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GRO RESEARCH AGREEMENT

THIS RESEARCH AGREEMENT (this “Agreement”) is made as of September 1, 2018 (the “Effective Date”) by and between Samsung Electronics Co., Ltd. (“SEC”), a Korean corporation with offices at 129, Samsung-Ro, Yeongtong-Gu, Suwon, Gyeonggi-Do 16677, Korea, by and through its R&D Center, Samsung Advanced Institute of Technology (“SAIT”) (collectively, “SEC”) and Name of University , a (e.g., *Japanese, Chinese, .. etc.*) ...)academic institution with offices at Address of University (“University”). SEC and University may be referred to individually as a “Party” and collectively as the “Parties” in this Agreement.

The Parties agree that this Agreement consists of the following:

1. This cover and signature page signed by the Parties;
2. The attached GRO Research Agreement Standard Terms and Conditions (“RA Terms”);
3. The attached Research Project Specification (Exhibit 1).

This Agreement pertains to the attached Research Project Specification only. The term of this Agreement is one (1) year commencing from the Effective Date, unless earlier terminated under the RA Terms.

APPROVED AND AGREE TO:

University:

Samsung Electronics Co., Ltd. (SAIT):

Authorized Representative Signature

Authorized Representative Signature

Name:

Name:

Title:

Title:

Date:

Date:

Principal Investigator

Name:

Title:

Date:

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GRO RESEARCH AGREEMENT STANDARD TERMS AND CONDITIONS

1. SCOPE

This Agreement sets forth the terms and conditions under which the Parties will collaborate on research activities only as described in the attached Research Project Specification.

2. DEFINITION

- 2.1 “Global Research Outreach Program” or “GRO Program” means the name of university collaboration program conducted by SAIT.
- 2.2 “GRO Fund” means an appointed research fund that will be given to the selected proposal which is carefully chosen by SAIT among the proposals from universities.
- 2.3 “Intellectual Property” or “IP” means discoveries, inventions, designs, works of authorship, and any related rights, including patents, registered designs, copyrights, moral rights, mask works, trade secrets, trademarks, and service marks.
- 2.4 “Personnel” means any employee, agent, worker, or contractor of a Party (including students in the case of University, and including Personnel of SEC subsidiaries in the case of SEC).
- 2.5 “Project IP” means the Intellectual Property that is conceived (in the case of inventions) or created (in the case of Intellectual Property other than inventions) in the performance of a Research Project.
- 2.6 “Project Results” means results, conclusions, and work product conceived or created by University Personnel in the course of performing this Agreement, including but not limited to tangible items, such as reports, computer programs and prototype hardware, and intangible items such as IP, data, information, ideas and concepts.
- 2.7 “Project Specification” means the detailed description of the research work to be performed as set forth in the “Research Project Specification” attached to and incorporated as a part of this Agreement.
- 2.8 “Research Project” means the project defined in the Project Specification.

3. PERFORMANCE

- 3.1 Performance. Each Party will use diligent efforts to perform the work set forth in the Project Specification. Any changes to the Project Specification, including changes of the principal investigator(s), will be effective only upon mutual written agreement of the Parties.
- 3.2 Reports. University shall submit SAIT (i) midterm report and deliverables in

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accordance with the Project Specification for first six (6) months works within seven (7) months from the Effective Date, and (ii) final report and deliverables in accordance with the Project Specification within thirteen (13) months from the Effective Date.

- 3.3 **Research Project Participants.** University will permit only University or SEC Personnel to work on the Research Project. In order for University to fulfill its obligations to SAIT under this Agreement: University will ensure that all University Personnel associated with the Research Project have been made fully aware of the terms and conditions of this Agreement and the Project Specification; and University will obtain necessary legal agreements from such University Personnel with respect to confidentiality and ownership of IP. If any University Personnel visit the premises of SEC, any information input made by such visitor on any work or business of SAIT may be taken by SEC to be non-confidential unless explicitly otherwise indicated prior to the input being given.
- 3.4 **Visiting Researchers.** If specified by the Project Specification, SEC may send SEC Personnel as visiting researchers to University's facilities, and University may send University Personnel as visiting researchers to SAIT's facilities. In each case, prior to any such visit, the Parties will first execute an applicable visiting researcher agreement and each visiting Party's Personnel will abide by the site security and safety policies of the hosting Party.

4. RESEARCH FUNDING

- 4.1 **SAIT Funding.** SAIT agrees to fund the Research Project in cash which appointed as a GRO Fund for GRO Program (total amount listed in the Project Specification) in accordance with the following schedule:

1st payment: Sixty Percent (60%) of the GRO Fund within one (1) month from the date of last signature of this Agreement subject to receipt by SEC of an applicable invoice; and

2nd payment: Forty Percent (40%) of the GRO Fund within one (1) month after receipt of the midterm report and applicable deliverables subject to receipt by SEC of an applicable invoice.

