

## **ONFI agreement execution instructions & information**

Complete and execute two complete copies of the agreement. One counter-executed original will be returned for your records. If a single original executed copy is received then a copy of the counter-executed agreement will be returned for your records.

Ensure an e-mail address for the primary point of contact is provided. The correspondence and distributions for the ONFI working group is handled via e-mail.

ONFI contributors have access to draft copies of the specifications during development as well as opportunity to participate in the definition process. ONFI adopters enjoy the same IP licensing terms as contributors but do not receive draft specifications during development or participate in the development process.

Although the ONFI agreement defines a maximum allowable membership dues for participation in the organization, it does not clarify what the present membership dues are. The ONFI board of directors has set the annual ONFI membership dues to \$0 for both the adopter and contributor members. No membership dues for ONFI have been assessed to date and the board has no current plans or intentions to begin assessing such dues in the future.

**NOTICE:** This instruction page is not part of the ONFI agreement

**ONFI SPECIFICATION  
ADOPTERS AGREEMENT**

**Note: This ONFI Adopters Agreement (“Agreement”) is not effective until a fully executed original has been received by the Secretary, Knut Grimsrud, c/o Intel Corp., M/S JF5-371, 2111 NE 25<sup>th</sup> Ave, Hillsboro, OR 97124 prior to the end of the Adoption Period.**

This Adopters Agreement (“Agreement”) is entered into by and between the Promoters (as defined below) and the adopting party set forth below (“Adopting Party”).

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Adopting Party Name

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City

State

Zip

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Contact Name

Telephone

Fax

**The parties hereto hereby agree as follows.**

1. Definitions
  - 1.1 “Adopter” means Adopting Party and any party that has entered into or enters into an Adopters Agreement during the Adoption Period.
  - 1.2 “Adopters Agreement” means an agreement entered into during the Adoption Period by any party and the Promoters containing terms substantially similar to this Agreement.
  - 1.3 “Adoption Period” means any time up to and including the date twelve (12) months after the party attempting to become an Adopter, and any and all of its Affiliates, began shipment of products which implement Compliant Portions of a Final Specification.
  - 1.4 “Affiliate” means any entity that is directly or indirectly controlled by, under common control with or that controls the subject party. For purposes of this definition control means direct or indirect ownership of or the right to exercise (a) more than fifty percent (50%) of the outstanding shares or securities entitled to vote for the election of directors or similar managing authority of the subject entity; or (b) more than fifty percent (50%) of the ownership interest representing the right to make the decisions for the subject entity, provided, however, that in each case such entity shall be deemed to be an Affiliate only so long as such ownership or control exists and is more than fifty percent (50%).

- 1.5 “Compliant Portion” means portions of products (hardware, software or combinations thereof) that implement and are compliant with all relevant portions of the Final Specification within the bounds of the Scope.
- 1.6 “Final Specification” means the specification designated “ONFI Specification” and all updates and alterations thereto as adopted and published by the Promoters.
- 1.7 “Necessary Claims” means claims of a patent or patent application that (a) are owned or controlled by a party or its Affiliates now or at any future time and that, if licensed, would not require a payment of royalties or other consideration, by the licensor to unaffiliated third parties unless the licensee agrees in writing to indemnify the licensor against all royalty costs and expenses arising from such license; and (b) are necessarily infringed by implementing those portions of the Final Specification within the bounds of the Scope, provided that a claim is necessarily infringed only when it is not possible to avoid infringing it because there is no commercially plausible non-infringing alternative for implementing such portions of the Final Specification within the bounds of the Scope. Notwithstanding the foregoing sentence, Necessary Claims do not include any claims (x) other than those set forth above even if contained in the same patent as Necessary Claims; (y) that read solely on any implementations of any portion of the Final Specification that are not within the bounds of the Scope.
- 1.8 “Promoters” means those parties that have executed the Open NAND Flash Initiative (“ONFI”) Promoter’s Agreement.
- 1.9 “Scope” means the protocols, electrical signaling characteristics, connection methods, tools, test scripts, register models, application program interfaces, service provider interfaces, physical dimensions and characteristics, data structures, mechanical requirements and firmware descriptors and device and driver architectures and any other hardware and/or software interface technologies solely to the extent disclosed with particularity in the Final Specification where the sole purpose of such disclosure is to enable products implementing the Final Specification to interoperate, interconnect or communicate as defined within the Final Specification. Notwithstanding the foregoing, the Scope shall not include (a) any enabling technologies that may be necessary to make or use any product or portion thereof that complies with the Final Specification, but are not themselves expressly set forth in the Final Specification (e.g., semiconductor manufacturing technology, non-volatile storage technology, compiler technology, object oriented technology, basic operating system technology, etc.); or (b) the implementation of other published specifications developed elsewhere but referred to in the body of the Final Specification; or (c) any portions of any product and any combinations thereof the purpose or function of which is not required for compliance with the Final Specification. For purposes of this definition, the Final Specification shall be deemed to include only architectural and interconnection requirements and shall not include any implementation examples unless such implementation examples

are expressly identified as being included as part of the limited patent license in the Final Specification as adopted.

