[MPC5xxx] "Bus errors" (question marks) when accessing internal SRAM or local memories

2026-08-11 - Comments (0) - MPC5xxx / SPC5xx

The SRAM and local memories are protected by ECC. After power-on, the SRAM contents and the corresponding ECC bits contain random values. Depending on the combination of these values, an ECC block (typically 64 or 32 bits) may or may not result in a bus error when accessed.

When an application is programmed into FLASH, the boot code is responsible for initializing the SRAM.

If the application is intended to run from SRAM instead, for example for an early test or for FLASH programming, the SRAM must be initialized by the debugger using the following command:

```
Data.Set EA:0x40000000--0x4000BFFF %Quad 0x0000000000000000
```