

## **Chia VDF v2.0 Competition Official Rules and Disclosures**

**NO PURCHASE NECESSARY TO ENTER OR WIN.**

**VOID WHERE PROHIBITED**

**ENTRY CONSTITUTES YOUR ACCEPTANCE OF THESE OFFICIAL RULES**

1. Challenge Sponsor: Chia Network, Inc., San Francisco, CA (1-844-257-8433) (the “Sponsor”).
2. Challenge Description: The Chia VDF v2.0 Competition (the “Challenge”) is a skill contest that seeks to advance the development of a more environmentally friendly and functional alternative to bitcoin using the Sponsor’s verifiable delay function (“VDF”), a proof of time protocol and primitive for cryptographic protocols, approach. In the Challenge, individual or team contestants compete to create implementations of the Sponsor’s VDF algorithm with the goal of optimizing the algorithm’s speed. At the start of the Challenge, the Sponsor will make available its VDF algorithm as the benchmark for speed and the technical specifications of the reference hardware on which the implementations will be run for judging purposes at <https://github.com/Chia-Network/vdf-competition>. Contestants will produce code and the documentation described below to submit as a readme file to a GitHub repository for their Entry. The Challenge is to submit the fastest VDF implementation on either or both of two tracks: (a) SIMD and GPU optimizations allowed, and (b) SIMD and GPU optimizations not allowed. There will be one winner for each track, and a prize will be awarded to each of the two winners. However, a contestant may submit their code to both tracks, and if the submission wins both tracks, that contestant will receive both prizes. Winning documentation will be published. All submissions may be made public. All source code and documentation in a submission related to the Challenge must be in the public domain, or made and submitted pursuant to Version 2.0 of the Apache License established by the Apache Software Foundation (the “Apache License”). Submissions can also incorporate third-party code licensed under the MIT License or the GNU Lesser General Public License Version 3.0 (“LGPL”) in any of the following 4 libraries: <http://www.flintlib.org/> <http://mpir.org/> <https://gmplib.org/> or <https://www.shoup.net/ntl/>, but not the GNU General Public License Version 2.0 or 3.0 (“GPL”). Capitalized terms have the meanings given to them in these Rules and Disclosures (the “Rules and Disclosures”).
3. Agreement to Rules: Each individual who participates in any way in the creation of any of the elements of an Entry, whether or not it is ultimately submitted in connection with an Entry, is a contestant under these rules (“Contestant”). Each Contestant agrees to these Official Rules (the “Rules”); acknowledges that any submissions relating to the Challenge may be made available to the public; affirms that they have read and understand the terms of the Apache License, as well as the MIT License or the LGPL in any of the three libraries of listed in the Challenge Description above, if third-party code licensed under one of those licenses is used in connection with their Entry; and represents

that all source code and documentation in any submission they make is in the public domain, or incorporates elements which are used pursuant to the Apache License, the MIT License or the LGPL in any of the 3 libraries of the listed above in the Challenge Description. If a Contestant is younger than 18 years old, or the age of majority in the jurisdiction in which they reside, a parent or guardian must consent to the minor's participation and these Rules, as well as complete all required Challenge documentation and communications. These Rules form a binding legal agreement between each Contestant and Sponsor with respect to the Challenge. You may not participate in the Challenge or be considered for a Prize unless you consent to these Rules.

