

Tag Generator Support Tool for Logix Designer/RSLogix 5000 & TIA Portal User Guide

To properly use the product, read this manual thoroughly and retain for easy reference, inspection, and maintenance. Ensure the end user receives this manual. This Page Intentionally Blank

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1 Preface and Safety

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2 Product Overview

About this Product

This User Guide describes the use of Tag Generator software that creates a tag file for import into Logix Designer/RSLogix 5000 or TIA Portal software.

This document is intended for use by those familiar with the configuration of communication networks for industrial and commercial applications. The user should be familiar with Logix Designer/RSLogix 5000 and/or TIA Portal software and Yaskawa AC drives.

The Tag Generator software produces a tag file, (*.CSV) for subsequent import to Logix Designer/RSLogix 5000 projects or, in the case of TIA Portal projects, a (*.XLSX) file for PROFIBUS and PROFINET. Tag Generator software reduces implementation time for PLC connected Yaskawa drives utilizing EtherNet/IP, DeviceNet, PROFINET, or PROFIBUS communications protocols.

Terms

Note: Indicates supplemental information unrelated to safety messages.

Drive: Yaskawa Drive

PLC: Programmable Logic Controller

Node: Drive on the network

Registered Trademarks

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Software, Product and PC System Requirements

Table 1

Specification	Description		
Software	YASKAWA Tag Generator PN: SW.YAI.01 Obtain from www.yaskawa.com at: https://www.yaskawa.com/pycprd/lookup/bannerDocDetails/		
Compatible Yaskawa Drive Product Series	A1000, D1000, iQpump1000, MV1000, P1000, R1000, V1000, V1000-4X, U1000 Industrial Matrix, U1000 Oil & Gas, F7, and G7		
Minimum PC System Requirements	 1.0 GHz or faster processor Windows 7 (32 bit and 64 bit); or Windows 8 (32 bit and 64 bit) 2 GB of RAM 10 MB of available hard-disk space 1280 x 720 screen resolution Requires .NET Framework 4.5 (2 GB disk space required for .NET) Internet connection (required for SW.YAI.01 download) 		

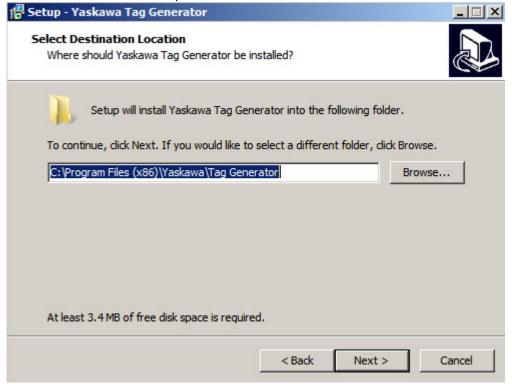
3 Install Software and Create a New Project

Obtain and Install Tag Generator Software SW.YAI.01.

- Direct your web browser to: https://www.yaskawa.com/pycprd/lookup/bannerDocDetails/ query type=get document&document id=SW.YAI.01&name=
- **2.** Download the software to a temporary folder on your PC. Extract the zip file to the temporary folder and click SETUP.EXE to install the Tag generator software.
- 3. Click Next.



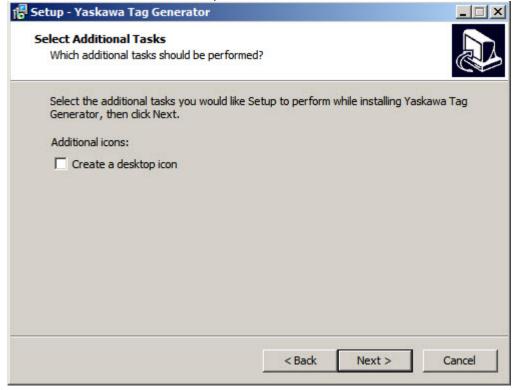
4. Click Next to use the default installation path or click Browse to select a different installation folder.



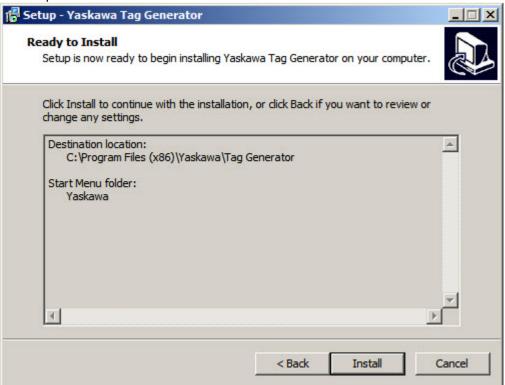
5. Click Next to continue to create a Yaskawa Start Menu folder or Browser to select a different folder.



