

A man in a light blue shirt is seen from the side, looking at a tablet. The background is a blurred industrial setting with a clock on the wall. Overlaid on the image are various digital graphics: a '24/7' icon with a circular arrow, a 'NEWS' section with a person icon, a 'Home' button, and a network diagram with three people icons. The overall theme is industrial digitalization and online support.

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**How to obtain and install the
G120X PROFINET GSDML or
PROFIBUS GSD file directly
from the G120X control unit
into a TIA Portal project**

SINAMICS G120X

<https://support.industry.siemens.com/cs/ww/en/view/109772109>

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1 Task

Startdrive does not support SINAMICS G120X. If you want to establish a PROFINET or PROFIBUS network connection to a G120X, or add it to an existing configuration, you have to use a GSDML or GSD file.

Both the PROFINET GSDML files and the PROFIBUS GSD files are available for download at <https://support.industry.siemens.com/cs/ww/en/view/109763250>

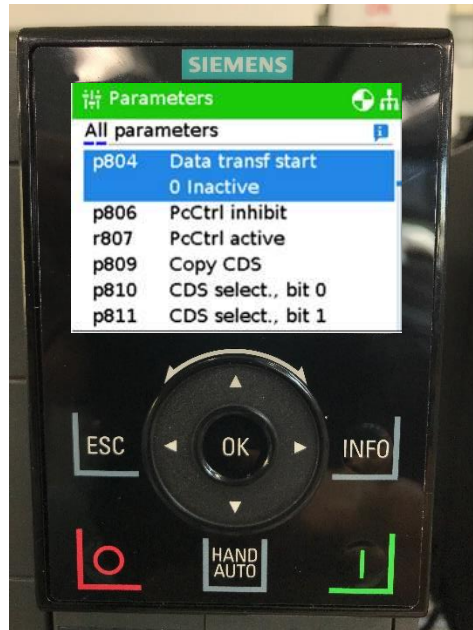
If you have no Internet access, you can download the files directly from the G120X control units too. This requires a SD card formatted with FAT or FAT32. The size must be between 256 MB and 2 GB.

Follow the instructions in the chapters [2](#) and [3](#).

2 Download data to SD card

1. Apply power to the control unit.
2. Insert a compatible formatted FAT/FAT32 SD card into the control unit.
3. Access parameter p804 (Data transfer start) via the IOP-2 or Smart access Module

