks (all IEC61131-3)
- ◆ Predefined Application Portfolio
- ◆ DCS Function Blocks
- ◆ Java, Visual Basic, HTML/XML
- ◆ Easy to engineer Tag based global database
- ◆ Object oriented engineering environment



Management Cost Saving

- ◆ The right info at any time, anywhere and anyhow
- ◆ No special software, just use your web browser
- ◆ Low cost enterprise integration



The Integrator's Ideal Solution

- ◆ Reduced engineering costs
 - ◆ Predefined modules/templates and application portfolios
 - ◆ Incredible programming and configuration flexibility
- ◆ Reduced installation cost via flexibility of the architecture
- ◆ Reduced commissioning costs by over 25%
- ◆ Total remote support and engineering capability
- ◆ Protect and market your application solution



Capital Cost Savings

- ◆ Reduced Engineering - Application Portfolios
- ◆ Reduced Installation Cost - Size, networking
- ◆ Reduced Commissioning Costs - Offline Simulation



Operational Cost Savings

- ◆ Reduced Maintenance Costs - Remote access via web server
- ◆ Increased Operator Efficiency - Mobile Control Room
- ◆ Reduced Production Downtime - Online additions, redundancy



Removes Maintenance Headaches

- ◆ Remote diagnostic access from ANYWHERE on the planet!
- ◆ Replace I/O cards online
- ◆ Redundancy capabilities
- ◆ Simple architecture
- ◆ Off-the-shelf networking components
- ◆ World-wide around the clock support



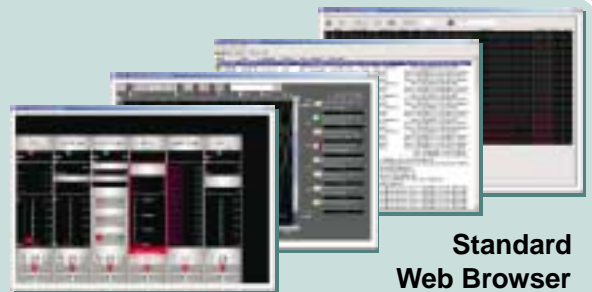
Mobile Control Room

- ◆ WAP enabled (Mobile Phone)
- ◆ e-Mail alarms and messages
- ◆ Personal Digital Assistant (Palm, HP)

Web Based Clients

Optional Test Package features useful functions for efficient debugging during system configuration, including:

- ◆ **Simulation.** Enables function tests with the predefined simulated inputs without a target machine.
- ◆ **Device Monitor.** Enables the users to view and change the CPU statuses and internal device data of connected PLC's.
- ◆ **Trace Management.** Changes in data can be recorded with timed traces.

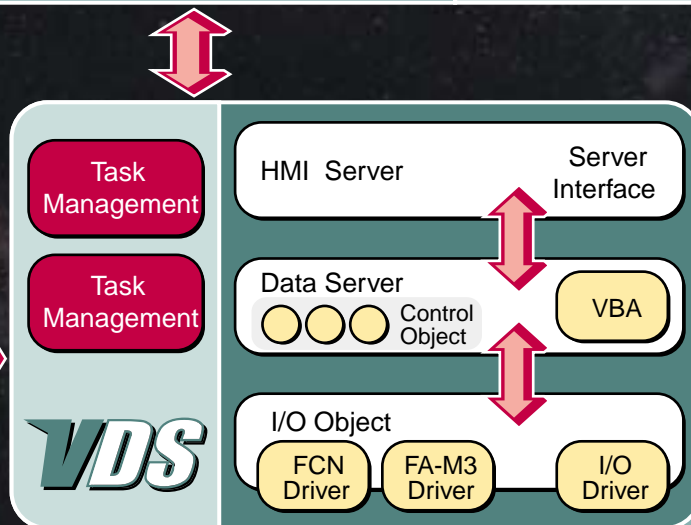


Standard Web Browser



Compliance

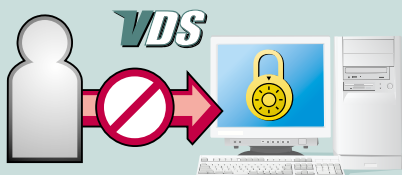
Compliance VPC Foundation



From the functions for communicating with I/O devices to those for converting data into a Web-compatible format and transferring it for presentation on a Web browser, VDS consists of a simple, hierarchical structure of functions.

Security

VDS's security functions can restrict access to writing data, running a program, etc, to protect the system against unauthorised users. VDS also records a log of the actions taken at the system as a detailed audit trail. Even when accessing an on-site system via a Web browser, users must enter their user name and password for authentication.



Variation of Drivers

VDS can easily link a variety of equipment together including Stardom controllers, various suppliers programmable logic controllers, single loop controllers, power monitors, etc on an integrated network.

A variety of fieldbus protocols are supported.

