

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4542661

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY AGREEMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SMART MODULAR TECHNOLOGIES, INC.	08/09/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	BARCLAYS BANK PLC, AS ADMINISTRATIVE AGENT
<b>Street Address:</b>	745 SEVENTH AVENUE
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10019
<b>PROPERTY NUMBERS Total: 17</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14077908
Application Number:	15462885
Application Number:	13940118
Application Number:	14994065
Application Number:	14884369
Application Number:	14231622
Application Number:	15055448
PCT Number:	US1718762
Application Number:	15066728
Application Number:	15076433
PCT Number:	US1722608
Application Number:	15141757
PCT Number:	US1729001
Application Number:	15273385
Application Number:	15285305
Application Number:	15294678
Application Number:	15388704
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(800)914-4240
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent</i>	
<b>PATENT</b>	

***using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.***

**Phone:** 800-713-0755  
**Email:** Michael.Violet@wolterskluwer.com  
**Correspondent Name:** MICHAEL VIOLET  
**Address Line 1:** 4400 EASTON COMMONS WAY  
**Address Line 2:** SUITE 125  
**Address Line 4:** COLUMBUS, OHIO 43219

<b>NAME OF SUBMITTER:</b>	ELAINE CARRERA
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<b>SIGNATURE:</b>	/Elaine Carrera/
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<b>DATE SIGNED:</b>	08/09/2017
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**Total Attachments: 5**

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RECORDATION FORM COVER SHEET  
**PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)**

SMART Modular Technologies, Inc.

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) August 9, 2017

- ☐ Assignment ☐ Merger  
☒ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: Barclays Bank PLC, as Administrative Agent

Internal Address: \_\_\_\_\_

Street Address: 745 Seventh Avenue

City: New York

State: NY

Country: USA Zip: 10019

Additional name(s) & address(es) attached? ☐ Yes ☒ No

**4. Application or patent number(s):**

A. Patent Application No.(s)

See Schedule I

☐ This document is being filed together with a new application.

B. Patent No.(s)

See Schedule I

☒ Additional numbers attached? ☒ Yes ☐ No

**5. Name and address to whom correspondence concerning document should be mailed:**

Name: Elaine Carrera, Legal Assistant

Internal Address: \_\_\_\_\_

Street Address: c/o Cahill Gordon & Reindel LLP

80 Pine Street

City: New York

State: NY Zip: 10005

Phone Number: (212) 701-3365

Docket Number: \_\_\_\_\_

Email Address: ecarrera@cahill.com

**6. Total number of applications and patents involved: 17**

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ \_\_\_\_\_**

- ☐ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**

Deposit Account Number \_\_\_\_\_

Authorized User Name \_\_\_\_\_

**9. Signature:**

Elaine Carrera  
Signature

August 9, 2015  
Date

Elaine Carrera  
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

5

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT SECURITY AGREEMENT dated as of August 9, 2017 (this "Agreement"), among Smart Modular Technologies, Inc. (the "Grantor") and Barclays Bank PLC, as administrative agent (in such capacity, the "Administrative Agent").

Reference is made to (a) the Second Amended and Restated Credit Agreement dated as of August 9, 2017 (as amended, supplemented or otherwise modified from time to time, the "Credit Agreement"), among SMART Worldwide Holdings, Inc., a Cayman Islands exempted company ("Holdings"), SMART Modular Technologies (Global), Inc., a Cayman Islands exempted company (the "Parent Borrower"), SMART Modular Technologies, Inc., a California corporation (the "Co-Borrower" and together with the Parent Borrower, the "Borrowers" and each a "Borrower"), the lenders from time to time party thereto (the "Lenders") and the Administrative Agent and (b) the Collateral Agreement dated as of August 26, 2011 (as amended, supplemented or otherwise modified from time to time, the "Collateral Agreement"), among the Co-Borrower, the other grantors from time to time party thereto and the Administrative Agent. The Lenders and the Issuing Banks have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement. The Grantor is an Affiliate of the Borrowers and is willing to execute and deliver this Agreement in order to induce the Lenders to make additional Loans and the Issuing Banks to issue additional Letters of Credit and as consideration for Loans previously made and Letters of Credit previously issued. Accordingly, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Collateral Agreement or the Credit Agreement, as applicable. The rules of construction specified in Section 1.01(b) of the Collateral Agreement also apply to this Agreement.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, the Grantor hereby grants to the Administrative Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under any Patents now owned or at any time hereafter acquired by such Grantor, including those listed on Schedule I (the "Patent Collateral").

