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Fire 2.0 - 2.1 Silicon Deltas

Revision History

Table 1 Revision History

<i>Revision</i>	<i>Date</i>	<i>Comments</i>
1.0	7/23/2007	External Release

Usage Information

This document provides a quick reference for differences between Fire 2.0 and Fire 2.1 silicon revisions. This is a summary only. Details for each can be found in the Fire PRM and/or Chip Errata.

Deltas

The Fire 2.1 re-spin is being driven by CR 6362138 which is a functional bug that can cause a deadlock and subsequent CPU or IO timeout. As a result of re-spinning the Fire ASIC there were other functions added or changed in order to address reported bugs found in the Fire 2.0 ASIC that did not merit a re-spin on their own. These deltas are tabled below and grouped by type giving reference to the bug number recorded in Globetrack and in some cases cross referenced to Bugster. The SW column depicts changes that are externally visible to software.

Table 2: Fire 2.0 - 2.1 Silicon Deltas

<i>Total</i>	<i>Bug ID</i>	<i>Type</i>	<i>SW</i>
1	P2313 - CR6362138	Functional: CR6362138 Potential deadlock bug.	N
1	N/A	Revision: Update JBus Device ID Module Revision from: MR[0x3] to: MR[0x4]	Y¹
2	P2271 P2304 - CR6313518	Tester: Enhancements to SerDes and VIH test ability	N
1	P2314 - CR6364442	RAS: Enhancement to control of PCIe optional error	N
4	P2255, P2265, P2287, P2290	RAS: Fix error handling corner cases	N
1	P2258	PCIe protocol: Fix minor protocol violation	Y²

1. This change results in a different value read by software for this register. Refer to the Fire Programmer's Reference Manual for the complete register definition incorporating this change.
2. This change impacts how incoming Unsupported Requests IOWr, CfgWr and MsgD are handled by Fire 2.1 silicon. The Unsupported Request Uncorrectable Error bit is the only error bit set (logged) for these incoming transactions independent of whether the ep Poisoned TLP bit is set in the packet. Fire 2.0 utilizes both the ep Poison TLP bit and the Unsupported Request by setting both errors if received in the same packet. Refer to the Fire Programmer's Reference Manual for the PP and UR register bit descriptions.