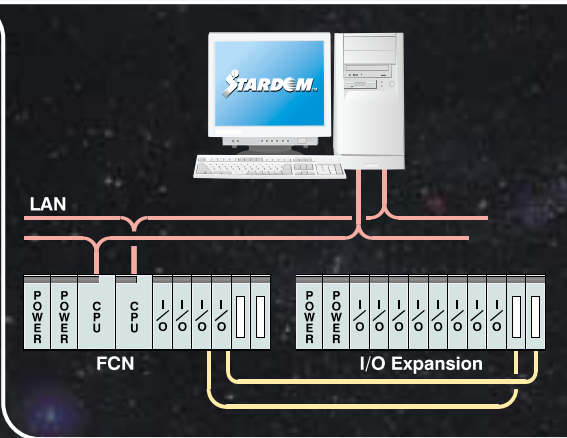




FCN/FCJ

Redundancy

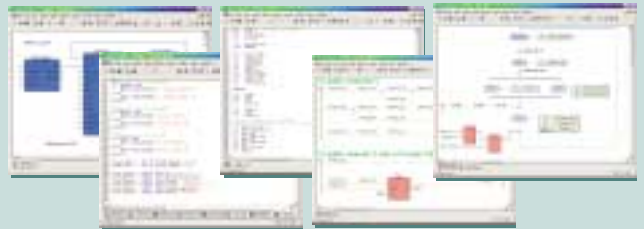
For continuous operations, high reliability is an essential requirement of controllers. Thanks to their distributed compact hardware and highly independent software architecture, FCN and FCJ autonomous controllers reduce risk of failure. The rugged hardware and optional dual-redundant configurations makes them ideal for mission-critical equipment.



Engineering

Reduction of the lead time from system design to start of operation greatly increases productivity. FCN and FCJ controller applications are written in programming languages compliant with IEC61131-3 international standard, so users do not need to learn manufacturer-specific programming languages. All five IEC61131.3 programming languages are available and can be freely mixed in the one application - Function Block Diagram, Ladder Diagram, Sequential Function Chart, Instruction List and Structured Text.

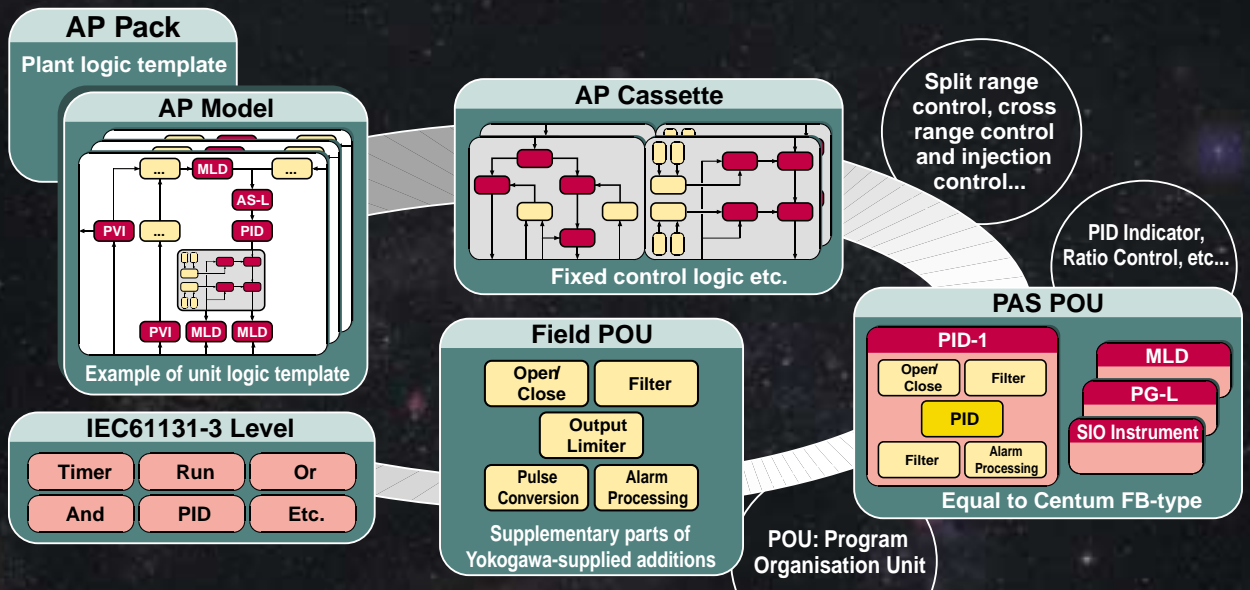
IEC61131-3 Basic Block Components



5 programming languages, may be combined in a single logic strategy

Application Library

Yokogawa has packaged its control expertise into libraries of software modules known as Application Portfolios (APPF). Each AP contains various control logic modules to meet diverse functional requirements, however users can easily add extra desired functions to a provided module if needed. Some portfolios also come with graphic displays.



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CAUTION



- For safe and proper use of the product, carefully read the manual before use.
- If this product is to be applied to a system that could directly affect human safety, contact your nearest sales representative.

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