

How to use the EthernetIP Driver

Creating the Links

To create a link to an A-B CompactLogix/ControlLogix PLC using Ethernet I/P protocol, Click on the menu item Panel>Link>Add to get the Add Link dialog box and make the selections as shown in the following example.

The 'Add Link' dialog box is shown with the 'Properties' tab selected. The fields are as follows:

- Link Number: 1
- Link Name: My A-B PLC
- Link Type: Direct Link (Ethernet)
- Device/Server: Allen Bradley
- CompactLogix/ControlLogix Ethernet/IP Tag
- Link Port: Ethernet1

After adding the link, click on the menu item Panel>Link>Properties>My A-B PLC to get the Link Properties dialog box. Click on the Parameter tab and specify the IP address of the PLC as shown in the following example.

The 'Link Properties' dialog box is shown with the 'Parameter' tab selected. The fields are as follows:

- IP Address: 192.168.1.222
- Use Default Port
- Port: 44818
- Node Address: 1
- Timeout Time: 0 (x 0.1 Sec.)
- Command Delay: 0 (x 0.1 Sec.)
- Retry Count: 0

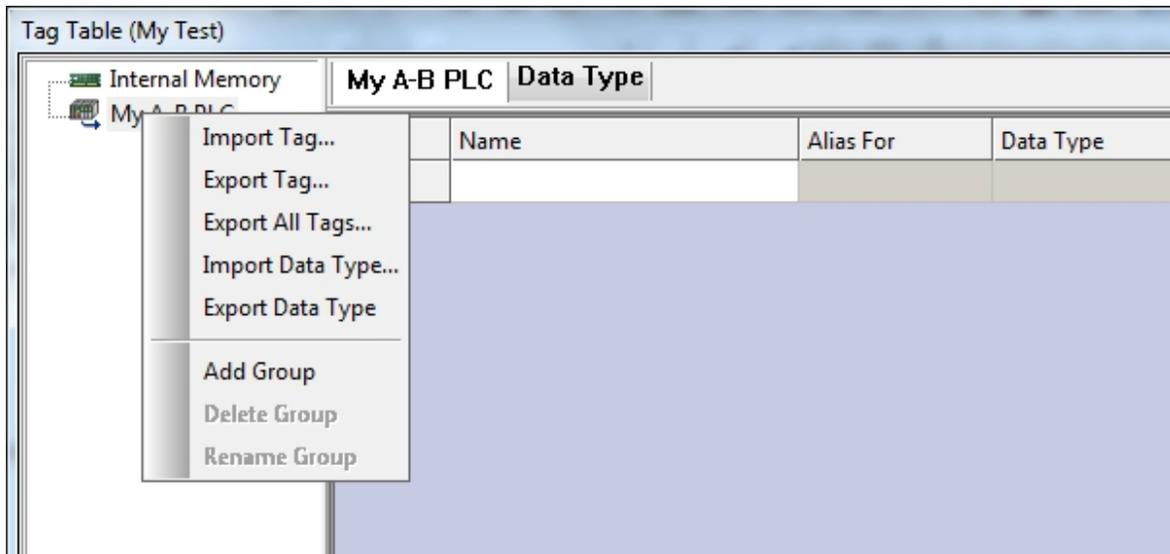
Importing Tags

To make things simple, it is recommended that your HMI only access the data of the basic type in the PLC when you are doing the first test. The basic data types include: BOOL, INT, DINT, UINT, UDINT, REAL, STRING, COUNTER, and TIMER.

