

General Specifications

STARDOM FCN/FCJ OPC Server for Windows



GS 34P02Q61-01E

■ GENERAL

FCN/FCJ OPC Server for Windows (hereinafter referred to as simply FCN/FCJ OPC Server) is software that supports interfaces compliant with the OPC (OLE for Process Control) Data Access standard ver. 2.0 (DA 2.0) and runs on a generic Windows-based computer. FCN/FCJ OPC Server supplies data in FCNs and FCJs to OPC clients upon request via an OPC DA 2.0 interface, thus allowing easy access from OPC clients to data inside FCNs and FCJs.

■ FEATURES

● Uses of FCN/FCJ OPC Server

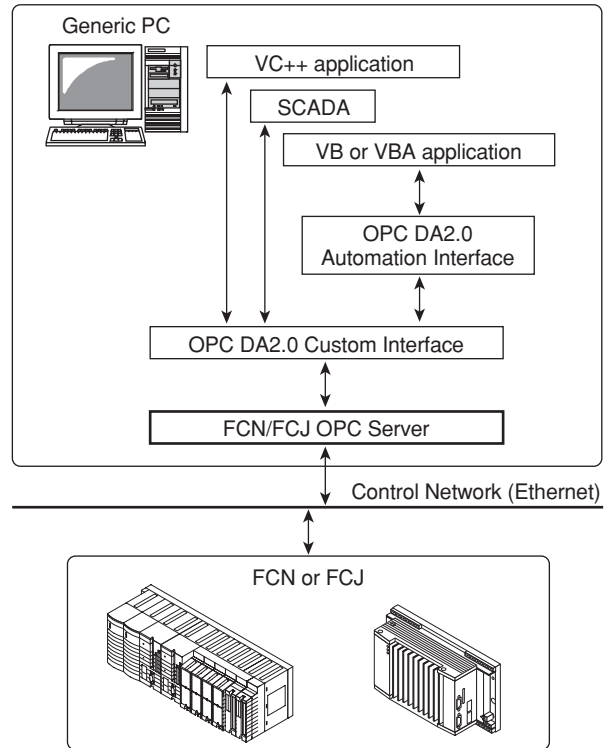
OPC interfaces provided by FCN/FCJ OPC Server can be used by a broad range of OPC client applications including:

- Various applications available in the market and compliant with the standards of OPC Foundation, such as SCADA
- User applications written in Microsoft Visual Basic or Visual C++

● Compliance with Standard OPC Specifications

FCN/FCJ OPC Server provides an interface compliant with the standard OPC Data Access interface specifications proposed by OPC Foundation.

■ FUNCTION CONFIGURATION



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Figure Function Configuration

FUNCTION SPECIFICATIONS

The table below outlines the capability of FCN/FCJ OPC Server.

Table Capability of FCN/FCJ OPC Server

Item	Specification
Connectable clients	Up to 100
Accessible data	Data residing in an FCN or FCJ (*1)
Accessible data type	Specified data types only (details are described later).
Data opening method	Compliant with OPC Foundation's Data Access Custom Interface standard ver. 2.05.
Connectable FCNs and FCJs	Up to 32
Access to duplexed-CPU FCN	Possible (*2)
Prerequisite for access	The FCN or FCJ in question must be running.(*3)
Dual-redundant network	Supported.(*4)

*1: These are control application parameters whose OPC attributes are turned ON, and internal parameters for PAS POU operation mode/tuning elements and the like.

*2: Communication retries will occur during a switching of the control right between the CPUs.

*3: An item can be defined for a group object only when the corresponding FCN or FCJ is running.

*4: Making the network dual-redundant requires the optional Duplexed Network Program for FCN/FCJ (see GS 34P02Q62-01E for details).

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Application Capacity

For an OPC client to access FCN/FCJ OPC Server, group objects need to be defined. In each group, multiple item IDs can be set, as shown below.

Table Application Capacity

Item	Specification
Group objects	Up to 1,000
Item IDs	Up to 10,000 per group object; up to 100,000 in total
Data update interval	1,000 to 3,600,000 milliseconds (1 second to 1 hour)

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Accessible Data Types

Data residing in FCNs and FCJs, opened by FCN/FCJ OPC Server, accessible for OPC clients are limited to data of one of the data types shown in the following tables. Data types are broadly categorized into four types:

- Basic data types
- Data types of a system flag
- Data types of an application portfolio
- Data types of a device label parameter

Table Basic Data Types

Data Type of Control Application's Parameter		Data Type in OPC
Data Type	Member Name	
BOOL	-	VT_BOOL
SINT	-	VT_I1
INT	-	VT_I2
DINT	-	VT_I4
USINT	-	VT_UI1
UINT	-	VT_UI2
UDINT	-	VT_UI4
REAL	-	VT_R4
LREAL	-	VT_R8
TIME	-	VT_UI4
BYTE	-	VT_UI1
WORD	-	VT_UI2
DWORD	-	VT_UI4
STRING	-	VT_BSTR

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Note: For all data types, array data items are also accessible.

Table Data Types of System Flag

Data Type of Control Application's Parameter		Data Type in OPC
Data Type	Member Name	
SD_FErrTab	-	VT_UI4
SD_FTaskName	-	VT_BSTR
SD_FVerStr	-	VT_BSTR
SD_FPrjName	-	VT_BSTR
SD_FRevShort	-	VT_BSTR
SD_FRevLong	-	VT_BSTR
SD_FNodeType	-	VT_BSTR
SD_FSerialNumber	-	VT_BSTR
SD_FManu_Date	-	VT_BSTR
SD_FErrInfoStr	-	VT_BSTR
SD_FRAS_Info	SoftStatus (*1)	VT_UI2
	HardStatus	VT_UI2
	SramErr	VT_UI2
	CpuTemp	VT_UI2
	MemErrCnt	VT_UI4
	MemErrAdd	VT_UI4
	SramErrCnt	VT_UI4
	DownStatus	VT_UI4
	DownCode	VT_UI4
	TotalTime	VT_UI4
	ActiveTime	VT_UI4
	RestartFlag	VT_BOOL
CtrlPriority	VT_I2	

T04E.EPS

*1: This data member is accessed if the data member name is omitted in access.

