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(54) **Title:** INTEGRATED CIRCUIT DEVICE, DATA STORAGE ARRAY SYSTEM AND METHOD THEREFOR

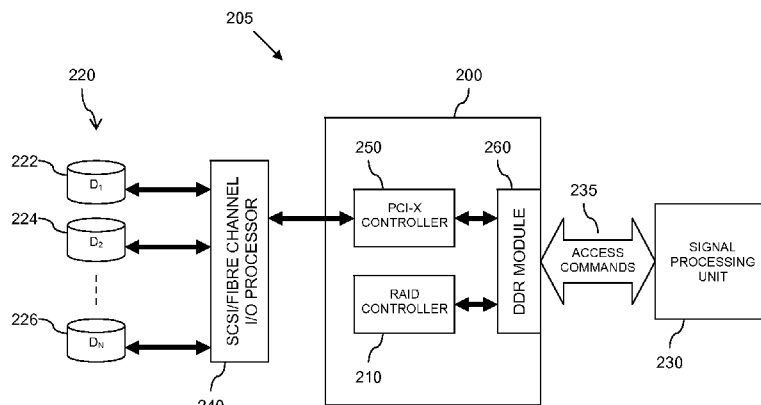


FIG. 2

(57) **Abstract:** An integrated circuit device (200) comprises a data storage array controller (210) for providing data storage array functionality for at least one data storage array (220). The data storage array controller (210) comprises an address window controller (340) arranged to receive at least one data storage device access command, and upon receipt of the at least one data storage device access command the address window controller (340) is arranged to compare a target address of the at least one data storage device access command to an address window for a target storage device (222, 224, 226) of the at least one data storage device access command, and if the target address is outside of the address window for the target storage device (222, 224, 226), block the at least one data storage device access command.

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A. CLASSIFICATION OF SUBJECT MATTER**G06F 13/14(2006.01)i, G06F 13/16(2006.01)i, G06F 12/00(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)

G06F 13/14; G06F 12/16; G06F 3/00; G06F 13/16; G06F 12/00

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: data storage access command, target address, address window, range, block

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2008-0089589 A (HANGZHOU H3C TECHNOLOGIES CO. LTD.) 07 October 2008 See paragraphs [27]-[33]	1-18
A	JP 09-244932 A (EKUSHINGU CO. LTD. et al.) 19 September 1997 See abstract	1-18
A	US 06138176A A (MCDONALD, JAMES ARTHUR et al.) 24 October 2000 See figures 1, 4; column 10, lines 25-65	1-18
A	US 6567892 B1 (HORST, ROBERT W. et al.) 20 May 2003 See figure 1; summary	1-18

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2008-0089589 A	07.10.2008	EP 2009552 A1	31.12.2008
		JP 2008-546049 A	18.12.2008
		US 2008-0307161 A1	11.12.2008
		US 8041890 B2	18.10.2011
		WO 2007-118371 A1	25.10.2007
JP 09-244932 A	19.09.1997	None	
US 06138176A A	24.10.2000	AU 1998-96898 A1	07.06.1999
		EP 1031091 A1	30.08.2000
		EP 1031091 A4	06.11.2002
		JP 2001-523860 A	27.11.2001
		US 06098114A A	01.08.2000
		US 06134630A A	17.10.2000
		US 2002-0174297 A1	21.11.2002
		US 2003-0120865 A1	26.06.2003
		US 6301625 B1	09.10.2001
		US 6421760 B1	16.07.2002
		US 6549981 B2	15.04.2003
WO 1999-26150 A1	27.05.1999		
US 6567892 B1	20.05.2003	None	