

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 October 2008 (23.10.2008)

PCT

(10) International Publication Number
WO 2008/127408 A3

- (51) International Patent Classification:
G06F 21/02 (2006.01)
- (21) International Application Number:
PCT/US2007/083763
- (22) International Filing Date:
6 November 2007 (06.11.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/598,173 8 November 2006 (08.11.2006) US
- (71) Applicant (for all designated States except US): **MI-CRON TECHNOLOGY, INC.** [US/US]; 8000 South Federal Way, Boise, ID 83716 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **ASNAASHARI, Mehdi** [US/US]; 268 Montego Drive, Danville, CA 94526 (US).
- (74) Agent: **LEFFERT, Thomas, W.**; Leffert, Jay & Polglaze, P.A., P. O. Box 581009, Minneapolis, MN 55458-1009 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
8 January 2009

(54) Title: METHOD AND SYSTEM FOR ENCRYPTION OF INFORMATION STORED IN AN EXTERNAL NONVOLATILE MEMORY

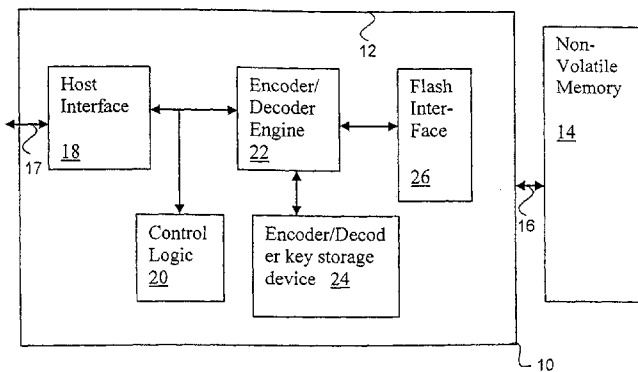


FIG. 1(a)

(57) Abstract: A nonvolatile storage system is described that includes a controller for transferring information between a host and nonvolatile memory. The controller includes an encryption/decryption engine for transferring information to and from a nonvolatile memory device, located externally to the controller, using a first key to encrypt information being stored into the nonvolatile memory device prior to storage thereof and further using the first key to decrypt the stored encrypted information after retrieval of thereof. Alternatively, a second key is used in conjunction with the first key to add further security to the information stored within the nonvolatile memory.



WO 2008/127408 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/083763

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F21/02

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

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 264 373 A (EUROLOGIC RESEARCH LIMITED [IE]) 25 August 1993 (1993-08-25) abstract; figure 1 page 3, line 1 - line 27 page 4, line 13 - page 6, line 4 page 7, line 27 - page 8, line 20	1-25
A	WO 2006/071725 A (SANDISK CORP [US]; DISCRETIX TECHNOLOGIES LTD [IL]; HOLTZMAN MICHAEL []) 6 July 2006 (2006-07-06) the whole document	1-25
A	US 2006/195704 A1 (COCHRAN ROBERT A [US] ET AL) 31 August 2006 (2006-08-31) abstract; figures 1B,3 paragraph [0005] - paragraph [0014] paragraph [0018] - paragraph [0024] paragraph [0049] - paragraph [0050]	1-25

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

14 November 2008

Date of mailing of the international search report

25/11/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Powell, David

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/083763

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2264373	A	25-08-1993	NONE
WO 2006071725	A	06-07-2006	EP 1828948 A2 05-09-2007 JP 2008524969 T 10-07-2008 KR 20070103741 A 24-10-2007
US 2006195704	A1	31-08-2006	NONE