Table Data Types of Application Portfolio

Data Type of Control Application's Parameter		Data Type in OPC
Data Type	Member Name	
CDATA_REAL	Value (*1)	VT_R4
	SH	VT_R4
	SL	VT_R4
	Unit	VT_BSTR
CDATA_INT	Value (*1)	VT_I2
	Status	VT_UI4
CDATA_DINT	Value (*1)	VT_I4
	Status	VT_UI4
CDATA_BOOL	Value (*1)	VT_BOOL
	Status	VT_UI4
	Cinfo	VT_UI4
SUM_DEF	SUM (*1)	VT_UI4
	DP	VT_UI2
	Status	VT_UI4
NSUM_DEF	SUM (*1)	VT_R8
	DP	VT_UI2
	Status	VT_UI4

*1: This data member is accessed if the data member name is omitted in access. T05E.EPS

Table Data Types of Device Label Parameter

Data Type of Control Application's Parameter		Data Type in OPC
Data Type	Member Name	
Dtag_I_Anlg Dtag_O_Anlg	Value (*1)	VT_UI2
	SH	VT_R4
	SL	VT_R4
	Unit	VT_BSTR
Dtag_I_Temp	Value (*1)	VT_R4
	SH	VT_R4
	SL	VT_R4
	Unit	VT_BSTR
Dtag_I_Pcnt	Value (*1)	VT_R4
	SH	VT_R4
	SL	VT_R4
	Unit	VT_BSTR
Dtag_I_PulsL	Value (*1)	VT_UI2
	SH	VT_R4
	SL	VT_R4
	Unit	VT_BSTR
	PRate	VT_R4
Dtag_I_Sts Dtag_O_Sts	Value (*1)	VT_UI2
	Status	VT_UI2
Dtag_I_PushB	Value (*1)	VT_UI2
	Status	VT_UI2

*1: This data member is accessed if the data member name is omitted when accessing. T06E.EPS

■ OPC DA 2.0 SPECIFICATIONS

● Interfaces

FCN/FCJ OPC Server provides the following OPC DA 2.0-compliant interfaces.

Table Interfaces Provided by FCN/FCJ OPC Server

Object	Interface	Remarks
Server object	IOPCCommon	Version1.0
	IOPCServer	
	IOPCItemProperties	Only the standard properties are supported.
	IOPCBrowseServerAddressSpace	
	IConnectionPointContainer	
	IOPCShutdown	Client side
Group object	IOPCGroupStateMgt	
	IOPCSyncIO	
	IOPCAsyncIO2	
	IOPCItemMgt	
	IConnectionPointContainer	
	IOPCDataCallback	Client side

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● Item IDs

Item IDs are to be defined in the following syntax:

HostID!DataInstanceName[(n)].[MemberName]

where brackets are optional and each parameter is as shown below.

- HostID** Identification name of the FCN or FCJ node to be accessed.
- !** Character (an exclamation mark) separating the host ID from the data instance name.
- DataInstanceName** Name of the parameter in the control application; for an array parameter, specify the desired data position in (n) where n is the array element number.
- .** Character (a period) separating the data instance name from the data member name.
- MemberName** Specify the data member name when accessing a member in a structure variable. When the member name is omitted, the interface regards the default member name as specified.

● Others

- Access path designations: Not supported.
- DeadBand: Not supported.

■ SYSTEM REQUIREMENTS

Table System Requirements to Run FCN/FCJ OPC Server

Item	Specification
Personal computer	PC/AT-compatible computer
CPU	Pentium II 300 MHz or better (Pentium4 1.6 GHz or better recommended)
RAM	256 MB or more (512 MB or more recommended)
Hard disk	At least 1 GB of free space is required.
CD-ROM drive	A CD-ROM drive that is supported by the operating system specified at the bottom of this table is required.
Ethernet adapter	A 10Base5, 10Base-T, or 100Base-TX adapter that is supported by the operating system specified at the bottom of this table is required.
Operating system	Windows 2000 Professional SP4 Windows XP Professional SP1, SP2

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■ ORDERING PROCEDURE

Specify the model and suffix codes.

■ TRADEMARKS

- STARDOM is a trademark of Yokogawa Electric Corporation.
- Ethernet is a registered trademark of Xerox Corporation.
- Pentium is a registered trademark of Intel Corporation.
- Windows is registered trademarks of Microsoft Corporation in the United States and other countries.
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■ SOFTWARE AND LICENSE

● Software Medium

Programs and help for FCN/FCJ OPC Server for Windows are supplied on a CD-ROM (Model NT203AJ).

● License

An order ID sheet with the order ID and password entries comes with each FCN/FCJ OPC Server for Windows License. Access the specified Web site of Yokogawa and enter the order ID and password. Then, the corresponding key code required for software installation will be given.

■ MODEL AND SUFFIX CODES

		Description
Model	NT781AJ	FCN/FCJ OPC Server for Windows (media: Model NT203AJ)
Suffix Codes	-L	License
	W	Issued at Web
	1	Always 1
	1	Always 1
	A	Standard

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