

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Cheng-Chieh Lin</td> <td>07/06/2012</td> </tr> <tr> <td>Jian-Yu Ding</td> <td>07/06/2012</td> </tr> <tr> <td>Yao-Chi Wang</td> <td>07/06/2012</td> </tr> </tbody> </table>		Name	Execution Date	Cheng-Chieh Lin	07/06/2012	Jian-Yu Ding	07/06/2012	Yao-Chi Wang	07/06/2012
Name	Execution Date								
Cheng-Chieh Lin	07/06/2012								
Jian-Yu Ding	07/06/2012								
Yao-Chi Wang	07/06/2012								
RECEIVING PARTY DATA									
Name:	MStar Semiconductor, Inc.								
Street Address:	4F-1, No. 26, Taiyuan St., Zhubei City								
City:	Hsinchu County								
State/Country:	Taiwan ROC								
Postal Code:	302								
PROPERTY NUMBERS Total: 1									
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13609749</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13609749				
Property Type	Number								
Application Number:	13609749								
CORRESPONDENCE DATA									
Fax Number:	7038807487								
Phone:	703-639-0151								
Email:	FAXVA@WPAT.COM								
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>									
Correspondent Name:	WPAT, PC INTELLECTUAL PROPERTY ATTORNEYS								
Address Line 1:	8230 Boone Blvd, Suite 405								
Address Line 4:	Vienna, VIRGINIA 22182								
ATTORNEY DOCKET NUMBER:	67407-166								
NAME OF SUBMITTER:	Justin King								
Total Attachments: 2 source=Assignment#page1.tif source=Assignment#page2.tif									

OP \$40.00 13609749

ASSIGNMENT

WHEREAS, I(we), **Cheng-Chieh Lin, Jian-Yu Ding, and Yao-Chi Wang** whose post office address(es) appear(s) below, hereinafter referred to as ASSIGNOR, have invented certain new and useful invention entitled

PHASE LOCKED LOOP AND ASSOCIATED PHASE ALIGNMENT METHOD

(hereinafter referred to as the INVENTION) for which an application for United States Letters Patent /Utility Patent is executed on even date herewith unless at least one of the following is checked:

United States Design Patent
was
 executed on:
 filed on: Serial No.:
 established by PCT International Patent Application No.: filed:
designating the United States of America
 issued on _____ as U.S. Patent No.: _____

WHEREAS, MStar Semiconductor, Inc.
whose post office address is 4F.-1, No.26, Taiyuan St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)
hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to the same in the United States and its territorial possessions;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, I (we), ASSIGNOR, by these presents do sell, assign and transfer unto said ASSIGNEE, the entire right, title, and interest in and to said INVENTION and application throughout the United States of America, including any and all Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application for the full term or terms for which the same may be granted, including all priority rights under any International Convention.

ASSIGNOR further covenants that no assignments, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment;

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) in the United States for said INVENTION, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said INVENTION, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the INVENTION that are within ASSIGNOR's possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance, litigation and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR's heirs, executors, administrators and other legal representatives.

ALSO, ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole use and behoof, and for the use and behoof of ASSIGNEE's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

ASSIGNOR authorizes any member of the firm of WPAT, PC (Customer No. 65358) to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

Full Name of First Inventor: Cheng-Chieh Lin	
Inventor's Signature: <i>Cheng-Chieh Lin</i>	Date: <i>July 06, 2012</i>
Residence: Hsinchu County, Taiwan, R.O.C.	
Citizenship: Taiwan, R.O.C.	
Mailing Address: 6F., No.142, Chenggong 11th St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)	

Full Name of Second Inventor: Jian-Yu Ding	
Inventor's Signature: <i>Jian-Yu Ding</i>	Date: <i>July 06, 2012</i>
Residence: Hsinchu County, Taiwan, R.O.C.	
Citizenship: Taiwan, R.O.C.	
Mailing Address: No.181, Guangming 10th St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)	

Full Name of Third Inventor: Yao-Chi Wang	
Inventor's Signature: <i>Yao-Chi Wang</i>	Date: <i>July 06, 2012</i>
Residence: Hsinchu County, Taiwan, R.O.C.	
Citizenship: Taiwan, R.O.C.	
Mailing Address: 14F.-4, No.15, Ln. 175, Wuling Rd., North Dist., Hsinchu City 300, Taiwan (R.O.C.)	