

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2878121

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
CONTOUR SEMICONDUCTOR, INC.		05/30/2014
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	AMERICAN CAPITAL, LTD.	
<b>Street Address:</b>	2 BETHESDA METRO CENTER	
<b>Internal Address:</b>	14TH FLOOR	
<b>City:</b>	BETHESDA	
<b>State/Country:</b>	MARYLAND	
<b>Postal Code:</b>	20814	
<b>PROPERTY NUMBERS Total: 48</b>		
<b>Property Type</b>	<b>Number</b>	
Patent Number:	5673218	
Patent Number:	5889694	
Patent Number:	RE41733	
Patent Number:	RE42310	
Patent Number:	6586327	
Patent Number:	7183206	
Patent Number:	7507663	
Patent Number:	6598164	
Patent Number:	6956757	
Patent Number:	7460384	
Patent Number:	7593246	
Patent Number:	7826244	
Patent Number:	8358525	
Patent Number:	7149934	
Patent Number:	8108735	
Patent Number:	7376008	
Patent Number:	7652916	
Patent Number:	7916530	
Patent Number:	7548454	
Patent Number:	7593256	
		<b>PATENT</b>

Property Type	Number
Patent Number:	7548453
Patent Number:	7667996
Patent Number:	7813157
Patent Number:	7933133
Patent Number:	8116109
Patent Number:	8000129
Patent Number:	7682981
Patent Number:	8358526
Patent Number:	8351238
Patent Number:	8325556
Patent Number:	8325557
Patent Number:	8035416
Patent Number:	8526217
Patent Number:	8455298
Patent Number:	8451024
Patent Number:	8635426
Patent Number:	8537618
Patent Number:	8378456
Application Number:	12720843
Application Number:	13373205
Application Number:	13707895
Application Number:	13714499
Application Number:	12924167
Application Number:	12930655
Application Number:	13135235
Application Number:	13385371
Application Number:	61725620
Application Number:	14282444

#### CORRESPONDENCE DATA

**Fax Number:** (617)248-4000

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Email:** tmadmin@choate.com

**Correspondent Name:** ELIZABETH A. WALKER

**Address Line 1:** TWO INTERNATIONAL PLACE

**Address Line 2:** CHOATE HALL & STEWART LLP

**Address Line 4:** BOSTON, MASSACHUSETTS 02110

**ATTORNEY DOCKET NUMBER:** 2009744-0001

**NAME OF SUBMITTER:** ELIZABETH A. WALKER

**PATENT**

**REEL: 033063 FRAME: 0618**

<b>SIGNATURE:</b>	/Elizabeth A. Walker/
<b>DATE SIGNED:</b>	05/30/2014
<b>Total Attachments: 6</b> source=Grant of Security Interest in US Patents.pdf#page1.tif source=Grant of Security Interest in US Patents.pdf#page2.tif source=Grant of Security Interest in US Patents.pdf#page3.tif source=Grant of Security Interest in US Patents.pdf#page4.tif source=Grant of Security Interest in US Patents.pdf#page5.tif source=Grant of Security Interest in US Patents.pdf#page6.tif	

**CONTOUR SEMICONDUCTOR, INC.**

**GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS**

**May 30, 2014**

FOR GOOD AND VALUABLE CONSIDERATION, receipt and sufficiency of which are hereby acknowledged, Contour Semiconductor, Inc., a Delaware corporation with its principal office located at 85 Rangeway Road, Bldg. 1, N. Billerica, MA 01862 (the "**Grantor**"), and the undersigned grantee (the "**Grantee**") hereby agree as follows:

Grantor hereby grants to the Grantee a continuing security interest in (i) all of the Grantor's right, title and interest in, to and under the United States patents and patent applications (the "**Patents**") set forth on Schedule A attached hereto (which Schedule A Grantor hereby represents and warrants to Grantee lists all United States patents and all applications for United States patents owned by Grantor as of the date hereof), (ii) any and all rights and privileges arising under applicable law with respect to Grantor's use of the Patents, (iii) any and all inventions and improvements described and claimed therein, (iv) any and all reissues, divisions, continuations, renewals, extensions and continuations-in-part thereof, (v) all income, fees, royalties, damages, claims and payments now or hereafter due and/or payable thereunder and with respect thereto including, without limitation, damages and payments for past, present or future infringements thereof, (vi) any and all rights corresponding thereto throughout the world and (vii) any and all rights to sue for past, present or future infringements thereof.

