Siemens S7 Devices Tag Importer

How to import tags from Siemens S7 devices.

Reference Solution Designer Settings and Tools Import Tags Siemens S7

You'll use the Import Siemens Address Configuration wizard to import tags from a Siemens PLC into the software platform. Start by providing the PLC's IP address, rack, slot, and other connection details. Choose to import tags from a file or directly from TIA Portal. For S7-1200/1500 PLCs, ensure that TIA Portal is configured to allow remote communication and that "Optimized Block Access" is disabled. Finally, select your XML file or connect to TIA Portal and click "Refresh" to import the available tags.

Deprecated importer

This importer belongs to the Siemens S7 Devices Legacy Connector, which is deprecated. From FrameworX 10.1.6, **Solution Import Tags** lists the "Siemens" importer only when the solution already has a channel using the legacy connector. The list refreshes when you reopen the solution. New Siemens S7 channels use the Siemens S7 Plus Devices Connector and its "SiemensPlus" importer. Solutions with a legacy channel keep the importer, and their channels, nodes and points keep working.

Instructions
- Wizard Startup
- Initial Configuration
- Sync Device Node
- Prefix Option (Optional)
- Refresh
- Import

TIA Portal Configuration
- Allow access with PUT/GET communication from remote partner
- Disable "Optimized block access"
- Load the XML or Import from TIA Portal

Instructions

Wizard Startup

On the Solution Designer, go to Solution Import Tags and select "Import Siemens Address configuration." Double click on selected wizard or press the "Execute" button to open the initial configuration popup.

Initial Configuration

In the initial configuration dialog, enter the Siemens PLC information:

- Station IP: The IP address of the Siemens device in network (e.g., 192.168.1.1)
- Rack: The Rack parameter specifies which frame or rack the target module is in in a multi-rack configuration. In many simple configurations, this is often 0, as there's only one rack.
- Slot: The physical slot of the PLC's communication module (often 2).
- Port: The communication port (default: 102)
- S7 Family: Specify the PLC model, either Model 300/400 or Model 1200, to ensure the appropriate communication methods and protocols are applied.

Model 300/400

The S7-300 and S7-400 are traditional, modular PLCs known for their flexibility and use in more complex automation systems. They often utilize the PROFIBUS or PROFINET communication protocols, depending on the specific modules and configurations in use.

Model 1200

The S7-1200 is part of Siemens' newer generation of PLCs. It's more compact and designed for small to medium automation tasks. It primarily uses PROFINET for communication.

Sync Device Node

The "Sync Device Node" dialog will appear. Here, you have the following import option:

- From a file: Provide the path of your stored file.

Prefix Option (Optional)

Select "Add NodeName as Prefix" option to automatically add the PLC's name as a prefix to all imported tags. It improves organization, especially in solutions with multiple PLCs.

Refresh

Click "Refresh" to display a preview of available tags.

Import

Finally, press "Ok" to start the import process.