Figure 2-1



4. Set P804=12 (GSD > mem_card).
This transfers the GSDML or GSD file from the control unit to the SD memory card

Figure 2-2



5. Remove the SD card from the control unit and place in your PC.

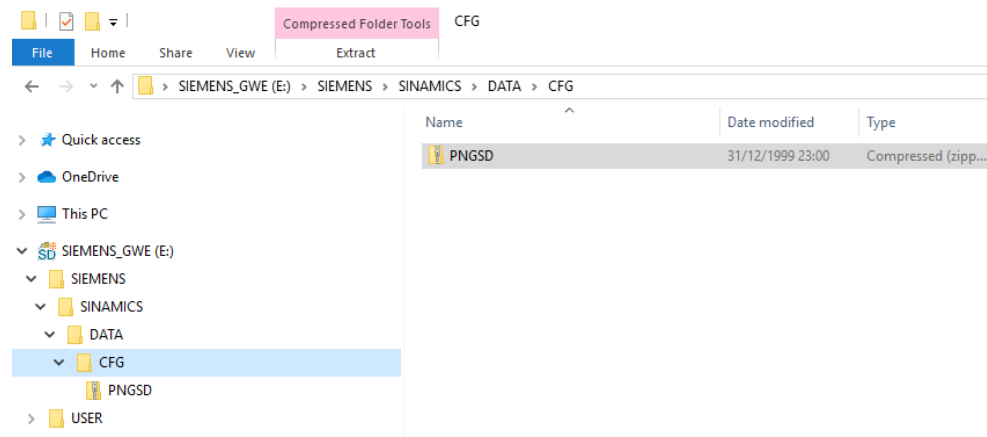
3 Extract GSDML/GSD files

1. Place the SD card in your PC.
2. Navigate to SIEMENS\SINAMICS\DATA\CFG

3.1 PROFINET GSDML

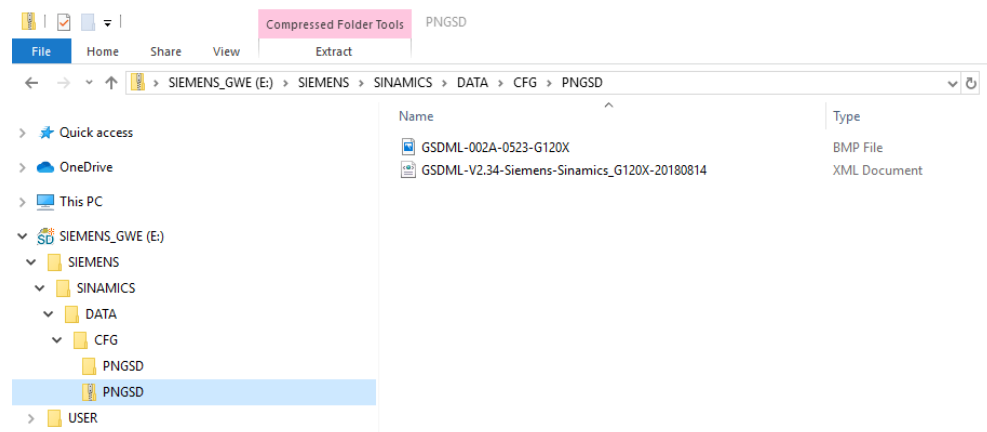
The PROFINET GSDML files are zipped in SIEMENS\SINAMICS\DATA\CFG\PNGSD.ZIP:

Figure 3-1



Unzip the PNGSD folder on the SD card to get access to the GSDML files:

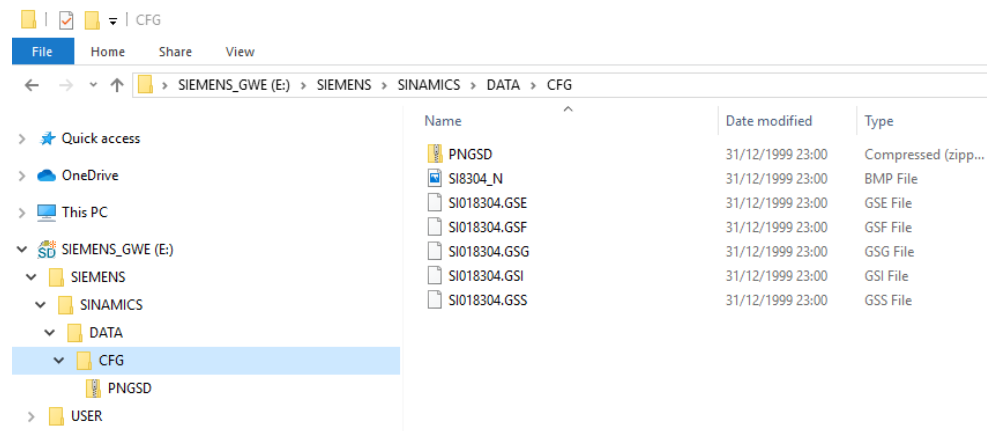
Figure 3-2



3.2 PROFIBUS GSD

The PROFIBUS GSD files are directly stored in SIEMENS\SINAMICS\DATA\CFG

Figure 3-3



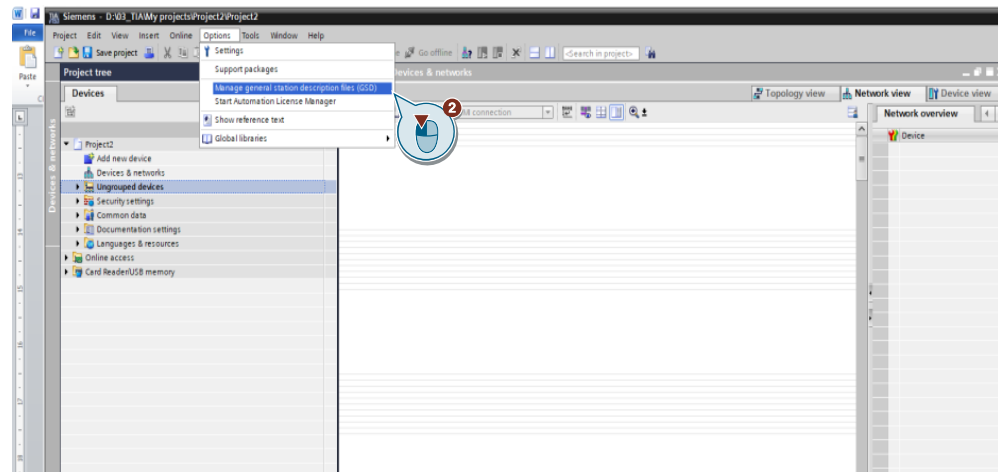
NOTE

The PNGSD.ZIP file for PROFINET is also in this folder but this file is not required for PROFIBUS.