Capitalized terms used herein but not otherwise defined shall have the meaning ascribed to such terms in the Security Agreement by and between the Grantor and the Grantee, dated as of May 30, 2014 (as amended, modified, restated and/or supplemented from time to time, the "**Security Agreement**"). This grant of security interest in United States Patents (this "**Grant**") is made to secure the satisfactory performance and payment of all the Secured Obligations of the Grantor. The rights and remedies of the Grantee with respect to the security interest granted herein are as set forth in the Security Agreement, all terms and provisions of which are incorporated herein by reference. Grantees may only take action with respect to the Patents and/or this Grant upon the written consent of the Majority Holders (as defined in the Security Agreement). In the event that any provisions of this Grant are deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall govern.

Grantor shall have the duty, with respect to Patents that are necessary in the conduct of Grantor's business, to protect and diligently enforce and defend at Grantor's expense such Patents, including (A) to diligently enforce and defend, including promptly suing for infringement, misappropriation, or dilution and to recover any and all damages for such infringement, misappropriation or dilution, and filing for opposition, interference and cancellation against conflicting Patent rights of any person or entity, (B) to prosecute diligently any patent application that is necessary in the conduct of Grantor's business and part of the Patents pending as of the date hereof or hereafter until the termination of the Security Agreement and (C) to take all reasonable and necessary action to preserve and maintain all of Grantor's Patents and its rights therein, including paying all maintenance fees and filing of applications for renewal, affidavits of use and affidavits of non-contestability. Grantor further agrees not to

abandon any Patents or Patent license or other similar right that is necessary in the conduct of Grantor's business. Grantor hereby agrees to take the steps described in this paragraph with respect to all new or acquired Patents to which it or any of its subsidiaries is now or later becomes entitled that is necessary in the conduct of Grantor's business.

Grantor acknowledges and agrees that the Grantee shall have no duties with respect to any Patents or Patent licenses or other similar rights of Grantor. Without limiting the generality of this paragraph, Grantor acknowledges and agrees that the Grantee shall not be under any obligation to take any steps necessary to preserve rights in the Collateral consisting of Patents or Patent licenses or other similar rights against any other person or entity, but any Grantee may do so at its option from and after the occurrence and during the continuance of an Event of Default, and all expenses incurred in connection therewith (including reasonable fees and expenses of attorneys and other professionals) shall be at the sole expense of the Grantor.

As soon as available and in any event within 120 days after the end of each fiscal year of the Grantor, Grantor shall provide the Grantee with any additional Patent Security Agreements necessary to record with the United States Patent and Trademark Office the Grantee's Lien on the United States Patents (and applications therefor) owned by Grantor and included in the Collateral.

Grantor shall take all reasonable steps that Grantor deems appropriate under the circumstances, using its reasonable business judgment, to maintain the confidentiality of (to the extent permissible under applicable law), and otherwise protect and enforce its rights in, the Patents that are necessary in the conduct of Grantor's business.


Grantor shall not enter into any Patent license or other similar right material to the business of Grantor to receive any license or rights in any Patents of any other person or entity unless Grantor has used commercially reasonable efforts to not prohibit the assignment of or grant of a security interest in such Patent license or other similar right (and all rights of Grantor thereunder) to the Grantee.

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IN WITNESS WHEREOF, the undersigned have executed this Grant as of the date first above written.

GRANTOR:

CONTOUR SEMICONDUCTOR, INC.

By:   
Name: SAUL ZAKES  
Title: Chief Executive Officer

GRANTEE:

AMERICAN CAPITAL, LTD.

By: \_\_\_\_\_  
Name:  
Title:

IN WITNESS WHEREOF, the undersigned have executed this Grant as of the date first above written.

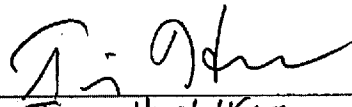
GRANTOR:

CONTOUR SEMICONDUCTOR, INC.

By: \_\_\_\_\_  
Name:  
Title:

GRANTEE:

AMERICAN CAPITAL, LTD.

