Sep 7, 2026 – Sep 8 • Daily Brief

Cracking a Wallet Signature: What It Would Cost — IonQ Runs the Numbers

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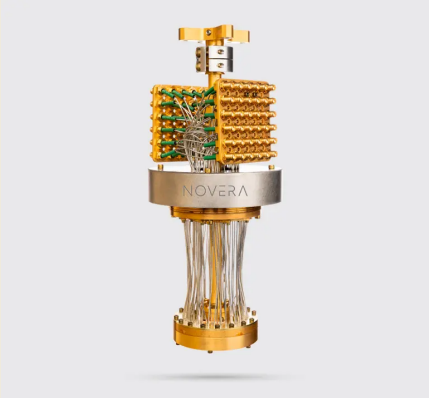
CURRENTSOTA

Physical qubits	1,180
2Q fidelity	99.99%
Logical qubits	96 LQ

Quantum hardware SOTA table →

01 Other

Today's Three Key Developments



1 **IonQ compiled the full bill for breaking elliptic-curve signatures, end to end** IonQ published a full-stack, end-to-end resource estimate for 256-bit elliptic-curve signatures (ECC, the signature algorithm common to Bitcoin wallets, bank cards and website certificates), mapped all the way down to quantum error-correction primitives; the company calls it the first of its kind, a claim that comes from IonQ's own blog and has not been peer-reviewed [5] — technical significance: previous estimates of this type

mostly stopped at abstract gate counts at the algorithm layer; by IonQ's account, this one compiles the circuit all the way down to error-correction primitives, so the error budget is no longer filled in by assumption; landscape impact: the cryptographic-migration timeline shifts from "philosophical argument" to verifiable engineering numbers, and banks, payment networks and certificate authorities will cite it directly in their post-quantum migration schedules — on a scale of years, not months.

1 **The U.S. government finalized five quantum manufacturing awards, the largest at $375 million** GlobalFoundries received a $375 million R&D award from the U.S. Department of Commerce for its quantum technology solutions business[29], while PsiQuantum[13], D-Wave[19] and Quantinuum[32] each received $100 million in CHIPS Act funding, and Rigetti separately received a $100 million award from the U.S. government[30] — with D-Wave handing the Department of Commerce a minority equity stake as consideration[19] — commercial significance: the government has moved from subsidizing papers to buying capacity and equity, with the money tied to 300mm wafer lines and packaging processes rather than algorithms; landscape impact: capital-expenditure curves at all five

recipients rise in step, with foundry and materials suppliers the first link to benefit, on a 12–36 month horizon.

1 **IonQ signs an $8.18 million quantum-resistant networking order with Congruity360** The two will deploy post-quantum cryptography together with hardware quantum key distribution (QKD, which distributes keys using photons and exposes any eavesdropper) into Congruity360's data governance platform[16] — technical significance: this is an unusual combination that bundles two mutually exclusive approaches (algorithmic PQC and physical-layer QKD) and sells them to a single enterprise customer; landscape impact: enterprise data governance software becomes a new entry point for quantum-resistant solutions, and while the contract value is small, it establishes pricing by platform rather than by device.

02 Hardware

Hardware Frontier

Trapped Ions

IonQ unveiled its sixth-generation architecture, Superion 256, bringing control electronics on-chip and integrating them with a CMOS process, with first tape-outs completed at SkyWater[14]. Technical significance: this is IonQ's first chip platform designed for high-volume semiconductor production lines, a path that traces back to its two acquisitions of Oxford Ionics and SkyWater[14]; the prior scaling bottleneck for trapped ions was not a physical limit but manual assembly and optical addressing, and moving the control electronics onto the chip is the standard way around that layer. Against current SOTA: what has actually been disclosed here is the completion of first tape-outs and the successful trapping of the first ions[14]; 256 is a product design scale rather than a demonstrated operational qubit count, and cannot yet be compared side by side with Quantinuum Helios's 98 all-to-all

connected qubits. Two-qubit gate fidelity was also not disclosed, so it cannot be aligned with this platform's baselines (99.99% for a single pair, 99.921% across all qubit pairs in commercial operation), and no ion-transport overhead or circuit repetition rate was given — and those two are the real bottlenecks for trapped-ion scaling. Landscape impact: if the fidelity figures are eventually delivered, trapped ions will for the first time have both scale and a foundry path, putting pressure directly on superconducting vendors that sell on qubit count; if they are not, 256 is just a packaging number.

