

General Specifications

NT755FJ FCN/FCJ Java Application Development Kit



GS 34P02Q76-01E

■ GENERAL

This document describes the FCN/FCJ Java Application Development Kit for creating Java applications running on Autonomous Controllers - FCN (Field Control Nodes) and FCJ (Field Control Junctions).

■ Overview of FCN/FCJ Java Function

The FCN/FCJ Java function is used to execute Java applications on the FCN/FCJ Autonomous Controllers (hereinafter referred to as FCN/FCJ). Control function written in IEC 61131-3 compliant programming languages runs on the FCN/FCJ. The FCN/FCJ Java function runs in parallel with this control function, performing control data monitoring, alarm notification, and logging using Java applications without requiring separate SCADA software.

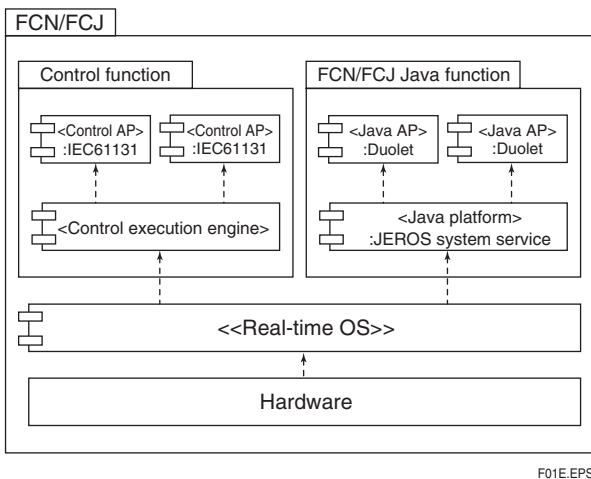


Figure Schematic of FCN/FCJ Java Function

■ FEATURES OF FCN/FCJ Java FUNCTION

- FCN/FCJ Java function enables the execution of user-created Java applications, alarm notification by email, and data transfer and storage by FTP.
- This function works in a memory area separate from the control function, so do not affect the memory area used by the “control engine” even though the Java applications use large amounts of memory.
- Java applications operate at a lower priority level than control function, so the CPU load due to Java applications does not have any effect on the control function.
- By using the (optional) Webmetry Basic Library Portfolio with FCN/FCJ Java function, you can publish data on the Web.

■ FCN/FCJ Java APPLICATION DEVELOPMENT KIT OVERVIEW

The FCN/FCJ Java function is configured as follows:

As shown in the figure below, our “Duolet” Java applications run on the Java Class Library provided by the FCN/FCJ Java function.

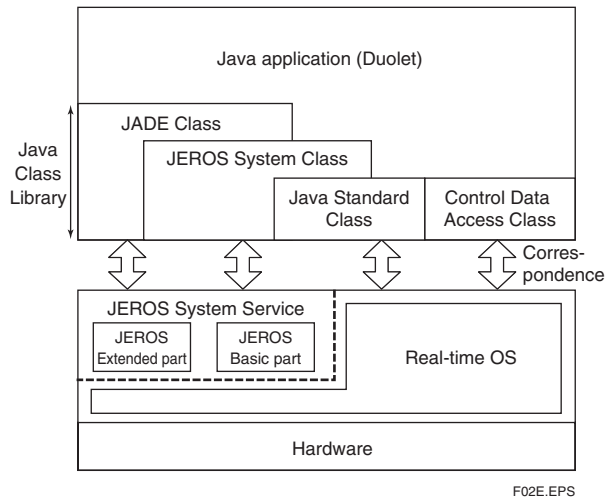


Figure Configuration of FCN/FCJ Java Function

The FCN/FCJ Java Application Development Kit is software to develop “Duolet” Java applications as shown in the figure above.

Use the SUN Microsystems, Inc. JDK (Java Development Kit) to develop Java applications.

The FCN/FCJ Java Application Development Kit includes Class Libraries required for developing Java applications on the FCN/FCJ - such as JADE class, JEROS system class, and control data access class. This kit also includes a Duolet monitor that allows Java application operations on the FCN/FCJ to be monitored on Windows and a JEROS emulator which runs on Windows and emulates the JEROS system service.

■ SOFTWARE

● FCN/FCJ Java Application Development Kit

This kit comes with the following software media. Use the supplied software together with the SUN Microsystems, Inc. JDK (Java Development Kit) to create a Java application on Windows.

Class libraries

- JADE Class Library
A class library for executing and managing Java application multitasking
- JEROS Class Library
A class library for system management
- Control Data Access Class Library
A class library for accessing data for control function

Duolet monitor

This software, running on a Windows machine, monitors "Duolet" Java applications running on the FCN/FCJ.

While the Java application is being tested on the FCN/FCJ, you can monitor or debug the Duolet running on the FCN/FCJ via a network.

JEROS emulator

This software runs on Windows and emulates JEROS system services.

This software enables Java applications to be tested on Windows.

Note: The JEROS emulator does not support control data access. To test Java applications which access control data, run them on the FCN/FCJ.

■ METHOD OF PROVIDING SOFTWARE

● Software Media

The FCN/FCJ Java Application Development Kit program and help are supplied on the FCN/FCJ Software Media (Model NT203AJ).

● The FCN/FCJ Java Application Development Kit License

The FCN/FCJ Java Application Development Kit comes with an order ID sheet as the order ID and password. After purchasing the license, access the specified Yokogawa Web site and enter this order ID and password. The corresponding key code is then issued. Use this key code to install the FCN/FCJ Java Application Development Kit on a PC.

■ OPERATING ENVIRONMENT

● Development Environment

Hardware operating environment

PC: Must satisfy operating environment requirements for logic designer.

Software operating environment

Java development environment:
SUN Microsystems, Inc. JDK 1.1.8 or later (J2SE SDK 1.3.1 or later recommended (*1))
Web browser: Internet Explorer 6.0 SP1 or later (*2)

- *1: The Java standard class of the FCN/FCJ Java function is compliant with the JDK 1.1.8 API. Any new functions added to later versions of the API cannot be used for the FCN/FCJ Java function.
- *2: The Web browser is needed to set the operating environments of FCN/FCJ Java function.

● Execution Environment

Hardware operating environment

Autonomous controllers FCN/FCJ (*1)

Software operating environment

FCN/FCJ basic software R1.20.01 or later (*2)

- *1: If FCN dual-redundant CPUs are used, FCN/FCJ Java function cannot be used.
- *2: If FCN/FCJ Java function is used, select "enable Java functions" for corresponding suffix codes of the FCN/FCJ Basic Software License (Model NT711AJ).

■ MODEL AND SUFFIX CODES

● FCN/FCJ Java Application Development Kit License

		Description
Model	NT755FJ	FCN/FCJ Java Application Development Kit License
Suffix codes	-L	License
	W	Issued on the Web
	1	Always 1
	1	Always 1
	A	Standard

Note: One license is required per PC running the FCN/^{T01E.EPS}FCJ Java Application Development Kit.

■ ORDERING INSTRUCTIONS

Specify model and suffix codes when ordering.

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