Do not proceed as follows:

1. Firmware update of the drive
2. Create a NEW STARTER project
3. Load into the PG

In this case, under certain circumstances, STARTER cannot assign the project to the correct drive version. If the STARTER project is not available, generate a new project with the old device version (load into the PG before the firmware update) and then proceed as normal.

11.1.1 Upgrading the device firmware

Note

Hardware/firmware compatibility

The hardware version of the Control Unit (CUD) must be taken into account when updating the device firmware. See the table below.

The hardware version can be read from the label on the right-hand side of the CUD.

CUD (print on label)	Executable firmware versions
C98043-A7100-**L1**-... C98043-A7100-**L2**-... C98043-A7100-**L100**-... C98043-A7100-**L200**-...	1.1, 1.2, 1.3
C98043-A7100-**L3**-... C98043-A7100-**L4**-... C98043-A7100-**L103**-... C98043-A7100-**L204**-...	All versions
A5E...	All versions

Step 1: Backup the configuration

The drive parameter assignment is not lost while updating the firmware. Nevertheless, before starting the firmware update, back up the drive configuration:

- Backup the parameter assignment on a memory card (see Chapter "Functions of the memory card") and/or
- Backup the parameter assignment in a STARTER project (see Chapter "Commissioning with the STARTER commissioning tool (Page 253)")

Step 2: Firmware update of the drive

Notes:

Only those memory cards that Siemens has prepared for these systems are accepted.
If the memory card is formatted, then this must always be realized with the FAT16 setting.
Download the current firmware version: See preface

Procedure:

1. Unzip the *.zip file to an empty memory card
2. Insert the card in the drive, which has been switched-off, and switch the device on again. A firmware update is being performed. The update has been completed if the RDY-LED and the DP1-LED flash at 0.5 Hz (the update takes about 12 min).
3. Carry out a POWER OFF. Remove the memory card from the drive.

NOTICE
Removing the memory card before POWER ON If the memory card is not removed from the drive before the POWER ON, the parameterization in the drive is copied to the memory card during power-up, or a parameterization already on the card copied to the drive. For a detailed description of this function, see Chapter "Memory card functions (Page 327)", Section "Copying parameter data sets from non-volatile memory to the memory card".

4. Carry out a POWER ON. The new firmware is now active.

   If a memory card is already in the drive, the following mechanism described in Chapter "Memory card functions (Page 327)", Section "Copying parameter data sets from non-volatile memory to the memory card" takes effect.

   – The connected TM modules and/or SMC10 or SMC30 carry out a firmware update when powered up for the first time.
   After the firmware update of these components, it is necessary to carry out a POWER OFF / POWER ON for these components. The memory card no longer needs to be inserted for this step.

   – An optionally connected AOP30 indicates that new AOP firmware is available. Confirm the prompt after the update with "OK".

Note

As a result of the device firmware update, DCC charts in the device are not automatically upgraded to the new DCC version. This is also not absolutely necessary. See also Step 5 (next chapter).

Note

The electronic power supply must not be interrupted during the firmware update, otherwise the update will need to be restarted.

Note

To safely remove the memory card, see Chapter "Memory card functions (Page 327)".

Step 3: Update the STARTER project

Install the SSP that matches the new firmware version (e.g. SSP SINAMICS DCP V1.2).

SSPs for different versions of the same drive can be simultaneously installed in STARTER.

Open the existing STARTER project (that refers to an old device version). Right-click the device in the project navigator and select "Target device" → "Device version…". Select the new device version and confirm with "Change version". The project is converted to the new device version.

Note

STARTER does not support a "downgrade" of the firmware version (e.g. V1.2 to V1.1).

Step 4: Load into the target system, RAM to ROM

Load the project into the drive (load into the target system) and permanently save the parameter assignment (carry out RAM to ROM).