6. Click Next or check the box to create a desktop icon.



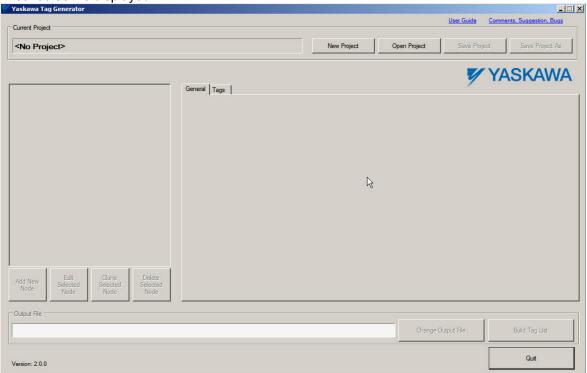
7. Click Install to complete the installation.



8. Click Finish to launch the Tag generator software.



9. The initial screen is displayed.



10.Click the "New Project" button on the "Yaskawa Tag Generator" window.

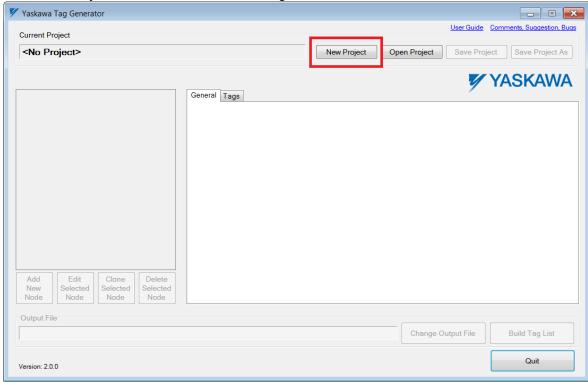


Figure 1 New Project Button

11.Select the radio button within the New Project dialog box to choose the software that will use the generated tag file. Select "Logix Designer/RSLogix 5000" for EtherNet/IP or DeviceNet protocols.

Select "TIA Portal" for PROFINET or PROFIBUS protocols.

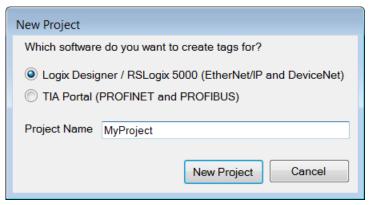


Figure 2 New Project Dialog Window

- **12.**Type a project name in the "Project Name" textbox.
- **13.**Click the "New Project" button.
- **14.** Refer to EtherNet/IP or DeviceNet Projects on page 11 for projects that utilize Logix Designer/RSLogix 5000. Refer to PROFINET or PROFIBUS Projects on page 19 for projects that utilize TIA Portal software.

4 EtherNet/IP or DeviceNet Projects

This section describes procedures for EtherNet/IP or DeviceNet projects and how to:

- · add one or more nodes
- edit an EtherNet/IP node
- edit a DeviceNet node
- modify tag names
- edit, clone or delete a node
- · build a tag list
- and import tags into Logix Designer/RSLogix 5000.

Add a Node

1. Click the "Add New Node" button on the Tag Generator Main Screen.

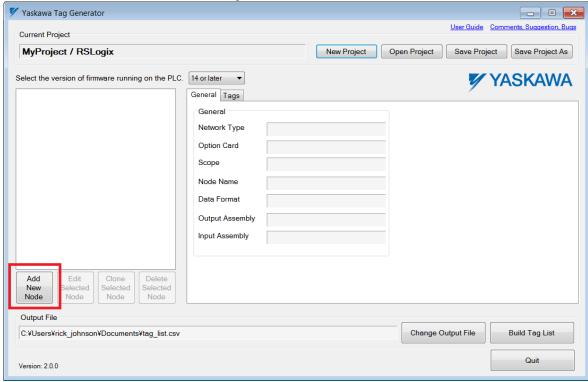


Figure 3 Add New Node Button

2. Click the radio button to choose the network type, next click the drop-down list to choose the communication option installed on the Yaskawa drive.

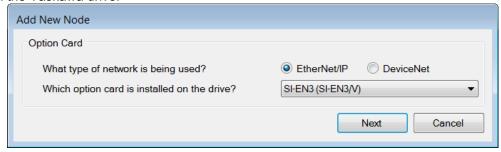


Figure 4 Add New Node Dialog

- 3. Click the "Next" button.
- 4. Proceed to Refer to Edit an EtherNet/IP Node on page 12 for an EtherNet/IP network. Proceed to Refer to Edit a DeviceNet Node on page 13 for a DeviceNet network.

Edit an EtherNet/IP Node

Follow this procedure to edit node settings for an EtherNet/IP node.

1. Match the fields in the "Edit EtherNet/IP Node" dialog to the configuration in Logix Designer/RSLogix 5000 software. Click the "Finish" button when all values are set.

NOTICE: Abnormal Equipment Operation. Match the fields in the "Edit EtherNet/IP Node" dialog to the configuration in Logix Designer/RSLogix 5000 software. Invalid or mismatched tags may cause erroneous operation.

