Advantech AE Technical Share Document

Date	2018/4/9	SR#	1-3418441964
Category	■FAQ □SOP	Related OS	N/A
Abstract	How to use KW MULTIPROG to trigger ADAM-3600 I/O		
Keyword	ADAM-3600, I/O, KW, MULTIPROG, DI, DO, reaction, Modbus, TCP		
Related Product	ADAM-3600		

■ **Problem Description:**

   This document explains how to set up different ADAM-3600 devices for I/O chain reaction, and how to use KW MULTIPROG to control ADAM-3600 I/O.
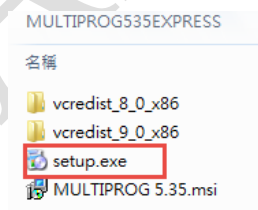
■ **Prerequisite:**

   To use KW MULTIPROG for ADAM-3600, user needs to install related software from Advantech official website.
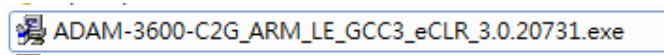
(http://support.advantech.com/Support/DownloadSRDetail_New.aspx?SR_ID=1-X915XS&Doc_Source=Download)

Download File	Released Date	Download Site	
MULTIPROG535EXPRESS.zip	2016-06-07	Primary	Secondary
ADAM-3600-C2G_ARM_LE_GCC3_eCLR_3.0.20731.exe	2015-05-21	Primary	Secondary

1. Install KW MULTIPROG 5.35 Express with setup.exe in MULTIPROG535EXPRESS.

MULTIPROG535EXPRESS

名稱

- vcredist_8_0_x86
- vcredist_9_0_x86
- setup.exe
- MULTIPROG 5.35.msi

2. Install ADAM-3600-C2G_ARM_LE_GCC3_eCLR_3.0.20731.exe. This eCLR is for downloading KW MULTIPROG intermediate code to ADAM-3600.

ADAM-3600-C2G_ARM_LE_GCC3_eCLR_3.0.20731.exe

Note: make sure that your installed Visual Studio Express version is compatible with <u>MS Visual C++ 2005.</u>

3. Install TagLink_2_1_1_AddOn_For_MULTIPROG_535_#46.exe from Advantech official website.

(http://support.advantech.com/Support/DownloadSRDetail_New.aspx?SR_ID=1-1DGHI57&Doc_Source=Download)

Download File	Released Date	Download Site	
TagLink_2_1_1_AddOn_For_MULTIPROG_535_#46.exe	2017-07-31	Primary	Secondary

   Note: install all of the add-on in the same folder as the KW express

■ **Answer:**

If the user wants to setup communication between different ADAM-3600, Modbus TCP is one option for implementation. This document introduces how to setup

1. Modbus server to provide DI status
2. Modbus client to receive DI status
3. Use KW to make relation between DI and DO in one ADAM-3600 machine
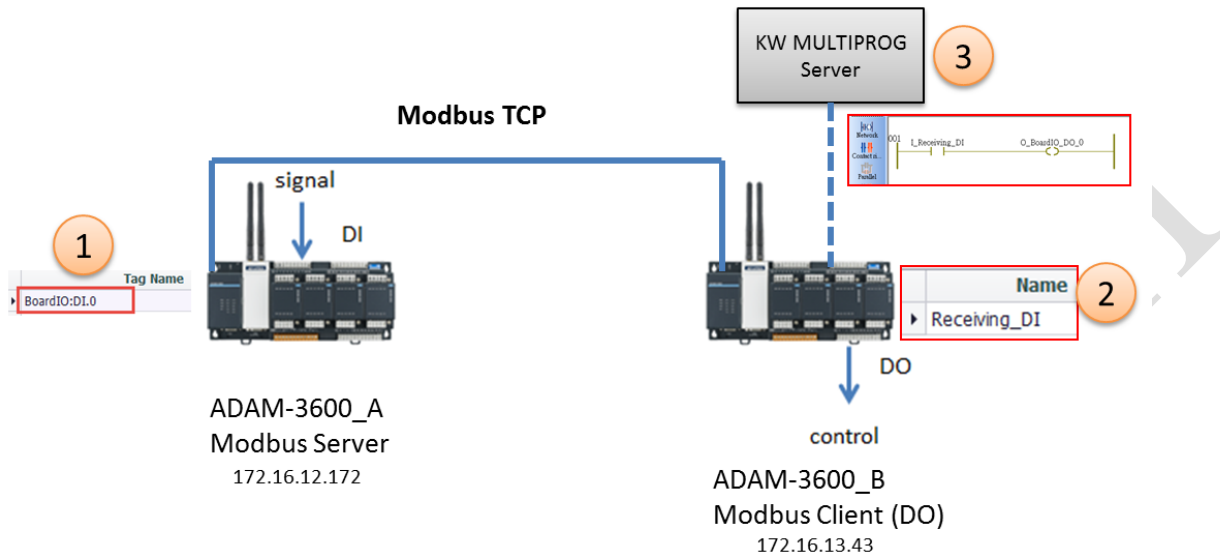
To further illustrate with above drawing, ADAM-3600_A receives signal into its BoardIO: DI. While ADAM-3600_B controls DO module, and queries DI status of ADAM-3600_A periodically.

We use KW MULTIPROG project to setup the received DI status to change DO status for ADAM-3600_B.

Note: once KW MULTIPROG project setup, there is **no need** the PC to run KW MULTIPROG project, and the relation between DI and DO on ADAM-3600_B will remain.

The setup requires 3 steps, which are described as followings.

1. Setup Modbus server (ADAM-3600_A) to provide DI status
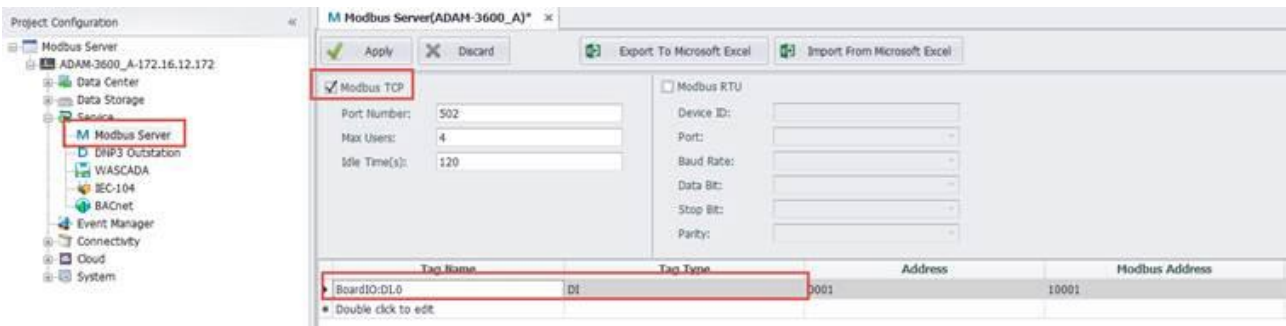
In the project "Modbus Server.acproj", I use User Tag "Simulate_DI" for simulating "BoardIO:DI".