- 1.10 “Secretary” means the party identified by the Promoters as the secretary for the Final Specification.
- 1.11 “Trademarks” shall have the meaning assigned in Section 4.

## **2. LICENSES**

### **2.1 Limited Patent Licenses.**

- (a) To Adopter. Effective upon adoption by the Promoters of the Final Specification, each Promoter and its Affiliates hereby agrees that it will grant to each of the Adopters and their Affiliates (also collectively “Licensee”) a nonexclusive, non-transferable, non-sublicenseable (except as set forth in Section 2.1(c) below), worldwide, perpetual, license under their Necessary Claims solely to make, have made, use, import, and directly and indirectly, offer to sell, sell and otherwise distribute and dispose of Compliant Portions (whether hardware, software or combinations thereof); provided that such license shall not extend to any part or function of a product the inclusion or operation of which is not a Compliant Portion. Such license shall be granted on reasonable and non-discriminatory terms, provided that such license grant may be conditioned upon Licensee’s grant of a reciprocal license.
- (b) By Adopter. Effective upon adoption by the Promoters of the Final Specification, each Adopter and its Affiliates hereby agrees that it will grant to each of the Promoters and their Affiliates and all Adopters (as provided in Section 2.2) and their Affiliates (also collectively “Licensee”), a nonexclusive, non-transferable, non-sublicenseable (except as set forth in Section 2.1(c) below, worldwide, perpetual license under its Necessary Claims solely to make, have made, use, import, and directly and indirectly, offer to sell, sell and otherwise distribute and dispose of Compliant Portions (whether hardware, software or combinations thereof); provided that such license shall not extend to any part or function of a product the inclusion or operation of which is not a Compliant Portion. Such license shall be granted on reasonable and non-discriminatory terms, provided that such license grant may be conditioned upon Licensee’s grant of a reciprocal license.
- (c) For Compliant Portions covered by the license in Subsections 2.1(a) and 2.1(b) that consist solely of software object code, such license shall be deemed to allow each Licensee to have third parties use, reproduce and distribute such Compliant Portions solely in the form supplied by Licensee, for the sole purpose of distributing such Compliant Portions under a license agreement rather than selling such Compliant Portions, provided

that the license in Subsections 2.1(a) and 2.1(b) shall not extend to any modification of any Compliant Portion or the combination of any Compliant Portion into or with any other hardware or software.

- 2.2 Licenses to Adopters. During the Adoption Period, any Promoter may extend the licenses set forth in Section 2.1(b) to a third party by entering into an Adopters Agreement with such third party.
- 2.3 Subsidiaries. Adopter shall use diligent efforts to have each of its subsidiaries bound to the terms of this Agreement, including without limitation, the granting of licenses to each Promoter and Adopter pursuant to Section 2.1.
- 2.4 Copyright License. Effective upon adoption by the Promoters of the Final Specification, the Promoters and its Affiliates hereby grant to each Adopter and its Affiliates a nonexclusive, royalty-free, non-transferable, non-sublicenseable, worldwide, perpetual copyright license to the Final Specification and any implementation examples that are licensed to reproduce the Final Specification and any implementation examples that are licensed as necessary in order to exercise the patent rights granted in Section 2.1(a), provided that all reproductions thereof shall include any copyright notices and disclaimers contained in the Final Specification.

### **3. WITHDRAWAL FROM PARTICIPATION**

- 3.1 Conditions for Withdrawal. An Adopter may withdraw from participation and terminate this Agreement at any time upon giving twenty one (21) days notice to the Secretary.
- 3.2 Effect of Withdrawal. The license grant committed to and by Adopter as defined in Section 2 above shall remain in effect for the (i) Final Specification, and (ii) any update or alteration to the Final Specification where more than twenty one (21) days has elapsed following Adopter's receipt of notice from Promoters to Adopter of an adoption of such update or alteration to a Final Specification and prior to Adopter giving the notice set forth in Section 3.1 above. If an Adopter gives the notice required in Section 3.1 prior to the end of the twenty one (21) day period following notice of an adoption of an update or alteration of a Final Specification, the license grant committed to and by Adopter in Section 2 above, in regards to such update or alteration shall be entirely null and void as though never committed.

