

## Advantech AE Technical Share Document

|                 |  |            |              |
|-----------------|--|------------|--------------|
| Date            | 2016/08/04   | SR#        | 1-2523032171 |
| Category        | <input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP | Related OS | N/A          |
| Abstract        | How to enable OPC server function in the Codesys                     |            |              |
| Keyword         | Codesys, OPC DA, OPC AE, SCADA                                       |            |              |
| Related Product | ADAM-5560-CDS, APAX-5580CDS  |            |              |

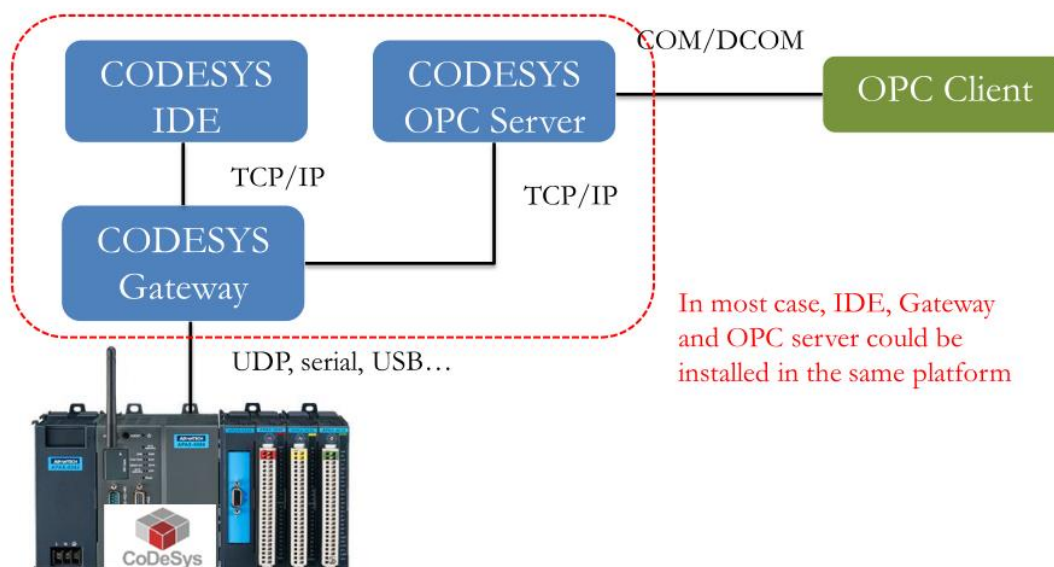
### ■ Problem Description:

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.



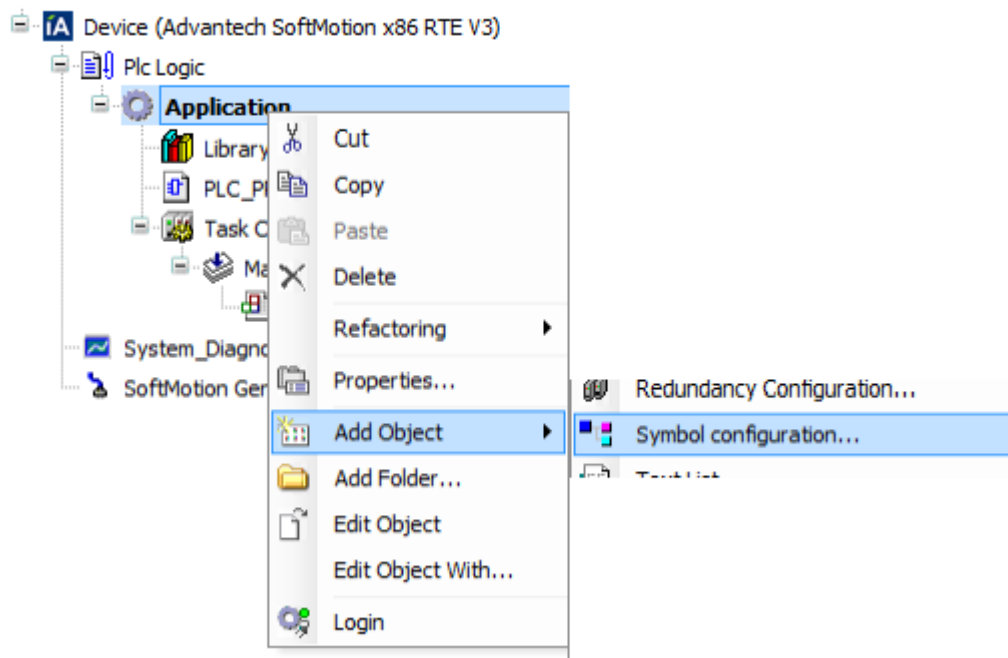
In most case, IDE, Gateway and OPC server could be installed in the same platform