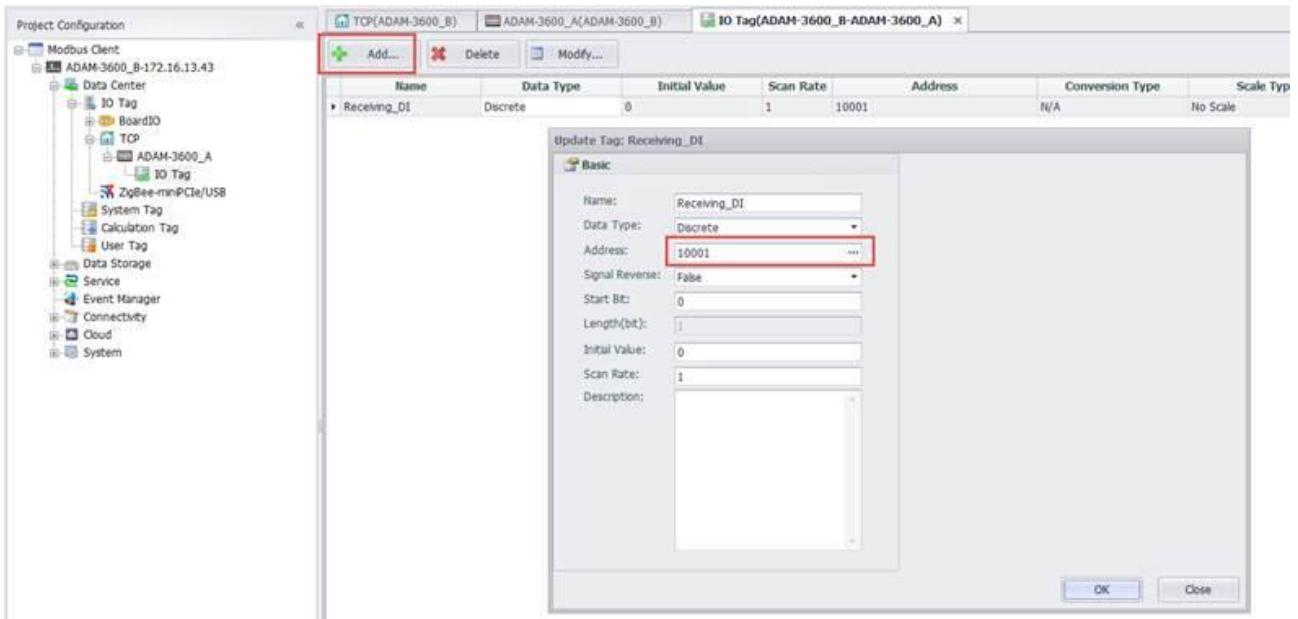**2. Setup Modbus Client (ADAM-3600_B) to receive DI status**

In configuration project of ADAM-3600_B, add port as TCPIP and new meter as Modicon. Key in ADAM-3600_A's IP address.
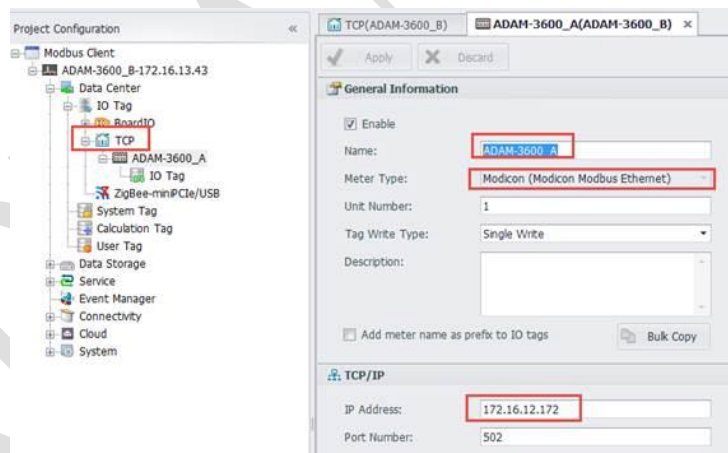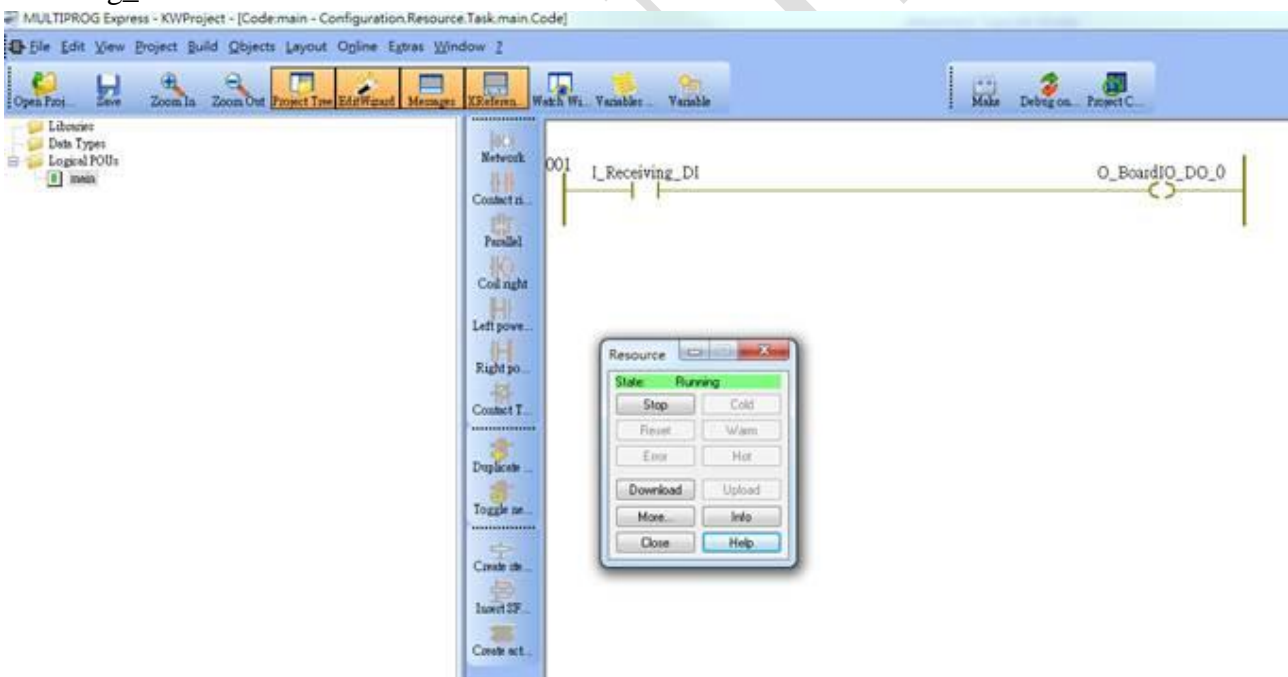

Add IO Tag of the new meter following Modbus address.

