Network-based Control System

STARDOM

Versatile Data Server Software

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http://stardom.biz
Versatile Data Server Software (VDS), which is Web-based HMI/SCADA software, adds cutting-edge network technologies to the conventional SCADA functionality such as data acquisition from various I/O devices, data saving, and process operation via a high-definition graphical user interface. The software thus makes operation and maintenance work much simpler.

VDS Web-based HMI and SCADA software will revolutionize your process operations.

**Simple, Secure Operation**
- Site status can be checked from anywhere
- Commercial Off-The-Shelf (COTS)

**Networking Versatility**
- Connectable to diverse devices
- OPC server/client connections supported

**Concise Application Development Environment**
- Simple software structure
- Object-oriented, efficient engineering

**Superb Operability with First-rate Safety**
- A wealth of functions to simplify operations

Versatile Data Server Software (VDS), which is Web-based HMI/SCADA software, adds cutting-edge network technologies to the conventional SCADA functionality such as data acquisition from various I/O devices, data saving, and process operation via a high-definition graphical user interface. The software thus makes operation and maintenance work that much simpler.
**Check the Site Statuses from Anywhere**

VDS’s 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.

**Functional Features**
- Swift response to manufacturing processes
- Fewer site visits for busy staff
- Supervision of integrated information of all processes from anywhere

**Commercial Off-The-Shelf (COTS)**

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

- No special hardware and software for process operation required
- Quicker maintenance and upgrade at lower cost

**Networking Versatility**

**Connectable to Diverse Devices**

VDS can easily link a variety of equipment including FCN (Field Control Node) and FCJ (Field Control Junction) autonomous controllers, various suppliers’ programmable logic controllers, temperature controllers, and power monitors, on an integrated network. Whether for factory or process automation equipment, VDS can handle various applications for production lines and manufacturing processes.

**Autonomous Controllers**

By linking FCN and FCJ autonomous controllers featuring loop control and sequence control, a high-performance process control system can be built at low cost.

**Other Suppliers’ PLCs**

Not only Yokogawa FA-M3 but also Mitsubishi Electric MELSEQ Series and OMRON SYSMAC Series programmable logic controllers can be connected. (Connectivity for other popular PLCs such as Allen-Bradley and Siemens controllers will be supported in due course.)

**Power Monitors**

By connecting Yokogawa power monitors, various power-related data can be acquired and power demands can be supervised.

**Data Acquisition Equipment and Recorders**

By connecting Yokogawa DARWIN data acquisition equipment and DAQSTATION networking paper-free recorders, measured data can be saved and reported in print.

**Temperature Controllers**

By connecting Green Series temperature controllers from Yokogawa, the PID temperature control loops can be operated and monitored locally and remotely.

**Supports OPC Server/Client Connections**

A third-party OPC server can be connected to collect data by specifying tags and to exchange data with an upper-level system for production management and quality control.

OPC client function supports failover function by monitoring the network and OPC server status.
A Wealth of Functions to Simplify Operations

In addition to the graphic window presentation on a Web browser, VDS also offers a host of functions to make operations easier.

Graphic Windows for Easy Visualization
VDS offers extensive graphic functions for building graphic windows that show parameters and data for efficient operation.

Security for Operation
VDS’s security functions can restrict access to writing data, running a program etc., to protect the system against unauthorized 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.

Extensive Message Management Functions
Process alarms and user-defined messages can be viewed on the alarm summary display and announced using sound output in different ways depending on their importance, making them easy for operators to identify. These messages can be analyzed later on the historical message file and on a printout.

Report Package for User Report Management
Report Package allows users to create reports (monthly, daily, lot, and simple batch reports) using Microsoft Excel and print them. The report data can also be saved to a relational database (such as SQL Server/Oracle).

Trend Package for Effective Use of Acquired Data
A trend graph of acquired and saved data can be pasted to a desired position on a graphic window so that the progression of data over time can be viewed. Trend data saved in VDS can also be exported to a CSV format file for preparing reports and in-depth analyses.

Simple Software Structure
To provide a concise environment for developing applications, maximize throughput and facilitate maintenance, VDS has a simple software structure and standard functions for managing users’ own programs.

Hierarchical Software with Clear Functional Partitioning
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.

Message and Process Management Included as Standard
Functions for managing alarms and messages, which are crucial in equipment and process operation, and process management functions to run and quit various programs, can be developed effortlessly using standard tools. There is no need to develop management programs using Visual Basic or other programming languages.

Event Driven System quickly responds to the event notification
In addition to the periodic monitoring which other SCADAs adopt, event driven type enables operation by receiving the event notification. A high process performance is realized since the process is triggered by the event notification instead of processing constantly.
Object-oriented, Effortless Engineering

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.

Defining connections to I/O devices

Simply select a proper driver for each I/O device to be connected and make basic communication settings such as an IP address. There’s no need to write a troublesome communication program.

Defining data for operation and monitoring

Simply define tags called control objects, set the method of acquiring their data (periodically, one-shot, or else), and make auxiliary settings such as the scaling specifications. Control objects you defined can be grouped for reuse.