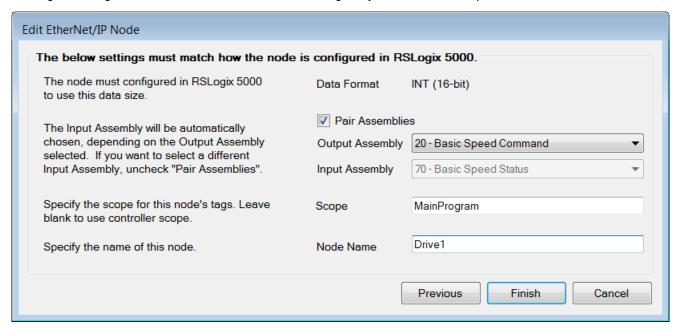


Figure 5 Edit EtherNet/IP Node Dialog

Table 2 Field Descriptions for the Edit EtherNet/IP Node Dialog

Dialog Field	Description	
Data Format (Display only):	Field displays tag data size. The tags are created based on the data size displayed here. This field is for display only and not configurable in the Tag Generator. The data in this display field must be manually mapped in RSNetWorx.	
Pair Assemblies (Checkbox):	Select this checkbox when using matching assemblies. Example: Output Assembly 20 is typically paired with Input Assembly 70. Deselect this checkbox to use differing assemblies.	
Output Assembly (Drop-down list):	Select the desired Output Assembly.	
Input Assembly (Drop-down list):	Select the desired Input Assembly when the "Pair Assemblies" checkbox is deselected.	
Scope (Textbox):	Specify the scope for this node's tags. Leave blank to use the controller scope. The default value for this field is "MainProgram".	
Node Name (Textbox):	Enter the name of the node in this text box to match the node name in Logix Designer/RSLogix 5000.	

Edit a DeviceNet Node

Follow this procedure to edit node settings for an DeviceNet node.

1. Match the fields in the "Edit DeviceNet/IP Node" dialog to the configuration in Logix Designer/RSLogix 5000 software. Click the "Finish" button when all values are set.

NOTICE: NOTICE: Abnormal Equipment Operation. Match the fields in the "Edit DeviceNet Node" dialog to the configuration in Logix Designer/RSLogix 5000 software. Invalid or mismatched tags may cause erroneous operation.

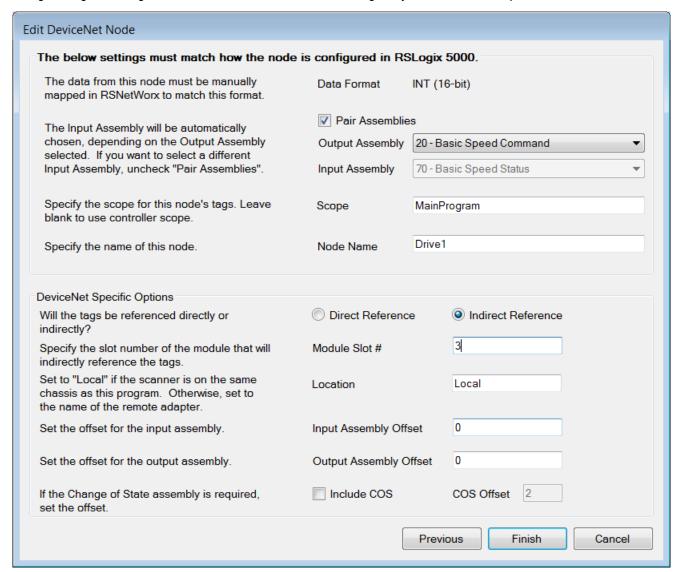


Figure 6 Edit DeviceNet Node Dialog

Table 3 Field Descriptions for the Edit DeviceNet Node Dialog

Dialog Field	Description	
Data Format (Display only):	Field displays tag data size. The tags are created based on the data size displayed here. This field is for display only and not configurable in the Tag Generator. The data in this display field must be manually mapped in RSNetWorx.	
Pair Assemblies (Checkbox):	Select this checkbox when using matching assemblies. Example: Output Assembly 20 is typically paired with Input Assembly 70. Deselect this checkbox to use differing assemblies.	
Output Assembly (Drop-down list):	Select the desired Output Assembly.	
Input Assembly (Drop-down list):	Select the desired Input Assembly when the "Pair Assemblies" checkbox is deselected.	
Scope (Textbox):	Specify the scope for this node's tags. Leave blank to use the controller scope. The default value for this field is "MainProgram".	

Dialog Field	Description		
Node Name (Textbox):	Enter the name of the node in this text box to match the node name in Logix Designer/RSLogix 5000.		
Module Slot # (Textbox): Specify the slot number of the module that will indirectly reference the DeviceNet to			
Location (Textbox):	Enter "Local" in this textbox if the DeviceNet scanner is on the same chassis as the CPU. Otherwise enter the name of the remote scanner/adapter in this textbox.		
Input and Output Assembly Offsets (Textbox, 2 each):	Enter the Input and Output Assembly offsets to match the data mapping location within the PLC memory. NOTICE: Abnormal Equipment Operation. Ensure the Input and Output Assembly offset values match the data mapping location in the PLC memory. Invalid or mismatched values will report improper data back to the tags and may cause erroneous operation.		
Include COS (Checkbox):	Select this checkbox to include the "Change of State" data if required.		
COS Offset (Textbox):	Enter the offset value to match the data mapping location in the PLC memory when the "Include COS" checkbox is selected.		