### **4. TRADEMARKS**

- 4.1 Nonassert. Adopter hereby agrees not to assert against any Promoter or other Adopter any trademark, trade name, or similar rights it may have now or hereafter in the names "Open NAND Flash Initiative" and/or "ONFI" (collectively "Trademarks").

- 4.2 Obligation to Use Trademarks. Adopter is not obligated to use any of the Trademarks on any product, advertising, or on any other material in any manner.
- 4.3 Use of the Trademarks. Adopter agrees that, to the extent it uses the Trademarks, it shall only use the Trademarks to label and promote products in which all included features and functions reasonably capable of being implemented as Compliant Portions have been so implemented. Adopter shall not use or adopt any trademarks for any product, service or specification likely to cause confusion with the Trademarks.

## 5. GENERAL

- 5.1 Effective Date. This Agreement shall become effective when the Secretary receives an original, fully executed copy hereof.
- 5.2 No Other Licenses. Except for the rights expressly provided by this Agreement, no Promoter or Adopter grants or receives, by implication, or estoppel, or otherwise, any rights under any patents or other intellectual property rights.
- 5.3 No Warranty. All parties acknowledge that all information provided as part of the Final Specification and the Final Specification itself are all provided "AS IS" WITH NO WARRANTIES WHATSOEVER, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, AND THE PARTIES EXPRESSLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION, OR SAMPLE.
- 5.4 Limitation of Liability. IN NO EVENT WILL ANY PARTY HERETO BE LIABLE TO ANY OTHER FOR THE COST OF PROCURING SUBSTITUTE GOODS OR SERVICES, LOST PROFITS, LOSS OF USE, LOSS OF DATA OR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR SPECIAL DAMAGES, WHETHER UNDER CONTRACT, TORT, WARRANTY OR OTHERWISE, ARISING IN ANY WAY OUT OF THIS OR ANY OTHER RELATED AGREEMENT, WHETHER OR NOT SUCH PARTY HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.
- 5.5 Governing Law. This Agreement shall be construed and controlled by the laws of New York without reference to conflict of laws principles.
- 5.6 Jurisdiction. The parties agree that all disputes arising in any way out of this Agreement shall be heard exclusively in, and all parties irrevocably consent to jurisdiction and venue in, the state and Federal courts of California.
- 5.7 Notices. All notices hereunder shall be in writing and sent to the parties at the following addresses or at such addresses as the Secretary or Adopter may later specify by such written notice. For purposes of this Section 4.7, written notice shall not include notice by electronic mail or by facsimile.

Notices to Promoters  
Intel Corporation  
2111 NE 25<sup>th</sup> Ave, M/S JF5-371  
Hillsboro, OR 97124 USA

Attn: Knut Grimsrud  
Subject: ONFI Initiative

With a copy to:  
Intel Corporation  
2111 NE 25<sup>th</sup> Avenue  
Hillsboro, OR 97124  
USA  
Attn.: Initiatives Legal, JF2-98

Notices to Adopting Party

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Such notices shall be deemed served when received by addressee or, if delivery is not accomplished by reason of some fault of the addressee, when tendered for delivery. Any party may give written notice of a change of address and, after notice of such change has been received, any notice or request shall thereafter be given to such party at such changed address.

- 5.8 Good Faith Dealing. Each party agrees that it will not, nor will it assist or encourage any third party to, attempt to gain the benefit of the licenses granted in this Agreement without granting to the Promoters and Adopters a similar license to all of such party's Necessary Claims, including without limitation, by acting through or in concert with Affiliates or any other third parties. Adopter hereby represents and warrants that it has power to cause all patents owned or controlled by it and all of its Affiliates to be licensed as set forth in this Agreement.
- 5.9 Not Partners. The parties hereto are independent companies and are not partners or joint venturers with each other.
- 5.10 Complete Agreement; No Waiver. This Agreement sets forth the entire understanding of the parties and supersedes all prior agreements and understandings relating hereto. No modifications or additions to or deletions from this Agreement shall be binding unless accepted in writing by an authorized representative of all parties, and the waiver of any breach or default will not constitute a waiver of any other right hereunder or any subsequent breach or default.
- 5.11 No Rule of Strict Construction. Regardless of which party may have drafted this Agreement, no rule of strict construction shall be applied against any party. If any provision of this Agreement is determined by a court to be unenforceable, the parties shall deem the provision to be modified to the extent necessary to allow it to be enforced to the extent permitted by law, or if it cannot be modified,

the provision will be severed and deleted from this Agreement, and the remainder of the Agreement will continue in effect.

