FORM PTO-1596

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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

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| To the Honorable Commissioner of Patents and Trademark | | documents or copy thereto: | |
| Name of conveying party(ies): | 2. Name and address of receiving | ng party(ies): | |
| Tung-Cheng KUO | Name: Macronix International | Co., Ltd. | |
| 11/06/21 | | 20 mg/s | |
| 11/20/01 | Internal Address: | 80 | |
| Additional name(s) of conveying party(ies) attached | 4 | ř = | |
| 3. Nature of conveyance: | Contable No IV 1915 D. 101 | | |
| X Assignment Merger Security Agreement Change of Name | Street Address: No. 16, Li Hsin Road, Science-Based Industrial Park | | |
| Other | City: Hsinchu | State or Area: Taiwan | |
| Gilei | Zip/Postal Code: | Country: R.O.C. | |
| Description Data Mariamban 5, 2001 | Additional name(s) & address(es) | | |
| Execution Date: November 5, 2001 | Auditional name(s) & audiess(es) | attached? | |
| Application number(s) or patent number(s): | | | |
| If the document is being filed together with a new application, the execu | ition date of the application is: Nove | ember 5, 2001 | |
| A. Patent Application No(s). | B. Patent No(s). | | |
| | | | |
| Additional r | numbers attached? | | |
| 5. Name and address of party to whom correspondence | 6. Total number of applications | and patents involved: one | |
| concerning document should be mailed: | or round named or approactions | and paronic involved. One | |
| Name: | 7. Total fee (37 CFR 3.41) | \$40.00 | |
| LOWE HAUPTMAN GILMAN & BERNER | ☑ Credit Card payment form | enclosed | |
| Internal Address: | ☐ Authorized to be charged to | | |
| Street Address: 1700 Diagonal Road, Suite 310 City: Alexandria State: VA ZIP: 22314 | 8. Deposit account number: 07- | -1337 | |
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| Statement and signature. To the best of my knowledge and belief, the foregoing information | on is true and correct and any attached | compisa trua compof the | |
| original document. | m is true and correct and arry andered | copy is a true copy of the | |
| Benjamin J. Hamptinan | | | |
| Reg. No. 29/3/10 | | | |
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| //// | November 28, 200 | <u>1</u> | |
| \$\partine{\part | Date | | |
| V/ / / | Total n | number of pages comprising cover sheet: 3 | |
| CMB No. 085/-0011/(exp. 4/94) | | | |
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PATENT REEL: 012330 FRAME: 0104

ASSIGNMENT

| This assignment agreement is applicable to an invention entitled (Invention Title) |
|--|
| METHOD FOR OPERATING THE NON-VOLATILE MEMORY WITH |
| SYMMETRICAL DUAL-CHANNELS |
| The PATENT RIGHTS referred to in this agreement are: |
| (check one) a patent application for this invention, executed by the ASSIGNOR(S) |
| concurrently with this assignment. |
| U.S. patent application Serial No,filed |
| a U.S. patent application based on PCT International Application |
| Nofiled on (date)(U.S. patent application |
| Serial No, if known). |
| U.S. patent No, issued |
| The PATENT RIGHTS also include all divisions reissues, continuations and extensions of |
| the patents and patent applications identified above. |
| The PATENT RIGHTS assigned under this agreement are: |
| (check one)⊠U.S. patent rights only. |
| Worldwide patent rights. In this case, the assignee shall have the right to |
| claim the benefit of the filing date of any U.S. or foreign patent application |
| for this invention. |
| The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures |
| appear on page 2 of this Assignment and any Supplemental Sheet(s). |
| The ASSIGNEE referred to in this agreement is: |
| (Name of Assignee) MACRONIX INTERNATIONAL CO., LTD. |
| (Address) No.16, LI HSIN ROAD, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, |
| TAIWAN, R.O.C. |
| |
| The ASSIGNEE is: |
| (check one) An individual. |
| A Partnership. |
| A Corporation of <u>TAIWAN, R.O.C.</u> (specify state or country) |
| other) |
| |
| The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and |

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and

the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

PATENT REEL: 012330 FRAME: 0105

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: MACRONIX INTERNATIONAL CO., LTD. INENTION TITLE: METHOD FOR OPERATING THE NON-VOLATILE MEMORY WITH SYMMETRICAL DUAL-CHANNELS

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

| Tung-Cheng KUO Name of sole or first inventor | Tung - Cheney KUU Signature | | |
|--|--------------------------------|------|--|
| Name of second inventor, if any | Signature | Date | |
| Name of third inventor, if any | Signature | Date | |
| Name of fourth inventor, if any | Signature | Date | |
| Name of fifth inventor, if any | Signature | Date | |
| Name of sixth inventor, if any | Signature | Date | |
| Name of seventh inventor, if any | Signature | Date | |
| Name of eighth inventor, if any | Signature | Date | |

PATENT
RECORDED: 11/28/2001 REEL: 012330 FRAME: 0106