### 505326570 02/13/2019

EPAS ID: PAT5373351

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
JONATHAN EPHRAIM DAVID HURWITZ	01/07/2019
EDWARD CHAPIN GUTHRIE	01/30/2019
JOSEPH LEANDRO BALAIS PEJE	01/03/2019

### **RECEIVING PARTY DATA**

Name:	ANALOG DEVICES GLOBAL UNLIMITED COMPANY
Street Address:	3RD FLOOR, PAR LA VILLE PLACE 14
Internal Address:	PAR LA VILLE ROAD
City:	HAMILTON
State/Country:	BERMUDA

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16192400

### **CORRESPONDENCE DATA**

Fax Number:

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:** request@slwip.com

Correspondent Name: SCHWEGMAN LUNDBERG & WOESSNER, P.A.

Address Line 1: P.O. BOX 2938

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	3867.492US1
NAME OF SUBMITTER:	DIANA JOHNSON
SIGNATURE:	/Diana Johnson/
DATE SIGNED:	02/13/2019

### **Total Attachments: 9**

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PATENT REEL: 048316 FRAME: 0960

# RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 3867.492US1 Patent and Trademark Office To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. Name and address of receiving party(ies): 1. Name of conveying party(ies): Name: Analog Devices Global Unlimited Company Jonathan Ephraim David Hurwitz, Edward Chapin Street Address: 3rd Floor, Par La Ville Place 14, Par La Guthrie, Joseph Leandro Balais Peje Ville Road Additional name(s) of conveying party(ies) attached? City: Hamilton [ ]Yes [X]No Country: Bermuda 3. Nature of conveyance: Additional name(s) & address(es) attached? []Yes [X]No [X] Assignment [ ] Merger [ ] Security Agreement [ ] Change of Name [ ] Other Execution Date: January 7, 2019, January 30, 2019, January 3, 2019 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. 16/192,400 Additional numbers attached? [ ]Yes [X]No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41):\$ 0.00 Name: James L. Shands [[Enclosed [Authorized to be charged to deposit account 19-Address: 0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743 Minneapolis, Minnesota 55402 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. February 13, 2019 James L. Shands/Reg. No. 54,439 Date Name of Person Signing Signature Total number of pages including cover sheet: 9

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: 048316 FRAME: 0961

WHEREAS, I am a named inventor, Jonathan Ephraim David Hurwitz, Edward Chapin Guthrie, Joseph Leandro Balais Peje, of residence listed below, having invented certain new and useful improvements as described in an application for United States Letters entitled "MULTI-STAGE **CONVERSION** ANALOG-TO-DIGITAL CONVERTER," (hereinafter referred to as "Application") and having internal reference number of **APD6334US02** which are described in a patent application filed on December 6, 2017, which application was assigned US application serial number 62/595,371, and which is titled SUB-RANGING SAR/SINGLE-SLOPE ANALOG-TO-DIGITAL CONVERTER; which are described in a patent application filed on June 12, 2017, which application was assigned EP application serial number PCTEP2017064326, and which is titled CMOS IMAGE SENSORS WITH REDUCED POWER CONSUMPTION; which are described in a patent application filed on June 10, 2016, which application was assigned US application serial number 62/348,800, and which is titled CMOS IMAGE SENSOR WITH REDUCED POWER CONSUMPTION.

WHEREAS, I hereby authorize and request the attorneys or agents associated with United States Patent and Trademark Office Customer No. 21186 to insert here in parentheses (Ser. No. 16/192,400; Filing Date: November 15, 2018) the filing date and serial number of the Application when known;

WHEREAS, Analog Devices Global Unlimited Company, (hereinafter referred to as "Assignee"), a Corporation of Ireland, with an address of 3rd Floor, Par La Ville Place 14, Par La Ville Road, Hamilton, Bermuda, desires to acquire my entire right, title and interest in and to any and all inventions and improvements that are disclosed in the Application (hereinafter referred to as "Invention"), including any Letters Patent that may issue thereon;

**NOW, THEREFORE,** for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I hereby assign and transfer, and hereby agree to assign and transfer, to Assignee, all right, title and interest in and to the Invention and in and to the Application and all patents which may be granted therefrom, and all related applications (e.g., provisional applications, divisional applications, reissues, reexaminations, continuation applications, continuation-in-part applications, extensions thereof, design applications, applications in foreign countries, international applications, national phase applications, and the like). I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents, for the Invention, or patents resulting therefrom, insofar as my interest is concerned, to Assignee.

I also hereby assign and transfer, and hereby agree to assign and transfer to Assignee, all right, title and interest to the Invention, the Application or any related application throughout the world, including all rights of priority resulting from the filing of the Application or any related application, including but not limited to: the right to file applications and obtain patents, utility models, industrial models and designs for the Invention in Assignee's own name throughout the world, the right to claim priority from the Application or any related application

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### ATTORNEY DOCKET NO. 3867.492US1(APD6334US02)

when filing applications and obtaining patents, utility models, industrial models and designs for the Invention throughout the world, and all rights to publish cautionary notices reserving ownership of the Invention and all rights to register the Invention in appropriate registries. I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such right, title and interest in and to Assignee.