Modify Tag Names

The Tag Generator provides the option to modify tag names and descriptions to for each application. Follow these steps to modify tag names.

1. Select the "Tags" tab in the "Yaskawa Tag Generator" dialog, then select a tag to edit and click the "Edit Selected Tag" button to display the "Edit Tag" dialog.

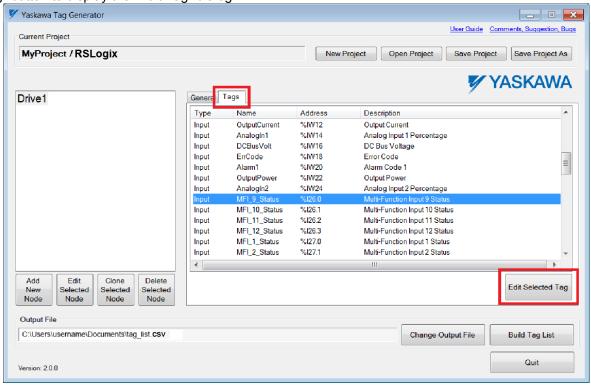


Figure 7 Yaskawa Tag Generator Dialog

2. Enter the new tag information in the "New Tag Description" and "New Tag Name" text boxes to modify the existing tag data.

The "Current Tag Description" and "Current Tag Name" text boxes display the currently assigned tag description and name.

Optional: Click the "Reset to Defaults" button to reset the values in the "New Tag Description" and "New Tag Name" text boxes to the default values shown in the "Default Tag Description" and "Default Tag Name" text boxes.



Figure 8 Edit Tag Dialog

◆ Edit, Clone or Delete Nodes (Optional)

- **1. Edit a node:** Double-click on a node in the list or select the node and click the "Edit Selected Node" button to edit existing nodes.
- 2. Clone a node: Use the Clone feature to easily duplicate several nodes.
 Select a node within the "Tags" tab and click the "Clone Selected Node" button, and give the new node a name to clone the node.
- **3.** Delete a node: Select a node within the "Tags" tab and click the "Delete Selected Node" button to remove a node.

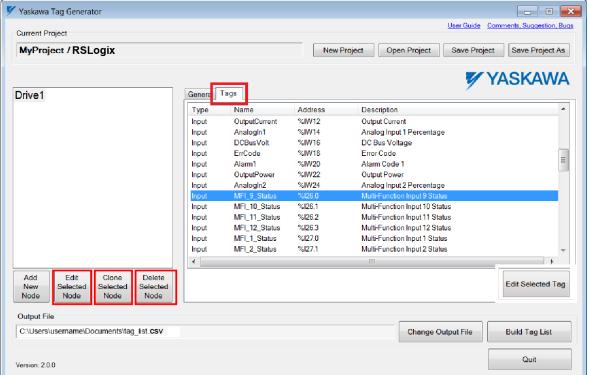


Figure 9 Edit, Clone or Delete Nodes

Build a Tag List

Follow these steps to build the tag list.

- 1. Ensure all project modifications are made, nodes are added, and tag names are defined.
- **2.** Determine the location of the output file.
- 3. Click the "Change Output File" button on "Yaskawa Tag Generator" dialog to specify the output file name and location.
- **4.** The default location and file name is C:\Users\Username\Documents\tag_list.csv.

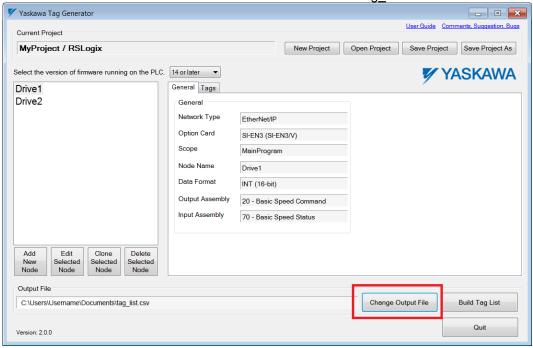


Figure 10 Change Output File Button

5. Specify the "Save As" folder location and "File name" in the "Save As" dialog and click the "Save" button. **Note:** The Tag Generator will automatically use extension ".csv" for EtherNet/IP or DeviceNet projects.

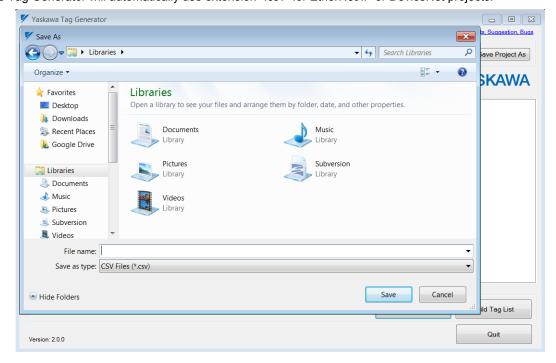


Figure 11 "Save As" Dialog for Tag Name and File Location

6. Click the "Build Tag List" button within the Yaskawa Tag Generator dialog, next click "OK" within the resulting Success dialog.