4 Install SINAMICS G120X GSDML/GSD file in TIA Portal

1. Open TIA Portal
2. From the options menu select "Manage General Station Description Files (GSD)"

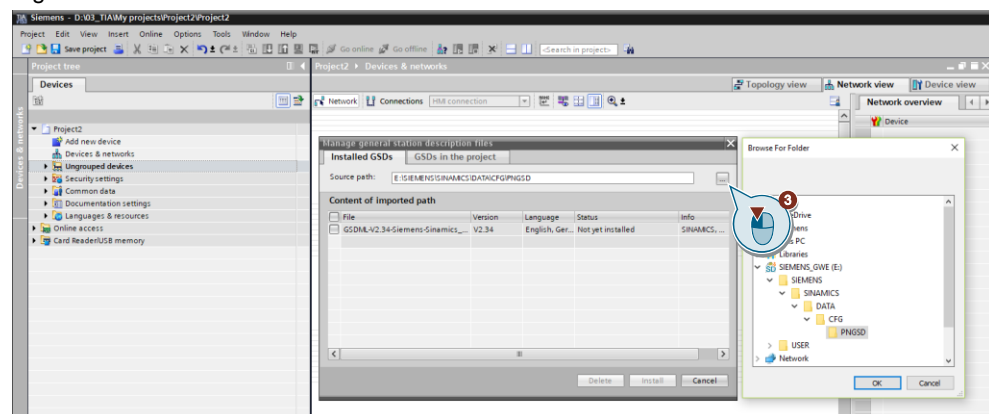
Figure 4-1



PROFINET GSDML

3. Via the browse icon navigate to the PNGSD folder on the SD card, select ok, select the file and install it

Figure 4-2

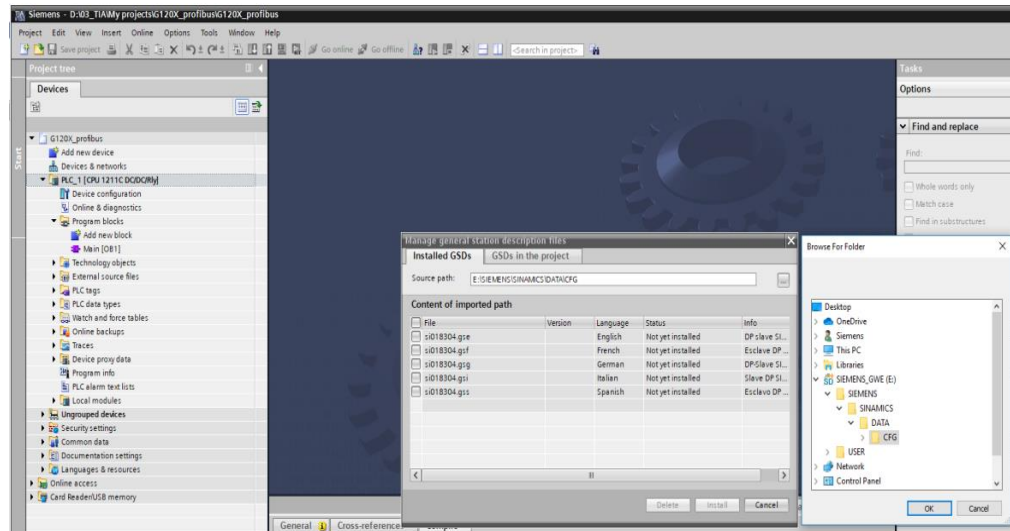


4. Continue with chapter [5](#)

PROFIBUS GSD

3. Via the browse icon navigate to the CFG folder on the SD card to reveal the GSD files in 5 languages.
Select your chosen language(s) and install it/them.

