

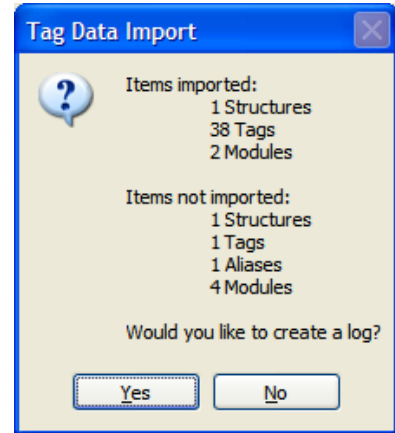
Application Note #1153: Manually Adding Native Tag Data Types

Introduction

When importing RSLogix 5000 Native Tag Data into GP-Pro EX the message “Items not imported: Would you like to create a log?” may appear. This document explains how to manually add Data Types making it possible to import many of these items. It also shows how to access unsupported modules by manually copying Tags.

This document supplements the Pro-face Rockwell Automation Ethernet/IP Driver Manual. Please be sure to read the manual since information contained therein may be needed to follow the steps in this document.

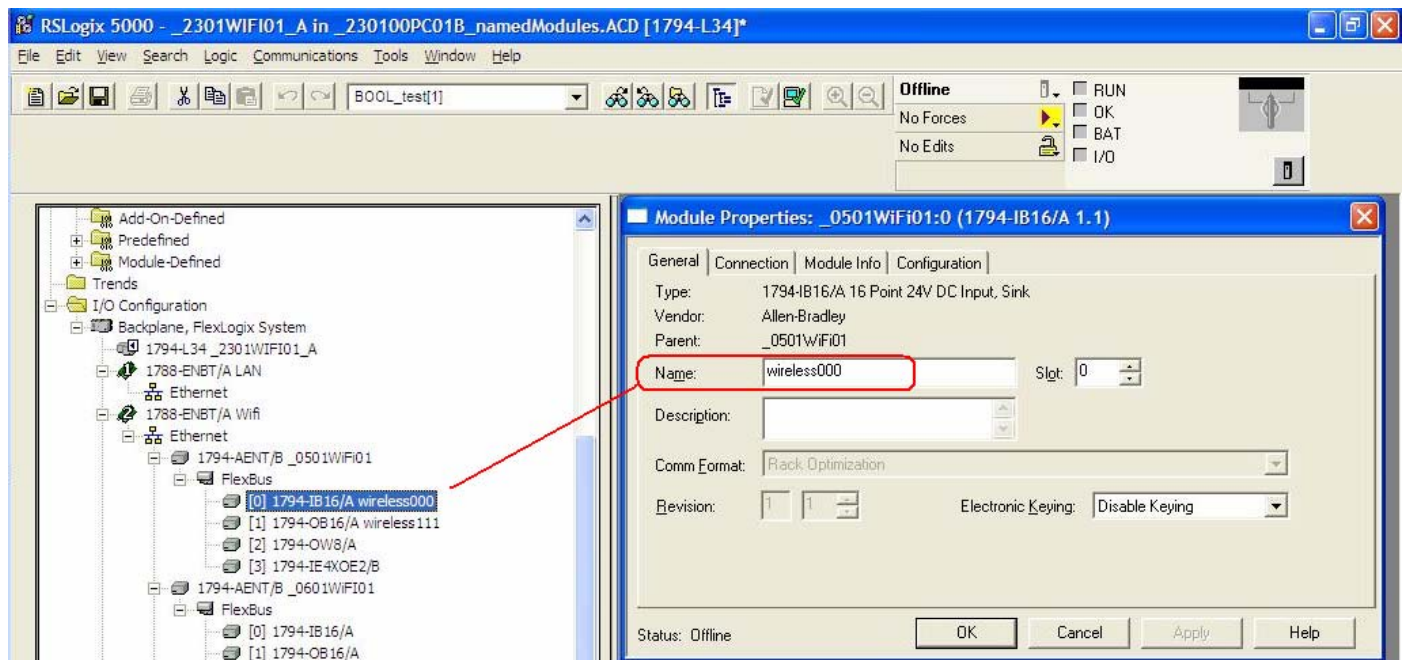
GP-Pro EX Device/PLC driver Rockwell EtherNet/IP v1.13.11 or later is required. The version of the driver is displayed in GP-Pro EX in System Settings / Peripheral Settings / Peripheral List.



Naming I/O Modules in RSLogix

This section applies only to Pro-face Rockwell Automation Ethernet/IP Driver v1.16.16 and earlier: If I/O modules are not given a name in RS Logix 5000 they might not import into GP-Pro EX or be included in the list of “Items not imported:” If the module tags will be used in the GP-Pro EX project go to RSLogix, give the module a name, and import an updated L5K file into GP-Pro EX.