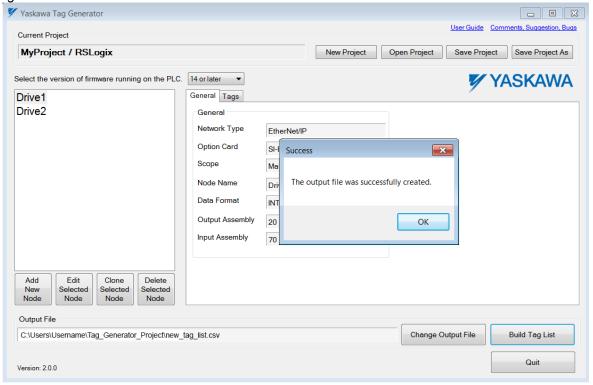


Figure 12 Successful Creation of an Output File

Example of a Logix Designer/RSLogix 5000 *.CSV output file.

```
remark, "Created by Yaskawa Tag Gen utility"
remark, "Date: 2015/02/10"
remark, "Time: 9:49:18"
remark, "To. 3

TYPE, SCOPE, NAME, DESCRIPTION, DATATYPE, SPECIFIER, ATTRIBUTES
remark, "To. 3

TYPE, SCOPE, NAME, DESCRIPTION, DATATYPE, SPECIFIER, ATTRIBUTES
remark, "To. 4

"Remark, "To. 5

"Remark, "To. 5

"Remark, "To. 5

"Remark, "To. 5

"Remark, "To. 6

"Remark, "To. 6

"Remark, "To. 6

"Remark, "To. 7

"Remark, "To
```

Figure 13 Example: Logix Designer/RSLogix 5000 *.CSV Output File

Import Tags into Logix Designer/RSLogix 5000

Follow this procedure to import tags from the Tag Generator into Logix Designer/RSLogix 5000.

1. Open the PLC project in Logix Designer/RSLogix 5000.

NOTICE: Ensure Logix Designer/RSLogix 5000 is offline, as tags can only be imported into Logix Designer/RSLogix 5000 in offline mode.

2. Select "Import", then "Tags and Logic Comments..." using the "Tools" drop-down menu to open the Import dialog. Refer to *Figure 14*.

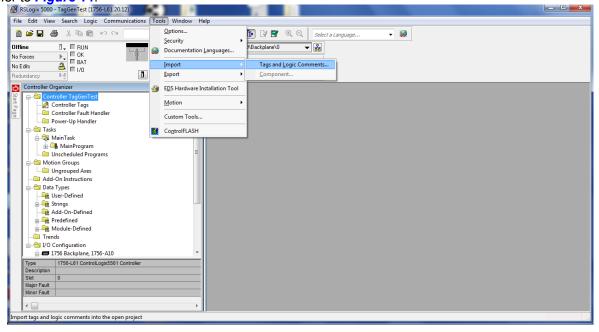


Figure 14 Import Tags into Logix Designer/RSLogix 5000

3. Browse to the *.CSV tag file, select it, and click the Import button using the Import dialog. Refer to Figure 15.



Figure 15 Select the *.CSV file for import

5 PROFINET or PROFIBUS Projects

After creating a new project, the next step to create new tags with the Tag Generator is to add one or more nodes. Follow these steps to add a node. Repeat these steps to add multiple nodes.

This section describes procedures for PROFINET or PROFIBUS projects and how to:

- · add one or more nodes
- · edit a PROFINET node
- edit a PROFIBUS node
- · modify tag names
- edit, clone or delete a node
- build a tag list
- and import tags into TIA Portal software.

Add a Node

Follow these steps to add one or more nodes.

1. Click the "Add New Node" button on the Tag Generator Main Screen.

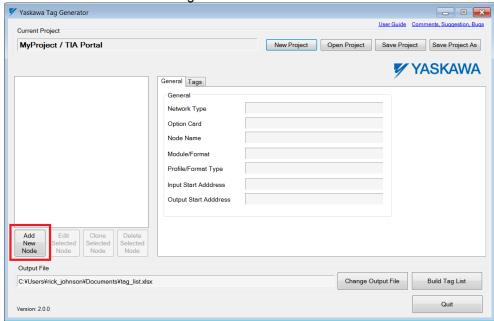


Figure 16 Add New Node Button

2. Click the radio button to choose the network type, next click the drop-down list to choose the communication option installed on the Yaskawa drive.

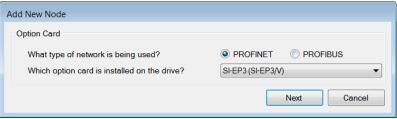


Figure 17 Add New Node Dialog

- 3. Click the "Next" button.
- 4. Refer to Edit a PROFINET Node on page 20 for a PROFINET network. Refer to Edit a PROFIBUS Node on page 21 for a PROFIBUS network.

Edit a PROFINET Node

Follow this procedure to edit node settings for a PROFINET node.

