506456910 01/19/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6503681

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NANYANG TECHNOLOGICAL UNIVERSITY	09/15/2020

RECEIVING PARTY DATA

Name:	ZERO-ERROR SYSTEMS PTE LTD
Street Address:	71 TOH GUAN ROAD EAST
Internal Address:	#05-07 TCH TECHCENTRE
City:	SINGAPORE
State/Country:	SINGAPORE
Postal Code:	608598

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16963798

CORRESPONDENCE DATA

Fax Number: (919)755-2150

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (919)755-2100

Email: shari.elofson@wbd-us.com

Correspondent Name: KEVIN R. LYN

Address Line 1: 555 FAYETTEVILLE STREET

Address Line 2: SUITE 1100

Address Line 4: RALEIGH, NORTH CAROLINA 27601

ATTORNEY DOCKET NUMBER:	N103471 1100US.PCT(0012.1	
NAME OF SUBMITTER:	KEVIN R. LYN	
SIGNATURE:	/kevin r. lyn/	
DATE SIGNED:	01/19/2021	

Total Attachments: 6

source=N103471 1100US.PCT (0012.1) Assignment to Zero-Error#page1.tif source=N103471 1100US.PCT (0012.1) Assignment to Zero-Error#page2.tif source=N103471 1100US.PCT (0012.1) Assignment to Zero-Error#page3.tif source=N103471 1100US.PCT (0012.1) Assignment to Zero-Error#page4.tif

PATENT 506456910 REEL: 054957 FRAME: 0681

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PATENT REEL: 054957 FRAME: 0682 DATED THIS 15 DAY OF Sep 2020

Between

NANYANG TECHNOLOGICAL UNIVERSITY

And

ZERO-ERROR SYSTEMS PTE LTD

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

PATENT REEL: 054957 FRAME: 0683

THIS ASSIGNMENT is made the 15 day of Sep 2020 BETWEEN

(1) NANYANG TECHNOLOGICAL UNIVERSITY, a public company limited by guarantee and incorporated in Singapore (UEN: 200604393R) and having its registered address at 50 Nanyang Avenue, Singapore 639798 ("NTU" or "Assignor");

And

(2) ZERO-ERROR SYSTEMS PTE LTD (company registration number: 201907883C), a company incorporated in Singapore with a business address at 71 Toh Guan Road East #05-07 TCH Techcentre Singapore 608598 (hereinafter referred to as "ZES" or "Assignee").

WHEREAS:

- (A) ZES, a company, is desirous of owning the rights, title and interest in and to the intellectual property rights to three (3) NTU inventions (hereinafter referred to collectively as the "Inventions") for which patent applications have been filed or granted which details.
- (B) NTU hereby agrees to assign all their rights, titles and interests in and to the intellectual property rights to the Inventions and the Patents (as hereinafter defined in Schedule 1 and referred to as the "Assigned IP") to ZES and ZES has agreed to accept the assignment of said intellectual property rights on the terms and conditions as set out below.

NOW THEREFORE the parties agree as follows:

- 1. In consideration of the sum of Singapore Dollars One Hundred Fifty Thousand (S\$150,000.00) (being Singapore Dollars Fifty Thousand (S\$50,000.00) for each of the three (3) Inventions as listed in Schedule1), excluding prevailing Singapore Goods and Services Tax (GST), the Assignor hereby sells, transfers and assigns to the Assignee, the Assignor's full and exclusive benefit and entire rights, titles, interests and benefits in and to:
 - (a) the Inventions, and any and all patent applications that have been or shall be filed in Singapore and all foreign countries based in whole or in part on any of the Applications and/or the Inventions, including any United States patent applications (including provisional, non-provisional, divisional, continuing, or reissue applications), and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid patent applications and/or Inventions, or any part thereof (hereinafter collectively referred to as the "Patents"); and
 - (b) all rights and powers arising or accrued from the assigned intellectual property rights hereunder, including the right to recover and take all such proceedings as may be necessary for the recovery of damages and/or other remedies in respect of all infringements whether committed before or after the date of this Assignment and to have the benefit of any remedy obtained on any infringement or alleged infringement before the date of this Assignment; to be held and

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enjoyed by the Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had no sale, transfer or assignment of such interest been made.