Note: A list of supported modules is included in the device driver manual.



Import Log File

When the message “Items not imported: Would you like to create a log?” appears click [Yes] and save the file. Open the file and review the list of items that did not import. If any unsupported data types or tags are found during import, a log file can be generated. Using the dialog box displayed, set the name and the location of the log file to be saved. Open the log file with Windows Notepad.

Look under “Tags not imported” and “Alias not imported” for tags that you want to use in your GP-Pro EX project. Refer to the sample log shown here. Note the tag that did not import is a Controller Scope tag and the tag is TAG_TEST_STRUCTURE. Following the tag name is the Data Type, in this case the Data Type is a structure, - TEST_STRUCTURE. Note the alias that did not import is a Controller Scope tag AG_IO_POINT_5 and it is an alias to Local:1:I.Data.5.

Also look under “Modules not imported” for any modules you want to access in GP-Pro EX.

```
Apps_PLC_APNT1153.log - Notepad
File Edit Format View Help
Source File Name:
E:\Demo\Apps_PLC_APNT1153.L5K
Storage Information:
Size 3 KB
Tag Count 2655
Items imported:
1 Structures
38 Tags
2 Modules
Items not imported:
1 Structures
1 Tags
1 Aliases
4 Modules
Structures not imported:
TEST_STRUCTURE
STRUCTURE_TAG_DINT - DINT
STRUCTURE_ADD_ON_MEMBER - TEST_ADD_ON
STRUCTURE_BOOL - BOOL
Tags not imported:
Controller Scope
TAG_TEST_STRUCTURE - TEST_STRUCTURE
Alias not imported:
Controller Scope
TAG_IO_POINT_5 to Local:1:I.Data.5
Modules not imported:
Controller - 1769-L23E-QB1
LocalENB - 1769-L23E-QB1 Ethernet Port
Discrete_Inputs - Embedded IQ16F
Discrete_Outputs - Embedded OQ16
```

You can disregard any items that will not be needed in your GP-Pro Ex project.

An Alias does not import if the tag or alias it refers to does not import. In most cases a Tag does not import because the import tool was not able to define its Data Type. Also, Base Tags for unsupported modules do not import (example: module base tag: Local:1.I.Data). They can be added manually after the Data Type/Structure for the module is manually defined.

The remainder of this document is divided into three sections. The first section describes how to add unsupported modules manually. The second section explains how to manually add Data Types. The third section outlines importing additional related items.

Note: If a Tag or Alias does not import and is not needed in your GP-Pro Ex project there is no need to manually add the related Data Type or unsupported module base tag.

Section 1

Manually Adding a Module

A list of modules that generate controller tags and Data Type/structures on import can be found in the Pro-face Rockwell Automation Ethernet/IP Driver Manual, section 5.5.

A module that is not supported can be added manually. An unsupported module needs to be added if its base tag is needed as a tag in the project, or is referenced by an alias that did not import. Manually adding a module consists of two parts; first manually defining the module Data Type/Structure(s) and then manually creating the controller base tag(s) as needed.

