

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>Jong Pil JUNG</td> <td>11/28/2012</td> </tr> <tr> <td>Young Ho KIM</td> <td>11/28/2012</td> </tr> <tr> <td>Young Kyun SHIN</td> <td>11/28/2012</td> </tr> <tr> <td>Duck Hoi KOO</td> <td>11/28/2012</td> </tr> </tbody> </table>		Name	Execution Date	Jong Pil JUNG	11/28/2012	Young Ho KIM	11/28/2012	Young Kyun SHIN	11/28/2012	Duck Hoi KOO	11/28/2012
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Young Kyun SHIN	11/28/2012										
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RECEIVING PARTY DATA											
Name:	SK hynix Inc.										
Street Address:	2091, Gyeongchung-daero, Bubal-eub, Icheon-si										
City:	Gyeonggi-do										
State/Country:	KOREA, REPUBLIC OF										
Postal Code:	467-734										
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>13720221</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13720221						
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Application Number:	13720221										
CORRESPONDENCE DATA											
Fax Number:	5713275452										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	571-327-5450										
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ATTORNEY DOCKET NUMBER:	OPX12206-163US										
NAME OF SUBMITTER:	Jun Jeong Park										
This document serves as an Oath/Declaration (37 CFR 1.63).											
Total Attachments: 2											
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source=4OPX12206-163US_Assignment#page2.tif											

OP \$40.00 13720221

ASSIGNMENT OF AND DECLARATION FOR APPLICATION
FOR UNITED STATES LETTERS PATENT

WHEREAS JUNG, Jong Pil et al.

hereinafter referred to collectively as the assignor and inventor, has invented a certain improvement relating to

DATA STORAGE DEVICE INCLUDING BUFFER MEMORY.

said application being attached hereto;
 said application having been filed in the United States Patent and Trademark Office on _____ as Application Serial No. _____ and was amended on _____ (if applicable);
 the specification of which was filed under the Patent Cooperation Treaty on _____ Serial No. _____, the United States of America being designated,

AND WHEREAS SK hynix Inc.

hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNOR (INVENTOR):

Signature: Jongpil Jung Date: November 28, 2012

Printed or Typed Name: JUNG, Jong Pil

SK hynix

신성호/특허개발팀/이원/2010

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ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

Signature: KIM, Young HO Date: November 28, 2012

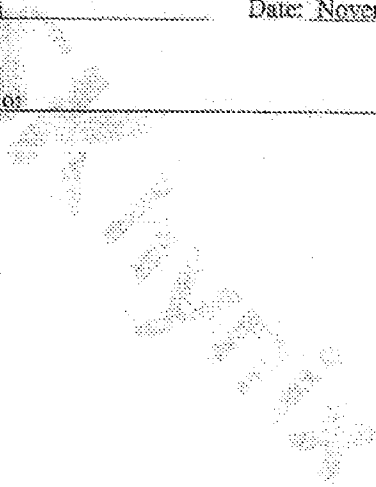
Printed or Typed Name: KIM, Young Ho

Signature: SHIN, Young Kyun Date: November 28, 2012

Printed or Typed Name: SHIN, Young Kyun

Signature: KOO, Duck Hee Date: November 28, 2012

Printed or Typed Name: KOO, Duck Hee



SKHyunix

이 문건/문건 번호/0128/2090

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