- Apart from the consideration as stated in Clause 1, Assignee also agrees to make payment to the Assignor the sum of Singapore Dollars Seventy-Two Thousand One Hundred Thirty and Forty-Four Cents(S\$72,130.44), excluding prevailing Singapore Goods and Services Tax (GST), being the agreed patent prosecution fees incurred by Assignor up to the date of this Assignment.
- If Assignee fails to make any payment due under this Assignment as consideration for this Assignment by the date as stated in the invoice to be issued by Assignor, all right, title and interest in and to the assigned Invention Intellectual Property shall, at the option of Assignor, revert to Assignor; without prejudice to the Assignor's rights to pursue any other legal redress against Assignee, as it deems fit.
- The Assignor hereby agrees to execute without further consideration when requested and 4. at the expense of the Assignee, any further lawful documents and any further assurances, including oaths, assignments and powers of attorney, that may be deemed necessary by the Assignee to fully secure to the Assignee its interest in and to the Inventions or any part thereof, and in and to the Patents.
- The Assignor hereby authorises and requests the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon any United States patent applications based in whole or in part on any of the Applications or upon any Invention or any part thereof.
- This assignment is to be effective as of the date written above, and is made subject to the 6. following warranties by Assignor:
- 6.1 That it has the legal power to transfer the legal and beneficial property to the Assigned IP to the Assignee free and clear of any Encumbrance.
- 6.2 Except for the warranties expressed in Clause 6.1 above, Assignor makes no other warranties or representations, express or implied, including without limitation:
 - warranties of fitness for a particular purpose or merchantability, satisfactory (a) quality, reliability, accuracy or validity of the Assigned IP; or;
 - (d) the patentability of the Assigned IP; or
 - (c) that the Assigned IP is or will be free from infringement of any patent or other rights of third parties.
- 6.3 Neither Assignor, nor any of its affiliates, faculty members, scientists, researchers, employees, officers, trustees or agents, assumes any responsibility for the use of the Assigned IP by Assignee, or any use, manufacture, specifications, sale or other dispositions of Products using the Assigned IP by or for the Assignee.
- 6.4 Assignor will not be liable to Assignee for any loss, damages, expenses, costs, damages or any other liability whatsoever which in any way relates to the use of the Assigned IP by Assignee, or any use, manufacture, specifications, sale or other dispositions of products using the Assigned IP by ar for the Assignee.

- Notwithstanding anything to the contrary, to the extent permitted under the applicable law Assignor's total and cumulative liability under this Agreement, howsoever arising, will not exceed the total sum of monies paid by Assignee to Assignor pursuant to this Agreement.
- The express terms of this Agreement are in lieu of all warranties, conditions, terms, undertakings and obligations implied by statute, common law, custom, trade usage, course of dealing or otherwise, all of which are hereby excluded to the fullest extent permitted by law.

Assignee grants Assignor, a perpetual royalty free license to use all forms of Assigned IP assigned to the Assignee for its academic, research, development and other non-commercial purposes. Assignee acknowledges that in consideration of the funding under the Office for Space Technology and Industry Space Research Program (OSTIn-SRP) of Economic Development Board (EDB), the Singapore Government acting through EDB has an irrevocable, worldwide, perpetual, non-exclusive, royalty free license to use and/or adapt the Inventions 2 and 3 in Schedule 1 for national interest or non-profit purposes.

Assignee acknowledges that in consideration of the funding from Ministry of Defence (MINDEF), the rights so assigned under this agreement are subject to the rights of the Singapore Government acting through MINDEF to the free and unfettered right to use all the Assigned IP for its internal academic, research, development and non-commercial purpose.

- In this Assignment, except where the context indicates the contrary:
 - (a) words importing the singular shall include the plural and vice versa, and words denoting a given gender shall include each other gender; and
 - (b) all schedules and attachments to this Assignment form part of this Assignment.
- 8. All sums payable under this Agreement will be paid in cleared funds to such bank account or in such other manner as Assignor may specify from time to time to Assignee, without any set off, deduction or withholding of taxes, charges and other duties. Assignee will be responsible for any and all bank charges associated with such payment. Assignee agrees to release and indemnify Assignor from and against all liability of whatever nature arising out of Assignee's failure duly and timely to pay and discharge any of the abovementioned taxes.
- This Assignment shall be governed by the laws of Singapore and the parties hereby submit to the exclusive jurisdiction of the courts of Singapore.
- 10. This Assignment shall be effective as of 15th Oct. 2020.

IN WITNESS WHEREOF the parties have hereto set their hands the day and year first above written.

SIGNED by for and on behalf of

SIGNED by for and on behalf of

NANYANG TECHNOLOGICAL UNIVERSITY

ZERO-ERROR SYSTEMS PTE LTD

Namé: Dr Lin Chee Lok Designation: Interim CEO Designation: /

In the presence of:

In the presence of:

Name: Lốn Wye Boon

Designation: Senior Assistant Director

Name: SHU WEI

Designation: CTO, 2ES



SCHEDULE 1

INVENTION 1

NTU Ref: TECH/199/14 "Detection And Protection Circuits For Single-Event-Latchup". US Patent Number: 10,566,780 B2.

INVENTION 2

NTU Ref: TECH/044/17 "Device-cum-Layout Technique To Mitigate Single Event Effects".

Europe patent application number: 18817856.0
US patent number application: 16/622,190
China patent application number: 201880039724.3

INVENTION 3

NTU Ref: TECH/294/17 "Low Soft-Error Rate Digital Circuit".

PCT application number: PCT/SG2019/050036
Europe patent application number: (Not Available Yet)

US patent number application: 16/963,798

China patent application number: (Not Available Yet)

NTUitive Ref: 2020-0253, 2020-0254, 2020-0255

RECORDED: 01/19/2021

