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(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHAUDHURI, Santanu** [US/US]; 1983 San Luis Avenue, Unit #8, Mountain View, CA 94043 (US). **SALMON, Joseph, H.** [US/US]; 3441 Big Barn Road, Placerville, CA 95667 (US). **BAINS, Kuljit, S.** [IN/US]; 9146 52nd Lane NE, Olympia, WA 98516 (US).(74) Agents: **VINCENT, Lester, J.** et al.; Blakely Sokoloff Taylor & Zafman, 1279 Oakmead Parkway, Sunnyvale, CA 94085 (US).

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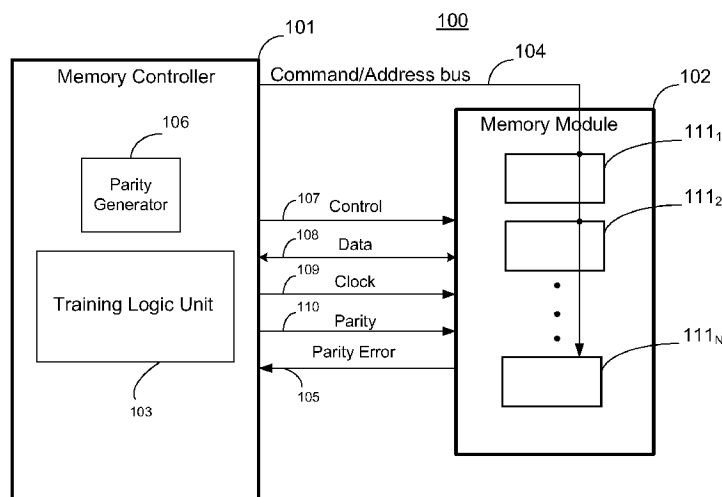
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(54) Title: METHOD AND APPARATUS FOR TRAINING A MEMORY SIGNAL VIA AN ERROR SIGNAL OF A MEMORY

**Fig. 1**

(57) Abstract: Described herein is a method and an apparatus for training a memory signal via an error signal of a memory. The method comprises transmitting from a memory controller a command-address (C/A) signal to a memory module; determining by the memory controller an error in the memory module via an error signal from an error pin of the memory module, the error associated with the C/A signal transmitted to the memory module; and modifying by the memory controller the C/A signal in response to determining an error in the memory module, wherein the error pin is a parity error pin of the memory module, and wherein the memory module comprises a Double Data Rate 4 (DDR4) interface.



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A. CLASSIFICATION OF SUBJECT MATTER***G11C 29/42(2006.01)i, G11C 8/18(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords:Parity, controller, error, Command, Address

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2004-152378 A (ELPIDA MEMORY INC et al.) 27 May 2004 See Claims 1-3, 7, 8, Figures 1, 3, 11, 12, 14-18.	1-30
A	JP 2008-234699 A (FUJITSU LTD) 02 October 2008 See Paragraphs 10, 11, 103-108, Figures 1, 18, 19.	1-30
A	JP 2008-192309 A (ELPIDA MEMORY INC) 21 August 2008 See Claims 1-5, Figures 1, 3, 11, 12, 14-18.	1-30
A	JP 2010-009642 A (TOSHIBA CORP) 14 January 2010 See Claims 1-6, Paragraphs 12-15, Figures 1, 15.	1-30



Further documents are listed in the continuation of Box C.



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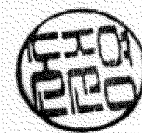
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