4. Eligibility Requirements: The Challenge is open to legal residents of the 50 United States, the District of Columbia, and other territories worldwide except for residents of Cuba, the Crimea territory, Iran, North Korea, Quebec (Canada), Syria; residents of any country or state where participation is illegal, prohibited, restricted or subject to tax or registration under applicable local laws; and any person who is subject to sanctions, blocking or other denial lists under U.S. law, including, but not limited to, persons on the US Treasury Department's list of Specially Designated Nationals and Blocked Persons. Contestants may work individually or in teams. Contestants must be legally able to enter a contract in the jurisdiction where they reside and the US, if not a US resident. Individuals who have not reached the age of majority in the jurisdiction in which they reside may only participate as part of a Team Contestant that has at least one member (which may be the Contestant's parent or guardian) who has reached the age of majority. Employees, contractors, interns, officers, directors, agents or other representatives of Sponsor or of any of its parent companies, subsidiaries, or affiliates (the "Challenge Parties") and all members of their immediate families and persons living in the same household with them, whether or not related, are not eligible to participate as a Contestant or win the Challenge, and may not provide any technical or financial support to any Contestant, except as provided in this Rules. Immediate family members include spouse, parent, child, sibling, including step-parents, children, siblings, half siblings, legal guardians and all of their respective spouses, regardless of where they reside.
5. How to Enter: Each individual or team of individuals must complete the following two steps by the End Date listed below: (1) Click on the "Entry Form" link located at <https://github.com/Chia-Network/vdf-competition> and follow the prompts to fully and accurately complete the entry form ("Entry Form") by providing your legal first and last names, street address, city, zip or similar code, telephone number, email address, and agreement to these Challenge Rules; and (2) Submit the Entry Form along with the source code and documentation meeting the Entry Specifications described below (the "Technical Submission") to Chia's public Keybase group the judges have created at [https://keybase.io/team/chia\\_network\\_public](https://keybase.io/team/chia_network_public) to communicate with Contestants using a keybase shared git repo. The Entry Form and Technical Submission together are considered the entry ("Entry"). An Entry is not complete and will not be considered if either portion is missing. An Entry may be submitted by a team of individuals working collaboratively (a "Team Contestant"), in which case, each individual member of the team must complete the Entry Form as described above and all members of the Team

Contestant must designate the same point of contact to receive official Challenge correspondence. A Contestant may submit a scanned or copy of the Entry Form, but must provide an original of the Entry Form(s) to the Sponsor in the event that Contestant (or Team Contestant) is named a winner in the Challenge.

6. Entry Period: The reference VDF and the specifications for the hardware on which the code in each Entry will be run will be released on or before 12:00:01 p.m. Pacific Time (PT) on April 4th, 2019 (“Start Date”). Contestants may submit their Entries at any time after Sponsor releases the updated Challenge technical documentation, VDF and reference hardware requirements as described in Section 10 below, and before 11:59:59 p.m. PT on July 4th, 2019 (“End Date”). Pacific Time means the time that is the current local time in Los Angeles on the dates above. Participants are responsible for determining the corresponding time zone in their respective jurisdictions. The Sponsor’s computer system is the official timekeeping device with respect to all matters relating to the Challenge.
7. Cost of Entry: NO PURCHASE IS NECESSARY
8. Entry Limits: There is no limit to the number of Entries one Contestant may submit. For example, an individual can submit an Entry individually and as a member of a Team Contestant. However, each Entry will be considered completely separately, as if it were submitted by a wholly unrelated Contestant. Elements of the documentation or implementation cannot be duplicated or incorporated by reference in multiple Entries. Each Entry must meet all of the Entry Specifications and submission due dates on its own. Any Contestant wishing to submit an Entry in both track 1 and track 2 must check next to each track on the Entry Form.
9. Technical Submission Entry Specifications: Entries that do not meet the following specifications (the “Entry Specifications”) will not be eligible to be judged and will not be considered for any prize.
  - a. All source code and documentation in an Entry must be in the public domain, or made and submitted pursuant to the terms of the Apache License, the MIT License, or the LGPL licenses in any of the following libraries: <http://www.flintlib.org/> <http://mpir.org/> or <https://gmplib.org/>. The Apache License and instructions for applying it can be found here: <https://www.apache.org/licenses/LICENSE-2.0>. The MIT License and instructions can be found here: <https://opensource.org/licenses/MIT>.
  - b. The Challenge is to submit the fastest VDF implementation, and the Challenge on one of both of two tracks: (a) SIMD and GPU optimizations allowed, and (b) SIMD and GPU optimizations not allowed. In the Challenge, code must be produced that will solve a VDF at a given number of iterations on the reference hardware. The repeated squarings VDF must be used, but we do not require computation of a proof, and only the speed of computation of the output will be judged. The VDF must be computed in the classgroup setting, and output the

same as our sample code above (see classgroup.py for naive implementation of classgroups). The number of iterations will be provided at the Start Date of the Challenge. Any revisions will be announced on the Reddit and the Keybase channel identified above at least 2 months before the end of the Challenge.