Adding a Module Data Type Definition

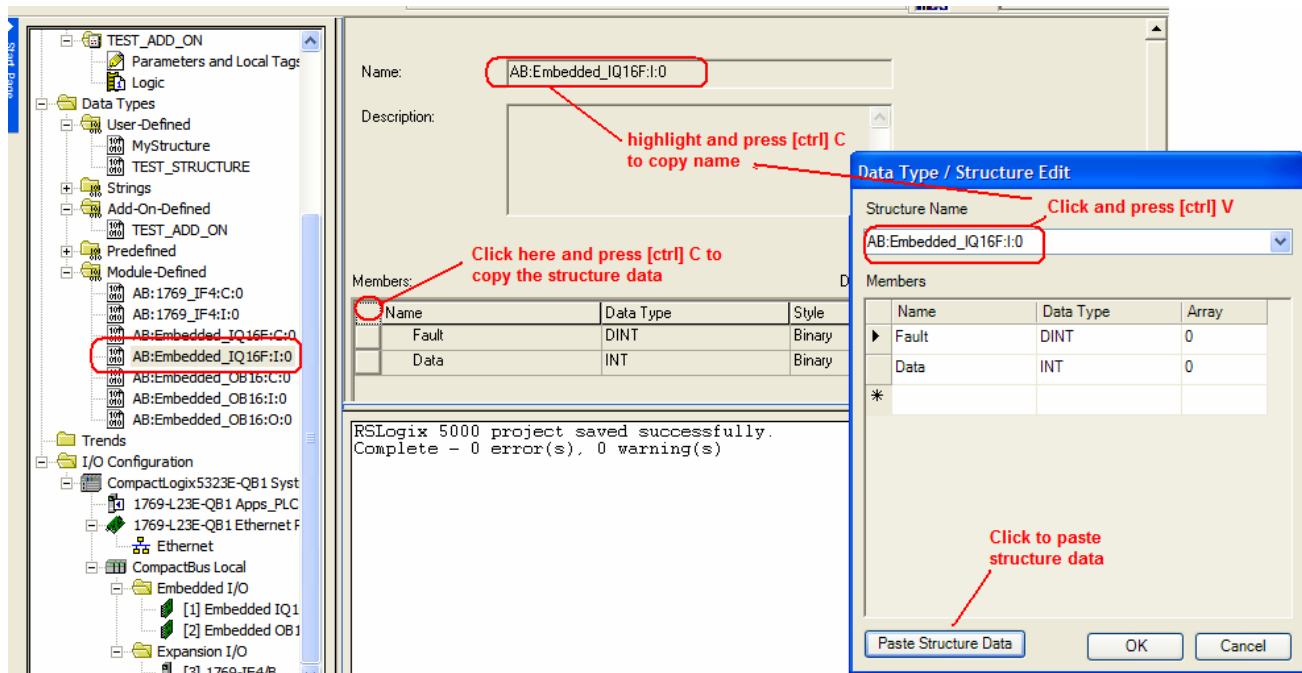
Refer to the sample log above. The alias “TAG_IO_POINT_5” did not import because the tag it refers to, “Local:1:I.Data.5”, did not import. Look for the “alias to” reference tag in RSLogix. (illustration below)

Name	Alias For	Base Tag	Data Type	Style
Local:1:C			AB:Embedded_IQ16F:C:0	
Local:1:I			AB:Embedded_IQ16F:I:0	
Local:1:I.Fault			DINT	Bina
Local:1:I.Data			INT	Bina
Local:1:I.Data.0			BOOL	Deci
Local:1:I.Data.1			BOOL	Deci
Local:1:I.Data.2			BOOL	Deci
Local:1:I.Data.3			BOOL	Deci
Local:1:I.Data.4			BOOL	Deci
Local:1:I.Data.5			BOOL	Deci
Local:1:I.Data.6			BOOL	Deci
Local:1:I.Data.7			BOOL	Deci
Local:1:I.Data.8			BOOL	Deci

Notice in the example the Data Type is “AB:Embedded_IQ16F:I:0”. Look in the RS Logix 5000 explorer window. Locate the matching Data Type, and click on it. (Illustration on next page)

In GP-Pro Ex in the Individual Device Settings dialog box press [Edit]. Then for Edit Mode select Data Type/Structure. Repeat the following steps for each unsupported module you want to add:

- 1> Click [Add].
- 2> In RS Logix highlight the Name field and press [ctrl] C.
- 3> In GP-Pro Ex click on the Structure Name field and press [ctrl] V to enter the name.
- 4> In RS Logix select the entire Members table by clicking on the upper left hand box of the table. Press [ctrl] C to copy the structure data.
- 5> In GP-Pro click on [Paste Structure Data].
- 6> Press [OK]