 Match the fields in the "Edit PROFINET Node" dialog to the configuration in TIA Portal software. Click the "Finish" button when all values are set.

NOTICE: Abnormal Equipment Operation. Match the fields in the "Edit PROFINET Node" dialog to the configuration in TIA Portal software. Invalid or mismatched tags may cause erroneous operation.

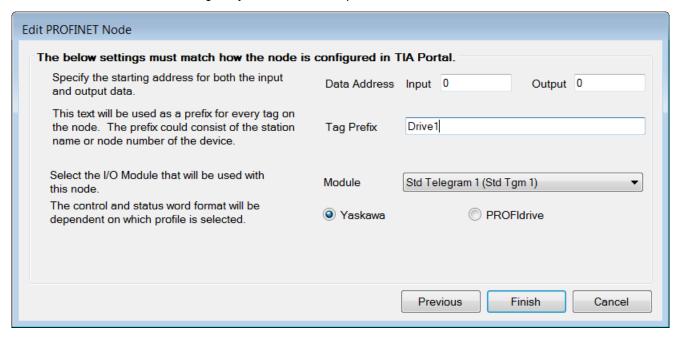


Figure 18 Edit PROFINET Node Dialog

Table 4 Field Descriptions for the Edit PROFINET Node Dialog

real property of the second se			
Dialog Field	Description		
Data Address-Input/Output (Textbox):	Specifies the starting address for input and output data. Enter addresses in these text boxes to match the addresses configured in TIA Portal.		
Tag Prefix (Textbox):	Enter a value to uniquely identify the node tags from other nodes. The prefix may consist of a station name or a node number of the device. This text will be used as a prefix for every tag on the node.		
Module (Drop-down list):	Select the I/O Module that will be used with this node. Ensure the selected module matches the module configured in the TIA Portal.		
Yaskawa or PROFIdrive (Radio button):	Select the radio button next to the value that matches the control and status configuration in TIA portal.		

Edit a PROFIBUS Node

Follow this procedure to edit node settings for a PROFIBUS node.

1. Match the fields in the "PROFIBUS Node" dialog to the configuration in TIA Portal software. Click the "Finish" button when all values are set.

NOTICE: Abnormal Equipment Operation. Match the fields in the "Edit PROFIBUS Node" dialog to the configuration in TIA Portal software. Invalid or mismatched tags may cause erroneous operation.

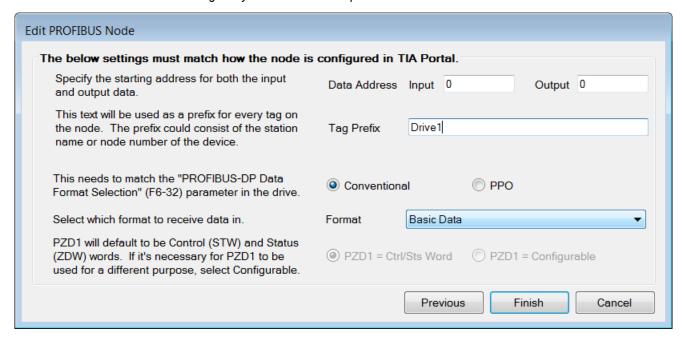


Figure 19 Edit PROFIBUS Node dialog

Table 5 Field Descriptions for the Edit PROFIBUS Node Dialog

Dialog Field	Description
Data Address-Input/Output (Textbox):	Specifies the starting address for input and output data. Enter addresses in these text boxes to match the addresses configured in TIA Portal.
Tag Prefix (Textbox):	Enter a value to uniquely identify the node tags from other nodes. The prefix may consist of a station name or a node number of the device. This text will be used as a prefix for every tag on the node.
Conventional or PPO (Radio button):	Select the radio button to match the PROFIBUS-DP Data Format Selection parameter F6-32 in the drive.
Format (Drop-down list):	Select a received data format from the drop-down list to match the module configured in TIA Portal. List choices vary based on the Conventional or PPO selection.
PZD1 (Radio button):	Choose the appropriate radio button for use with the PLC program. Select "PZD1 = Ctrl/Sts Word" for control/status word. Select "PZD1 = Configurable" for configurable word or alternate purpose. This radio button is enabled when PPO is set in the "Format" field. The Tag Generator will generate multiple tags for each bit or a single tag for the whole word. PZD1 defaults to Control (STW) and Status (ZDW) words.

Modify Tag Names

The Tag Generator provides the option to modify tag names and descriptions for each application. Follow these steps to modify tag names.

1. Select the "Tags" tab in the "Yaskawa Tag Generator" dialog, then select a tag to edit and click the "Edit Selected Tag" button to display the "Edit Tag" dialog.