Solid-State Color Centers

Fujitsu built a diamond spin QPU prototype, integrating tin-vacancy (SnV) color centers into a photonic integrated circuit, operating at −271.6°C[20]. Technical significance: an operating point of roughly 1.55 K is two orders of magnitude higher than the ~10 mK regime typical for superconducting transmons, which loosens the cooling-power budget of the dilution refrigerator — the most concrete engineering dividend of this approach; SnV is also less sensitive to electrical noise than the more common nitrogen-vacancy center, and is paired with heterogeneous bonding and nanoscale diamond thinning to address

scaling[20]. Against SOTA: no gate fidelity or qubit count was released, so it cannot be benchmarked against published photonic figures such as 99.98% SPAM and 99.22% fusion fidelity; the key missing items are an end-to-end optical loss budget and the deterministic entanglement rate between color centers. Landscape impact: Fujitsu is advancing diamond spin and its own superconducting hardware in parallel, and plans to interconnect the two[20] — a 1–2 year observation window.

Superconducting

Researchers built RAQM, a quantum memory capable of holding 8 qubits in a single superconducting storage module[33]. Technical significance: in conventional superconducting architectures, storage and computation share the same pool of transmons, making storage density a direct function of wiring and crosstalk; packing 8 qubits into one module effectively separates "storage" from "compute" into distinct layers — a structural step toward scalable processors. Against SOTA: published physical qubit counts on the superconducting path run from 105 (Google Willow) to 120 (IBM Nighthawk), and an 8-qubit storage module is not directly comparable; what remains missing on the road to fault tolerance is measured performance of this module within surface-

code cycles — Willow's error-suppression factor $\Lambda \approx 2.1$ with real-time error-correction closed loop remains the sole gold standard on this path, and the storage module offers no corresponding data. Landscape impact: if the storage module can be aligned with the error-correction cycle, the wiring bottleneck on the superconducting path gets pushed back, and the beneficiaries are every foundry and packaging/test player working on large-scale packaging.

Spin Quantum Dots

A new protocol uses modulated microwaves to perform dynamical decoupling on hole spins in silicon, with noise suppression that works not only while qubits idle but also during active computation, while simultaneously suppressing signal degradation and driving errors[22]. Technical significance: silicon qubits previously had to either add shielding or pause computation to dodge noise — trading time for fidelity; extending continuous-drive decoupling to the notoriously difficult hole spins means coherence-time gains can potentially be converted directly into executable gate counts. Against SOTA: spin quantum dots have the lowest N_ops (coherence time divided by gate time) of the five platforms, on the order of just 10^2–10^3,

which is this path's hardest weakness; this work attacks exactly that, but the published material gives no post-improvement N_ops figure or two-qubit gate fidelity, so it is impossible to judge whether it approaches this platform's baselines of 99.99% (donor qubits) and >99% in random sampling across 300mm wafers. Landscape impact: the silicon pitch has always been "it can use existing CMOS lines" — only if N_ops rises does that foundry advantage actually monetize, and the most directly affected are silicon-based startups tied to major semiconductor manufacturers.

