504306673 04/05/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XUERU DING	03/09/2017
MICHAEL S. ALLEN	03/13/2017

RECEIVING PARTY DATA

Name:	ANALOG DEVICES, INC.
Street Address:	ONE TECHNOLOGY WAY
City:	NORWOOD
State/Country:	MASSACHUSETTS
Postal Code:	02062

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15445188

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	3867.355US1	
NAME OF SUBMITTER:	DIANA JOHNSON	
SIGNATURE:	/Diana Johnson/	
DATE SIGNED:	04/05/2017	

Total Attachments: 5

source=3867.355US1 Assignment-signed#page1.tif source=3867.355US1 Assignment-signed#page2.tif source=3867.355US1 Assignment-signed#page3.tif source=3867.355US1 Assignment-signed#page4.tif source=3867.355US1 Assignment-signed#page5.tif

PATENT REEL: 041853 FRAME: 0315

504306673

RECORDATION FORM COVER SHEET **PATENTS ONLY**

Atty Ref/Docket No.: 3867.355US1 Patent and Trademark Office

To the Director of the U.S. Patent and Trademark (Office: Please record the attached original documents or copy thereof.			
1. Name of conveying party(ies):	2. Name and address of receiving party(ies):			
Xueru Ding, Michael S. Allen	Name: Analog Devices, Inc.			
Additional name(s) of conveying party(ies) attached	Street Address: One Technology Way			
[]Yes [X]No	City: <u>Norwood</u> State: <u>MA</u> Zip: <u>02062</u> Country: <u>United States of America</u>			
3. Nature of conveyance:	Additional name(s) & address(es) attached? []Yes [X]No			
[X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other				
Execution Date: March 9, 2017, March 13, 2017				
4. Application number(s) or patent number(s):				
If this document is being filed together with a new	application, the execution date of the application is:			
A. Patent Application No.(s)	B. Patent No.(s)			
Serial No. 15/445,188				
Additional numbers attached? []Yes [X]No				
	6. Total number of applications and patents involved: 1			
5. Name and address of party to whom correspond concerning document should be mailed:	7. Total fee (37 CFR 3.41):\$ <u>0.00</u>			
Name: Brent K. Whitlock	∏Enclosed			
Address:	Authorized to be charged to deposit account 19-			
Schwegman Lundberg & Woessner, P.A.	0743			
P.O. Box 2938 Minneapolis, MN 554020938	8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743			
DO NOT USE THIS SPACE				
9. Statement and signature. To the best of my knowledge and belief, the forego of the original document.	oing information is true and correct and any attached copy is a true copy			
Brent K. Whitlock/Reg. No. 61,371	/Brent K. Whitlock/ April 4, 2017			
Name of Person Signing	Signature Date			
	Total number of pages including cover sheet: 5			

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

> PATENT REEL: 041853 FRAME: 0316

ASSIGNMENT

WHEREAS, Xueru Ding and Michael S. Allen (hereinafter the "Undersigned") have made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention"); and as described in the patent application filed on February 28, 2017, assigned US application serial number 15/445,188, and titled SYSTEMS AND METHODS FOR IMPROVED ANGULAR RESOLUTION IN MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) RADAR.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Analog Devices, Inc. (the "Assignee"), a corporation of the State of Massachusetts, having a place of business at One Technology Way, Norwood, MA 02062, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

PATENT REEL: 041853 FRAME: 0317 Assignment

Assignors: Xueru Ding et al.

Docket No: 3867,355US1 Client Ref. No. APD5915-1-US

RADAR

Page 2 of 4

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

Title: SYSTEMS AND METHODS FOR IMPROVED ANGULAR RESOLUTION IN MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO)

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignment Docket No: 3867.355US1
Assignors: Xueru Ding et al. Client Ref. No. APD5915-1-US
Title: SYSTEMS AND METHODS FOR IMPROVED ANGULAR RESOLUTION IN MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO)

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Assignor:

(Signature):

Name: Xueru Ding

City/State: Newton, MA

Date:

03/09/2017

REEL: 041853 FRAME: 0319

Assignment

Docket No. 3867 3351351 Cheef Ref. No. APD5915-1478

Clear Ref. No. APD 5915-13 Tale: \$7830MS AND MICHORES FOR IMPROVED ANGULAR RESOLUTION IN MILL DELEMPER MELTIPLE COTTECT (MIMO) RADAR

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Assignor:

(Signature):

Name: Michael S. Allen

City/State: Needham, MA

Date:

PATENT REEL: 041853 FRAME: 0320