AD\ANTECH Enabling an Intelligent Planet

Advantech AE Technical Share Document

Date	2016/08/04	SR#	1-2523032171			
Category	□FAQ ■SOP	Related OS	N/A			
Abstract	How to enable OPC server function in the Codesys					
Keyword	Codesys, OPC DA, OPC AE, SCADA					
Related						
Product	ADAW-5500-CD5, APAX-5580CD5					

Problem Description:

In this document, we will described the system structure of Codesys OPC V3 which is supported with Advantech Control x86 RTE and SoftMotion x86 RTE, detail setting procedures will also be covered.

System Structure:

Codesys OPC V3 is available with Advantech Control x86 RTE & SoftMotion x86 RTE, please note that it support OPC DA & OPC AE, but **NOT** OPC UA.

In most cases, Codesys IDE, Codesy gateway and Codesys OPC server can be installed in the same platform.



APAX-5580 with CODESYS Control RTE



Procedure:

1. Add a symbol configuration in Codesys Project

Right click on Application \rightarrow Add Object \rightarrow Symbol configuration.



Use default setting and click "Add"

Add Symbol configuration
Remote access symbol configuration.
Name:
 Include Comments in XML Support OPC UA Features Client side data layout Compatibility Layout Optimized Layout
Add Cancel

2. Build the project again and select the variable to be used in OPC server then download the project to PLC

Execute "Build" command to be	e able to select var	iables (you n	eed an error-f	ree build)	Build	Details
hanged symbol configuration w	ill be transferred wi	th the next do	ownload or on	line chang	è	
Symbols	Access Rights	Maximal	Attribute	Туре	Members	Comment
🗉 🔲 📄 Constants						
🗉 🔲 📑 IoConfig_Globals						
🗄 🔲 📄 PLC_PRG						
		-			•••	
Constants						
IoConfig_Globals						
🗄 🔽 📄 PLC_PRG						
LC_PRG			*		ARRAY	[010] OF REAL
UC_PRG	99 99		**		ARRAY BOOL	[010] OF REAL

3. Set the IP address of PLC in Codesys OPC configurator

Location: 3S CODESYS \rightarrow CODESYS OPC Server V3 \rightarrow OPC Configurator



Right click on "Server"→Append PLC

Server	Setting	for OPC Server
	New Redundancygroup	Ctrl+G
0	Append PLC	Ctrl+A
	Delete PLC	Ctrl+D
	Rename PLC	Ctrl+R ms): 100
	Reset PLC	Ctrl+Z
		Sync Init:
		Logging ✓ Enable logging (Defaultevents) ✓ Log Additional Events ✓ Add Debug Events (slowl)



Select Connection \rightarrow Edit

OPCConfig - C:\ProgramData\CoDeSysOPC\OPCServer.ini							
File Edit ?							
E	Edit						
	Gateway: Tcp/Ip						
	Device:						

Enable "Use Tcp/ip blockdriver"→Enter IP address of PLC and then save the file as "OPCServer.ini" (Default setting)

Gateway IP-Address localhost Port 1217	ОК
PLC name (recommended) or address Use Tcp/lp blockdriver	0000
IP Address of PLC	10.0.0.168

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4. Connect to OPC server via OPC client software

In this SOP, we will use Advantech Adam OPC Browser as test tool

Select "CoDeSys.OPC.DA" as OPC server

View About Monator OPC Server OPC Server OPC Server Specification Data Access 2 XX Speci
Ready (ODiert(s)

OPC client should be able to monitor/control the variables successfully.

Item ID	Value	DataType	Timestamp	Quality	Subquality	Limit	Result	Active
👮 PLC1.Application.PLC_PRG.TestBool	False	Boolean	2016/8/4 上午 11:18:00	Good	Not-specific	Not Limited	S_OK	True
\overline PLC1.Application.PLC_PRG.TestWord	12345	UInt16	2016/8/4 上午 11:18:00	Good	Not-specific	Not Limited	S_OK	True
💯 PLC1.Application.PLC_PRG.TestArray	System.Single 🛛	Single 🛛	2016/8/4 上午 11:18:21	Good	Not-specific	Not Limited	S_OK	True
👮 PLC1.Application.PLC_PRG.TestArray[0]	0.78	Single	2016/8/4 上午 11:18:19	Good	Not-specific	Not Limited	S_OK	True
👮 PLC1.Application.PLC_PRG.TestArray[1]	1.35	Single	2016/8/4 上午 11:18:19	Good	Not-specific	Not Limited	S_OK	True
💯 PLC1.Application.PLC_PRG.TestArray[2]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
🔁 PLC1.Application.PLC_PRG.TestArray[3]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
PLC1.Application.PLC_PRG.TestArray[4]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
🙇 PLC1.Application.PLC_PRG.TestArray[5]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
🔁 PLC1.Application.PLC_PRG.TestArray[6]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
Z PLC1.Application.PLC_PRG.TestArray[7]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
🛛 🗱 PLC1.Application.PLC_PRG.TestArray[8]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
💯 PLC1.Application.PLC_PRG.TestArray[9]	0	Single	2016/8/4 上午 11:17:17	Good	Not-specific	Not Limited	S_OK	True
🛛 💯 PLC1.Application.PLC_PRG.TestArray[10]	8.915	Single	2016/8/4 上午 11:18:21	Good	Not-specific	Not Limited	S_OK	True