Figure 4-3



4. Continue with chapter [5](#)

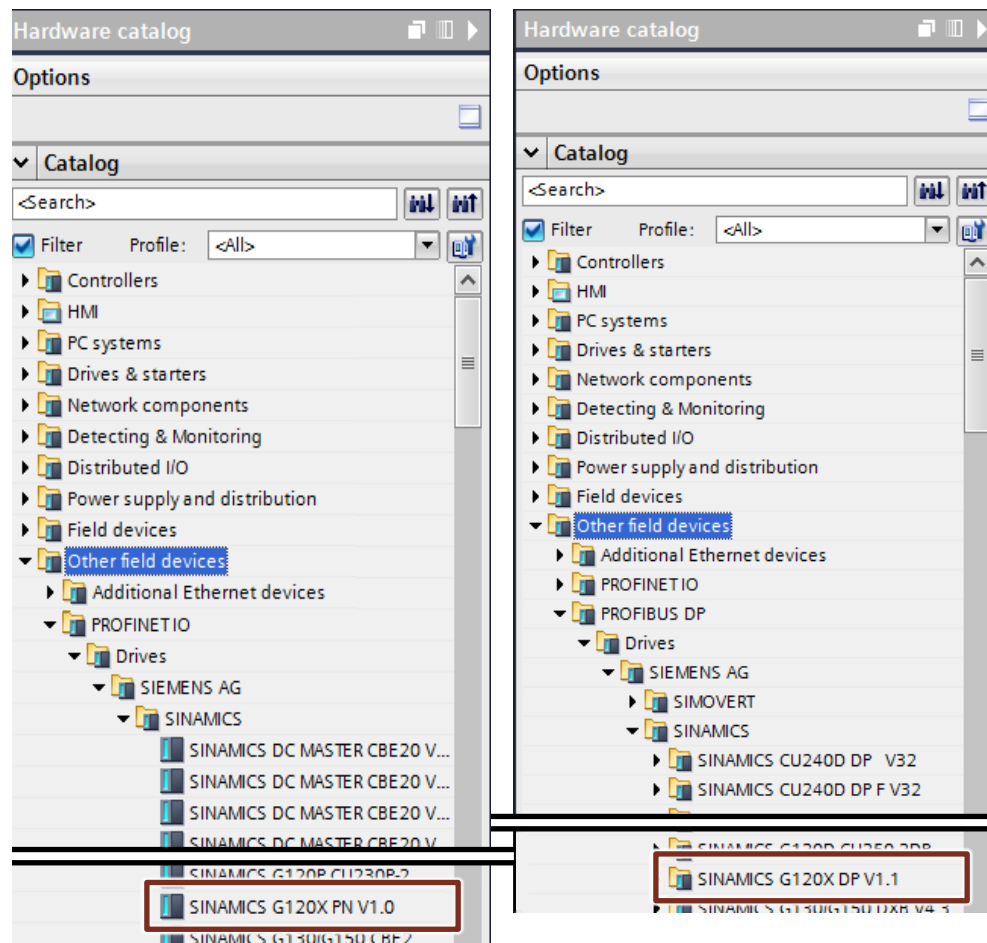
5 Adding SINAMICS G120X into a TIA Portal project

After the GSDML or GSD file is installed in TIA Portal the hardware catalog includes the SINAMICS G120X.

The with GSDML or GSD file installed devices, can be found under "Other field devices"

- For PROFINET look for "SINAMICS G120X PN V1.0"
- For PROFIBUS look for "SINAMICS G120X DP V1.1"

