



(43) International Publication Date
13 December 2012 (13.12.2012)

(51) International Patent Classification:

G06F 13/14 (2006.01) G06F 12/16 (2006.01)
G06F 13/16 (2006.01) G11C 7/10 (2006.01)

(21) International Application Number:

PCT/KR2012/004535

(22) International Filing Date:

8 June 2012 (08.06.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/155,598 8 June 2011 (08.06.2011) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available):

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

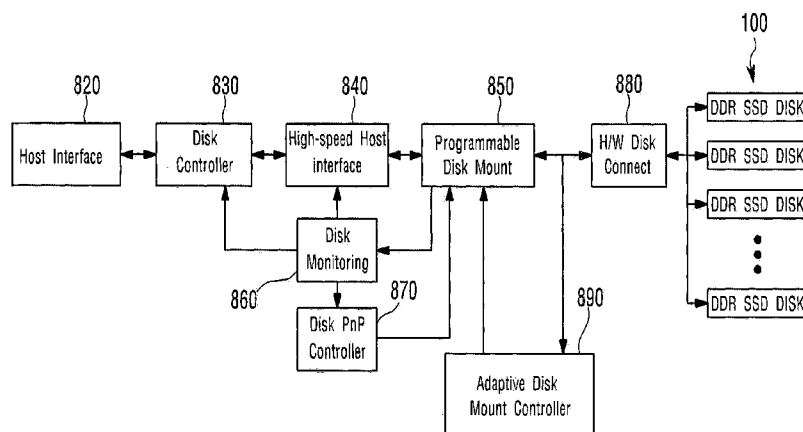
— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

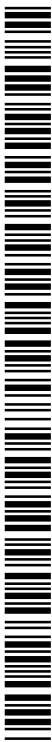
7 March 2013

(54) Title: RAID CONTROLLER WITH PROGRAMMABLE INTERFACE FOR A SEMICONDUCTOR STORAGE DEVICE

[Fig. 3]



(57) Abstract: Provided is a RAID controlled storage device of a serial attached small computer system interface/serial advanced technology attachment (PCI-Express) type, which provides data storage/reading services through a PCI-Express interface. The RAID controller typically includes a hardware (H/W) disk connect coupled to a set of PCI-Express SSD memory disk units, the set of PCI-Express SSD memory disk units comprising a set of volatile semiconductor memories; a programmable disk mount coupled to the H/W disk connect; an adaptive disk mount controller coupled to the programmable disk mount; a disk monitoring unit coupled to the programmable disk mount for monitoring the set of PCI-Express memory disk units; a disk plug and play controller coupled to the disk monitoring unit and the programmable disk mount for controlling the programmable disk mount; a high speed host interface coupled to the disk monitoring unit and the programmable disk mount for providing high-speed host interface capabilities; a disk controller coupled to the high speed host interface and the disk monitoring unit; and a host interface coupled to the disk controller.



WO 2012/169824 A3

A. CLASSIFICATION OF SUBJECT MATTER**G06F 13/14(2006.01)i, G06F 13/16(2006.01)i, G06F 12/16(2006.01)i, G11C 7/10(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 3/06; G06F 12/00; G06F 3/08

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: RAID controller, SSD, programmable, adaptive disk mount

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	KR 10-2010-0036528 A (TAEJIN INFOTECH CO., LTD.) 08 April 2010 See claims 1-4; figure 1 and its corresponding description	1, 10, 17 2-9, 11-16, 18-20
Y	JP 2011-008401 A (CANON INC) 13 January 2011 See claims 1 and 6	1-20
Y	KR 10-0928438 B1 (TAEJIN INFOTECH CO., LTD.) 25 November 2009 See figures 1-3 and their corresponding description	1-20

 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

Date of the actual completion of the international search

11 DECEMBER 2012 (11.12.2012)

Date of mailing of the international search report

12 DECEMBER 2012 (12.12.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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Telephone No. 82-42-481-5685



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2012/004535

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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