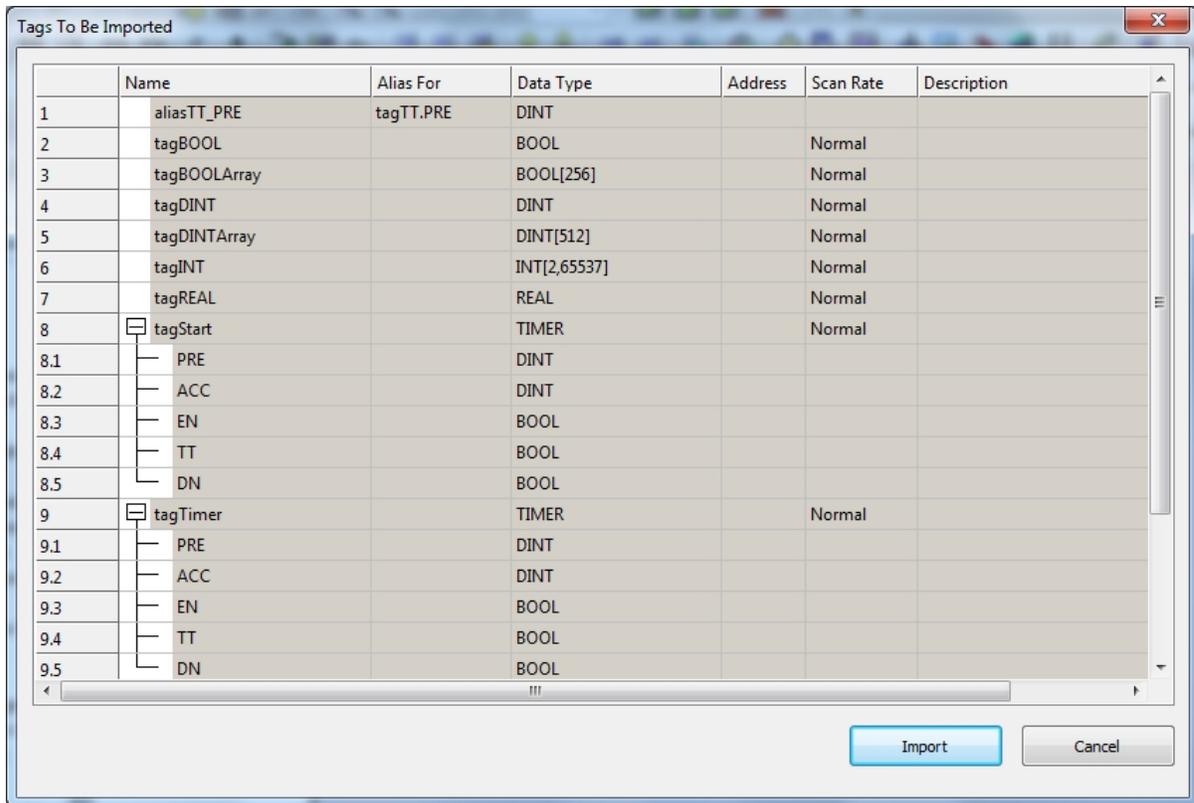
You need to import the tags of the PLC's project in order that you can configure the HMI to access the PLC data.

The steps to import the tags are shown in the following:

- 1) Use RSLogix 5000 to export the tags of the PLC project to a CSV file.
- 2) In the PM Designer, click on Panel>Tags to get the Tag table of the current panel application.
- 3) Right-click the node of the A-B PLC link on the link tree of the tag table to get the pop-up menu as shown in the following picture.



- 4) Click Import Tag on the pop-up menu to start the import process. You need to specify the CSV file that stores the exported tags of the PLC project. A list of the importable tags will be shown in the preview table as the example shown below after the CSV file is successfully read.



5) Click the Import button to complete the import process.

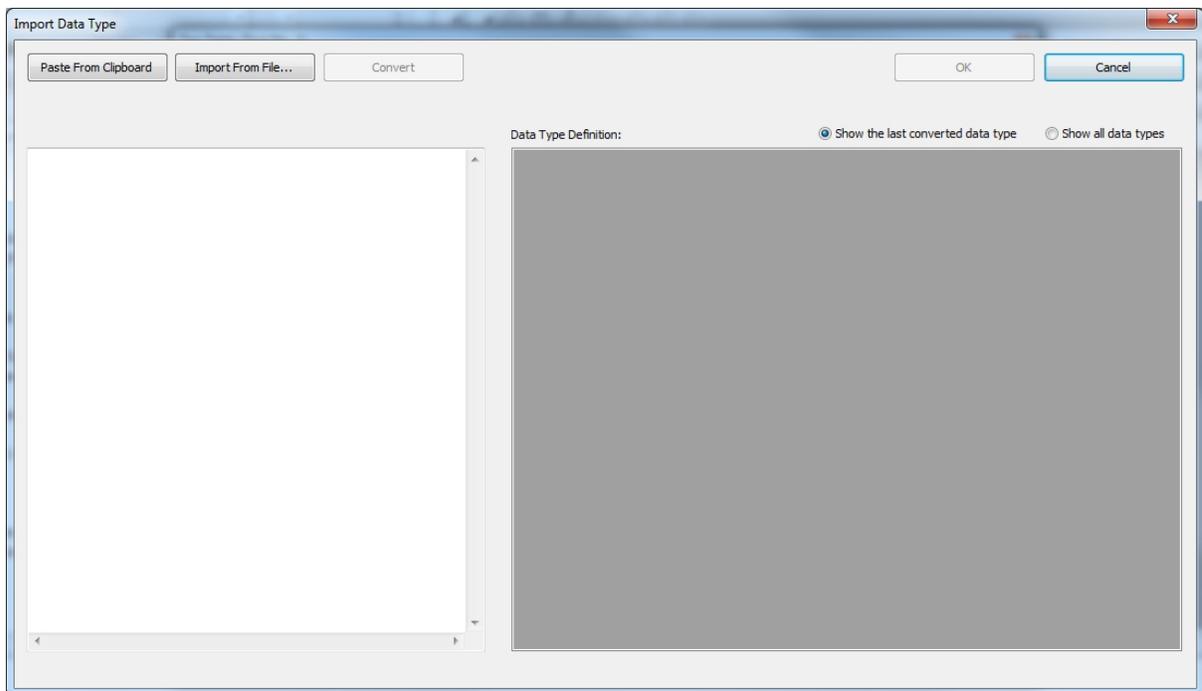
Important Notes:

- 1) All the existing tags of a link will be removed when you import a new set of tags.
- 2) A tag can be imported if its data type is a basic one or the data type is already defined in the Data Type page of the link in the tag table.

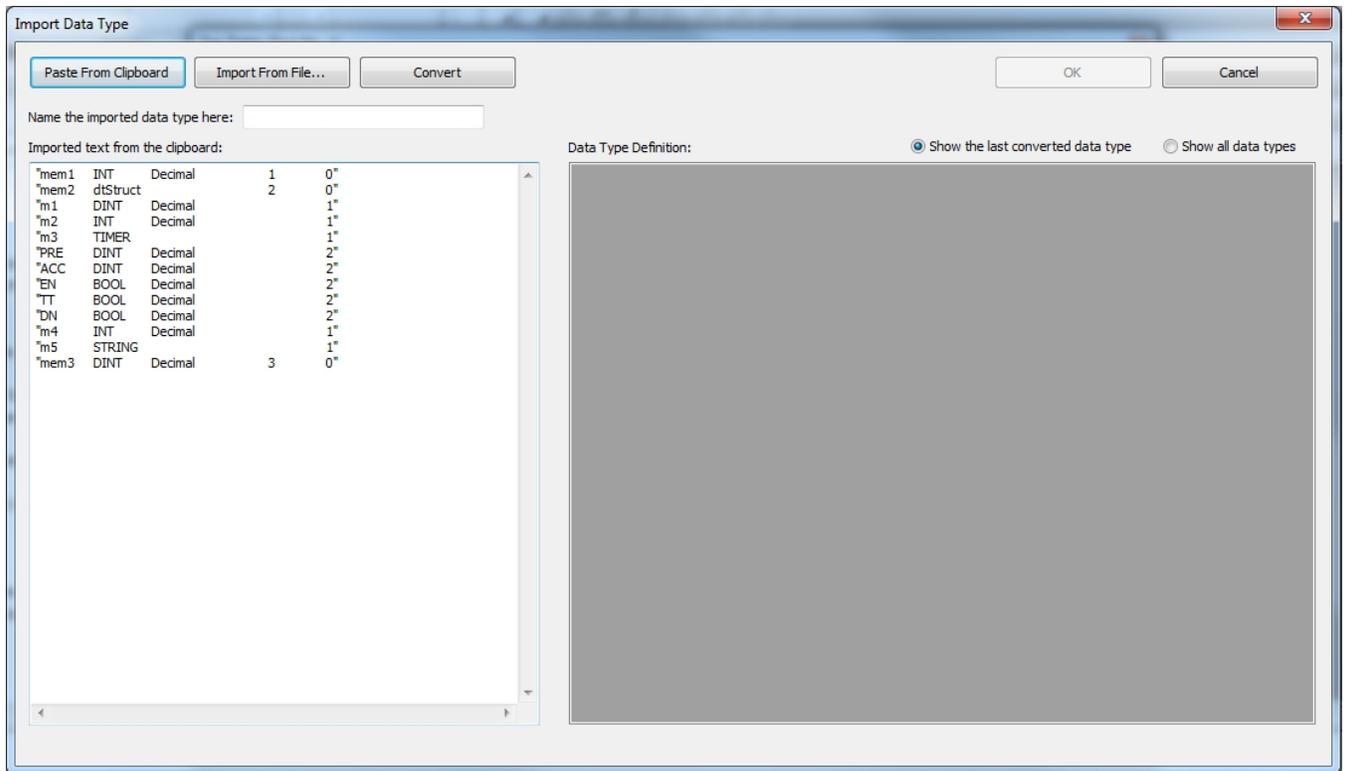
Importing Tags

There are three methods to define a user data type (UDT):