3. Use KW to make relation of DI and DO

We have no direct associating relation of DO with other tags in the period of writing this document. Therefore, we use KW MULTIPROG to associate the relation of DO reaction with receiving_DI.

You may take a look at the attached video "DI_trigger_DO.mp4".

DI_trigger_DO.mp4

The related TagLink and KW Projects are attached for your reference.

Modbus Server.acproj

Modbus Client.acproj

KWProject.mwe

Further detailed MULTIPROG Express setup may refer to below steps.

1. Create a new project.
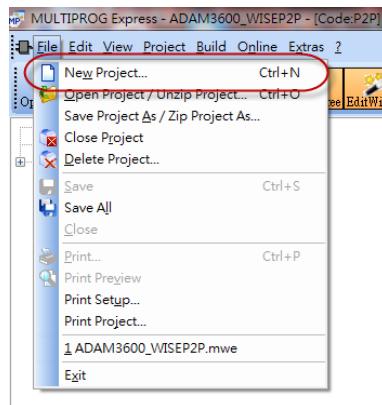
2. Enter the name of project and select the project path
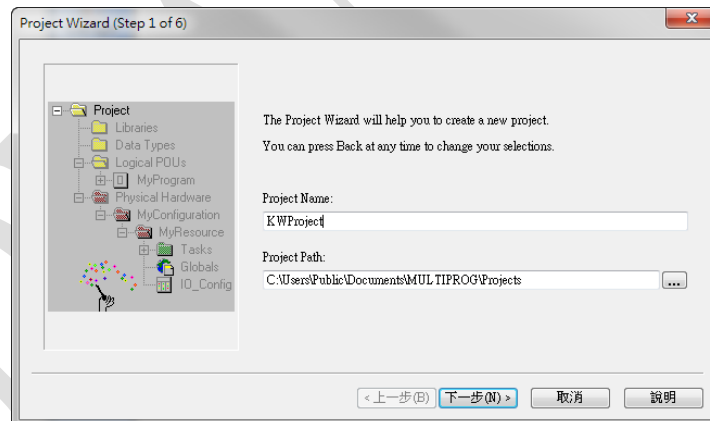
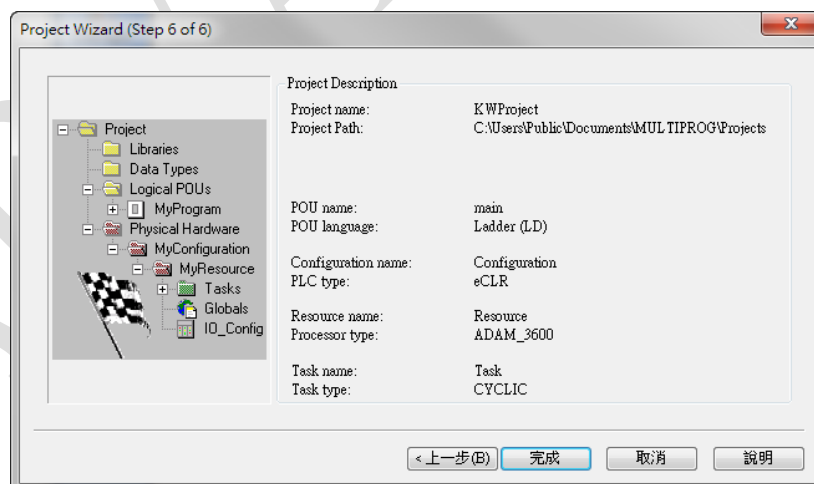3. Select One of IEC 61131-3 Programming Languages You Like
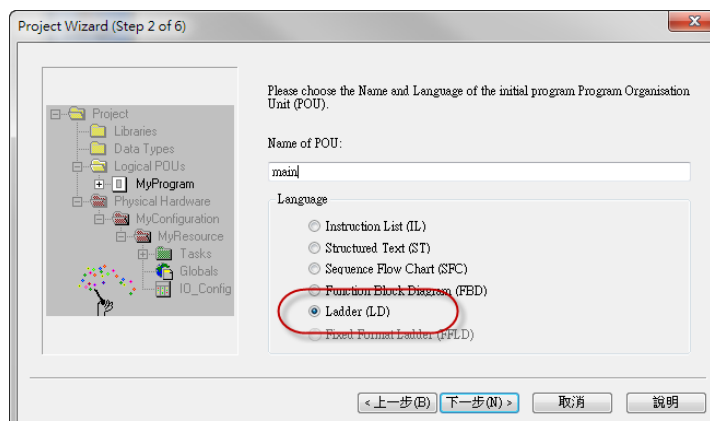
4. After installing Add-on, we can choose TagLink type here.
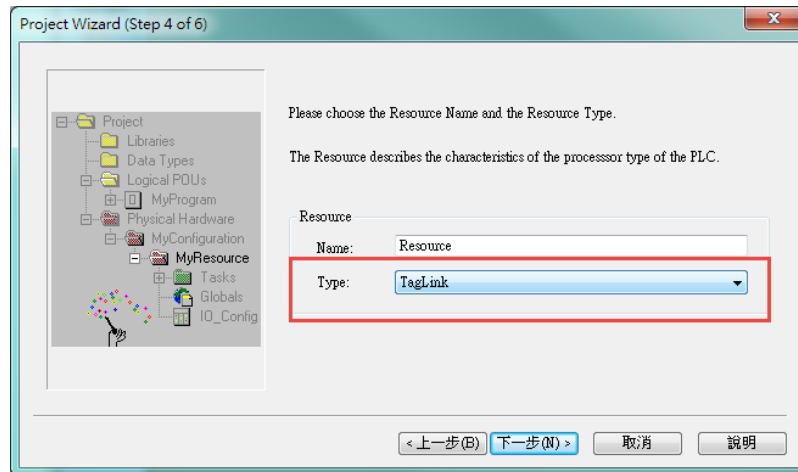
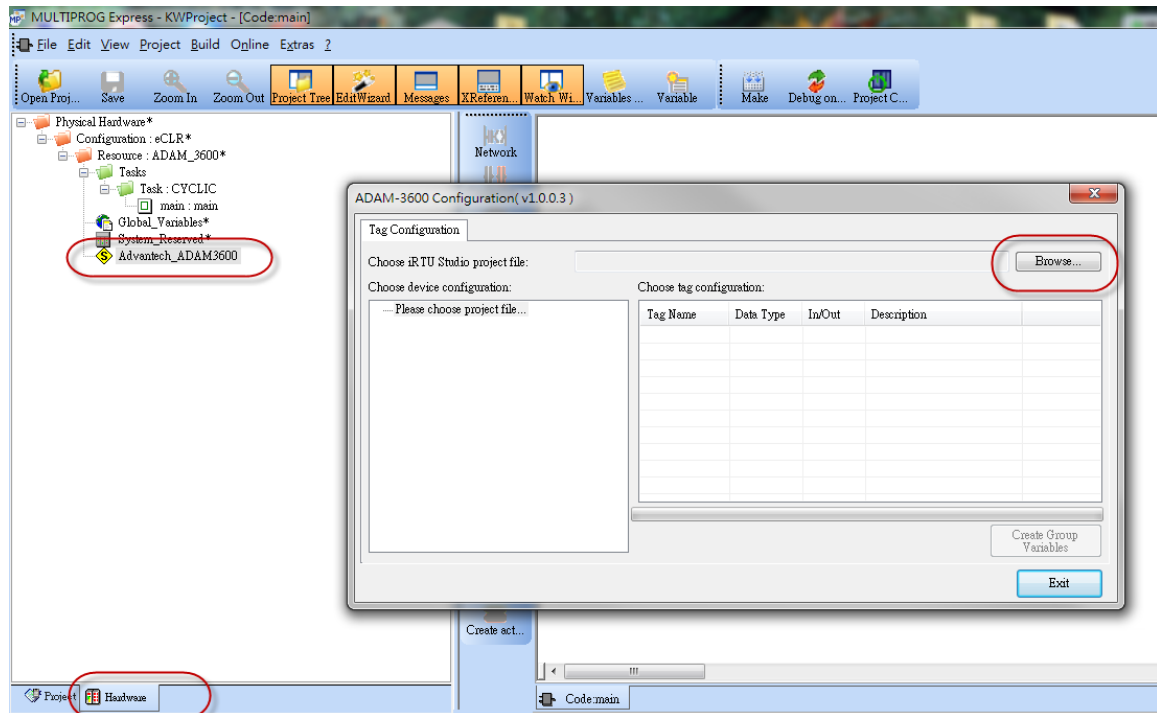5. Choose cyclic as task type and it will run it periodically.
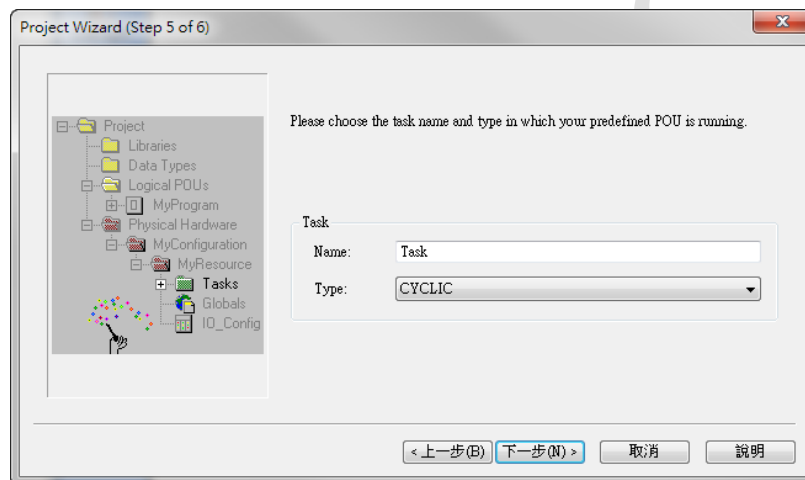
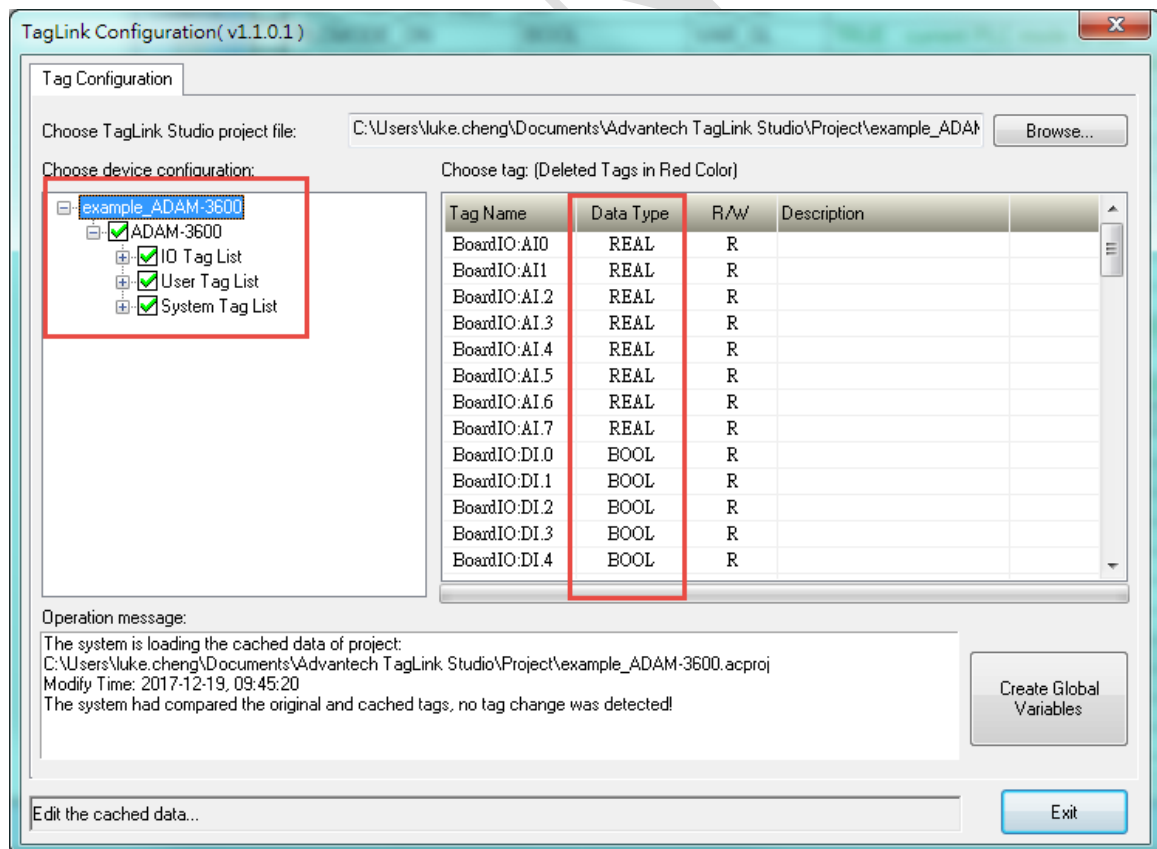
6. You could see the overall project description, and click Finish

