



Rigetti Computing Reports Fidelities as High as 99.5% on Next-Generation Chip Architecture

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Berkeley, CA, Feb. 17, 2022 (GLOBE NEWSWIRE) -- Rigetti Holdings, Inc. ("Rigetti"), a pioneer in hybrid quantum-classical computing systems, announced today it has achieved entangling gate fidelities as high as 99.5% on its next-generation chip architecture, crossing what is believed to be a key threshold for commercial quantum computing. The results follow the company's recent announcements on scalability and speed on its production systems, relating to Rigetti's progress toward quantum advantage and fault-tolerant quantum computing.

Today's quantum computers are prone to errors, which limit the size and complexity of problems that can be encoded and processed on them. Reducing these errors is the focus of many efforts across the industry, and is widely believed to be one of the key characteristics for commercial quantum computers, along with scale, speed, reprogrammability, and co-processing.

"Achieving error rates well below one percent is a big step toward the broader commercialization of quantum computing," said Chad Rigetti, founder and CEO of Rigetti. "We believe it opens up a new regime for algorithm R&D, which includes practical application development, quantum advantage benchmarking, and empirical tests of quantum error correction."

The next-generation chip architecture builds on several engineering achievements from its previous generation processors, including 3D signal delivery and superconducting caps and vias, which are designed to reduce crosstalk among qubits on the chip. It also incorporates recent advances in qubit design and gate operations, which the company has published previously. Internal measurements on a 9-qubit test device demonstrate two-qubit gate fidelities as high as 99.5% and a median fidelity of 99.2%.

Rigetti plans to continue to scale test devices to higher qubit counts. Once scaled, the company intends to incorporate the new design into its proprietary modular chip architecture, with the goal of bringing together advancements in scalability, speed, and fidelity. Rigetti introduced its pioneering multi-chip processor technology last year, and recently [announced the commercial availability of its 80Q Aspen-M system](#), the first processor generation based on this scalable architecture.

About Rigetti

Rigetti Computing is a pioneer in full-stack quantum computing. The company has operated quantum computers over the cloud since 2017 and serves global enterprise, government, and research clients through its Rigetti Quantum Cloud Services platform. The company's proprietary quantum-classical infrastructure provides ultra-low latency integration with public and private clouds for high-performance practical quantum computing. Rigetti has developed the industry's first multi-chip quantum processor for scalable quantum computing systems. The company designs and manufactures its chips in-house at Fab-1, the industry's first dedicated and integrated quantum device manufacturing facility. Rigetti was founded in 2013 by Chad Rigetti and today employs more than 140 people with offices in the United States, U.K., and Australia. Learn more at www.rigetti.com.

Additional Information and Where to Find It

In connection with the previously announced proposed business combination between Rigetti and Supernova Partners Acquisition Company II Ltd ("Supernova") (NYSE:SNII), Supernova has filed a registration statement on Form S-4 (as amended, the "Form S-4") with the SEC, which includes a proxy statement/prospectus, that is both the proxy statement to be distributed to holders of Supernova's ordinary shares in connection with its solicitation of proxies for the vote by Supernova's shareholders with respect to the proposed business combination and other matters as may be described in the registration statement, as well as the prospectus relating to the offer and sale of the securities to be issued in the business combination. Supernova has mailed a definitive proxy statement/prospectus and other relevant documents to its shareholders. This communication does not contain all the information that should be considered concerning the proposed business combination and is not intended to form the basis of any investment decision or any other decision in respect of the business combination. Supernova's shareholders and other interested persons are advised to read the definitive proxy statement/prospectus and other documents filed in connection with the proposed business combination, as these materials will contain important information about Rigetti, Supernova and the business combination. The Registration Statement was declared effective by the SEC on February 9, 2022 and the definitive proxy statement/prospectus and other relevant documents were mailed to shareholders of Supernova as of the record date established for voting on the proposed Business Combination and the other proposals regarding the Business Combination. Shareholders are able to obtain copies of the definitive proxy statement and other documents filed with the SEC, without charge, at the SEC's website at www.sec.gov, or by directing a request to Supernova's secretary at 4301 50th Street NW, Suite 300 PMB 1044, Washington, D.C. 20016, (202) 918-7050.