Photonics

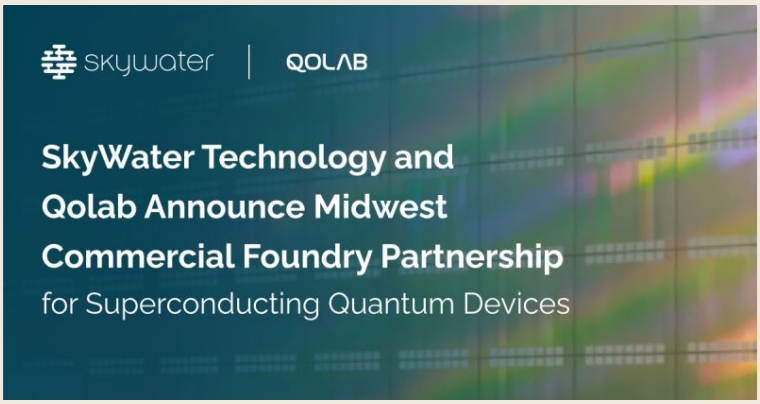
Researchers proposed and numerically demonstrated an optical controlled-Y gate based on a single-layer Pancharatnam–Berry gradient metasurface, operating at 1550 nm[21]. Technical significance: two-qubit controlled gates like controlled-Y are basic building blocks of universal quantum computing, and compressing one into a single flat metasurface replaces the alignment work of an entire set of discrete optical components with a single element; 1550 nm is precisely the telecom band, matching existing fiber infrastructure. Risk note: this is currently a numerical demonstration rather than a fabricated device, and photonic fidelities are

conventionally conditional values — "conditioned on photon detection" — which cannot enter engineering scoring without an itemized loss budget. Landscape impact: if experiment bears it out, the volume and alignment costs of photonic quantum circuits drop substantially, with integrated-photonics foundries and component makers the beneficiaries.

New Concepts

A team proposed a new design for building a quantum computer from helium-3, exploiting its faster tunneling rate to buy higher operating speed and stability[6]. Technical significance: helium is the lightest atom that can be laser-cooled and manipulated, and tunneling rate rises as mass falls — a physical shortcut to higher gate speeds. Against SOTA: the current hard constraints on the neutral-atom path are the 1–10 Hz circuit repetition rate and mid-circuit measurement capability, not single-gate speed; this design remains conceptual, with no fidelity or array scale given. Landscape impact: it does not change the near-term picture in which neutral atoms lead on logical qubit count (96 logical qubits, QuEra), and belongs to the 3-year-plus alternative-path category.

Algorithms and Software



IonQ's elliptic-curve-breaking resource estimate is the most substantial software result of this issue: IonQ says it delivers a complete compilation pipeline and end-to-end resource estimate for 256-bit ECC signatures, mapped down to quantum error-correction primitives; the claim comes from the company's blog and has not been peer-reviewed [5]. Technical significance: the chronic flaw in such estimates has been that the algorithm layer and the error-correction layer talk past each other, with the intervening compilation and layout overhead patched in by empirical fudge factors that can be off by an order of magnitude; compiling the circuit all the way down turns "how many physical qubits, and for how long" into an auditable engineering quantity. Against SOTA: the highest publicly verified logical qubit count is

96 (QuEra, [[16,6,4]] code, 448 physical qubits), still several orders of magnitude from the scale required to break a 256-bit curve — the value of this estimate lies in calibrating that gap precisely, not in declaring the threat imminent. Landscape impact: post-quantum migration budgets in finance, certificates and blockchain now have a reference frame an auditor can cite.

A new framework for automatically locating quantum-state errors: a model-based method automatically quantifies each source of degradation in prepared states[23]. Technical significance: state-preparation errors were previously chased down with manual tomography and experienced judgment; automatically decomposing "which link broke" turns debugging from a craft into a process. Landscape impact: the beneficiaries are every hardware team that has to calibrate frequently, and it directly compresses machine downtime for calibration.