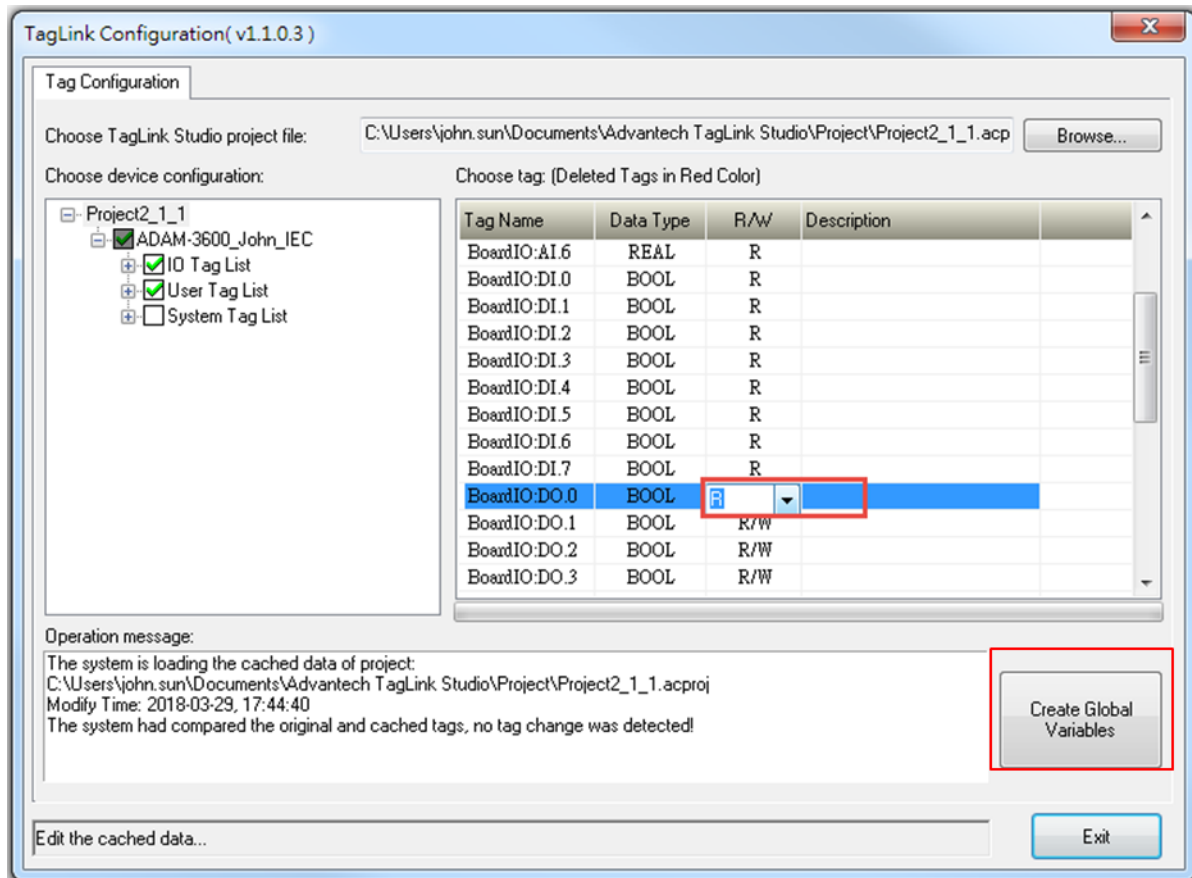7. Select "Hardware."

   Double click "Advantech_ADAM3600."

   Click "Browse" to select the project of TagLink Studio
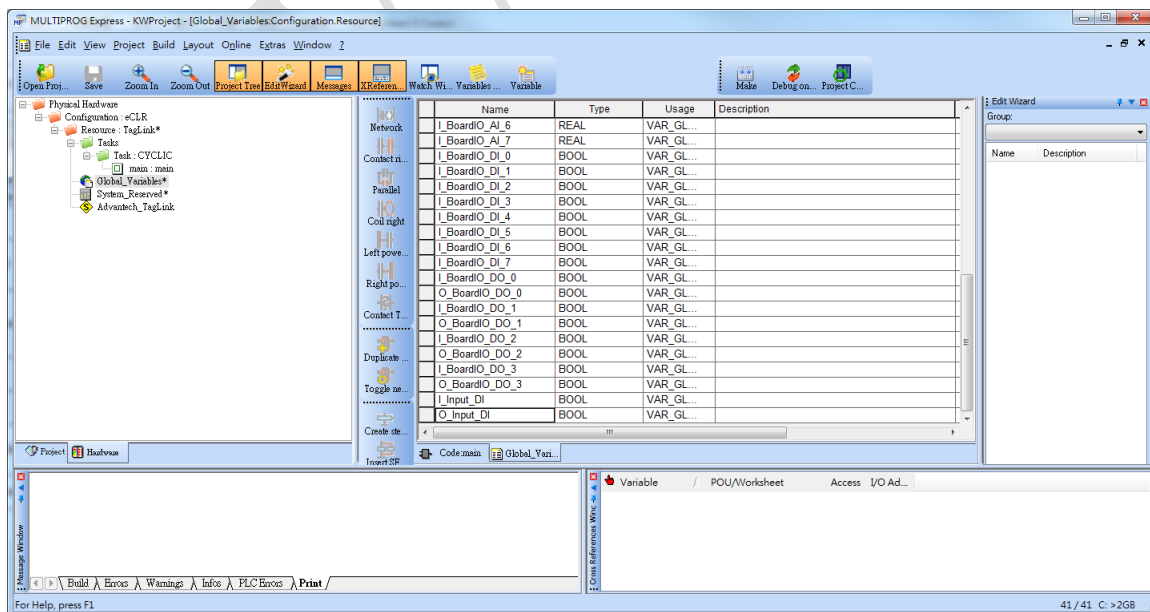

