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## ILX56-PBS

Installing Logix v20 and Below

January 29, 2024

**TECHNICAL NOTE**

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ILX56-PBS Installing Logix v20 and Below Technical Note  
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# 1 Studio 5000 Configuration

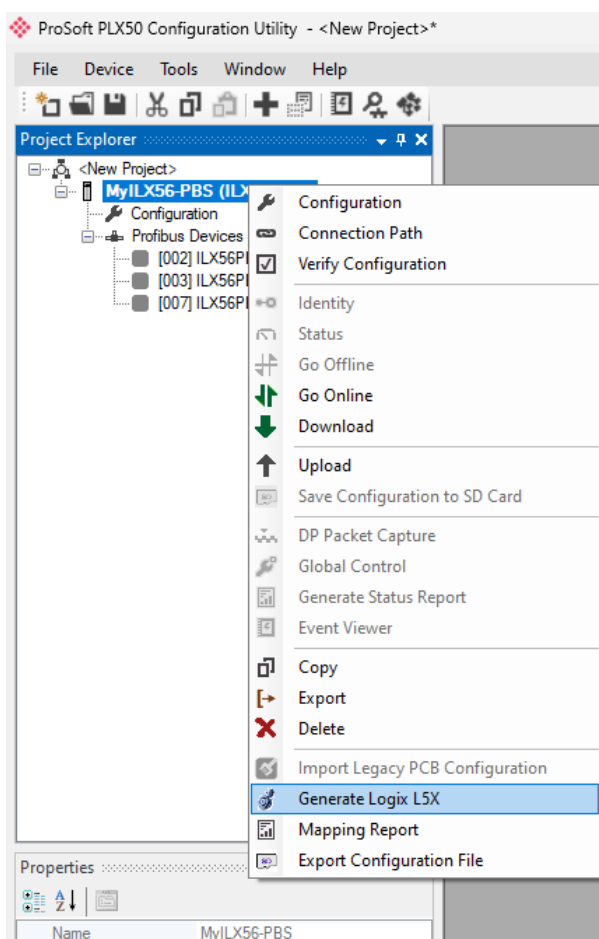
The ILX56-PBS can be integrated with Logix controllers using a **Generic 1756 Module** profile.

**Note:** When Studio 5000 v20 and below is used, the ILX56-PBS can only utilize a single I/O connection.

## 1.1.1 Generating the Logix .L5X File

The PLX50 Configuration Utility can generate a Logix .L5X file of the ILX56-PBS project.

In the ILX56-PBS project, right-click on the **ILX56-PBS** icon and select **GENERATE LOGIX L5X**. Then save the .L5X file.



## 1.1.2 Importing the ILX56-PBS .L5X File

- 1 In a new or existing Studio 5000 (v20 and below) project, add a **GENERIC 1756 MODULE** to the I/O tree using the following *Connection Parameters*:

**New Module**

Type: 1756-MODULE Generic 1756 Module  
Parent: Local

Name: ILX56\_PBS  
Description:   
Comm Format: Data - SINT  
Slot: 6

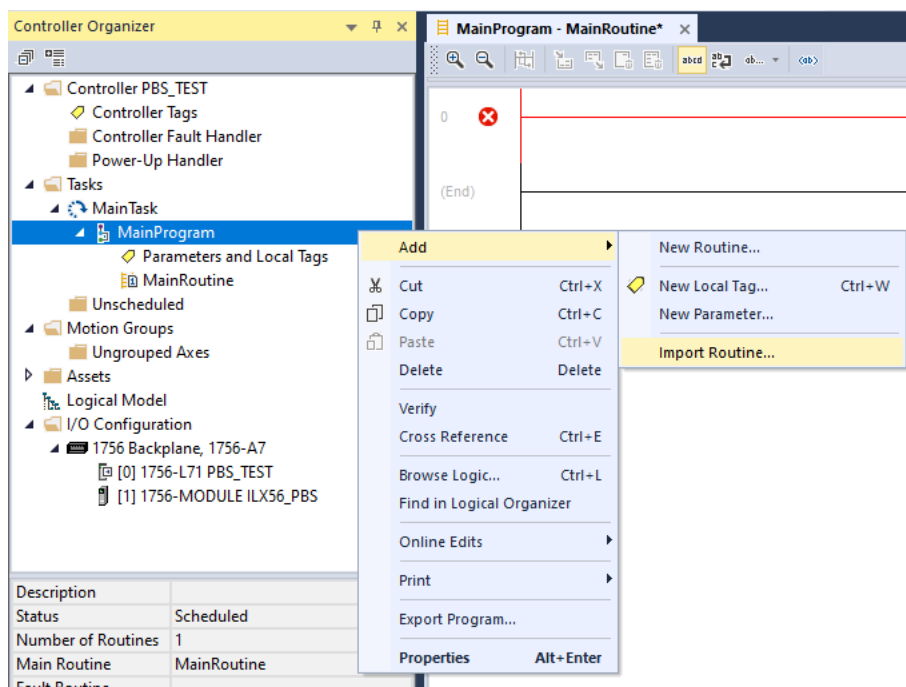
**Connection Parameters**

	Assembly Instance:	Size:	
Input:	132	500	(8-bit)
Output:	133	496	(8-bit)
Configuration:	102	0	(8-bit)
Status Input:			
Status Output:			

