# Rigetti Launches the Novera QPU, the Company's First Commercially Available QPU

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**The Novera QPU is Rigetti's first commercially available QPU. The QPU includes a 9-qubit chip that features tunable couplers for fast 2-qubit operations and a 5-qubit chip for testing single-qubit operations. The Novera QPU is based on Rigetti's fourth generation Ankaa-class architecture.**

BERKELEY, Calif., Dec. 06, 2023 (GLOBE NEWSWIRE) -- Rigetti Computing, Inc. (Nasdaq: RGTI) ("Rigetti" or the "Company"), a pioneer in full-stack quantum-classical computing, announced today the launch of its Novera™ QPU, a 9-qubit quantum processing unit (QPU) based on the Company's fourth generation Ankaa™-class architecture featuring tunable couplers and a square lattice for denser connectivity and fast 2-qubit operations. The Novera QPU is manufactured in Rigetti's Fab-1, the industry's first dedicated and integrated quantum device manufacturing facility.

The Novera QPU includes all of the hardware below the mixing chamber plate (MXC) of a dilution refrigerator. In addition to a 9-qubit chip with a 3x3 array of tunable transmons, the Novera QPU also includes a 5-qubit chip with no tunable couplers or qubit-qubit coupling which can be used for developing and characterizing single-qubit operations on a simpler circuit. In addition to the 9-qubit and 5-qubit chips, Novera QPU components include:

- A puck that contains both the 9-qubit and 5-qubit chips, interposers and a PCB to route signals to SMPM connectors at the puck periphery.
- A tower that hangs from the MXC and connects coaxial cables between the puck and the SMA patch panel. The tower delivers cooling power from the MXC to the chips.
- Shields that surround the tower to isolate the puck from infrared radiation and stray magnetic fields.
- Payload brackets and a signal chain installed around the tower with mounted signal conditioning devices, including ferrite isolators, diplexers, filters, and optional quantum-limited amplifiers.

**The Novera™ QPU**


The Novera™ QPU is Rigetti's 9-qubit QPU based on the Company's fourth generation Ankaa-class architecture. Photo Credit: Drew Bird Photography.

"Our new Novera QPU enables hands-on access to our most innovative quantum computing technology. With the same architecture as our 84-qubit Ankaa systems, researchers working with the Novera QPU can have a head start in pursuing their quantum computing work and drive the industry forward," says Dr. Subodh Kulkarni, Rigetti CEO. "Our Ankaa-class 9-qubit QPUs have already been commissioned by premier national labs, and now the same technology is available to those seeking to accelerate their own quantum computing work."

Fundamental research to gain a better understanding of how qubits operate, how to optimize control systems, testing how to design and characterize gates, ways to mitigate decoherence, and how to develop more efficient quantum algorithms are among the key focus areas for building higher quality quantum computers.

"With the launch of the Novera QPU, quantum computing professionals and students can now have on-premise access to years of Rigetti's internal R&D within a matter of weeks. Rigetti has been pioneering full-stack quantum computing technology for 10 years. This is an exciting moment for us to equip the quantum computing ecosystem with the same caliber of hardware and engineering that we use on our most powerful QPUs," says David Rivas, Rigetti CTO.

The Novera QPU implements universal, gate-based quantum computing and can be used by quantum software and algorithm experts to prototype and test: (1) hybrid quantum algorithms, (2) characterization, calibration, and error mitigation, and (3) quantum error correction (QEC) experiments.

Additionally, organizations looking to develop components of their quantum computing stack can leverage the Novera QPU to accelerate areas such as: (1) control electronics and software, (2) QEC decoders, (3) control optimization algorithms, (3) native gate architectures, and (4) measurement and calibration, and accompanying software.

The Novera QPU is designed to be integrated with commercially available dilution refrigerators and control systems.

The Novera QPU is available to order at rigetti.com/novera starting at $900,000 and ships within 4-6 weeks after the order is confirmed and shipping and logistics are finalized.

**About Rigetti**
Rigetti 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 high performance integration with public and private clouds for 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. Learn more at rigetti.com.

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**Cautionary Language Concerning Forward-Looking Statements**

Certain statements in this communication may be considered "forward-looking statements" within the meaning of the federal securities laws, including but not limited to, expectations with respect to the Company's business and operations, including its expectations with respect to future sales or leases of the Novera 9-qubit QPU, customer adoption of the Novera 9-qubit QPU and ongoing use and research by customers of the Novera 9-qubit QPU. Forward-looking statements generally relate to future events and can be identified by terminology such as "commit," "may," "should," "could," "might," "plan," "possible," "intend," "strive," "expect," "intend," "will," "estimate," "believe," "predict," "potential," "pursue," "aim," "goal," "outlook," "anticipate," "assume," or "continue," or the negatives of these terms or variations of them or similar terminology. 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 Rigetti and its management, are inherently uncertain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: Rigetti's ability to achieve milestones, technological advancements, including with respect to its roadmap, help unlock quantum computing, and develop practical applications; the ability of Rigetti to complete ongoing negotiations with government contractors successfully and in a timely manner; the potential of quantum computing; the ability of Rigetti to obtain government contracts and the availability of government funding; the ability of Rigetti to expand its QCS business; the success of Rigetti's partnerships and collaborations; Rigetti's ability to accelerate its development of multiple generations of quantum processors; the outcome of any legal proceedings that may be instituted against Rigetti or others; the ability to continue to meet stock exchange listing standards; costs related to operating as a public company; changes in applicable laws or regulations; the possibility that Rigetti 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; disruptions in banking systems, increased costs, international trade relations, political turmoil, natural catastrophes, warfare (such as the ongoing military conflict between Russia and Ukraine and related sanctions and the state of war between Israel and Hamas and related threat of a larger regional conflict), and terrorist attacks; and other risks and uncertainties set forth in the section entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 and Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023 and June 30, 2023, and the Company's future filings with the SEC, including the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, and other documents filed by the Company from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and the Company assumes no obligation and does not intend to update or revise these forward-looking statements other than as required by applicable law. The Company does not give any assurance that it will achieve its expectations.

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/8311aa8f-8c7d-42d5-8970-11ab59527121