DS800 Development Suite Software

DS800 Development Suite Software Workbench (DS800) is the PC-based program which allows you to build IEC 61131-3 compliant programs for use with the ROC800-Series Remote Operations Controller (ROC800) or FloBoss 107 Flow Manager (FB107) unit. The DS800 software can be used to develop programs independently of ROCLINK™ 800 Configuration Software. You typically download these programs over the Ethernet port (ROC800) or a serial port (ROC800 or FB107) to the unit. Each device must have an optional run-time license key (purchased separately) to run programs created with DS800 software.

DS800 Development Suite software allows programming in all five of the IEC 61131-3 languages:

- Ladder Diagram.
- Sequential Function Chart.
- Function Block Diagram.
- Structured Text.
- Instruction List.

In addition to the above languages, a Flow Chart language is also provided.

Applications built with the DS800 Development Suite software can be executed in the ROC800 or FB107 unit in addition to, or as an alternative to, Function Sequence Table (FST) programs. For ROC800 units, DS800 has the added benefit of being able to implement a single control algorithm using a distributed architecture. Users will also appreciate the powerful simulation and debug capabilities provided while on-line or off-line.

DS800 Development Suite software has the following features:

- Cross-reference (bindings) between variables in separate ROC800 units.
- Variable Dictionary.
- Off-line simulation for diagnostics and testing.
- On-line debugging of programs.
- On-line modification of programs.
- Locking and forcing of variables.
- User developed functions and function blocks.
- User defined templates.
- Access to ROC800 and FB107 internal data and functionality.

The Project Manager screen is the primary screen in the DS800 Development Suite. The screen is used to create configurations, resources, programs, and provides a mechanism to link and cross-reference them. Programs are then compiled, downloaded to the ROC800 or FB107 unit, and debugged. A Variable Dictionary supports structures of advanced data types, integer, floating point (real), binary, complex structure, arrays, functions, function blocks, and strings.

The Project Manager screen graphically presents in an organized fashion programs, resources, configurations, and networks within the current project. All language editors are launched from the Project Manager, as are the simulator, compiler, and document generator. The four views of the Project Manager screen are:

- Link architecture.
- Hardware architecture.
- Dictionary.
- Input/Output (I/O) Wiring tool.

These views allow visualization of the complete control algorithm independently of its physical architecture.

The graphical programming languages, like Ladder Diagram, feature simple-to-use icons and a clear designation of current position within the workspace.

A simulator is built into the DS800 Development Suite software to allow debugging and testing before the program is downloaded to the ROC800 or FB107 unit. Once downloaded, variables associated with I/O channels can be locked and unlocked easily, thereby allowing them to be forced to a desired value for testing purposes. DS800 software alerts the user to errors within the program when it is compiled. Once downloaded, DS800 software supports on-line changes without having to restart the controller.

The DS800 application workbench is available in two versions: distributed and 128-point. The distributed workbench is required to create a project with multiple ROC800s tied together and distributed across an Ethernet network.

The 128-point workbench is for projects with a single ROC800 or FB107 that contains only one resource with a

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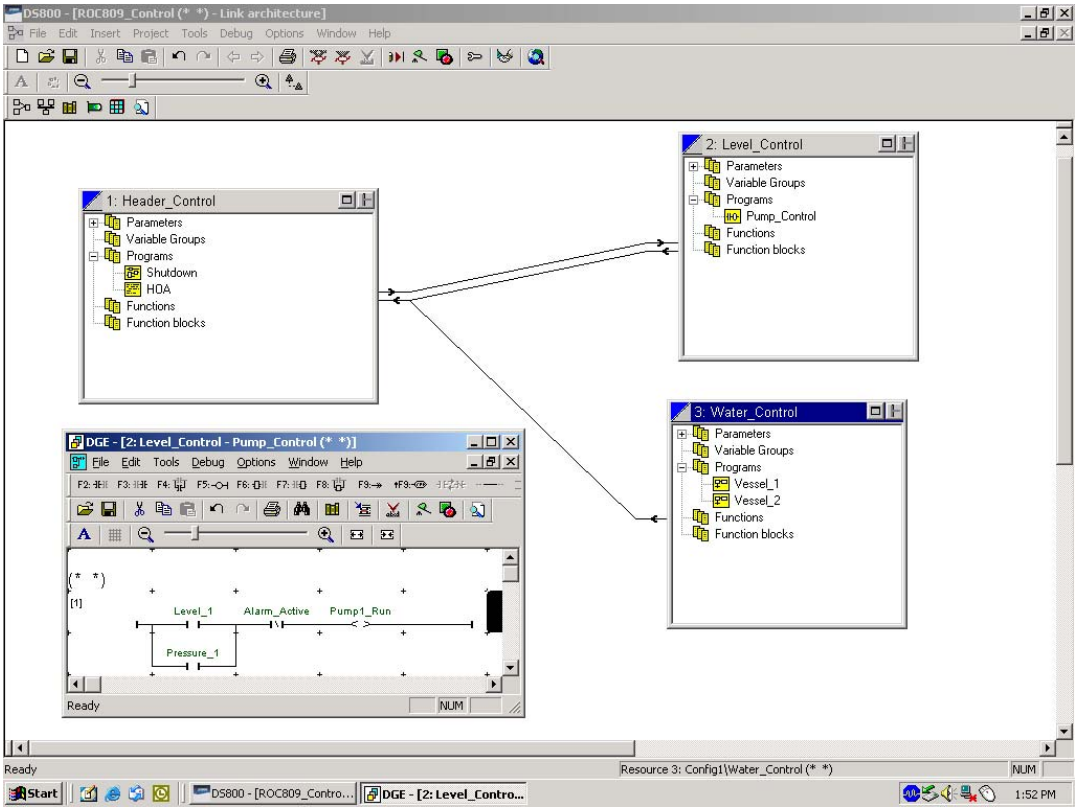
maximum of 128 I/O points (points declared as inputs or outputs).

In both versions, there is no limit to the number of internal variables and the number of programs a single resource can have.

The DS800 software is designed to run on an IBM-compatible personal computer (PC) having the following minimum requirements:

- Pentium-class processor (233 MHz or greater recommended).
- CD-ROM drive.
- Windows 2000 (Service Pack 2) or XP.
- Ethernet (recommended) or serial port.
- USB port (for USB-based software license key).
- ROCLINK 800 Configuration Software (version 1.80 or greater).
- SVGA color monitor, 800 x 600 pixels.

The software and user documentation are supplied on a CD-ROM. A USB-based software license key is also supplied. The USB key is required for full programming functionality. A “Technician” mode is available without the USB key. The “Technician” mode allows read-only access to DS800 projects, and allows you to transfer DS800 projects to a ROC or FloBoss.



Link Architecture View

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