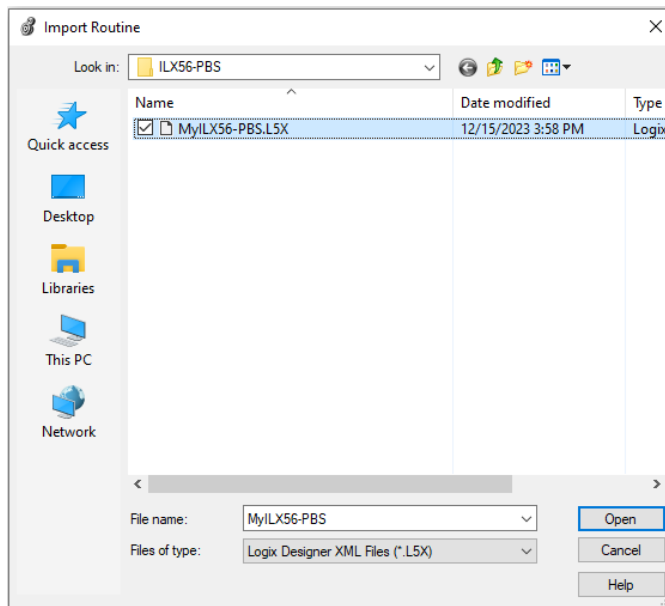
☒ Open Module Properties

OK Cancel Help

- 2 In Studio 5000, right-click on the **MAINPROGRAM** routine. Then select **ADD > IMPORT ROUTINE**.

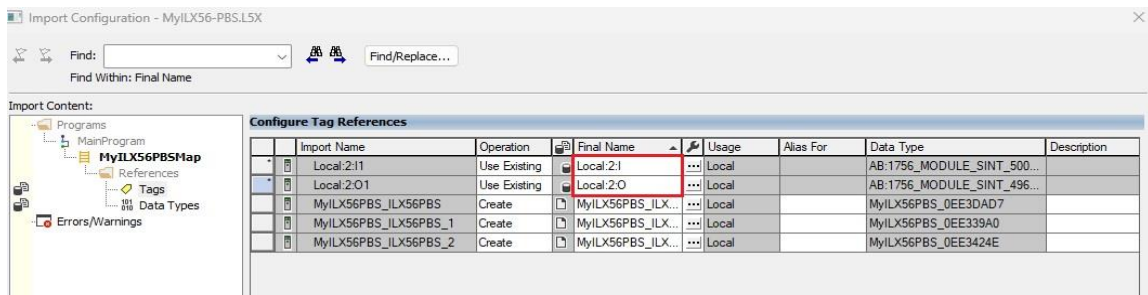


- 3 In the *Import Routine* dialog, navigate to and select the exported ILX56-PBS .L5X file. Then click **OPEN**.



- 4 In the *Import Configuration* dialog, click on the **TAGS** icon. In the *Final Name* column, change the *Local:x:I* and *Local:x:O* text to reflect the ILX56-PBS ControlLogix slot location. Then click **OK**.

The following example shows the ILX56-PBS in slot 2.

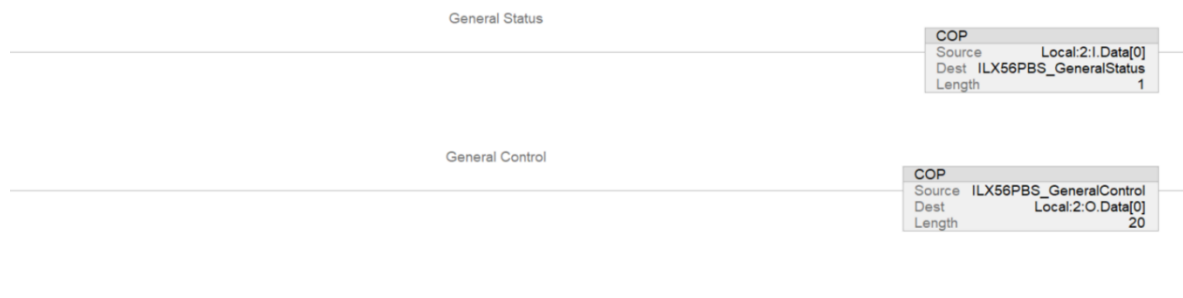


- 5 From a scheduled routine, add a JSR to the newly imported ILX56-PBS routine.

