
Mask Set Errata for Mask 0M46S

Introduction

This report applies to mask 0M46S for these products:

- MC9S08LL64
- MC9S08LL36

SE184-FLVD-STOP3: False low voltage detect when exiting stop3

Errata type: Silicon

Affected component: SoC level behavior

Description: If the low voltage detect (LVD) is enabled (LVDE = 1) but not in stop mode (LVDSE = 0), on some devices the low voltage detect flag (LVDF) will occasionally be set when exiting stop3 mode. If the LVD interrupt is enabled (LVDIE = 1) the interrupt vector will be fetched. If the LVD reset is enabled, the part will reset, and the LVD bit in the System Reset Status (SRS) register will be set. The correct operation of the device is to wake and execute the code immediately after the STOP instruction.

If the LVD is not enabled (LVDE = 0) or if LVD is also enabled during stop mode (LVDSE = 1) then this issue will not occur. If the LVD is enabled during stop mode the stop3 current will increase.

Workaround: A software level change to reliably eliminate the issue is to use only the LVD interrupt (LVDE = 1, LVDIE = 1, and LVDRE = 0). Inside the LVD interrupt service routine, a short state of health check can be made to verify the supply level before proceeding. In this routine, the LVDF should be cleared and then read to determine whether a true low voltage event is present. If the LVDF is set when it is read, then a true LVD condition exists and the MCU can be reset by forcing the execution of an illegal op-code.

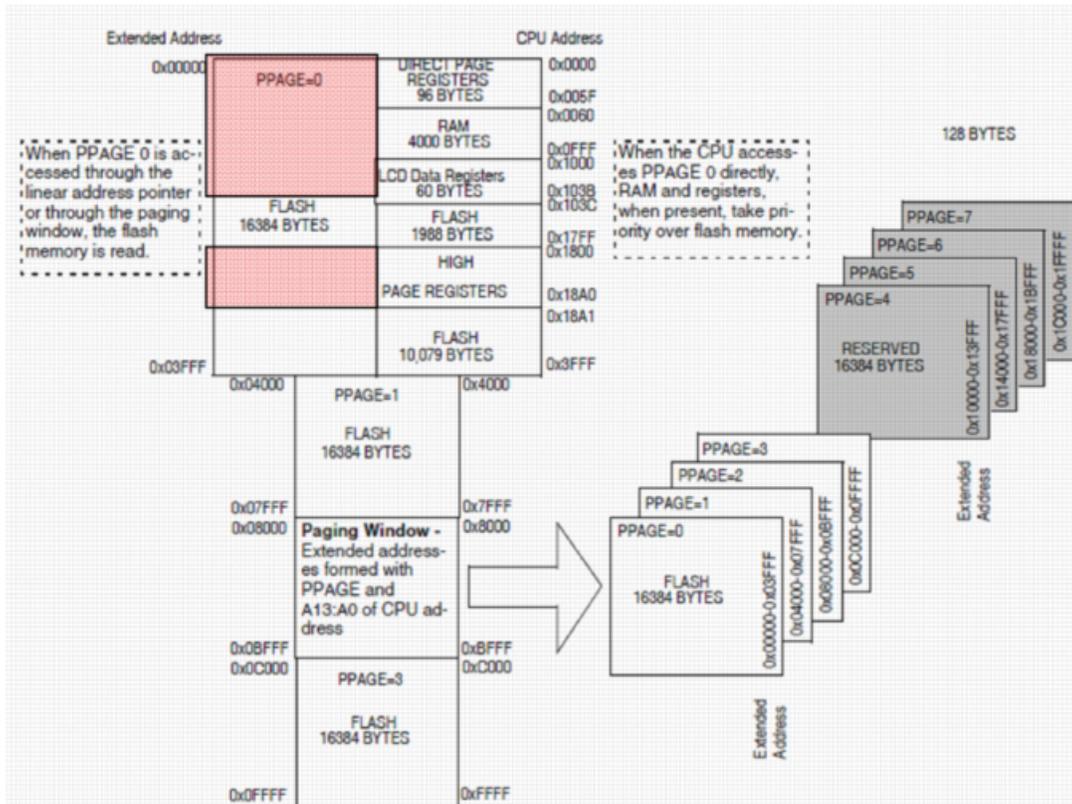
SE171-DBG-MEM: Debug module (DBG) paged memory behavior

Errata type: Silicon

Affected component: DBG, development tool environments

Description: The DBG module does not support setting breakpoints in the paging window area of the memory map. Setting a breakpoint in memory addresses that are accessible only through the paging window is not functional. Thus for the flash addresses 0x0000 through 0x103B and addresses 0x1800 through 0x18A0, the debug (DBG) module will not work. This area of 4,316 bytes of flash will not be supported by the features of the DBG module.

The affected flash areas are shown below. When using the DBG module to debug software, if a breakpoint is set in the affected flash area, this breakpoint will not trigger a break. Effectively this area of flash can not be used to debug application software.



Workaround: This area of 4,316 bytes should be used as storage for nonvolatile constants. If application software must be placed here, make sure to place simple functions that will not need extensive debugging. The PRM file has placed the lowest priority on this section of flash so that applications that only use the entire flash space will use this area.

Fixed starting with 1M46S mask set.

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