Improved accuracy in molecular dynamics simulation: a new method for fault-tolerant quantum computers pairs the Walsh–Hadamard transform with a discrete variable representation to improve the accuracy of simulating nuclear motion[24]. Technical significance: nuclear motion has long been the piece approximated away in quantum

chemistry simulation, and better accuracy means tighter confidence intervals on reaction-pathway prediction. Landscape impact: this is a reserve algorithm for the fault-tolerant era; the usable date for pharmaceutical and materials customers still trails the hardware.

Reconstructing Hamiltonians from limited data: a new algebraic method can infer a complete Hamiltonian (the mathematical expression describing a system's total energy) from a simplified model[27]. Technical significance: previously, without knowing all of a system's details you could not determine its complete behavior; this opens a crack in that wall — though the authors also acknowledge the method is not universal[27]. Landscape impact: an immediately usable tool for teams doing device characterization and noise modeling.

Skala functional lands in CP2K: a data-trained exchange-correlation functional has been validated inside mainstream quantum chemistry software, with error reaching 0.020 kcal/mol[26]. Technical significance: 0.020 kcal/mol is already inside the chemical-accuracy range, and without a proportional increase in compute; but the authors explicitly note that performance degrades beyond small molecular systems or for extended solid-state

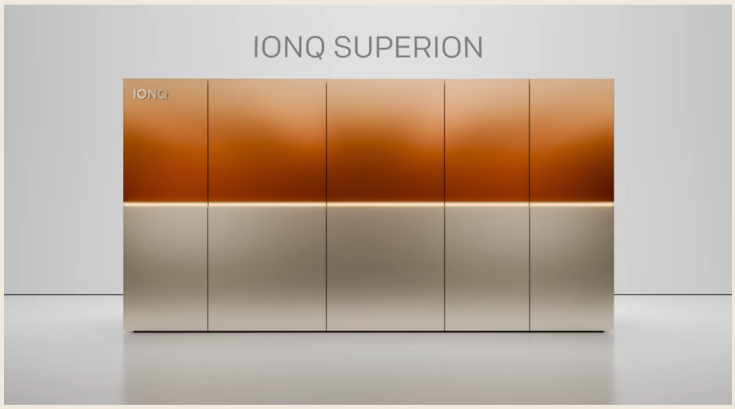
materials[26]. Landscape impact: this is progress on the classical side, and it raises the bar for arguing that quantum chemistry simulation "requires a quantum machine" — proving the value of quantum algorithms just got harder.

A realistic assessment of hybrid quantum-classical molecular simulation: a team at Northwestern Polytechnical University argues that such methods carry a critical tension between theoretical elegance and engineering feasibility, and that the hybrid route offers only an incremental path[31]. Landscape impact: it cools near-term commercial promises in molecular simulation; investors should push their payoff windows further out.

Qoro connects to UK supercomputing: Qoro signed a memorandum of understanding with the STFC Hartree Centre to link its software to high-performance computing infrastructure through the Quantum Resource Management Interface (QRMI), with target problems in electronic structure theory[34]. Technical significance: scheduling a quantum machine as just another class of accelerator inside a supercomputer is the most realistic deployment form available today. Landscape impact: this affects the procurement logic of national supercomputing centers, on a 1–2 year scale.

04 Industry

Industry and Ecosystem



Government Awards: Five Finalized

GlobalFoundries received a $375 million R&D award from the U.S. Department of Commerce for its quantum technology solutions business, strengthening domestic U.S. quantum chip manufacturing [29]. PsiQuantum finalized $100 million in CHIPS Act funding to accelerate domestic semiconductor process development and onshore supply-chain security for fault-tolerant quantum computing infrastructure, with the money supporting a 300mm wafer line for barium titanate (BTO, an electro-optic switching material) and single-photon detector optimization [13]. D-Wave likewise finalized a $100 million agreement while pursuing two superconducting architectures in parallel — quantum annealing and gate model — targeting a 100,000-qubit system and a 10,000-physical-qubit QPU respectively; as

consideration, the Department of Commerce took a minority equity stake[19]. Rigetti received a $100 million award from the U.S. government to advance superconducting quantum computing R&D[30]; Quantinuum received a $100 million CHIPS R&D award[32].