8. Select IO to be imported in the project, and select appropriate data and I/O type.

9. Set Read-Only type for the I/O you want to control in TagLink. Otherwise, KW would control the I/O while TagLink cannot control it.
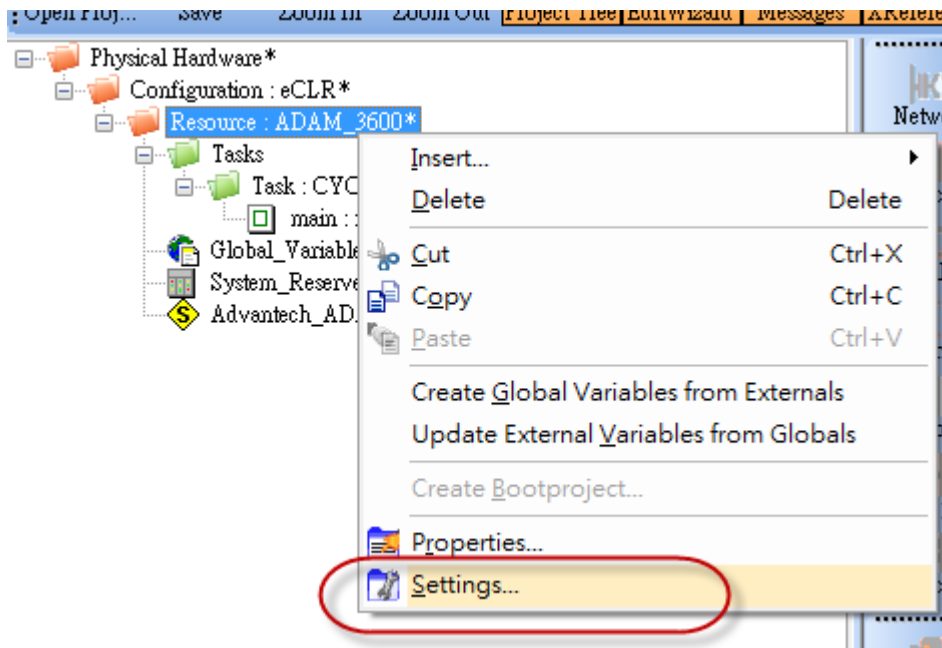
Click "Create Global Variables"

10. Each tag has two types. O_Board can control, while I_Borad cannot control.

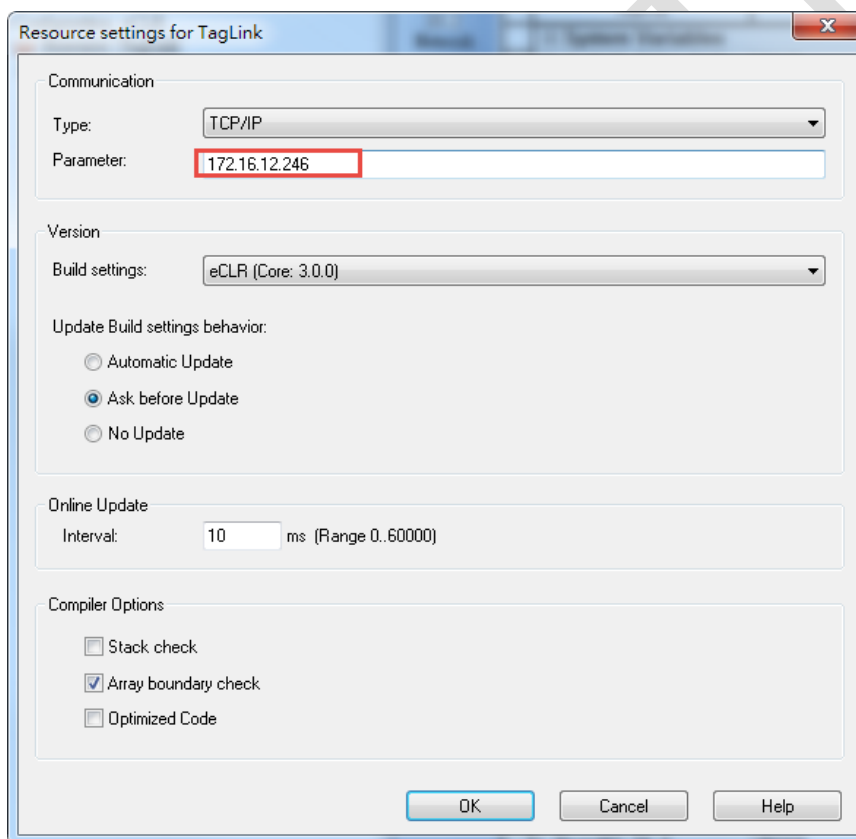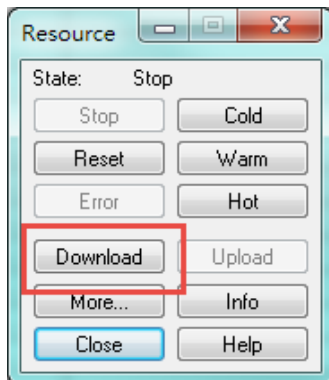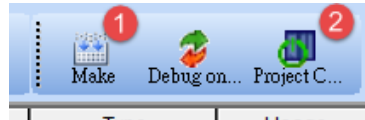**ADVANTECH** *Enabling an Intelligent Planet*