Payment shall be made to:

Bank Name:

Bank Address:

Swift Code:

Routing Number:

IBAN:

Receiver Name:

Department Name:

Receiver Account:

Receiver Address:

- 4.2 **University Resources.** University agrees to use good-faith efforts to provide or obtain the resources for the Research Project as specified in the Project Specification (the "University Resources"). In the event such University Resources cannot be provided or

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obtained during the course of the Research Project, the principal investigator will promptly notify SAIT to discuss the impact on the Research Project.

- 4.3 **Loaned Equipment and Software.** For performing work on the Research Project, University may request loan equipment or license software code (the “Loaned Material”) to SAIT for free or the Parties may agree to loan equipment or license software code (the “Loaned Material”) to one another if the Parties have agreed to perform joint R&D. With respect to the Loaned Material, and absent a specific written agreement to the contrary, the Parties agree that: (a) the providing Party retains all title and rights to the Loaned Material, and no IP license is granted beyond the right to use the Loaned Material for the Research Project, and no IP warranty or indemnity is provided; (b) the receiving Party will not encumber, transfer, loan, assign, sell, dispose of or damage any Loaned Material; (c) if the Loaned Material is not generally offered to the public as a commercial product, it will be deemed “confidential” to the providing Party, subject to the provisions of Section 6 below; (d) software source code will be treated as confidential, even if such software is offered commercially in object code format; (e) if software is provided commercially subject to confidentiality restrictions, such restrictions will apply to a Party’s use of such software; (f) no warranty is made or implied that any Loaned Material is product grade or of commercial quality, and no other warranty or any support is provided; (g) use of the Loaned Material is at the receiving Party’s own sole risk; and (h) the Loaned Material must be returned in well maintained and good working order to the providing Party, upon demand, at the receiving Party’s expense.

5. INTELLECTUAL PROPERTY

- 5.1 **Disclosure.** Each person who works on the Research Project will disclose to the Parties all Project IP, Project Results, and deliverables as set forth in the Project Specification, conceived, created, or developed by that person in the course of the Research Project. Such disclosures will be made in accordance with the Project Specification. The Parties will review disclosures on research progress, inventions, and software arising from the Research Project, including any items not considered in any previous project review meeting.
- 5.2 **Joint Ownership.** Project IP will be jointly owned by the Parties. For the purposes of this Agreement and for all forms of Intellectual Property (irrespective of the country of creation or development, or where rights or enforcement is sought), “joint ownership” by the Parties means that each Party may independently license, enforce, collect royalties, make, use, sell, import, distribute, copy, and have made and otherwise enjoy benefits of such Intellectual Property without any obligation to account to, obtain permission from, or share royalties with the other Party. In the event that local country law provides for compensation to an inventor, each Party agrees to be solely responsible for its own Personnel. In no event will either Party have any obligation to compensate any Personnel of the other Party, and each employing Party agrees to hold the other Party harmless from any such claim.
- 5.3 **Patents for Joint Project IP.** For formal rights procurement (patents and patent applications) for any Project IP, such University Personnel and SEC Personnel (the joint inventors) will prepare and present to the Parties an invention disclosure describing any potentially patentable invention. SAIT will review the invention disclosure and

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determine whether SAIT elects to prepare and file an application for patent at SAIT's expense. If SAIT elects not to file an application for patent on any such invention, SAIT will promptly notify University, and University may elect to do so at University's expense. The Party that prepares and files a patent application will provide a copy of the application to the other Party upon the other Party's request during preparation, and prior to filing. If during the prosecution of such application, or after issuance of a patent thereon, the Party that prepared and filed the patent application elects to discontinue prosecution of the patent application or discontinue payment of maintenance fees on the issued patent, that Party will notify the other Party in good time to permit the other Party to decide whether to assume prosecution of the patent application or maintenance of the issued patent, and if the other Party elects to do so, timely take all necessary steps to permit the other Party to assume prosecution or maintenance, as the case may be. All such patent applications and patents, whether prepared and filed by SAIT at SAIT's expense or by University at University's expense, will be jointly owned by the Parties.

