# 505731793 10/21/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5778604

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
YAN-HAN CHEN	10/15/2019
CHENG-KANG HU	10/15/2019
REN-HAU WU	10/15/2019
CHENG-HUNG CHEN	10/15/2019
FENG-KUANG WU	10/16/2019
HSU-SHUI LIU	10/15/2019
JIUN-RONG PAI	10/16/2019
SHOU-WEN KUO	10/16/2019

# **RECEIVING PARTY DATA**

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED	
Street Address:	NO. 8, LI-HSIN ROAD 6, HSIN-CHU SCIENCE PARK	
City:	HSIN-CHU	
State/Country:	TAIWAN	
Postal Code:	300-77	

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16572960

#### **CORRESPONDENCE DATA**

**Fax Number:** (216)373-3450

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.

**Phone:** 2166540090

Email:docketing@cooperlegalgroup.comCorrespondent Name:COOPER LEGAL GROUP LLCAddress Line 1:6505 ROCKSIDE ROAD SUITE 330Address Line 4:INDEPENDENCE, OHIO 44131

ATTORNEY DOCKET NUMBER:	P20183298US00	
NAME OF SUBMITTER:	WILLIAM JOSEPH COOPER	
SIGNATURE:	/William Joseph Cooper/	

PATENT 505731793 REEL: 050774 FRAME: 0020

Total Attachments: 3
source=P20183298US00\_Assignment for Recordation#page1.tif
source=P20183298US00\_Assignment for Recordation#page2.tif
source=P20183298US00\_Assignment for Recordation#page3.tif

PATENT REEL: 050774 FRAME: 0021

#### ASSIGNMENT

For good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, the undersigned

Yan-Han CHEN Miaoli County, TW

Cheng-Kang HU
Kaohsiung City, TW

Ren-Hau WU New Taipei City, TW

Cheng-Hung CHEN Zhubei City, TW

Feng-Kuang WU Hsinchu County, TW

Hsu-Shui LIU Pingjhen City, TW

Jiun-Rong PAI Jhubei City, TW Shou-Wen KUO Hsinchu City, TW

NOW, THEREFORE, for and in consideration of our employment and the salary or wages paid to us by Taiwan Semiconductor Manufacturing Company Limited, I/we, Yan-Han CHEN, Cheng-Kang HU, Ren-Hau WU, Cheng-Hung CHEN, Feng-Kuang WU, Hsu-Shui LIU, Jiun-Rong PAI, and Shou-Wen KUO by these presents do sell, assign, and transfer unto said Taiwan Semiconductor Manufacturing Company Limited, a corporation organized and existing under the laws of the Republic of China, having its principal place of business at No. 8, Li-Hsin Road 6, Hsin-Chu Science Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring an interest therein, its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions entitled

# DEVICE POSITIONING USING SENSORS

for which application for United States Letters Patent has been filed on September 17, 2019 under Serial No. 16/572,960 , or was executed by the undersigned on the date below and is being filed concurrently herewith, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent; said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had

10/15/2019

PATENT REEL: 050774 FRAME: 0022

Security C - TSMC Secret

by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

Inventor's Signature  Yan-Han CHEN Printed Name in English	2019 / 10 / 15 Date
Inventor's Signature  Cheng-Kang HU  Printed Name in English	Date 10 (15
Ren-Hau WU Printed Name in English	2018/10/18. Date
Inventor's Signature  Cheng-Hung CHEN Printed Name in English	1th Oct, 7019 Date

Security C - TSMC Secret Lury Wu 2019, 10, 16 Feng-Kuang WU Printed Name in English Hart Shui Lin 2019.10.15 Inventor's Signature Date Hsu-Shui LIU Printed Name in English Jiun-Rong PAI Printed Name in English Shon-Wea Kno Inventor's Signature Shou-Wen KUO Printed Name in English

10/15/2019