11. Right click Resource → Settings
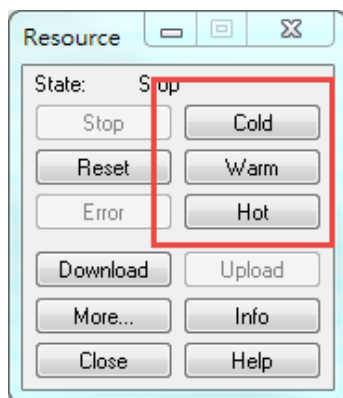

Enter IP address of ADAM-3600

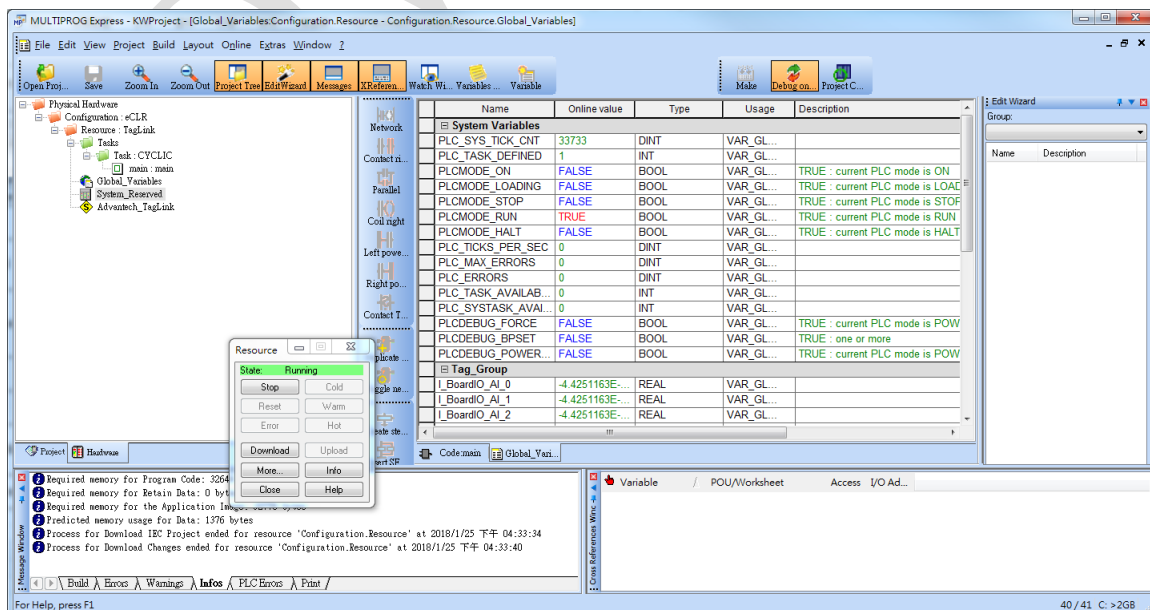12. Next, as KW develop steps, user should do [**Make**] and [**Download**] the project to ADAM-3600.

13. Choose the type you want to [**Run**] the project.

Cold: All data are initialized. Warm: Only non-retentive data are initialized. Hot: During a hot start no data are initialized.

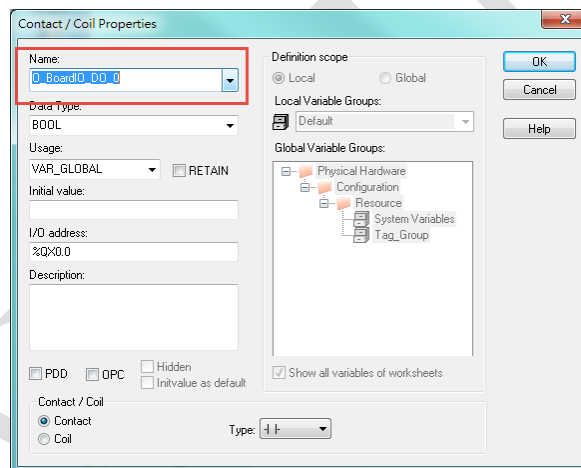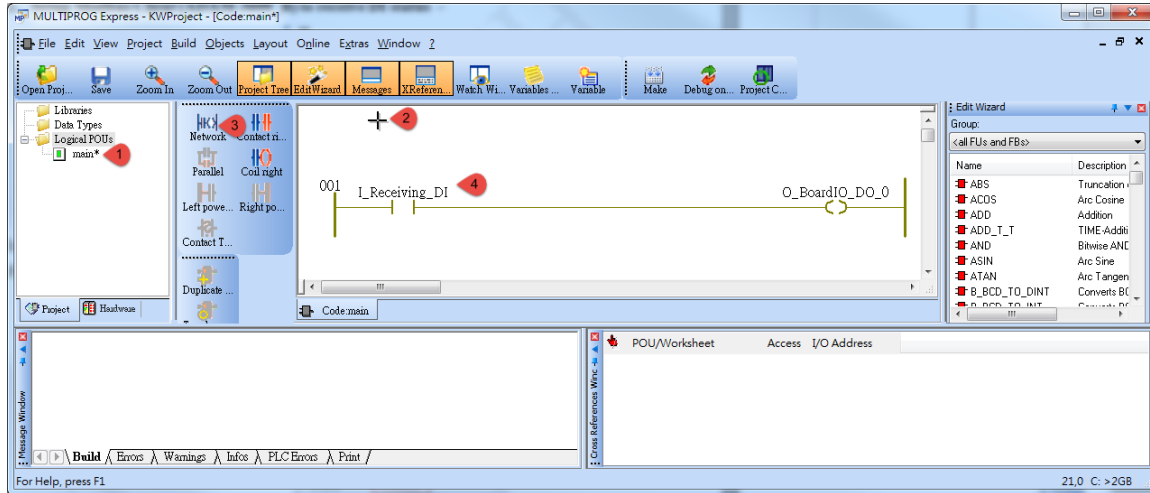14. You may observe the tags status by clicking [**Debug-On**] mode.