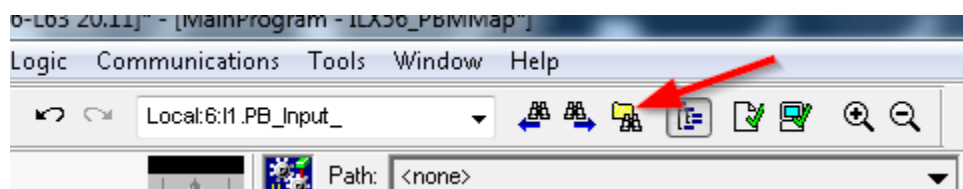


- 6 At the top of the ILX56-PBS routine, right-click on an empty rung, and select **IMPORT RUNG** and import the *ILX56PBS\_ImportRung\_tagsFor\_V20.L5X* file.

**Note:** If the **Local:<slot>** does not match the actual ILX56-PBS slot number, there will be errors on each rung. Once the **Local:<slot>** is corrected, these errors will go away.



- 7 Within the ILX56-PBS routine, click on the **FIND ALL** button then click on the **REPLACE** button to open the *Replace With* field.



- 8 In the example, the ILX56-PBS is in slot 2. Be sure to change this to reflect the ILX56-PBS slot number.

**Find What:** Local:2:O.PB\_Input\_

**Replace With:** Local:2:O.Data[

**Find What:** Local:2:I.PB\_Output\_

**Replace With:** Local:2:I.Data[

Modifications may be needed in the *Find What* field to “**I1**” and “**O1**” for the Input/Output designation. For example, **Find What:** Local:2:I1.PB\_Output\_

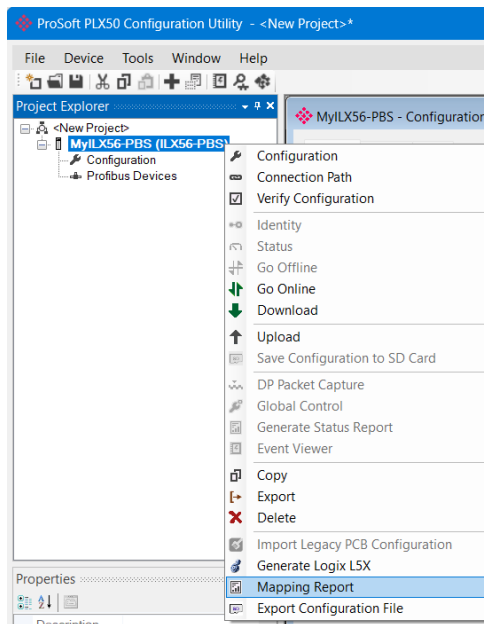
The number of search/replace instances found should equal the number of PROFIBUS slaves.



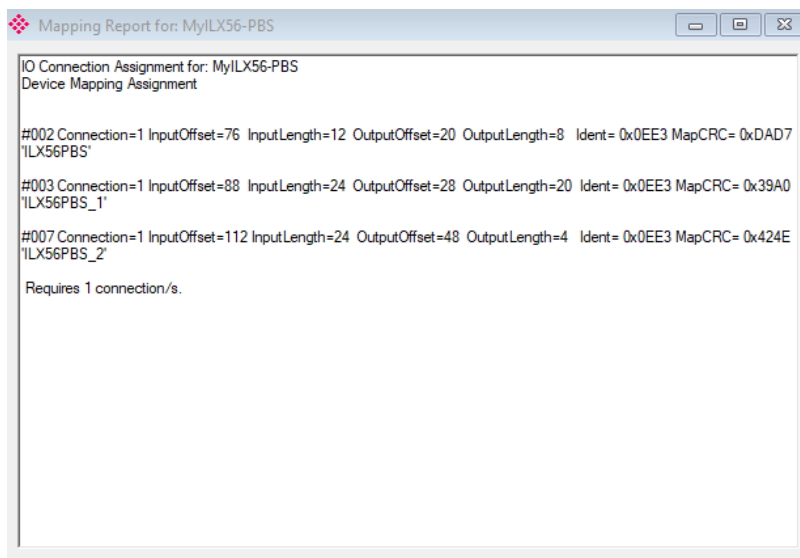
### 1.1.3 Mapping Report

The imported rungs for each PROFIBUS slave node must be updated to reflect the specific device mapping assignments. The *Mapping Report* contains the I/O Connection and Device Mapping Assignments for the ILX56-PBS project.