APAX-5580 with CODESYS Control RTE

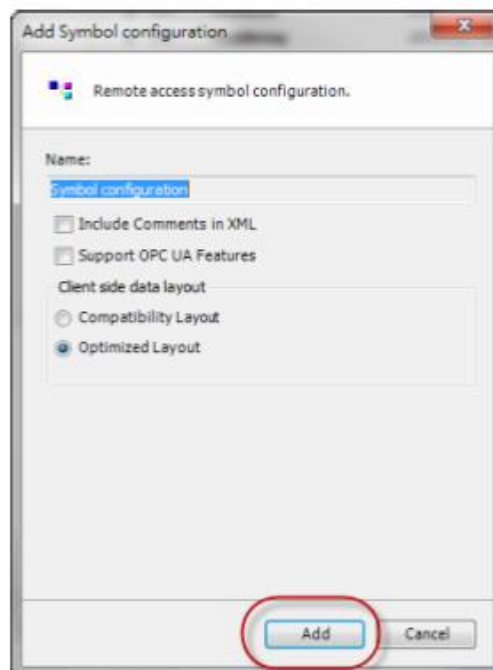
## ■ Procedure:

### 1. Add a symbol configuration in Codesys Project

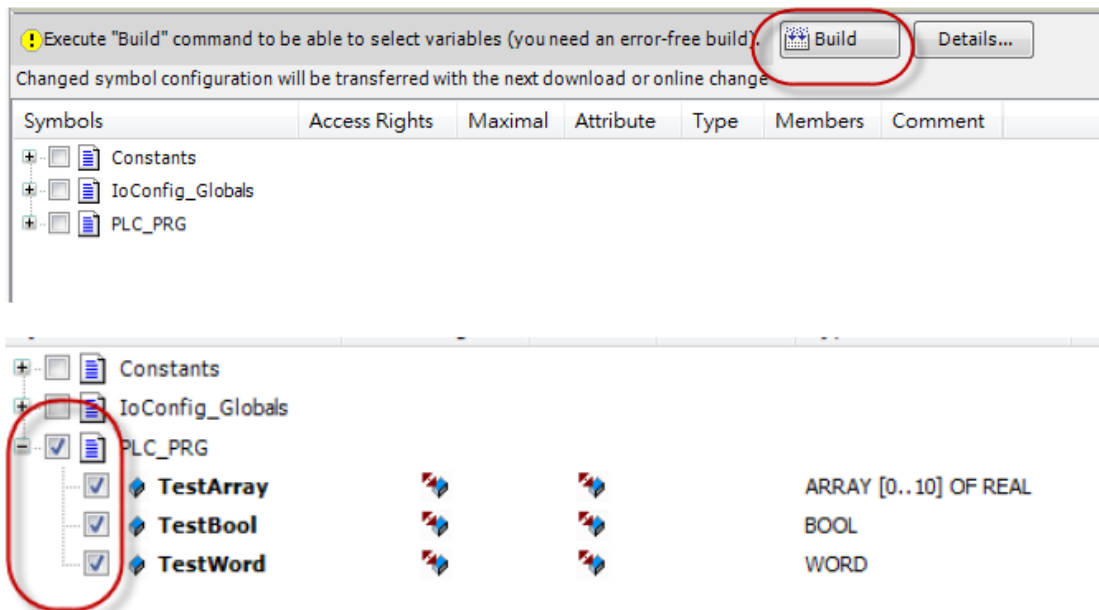
Right click on Application → Add Object → Symbol configuration.



Use default setting and click “Add”

