*DIRECT*LOGIC DRIVER

In This Chapter...

*Direct*LOGIC Using Tag Integration

Using Point of View along with the Koyo DirectLogic communications driver, allows you to easily import the TagDB into your POV project using tag integration.

By using tag integration, all tags from the PLC can be browsed in the Object Finder, but an individual tag is not added to your project tags database nor counted against the project's tag limit until you actually use it somewhere in your project.

In this example, we are going to cover how to read the clock seconds from a Koyo D2-260 via Ethernet.

NOTE: *An IP address will need to be setup in the H2-ECOM100 prior to starting this exercise.*

1.) Open *Direct*SOFT Software and create a new project, name this project "POV Example".

2.) Click on Tools > Documentation Editor.

3.) Use shortcut Ctrl + F (Find), and type in V7766 > Hit enter.

4.) For V7766, under Nickname, type in "Clock Seconds".

5.) On rung 1, enter an END statement.

6.) Click on File > Save Project > To Disk.

7.) Download the project to the PLC.

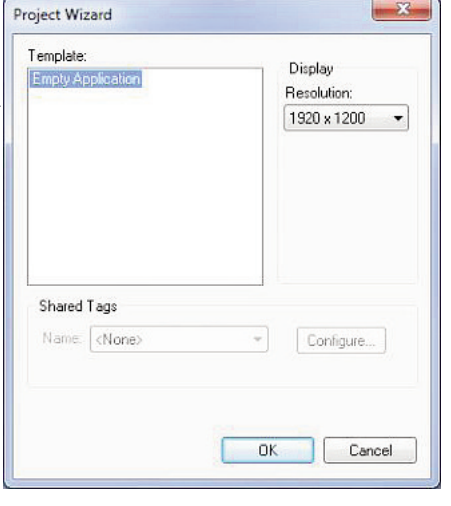
8.) Now click on File > Export > Element Documentation > Save.

9.) Open Point of View software.

10.) Click on Application Menu button  and select New.

11.) Enter a 'Koyo DirectLogic Example' as a project name, select your product type that is currently licensed on the USB key for the PC you are currently using > Then hit OK. (Ignore if in Demo Mode)

12.) Project Wizard will open > Hit OK.

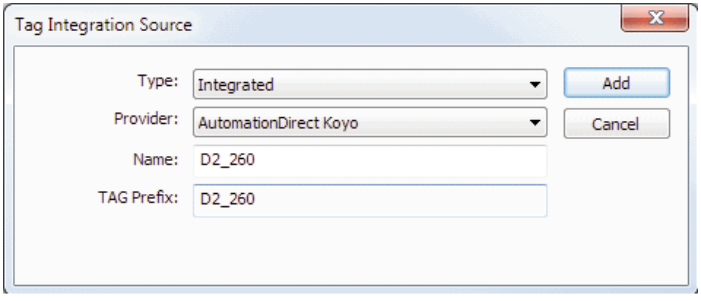


Next, we will use tag integration to setup the communications to the Koyo D2-260:

13.) Click on the Project tab > select Communication on the ribbon bar.

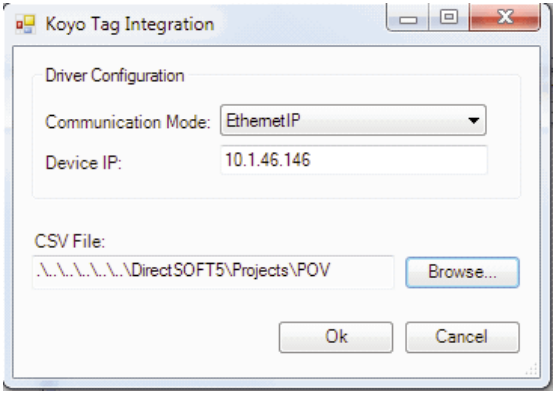
14.) Under Tag Integration, click on Add.

15.) Select the drop down next to Provider, and choose AutomationDirect Koyo.



16.) In the Name field the default name is 'DEV', change this to 'DL' > Click on Add.

17.) Next for Communication Mode, select EthernetIP.



18.) Enter the IP address of your ECOM-100 into the Device IP field.

