



- (51) **International Patent Classification:**
H04L 7/02 (2006.01) *H04L 29/06* (2006.01)
- (21) **International Application Number:**
PCT/US2012/041708
- (22) **International Filing Date:**
8 June 2012 (08.06.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/495,579 10 June 2011 (10.06.2011) US
13/492,277 8 June 2012 (08.06.2012) US
- (71) **Applicant (for all designated States except US):** **INTERSIL AMERICAS LLC** [US/US]; 1001 Murphy Ranch Road, Milpitas, CA 95035 (US).
- (72) **Inventor; and**
- (75) **Inventor/Applicant (for US only):** **HERKLOTS, Timothy, James** [GB/US]; 10510 S. Tantau Avenue, Cupertino, CA 95014 (US).
- (74) **Agent:** **WALKER, Brian, D.**; Howison & Arnott, L.L.P., P.O. Box 741715, Dallas, TX 75374-1715 (US).
- (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).

Declarations under Rule 4.17:

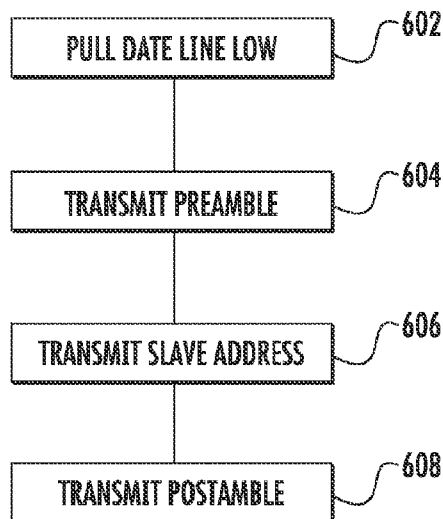
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

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

[Continued on next page]

(54) **Title:** SYSTEM AND METHOD FOR OPERATING A ONE-WIRE PROTOCOL SLAVE IN A TWO-WIRE PROTOCOL BUS ENVIRONMENT

**FIG. 6**

(57) **Abstract:** A method for transmitting data on a data line of a two-wire bus wherein the bus includes a data line and a clock line includes the step of pulling the data line of the two-wire bus low to define a start condition. Next, a first group of fixed data bits enabling a slave device to determine a clock signal for an address portion of a transmission of data are transmitted between a master device and the slave device. An address of the slave device is transmitted from the master device in a second group of data bits. A third group of fixed data bits enabling the slave device to determine the clock signal for a data portion of the transmission of data between the master device and the slave device are transmitted from the master device to the slave device.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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

7 March 2013

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/041708**A. CLASSIFICATION OF SUBJECT MATTER****H04L 7/02(2006.01)i, H04L 29/06(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)

H04L 7/02; G06F 13/40; G06F 3/00; H04B 3/00; G06F 13/42; G06F 13/00; H04B 1/38

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: i2c bus, two-wire bus, data line, clock line, master, slave, address, fixed data bit

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010-0017553 A1 (CHRISTOPHE LAURENCIN et al.) 21 January 2010 See paragraphs [0039]–[0047], [0052], [0063], [0068]; claims 1–8; figures 1–12C.	1–25
A	US 2010-0205326 A1 (AMRITA DESHPANDE et al.) 12 August 2010 See paragraphs [0023]–[0026]; claim 1; figures 1, 2.	1–25
A	US 2008-0201511 A1 (AMRITA DESHPANDE et al.) 21 August 2008 See paragraphs [0023]–[0037]; claim 1; figures 1, 2.	1–25
A	US 2010-0054313 A1 (KWAN-JEN CHU et al.) 04 March 2010 See paragraph [0029]; figure 3.	1–25
A	US 7111097 B2 (PETER LIN) 19 September 2006 See column 4, line 64; claim 1; figure 5.	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 application or patent 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 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

16 JANUARY 2013 (16.01.2013)

Date of mailing of the international search report

17 JANUARY 2013 (17.01.2013)

Name and mailing address of the ISA/KR

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

Facsimile No. 82-42-472-7140

Authorized officer

KANG, HEE GOK

Telephone No. 82-42-481-8264



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/041708

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010-0017553 A1	21.01.2010	AT 543139 T EP 2146287 A1 EP 2146287 B1 US 8161224 B2	15.02.2012 20.01.2010 25.01.2012 17.04.2012
US 2010-0205326 A1	12.08.2010	AT 488805 T CN 101208681 A0 CN 101208681 B DE 602006018280 D1 EP 1877915 A2 EP 1877915 B1 JP 2008-539498 A US 2008-0195764 A1 US 7711867 B2 US 7979597 B2 WO 2006-117751 A2 WO 2006-117751 A3	15.12.2010 25.06.2008 07.03.2012 30.12.2010 16.01.2008 17.11.2010 13.11.2008 14.08.2008 04.05.2010 12.07.2011 09.11.2006 08.02.2007
US 2008-0201511 A1	21.08.2008	AT 459052 T CN 101208679 A0 CN 101208679 B DE 602006012476 D1 EP 1877914 A1 EP 1877914 B1 JP 2008-539497 A US 7774528 B2 WO 2006-117750 A1	15.03.2010 25.06.2008 01.12.2010 08.04.2010 16.01.2008 24.02.2010 13.11.2008 10.08.2010 09.11.2006
US 2010-0054313 A1	04.03.2010	TW 201011547 A	16.03.2010
US 7111097 B2	19.09.2006	TW 236264 A TW 236264 B US 2004-0049619 A1	11.07.2005 11.07.2005 11.03.2004