

Release Notes - Firmware V2.0.0 of AC500-S Safety CPUs

For SM560-S (-XC), SM560-S-FD-1 (-XC) and SM560-S-FD-4 (-XC)

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Firmware V2.0.0 for AC500-S Safety CPUs.

Note:

- Firmware V1.0.0 for SM560-S (-XC) Safety CPUs is also included as part of SD card firmware update content in case the downgrade to firmware V1.0.0 is required.

General purpose

The firmware version is capable to run on the following hardware variants:

- SM560-S, **1SAP280000R0001**
- SM560-S-XC, **1SAP380000R0001**
- SM560-S-FD-1, **1SAP286000R0001**
- SM560-S-FD-1-XC, **1SAP386000R0001**
- SM560-S-FD-4, **1SAP286100R0001**
- SM560-S-FD-4-XC, **1SAP386100R0001**

Firmware V2.0.0 is compatible with previous SM560-S (-XC) firmware version V1.0.0 and, thus, previously obtained functional safety certifications for machines or processes remain valid, because the boot project CRC (Cyclic Redundancy Check) does not change. As an example, SM560-S (-XC) modules with firmware V2.0.0 can be used to replace SM560-S (-XC) modules with firmware V1.0.0. Nevertheless, usage of SM560-S (-XC) with firmware V2.0.0 is recommended with the PM5xx firmware 2.7 (or newer) and Automation Builder 2.1 (or newer).

Firmware V2.0.0 on SM560-S (-XC) safety CPUs can be always downgraded to V1.0.0 to avoid usage of multiple firmware versions in machine lines. All SM560-S (-XC) safety CPUs can be also upgraded to firmware V2.0.0, if needed.

Usage of SF_RTS_INFO function in SM560-S (-XC) boot project allows controlling which firmware version(s) will be accepted by the SM560-S application program and which is not, if tighter control over firmware version is required from the customer application.

Note:

- Firmware V1.0.0 does not run on SM560-S-FD-1 (-XC) and SM560-S-FD-4 (-XC).
- The boot code V1.0.0 for all AC500-S safety CPUs was not changed.

Changes in this version

- New functions for SM560-S (-XC) safety CPU are supported (see AC500-S Safety User Manual V1.1.0 (or higher) for more details on new functions):
 - Triggering safe stop from application program
 - Reading safety boot project CRC from the application program
 - Read configured power-dip setting on the safety CPU
- Support of SM560-S-FD-1 (-XC) and SM560-S-FD-4 (-XC) safety CPUs.
- Minor internal improvements.

Known issues

- N.A.

Installation (Download) prerequisite

To download firmware to SM560-S (-XC), AC500 CPU with firmware V2.3.0 or higher is needed.

To download this firmware to SM560-S-FD-1 (-XC) or SM560-S-FD-4 (-XC), AC500 CPU with firmware V2.7.0 or higher is needed.

The installation / download of this firmware can be performed using SD card or Automation Builder.

- Attached SD card image:
 - SD card image to update AC500-S Safety CPUs on any of 4 external coupler slots to a new firmware version:
 - **SD_card_create_SM560-S_V2_0_0.exe**

Update using SD card:

SD card image files in the provided .exe file will create the needed update directory on a formatted SD card.

- Put the SD card into the SD card reader on your PC.
- After that, select the SD card image data corresponding to the product to be updated, e.g., SM560-S.
- With double click on **SD_card_create_SM560-S_V2_0_0.exe**, the file content is automatically extracted (select the SD-Card reader/writer root directory to extract the file).
- Confirm the procedure and the program will generate the file structure on the SD card and copy all the needed files in the corresponding directories.

Perform then the firmware update for AC500-S Safety CPUs as described in the AC500-S Safety User Manual.

Update using Automation Builder software:

Use Automation Builder documentation on how to update firmware for external couplers including AC500-S Safety CPUs. AC500-S Safety CPU firmware V2.0.0 will be available in Automation Builder 2.1.2 (or newer).