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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUN-YOUNG LIM	12/26/2018
YOUNG-JIN CHO	12/28/2018
JANG-SEOK CHOI	12/26/2018

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU
City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	16677

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16236750

CORRESPONDENCE DATA

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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.

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Email: pto@muirpatentlaw.com MUIR PATENT LAW, PLLC **Correspondent Name:**

Address Line 1: P.O. BOX 1213

Address Line 4: GREAT FALLS, VIRGINIA 22066

ATTORNEY DOCKET NUMBER:	SAM-55149CIP
NAME OF SUBMITTER:	PATRICK MUIR
SIGNATURE:	/Patrick Muir/
DATE SIGNED:	02/08/2019

Total Attachments: 5

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COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

for which As for patent.	signor is about to n	nake or has mad	e United States or i	international	applic
WHEREAS, a	s a below named in	iventor(s), I/(we)	hereby declare th	at:	
Section I. D	eclaration				
This declara	ion is directed to:				
	The attached U.	S. non-provision	al patent applicatio	n, or	
	U.S. non-provisio		cation number r		
	PCT internationa		ion number	·	, fi
The above-io	lentified applicatio	n was made or a	uthorized to be ma	ade by me (us).
	e that I am (we are the above-identifis		entor (original join	t inventors) o	facla
	y acknowledge that Inder 18 U.S.C. 100				
	quires the use of an Ag	oplication Data Shee			
1 This form re					

PATENT REEL: 048272 FRAME: 0670 SAMSUNG ELECTRONICS CO., LTD.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1,56.

Section II. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Korea, Republic Of (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations in part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, reexamination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

SEC Ref No.

ID-201610-041-1-US1

Attorney Ref No.

ION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 2 of 4

> **PATENT** REEL: 048272 FRAME: 0671

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Muir Patent Law, PLLC the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	Lim	Sun-young	3
SIGNATURE	0/12	DATE	12.673.18

LEGAL NAME OF SECOND	Family Name	First Given Name	Secon	d Given N	lame
NVENTOR/ASSIGNOR	Cho	Young-jin			
					Ta.
SIGNATURE		DATE			
3136A, O.E.	-				-

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PATENT

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Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Muir Patent Law, PLLC the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF	Family Name	First Given Name 11 Second Given Name
FIRST INVENTOR/ASSIGNOR	Lim	Sun-young
INVENTORYASISHOR		
		DATE
SIGNATURE		

LEGAL NAME OF	Family Name	First Given Name Second Given Name
SECOND INVENTOR/ASSIGNOR	Cho	Young-jin
SIGNATURE		DATE /2 - 28 - 2018

SEC Ref No. ID-201610-041-1-US1 Attorney Ref No. SAM-55149CIP

SAMSUNG ELECTRONICS CO., LTD.

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	Choi	Jang-seok	
			7
SIGNATURE	极3/L	DATE	0/24/308
	No.	ne	

SEC Ref No.

ID-201610-041-1-US1

Attorney Rei No.

SAM-55149CIP

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