

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>JI-SANG LEE</td> <td>06/08/2012</td> </tr> <tr> <td>KI HWAN CHOI</td> <td>06/08/2012</td> </tr> </tbody> </table>		Name	Execution Date	JI-SANG LEE	06/08/2012	KI HWAN CHOI	06/08/2012
Name	Execution Date						
JI-SANG LEE	06/08/2012						
KI HWAN CHOI	06/08/2012						
RECEIVING PARTY DATA							
Name:	SAMSUNG ELECTRONICS CO., LTD.						
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU,						
City:	SUWON-SI, GYEONGGI-DO						
State/Country:	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF						
Postal Code:	443-742						
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>13528886</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13528886		
Property Type	Number						
Application Number:	13528886						
CORRESPONDENCE DATA							
Fax Number:	(571)283-0740						
Phone:	5712830720						
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<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:	VOLENTINE & WHITT, PLLC						
Address Line 1:	11951 FREEDOM DRIVE, SUITE 1300						
Address Line 4:	RESTON, VIRGINIA 20190						
ATTORNEY DOCKET NUMBER:	SEC.3166						
NAME OF SUBMITTER:	ADAM C. VOLENTINE						
Total Attachments: 2 source=Assignment#page1.tif source=Assignment#page2.tif							

CH \$40.00 13528886

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned

Insert

**Name(s) of
Inventor(s)**

- 1. Ji-Sang Lee 7. _____
- 2. Ki Hwan Choi 8. _____
- 3. _____ 9. _____
- 4. _____ 10. _____
- 5. _____ 11. _____
- 6. _____ 12. _____

Insert

**Name(s) of
Assignee(s) &**

the undersigned hereby sell(s) and assign(s) to

Address(es)

SAMSUNG ELECTRONICS CO., LTD.
129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do 443-742, Republic of Korea

(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as

Title of

Invention

NON-VOLATILE MULTI-LEVEL MEMORY DEVICE AND DATA READ

METHOD

Date of

**Signing of
Application**

for which an application for patent in the United States of America has been executed by
the undersigned on JUNE 8, 2012

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby grant(s) the practitioners associated with the CUSTOMER NUMBER 20987 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date 06.08.12 Signature of Inventor Ji-Sang Lee
Ji-Sang Lee

Date 06.08.12 Signature of Inventor Kihwan Choi
Ki Hwan Choi

Date _____ Signature of Inventor _____

Date _____ Signature of Inventor _____

Date _____ Signature of Inventor _____

Date _____ Signature of Inventor _____

(Note regarding Witnessing: It is recommended that the execution by the Inventor(s) be witnessed by at least two witnesses who sign here. However, the current practice of the U.S. Patent and Trademark Office is to record an Assignment even it has not been witnessed.)

Witness _____

Witness _____

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Applicant Reference No. SOV-001206-US