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SIEMENS

Handling EPLAN to transfer specific properties

TIA Portal

<https://support.industry.siemens.com/cs/ww/en/view/109748224>

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To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under <https://www.siemens.com/cert>.

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1 Introduction

1.1 Overview

When transferring planning data from EPLAN to TIA Portal, the hardware configuration including configured address lists can be transferred. The hardware elements are created from the hardware catalog during import into TIA Portal, so that they are created with their standard properties.

Depending on the application and requirements, it may be interesting to define properties in the upstream program in order to transfer them to the project engineering in TIA Portal. There are two ways to do this, the Template References and the Custom Attributes.

Template References

Template References are used to refer to predefined templates. They allow that when importing an AML file into TIA Portal instead of the element from the hardware catalog with standard properties, for example an element from a global or project library is inserted, which already contains predefined properties (e.g. safety settings of the CPU).

Custom Attributes

Custom Attributes are used to set individual properties of elements in EPLAN and to transfer these to the corresponding elements in the TIA Portal. Here, user-defined attributes are to be configured in EPLAN, which can be exported centrally to a file after the AML export. After the AML import in TIA Portal, the file with the user-defined attributes can be transferred to the hardware elements in the TIA Portal project via an appropriately created Openness application. Here, only parameters in TIA Portal objects that are available via the Openness interface can be adapted (e.g. activation of the CPU web server).

Using both Template References and Custom Attributes, you can effectively combine both functionalities:

- Frequently used parameters that differ from the standard properties of the hardware catalog or parameters that cannot be mapped via the Openness interface can be stored in a global library via a master copy and addressed in EPLAN via the Template References.
- Properties that differ depending on the module/project can be handled and individualized in the project via appropriately created Custom Attributes as well as a suitable Openness application.

This way, a large part of the hardware configuration can be configured centrally from an upstream program such as EPLAN.

1.2 Components used

This application example has been created with the following hard- and software components:

Table 1-1

Component	Number	Article number	Note
EPLAN Electric	1		http://www.eplan.com/
SIMATIC STEP 7 Professional V18	1	6ES7822-1..08-..	Download oder DV

You can purchase these components from the [Siemens Industry Mall](#).

This application example consists of the following components:

Table 1-2

Component	File name	Note
Documentation	109748224_Library_Reference_DOC_v10_en.pdf	This document
Library Reference <ul style="list-style-type: none"> EPLAN 2023 Project for Library Reference AML-File for Library Reference TIA Portal V18 Library for Library Reference	109748224_Library_Reference_PROJ_v10.zip	
EPLAN Project	109748224_Library_Reference_EPLAN_v10.zip	