Participants in the Solicitation

Supernova and its directors and executive officers may be deemed participants in the solicitation of proxies from Supernova's shareholders with respect to the proposed business combination. A list of the names of those directors and executive officers and a description of their interests in Supernova is contained in Supernova's definitive proxy statement/prospectus, which was filed with the SEC and is available free of charge at the SEC's website at www.sec.gov. To the extent such holdings of Supernova's securities may have changed since that time, such changes have been or will be reflected on Statements of Change in Ownership on Form 4 filed with the SEC.

Rigetti and its directors and executive officers may also be deemed to be participants in the solicitation of proxies from the shareholders of Supernova in connection with the proposed business combination. A list of the names of such directors and executive officers and information regarding their interests in the proposed business combination is included in the proxy statement/prospectus for the proposed business combination.

No Offer or Solicitation

This communication does not constitute (i) a solicitation of a proxy, consent or authorization with respect to any securities or in respect of the proposed business combination or (ii) an offer to sell, a solicitation of an offer to buy, or a recommendation to purchase any security of Supernova, Rigetti, or any

of their respective affiliates.

Forward-Looking Statements

Certain statements in this communication may be considered forward-looking statements. Forward-looking statements generally relate to future events and can be identified by terminology such as “pro forma”, “may”, “should”, “could”, “might”, “plan”, “possible”, “project”, “strive”, “budget”, “forecast”, “expect”, “intend”, “will”, “estimate”, “anticipate”, “believe”, “predict”, “potential”, “goal” or “continue”, or the negatives of these terms or variations of them or similar terminology. These forward-looking statements include, but are not limited to, statements relating to Rigetti’s new chip architecture, the key characteristics and thresholds for commercial quantum computing and new algorithm R&D and statements relating to Rigetti’s plans to scale test devices to higher qubits and incorporate its new design into its modular chip architecture. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Supernova and its management, and Rigetti and its management, as the case may be, are inherently uncertain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: the outcome of any legal proceedings that may be instituted against Supernova, Rigetti, the combined company or others following the announcement of the business combination and any definitive agreements with respect thereto; the inability to complete the proposed business combination due to the failure to obtain approval of the shareholders of Supernova or to satisfy other conditions to closing; changes to the proposed structure of the business combination that may be required or appropriate as a result of applicable laws or regulations or as a condition to obtaining regulatory approval of the business combination; the ability to meet stock exchange listing standards following the consummation of the business combination; the risk that the proposed business combination disrupts current plans and operations of Rigetti as a result of the announcement and consummation of the proposed business combination; the ability to recognize the anticipated benefits of the business combination, which may be affected by, among other things, competition, the ability of the combined company to grow and manage growth profitably, maintain relationships with customers and suppliers and retain its management and key employees; costs related to the business combination; changes in applicable laws or regulations; the possibility that Rigetti or the combined company may be adversely affected by other economic, business, or competitive factors; Rigetti’s estimates of expenses and profitability; the evolution of the markets in which Rigetti competes; the ability of Rigetti to execute on its technology roadmap; the ability of Rigetti to implement its strategic initiatives, expansion plans and continue to innovate its existing services; the impact of the COVID-19 pandemic on Rigetti’s business; and other risks and uncertainties set forth in the sections entitled “Risk Factors” and “Cautionary Note Regarding Forward-Looking Statements” in the registration statement on Form S-4 and definitive proxy statement/prospectus discussed above and other documents filed by Supernova from time to time with the SEC.

Nothing in this communication should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Neither Supernova nor Rigetti undertakes any duty to update these forward-looking statements other than as required by law.