5.4 Publication. Should any University Personnel desire to publish a paper (that is not co-authored with SEC Personnel) that will disclose research performed pursuant to the Project Specification, the University Personnel will provide SAIT with a copy of the paper to SAIT thirty (30) days in advance before submission of the proposed paper for publication. SAIT will then have thirty (30) days from the date of receipt to review the paper for the limited purpose of determining whether it discloses patentable Project IP. If SAIT determines that the paper contains patentable Project IP, SAIT will so inform the University Personnel and the University Personnel will either remove such patentable Project IP, from the paper, or delay publication of the paper to permit a patent application to be prepared and filed, however, the delay will not exceed a total of three (3) months from the date that the paper is provided to SAIT. Upon receiving a notice of acceptance of the paper for publication, and if the paper as accepted for publication contains any material in addition to the content of the paper initially delivered to SAIT, the University Personnel will promptly provide to SAIT a copy of the paper as accepted for publication and inform SAIT of the scheduled publication date. Each Party will acknowledge the contributions of the other in any publication, as scientifically and professionally appropriate. SAIT agrees to keep confidential any unpublished manuscript written by University Personnel until the earlier of publication or nine (9) months after receipt of such manuscript. After the conclusion of a Research Project, SAIT may publish Project Results that have not been previously published.

5.5 Third Party IP and Background IP. University Personnel who work on the Research Project will not knowingly use in the Research Project: (i) any proprietary IP owned by a third party, or (ii) any proprietary background IP owned or controlled by University. (For the purpose of this Section, "knowingly" means having personal knowledge without prior search of any records or database.) In the event that any such third party IP or University background IP is inadvertently or unavoidably used in the Research Project, University Personnel upon acquiring personal knowledge of such use will promptly notify SAIT thereof. Nothing in this Agreement will be construed to operate as, or to require, the assignment of any right, title, or interest in or to any Intellectual Property that has been or will be conceived or created prior to or outside the scope of this Agreement, nor to require the license of such IP.

5.6 Further Assurances. Each Party covenants to execute all further documents and to take all steps that the other Party may reasonably request to effect such Party's right under this

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Section 5. Each Party confirms that any and all moral rights which a Party or its personnel may have in any Project IP or Project Results have been waived, to the extent allowed by applicable law.

6. CONFIDENTIAL INFORMATION

- 6.1 No Prior Disclosure of Confidential Information. University acknowledges that during the evaluation process relating to SAIT's acceptance of University's Research Project Specification proposal, SAIT did not request or desire any confidential information of University, and University represents that no confidential or proprietary information of University or other third party has been included or disclosed in any proposal submitted to SAIT relating to the Research Project. Each Party acknowledges and agrees that any information that it disclosed to the other Party prior to the Effective Date is not confidential or proprietary and hereby waives any causes of action against the other Party for any alleged misuse, misappropriation or unauthorized disclosure or such information.
- 6.2 Confidential Information. SAIT may from time to time disclose confidential information to University and University Personnel in connection with the Research Project (including certain Loaned Material described in Section 4.3). The receiving Party of such confidential information will, except as otherwise permitted by this Agreement, use it only for the Research Project and will protect the confidential information by using the same degree of care, but no less than a reasonable degree of care, to prevent the unauthorized use, dissemination, or publication of the information as the receiving Party uses to protect its own confidential information of like nature. The obligation to keep information confidential will only extend to confidential information that (a) is marked as confidential at the time of disclosure or (b) is unmarked (e.g. orally/visually disclosed) but is treated by SAIT as confidential at the time of disclosure and is designated as confidential in a written memorandum provided within thirty (30) days of disclosure by SAIT, summarizing the confidential information sufficiently for identification. The obligation to keep information confidential will expire three (3) years after the date of termination or expiration of this Agreement. Notwithstanding the foregoing, the obligation to keep information confidential does not extend to any information: that was lawfully in University's possession before receipt from SAIT; or that is or becomes a matter of public knowledge through no fault of University; or that is rightfully received by University from a third party without a duty of confidentiality on the third party; or that is disclosed under operation of law, provided that the receiving Party shall take all reasonably available legal measures to avoid such disclosure, and notifies the disclosing Party as soon as practicable after such disclosure is ordered so that the disclosing Party may seek an appropriate protective order or other remedy. If access to this Agreement, or to data associated with the Research Project, is made under the Freedom of Information Act in the United States, or under similar state law or local country law, University will promptly notify SAIT of such request and SAIT does not relinquish any entitlement to object to disclosure under such law, to the extent that this Agreement or such data reveals trade secrets or scientific, technical, commercial or financial information of SAIT, the disclosure of which would prejudice the competitive position of SAIT.