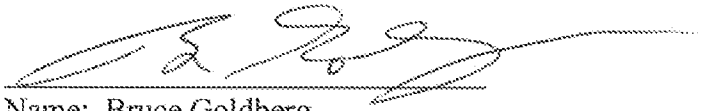
SECTION 3. Collateral Agreement. The Security Interest granted to the Administrative Agent herein is granted in furtherance, and not in limitation, of the security interests granted to the Administrative Agent pursuant to the Collateral Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Patent Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Collateral Agreement, the terms of the Collateral Agreement shall govern.

SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

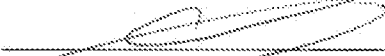
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IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

SMART MODULAR TECHNOLOGIES, INC.

By:   
Name: Bruce Goldberg  
Title: Vice President, Chief Legal Officer,  
Chief Compliance Officer and  
Secretary

BARCLAYS BANK PLC, as Administrative Agent

By: 

Name: *Chris Walton*

Title: *Director*

## Schedule I

	Owner	Patent Title	Serial No. Filing Date	Patent No. Issue Date	Status
1.	SMART Modular Technologies, Inc.	Integrated circuit device system with elevated configuration and method of manufacture thereof	14/077,908 11/12/2013	9,603,252 03/21/2017	Issued
2.	SMART Modular Technologies, Inc.	Integrated circuit device system with elevated configuration and method of manufacture thereof	15/462,885	N/A	Pending
3.	SMART Modular Technologies, Inc.	Computing system with backup and recovery mechanism and method of operation thereof	13/940,118	N/A	Pending
4.	SMART Modular Technologies, Inc.	Memory management system with backup system and method of operation thereof	14/994,065 01/12/2016		Pending
5.	SMART Modular Technologies, Inc.	Memory module with power management system and method of operation thereof	14/884,369 10/15/2015	9,576,615 02/21/2017	Issued
6.	SMART Modular Technologies, Inc.	Integrated circuit device system with elevated stacked configuration and method of manufacture thereof	14/231,622 03/31/2014	9,648,754 05/09/2017	Issued
7.	SMART Modular Technologies, Inc.	Memory management system with multiple boot devices and method of operation thereof	15/055,448	N/A	Pending
8.	SMART Modular Technologies, Inc.	Memory management system with multiple boot devices and method of operation thereof	PCT/US17/ 18762	N/A	Pending
9.	SMART Modular Technologies, Inc.	Memory module repair system with failing component detection and method of operation thereof	15/066,728	N/A	Pending
10.	SMART Modular Technologies, Inc.	Solid state storage system with latency management mechanism and method of operation thereof	15/076,433	N/A	Pending
11.	SMART Modular Technologies, Inc.	Solid state storage system with latency management mechanism and method of operation thereof	PCT/US17/ 22608	N/A	Pending
12.	SMART Modular Technologies, Inc.	Interconnected memory system and method of operation thereof	15/141,757	N/A	Pending
13.	SMART Modular Technologies, Inc.	Interconnected memory system and method of operation thereof	PCT/US17/ 29001	N/A	Pending
14.	SMART Modular Technologies, Inc.	High density memory module system	15/273,385	N/A	Pending
15.	SMART Modular Technologies, Inc.	Memory controller for high latency memory devices	15/285,305	N/A	Pending
16.	SMART Modular Technologies, Inc.	Flash-based block storage system with trimmed space management and method of operation thereof	15/294,678	N/A	Pending
17.	SMART Modular Technologies, Inc.	Virtual timer for data retention	15/388,704	N/A	Pending