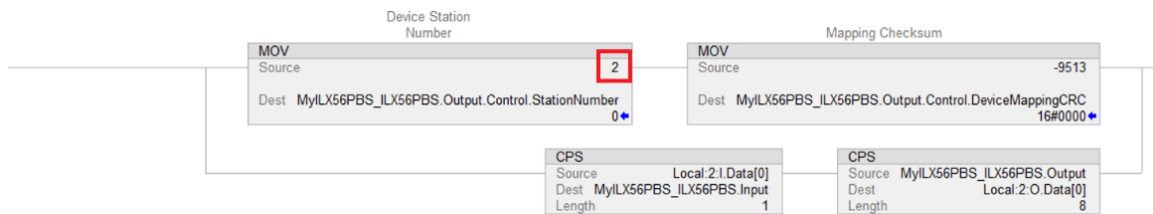
- 1 Within the PLX50CU, right-click on the module and select **MAPPING REPORT** to open the *Mapping Report* dialog.



- 2 In the *Mapping Report* example below, the PROFIBUS slave nodes are listed as: **#002**, **#003**, and **#007**.

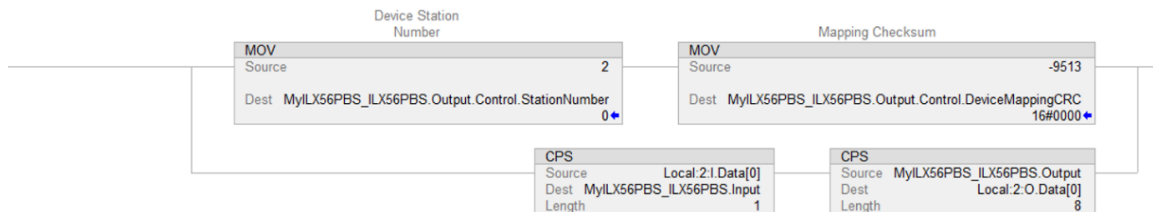


- 3 Each PROFIBUS DP node has its own rung in the imported routine. The PROFIBUS DP node number can be identified in the *Source* of the first **MOV** instruction.

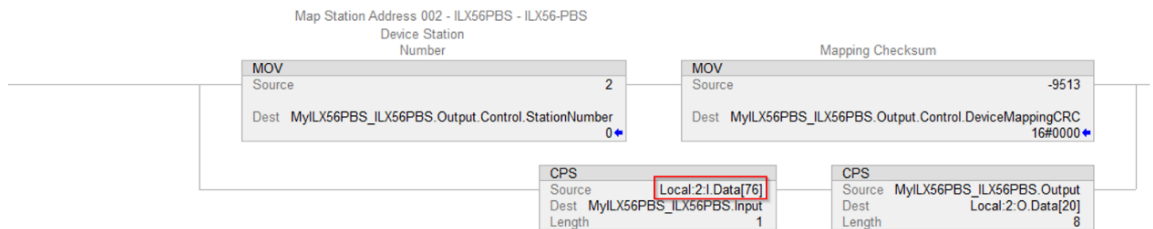


- 4 For each node rung, modify the **CPS** instruction *Source* and *Destination* values to reflect the *InputOffset* and *OutputOffset* values in the Mapping Report.

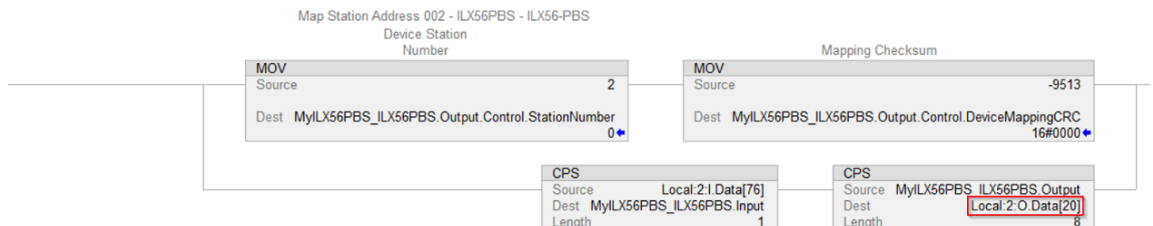
Example: The following is the original rung for node 2 after the Search/Replace.



- 5 Modify the *Source* location in the first **CPS** instruction to match the *InputOffset* value in the Mapping Report.



- 6 Modify the *Dest* value in the second **CPS** instruction to match the *OutputOffset* value in the Mapping Report.



- 7 Repeat Steps 4 to 6 for each node rung.
- 8 Save the .L5X file and download to the processor when ready.

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- 1 Product Version Number
- 2 System architecture
- 3 Network details

If the issue is hardware related, we will also need information regarding:

- 1 Module configuration and associated ladder files, if any
- 2 Module operation and any unusual behavior
- 3 Configuration/Debug status information
- 4 LED patterns
- 5 Details about the interfaced serial, Ethernet or Fieldbus devices

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