

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Nang-Ping TU	08/16/2010
RECEIVING PARTY DATA	
Name:	Taiwan Semiconductor Manufacturing Co., Ltd.
Street Address:	No. 8, Li-Hsin Road 6
Internal Address:	Science-Based Industrial Park
City:	Hsin-Chu
State/Country:	TAIWAN
Postal Code:	300-77
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	12859893
CORRESPONDENCE DATA	
Fax Number:	(215)689-3797
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Phone:	215-979-1842
Email:	jsjulianti@duanemorris.com
Correspondent Name:	Duane Morris LLP
Address Line 1:	30 South 17th Street
Address Line 4:	Philadelphia, PENNSYLVANIA 19103-4196
ATTORNEY DOCKET NUMBER:	N1085-00693
NAME OF SUBMITTER:	Joseph A, Powers
Total Attachments: 2 source=executedassign#page1.tif source=executedassign#page2.tif	

CH \$40.00 12859893

Serial No. 12/859,893
filed August 20, 2010

ATTORNEY DOCKET NO.: 2010.0281/1085.693

ASSIGNMENT AND AGREEMENT

For value received, I, **Neng-Ping Tu**, hereby transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.**, with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **TWO-STAGE DAC ARCHITECTURE FOR LCD SOURCE DRIVER UTILIZING ONE-BIT SERIAL CHARGE REDISTRIBUTION DAC**, described in a non provisional patent application claiming priority to U.S. provisional application Serial No. **61/327,147** filed **April 23, 2010**, and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof, or claiming priority therefrom that may be granted in the United States for said inventions; and I also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from me, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

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I agree that, when requested, I shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Inventor No. 1

Dated: 8/16/2010 ✓

Neng-Ping TU ✓
Neng-Ping TU
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Residence:

No. 5-2, Lane 46, Jiangong 2nd Road, Hsinchu, Taiwan, R.O.C.