5.12 Compliance with Laws. Anything contained in this Agreement to the contrary notwithstanding, the obligations of the parties hereto shall be subject to all laws, present and future, of any government having jurisdiction over the parties hereto, and to orders, regulations, directions or requests of any such government.

5.13 Fees. Adopter agrees to pay an equal share of an annual fee, in no event to exceed Five Thousand dollars (\$5,000), if needed, to defray operating and promotional expenses as determined and approved by a supermajority vote (N-1) of the Promoters and required of all Adopters during the the period of this Agreement with the first such payment due within sixty days of approval by the Promoters.

In witness of their agreement, the parties have executed this Agreement below:

\_\_\_\_\_  
Promoter

On behalf of all Promoters

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Adopting Party

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



## **ONFI SPECIFICATION CONTRIBUTION ADDENDUM**

**Warning, except for work on updates or alterations, this agreement cannot be entered into later than 60 days prior to the first scheduled Adoption Meeting.**

Whereas, Contributor is signing contemporaneously with this agreement an Adopters Agreement (“Adopters Agreement”) for the Final Specification;

Whereas, the Promoters have not yet completed drafting or adopted the Final Specification or are in the process of updating or altering the Final Specification;

Whereas, Contributor wishes to review and comment upon preliminary drafts of specifications (collectively “Draft Specifications”) that are circulated by the Promoters for the purpose of formulating the Final Specification, and the Promoters are willing to include the contributor in those portions of their deliberative process in which Contributor has specific expertise; and

Whereas, the Promoters and Contributor desire to have the following additional conditions apply to the Adopters Agreement;

**Now, therefore, in consideration of the mutual promises and conditions contained herein, the Promoters and Contributor agree to amend and add the following terms to the Adopters Agreement through this addendum (“Contribution Addendum”) as follows:**

### **1. DEFINITIONS**

All defined terms used in this Contribution Addendum that are not defined herein shall have the meanings assigned in the Adopters Agreement.

### **2. COMPLIANCE WITH ANTITRUST LAWS**

Contributor and the Promoters are committed to fostering open competition in the development of products and services based on the Final Specification. Contributor and the Promoters understand that in certain lines of business they are or may be direct competitors and that it is imperative that they and their representatives act in a manner which does not violate any state, federal or international antitrust laws and regulations. Without limiting the generality of the foregoing, Contributor and the Promoters acknowledge that this Agreement prohibits any communications regarding costs, prices, quantity or quality of production levels, methods or channels of distribution, markets, customers, exclusion of competitors or any other topic which may be construed as a violation of antitrust laws. Accordingly, Contributor and each Promoter will counsel its representatives who participate in any activities under this Agreement on the

importance of limiting the scope of their discussions and communications to the topics that relate to the purposes of this Agreement, whether or not such discussions and communications take place during formal meetings, informal gatherings, or otherwise.

### **3. SUBMISSIONS TO PROMOTERS**

Contributor understands that all submissions it makes to the Promoters with regard to Draft Specifications shall be governed by the following:

- 3.1 Confidentiality of Contributor Submissions. Contributor agrees that any submissions it makes to the Promoters regarding the Draft Specifications shall be deemed to be made on a non-confidential basis and that the Promoters shall be free to use these submissions for any purpose and disclose such submissions to each other and any third parties.
- 3.2 Copyrights in Specification as Adopted. Contributor agrees that it shall assign, and does hereby assign, any copyright interest it may have in any submission it makes to the Promoters that is ultimately incorporated in the Final Specification. Each Promoter may exercise any and all rights of copyright ownership and sublicense such rights in the Final Specification as if such rights were solely owned by such Promoter and without permission of the Contributor and without any duty to account.