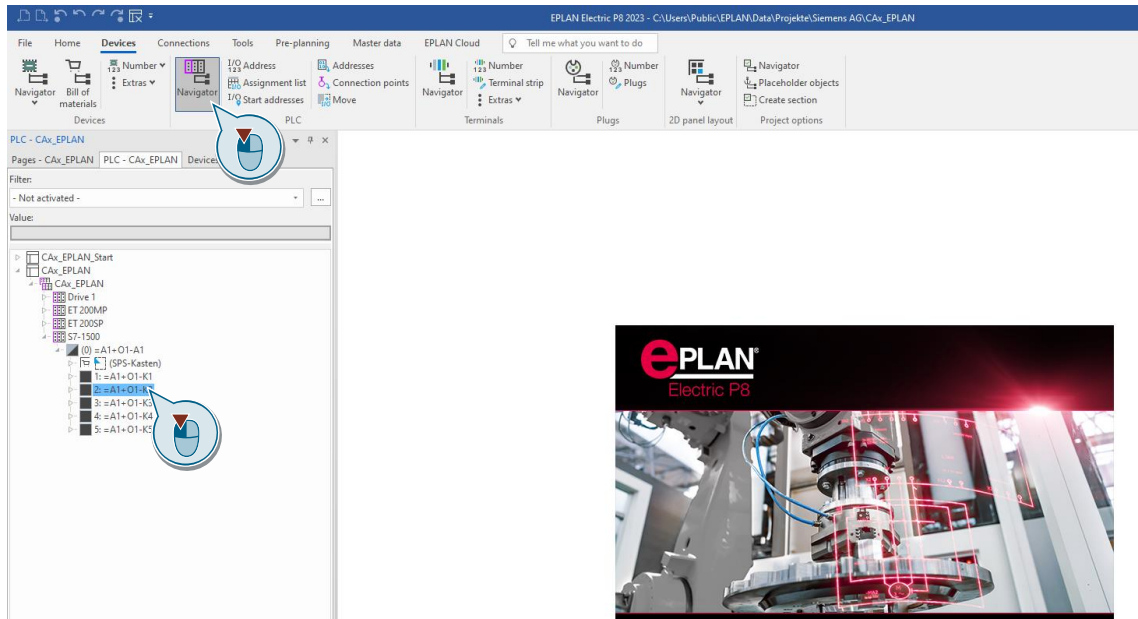
2 Engineering

2.1 Inserting Template References

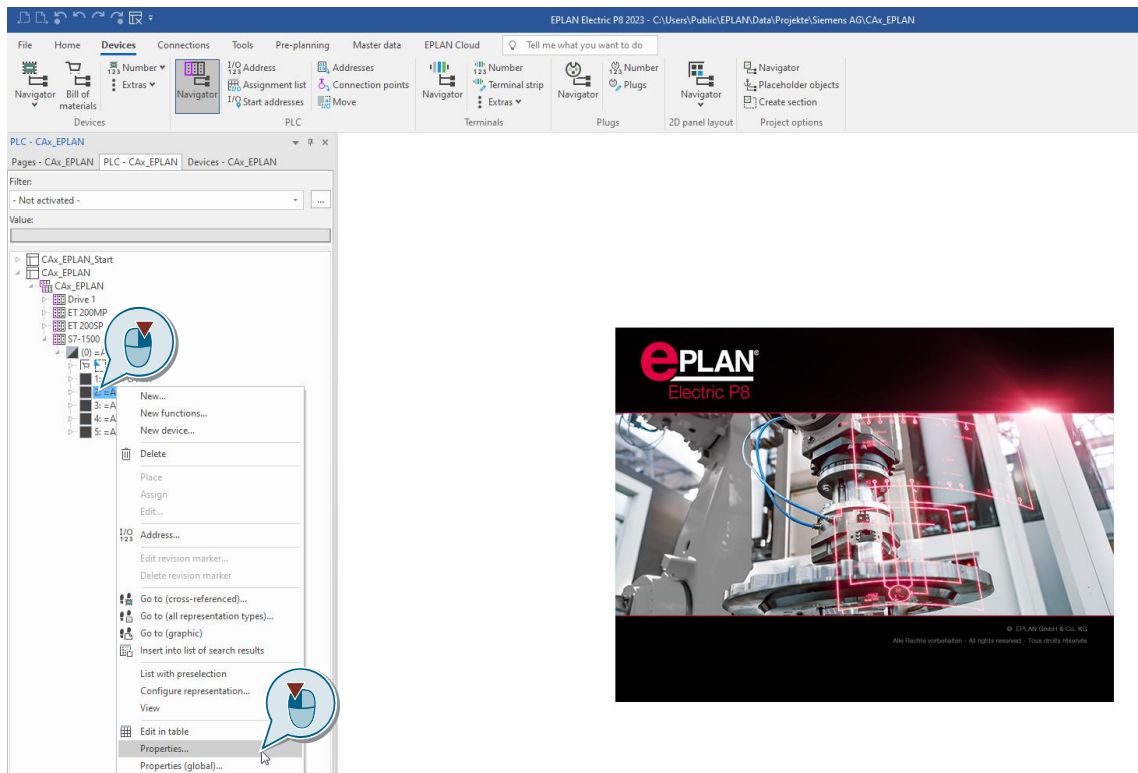
The Template Reference must be set at the main function and cannot be set at the article placement, for example.

To insert a Template Reference, proceed as follows:

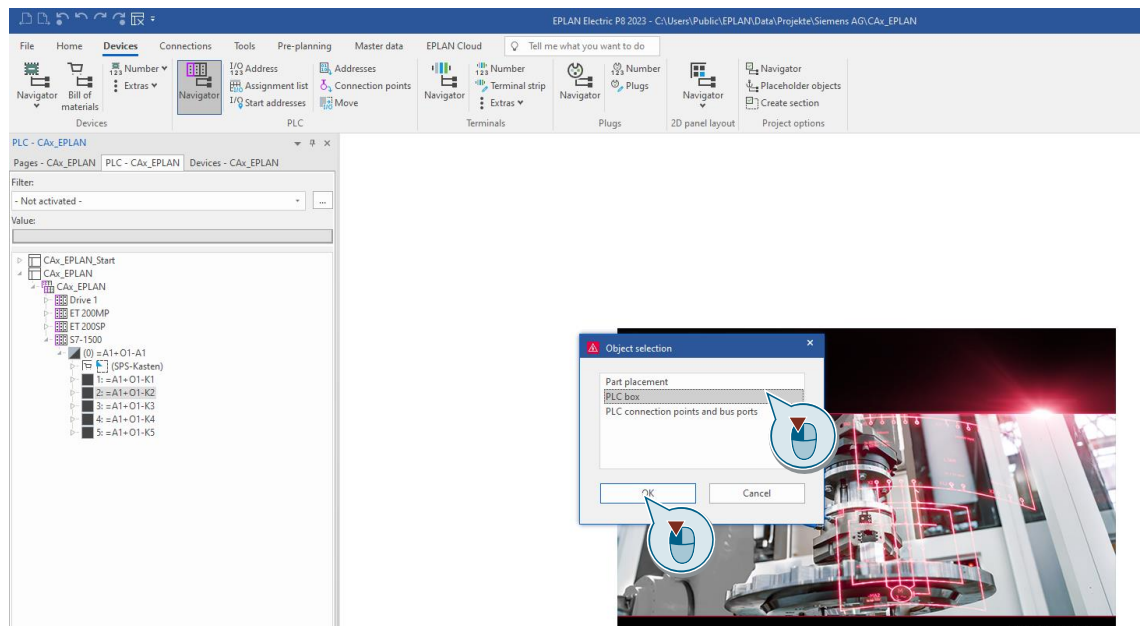
1. Select an element in the PLC navigator. (if necessary, show navigator via button)



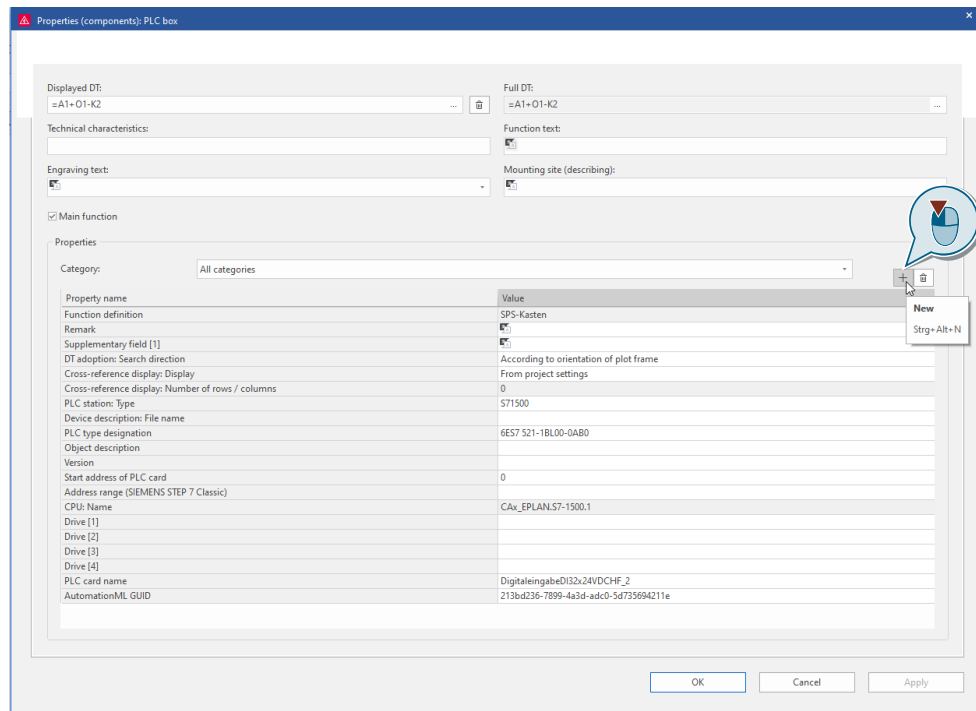
2. Select the properties of the module with a right click.