7. LIMITATIONS ON WARRANTIES AND DAMAGES

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- 7.1 **LIMITATION ON WARRANTIES.** EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, NEITHER UNIVERSITY NOR SEC MAKES ANY REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, REGARDING ITS PERFORMANCE UNDER THIS AGREEMENT OR ANY PROJECT SPECIFICATION, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE OF ANY PROJECT RESULTS.
- 7.2 **LIMITATION ON LIABILITY.** EXCEPT FOR BREACH OF CONFIDENTIALITY OBLIGATIONS UNDER SECTION 6, NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES HEREUNDER, INCLUDING AS A RESULT OF THE OTHER PARTY'S USE OF ANY PROJECT RESULTS. IN NO EVENT WILL SEC BE LIABLE TO UNIVERSITY FOR DIRECT DAMAGES IN AN AMOUNT GREATER THAN SEC'S UNPAID CASH (AND NOT IN-KIND) FUNDING COMMITMENTS SPECIFIED IN THE PROJECT SPECIFICATION FOR THAT RESEARCH PROJECT AT THE TIME A CLAIM IS RAISED. IN NO EVENT SHALL UNIVERSITY'S TOTAL LIABILITY UNDER THIS AGREEMENT EXCEED ONE HUNDRED PERCENT (100%) OF THE TOTAL AGGREGATED PAYMENT MADE BY SPONSOR UNTIL THE DATE ANY CLAIM IS MADE.

8. TERMINATION

- 8.1 **Effect of Expiration.** Any Research Project which is active as of the expiration of this Agreement will remain in effect until the expiration of the Project Specification, unless the Research Project is otherwise terminated as provided below.
- 8.2 **Termination for Cause.** Either Party may terminate this Agreement and associated Research Project upon written notice to the other, if the other Party fails to fulfill its material obligations under this Agreement or the Project Specification, and such failure (if remediable) is not remedied with thirty (30) days after the date of the written notice.
- 8.3 **Effect of Termination.** Upon termination of this Agreement for any reason, each Party will promptly disclose all Research Results, to the extent they exist, and return all Loaned Materials to the other Party as set forth in Section 4.3 (h). The provisions of Section 5 through 9 will survive the expiration or termination of this Agreement.

9. GENERAL PROVISIONS

- 9.1 **Relationship of the Parties.** The Parties are independent contractors. Nothing in this Agreement will constitute the Parties as entering into an employment, partnership, joint venture, or agency relationship. SEC may delegate or act through its wholly-owned subsidiaries in the performance or enforcement of this Agreement.
- 9.2 **Entire Agreement.** This Agreement is the entire understanding between the Parties with respect to the subject matter hereof and supersedes and replaces all prior agreements, dealings and negotiations. No modification, alteration, or amendment of this Agreement will be effective unless in writing and signed by the Parties. University may not disclose

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or publicize the terms and conditions of this Agreement without the prior written consent of SAIT. Every provision of this Agreement is severable from the others, and if a court of competent jurisdiction holds any provision to be invalid or unenforceable, in whole or in part, the validity and enforceability of the remaining part and other provisions will not be affected. Failure by either Party to enforce any provision of the Agreement does not constitute a waiver or affect its right to enforce such provision, and a waiver by a Party of any breach does not constitute a waiver of any subsequent breach. No waiver is binding unless made in writing and signed by the waiving Party.

9.3 Precedence. The RA Terms are the exclusive statement of the Parties' legal rights and duties, and the Parties intend for the Project Specification to set forth only technical, logistical, and administrative matters pertaining to the Research Project. The Project Specification will not be given any effect to the extent it purports to set forth, add or modify, any rights, or duties of the Parties independent of these RA Terms. In the event of a conflict between a provision of these RA Terms and a provision of the Project Specification, invoice, purchase order, or other administrative document, the provision of these RA Terms will prevail.

9.4 Assignment. Neither Party may assign its rights or obligations unless the other gives written consent. Any attempted assignment without such consent will be voidable at the option of the non-assigning Party. There are no third party beneficiaries under this Agreement and no third party will have any right to enforce this Agreement.

9.5 Dispute Resolution. All disputes between the Parties in connection to this Agreement shall first be discussed in good faith between the Parties in order to try to find an amicable solution. If no solution can be found to settle the dispute within forty-five (45) days after the defaulting Party receives a relevant notice to the effect, such dispute shall be finally settled by arbitration in the city and country of respondent in accordance with the Rules of Arbitration rules of the International Chamber of Commerce. Nothing herein shall preclude either Party from seeking interim equitable relief from a court of competent jurisdiction. A request by a Party to a court for interim relief shall not affect either Party's obligation hereunder to arbitrate. The award of such arbitration shall be final and binding on the Parties hereto and shall not be subject to appeal to any court, and may be entered in the court of competent jurisdiction for execution forthwith.

9.6 Notice. Any notice given under this Agreement will be in writing, will reference this Agreement, and will be deemed to have been given when personally delivered, when sent by confirmed telex or facsimile, or when sent by mail or courier as confirmed by a verification of receipt. All communications will be sent to the addresses set forth above or to such other address as may be designated by a Party by giving written notice to the other Party.

9.7 Headings; Language. The headings in this Agreement are included for convenience only, and will not affect the construction or interpretation of any provision. This Agreement is drafted in U.S. English. If translated into other languages, the U.S. English version alone will govern.

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EXHIBIT 1

Research Project Specification