- c. The Contestant, or each member of a Team Contestant, must certify that the entire Technical Submission incorporates content that is in the public domain or covered by an Apache License, the MIT License or the LGPL in any of the 3 libraries of the listed above in the Challenge Description and is properly identified as such and that the Contestant has all legal rights necessary to grant the license granted in subsection (a) above.
  - d. Each Entry must be submitted with a Readme file that completes the Entry Form and describes in English the methods used in the software.
  - e. Cheating/Disqualification: To provide a uniform platform for fairly judging all Entries, each Entry must run on the reference hardware without modification to that hardware or reliance on anything external to the hardware other than code submitted in the Entry. Therefore, actions such as upping the clock speed of the machine, having it make a request from an external machine, hacking the machine so it does not do a fresh install when reinstallation is attempted and all similar behaviors are prohibited. Similarly, all source code and documentation in an Entry must be in the public domain, or made and submitted pursuant to the terms Apache License, the MIT License or the LGPL licenses in any of the 3 libraries listed above in the Challenge Description. Therefore, snooping around on raw disk access to find traces of other Contestants, hacking into, spying on or otherwise gaining access to another Contestant's Entry materials or research in support of them or Sponsor's electronic systems, and all similar behaviors are prohibited. Sponsor reserves the right to disqualify any Contestant or Team Contestant that it believes has violated these Official Rules, is not eligible to participate, who has provided false information, acted in a harassing or unsportsmanlike manner with respect to Sponsor or any other Contestant, or tampered with the fair operation or administration of the Challenge. Sponsor's decisions as to all issues, including eligibility, shall be final.
10. Communications During Challenge: On approximately April 4th, 2019, Sponsor will release updated Challenge technical documentation, VDF and reference hardware requirements, if any. In addition, beginning on the Start Date and ending on July 4th, 2019, Contestants may submit questions to the Sponsor via the Keybase and Reddit sites identified above. Sponsor will review all questions received and if Sponsor, in its sole discretion, determines that providing a response to the question would benefit the administration or enhance the outcome of the Challenge, the Sponsor will post the pertinent information via Keybase, Reddit or Github. In posting this information, Sponsor will make all efforts to not identify the Contestant who asked the question and may, in its

sole discretion, provide both the question and response or simply the response, rephrase the question or combine multiple questions into a single response. Contestants are responsible for consulting the Keybase, Reddit and Github identified above periodically for updates and responses to questions. Sponsor is not responsible for providing any additional notice of information published. All documentation posted by Sponsor, including responses to questions or other information, to the Keybase, Reddit or Github will be automatically incorporated into and made a part of these Official Rules and become binding on all Contestants. Sponsor reserves the right to request from those Contestants who submit questions, including all members of a Team Contestant, identifying information such as name, address, country of regular residence or similar for purposes of verifying compliance with the eligibility requirements, prior to accepting or responding to any questions.

11. Judges and Judging: In the Challenge, code must be produced that will solve a VDF at a given number of iterations on the reference hardware. The repeated squarings VDF must be used, but we do not require computation of a proof, and only the speed of computation of the output will be judged. The VDF must be computed in the classgroup setting, and must output the same as our sample code above (see classgroup.py for naive implementation of classgroups). The number of iterations will be provided on the Start Date. Any revisions will be announced on the Reddit and the Keybase channel identified above at least 2 months before the end of the Challenge. The Sponsor will run all submitted Entries on the reference hardware and the Contestant or Team Contestant in each track whose Entry completes the iterations the fastest will be declared the Proposed Winner in that track.

The judges' decision will be final and no correspondence will be entered into.

12. Prizes to be Awarded; Ties: A prize will be awarded in each of the two tracks. One Track One Prize of \$50,000.00 and one Track Two Prize of \$50,000.00 will be awarded. If the same Entry is declared the Winner in both tracks, that Contestant or Team Contestant will be declared the Winner of both the Track One Prize and the Track Two Prize. In the unlikely event of a tie for any prize, that prize will be divided by the number of tied Contestants or Team Contestants, with each Contestant or Team Contestant receiving a pro rata share. Each prize is expressed in US Dollars and net of any taxes Sponsor may be required by law to withhold. Prizes will be paid in bitcoin or other cash equivalent at Sponsor's discretion. No other cash alternatives or alternative prizes of any description will be awarded. In the event that a Team Contestant is declared the Winner of any prize, that prize will be awarded in equal portions to each member of the Team Contestant as reflected in the Entry Forms timely submitted, regardless of their role in creating the Entry. In the event any Winner or member of a winning Team Contestant has not reached the age of majority in the jurisdiction where he/she resides, the prize, or that member's portion of it, will be awarded to their parent or legal guardian, who must complete the steps identified below to claim the prize or portion of it. WINNER(S) ARE RESPONSIBLE FOR ALL TAXES, TARIFFS, STAMPS, DUTIES, RESTRICTIONS AND LIMITATIONS ON THE PRIZE AWARDED. Winning Contestants, and each

member of a winning Team Contestant, must supply the Sponsor with all information and documentation requested by Sponsor, including but not limited to a Social Security or other Tax Identification Number and government issued photo identification (passport for non-US citizens), for purposes of Contestant identification, due diligence, and legal compliance, including all state, local and federal tax reporting, withholding and filing requirements. Non-compliance will result in forfeiture of prize.