By:   
Name: Tim Huelshamp  
Title: Vice President

## SCHEDULE A

### ISSUED PATENTS

<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
5,673,218	09/30/1997	Dual-Addressed Rectifier Storage Device
5,889,694	03/30/1999	Dual-Addressed Rectifier Storage Device
RE41,733	09/21/2010	Dual-Addressed Rectifier Storage Device
RE42,310	04/26/2011	Dual-Addressed Rectifier Storage Device
6,586,327	07/01/2003	Fabrication of Semiconductor Devices
7,183,206	02/27/2007	Fabrication of Semiconductor Devices
7,507,663	03/24/2009	Fabrication of Semiconductor Devices
ZL01819463X	01/01/1900	Fabrication of Semiconductor Devices
6,598,164	07/22/2003	Device & Method for Reducing Piracy of Digitized Information
6,956,757	10/18/2005	Low Cost High Density Rectifier Matrix Memory
7,460,384	12/02/2008	Low Cost High Density Rectifier Matrix Memory
7,593,246	09/22/2009	Low Cost High Density Rectifier Matrix Memory
7,826,244	11/02/2010	Low Cost High Density Rectifier Matrix Memory
8,358,525	01/22/2013	Low Cost High Density Rectifier Matrix Memory
7,149,934	12/12/2006	Error Correcting Memory Access Means and Method
8,108,735	01/31/2012	Error Correcting Memory Access Means and Method
7,376,008	05/20/2008	SCR Matrix Storage Device
7,652,916	01/26/2010	SCR Matrix Storage Device
7,916,530	03/29/2011	SCR Matrix Storage Device
7,548,454	06/16/2009	Memory Array with Readout Isolation
7,593,256	09/22/2009	Memory Array with Readout Isolation
7,548,453	06/16/2009	Memory Array with Readout Isolation
7,667,996	02/23/2010	Nano-Vacuum Tubes and their Application in Storage Devices
7,813,157	10/12/2010	Non-Linear Conductor Memory
7,933,133	04/26/2011	Low Cost, High-Density Rectifier Matrix Memory



8,116,109	02/14/2012	Low-Cost High Density Rectifier Matrix Memory
8,000,129	08/16/2011	Field-Emitter-Based Memory Array with Phase-Change Storage Devices
7,682,981	03/23/2010	Topography Transfer Method with Aspect Ratio Scaling
8,358,526	01/22/2013	Diagonal Connection Storage Array
8,351,238	01/08/2013	Low-Complexity Electronic Circuits & Methods for Forming the Same
8,325,556	12/04/2012	Sequencing Decoder Circuit
8,325,557	12/04/2012	Methods and Apparatus for Disabling a Memory-Array Portion
8,035,416	10/11/2011	Bipolar-MOS Driver Circuit
8,526,217	09/03/2013	Low-Complexity Electronic Circuits & Methods for Forming the Same
8,455,298	06/04/2013	Method for Forming Self-aligned Phase-Change Semiconductor Diode Memory
8,451,024	05/28/2013	Bipolar-MOS Driver Circuit
8,635,426	01/21/2014	Diagonally Accessed Memory Array Circuit
8,537,618	09/17/2013	RAM Memory Device with Nand Type Interface
8,378,456	02/19/2013	UNIFIED SWITCH ARRAY FOR MEMORY DEVICES
12/720,843	03/10/2010	[ISSUE FEE PAID] Vertical Switch Three-Dimensional Memory Array
13/373,205	11/08/2011	[ISSUE FEE PAID] PINCHED CENTER RESISTIVE CHANGE MEMORY CELL (NUP-052US)
13/707,895	12/07/2012	[ALLOWED] EMBEDDED NON-VOLATILE MEMORY

#### PENDING PATENTS

<u>Applctn No.</u>	<u>Filing Date</u>	<u>Title</u>
13/714,499	12/14/2012	Bipolar-CMOS Driver Circuit
12/924,167	09/22/2010	Method of Phase Change Memory Programming
12/930,655	01/13/2011	Diode Polarity for Diode Array
13/135,235	06/29/2011	3-D Resistor Array and Method of Operation
13/385,371	02/15/2012	CURRENT STEERING ELEMENT FORMATION FOR MEMORY CELLS (NUP-055US)
61/725,620	11/13/2012	Solid State Devices Having Fine Pitch Structures
14/282,444	05/20/2014	Vertical Switch Three-Dimensional Memory Array
CONTINUED	05/21/2014	PINCHED CENTER RESISTIVE CHANGE MEMORY CELL (NUP-052C1)
CONTINUATION PLANNED		EMBEDDED NON-VOLATILE MEMORY (NUP-058C1)