19.) Click on the Browse button > now browse for your DirectSoft project .csv file we exported in Step 8 "POV example".

20.) Click on the OK button > Click on the OK once again.

NOTE: *All the tags from the .csv have now been imported into your POV project.*

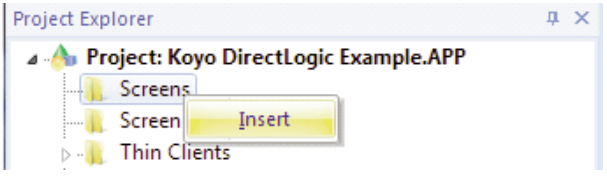
NOTE: *Integrated tags are not added to a Main or Standard driver worksheet, these tags are found using the Object Finder which is located in the Tags section of the Home ribbon. Open the Object Fnder and then expand the Devices.*

NOTE: *Integrated tags can not have an optional format modifier added. You will need to manually add the tag to a Main or Standard driver worksheet to used modifiers.*

Next, we will create a text object to read the clock seconds:

21.) Click on the Graphics tab at the bottom of the Project Explorer pane.

22.) Now right click on Screens and select Insert > then select OK.



23.) On the ribbon bar under the Graphics tab select Active Objects > then Text. This will give you a cross-hair, left click and place anywhere on the screen work area.

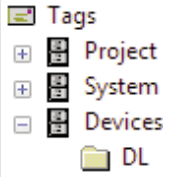
24.) Now type in 'DLSeconds: ##' > Hit Enter.

25.) Double left click on the above entry to open the properties.

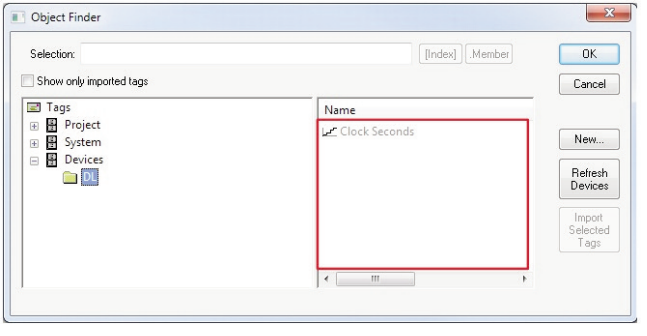
26.) Click on 'Text data link'.

27.) At the end of the Tag/Expression field, click on the Browse button. 

28.) In the left hand column, you will see a DL folder under Devices. Click on the DL folder and in right hand window you will see all of the tags brought in during the Tag Integration process.



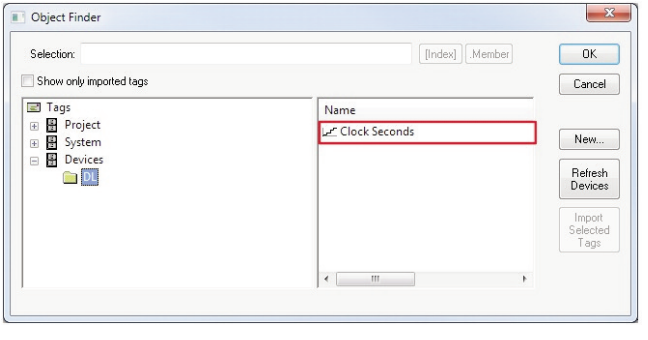
NOTE: *These tags are shown in grey indicating that you still need to select and Import the desired tags to be used in the project.*



29.) Left click on the Clock Seconds tag, the Import Selected Tags will now be highlighted for you to select.

30.) Select Yes on the next pop up > then hit OK once successfully adding the tag.

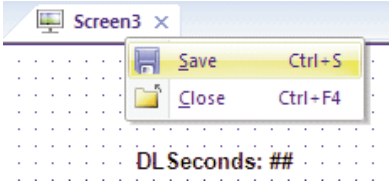
NOTE: *The Clock Seconds tag is now in black indicating the tag has been imported and can be used in your project. In addition, notice your tag count (bottom right hand corner) increased by one.*



31.) Click the OK button > you should see DL.Clock_Seonds in the Tag/Expression Field.

