



US007260007B2

(12) **United States Patent**  
**Jain et al.**

(10) **Patent No.:** **US 7,260,007 B2**  
(45) **Date of Patent:** **Aug. 21, 2007**

(54) **TEMPERATURE DETERMINATION AND COMMUNICATION FOR MULTIPLE DEVICES OF A MEMORY MODULE**  
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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 19 days.

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(21) Appl. No.: **11/093,905**

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(22) Filed: **Mar. 30, 2005**

(57) **ABSTRACT**

(65) **Prior Publication Data**

US 2006/0221741 A1 Oct. 5, 2006

Thermal management and communication is described in the context of memory modules that contain several memory devices. In one example, the invention includes determining a temperature of a first memory device, the first memory device containing a plurality of memory cells, determining a temperature of a second memory device after determining the temperature of the first memory device, the second memory device containing a plurality of memory cells, and generating an alarm based on an evaluation of the first and the second temperatures. In another example, the invention includes detecting a thermal event on a memory device of a memory module that contains a plurality of memory devices, detecting the state of an event bus of the memory module, and sending an alert on the event bus if the event bus is in an unoccupied state.

(51) **Int. Cl.**

**G11C 5/06** (2006.01)  
**G11C 7/04** (2006.01)  
**G11C 7/00** (2006.01)

(52) **U.S. Cl.** ..... **365/212; 365/211; 365/227; 365/72; 365/63; 365/51**

(58) **Field of Classification Search** ..... **365/51, 365/63, 72, 212, 211, 227**  
See application file for complete search history.

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**19 Claims, 5 Drawing Sheets**