13. Winner Notification and Announcement: The Contestant or Team Contestant that submitted an Entry declared a Proposed Winner will be notified via the email address on the Entry Form. Upon notification, the Contestant and each member of a Team Contestant must complete and return to Sponsor an Affidavit of Eligibility and Publicity Release within five (5) days. Upon fulfillment of these requirements, the Contestant will be definitively declared the Winner of the prize for which they were notified, and Sponsor will announce the Winner's identity (or pseudonym) on Sponsor social media. Personal data will not be released, unless consented to by the Winner (see "Privacy," below). The date of the award announcement shall constitute the Award Date. In the event that the prize notification email is returned or undeliverable, Sponsor is unable to contact a Proposed Winner, or that Proposed Winner does not comply with the requirements of the prize notification email during the timeframes provided or is otherwise disqualified under these Official Rules, Sponsor will declare a new Proposed Winner of the prize, following all the Judging and notification procedures described above. By accepting a prize, the Winner and every member of the winning Team Contestant grants its permission (except where prohibited by law) to the use of Contestant's name, likeness, biographical information, and Prize won for future advertising and publicity in any form, media or technology now known or later developed, for any lawful commercial purpose, throughout the world in perpetuity, without additional compensation, notification or permission. By accepting a prize, the Winner and each member of the winning Team Contestant agrees to release, discharge and hold harmless the Challenge Parties from any claims, losses, or damages arising out of the Challenge or the acceptance or use, misuse or possession of that prize.
14. Delivery of Prize: In the event any Winner or any member of a winning Team Contestant is subject to or is the subject of any order or legal process issued by any US governmental agency having jurisdiction over the affairs of the Winner or Team Contestant member (i.e. garnishment, child support order, judgment, lien, and the like), the Sponsor's delivery of the prize or Team Contestant's portion of the prize to the official representative of the governmental entity claiming a right to the prize shall be thus deemed as the Sponsor's awarding the prize to the Winner or winning Team Contestant member. The Sponsor shall be entitled to rely in good faith, upon any documents presented by the representative seeking to collect the prize in lieu of the Winner or member of the winning Team Contestant. The Sponsor shall not be liable for any claim for damages incidental thereto.
15. Estimated Numerical Odds of Winning: The odds of winning a prize will depend on the number of Contestants and skill of the Contestants.



16. Privacy: Personal data provided to Sponsor during the Challenge, including name, age, mailing address, and phone number, as well as information provided on affidavits of eligibility and releases of liability and publicity, including government issued identity documents and social security or other tax identification information, is being collected specifically for purposes of administration of the Challenge and complying with legal processes/regulatory requirements such as tax reporting and recordkeeping, and for the purposes set out in the affidavits/releases with respect to publicity. Personal data will be retained and accessed only by those company employees who have a legitimate business interest in accessing the data or a legal right to do so. This personal data will be transferred into the United States. You affirmatively consent to the transmission, processing, and storage of this personal data in the United States, and acknowledge that you have the right to inquire as to how it is being processed, except how the Entry is judged, and may do so by making such a request in writing to: hello@chia.net. However, personal data will only be released to the public if consented to by the Winner.
17. Limitation of the Sponsor Liability; Termination: The Challenge is void where prohibited by law or subject to registration or tax and is subject to all applicable US federal, state and local laws and regulations. Sponsor is not responsible for, and by participating each Contestant releases the Sponsor and Challenge Parties from, any liability, claims, losses, and damages arising out of or relating to their participation in this Challenge or the acceptance, use, misuse, or possession of any prize received in this Challenge. Sponsor is not responsible for any problems related to technical malfunctions of electronic equipment, computer online systems, servers, or providers, computer hardware or software failures, phone lines, traffic, congestion on the internet or any website, unauthorized intervention, telecommunication miscommunication or failure, unavailability of any website or platform, and failed, lost, delayed, incomplete, garbled, or misdirected communications which may limit a person's ability to participate in the Challenge in any way. Sponsor is not responsible for any other errors or malfunctions of any kind, whether network, printing, typographical, human or otherwise relating to or in connection with the Challenge, including, without limitation, errors or malfunctions which may occur in connection with the administration of the Challenge, the announcement of any Winner, or in any Challenge-related materials. Sponsor reserves the right to modify, suspend, cancel or terminate without the award of any prizes the Challenge in the event Sponsor in its sole discretion determines that it cannot operate as intended, including due to any legal obligation, dispute, act of God, war or civil unrest, infection by computer virus, hacking or other technical impairment. Sponsor further reserves the right to cancel or suspend the Challenge in its entirety should tampering, unauthorized intervention, fraud, technical failures or other causes corrupt the administration, security, fairness, integrity or proper administration of the Challenge and, if terminated, at Sponsor's discretion, determine the Winner(s) using all non-suspect, eligible Entries received up to time of cancellation using the procedures outlined above.
18. No Offer or Contract of Employment: Each Contestant and each member of a Team Contestant agrees that their participation in the Challenge and any Entry submitted is