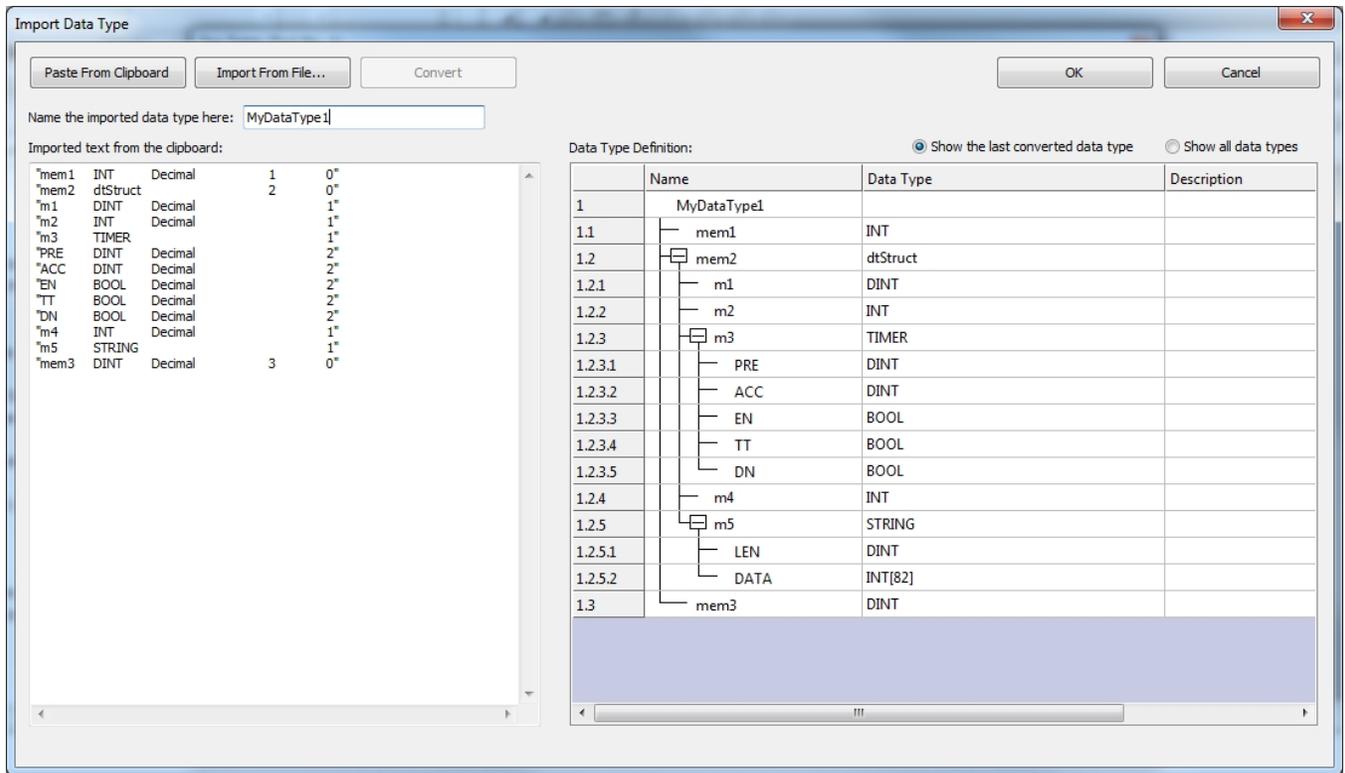
- 1) Create and define a data type manually in the Data Type page of the link in the tag table. When you define a data type, the name of the data type, the number of its data members, and the name and the data type of each of its data members must be exactly the same as the data type was defined in the PLC project, or the PLC will not recognize the data type. Apparently this is not an efficient way to define a data type when you can import a data type by the other 2 methods described below.
- 2) Copy the definition of a data type in RSLogix and paste it in a Data Type page of the PM Designer.
 - a. In RSLogix, select “User Defined Data Type”.
 - b. Select the desired data type.
 - c. Select all the members of the data type and right-click and copy.
 - d. In PM Designer, open the tag table.
 - e. Select the link. Right-click the link to get the pop-up menu. Click “Import Data Type...” to get the Import Data Type dialog box.



- f. Click the “Paste From Clipboard” button to import the text of the data type definition.



- g. Specify the name of the imported data type. The name must be the same as defined in RSLogix.
- h. Click "Convert" button to convert the imported text to the data type definition.



i. Click "OK" button to actually import the data type and exit the dialog box.

3) Import a data type definition file generated by RSLogix. This method is under development.

Important Notes:

1) A data type can be imported if the data types of all of its members are already defined.