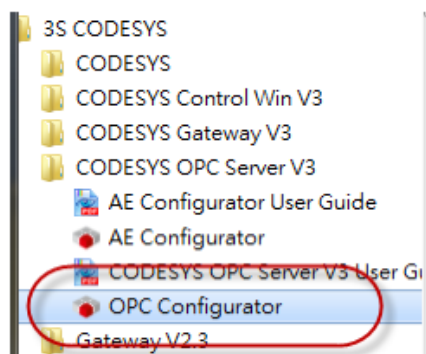


## 2. Build the project again and select the variable to be used in OPC server then download the project to PLC

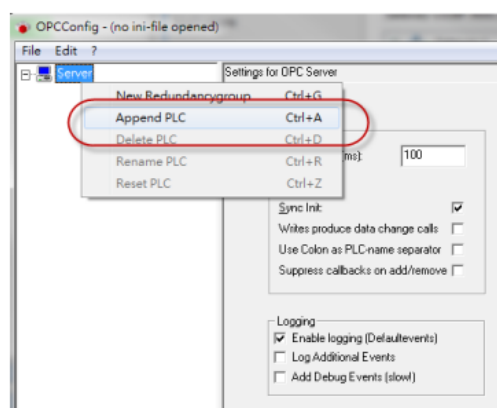


## 3. Set the IP address of PLC in Codesys OPC configurator

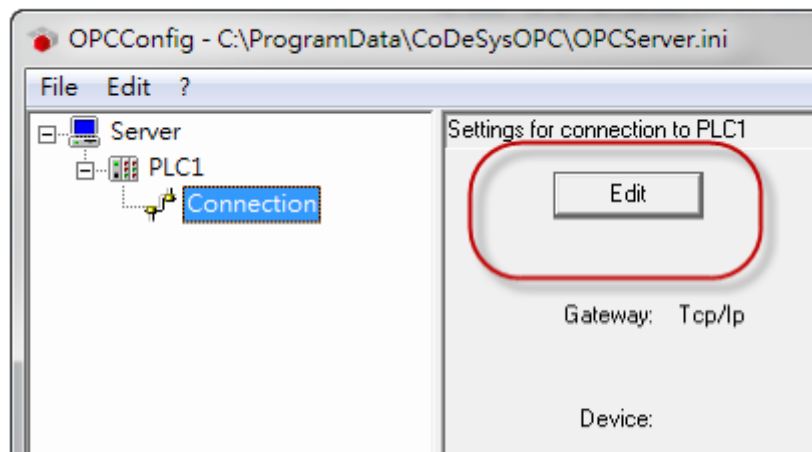
Location: 3S CODESYS → CODESYS OPC Server V3 → OPC Configurator



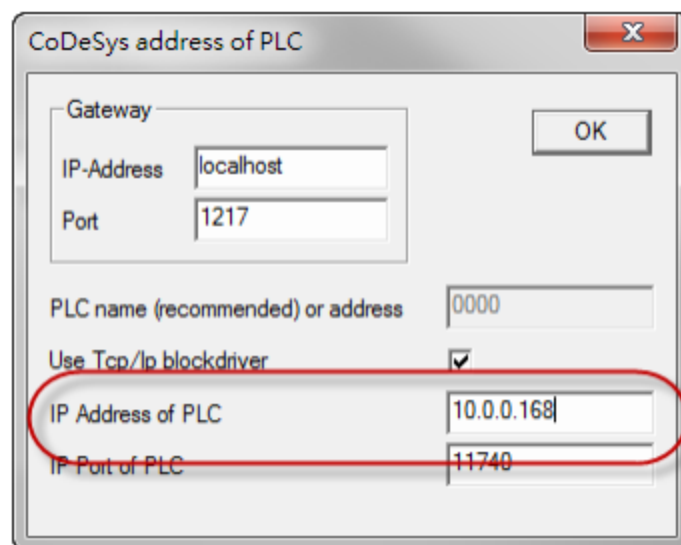
Right click on "Server" → Append PLC



Select Connection → Edit



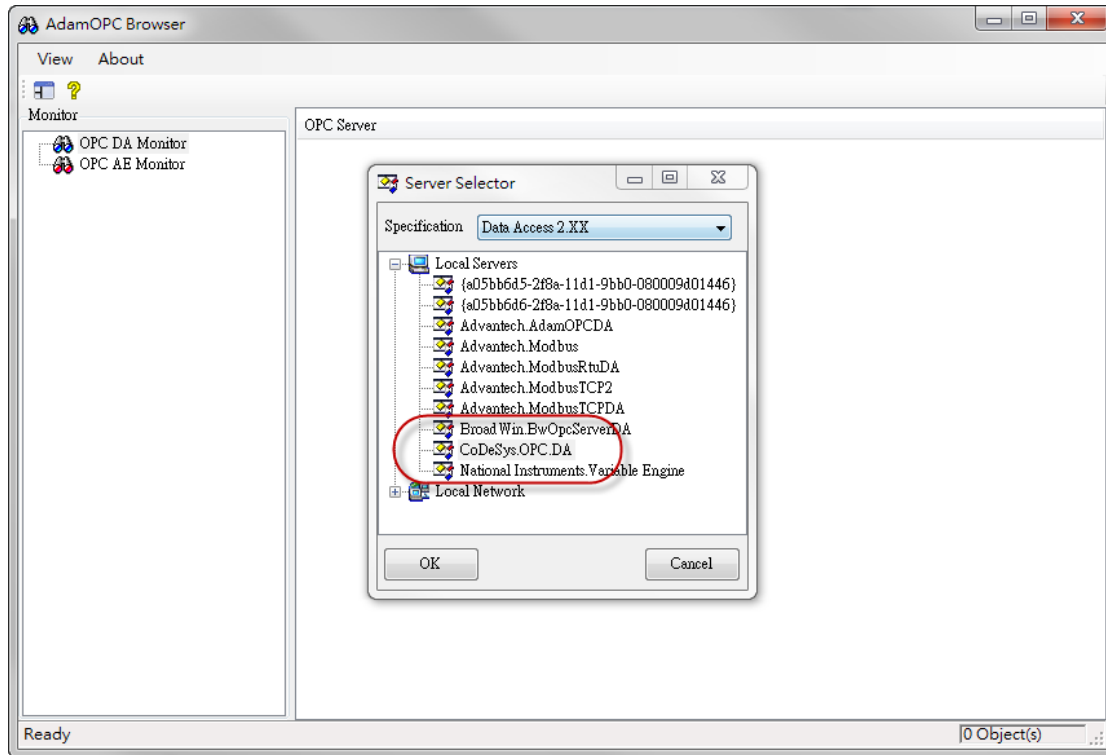
Enable “Use Tcp/ip blockdriver” → Enter IP address of PLC and then save the file as “OPCServer.ini” (Default setting)



## 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



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

| Item ID                                | Value           | Data Type | 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   |
| 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   |
| 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   |