Commercial significance: the key difference in this round is not the amount but the form — the Department of Commerce is taking equity rather than only issuing subsidies[19], tying the return on taxpayer money to the valuation of the assets; at the same time, PsiQuantum's award points explicitly at 300mm lines, materials and packaging[13], while D-Wave's is explicitly targeted at a 100,000-qubit system and a 10,000-physical-qubit QPU[19]. Against SOTA: PsiQuantum's funding goes to a barium titanate 300mm wafer line plus single-photon detectors and packaging-line optimization[13], and its Omega chip has already reached 99.98% dual-rail-encoded SPAM and 99.72% chip-to-chip interconnect fidelity (over 42 meters of fiber), so the funding direction is consistent with its existing strengths; the public material on Rigetti's award says only that the money comes from the U.S. government and will advance superconducting quantum computing R&D[30], with no qubit count or two-qubit gate fidelity given for its production systems — whether $100 million

converts into fidelity is the thing to watch. Landscape impact: the U.S. has formally added quantum hardware to its industrial-policy toolbox, and matching moves from Europe and Japan are likely within 6–12 months.

> **Foundry: SkyWater Turns Quantum Into a Foundry Business**

SkyWater established a dedicated commercial foundry unit for quantum solutions, offering two standardized process platforms — SC250 for superconducting circuits and SP90 for quantum photonic routing — and has already won joint development contracts[18]. In parallel, SkyWater signed a multi-year agreement with Qolab, making Qolab the launch customer for the SC250 platform and moving its quantum system-in-package (QSiP) architecture from research into commercial manufacturing[17].

Commercial significance: this is the first appearance in quantum hardware of a semiconductor-style "standard process kit plus multiple customers" model; previously every hardware company built its own process. Standardization means fixed costs for new entrants fall sharply. Landscape impact: the hardest hit are hardware startups that treat "proprietary process" as their moat, whose

technical premium will be diluted by foundry platforms — a window of roughly 2 years.

Financials: IonQ Raises Full-Year Guidance

IonQ raised its full-year 2026 revenue guidance to $450–460 million, incorporating the contribution from SkyWater, whose acquisition closed on July 31[15]; the company says manufacturing speed for 256-qubit processor wafers has tripled, with 12 times as many wafer lots delivered every six months[15].

Commercial significance: the incremental revenue comes mainly from the consolidated foundry business rather than quantum machine sales, and investors need to separate "quantum revenue" from "semiconductor foundry revenue"; the 3x and 12x figures describe capacity, not performance. Landscape impact: the valuation anchor for publicly listed quantum companies is sliding from technical metrics toward recognizable revenue, raising the odds that peers follow with acquisitions.

Other Developments

QUDORA Technologies received EU support through the EuroHPC Joint Undertaking to scale its near-field quantum control technology (aimed at microwave qubit control)[28].

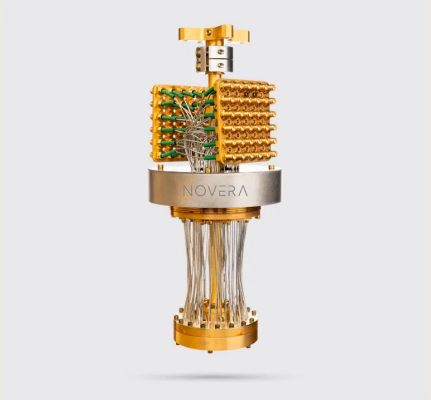
Technical significance: control electronics is a major cost driver shared by trapped ions and superconducting alike, and the EU's choice to invest in the control layer rather than the qubits themselves is a play for infrastructure positioning.