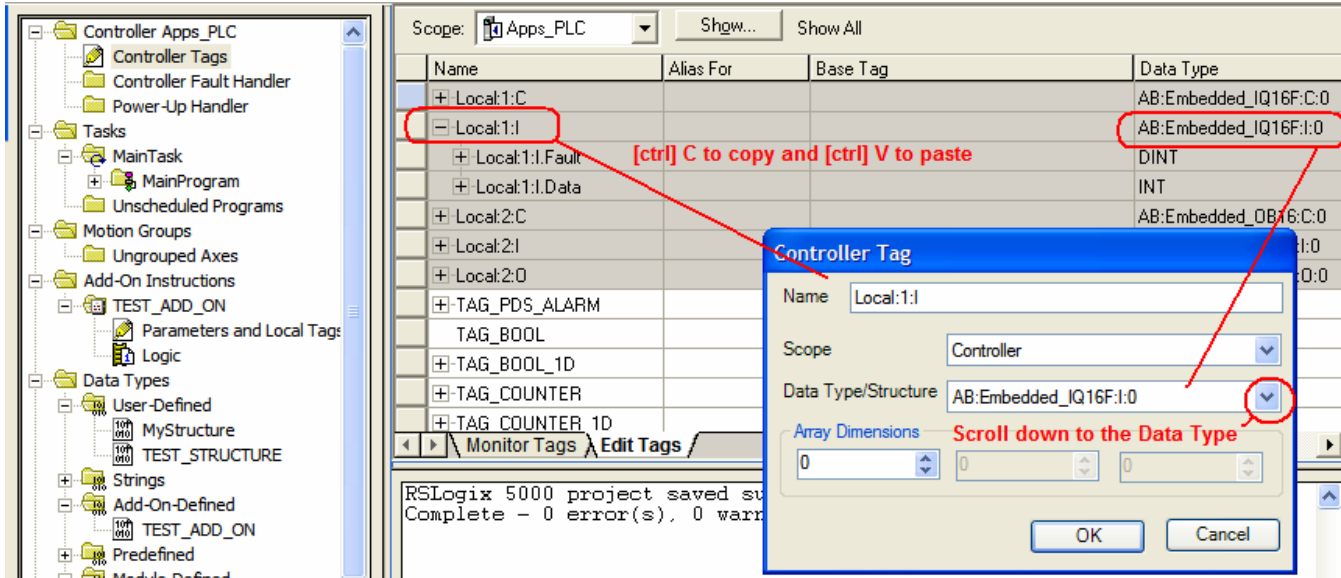


After the module Data Type/Structure has been defined other structures that needed the module Data Type for a member, along with tags and aliases of the other structure, will import. For instructions on importing them see the Section 3 "Importing Additional Items".

Adding a Module Base Tag

Module Base Tags do not import even after the Data Type/Structure is defined. Manually enter the Base Tag(s). In GP-Pro EX select Edit Mode: Tag/Alias. Repeat the following steps for each module base tag you want to add:

- 1> Click [Add] to open the controller Tag dialog box.
- 2> In RS Logix 5000 locate the Base Tag, highlight the Name and press [ctrl] C.
- 3> In GP-Pro EX click in the Name field and press [ctrl] V.
- 4> Click the Data Type/Structure scroll arrow and find the Data Type. (in the example it is "AB:Embedded_IQ16F:I:0")
- 5> Click OK.



After a module base tag has been created aliases that reference it will import. For instructions on importing them see Section 3 “Importing Additional items”.

Section 2

Manually Adding a Data Type/Structure

In some cases a tag or an alias does not import because the Data Type is not pre-defined and the import utility was unable to define it. Often it is because the Data Type/structure or a member of the structure is an Add-On-Defined Data Type. In those situations the Data Type/Structure can be created manually.

In the sample import log the tag TAG_TEST_STRUCTURE did not import. Refer to the import log section “Structures not imported”:

```

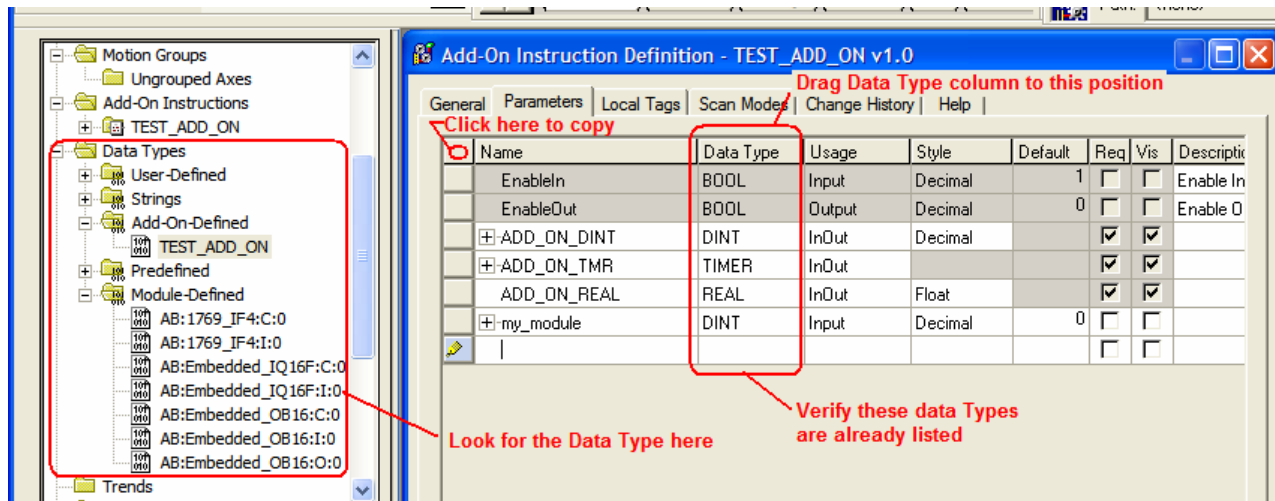
TEST_STRUCTURE
  STRUCTURE_TAG_DINT - DINT
  STRUCTURE_ADD_ON_MEMBER - TEST_ADD_ON
  STRUCTURE_BOOL - BOOL
  
