504547040 09/14/2017

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4593748

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FENG WEI KUO	12/15/2015
WILLIAM WU SHEN	12/16/2015
CHEWN-PU JOU	12/15/2015
HUAN-NENG CHEN	12/15/2015
LAN-CHOU CHO	12/15/2015

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
Street Address:	NO. 8, LI-HSIN RD. VI, HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15704140

CORRESPONDENCE DATA

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HAUPTMAN HAM, LLP (TSMC) **Correspondent Name:**

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ATTORNEY DOCKET NUMBER:	T5057-1186A
NAME OF SUBMITTER:	RANDY A. NORANBROCK
SIGNATURE:	/Randy A. Noranbrock/
DATE SIGNED:	09/14/2017

Total Attachments: 1

PATENT REEL: 043586 FRAME: 0279

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PATENT REEL: 043586 FRAME: 0280

Docket No. P20150243US00 T5057-1186

ASSIGNMENT

In consideration of the premises and other	good and valuable	consideration in ha	and paid, the receip	ot and sufficiency of
which is hereby acknowledged, the undersigned,			•	·

1) Feng Wei KUO

4) Huan-Neng CHEN

2) William Wu SHEN

5) Lan-Chou CHO

3) Chewn-Pu JOU

who has made a certain new and useful invention, hereby sells, assigns and transfers unto TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

COMMUNICATION SYSTEM AND METHOD OF DATA COMMUNICATIONS

(a)	for which an application for United States Letters Patent was fil	led on2015-12-15	, and identified by
	United States Patent Application No. 14/969,309	; or	.

(b) for which an application for United States Letters Patent was executed on _____

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) Fong Wei Kuo	2015. 12.15
Name: Feng Wei KUO	Date:
2) (htill-like 81-	2015, 12.16
Name: William Wu SHEN	Date:
3) Reughen	2015.12.18
Name: Chewn-Pu JOU	Date:
4) Huan-Neng Chen	2015.12.15
Name: Huan-Neng CHEN θ	Date:
5) Lan-Chon Cho	2015-12-15
Name: Lan-Chou CHO	Date:

PATENT
REEL: 043586 FRAME: 0281

RECORDED: 09/14/2017