NLM Photonics brought in a new investor to scale up industrialization of its organic photonics technology[47]. The 16 finalists at Constructor Start Demo Day include quantum startups[45]. Daniel Freedman joined Quantum X Labs as Distinguished Quantum Scientist[46]. Infleqtion (NYSE: INFQ) announced its participation in the 2026 Quantum World Congress, where CEO Matt Kinsella will deliver a keynote on scaling quantum computing, and company executives will also discuss applications of neutral-atom technology in defense, aerospace and manufacturing[1].

At the ecosystem level, Finland's Kvanttinova ecosystem bundles semiconductors, microelectronics and photonics together with quantum technology[3]; research at Italy's FBK Center for Sensors and Devices spans advanced materials and single-photon technology[2]. Opinion pieces also discuss how tokenized finance can prepare for post-quantum security[48], and the question of legal liability in the use of quantum technology[4].

05 Other

Academic Frontier



A quantum advantage game with a provable classical limit: researchers designed a game-form verification scheme that uses a provable classical upper bound to determine whether a machine is genuinely exploiting quantum effects[7]. Technical significance: every prior method of verifying quantum advantage has run into the same wall — the boundary of classical simulability keeps being pushed higher, invalidating the verdict along with it; writing the classical bound in provable form upgrades verification from "no one can simulate it for now" to "impossible in principle." Landscape impact: once protocols like this become standard, hardware vendors' advantage claims will no longer be settled by their own materials, and buyers and auditors will for the first time have an independent criterion.

First direct observation of gravitational effects at the quantum level: physicists used ultracold atoms to split an atom's quantum wave in two — one half held in place, the other falling freely under gravity — then recombined them to measure the tiny difference between the two[37]. Technical significance: this puts Einstein's foundational premise inside a quantum superposition for a direct test, an effect long predicted but never directly observed. Landscape impact: no near-term engineering relevance; over the long term it points to the sensitivity ceiling of quantum gravimetric sensors, on an observation window of 5 years or more.

The double-slit experiment shrunk to atomic scale: researchers used a crystal itself as an atomic-scale interferometer, achieving direct visualization of local atomic arrangements[9]. Technical significance: compressing a textbook interference experiment down to the atomic scale yields structural characterization capability, not merely a demonstration of principle. Landscape impact: a direct addition to the toolkit for materials characterization.

A step forward in detecting fractons: a quantum model closer to real materials provides evidence that fractons — quasiparticles that are nearly immobile — may exist in solid-state materials, with that

immobility making them exceptionally robust candidates for quantum information storage[36]. Technical significance: topologically protected information storage has long lacked a realizable carrier, and fractons are an approach that sidesteps decoherence rather than fighting it. Landscape impact: a long-term variable on the topological path, posing no near-term competition to the five current mainstream hardware platforms.

Finding usable energy in quantum waste heat: physicists identified extractable useful energy in driven-dissipative quantum systems[44]. Technical significance: dissipation in quantum devices has always been treated as pure loss, and counting part of it back as available energy rewrites the energy-budget model for cryogenic systems.

Magnetic-storage switching energy could drop by orders of magnitude: by mathematically optimizing the pulses used to flip a bit, a new method can reduce the switching energy of magnetic memory by several orders of magnitude, with simulations suggesting it could approach the fundamental physical limit of information processing[35]. Landscape impact: no direct connection to quantum computing, but every unit of heat budget is scarce in a cryogenic environment,

and this kind of optimization applies equally to quantum control peripherals.

Observing glassy behavior on a superconducting processor: measurements on a superconducting processor show that complex systems with glassy behavior can be observed trajectory by trajectory, with spacetime-region analysis revealing how "inactivity" spreads through the system[25]. Technical significance: this establishes that contemporary processors can already serve as platforms for studying such dynamics — an application in the "useful right now" category, rather than one waiting for fault tolerance. Landscape impact: condensed-matter research users are the most realistic paying customer base available today.

