

## Customer information

### Unexpected behavior in relation to the recovery of a safety-related project

Topic

**iCube iC9226M-FSoE - JEYRM-MPX022SE10L32-2**

Affected products

Customer information

DMC

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### Behavior

If you use the "Download Changes" functionality in the iCube Engineer in a productive environment with an already validated safety function, the products mentioned above may unexpectedly fail to execute the current version of the safety-related project after a restart.

In this case, please note the following information.

This behavior only occurs if the following steps have been performed:

1.  A safety-related project is downloaded to the safety-related controller.
2.  A non-safety-related project is downloaded to the standard controller.
3.  A modified safety-related project is downloaded to the safety-related controller.
4.  An attempt is made to change the non-safety-related project using "Download Changes", which is rejected by the iCube firmware of the standard controller (e.g. by changing the task configuration, ...).
5.  The device is restarted. (e.g. voltage failure and recovery, request for restart in iCube Engineer, ...).



#### NOTICE

Attention: After the restart, the safety-related controller executes the original safety-related project from step 1.

### Recommended action

To validate existing applications, we recommend the following procedure to ensure that the last validated safety-related project is executed:

1.  Determine CRC checksum of the active safety-related project using the system variables of the safety-related controller or in the "Cockpit Safe PLC" in the iCube Engineer software.
2.  Perform a restart in the iCube Engineer software in the "Cockpit" editor of the standard controller or switch off the supply voltage of the device for at least 30 s and then switch it on again (Power-Reset).
3.  Check whether the CRC checksum has changed using the system variables of the safety-related controller or in the "Cockpit Safe PLC" in the iCube Engineer software.

**NOTICE**

Attention: If the CRC checksums from step 1 and step 3 are not identical, the last validated safety-related project is not being executed. In this case, please transfer the last validated safety-related project to the safety-related controller again and carry out the previously mentioned steps for validation again.

We generally recommend performing the following steps after each change to the safety-related project:

1. → Perform a restart in the iCube Engineer software in the "Cockpit" editor of the standard controller or switch off the supply voltage of the device for at least 30s and then switch it on again (Power-Reset).
2. → Compare the CRC checksum of the safety-related project using the system variables of the safety-related controller or in the "Cockpit Safe PLC" in the iCube Engineer software with the original CRC checksum before the restart.

The validation steps described above can be used with all previous firmware versions of the iCube firmware. In the next regular release of the iCube firmware, a function will be implemented that prevents the behavior described above.