15. User may choose to use ladder to implement the program logic.

15.1 Select the POU

15.2 Click on the blank part in Work area
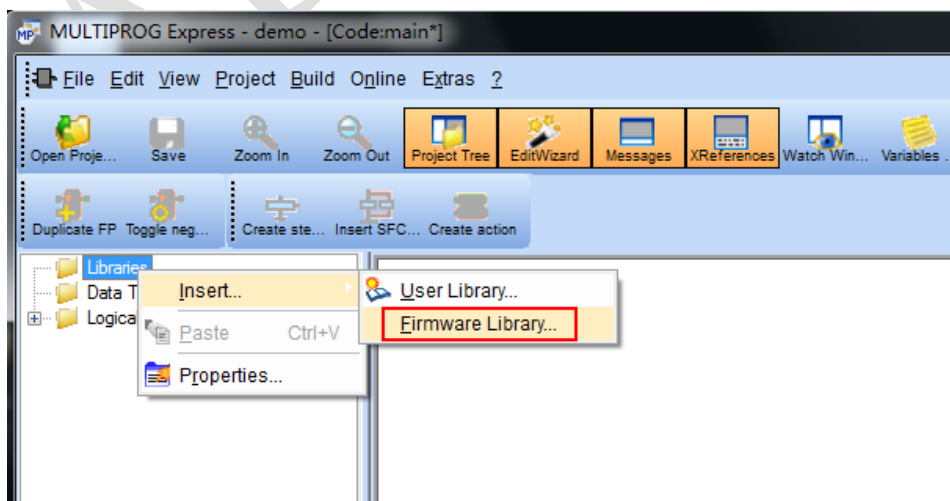
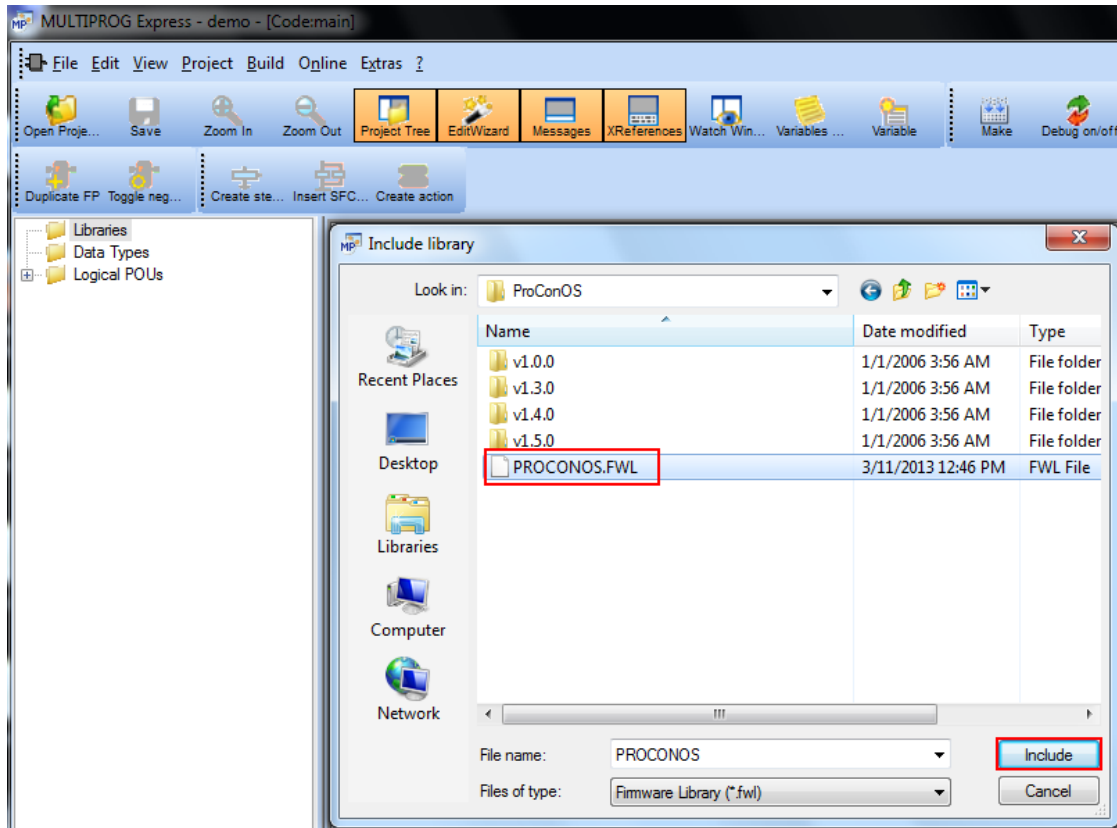15.3 Create a Network

15.4 Select the I/O Name

After implementing the logic, Make→Download→Start

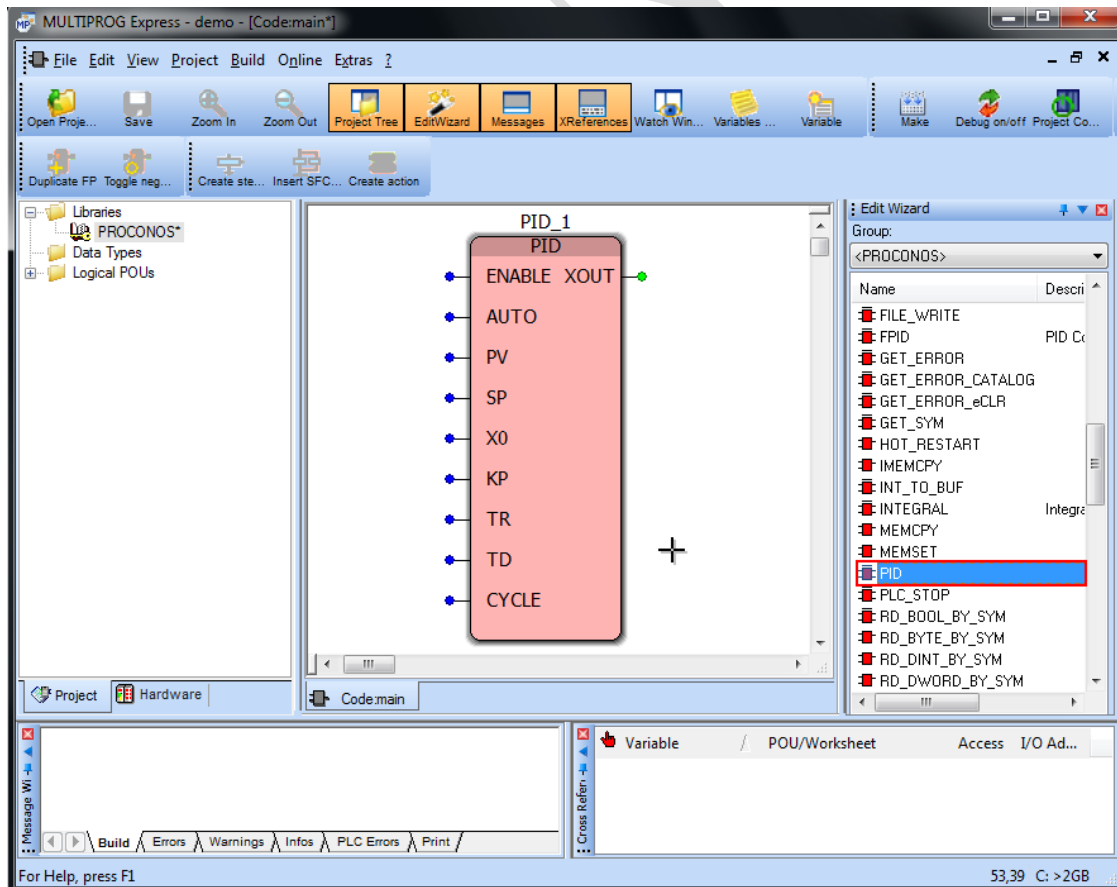16. User may choose to use Function block tom implement the program logic.

16.1 Insert "Firmware Library."

11

16.2 Select the library file of ProConOS.FWL, and click "Include" button.

16.3 Now, you can find PID FD under Edit wizard.

After implementing the logic, Make→Download→Start