32.) Close the Object Properties window.

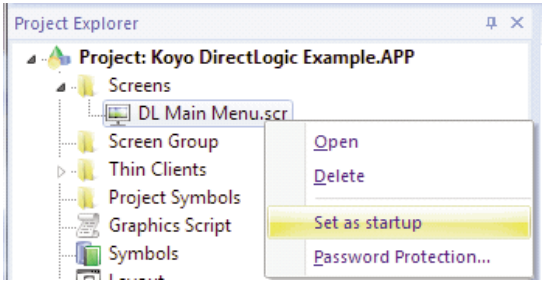
33.) Right click on the current screen tab and select Close.



34.) On the pop up, select Yes to save changes.

35.) Change the file name to 'DL Main Menu', then select Save.

36.) Under the screen folder > right click on our newly created screen > select 'Set as Startup'

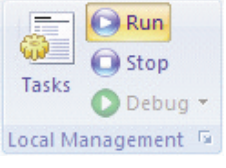


We will now run the project to verify communications between the PC and the D2-260:

NOTE: *Ensure your PC is connected to the H2-ECOM100 Ethernet port or switch prior to placing in Run.*

37.) On the ribbon bar > under the 'Home' tab and Local Management > select the Run button.

38.) You should now see the seconds updating on your screen.



NOTE: *If any part of the project doesn't work as expected (or to exit the runtime application), switch back to the development application (ALT+TAB) and then click Stop on the Home tab of the ribbon. Then if needed, begin troubleshooting.*

*Direct*LOGIC Addressing in Point of View

*Direct*Logic POV Addressing for Koyo Driver

Data Types	*Direct*Logic Address	POV Address	Data Format	Read/Write
X	X0	X:0	BOOL	Read
Y	Y0	Y:0	BOOL	Read/Write
C	C0	C:0	BOOL	Read/Write
S	S0	S:0	BOOL	Read/Write
SP	SP0	SP:0	VARIES	Varies
T	T0	T:0	BOOL	Read/Write
CT	CT0	CT:0	BOOL	Read/Write
V	V2000 (bit of word)	V:2000.0	INTEGER	Read/Write
V	V2000 (unsigned)	V:2000	INTEGER	Read/Write
V	V2000 (signed)	V:2000:S	INTEGER	Read/Write
V	V2000 (BCD)	V:2000:B	INTEGER	Read/Write
V	V2000 (BCD double word)	V:2000:LB	INTEGER	Read/Write
V	V2000 (unsigned double word)	V:2000:D	INTEGER	Read/Write
V	V2000 (signed double word)	V:2000:SD	INTEGER	Read/Write
V	V2000 (floating point)	V:2000:F	REAL	Read/Write
V	V2000 (ASCII string)	V:2000:A.#*	STRING	Read/Write

* [# is equal to the length of the string]

*Direct*Logic POV Addressing for Modbus

Data Types	*Direct*Logic Address	POV Address	Data Format	Read/Write
X	X0	1X:2049	BOOL	Read
Y	Y0	0X:2049	BOOL	Read/Write
C	C0	0X:3073	BOOL	Read/Write
V	V2000 (bit of word)	4X:1025.0	INTEGER	Read/Write
V	V2000 (unsigned)	4x:1025	INTEGER	Read/Write
V	V2000 (signed)	4X:S1025	INTEGER	Read/Write
V	V2000 (BCD)	BCD:1025	INTEGER	Read/Write
V	V2000 (BCD double word)	BCDDW:1025	INTEGER	Read/Write
V	V2000 (BCD double word w byte swap)	BCDDWS:1025	INTEGER	Read/Write
V	V2000 (double word)	DW:1025	INTEGER	Read/Write
V	V2000 (double word w byte swap)	DWS:1025	INTEGER	Read/Write
V	V2000 (floating point)	FP:1025	REAL	Read/Write
V	V2000 (floating point with byte swap)	FPS:1025	REAL	Read/Write
V	V2000 (string)	ST:1025:#*	STRING	Read/Write
V	V2000 (string with byte swap)	STS:1025:#*	STRING	Read/Write

* [# is equal to the length of the string]