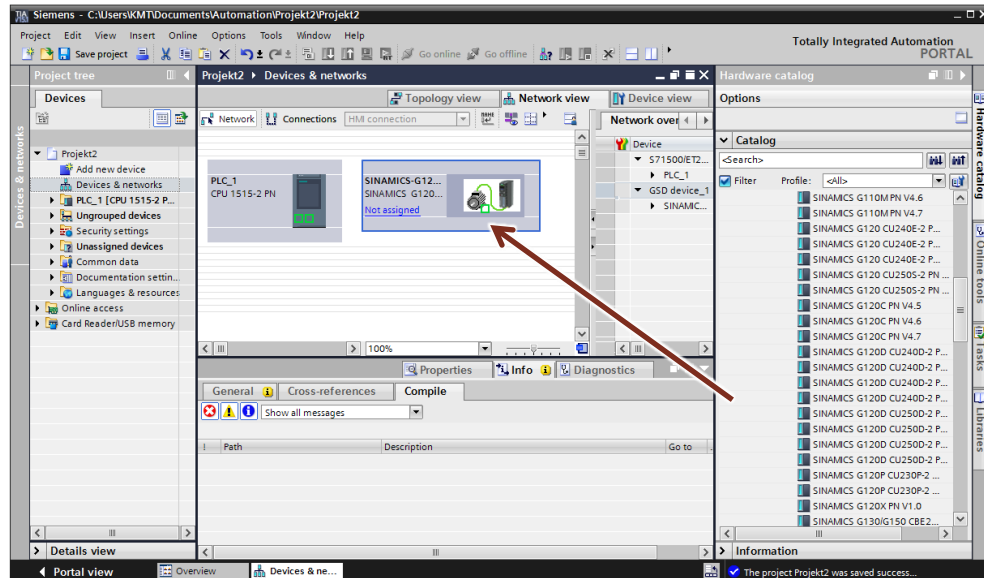
Figure 5-1



5 Adding SINAMICS G120X into a TIA Portal project

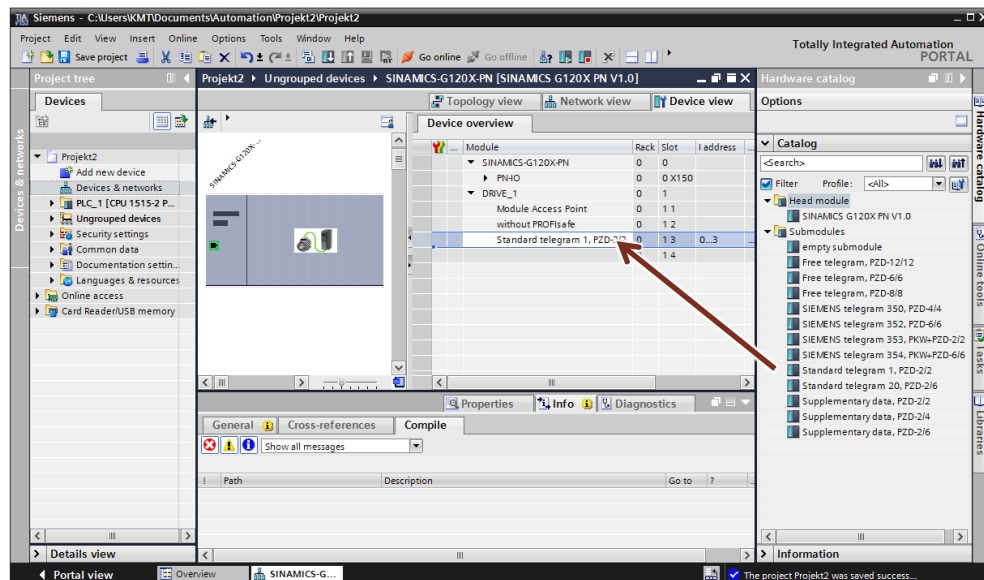
After locating the device in the catalog simply drag and drop the file into the "Network view" in "Devices and networks" of your TIA Portal project and assign it to a S7-CPU.

Figure 5-2



Remember to add your telegram selection and configure your I/O addresses before compiling and downloading the configuration. Double click on the inserted SINAMICS G120X in your configuration to reveal the available telegrams.

Figure 5-3



6 DriveLib

With the SINA blocks from the DriveLib, you can easily establish the communication between an S7 controller and SINAMICS G120X.

You can download the DriveLib for free (see [17](#)). The DriveLib is also automatically installed, when you install Startdrive.

The DriveLib includes, among others:

- **SINA_SPEED**
With the help of the SINA_POS block, you can easily send the control word and the speed setpoint to the drive as well as receive the status word and the actual value. In order to use SINA_SPEED, the telegram 1 must be used.
- **SINA_PARA**
With the help of the SINA_PARA block, you can use the S7 program to read or write any parameter in the drive.
- **SINA_PARA_S**
With the help of the SINA_PARA block, you can use the S7 program to read or write several parameters in the drive

7 Links and Literature

Table 7-1

Nr.	Thema
\1\	Siemens Industry Online Support https://support.industry.siemens.com
\2\	Link to this entry page of this FAQs https://support.industry.siemens.com/cs/ww/en/view/109772109
\3\	Operating Instructions SINAMICS G120X converter https://support.industry.siemens.com/cs/ww/en/view/109769350
\4\	Operating Instructions Intelligent Operator Panel 2 (IOP-2) https://support.industry.siemens.com/cs/ww/en/view/109767180
\5\	Operating Instructions SINAMICS G120 Smart Access https://support.industry.siemens.com/cs/ww/en/view/109771299
\6\	Application example "Controlling a speed axis with the SINA_SPEED" block " https://support.industry.siemens.com/cs/ww/en/view/109485727
\7\	Documentation and Download of DriveLib (SINA blocks) https://support.industry.siemens.com/cs/ww/en/view/109475044