

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT4674665

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MIN-FENG KAO	12/17/2013
DUN-NIAN YAUNG	12/17/2013
JEN-CHENG LIU	12/17/2013
CHUN-CHIEH CHUANG	12/17/2013
FENG-CHI HUNG	12/17/2013
SHUANG-JI TSAI	12/17/2013
JENG-SHYAN LIN	12/17/2013
SHU-TING TSAI	12/17/2013
WEN-I HSU	12/17/2013
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	NO. 8, LI-HSIN RD. 6
<b>Internal Address:</b>	SCIENCE-BASED INDUSTRIAL PARK
<b>City:</b>	HSIN-CHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15803913
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)200-0853
<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>	
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<b>Correspondent Name:</b>	HAYNES AND BOONE, LLP IP SECTION
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<b>ATTORNEY DOCKET NUMBER:</b>	2013-0238/24061.2478US04

PATENT

<b>NAME OF SUBMITTER:</b>	KYLE HOWARD
<b>SIGNATURE:</b>	/Kyle Howard/
<b>DATE SIGNED:</b>	11/06/2017
<b>Total Attachments: 4</b> source=2478US04 - Assignment#page1.tif source=2478US04 - Assignment#page2.tif source=2478US04 - Assignment#page3.tif source=2478US04 - Assignment#page4.tif	

**ASSIGNMENT**

WHEREAS, we,

- |     |                   |    |   |
|-----|-------------------|----|---|
| (1) | Min-Feng Kao      | of | No. 15, Lane 224, Wufeng S. Road<br>East District, Chiayi City 600<br>Taiwan, R.O.C.                    |
| (2) | Dun-Nian Yaung    | of | 4F., No. 15, Lane 130, Wansheng Street<br>Wunshan District, Taipei City 116<br>Taiwan, R.O.C.           |
| (3) | Jen-Cheng Liu     | of | #17, Lane 48, Lane 240, Guo-Seng Street<br>Hsin-Chu City, Taiwan, R.O.C.                                |
| (4) | Chun-Chieh Chuang | of | No. 61, Meinan Street<br>Tainan City, Taiwan, R.O.C.  |
| (5) | Feng-Chi Hung     | of | Floor 10, No. 535-2, Bo-Ai Street<br>Chu-Bei City, Hsin-Chu County<br>Taiwan, R.O.C.                    |
| (6) | Shuang-Ji Tsai    | of | No. 1, Lane 45, Wenhua N. 2nd Street<br>Guiren District, Tainan City 711<br>Taiwan, R.O.C.              |
| (7) | Jeng-Shyan Lin    | of | No. 44, Alley 116, Lane 175, Section 1<br>Datong Road, East District<br>Tainan City 701, Taiwan, R.O.C. |
| (8) | Shu-Ting Tsai     | of | No. 27, Baoding Street<br>Sanmin District, Kaohsiung City 807<br>Taiwan, R.O.C.                         |
| (9) | Wen-I Hsu         | of | 10F.-1, No. 253, Gongyuan Road<br>Shanhua District, Tainan City 741<br>Taiwan, R.O.C.                   |

have invented certain improvements in

**STRUCTURE AND METHOD FOR 3D IMAGE SENSOR**

for which we have executed an application for Letters Patent of the United States of America,

  X   of even date filed herewith; and  
       filed on                            and assigned application number                           ; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

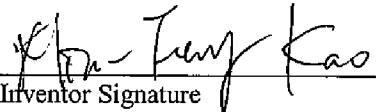
AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name: Min-Feng Kao

Residence Address: No. 15, Lane 224, Wufeng S. Road  
East District, Chiayi City 600 Taiwan, R.O.C.

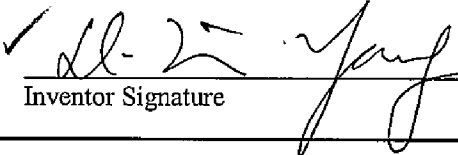
✓ Dated: 2013-12-17

  
Inventor Signature

Inventor Name: Dun-Nian Yaung

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✓ Dated: ~~2013-12-17~~  
2013-12-17

  
Inventor Signature

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✓ Dated: 2013, 12/19

✓ Jen-Cheng Liu  
Inventor Signature

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✓ Dated: 2013, 12/19

✓ Chun-Chieh Chuang  
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Jeng Shyan Lin

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✓ Dated: 2013. 12. 17

✓ Shu-Ting Tsai  
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✓ Dated: 2013. 12/17

✓ Wen-I Hsu.  
Inventor Signature