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- (71) **Applicant** (for all designated States except US): **FREESCALE SEMICONDUCTOR, INC.** [US/US]; 6501 William Cannon Drive West, Austin, Texas 78735 (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,

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(54) **Title:** Multi-Core Processor and Method of Power Management of a Multi-Core Processor

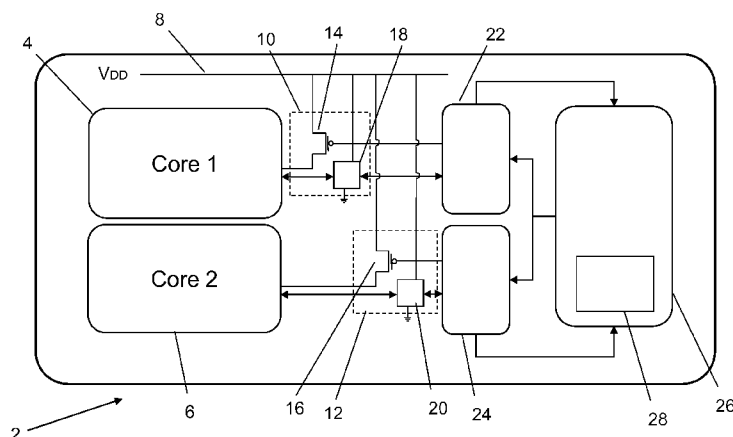


Figure 1

(57) **Abstract:** Freescale Confidential Proprietary Multi-Core Processor and Method of Power Management of a Multi-Core Processor Abstract A multi-core processor (2) includes a plurality of power gating elements (10, 12) for controlling power applied to each core (4, 6). Each power gating element (10, 12) is coupled to a respective power gating controllers (22, 24) for controlling the respective power gating element (10, 2) to selectively provide full power to the respective core (4, 6) only during an active period of the respective core. A common power gating controller (26) is coupled to the individual power gating controllers (22, 24) for controlling the individual power gating controllers (22, 24) to balance the active periods of the plurality of cores so as to substantially reduce or minimise overlapping active periods so as to reduce the total power provided to all the cores.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/053409**A. CLASSIFICATION OF SUBJECT MATTER****G06F 1/32(2006.01)i, G06F 15/80(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 1/32; G05F 3/02; G06F 11/30; H03K 3/289; G06F 1/26; H03K 3/356; G05F 1/10; G01R 1/02

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: mutli-core, control, switch, transistor, gating, power, transistor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7737770 B2 (KUHN KELIN J. et al.) 15 June 2010 See col.5 line 3 - col.6 line 49, and fig.2.	1-10
A	US 2008-0238407 A1 (GRASSI MICHAEL et al.) 02 October 2008 See paras.[0013],[0015], and figs.1,2.	1-10
A	US 2010-0162023 A1 (ROTEM EFRAIM et al.) 24 June 2010 See paras.[0034]-[0054], and fig.2.	1-10
A	US 2009-0070607 A1 (SAFFORD KEVIN et al.) 12 March 2009 See abstract, paras.[0045]-[0049], and figs.1,2.	1-10
A	US 7164301 B2 (CHRISTOPHER K.Y. CHUN) 16 January 2007 See abstract, and col.1 lines 6-35.	1-10

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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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