Exhibit 1

US009529768B2

(12) **United States Patent**

Chu

(10) **Patent No.:** **US 9,529,768 B2**

(45) **Date of Patent:** *Dec. 27, 2016

(54) **COMPUTER SYSTEM INCLUDING CPU OR PERIPHERAL BRIDGE DIRECTLY CONNECTED TO A LOW VOLTAGE DIFFERENTIAL SIGNAL CHANNEL THAT COMMUNICATES SERIAL BITS OF A PERIPHERAL COMPONENT INTERCONNECT BUS TRANSACTION IN OPPOSITE DIRECTIONS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 387 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/209,922**

(22) Filed: **Mar. 13, 2014**

(65) **Prior Publication Data**

US 2014/0195713 A1 Jul. 10, 2014

Related U.S. Application Data

(63) Continuation of application No. 13/744,287, filed on Jan. 17, 2013, now Pat. No. 8,756,359, which is a

(Continued)

(51) **Int. Cl.**
G06F 13/20 (2006.01)
G06F 13/42 (2006.01)

(Continued)

(52) **U.S. Cl.**
CPC **G06F 13/4282** (2013.01); **G06F 1/08** (2013.01); **G06F 1/12** (2013.01); **G06F 13/102** (2013.01);

(Continued)

(58) **Field of Classification Search**
CPC G06F 13/4022; G06F 13/4027; G06F 13/364; G06F 13/385

(Continued)

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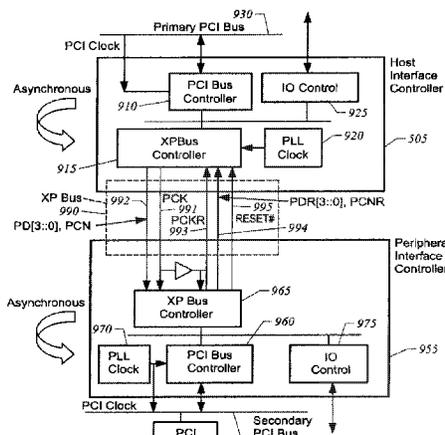(74) *Attorney, Agent, or Firm* — Cooley LLP

(57) **ABSTRACT**

A computer system for multi-processing purposes. The computer system has a console comprising a first coupling site and a second coupling site. Each coupling site comprises a connector. The console is an enclosure that is capable of housing each coupling site. The system also has a plurality of computer modules, where each of the computer modules is coupled to a connector. Each of the computer modules has a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the processing unit, and a mass storage device coupled to the processing unit. Each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system.

40 Claims, 35 Drawing Sheets

US 9,529,768 B2

Page 2

Related U.S. Application Data

continuation of application No. 13/649,084, filed on Oct. 10, 2012, now Pat. No. 8,977,797, which is a continuation of application No. 13/560,924, filed on Jul. 27, 2012, now Pat. No. 8,626,977, which is a continuation of application No. 13/087,912, filed on Apr. 15, 2011, now Pat. No. 8,234,436, which is a continuation of application No. 12/504,534, filed on Jul. 16, 2009, now Pat. No. 8,041,873, which is a continuation of application No. 12/077,503, filed on Mar. 18, 2008, now Pat. No. 7,676,624, which is a continuation of application No. 11/166,656, filed on Jun. 24, 2005, now Pat. No. 7,376,779, which is a continuation of application No. 11/097,694, filed on Mar. 31, 2005, now Pat. No. 7,363,415, which is a continuation of application No. 10/772,214, filed on Feb. 3, 2004, now Pat. No. 7,099,981, which is a continuation of application No. 09/569,758, filed on May 12, 2000, now Pat. No. 6,718,415.

(60) Provisional application No. 60/134,122, filed on May 14, 1999.

(51) **Int. Cl.**
G06F 13/40	(2006.01)
G06F 1/12	(2006.01)
G06F 13/38	(2006.01)
G06F 1/08	(2006.01)
G06F 13/10	(2006.01)

(52) **U.S. Cl.**
CPC *G06F 13/20* (2013.01); *G06F 13/385* (2013.01); *G06F 13/409* (2013.01); *G06F 13/4027* (2013.01); *G06F 13/4068* (2013.01); *G06F 13/42* (2013.01); *G06F 13/4221* (2013.01)

(58) **Field of Classification Search**
USPC 710/305–317, 104–110, 62–64, 72–74
See application file for complete search history.

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