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The Double Bus Fault Monitor

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Introduction

The *Modular Microcontroller Family SIM System Integration Module Manual*, Motorola document order numbers SIMRM/AD and SCIMRM/AD, refers to a double bus fault monitor. But the double bus fault monitor is not referred to in some of the older user's manuals because it was previously called the halt monitor.

General Information

The halt monitor discussed in the *MC68332 User's Manual* is called the double bus fault monitor in the *SIM System Integration Module Manual*.

Basically, a double bus fault is an exception upon an exception. As explained in the SIM manual, a double bus fault can occur under these conditions:


1. When bus error exception processing begins and a second bus error is detected before the first instruction of the first exception handler is executed
2. When one or more bus errors occur before the first instruction after a reset exception is executed



3. When a bus error occurs while the CPU is loading information from a bus error stack frame during execution of a return-from-exception (RTE) instruction (CPU32-based MCUs only).

After the double bus fault occurs, the MCU drives the HALT line low and can be restarted only by a reset. When the HALT line is driven low internally, the double bus fault monitor will cause a reset immediately if it is enabled.

If the double bus fault monitor has been disabled by clearing the HME bit in the system protection control register (SYPCR), the MCU will remain in the halted state indefinitely and must be reset externally.

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