### **4. CONFIDENTIALITY**

- 4.1 Draft Specification. Until the Promoters adopt the Final Specification and make it generally publicly available, Contributor will maintain all versions and revisions of the Draft Specifications (“Confidential Material”) in confidence with at least the same degree of care that it uses to protect its own confidential and proprietary information, but no less than a reasonable degree of care under the circumstances and will not use, disclose or copy the Confidential Material except as necessary for its employees with a need to know to evaluate and comment thereon. Contributor shall mark any copies it makes “confidential,” “proprietary” or with a similar legend and shall reproduce all copyright notices and disclaimers therein. Unless the parties agree otherwise, this obligation of confidentiality will expire three (3) years from the date of disclosure to Contributor, provided that Confidential Material shall not include any information that is (a) rightfully in the public domain other than by a breach of a duty to the disclosing party; (b) rightfully received from a third party without any obligation of confidentiality; (c) rightfully known to the receiving party without any limitation on use or disclosure prior to its receipt from the disclosing party; (d) independently developed by employees of the receiving party; or (e) generally made available to third parties by the disclosing party without restriction on disclosure.
- 4.2 Withdrawal. Upon withdrawal by Contributor hereunder, Contributor shall have no right to use or distribute any of the Confidential Material identified in Section

4.1 and shall, within ten (10) days following such withdrawal, return to the Secretary all tangible copies thereof, destroy all intangible copies thereof and certify in writing to the Secretary that these actions have been taken. For clarification purposes, the destruction of intangible copies does not include any computer-based back up files generated in the normal course of business that are generally not accessible by employees.

## **5. WITHDRAWAL**

5.1 Process. The Secretary shall send written notice to Contributor advising of a meeting of the Promoters to be held for the purposes of adopting a specification, update, or alteration to which Contributor made a Contribution as a Final Specification, which notice shall set forth the date for adoption (“Adoption Date”) and shall include a copy of the proposed Final Specification; provided that the meeting may not be set for a date earlier than two (2) weeks after the mailing date of the notice (the two week period after mailing and before the Adoption Date is hereinafter referred to as the “Review Period”). Contributor may withdraw from participation and terminate this Agreement by giving notice to the Secretary at any time during the Review Period.

5.2 Effect of Withdrawal. If Contributor withdraws under Section 5.1, the following terms shall apply.

(a) Termination of Adopters Agreement. Except as set forth in Section 5.2(b), the license grant committed to and by Contributor in the Adopters Agreement in regards to such Final Specification, update, or alteration that has not yet been adopted shall be entirely null and void as though never committed and the Adopters Agreement shall terminate in regards to such Final Specification, update, or alteration and any subsequent update, or alteration contained in a future Final Specification; provided that this Contribution Addendum and the licenses granted herein shall survive in their entirety.

(b) License to Contributions. Notwithstanding anything to the contrary in Section 5.2(a), effective upon the Promoters adoption of the Final Specification, for any suggestion or improvement to the Draft Specifications made by Contributor and communicated to any Promoter in any form, Contributor and its Affiliates hereby agrees that it will grant to the Promoters and their Affiliates and all Adopters and their Affilaites, a non-exclusive, non-transferable, world-wide license under any Necessary Claim of a patent or patent application reading on such suggestion or improvement, to make, import, or have made products which implement and comply with the Final Specification, and to use, sell, offer to sell, and import such products, where infringement of such Necessary Claims would not have occurred but for the implementation of or compliance with the Final Specification in such products; provided that such license shall

not extend to features of a product which are not required to comply with the Final Specification or for which there exists an economically feasible, non-infringing alternative. Such license shall be granted on reasonable and non-discriminatory terms provided that such license grant may be conditioned upon Licensee's grant of a reciprocal license.

**6. MISCELLANEOUS**

- 6.1 Binding Effect. Except as provided herein, the terms and conditions of the Adopters Agreement shall continue in full force and effect.
- 6.2 Parties. The Promoters executing this agreement have the authority and by signing this agreement do hereby bind all the Promoters to this agreement.
- 6.3 Fees. Contributing Adopter agrees to pay an equal share of an annual fee, in no event to exceed Ten Thousand dollars (\$10,000), if needed, to defray operating and promotional expenses as determined and approved by a supermajority vote (N-1) of the Promoters and required of all Contributors during the the period of this Agreement with the first such payment due within sixty days of approval by the Promoters.

**Agreed:**

**Promoter:**

Company: \_\_\_\_\_

Address: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Title: \_\_\_\_\_

Fax: \_\_\_\_\_

Date: \_\_\_\_\_

e-mail: \_\_\_\_\_

**Promoter:**

Company: \_\_\_\_\_

Address: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Title: \_\_\_\_\_

Fax: \_\_\_\_\_

Date: \_\_\_\_\_

e-mail: \_\_\_\_\_

**Contributor:**

Company: \_\_\_\_\_

Address: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Title: \_\_\_\_\_

Fax: \_\_\_\_\_

Date: \_\_\_\_\_

e-mail: \_\_\_\_\_