

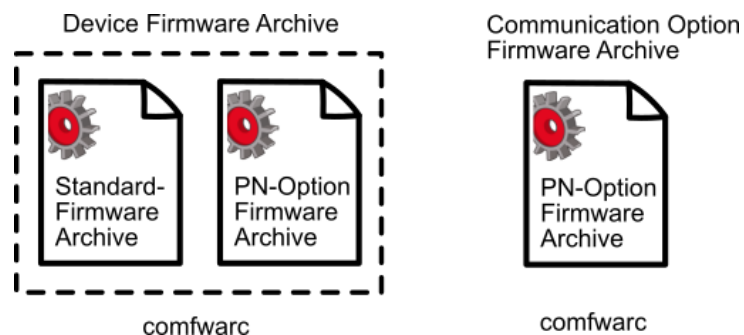
## Firmware Loading with PROFINET and ServoOne + GSDML History

Version 2021-07-01-EN

**Dear customer,**

For establishing a PROFINET communication with ServoOne, a device description is needed (GSDML) for the PN-Master development system (e.g. SIEMENS TIA Portal). Due to the ongoing development process of the device firmware, it might be possible that newer device description files contain additional modules and/or new supported services, features, etc.

In case of a ServoOne device with PROFINET communication option, the option itself has an own ERTEC-ASIC firmware version (PN-Option Firmware Archive), which must match with the Standard Firmware (Standard Firmware Archive). Otherwise, a communication cannot be established. Then, the LEDs H2/H3 on the communication indicate that. Both versions are included in a Device Firmware Archive (\*.comfwarc). The single PN-Option Firmware Archive is also loadable.



If you are using different ServoOne Device Firmware Archives / Firmware-Versions with certain modules, please use the matching device description file from the following history.

## GSDML Version History:

PN-FW-Version	GSDML-File	Since SO/SO-FS-FW-Version	Since SO Junior-FW-Version	Added Feature(s)
2.00-02	GSDML-V2.3-LT-i-ServoOne-20130201.XML	3.50-01	2.00-00	Basic, Certification
2.00-03	GSDML-V2.3-LT-i-ServoOne-20130515.XML	3.55-01	2.05-01	Basic Release
2.00-04	GSDML-V2.3-LT-i-ServoOne-20131011.XML	3.60-xx	2.10-xx	MRP Support
2.05-00	GSDML-V2.3-LTI-ServoOne-20170131.XML	4.15-37	4.15-37	Supporting new module structure according to PROFIdrive
2.05-05	GSDML-V2.3-LTI-ServoOne-20170131.XML	4.20-03	4.20-03	<ul style="list-style-type: none"> <li>FW-Download via Bus supported</li> <li>Acyclic diagnostic alarm is implemented</li> <li>Ethernet via PROFINET for using DriveManager 5 over Fieldbus</li> </ul>
3.00-02	GSDML-V2.34-LTI-ServoOne-20180530.XML  GSDML-V2.3-LTI-ServoOne-20170131.XML also possible	4.25-00	4.25-00	Certification PN Spec. V2.3

You can find all older GSDML files in this archive (folder "older").

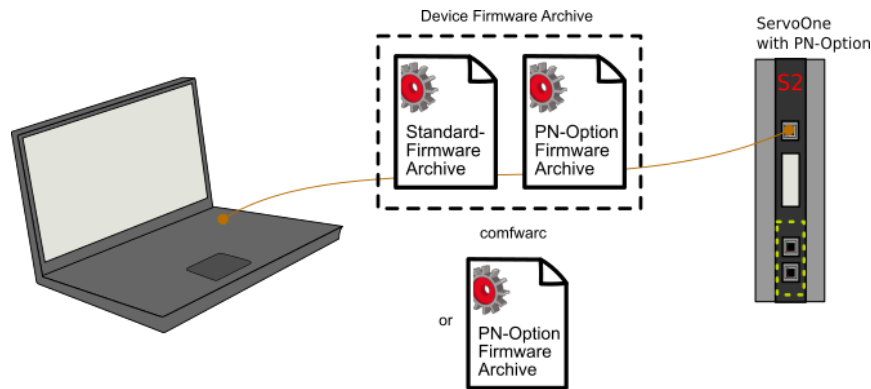
The firmware version of the PROFINET Option (PN-FW-Version) can also be read via SIEMENS PRONETA network tool.

## Firmware Upgrade/ Downgrade ServoOne with PROFINET Option

The PROFINET-Option Firmware is included in a Device Firmware Commissioning Archive (\*.comfwarc). With it, a firmware Upgrade/Downgrade can be realized in different ways:

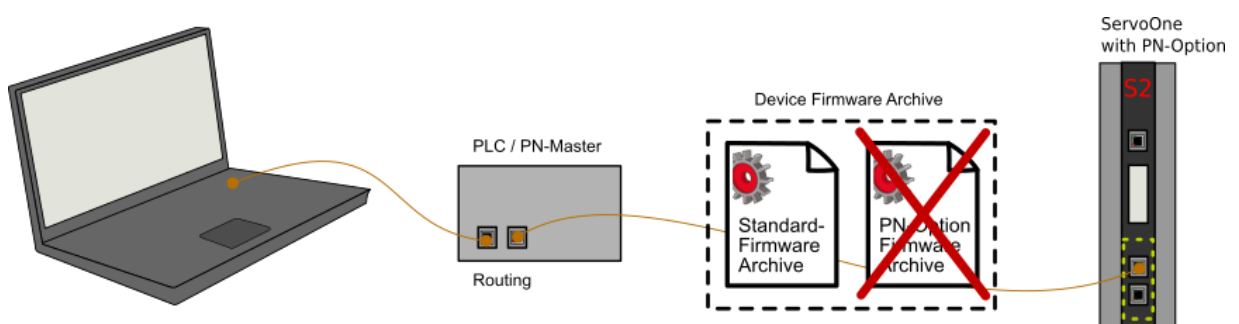
1. Loading archive file via TCP/IP service at interface X3:
  - a. Load Device Firmware Commissioning Archive via DriveManger service tool or
  - b. Load Device Firmware Commissioning Archive via DriveLoader / XLoader service tool
2. Loading archive file via TCP/IP over PROFINET at interface X47 or X48 (since Device-FW 4.20-03)
  - a. Load Device Firmware Commissioning Archive via DriveManger service tool or
  - b. Load Device Firmware Commissioning Archive via DriveLoader / XLoader service tool
3. Loading only PN-Firmware via TCP/IP over PROFINET at interface X47 or X48 (Batch Loader)
  - a. Load (force) a defined PN-FW-Version into the drive with a batch file

## Firmware Upgrade

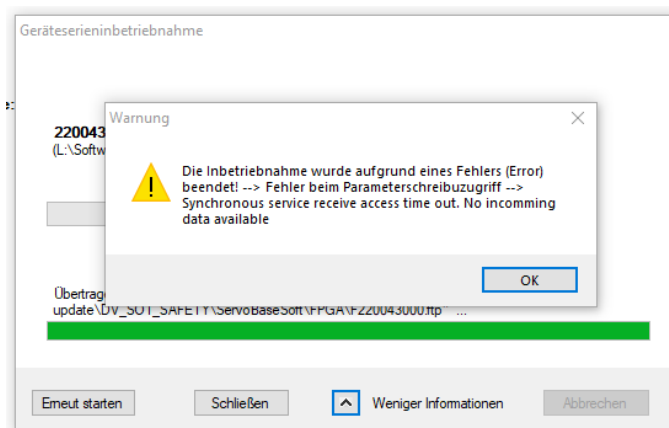


1. If a newer Device Firmware Commissioning Archive should be installed on a drive **via service interface X3**, which contains a newer Standard-Firmware + PROFINET-Option FW-Version than the current installed, the older firmware versions will be replaced by the newer ones.
2. A running fieldbus communication will be interrupted!
3. Check, if the used GSDML-File in your PLC is still matching with the installed firmware versions from the history – otherwise change!
4. Check given station name PLC/Drive

5. A restart of the drive is needed (24V reset or software restart)!
6. It is recommended to check PROFINET-Option FW-Version after every upgrade in parameter *P1297[4] COM\_PN\_BusInfo Software Version* (parameter available since device FW 4.15-37). In case of non-consistent firmware versions, the single PROFINET-Option Firmware-Archive can be reinstalled separately. This archive file can be asked from KEBA AG.



1. If a newer Device Firmware Commissioning Archive should be installed on a drive **via PROFINET fieldbus X47/X47**, which contains a newer Standard-Firmware + PROFINET-Option FW-Version than the current installed, the drive will only install the standard firmware without PROFINET-Option Firmware. The download dialog will bring with some error:



Because of a firmware update via fieldbus, the communication should be kept always active while transmitting data. Otherwise, theoretically the PROFINET-Option Firmware would be overwritten while

it is active. The update would never be completed. The PROFINET firmware in a \*.comfwarc file will be not downloaded (ignored), if a PROFINET connection is established. To download a PROFINET firmware, the service link X3 or the firmware batch loader should be used (batch file).

2. A running fieldbus communication will be interrupted!
7. Check installed standard firmware after download in parameter *4[0] DV\_SwVersion* and PN-FW-Version in parameter *P1297[4] COM\_PN\_BusInfo Software Version* (parameter available since device FW 4.15-37).
3. Re-Install the needed PROFINET-Option Firmware Version from the GSDML-Version History via Batch-File
4. Check installed PROFINET-Option Firmware Version after download in parameter *P1297[4] COM\_PN\_BusInfo Software Version* (parameter available since device FW 4.15-37).
5. Check, if the used GSDML-File in your PLC is still matching with the installed Firmware-Versions – otherwise change!
6. Check given station name PLC/Drive
7. A restart of the drive is needed (24V reset or software restart)!

## Firmware Downgrade

If an older Device Firmware Commissioning Archive should be installed on a drive **via service interface X3**, which contains an older Standard-Firmware + PROFINET-Option Firmware Version than the current installed, the current firmware versions will be replaced by the older ones.

The same points as for Firmware Update are valid.

## Firmware Batch Loader

With the batch file, a defined binary firmware file for the PROFINET option can be downloaded by giving an **IP address (PROFINET Slave address)** and a **default port 999**, e.g.:

```
tcpFwLoader I0030002.bin 192.168.39.11 999
```

This way is possible since standard firmware 4.20-03. [The binary file can be asked from KEBA AG.](#)

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ruehtobi\MyData\Bussysteme\PROFINET\LTI_SOJ_PROFINET_GSDML\batch>tcpFwLoader I0030002.bin 192.168.39.2 999
file size = 2213348 bytes, read file.....done
try to connect to server.....done
send header information to server.....done
send data to server .....
firmware transfer finished
device now erases and programs flash

=====
DO NOT SWITCH OFF DEVICE POWER SUPPLY,
WHILE FLASH PROGRAMMING IS RUNNING
=====

OK, Flashing firmware finished
press any key to exit program...
```