Creating graphic windows

Graphic windows running on a Web browser can be created by simply pasting supplied graphic components and specifying their actions.

Test Package, a Powerful Helper for Debugging

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 PLCs.

- **Trace Management**
  Changes in data can be recorded with timed traces.

Easy linkage with VB applications

“VB property link” realizing the data linkage with separately developed VB application is supported as a standard function.

“All data link package for .NET” supports the latest Visual Studio .net.

Temperature data Current value 78deg

Visual Basic

- **VB property link function**
  Definition information in case that T100 < 100deg Rectangle 3 = “Red”
# Flexible Package Types for Applications of All Sizes and Purposes

## VDS Software Medium

<table>
<thead>
<tr>
<th>Name</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software medium</td>
<td>NT201AJ</td>
<td>CD-ROM containing VDS basic and optional software* and electronic documents</td>
</tr>
</tbody>
</table>

* To run VDS basic and optional software, you need to purchase the licenses of the respective software packages.

## VDS Basic Software License

<table>
<thead>
<tr>
<th>Name</th>
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</tr>
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<tbody>
<tr>
<td>Basic software license</td>
<td>NT610FJ</td>
<td>Available in 8 types depending on the number of definable tags from 50 to 5000.</td>
</tr>
<tr>
<td></td>
<td>NT610RJ</td>
<td>Includes a license for the first HMI client (Web browser) to access VDS.</td>
</tr>
<tr>
<td>Upgrade kit</td>
<td>NT620FJ</td>
<td>Upgrades the basic software license to increase the number of definable tags.</td>
</tr>
<tr>
<td></td>
<td>NT620RJ</td>
<td></td>
</tr>
<tr>
<td>Additional HMI client license</td>
<td>NT625AJ</td>
<td>License for increasing the number of HMI clients (Web browsers) that can access VDS concurrently.</td>
</tr>
</tbody>
</table>

** The full-time version has both development and runtime environments; the runtime version offers only the runtime environment.

## Optional Software Licenses

### Options for Routine Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Model</th>
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<tbody>
<tr>
<td>Report Package</td>
<td>NT301AJ</td>
<td>Helps create monthly, daily, lot, and simple batch reports. (Needs Microsoft Excel to run.)</td>
</tr>
<tr>
<td></td>
<td>NT301RJ</td>
<td></td>
</tr>
<tr>
<td>Trend Package</td>
<td>NT302AJ</td>
<td>Displays trend graphs of data acquired by VDS.</td>
</tr>
<tr>
<td></td>
<td>NT302RJ</td>
<td></td>
</tr>
<tr>
<td>Test Package</td>
<td>NT303AJ</td>
<td>Helps debugging by providing I/O simulation functions for debugging without target machine, device monitor functions to monitor the connected PLCs’ statuses, and more.</td>
</tr>
<tr>
<td></td>
<td>NT303RJ</td>
<td></td>
</tr>
<tr>
<td>Multi-task Package</td>
<td>NT304AJ</td>
<td>Enables intercommunication of signals with Visual Basic programs and exchange of array data in a PLC with Visual Basic programs.</td>
</tr>
<tr>
<td></td>
<td>NT304RJ</td>
<td></td>
</tr>
<tr>
<td>OPC Data Link Package for .NET</td>
<td>NT336AJ</td>
<td>Links various control properties in Microsoft Visual Studio .NET, “Visual Basic” or “C#” to control object properties without developing any program.</td>
</tr>
</tbody>
</table>

### Options for Device Connections

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>MELSEC Driver</td>
<td>NT351AJ</td>
<td>Driver for connecting MELSEC Series controllers from Mitsubishi Electric Corporation. Implements EZSocket.</td>
</tr>
<tr>
<td>SYMTRAC Driver</td>
<td>NT356AJ</td>
<td>Driver for connecting SYMTRAC Series controllers from OMRON Corporation. Implements FinsGateway.</td>
</tr>
<tr>
<td>OPC Server Driver</td>
<td>NT358AJ</td>
<td>Driver for connecting a third-party OPC server.</td>
</tr>
<tr>
<td>DARWIN Driver</td>
<td>NT365AJ</td>
<td>Driver for connecting Yokogawa DARWIN Series units and DAQSTATION recorders.</td>
</tr>
</tbody>
</table>

Note: For the models supported by the individual drivers, see the respective General Specification sheets.

Note: No optional software is required for VDS to connect to the following devices: FCN/FCJ autonomous controllers, FA-M3 universal-range controllers, Green Series controllers, and UPM100/101 power monitors. More models will be added to the range of supported models.

Note 1: Each software license, except for the software medium (Model NT201AJ), is required for each computer running VDS to run the corresponding software.

Note 2: The software that is not offered in full-time and runtime versions can run in both the development and runtime environments.
The following names are trademarks or registered trademarks of their respective holders:
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- MELSEC, EZSocket, SYSMAC, FinsGateway
- Ethernet
- ORACLE

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The clear path to operational excellence

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Represented by:

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