voluntary, and not in confidence or trust; that no confidential, fiduciary, agency or other relationship or implied in fact contract exists between the Contestant and the Sponsor nor is any created by the Contestant's participation in the Challenge; that under no circumstances will participation in the Challenge, submission of an Entry into the Challenge, selection as a winner or anything in these Rules be construed as an offer or contract of employment with Sponsor, and that no Entry constitutes a work for hire.

19. Disputes: The Sponsor shall be the sole arbiter of the Challenge and the interpreter of these Official Rules, including as to eligibility. Its decisions shall be final. Entry into the Challenge constitutes agreement by Contestants to abide by these Official Rules, as well as any other rules established by the Sponsor. The Sponsor reserves the right to disqualify any Contestant if any of the Official Rules are violated in any way. The Sponsor reserves the right to refuse awarding any prize to a person who is determined to have violated any Official Rule as outlined above, to be ineligible to enter, to have gained unfair advantage in participating in the Challenge, or obtained a winner status using fraudulent means. Except where prohibited by law, any action arising out of or relating to this Challenge or these Official Rules shall be resolved individually and exclusively by final and binding arbitration administered by the American Arbitration Association ("AAA") and conducted before a single arbitrator, all pursuant to the AAA Commercial Arbitration Rules as supplemented by AAA's Supplementary Procedures for Consumer-Related Disputes (collectively, the "AAA Rules"). If brought by a US resident, the arbitration shall be held at a location in the state in which you live. If brought by a non-US resident, the arbitration shall be held in the state where Sponsor is located. There shall be no authority for any claims to be arbitrated (or otherwise disputed) on a class or representative basis; arbitration can only decide Sponsor's and your individual claims and the arbitration may not consolidate or join the claims of other persons or parties who may be similarly situated. ANY AND ALL DISPUTES, CLAIMS AND CAUSES OF ACTION ARISING OUT OF OR CONNECTED WITH THE GIVEAWAY, OR ANYTHING AWARDED IN CONNECTION WITH THE GIVEAWAY, WILL BE RESOLVED INDIVIDUALLY, WITHOUT RESORT TO ANY FORM OF CLASS ACTION. ANY RIGHT TO A TRIAL BY JURY IS HEREBY WAIVED. Notwithstanding anything to the contrary in these Official Rules, for US residents, if the amount in dispute arising out of or relating to this Challenge or these Official Rules is less than the jurisdictional maximum of a small claims court applicable in the US state in which the Contestant bringing the claim lives, the Contestant may bring an action in such small claims court for such dispute, which will be in lieu of arbitration or an action in any other court.
20. Applicable Forum and Governing Law: The validity, enforcement, interpretation, and performance of these Rules and the Challenge itself shall be governed by the laws of the State of California, United States of America, excluding all conflict of law rules. If any provisions of the Terms are held to be invalid or unenforceable, all remaining provisions hereof will remain in full force and effect, unless and until Sponsor determines that such invalidity or unenforceability warrants termination of the Challenge. To the extent permitted by law, all participants, without or not they ultimately become Entrants,



expressly waive any and all rights to litigate or seek any other recourse to judicial or any other procedure in case of disputes or claims resulting from or in connection with these Rules and the Challenge.

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

Your Team Name (if applicable): \_\_\_\_\_

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

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