I will communicate to Assignee any facts known to me respecting any improvements to the Invention; and I will sign all lawful papers, execute all rightful assignments, execute all provisional, divisional, continuation, continuation-in-part, reissue and substitute applications, make lawful oaths and declarations, and generally do everything possible to vest title in and to Assignee and to aid Assignee to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I irrevocably appoint Assignee as my attorney-in-fact to execute on my behalf any documents deemed necessary by Assignee to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I agree to testify and cooperate with Assignee in any judicial proceeding, administrative proceeding, post-grant proceeding, or other proceeding concerning the Invention (including litigation with a third party over any patent issued on the Invention), and Assignee agrees to cover my reasonable costs and expenses (if any).

This Assignment shall be binding on the parties' successors, assigns and legal representatives.

Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor: Inventor's signature:	Jonathan Ephraim David Hurwitz
Date:	7 7m 19
Inventor Home Address:	10 Claremont Park Edinburgh EH6 7PJ, United Kingdom
Witness's Print Name: Witness's signature:	U BROWN Ully

ATTORNEY	DOCKET	NO.
3867.492US1	(APD6334	US02)

Witness Home Address:	9 (AEREATERACE COURT CRAWETHR WIND EANBURCH, ESTE EXO, SCOTLAND, UK
	The state of the s
Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor:	Edward Chapin Guthrie
Inventor's signature:	
Date:	
Inventor Home Address:	4 Monument Sq. Apt 3 Charlestown, MA 02129
Witness's Print Name:	
Witness's signature:	
Witness Home Address:	

Page 3

Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor:	Joseph Leandro Balais Peje
Inventor's signature:	
Date:	
Inventor Home Address:	TC-3K Suntrust Adriatico Gardens Adriatico, St. Malate Manila, Philippines
Witness's Print Name:	
Witness's signature:	
Witness Home Address:	

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**NOW, THEREFORE,** for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I hereby assign and transfer, and hereby agree to assign and transfer, to Assignee, all right, title and interest in and to the Invention and in and to the Application and all patents which may be granted therefrom, and all related applications (e.g., provisional applications, divisional applications, reissues, reexaminations, continuation applications, continuation-in-part applications, extensions thereof, design applications, applications in foreign countries, international applications, national phase applications, and the like). I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents, for the Invention, or patents resulting therefrom, insofar as my interest is concerned, to Assignee.

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when filing applications and obtaining patents, utility models, industrial models and designs for the Invention throughout the world, and all rights to publish cautionary notices reserving ownership of the Invention and all rights to register the Invention in appropriate registries. I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such right, title and interest in and to Assignee.

I will communicate to Assignee any facts known to me respecting any improvements to the Invention; and I will sign all lawful papers, execute all rightful assignments, execute all provisional, divisional, continuation, continuation-in-part, reissue and substitute applications, make lawful oaths and declarations, and generally do everything possible to vest title in and to Assignee and to aid Assignee to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I irrevocably appoint Assignee as my attorney-in-fact to execute on my behalf any documents deemed necessary by Assignee to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I agree to testify and cooperate with Assignee in any judicial proceeding, administrative proceeding, post-grant proceeding, or other proceeding concerning the Invention (including litigation with a third party over any patent issued on the Invention), and Assignee agrees to cover my reasonable costs and expenses (if any).

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Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor:	Jonathan Ephraim David Hurwitz
Inventor's signature:	
Date:	
Inventor Home Address:	10 Claremont Park Edinburgh EH6 7PJ, United Kingdom
Witness's Print Name:	
Witness's signature:	

ATTORNEY DOCKET NO. 3867.492US1(APD6334US02)	ASSIGNMENT
Witness Home Address:	·
Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor:	Edward Chapin Guthrie
Inventor's signature:	WODE
Date:	1/30/2019
Inventor Home Address:	4 Monument Sq. Apt 3 Charlestown, MA 02129
Witness's Print Name:	ANKIT KHANDELWAL
Witness's signature:	Christ
Witness Home Address:	99 W. WYOMING AVE,#3 MELROSE, MA - 02176

# ATTORNEY DOCKET NO. 3867.492US1(APD6334US02)

ASSIGNMENT

Title of Invention:	MULTI-STAGE CONVERSION ANALOG-TO-DIGITAL CONVERTER
Full name of inventor:	Joseph Leandro Balais Peje
Inventor's signature:	
Daie:	Jan 3, 2019
Inventor Home Address:	TC-3K Suntrust Adriatico Gardens Adriatico, St. Malate Manila, Philippines
Witness's Print Name:	SHERWIN PAVL ALMAZANI
Witness's signature:	- Elifunkug
Witness Home Address:	LYBOL OF GENTH HEIGHT
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