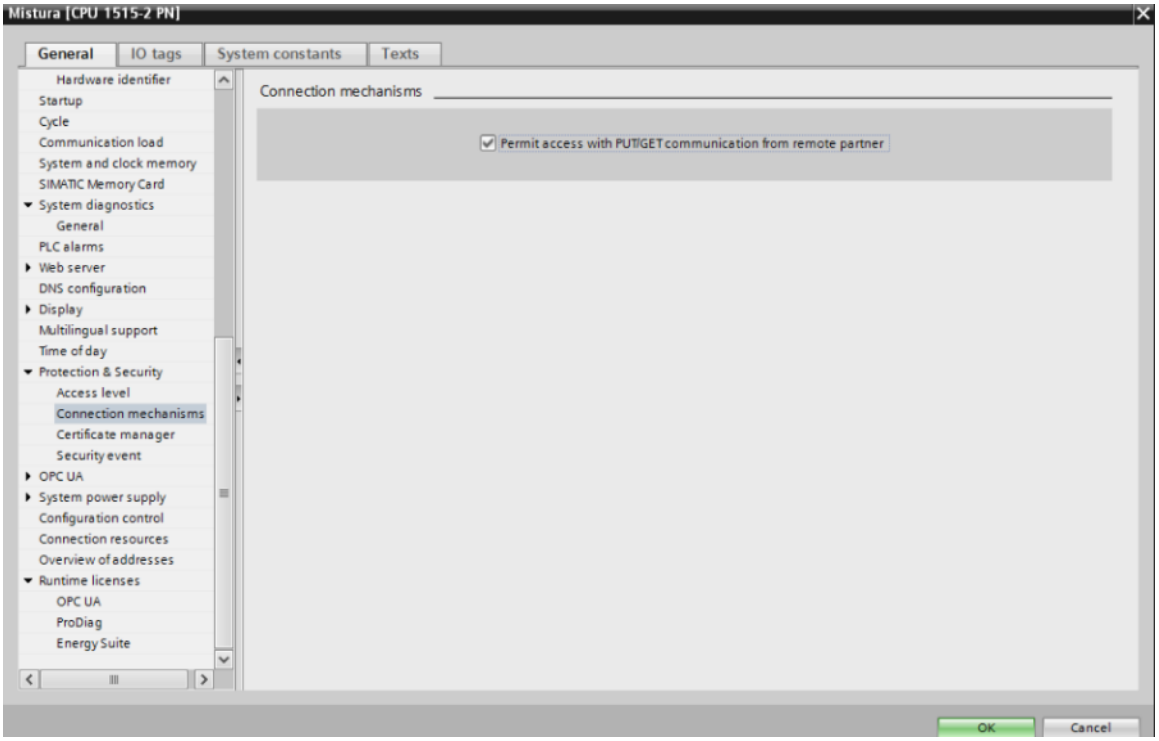
TIA Portal Configuration

To communicate the device Siemens S7 1200/1500 with the platform correctly, two configurations in TIA Portal are needed.

Allow access with PUT/GET communication from remote partner

In the first one, you need to check if the communication with a remote partner is allowed.

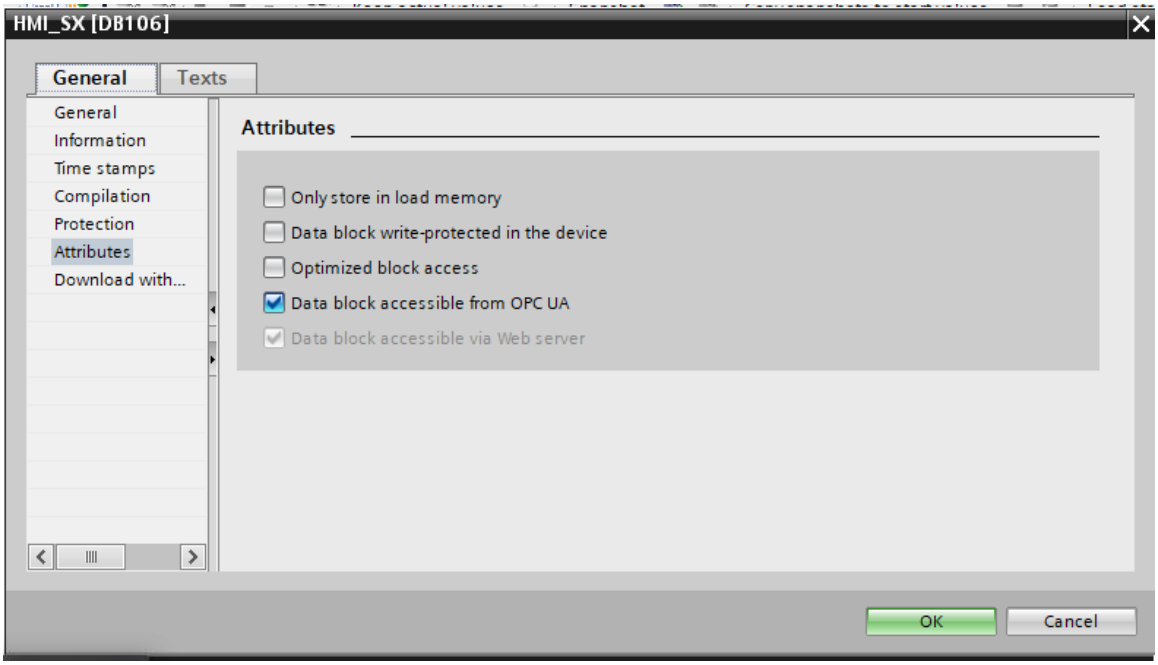
You can check that on **Protection & Security Connection Mechanism**. Make sure that the following box is checked.



