

# TIA Portal Exporter Utility

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## TIA Portal Exporter Utility

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Help version 1.018

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### Overview

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The TIA Portal Exporter utility is a tool that can be used to export tags from a Siemens TIA Portal project into the server. When a project is opened using the tool, the content of the project is displayed, allowing the selection of program block, tag tables, or individual tags. The selected tags are exported into a format which can be consumed by the Siemens TCP/IP Driver Automatic Tag Generation process.

The TIA Portal Exporter utility supports versions 13, 14, 15, 16, 17, 18, or 19 of TIA Portal projects.

 For more information regarding how tags are translated see [Tag Data Type Conversions](#).

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## Install TIA Portal Exporter

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The installer for the TIA Portal Exporter Utility is present in the utility directory of the system on which the server has been installed. TIA Portal Exporter is available if the Siemens TCP/IP driver is selected for installation.

● **Important:** This utility must be installed onto a system which has TIA Portal 13, 14, 15, 16, 17, 18, or 19 and the associated installation of Openness.

1. Open the utility folder on the system where the server has been installed.
2. Copy TIAPortalExporter6.exe to the system which runs TIA Portal.
3. Run the installer.
4. Select the appropriate language for your system.
5. Complete the installation.
6. Identify the Windows user accounts to run the utility under, and add them to the Siemens TIA Openness local user group.
  - a. Open the system **Computer Management** window.
  - b. Expand **Local Users and Groups** and select **Groups**.
  - c. Open the **Siemens TIA Openness** group.
  - d. Select to add a user to run TIAPortalExporter.

● **Note:** In order for user account changes to take effect, the account must be logged out and logged in again. An operating system restart is recommended.

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## User Guide

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Access the links below for information on how to use the TIA Portal Exporter Utility:

- [In the Utility](#)
- [In Server](#)
- [Multilingual Projects](#)

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## Use in the Utility

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1. From the Start menu, select **TIAPortalExporter 6** from the TIAPortalExporter 6 folder.
2. Click the **“Open Project File...”** button.
3. Browse to and select a TIA Portal project file.

● **Notes:**

- TIA Portal project files have the extension .apn where *n* is the version number (.ap13, .ap14, .ap15\_1...).
- The TIA Portal Exporter utility cannot open projects which are already open in TIA Portal. Close any projects you have open in TIA Portal before you open them in the utility. Once the

Exporter utility has completed its processing of the project you may re-open it in TIA Portal without interfering with the operation of the Exporter utility.

- Be sure to compile and save data blocks in the project from which you would like to export. Un-compiled data blocks will not be visible to the Exporter utility.
  - Multilingual Tag Comments are deserialized using the Siemens TIA Portal Project's "Reference Language" (see [Working with Multilingual Projects](#) for more information).
4. Wait while the project file is opened and the tags are loaded.
  5. Once the project has loaded you will be presented with a list of tag tables and program blocks. Entire blocks may be selected by clicking the "Select All" button on the block header. You may also elect to expand the blocks and select individual tags within. The blocks may be expanded by clicking the expand (down caret) button at the left side of the block header. The number of selected tags in the block is displayed in the block header, and the overall number of selected tags is shown in the information pane at the left hand side of the window.
  6. Once you have selected the tags you would like to export, click the **Export** button. Wait for the export to complete.

## Use in Server

1. Copy the export file produced by the TIA Portal Exporter utility to the system where Server is running.
2. Open the Server Configuration application, expand the Siemens Ethernet TCP/IP driver and select the device to which you would like to import tags.
3. Right-click on the device and select the properties context menu.
4. In the property editor for the device, select the Tag Import Tab. Enter the path to the export file in the space provided.
5. Select the Tag Generation Tab. Click the "Create tags" button. Wait for tag generation to complete.
6. Close the property editor.

## Tag Data Type Conversions

TIA Portal tag table data types are converted to Server data types as follows:

TIA Portal Data Type	Server Data Type
Bool	Boolean
Byte	Byte
Char	Char
Counter	Word
Date	String
Dint	Long
DWord	DWord
Int	Short
Real	Float

<b>TIA Portal Data Type</b>	<b>Server Data Type</b>
S5Time	Long
Time	String
Timer	Long
Time Of Day	String
Word	Word
Aom_Ident	DWord
Conn_Any	Word
Conn_Ouc	Word
Conn_Prg	Word
Conn_R_Id	DWord
DB_ANY	Word
DB_DYN	Word
DB_WWW	Word
Event_Any	DWord
Event_Att	DWord
Event_HwInt	DWord
Hw_Any	Word
Hw_Device	Word
Hw_DpMaster	Word
Hw_DpSlave	Word
Hw_Hsc	Word
Hw_Interface	Word
Hw_IEPort	Word
Hw_Io	Word
Hw_IoSystem	Word
Hw_Module	Word
Hw_Pto	Word
Hw_Pwm	Word
Hw_SubModule	Word
LReal	Double
OB_Any	Short
OB_Att	Short
OB_Cyclic	Short
OB_Delay	Short
OB_DIAG	Short
OB_HWINT	Short
OB_PCYCLE	Short
OB_STARTUP	Short
OB_TIMEERROR	Short
OB_Tod	Short
Pip	Word
Port	Word
Rtm	Word

TIA Portal Data Type	Server Data Type
SInt	Char
UDInt	DWord
UInt	Word
USInt	Byte
WChar	Short

TIA Portal program block data types are converted to Server data types as follows:

TIA Portal Data Type	Server Data Type
Bool	Boolean
Byte	Byte
Char	Char
Counter	Char
Date	String
Dint	Long
DWord	DWord
Int	Short
Real	Float
S5Time	Long
Time	String
Timer	String
Time Of Day	String
Word	Word
Date and Time	String
AOM_IDENT	DWord
CONN_ANY	Word
CONN_OUC	Word
CONN_PRG	Word
CONN_R_ID	DWord
DB_ANY	Word
DB_DYN	Word
DB_WWW	Word
EVENT_ANY	DWord
EVENT_ATT	DWord
EVENT_HWINT	DWord
Hw_Any	Word
Hw_Device	Word
Hw_DPMaster	Word
Hw_DPSlave	Word
Hw_HSC	Word
Hw_Interface	Word
Hw_IEPort	Word
Hw_lo	Word

TIA Portal Data Type	Server Data Type
Hw_IoSystem	Word
Hw_Module	Word
Hw_Pto	Word
Hw_Pwm	Word
Hw_SubModule	Word
LReal	Double
OB_Any	Short
OB_Att	Short
OB_Cyclic	Short
OB_Delay	Short
OB_DIAG	Short
OB_HWINT	Short
OB_PCYCLE	Short
OB_STARTUP	Short
OB_TIMEERROR	Short
OB_Tod	Short
Pip	Word
Port	Word
Rtm	Word
SInt	Char
UDInt	DWord
UInt	Word
USInt	Byte
WChar	Short

#### Notes:

1. Arrays are automatically expanded. For each array, a tag is created for the entire array as well as each index in the array.
2. Tags cannot be created for User Data Types or Strings placed in the InOut section of a function block.
3. User defined types in tag tables cannot be expanded. The address of the start of the UDT will be provided as a tag.

### Unsupported Types

- **Multidimensional Boolean Arrays:** Multidimensional Boolean array tags are not supported by Server, however tags are created for the individual elements of the array.
- **String Arrays:** Arrays of strings, and data types which evaluate to string (see table above) are not supported.
- **Strings Longer than 210 Characters:** Due to limitations in the Siemens TCP/IP Driver strings greater than 210 characters in length are not currently supported.
- **Complex Types in the InOut Section of Instance Function Blocks:** Tags for complex data types ( user defined types, structs, arrays, and strings) cannot be generated for the InOut section of instance function blocks.



## Working with Multi-Lingual Projects

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TIA Portal projects (versions 14.0.1.0 and above) that contain text translations for Tag Comments are deserialized by the TIA Portal Exporter Utility in the Reference Language of the project.

• *For more information, refer to the Siemens TIA Information System | [Editing Project Data](#) | [Working with Multi-Language Projects](#).*

## Event Log Messages

The following information concerns messages posted to the Event Log pane in the main user interface. Consult the OPC server help on filtering and sorting the Event Log detail view. Server help contains many common messages, so should also be searched. Generally, the type of message (informational, warning) and troubleshooting information is provided whenever possible.

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### **Unexpected error reading the project file.**

**Error Type:**

Informational

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### **Invalid extractor version. Please check your installation.**

**Error Type:**

Warning

**Possible Solution:**

Check your installation.

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### **Unable to open the selected project. Make sure that the correct version of Openness is installed.**

**Error Type:**

Warning

**Possible Solution:**

Make sure that the correct version of Openness is installed.

---

### **Error initializing the Openness API. Please verify that all necessary components are installed.**

**Error Type:**

Warning

**Possible Cause:**

Not all necessary components of Openness API are installed.

**Possible Solution:**

Please verify that all necessary components are installed.

---

### **Failed to open the project file. Please verify that the project can be opened by the version of TIA Portal installed on this system and that the project is not currently open in TIA Portal.**

**Error Type:**

Warning

**Possible Causes:**

1. The version of TIA Portal installed on this system is not compatible with the project.
2. The project is currently open in TIA Portal.

**Possible Solutions:**

1. Verify that the project can be opened by the version of TIA Portal installed on this system.
2. Verify that the project is not currently open in TIA Portal.

**A problem has been encountered extracting tags from the selected project. Please verify that the project is complete and has been successfully compiled.**

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**Error Type:**

Warning

**Possible Causes:**

The project is not complete nor successfully compiled.

**Possible Solution:**

Verify that the project is complete and has been successfully compiled.

**Timed out waiting for the extractor to complete.**

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**Error Type:**

Warning

**The selected project type is not currently supported.**

---

**Error Type:**

Informational

**Possible Solution:**

Convert the project to one of the supported versions.

**No extractors can be found on the system. Please check your installation.**

---

**Error Type:**

Warning

**Possible Cause:**

There is an issue with the installation.

**Possible Solution:**

Check the installation.

**Project load canceled.**

---

**Error Type:**

Informational

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**Failed to export to file.**

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**Error Type:**

Informational

**Possible Cause:**

The selected file is in use or open in another application.

**Possible Solution:**

Close the selected file in any other application or instance.

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**Failed to start extractor process.**

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**Error Type:**

Informational

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**Unable to load project.**

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**Error Type:**

Informational

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**Unable to find help documentation. Please verify your installation.**

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**Error Type:**

Warning

**Possible Cause:**

There is an issue with the installation.

**Possible Solution:**

Check the installation.

---

**Unable to access the Openness API. The current user is not a member of the Siemens TIA Openness group.**

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**Error Type:**

Warning

**Possible Cause:**

The current user is not a member of the Siemens TIA Openness group.

**Possible Solution:**

Add current user to the Siemens TIA Openness group.

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