

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4215374

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	CHANGHAN HOBIE YUN	12/08/2016
	DAVID FRANCIS BERDY	12/09/2016
	CHENGJIE ZUO	12/20/2016
	DAEIK DANIEL KIM	12/08/2016
	JONGHAE KIM	12/20/2016
	MARIO FRANCISCO VELEZ	12/13/2016
	NIRANJAN SUNIL MUDAKATTE	12/20/2016
	ROBERT PAUL MIKULKA	12/20/2016
RECEIVING PARTY DATA		
Name:	QUALCOMM INCORPORATED	
Street Address:	5775 MOREHOUSE DRIVE	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121-1714	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Application Number:	15161138	
CORRESPONDENCE DATA		
Fax Number:		
<i>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.</i>		
Phone:	7036217140	
Email:	meo.docket@mg-ip.com	
Correspondent Name:	MUNCY, GEISSLER, OLDS & LOWE, P.C./QC	
Address Line 1:	4000 LEGATO ROAD, SUITE 310	
Address Line 4:	FAIRFAX, VIRGINIA 22033	
ATTORNEY DOCKET NUMBER:	QC161132	
NAME OF SUBMITTER:	SAMANTHA PITTENGER	
SIGNATURE:	/Samantha Pittenger/	

DATE SIGNED:	01/09/2017
Total Attachments: 9 source=161132_ASSN_As-Filed_2017-01-09#page1.tif source=161132_ASSN_As-Filed_2017-01-09#page2.tif source=161132_ASSN_As-Filed_2017-01-09#page3.tif source=161132_ASSN_As-Filed_2017-01-09#page4.tif source=161132_ASSN_As-Filed_2017-01-09#page5.tif source=161132_ASSN_As-Filed_2017-01-09#page6.tif source=161132_ASSN_As-Filed_2017-01-09#page7.tif source=161132_ASSN_As-Filed_2017-01-09#page8.tif source=161132_ASSN_As-Filed_2017-01-09#page9.tif	

ASSIGNMENT

WHEREAS, WE,

1. **Changhan Hobie YUN**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
2. **David Francis BERDY**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
3. **Chengjie ZUO**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
4. **Daeik Daniel KIM**, a citizen of the Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Del Mar, CA;
5. **Jonghae KIM**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
6. **Mario Francisco VELEZ**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
7. **Niranjan Sunil MUDAKATTE**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA; and
8. **Robert Paul MIKULKA**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Oceanside, CA;

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **DOUBLE-SIDED CIRCUIT** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that

may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). **15/161,138** filed **May 20, 2016**, Qualcomm Reference No. **161132**, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

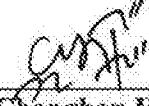
AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, on 2016-12-8
LOCATION DATE


Changhan Hobie YUN

Done at _____, on _____
LOCATION DATE

David Francis BERDY

Done at San Diego, on 12/20/16
LOCATION DATE


Chengjie ZUO

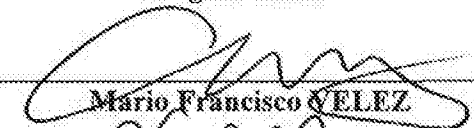
Done at _____, on _____
LOCATION DATE

Daeik Daniel KIM

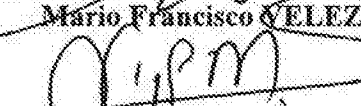
Done at San Diego, on 12/20/16
LOCATION DATE


Jonghae KIM

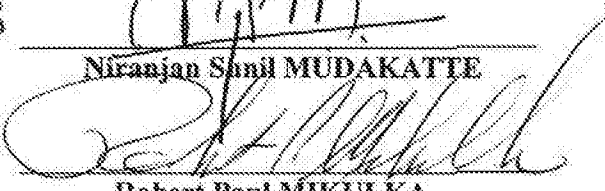
Done at San Diego, on 12-13-2016
LOCATION DATE


Mario Francisco VELEZ

Done at SAN DIEGO, on 12-20-2016
LOCATION DATE


Niranjan Sanil MUDAKATTE

Done at SAN DIEGO, on 12-20-2016
LOCATION DATE


Robert Paul MIKULKA

ASSIGNMENT

WHEREAS, WE,

1. **Changhan Hobie YUN**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
2. **David Francis BERDY**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
3. **Chengjie ZUO**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
4. **Daeik Daniel KIM**, a citizen of the Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Del Mar, CA;
5. **Jonghae KIM**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
6. **Mario Francisco VELEZ**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
7. **Niranjan Sunil MUDAKATTE**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA; and
8. **Robert Paul MIKULKA**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Oceanside, CA;

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **DOUBLE-SIDED CIRCUIT** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that

may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 15/161,138 filed May 20, 2016, Qualcomm Reference No. 161132, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at _____, on _____
LOCATION DATE

Changhan Hobie YUN

Done at San Diego, CA, on 4/2/9/16
LOCATION DATE

David Francis BERDY

Done at _____, on _____
LOCATION DATE

Chengjie ZUO

Done at _____, on _____
LOCATION DATE

Daeik Daniel KIM

Done at _____, on _____
LOCATION DATE

Jonghae KIM

Done at _____, on _____
LOCATION DATE

Mario Francisco VELEZ

Done at _____, on _____
LOCATION DATE

Niranjan Sunil MUDAKATTE

Done at _____, on _____
LOCATION DATE

Robert Paul MIKULKA

ASSIGNMENT

WHEREAS, WE,

1. **Changhan Hobie YUN**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
2. **David Francis BERDY**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
3. **Chengjie ZUO**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
4. **Daeik Daniel KIM**, a citizen of the Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Del Mar, CA;
5. **Jonghae KIM**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
6. **Mario Francisco VELEZ**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA;
7. **Niranjan Sunil MUDAKATTE**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of San Diego, CA; and
8. **Robert Paul MIKULKA**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA and a resident of Oceanside, CA;

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **DOUBLE-SIDED CIRCUIT** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that

may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 15/161,138 filed May 20, 2016, Qualcomm Reference No. 161132, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at _____, on _____
LOCATION DATE

Changhan Hobie YUN

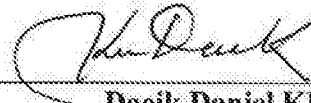
Done at _____, on _____
LOCATION DATE

David Francis BERDY

Done at _____, on _____
LOCATION DATE

Chengjie ZUO

Done at San Diego, on 12/8/2016
LOCATION DATE



Daeik Daniel KIM

Done at _____, on _____
LOCATION DATE

Jonghae KIM

Done at _____, on _____
LOCATION DATE

Mario Francisco VELEZ

Done at _____, on _____
LOCATION DATE

Niranjan Sunil MUDAKATTE

Done at _____, on _____
LOCATION DATE

Robert Paul MIKULKA