Disable "Optimized block access"

In the second configuration, you need to configure the Program Blocks and disable "Optimized block access". To do so, you can follow the procedure below:

1. Open the **Program blocks** folder in the solution tree.
2. Right-click the block whose block access you want to change.
3. Select the **Properties** command in the shortcut menu.
4. The properties dialog box of the block opens.
5. Click **Attributes** in the navigation area.
6. Disable the **Optimized block access** option.
7. Confirm your entries clicking **OK**.



Load the XML or Import from TIA Portal

The next step is to load the file, which be a file with extension .xml or import from TIA Portal — the automation software of Siemens.

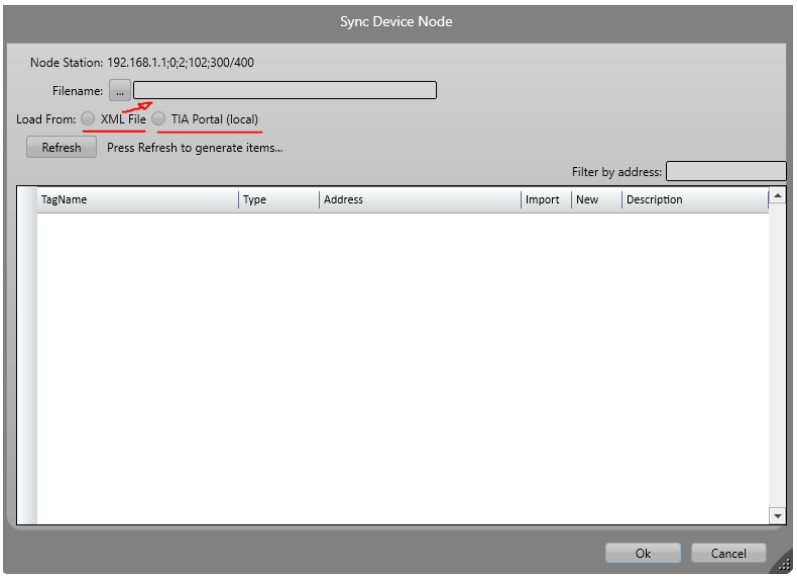
Finally, click **Refresh** and observe which tags are available to be imported. The image below does not show it because there is no document inserted.
Where:
< **TIA Portal** > = It works only when TIA is in the same machine as the software platform. The tested version is 21, and the file was SolutionName.ap21. It is no use that the extension is .ap21. When we select the TIA Portal option, the syntax required is <**SolutionName.ap21**>;<**DeviceName**> = Where the first parameter is the filename of the TIA project and the second one refers to the name of the device that you want to import in the solution.

> **TIA Portal import** is currently unavailable; contact Tatsoft if you need it.

< **.xml** > = This file can be generated in TiaPortalOpennessDemo.exe. Click the following link: TiaPortalOpenness.zip. To do so, follow these 4 steps:

1. This program has to be executed on the same computer as the TIA running, with the TIA Portal project open. Keep the TIA Portal window open the entire time you use this tool — closing TIA or the project breaks the connection.
2. After connected to TIA, select the device you want to export.
3. Select the DB you want to export to XML.
4. Copy the file to software platform and select it in the Filename field.

> **XML import** — This tool (`TiaPortalOpennessDemo.exe`) imports Data Blocks only. Tag import requires FrameworX 10.1.5d or later.



In this section...