```

Each member of the structure is listed along with its Data Type. Example: STRUCTURE_TAG_DINT is a member and – DINT is its Data Type. In GP-Pro Ex select Edit Mode “Data Type/Structure”. Look for the Data Type; in this example it is Data Type DINT. Verify that the Data Type of each member of the structure is on the list. Notice that the second member in the example, STRUCTURE_ADD_ON_MEMBER, is of the Data Type TEST_ADD_ON. The list of Data Types in GP-Pro EX does not include it. To import the structure a member’s Data Type may need to be added manually.

In RS-Logix in the list of Data Types open the folders to look for the Data Type you need to add. (In the example it is TEST_ADD_ON). Click on it. Check the column labeled Data Type for any that are neither on the GP-Pro EX project list of Data Types/Structures or a Pre-Defined Data Type in RS-Logix. The Data Types of all members must be on the list of defined Data Types/Structures before manually adding a Data Type/structure. If the Data Type of a member is not yet listed in the project but it is pre-defined in RS-Logix it can be simply defined in the project. In the example Timer is such a Data Type:

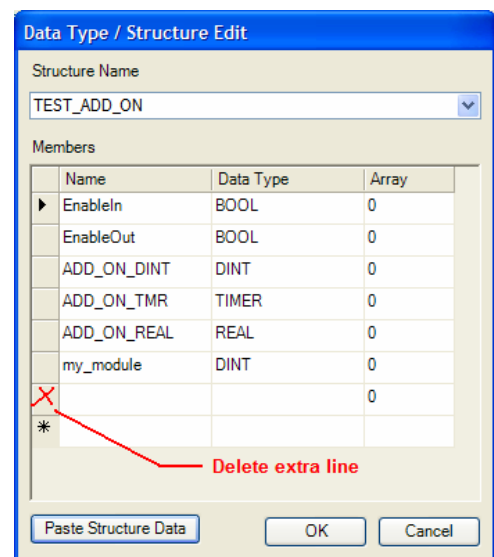
- 1> Click [Add]
- 2> Type in (or paste) the Name of the Data-Type
- 3> Click [OK]. The definition of the Data Type will be added automatically to the project.

Note: If the Data Type of a structure member is yet another structure not on the list of defined Data Types/Structures, it must be added first.



In our example all of the members of the Add-On-Defined Data Type are now defined. The next step is to manually add The Data Type:

- 1> In the GP-Pro EX Data Type/structure List tab click on [Add].
- 2> In RSLogix click on the data type in the list of Data Types.
- 3> In the instruction definition area, highlight the Name. Press [ctrl] C. (If it is an Add-On-Defined Data Type click on the General tab to find the name.)
- 4> In GP-Pro EX click on the Structure Name field and press [ctrl] V to paste the name.
- 5> In RS Logix, the structure Members table column labeled "Data Type" should, like GP-Pro Ex, be the second column from the left. If it is not, select the entire column and drag it to that location. (for Add-On-Defined Data Types click on the Parameters tab to find the table) (this column needs to be moved only once to modify the RSLogix editor configuration)



- 6> Select the entire Members table by clicking on the upper left box of the table. Press [ctrl] C.
- 7> In GP-Pro click on [Paste Structure Data].
- 8> If the list of members includes an extra line delete it.
- 9> Click [OK]. *If you get an error "Found a sub-entry with invalid name:" delete the extra line.*

You can repeat the above steps until all the structures that did not import are added. In the example only one of the members of a structure would not import. Once the missing Data Type is entered the structure and tag will import.

Once a Data Type/Structure has been defined other structures that needed the Data Type for a member, along with tags and aliases of the other structure/Data Type, will import. For instructions on importing them see the section "Importing Additional Items".

Section 3: -----

Importing Additional Items

After adding structures or module defined tags that did not previously import other items that needed them for their definition will import. To import these additional items:

- 1> In the Controller Tag List dialog box verify the PLC Version selected is correct.
- 2> Click on [Import].
- 3> Select the Import L5K
- 4> Choose Import All or Import New Only
- 5> Choose Controller Scope Only or include Program Scope Tags.
- 6> Click on [Open]
- 7> If "Items not imported" appears create a log to verify the results.

If some of the items did not import review the log and return to the appropriate step above.

For technical support email Pro-face America at support@profacamerica.com or call 734-944-0482.