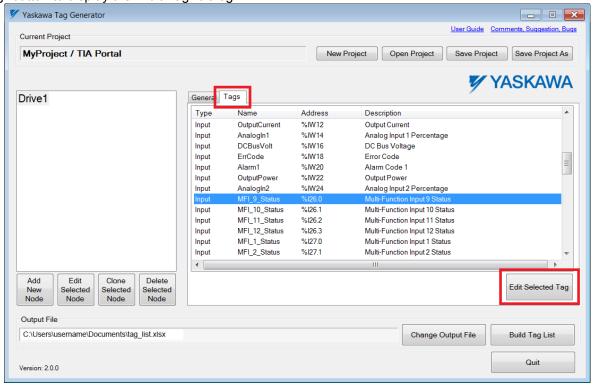


Figure 20 Yaskawa Tag Generator Dialog

2. Enter the new tag information in the "New Tag Description" and "New Tag Name" text boxes to modify the existing tag data.

The "Current Tag Description" and "Current Tag Name" text boxes display the currently assigned tag description and name.

Optional: Click the "Reset to Defaults" button to reset the values in the "New Tag Description" and "New Tag Name" text boxes to the default values shown in the "Default Tag Description" and "Default Tag Name" text boxes.

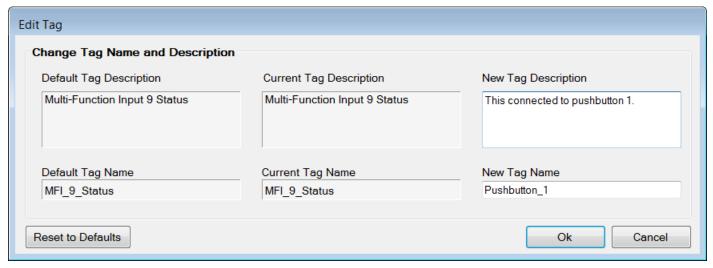


Figure 21 Edit Tag Dialog

◆ Edit, Clone or Delete Nodes (Optional)

- **1. Edit a node:** Double-click on a node in the list or select the node and click the "Edit Selected Node" button to edit existing nodes.
- 2. Clone a node: Use the Clone feature to easily duplicate several nodes.
 Select a node within the "Tags" tab and click the "Clone Selected Node" button, and give the new node a name to clone the node.
- 3. Delete a node: Select a node within the "Tags" tab and click the "Delete Selected Node" button to remove a node.

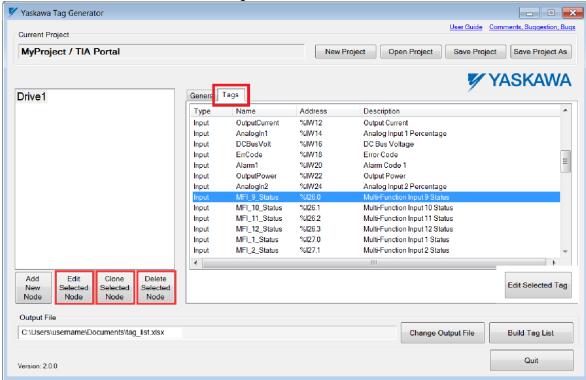


Figure 22 Edit, Clone or Delete Nodes

Build a Tag List

- 1. Ensure all project modifications are made, nodes are added, and tag names are defined.
- **2.** Determine the location of the output file.
- 3. Click the "Change Output File" button on "Yaskawa Tag Generator" dialog to specify the output file name and location.
- 4. The default location and file name is C:\Users\Username\Documents\tag_list.xlsx.

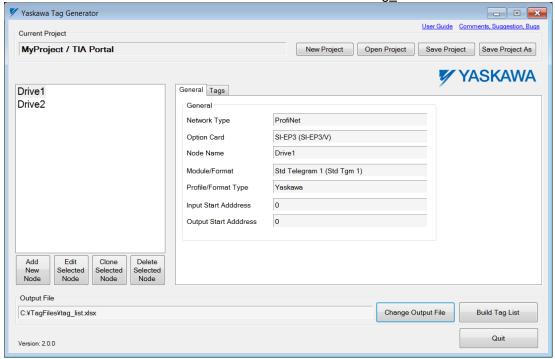


Figure 23 Yaskawa Tag Generator Dialog (Change output file)

5. Specify the "Save As" folder location and "File name" in the "Save As" window dialog and click the "Save" button. **Note:** The Tag Generator will automatically use extension ".xlsx" for PROFIBUS or PROFINET projects.

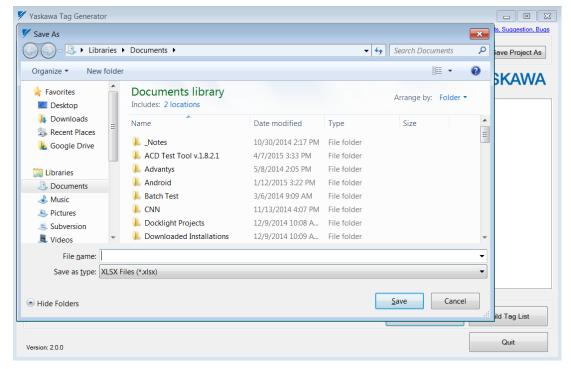


Figure 24 "Save As" Dialog for Tag File Location and File Name

6. Click the "Build Tag List" button within the Yaskawa Tag Generator dialog, next click "OK" within the resulting Success dialog.

