

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4533621

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHANGHUI CATHY ZHANG	06/28/2017
QU GARY JIN	06/28/2017
MARK A. WARRINER	07/10/2017
KAMRAN RAHBAR	07/12/2017
<b>RECEIVING PARTY DATA</b>	
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<b>State/Country:</b>	CANADA
<b>Postal Code:</b>	K2K 3H4
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15597726
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<b>ATTORNEY DOCKET NUMBER:</b>	691303-1090
<b>NAME OF SUBMITTER:</b>	JOHN L. LYON
<b>SIGNATURE:</b>	/John L. Lyon/
<b>DATE SIGNED:</b>	08/03/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 8</b>	

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## DECLARATION AND ASSIGNMENT

As a below named inventor, I/we hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their names.

I/we believe the inventor(s) named below to be the original inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

### METHOD OF SPEEDING UP OUTPUT ALIGNMENT IN A DIGITAL PHASE LOCKED LOOP

- ☐ the specification of which is attached hereto.  
☒ the specification of which was filed on May 17, 2017 as  
U.S. Patent Application No. 15/597,726.  
☐ as amended on \_\_\_\_\_, 2017

The above-identified application was made or authorized by the below named inventor(s). I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above.

I/we acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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I/we hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patents or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Claimed	Certified Copy Attached?

I/we hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)
62/343,048	05/30/2016

### ASSIGNMENT

WHEREAS, the below named inventors have invented certain improvements in the invention as set forth in the application for U.S. Letters Patent set forth above;

WHEREAS, Microsemi Semiconductor ULC, (the "Assignee") a corporation of Canada, having a place of business at 400 March Road, Kanata, ON, K2K 3H4, is desirous of acquiring an interest therein.

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration the receipt of which is hereby acknowledged, and without any expectation of any further compensation whatsoever, we, (the "Assignors") Changhui Cathy Zhang, Qu Gary Jin, Mark A. Warriner, and Kamran Rahbar, by these presents do hereby sell, assign and transfer unto Microsemi Semiconductor ULC, the entire worldwide right, title and interest in and to:

said invention, as described in the patent application identified above (the "Application"), preparatory to obtaining Letters Patent of the United States therefor;

the Application and any other related intellectual property rights such as, but not limited to, copyright rights, copyrightable subject matter, know how, trade secrets, copyright registrations, reproduction rights, and waives any and all moral rights under 17 U.S.C. § 106A or otherwise;

the right to file counterparts to the Application in all countries and regions;

the right to claim priority from the Application in all countries and regions;

all patents which may be granted on or as a result thereof;

any reissue or reissues of such patents;

any patent application thereon that may be filed in any country foreign to the United States, and to any divisional, continuation or continuation-in-part applications thereon that may be filed in the United States or any other country;

said invention, application and Letters Patent to be held and enjoyed by the said Microsemi Semiconductor ULC for its own use and behoof, and for its legal representatives or assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by us had this assignment and sale not been made.

The Assignors hereby covenant that they: have full right to convey the entire interest herein assigned; and have not executed and will not execute any agreement to transfer any rights in the Inventions and/or the Application to anyone other than the Assignee or that is otherwise in conflict herewith.

The Assignors promise that they shall:

- each time a request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to the Inventions, the Application, and the patents in the Assignee, its successors, assigns, nominees or legal representatives;
  - communicate to the Assignee, or its nominees, all known facts respecting the Inventions, the Application and said patents;
  - testify in any legal proceedings;
  - sign all lawful papers;
  - execute all disclaimers and divisional, continuing, reissue and foreign applications;
  - make all rightful oaths; and
  - generally do everything possible to aid the Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit, proper patent protection for the Inventions in all countries;
- all at the expense, however, of the Assignee or its successors, assigns, nominees or legal representatives.

Assignors covenant and agree not to challenge or oppose, on any grounds whatsoever, the validity of this Assignment or to assist or request any third party to contest the validity of this Assignment unless required to do so by operation of law.

Assignors further covenant and agree not to contest the validity or enforceability of any intellectual

property rights assigned herein, or to assist or request any third party to contest the validity or enforceability of any intellectual property rights assigned herein.

The Assignors hereby irrevocably designate and appoint the Assignee and its duly authorized officers and agents, and their successors, as their agents and attorneys-in-fact, to act on the Assignors' behalf and instead of the Assignors, to execute and file applications to patent the Inventions in all countries, and to do all other proper lawfully-permitted acts to further the assignment, prosecution and issuance of patents for the Inventions with the same legal force and effect as if executed by the Assignors. This power of attorney shall be deemed coupled with an interest and is irrevocable.

The Assignors hereby authorize and request any official of any country or countries whose duty it is to issue patents on applications to issue to the Assignee, its successors, assigns, nominees or legal representatives all patents for the Inventions in accordance with the terms of this Assignment.

If any part of this assignment is declared unenforceable or invalid, the remainder will continue to be valid and enforceable.

The undersigned hereby authorize the firm of Thomas Horstemeyer to correct errors in this assignment or to insert any further identification or other information necessary or desirable to make this Assignment suitable for recordal in any country.

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I/we hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Inventor's Signature 

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Date

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Citizenship: Canada

Witness 1 

Witness 2 

Name of Second Inventor: Qu Gary Jin

Inventor's Signature 

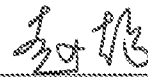
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Date

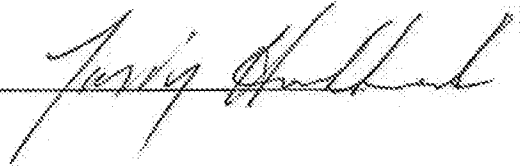
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Witness 1 

Witness 2 



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Inventor's Signature Mark Warriner

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Name of Fourth Inventor: Kamran Rahbar

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4852-0100-7432, v. 1