Topic:	**Cold-Boot Configuration of R1200**
Component(s) Affected:	**R1200 Blade PC**
Date:	**January 30, 2004**

OVERVIEW / ENVIRONMENT

This Technical Bulletin highlights the conditions under which the BIOS reconfigures the Altera FPGA and the BPIC, the two configurable devices on the R1200 Blade PC.

DETAILED DESCRIPTION

The Altera FPGA is powered by standby power, hence it is configured by the BIOS the first time the Blade is powered up, and after every subsequent standby power loss. Standby power is lost only when a Cage is powered down, or when the Blade is removed from the Cage. Shutting down a Blade does not result in a loss of standby power.

The BPIC is flash memory-based. Once it is configured, it never needs to be configured again unless one of two variables changes: the Blade serial number, or the BPIC code version number. To configure the BPIC, the BIOS compares the values of these two variables stored in the BPIC with the values stored in the CMOS. It first compares the Blade serial number. If the Blade serial number does not match, the BIOS reconfigures the entire BPIC.

If the Blade serial number matches, the BIOS continues to compare the BPIC code's version number. If the version number matches, the BPIC is considered to have already been configured with the most recent BPIC code and is left intact.

On the other hand, if the version number is different, then the BIOS updates and reconfigures the entire program memory, and the Blade serial number and BPIC codes version number in the data memory. The rest of the data memory is left intact. This preserves the user's settings such as LCD Data and MSL settings, which typically are modified by an administrator using ClearCube management applications such as Switch Manager.

Since the reflashable BIOS on the R1200 controls both the Altera FPGA and the BPIC, updates to the BIOS can provide new functionality for the Blade that is in addition to the traditional functions of the system BIOS. Periodically, ClearCube will provide BIOS updates for the R1200 to enhance its overall functionality.

For more information, please contact ClearCube technical support.

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TB0071 rev 11/23/2004

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