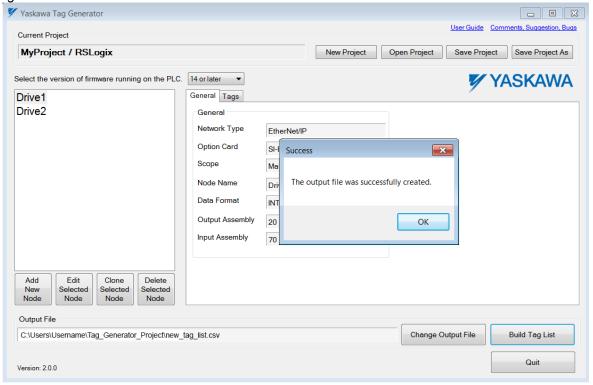


Figure 25 Successful Creation of an Output File

7. Example of a TIA Portal *.XLSX output file.

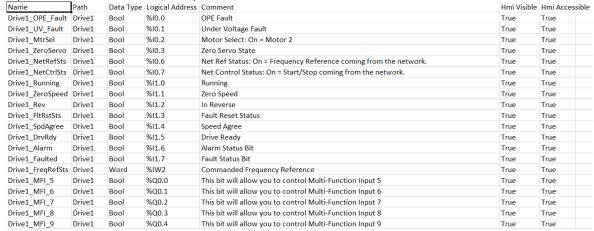


Figure 26 TIA Portal Example File

Import Tags into TIA Portal Software

Follow this procedure to import tags from the Tag Generator into TIA Portal software. Refer to *Figure 27*

- 1. Open the PLC project in TIA Portal.
- **2.** Expand the target PLC in the Devices project tree.
- 3. Expand PLC tags.
- **4.** Double-click "Show all tags" in the Devices project tree.

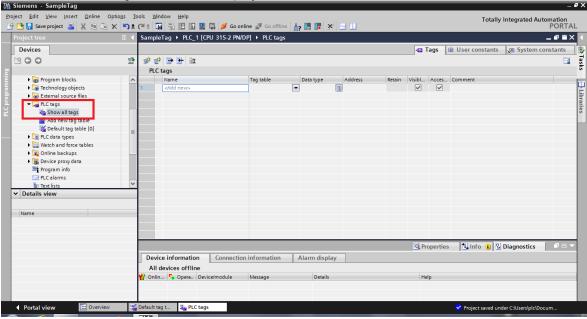


Figure 27 Expanded Devices Project Tree within TIA Portal

5. Click the Import icon on the main window tool bar to open the Import from Excel dialog. Refer to *Figure 28*. Click the "..." icon in the "Import from Excel" dialog to browse to the *.XLSX tag file. Refer to *Figure 29*.

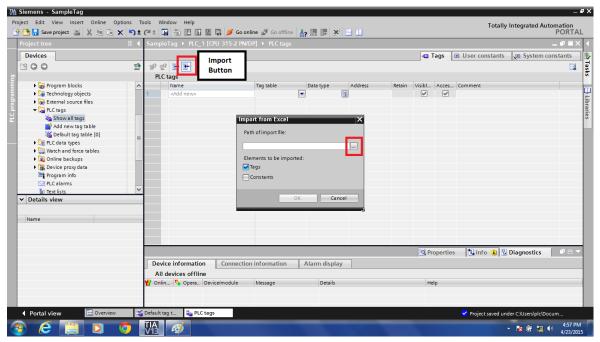


Figure 28 Import From Excel Dialog

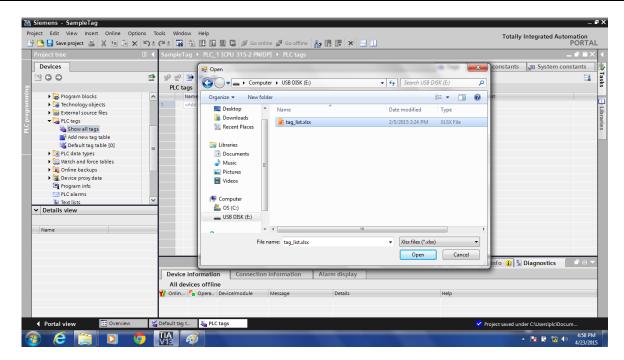


Figure 29 File Selection Browse Dialog

- **6.** Select the *.XLSX tag file for import and click the Open button in the Open dialog to import the file. Refer to *Figure* 29
- **7.** End

Revision History

The revision dates and the numbers of the revised manuals appear on the bottom of the back cover.

Example:

MANUAL NO. TOEP YAICOM 20A

Published in USA May 2015 15-5

Date of original publication

Date of publication

Date of Publication	Revision Number	Section	Revised Content
May 2015	-	-	First Edition. This manual supports software version 2.0.0.

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Tag Generator Support Tool for Logix Designer/RSLogix 5000 & TIA Portal User Guide

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YASKAWA

YASKAWA AMERICA, INC.

In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply. Specifications are subject to change without notice for ongoing product modifications and improvements.

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