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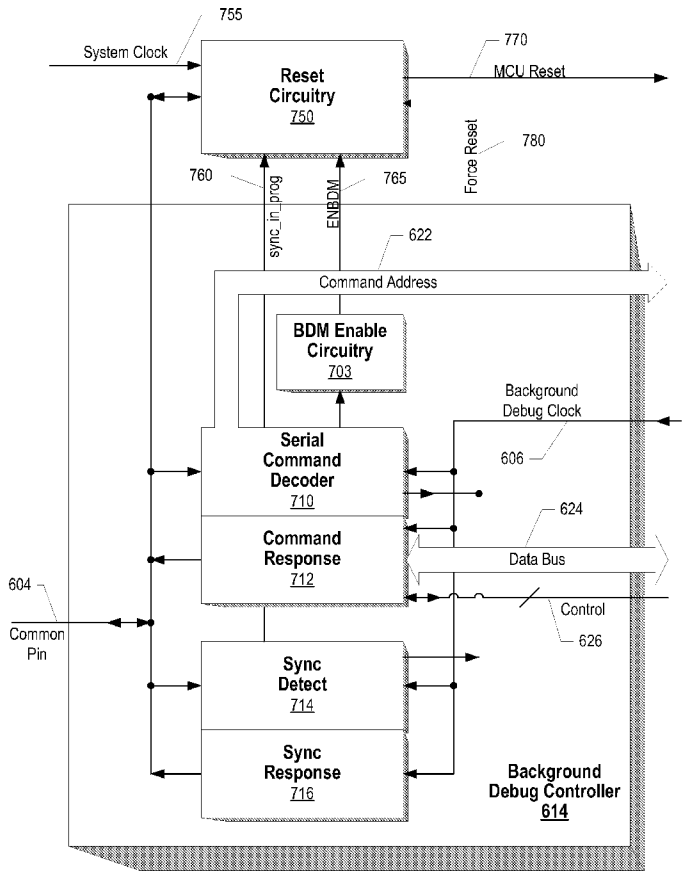
[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR SHARING RESET AND BACKGROUND COMMUNICATION ON A SINGLE MCU PIN



(57) Abstract: Methods and data processing systems (610) are provided to share a common pin (604) between two circuits (614, 750) in microcontroller unit (MCU). Signals are received at a common pin (604) included in the MCU. If the first circuit (614) has been enabled, then the received signals are analyzed to determine whether the signals are valid command signals for the first circuit (614). If the signals are not a valid command signal, then a second circuit (750) is performed. If the first circuit (614) has not been enabled, then an alternate function is performed. One of the operations performed by the alternate function is to determine whether to enable the first function. In one embodiment, the first circuit is a background debug controller (614) of the MCU and the second circuit is a reset circuit (750).

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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 17/50 (2007.10)
USPC - 716/1
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)
USPC: 716/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 716/1, 716/2 (search term limited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Electronic Databases Searched: pubWEST(PGPB,USPT,EPAB,JPAB; PLUR=YES); DialogPRO(Engineering); Google Scholar
Text search terms: shared pin, common pin, reset, pod, dongle, active connector, remote circuit, 1149, USB, JTAG, hot, enable, disable, reset, synchronization

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FREESCALE Semiconductor, "MC9S08GB60A MC9S08GB32A MC9S08GT60A MC9S08GT32AHCS 08 Microcontrollers Data Sheet" 08/2005 [retrieved 19 December 2007 (19.12.2007)] Retrieved from the Internet. <URL: . http://www.freescale.com/files/microcontrollers/doc/data_sheet/MC9S08GB60A.pdf> Entire document (especially pg 17, para 3; pg 18, para 1; 3; pg 29, para 1-2, 4-6, 8; pg 30, para 4; pg 33, para 4; pg 37, para 2; pg 154, para 3; pg 235, para 4; pg 242, para 5-6 and Fig. 15-1)	1-20
A	US 2004/0100459 A1 (WU et al.) 27 May 2004 (27.05.2004) entire document, especially Fig. 1, Abstract, para [0014]-[0015], [0019]	1-20
A	US 2005/0234674 A1 (BUNDY et al.) 20 October 2005 (20.10.2005) entire document	1-20
A	US 2006/0101173 A1 (CHENG et al.) 11 May 2006 (11.05.2006) entire document	1-20

☐ Further documents are listed in the continuation of Box C. ☐

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"A" document defining the general state of the art which is not considered to be of particular relevance
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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