General Specifications

Model NT358AJ
OPC Server Driver

GS 34P02G08-01E

■ GENERAL

This optional OPC server driver is used to connect third-party OPC servers to the VDS (Versatile Data Server Software).

■ SYSTEM REQUIREMENTS

The system requirements follow those required for VDS specified in VDS Versatile Database Server Software, GS 34P02A02-01E.

Note that the runtime version of OPC Server Driver does not allow the user to make or modify settings and only allows the monitoring.

■ FUNCTIONAL OVERVIEW

The OPC server driver makes the I/O object perform as an OPC client and exchange data with third-party OPC servers.

OPC(OLE for Process Control) specifications are the standard for exchanging data between two or more industrial system programs.

The driver allows the VDS system to connect with PLCs or OPC servers provided by other manufacturers and to exchange data in between devices and VDS device tag objects through the servers.

The following configurations are allowed:

• The OPC server coexists on a PC with VDS.
• The OPC server on other PCs in the same network.

■ FUNCTIONAL SPECIFICATIONS

● Interface Specifications

Interface: OPC DA 2.0
Method of access to device data: By means of OPC data acquisition methods
Asynchronous data reception: Not supported
Number of OPC servers connected: 32 max.

The following table lists the interfaces and methods defined by OPC DA 2.0 and used by the OPC server driver. OPC servers must have these interfaces and methods incorporated to be connected.

Specification	Object	Interface	Method
DA	OPCServer	IOPCServer	AddGroup
		IConnectionPointContainer	
	OPCGroup	IOPCGroupStateMgt	GetState
			SetState
		IOPCItemMgt	AddItems
			ValidateItems
			RemoveItems
			SetActiveState
		IOPCAsyncIO2	Read
			Write
			Cancel2
			Refresh2
			SetEnable
		IOPCDataCallback	OnDataChange
			OnReadComplete
			OnWriteComplete
		IConnectionPointContainer	

Although the method shown below is not required for data access, if an OPC server supports it, a shutdown of the OPC server can be detected on the VDS.

Specification	Object	Interface	Method
Common	OPCServer	IOPCShutdown	ShutdownRequest

● Relationship with Device Tag Objects

The following table shows the relationship between the OPC data types and corresponding device tag objects. Data types that are not listed below are not supported.

Data Type		Device Tag Object Type
Simple	VT_BOOL	DI,DO
	VT_I2	AI, AO
	VT_UI2	AI, AO
	VT_I4	XAI, XAO
	VT_UI4	XAI, XAO
	VT_R4	XAI, XAO
	VT_R8	WAI, WAO
	VT_BSTR	TXT
Array	VT_BOOL	DR
	VT_I2	AR
	VT_UI2	AR
	VT_I4	XAR
	VT_UI4	XAR
	VT_R4	XAR
	VT_R8	WAR

● OPC server failover

The OPC server driver supports OPC server failover functionality by monitoring the network and the OPC server, it automatically switches the server to the backup server if the error is detected in the network or the server.

Table Time to detect failure

Failure	Time to detect
Network Error	30s max
OPC server error	10s max
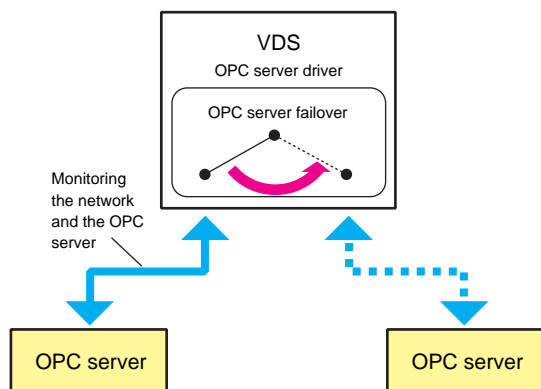
These two OPC servers must be the same software product.

F01E.ai

Figure OPC server failover

■ MODEL AND SUFFIX CODE

Model	Suffix Code	Description
NT358AJ	-LW11A	OPC Server Driver

■ ORDERING INFORMATION

Specify the model and suffix codes.

■ RELATED DOCUMENT

• VDS, GS 34P02A02-01E

■ TRADEMARKS

• STARDOM is a trademark of Yokogawa Electric Corporation.
• Microsoft and Visual Basic are registered trademarks of Microsoft Corporation in the United States and/or other countries.
• Other company and product names in this document are trademarks or registered trademarks of their respective holders.