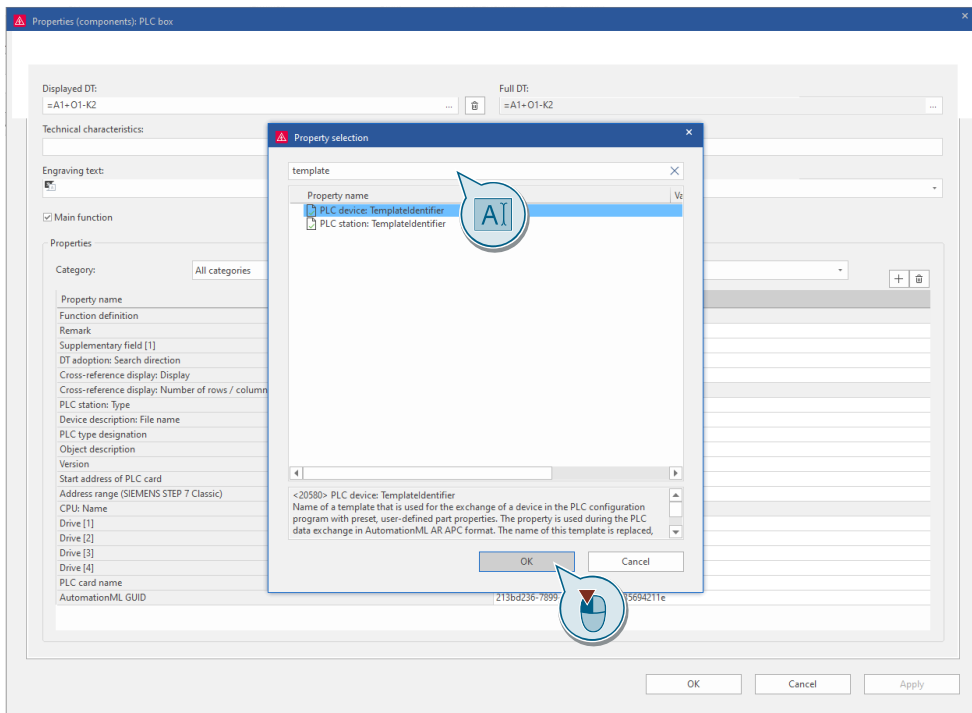
3. Select the PLC box in the Object selection.



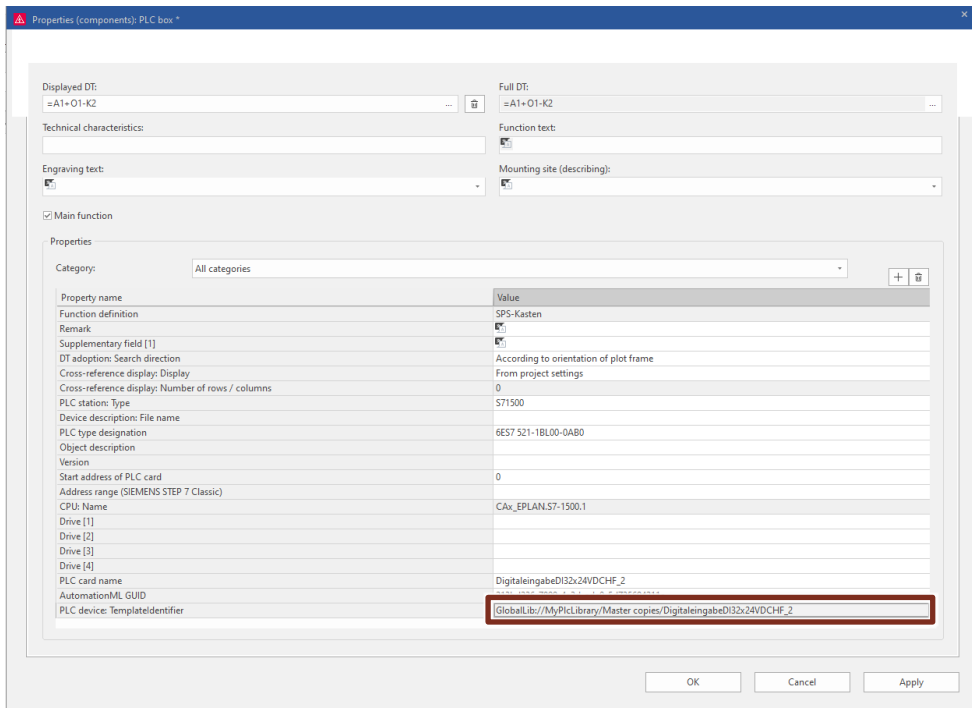
4. Add a new property in the properties.



