

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>Hyoung-Rae Kim</td><td>12/08/2009</td></tr><tr><td>Yong-Joon Jeon</td><td>12/16/2009</td></tr><tr><td>Gyu-Hyeong Cho</td><td>12/16/2009</td></tr><tr><td>Sung-Woo Lee</td><td>12/16/2009</td></tr><tr><td>Hyung-Min Lee</td><td>12/16/2009</td></tr><tr><td>Yoon-Kyung Choi</td><td>12/08/2009</td></tr></tbody></table> | Name | Execution Date | Hyoung-Rae Kim | 12/08/2009 | Yong-Joon Jeon | 12/16/2009 | Gyu-Hyeong Cho | 12/16/2009 | Sung-Woo Lee | 12/16/2009 | Hyung-Min Lee | 12/16/2009 | Yoon-Kyung Choi | 12/08/2009 | |
| Name | Execution Date | | | | | | | | | | | | | | |
| Hyoung-Rae Kim | 12/08/2009 | | | | | | | | | | | | | | |
| Yong-Joon Jeon | 12/16/2009 | | | | | | | | | | | | | | |
| Gyu-Hyeong Cho | 12/16/2009 | | | | | | | | | | | | | | |
| Sung-Woo Lee | 12/16/2009 | | | | | | | | | | | | | | |
| Hyung-Min Lee | 12/16/2009 | | | | | | | | | | | | | | |
| Yoon-Kyung Choi | 12/08/2009 | | | | | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | | | | | |
| Name: | SAMSUNG ELECTRONICS CO., LTD. | | | | | | | | | | | | | | |
| Street Address: | 416, Maetan-dong, Yeongtong-gu, | | | | | | | | | | | | | | |
| City: | Suwon-si, Gyeonggi-do, | | | | | | | | | | | | | | |
| State/Country: | REPUBLIC OF KOREA | | | | | | | | | | | | | | |
| Postal Code: | 442-742 | | | | | | | | | | | | | | |
| 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>12639117</td></tr></tbody></table> | Property Type | Number | Application Number: | 12639117 | | | | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | | | |
| Application Number: | 12639117 | | | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | | | |
| Fax Number: (571)283-0740 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | | | | | | | | | |
| Phone: 5712830720 | | | | | | | | | | | | | | | |
| Email: aloomis@volentine.com | | | | | | | | | | | | | | | |
| Correspondent Name: VOLENTINE & WHITT, PLLC | | | | | | | | | | | | | | | |
| Address Line 1: 11951 FREEDOM DRIVE, SUITE 1260 | | | | | | | | | | | | | | | |
| Address Line 4: RESTON, VIRGINIA 20190 | | | | | | | | | | | | | | | |
| ATTORNEY DOCKET NUMBER: | SEC.2673 | | | | | | | | | | | | | | |
| NAME OF SUBMITTER: | ADAM C. VOLENTINE | | | | | | | | | | | | | | |

CH \$40.00 12639117

501042550

PATENT
REEL: 023661 FRAME: 0240

Total Attachments: 3

source=Assignment#page1.tif

source=Assignment#page2.tif

source=Assignment#page3.tif

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. Hyoung-Rae Kim

7.

2. Yong-Joon Jeon

8.

3. Gyu-Hyeong Cho

9.

4. Sung-Woo Lee

10.

5. Hyung-Min Lee

11.

6. Yeon-Kyung Choi

12.

Insert
Name(s) of
Assignee(s) &

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

SAMSUNG ELECTRONICS CO., LTD.

Address(es)

416, Maetan-dong, Yeongtong-gu,
of Suwon-si, Gyeonggi-do 442-742, 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

DIGITAL-TO-ANALOG CONVERTER, SOURCE DRIVING CIRCUIT AND
DISPLAY DEVICE HAVING THE SAME

Date of
Signing of
Application

for which an application for patent in the United States of America has been executed by
the undersigned on December 8, 2009 and December 16, 2009

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 Dec 8, 2009 Signature of Inventor Hyodng-Rae Kim
Hyodng-Rae Kim

Date _____ Signature of Inventor _____
Yong-Joon Jeon

Date _____ Signature of Inventor _____
Gyu-Hyeong Cho

Date _____ Signature of Inventor _____
Sung-Woo Lee

Date _____ Signature of Inventor _____
Hyung-Min Lee

Date Dec 08, 2009 Signature of Inventor Yoon-Kyung Choi
Yoon-Kyung Choi

(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 if it has not been witnessed.)

Witness _____

Witness _____

Applicant Reference No. CX5036US/SS

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 | _____ | Signature of Inventor | _____ |
| | | | Byoung-Han Kim |
| Date | 16 Dec. 2009 | Signature of Inventor | _____ |
| | | | Yong-Joon Jeon |
| Date | 16 Dec. 2009 | Signature of Inventor | _____ |
| | | | Gyu-Hyeong Cho |
| Date | 16 Dec. 2009 | Signature of Inventor | _____ |
| | | | Sung-Woo Lee |
| Date | 16 Dec. 2009 | Signature of Inventor | _____ |
| | | | Byung-Min Lee |
| Date | _____ | Signature of Inventor | _____ |
| | | | Yoon-Ryung Choi |

(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 _____

Applicant Reference No. CX5036US/SS