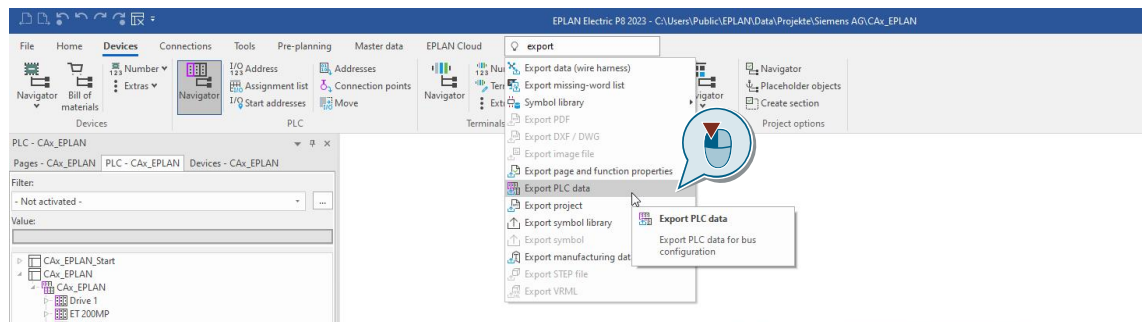
5. Optionally filter by "Template".



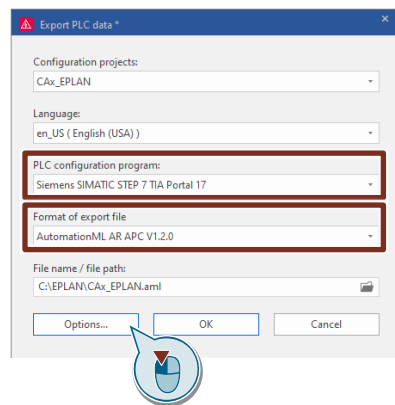
6. Insert a reference to the object.



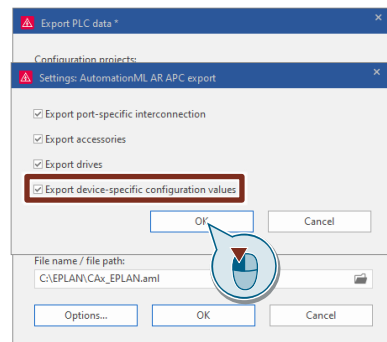
7. Export the data as AML.



8. Select "Siemens SIMATIC STEP 7 TIA Portal V1x" and "AutomationML V1.2.0" and click on "Options...".



9. Make sure that the option "Export device-specific configuration values" is selected in the options.



2.2 Create and assign Custom Attributes

Custom Attributes are possible from TIA Portal V18.

The tools and their help are delivered with TIA Portal V18.

You can find them under:

- **Hardware Publication Tool**
 - **Tool:** C:\Program Files\Siemens\Automation\Portal V18\Bin\Siemens.Automation.Cax.PublicationTool.Mdd.exe
 - **Help:** C:\Program Files\Siemens\Automation\Portal V18\Bin\CaxMddPublicationToolHelp
- **GSDML Publication Tool**
 - **Tool:** C:\Program Files\Siemens\Automation\Portal V18\Bin\Siemens.Automation.Cax.PublicationTool.Gsdml.exe
 - **Help:** C:\Program Files\Siemens\Automation\Portal V18\Bin\CaxGsdmlPublicationToolHelp

3 Appendix

3.1 Service and support

Industry Online Support

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Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

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support.industry.siemens.com

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The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers

– ranging from basic support to individual support contracts. Please send queries to Technical Support via Web form:

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- Spare parts services
- Repair services
- On-site and maintenance services
- Retrofitting and modernization services
- Service programs and contracts

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support.industry.siemens.com/cs/sc

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for iOS and Android:

support.industry.siemens.com/cs/ww/en/sc/2067

3.2 Industry Mall



The Siemens Industry Mall is the platform on which the entire Siemens Industry product portfolio is accessible. From the selection of products to the order and the delivery tracking, the Industry Mall enables the complete purchasing processing – directly and independently of time and location:

mall.industry.siemens.com

3.3 Links and literature

Table 3-1

Nr.	Thema
\1\	Siemens Industry Online Support https://support.industry.siemens.com
\2\	Link to this entry page of this application example https://support.industry.siemens.com/cs/ww/en/view/109748224
\3\	

3.4 Change documentation

Table 3-2

Version	Date	Modifications
V1.0	04/2023	First version