A photon that should not have reached Earth: new work by Giorgio Galanti (INAF) and Marco Roncadelli (INFN) examines a photon that crossed more than 2 billion light-years and should, by known physics, have been absorbed en route; the paper has been accepted by Physical Review Letters[8]. Landscape impact: unrelated to computing, but it places new observational constraints on particle hypotheses beyond the Standard Model.

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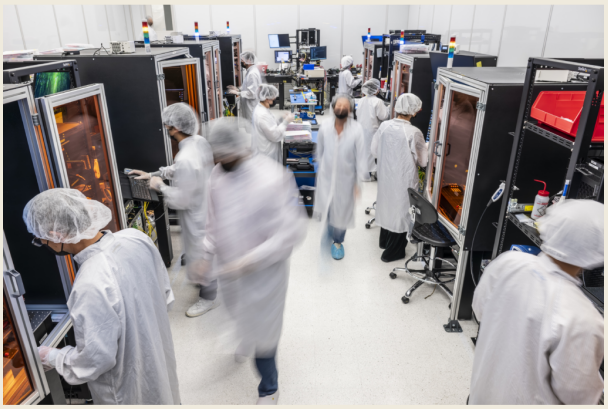
06 Impact

Today's Impact



1 **Compliance departments have a new reference frame as of today.** Who is affected: banks, payment networks, certificate authorities, custodial wallet providers. What changed: IonQ says its resource estimate for breaking 256-bit elliptic-curve signatures has been compiled all the way down to the error-correction layer — a claim that comes from the company's blog and has not been peer-reviewed [5] — so migration schedules no longer have to rest on vague vendor-framed warnings. What to watch next: whether the estimate's physical qubit count and runtime are independently reproduced by third parties, and whether regulators cite its figures in guidance.

1 **The capital structure of U.S. quantum hardware has changed in kind.** Who is

affected: the five companies receiving awards and their supply chains. What changed: the U.S. government finalized $375 million plus four $100 million awards[29] [13] [19] [30] [32], with D-Wave giving up a minority equity stake as consideration[19] — the government has gone from subsidizer to shareholder. What to watch next: whether the other four also carry equity terms, and the actual number of 300mm tape-outs within 12 months of the money landing.

1. **The moat in quantum hardware is starting to move away from process.** Who is affected: every hardware startup with an in-house process. What changed: SkyWater launched standardized SC250 superconducting and SP90 photonic-routing process platforms and signed launch customer Qolab[18] [17], and IonQ's 256-qubit chip also completed its first tape-outs at the same foundry[14]. What to watch next: whether a second and third customer appear — only multiple customers prove this is a foundry business rather than custom outsourcing.

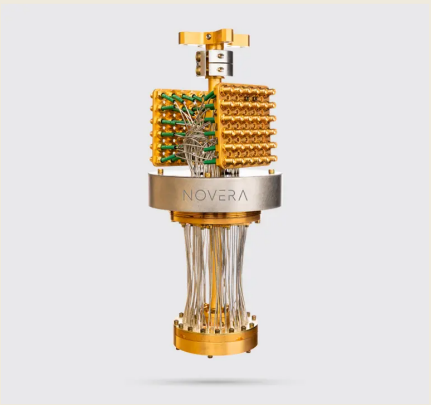
1. **The valuation anchor for listed quantum companies is being swapped out.** Who is affected: public-market investors. What changed: IonQ raised full-year revenue

guidance to $450–460 million, with the increment coming mainly from the consolidated SkyWater foundry business[15]. What to watch next: whether the next earnings report discloses quantum machine revenue and foundry revenue separately; without that split, there is no way to judge whether a technology premium actually exists.

1 **The time ledger for silicon qubits may be rewritten.** Who is affected: the silicon spin quantum dot camp and the semiconductor manufacturers tied to it. What changed: modulated-microwave decoupling can suppress both noise and driving errors during idle periods and active computation alike[22], aimed squarely at this platform's hardest weakness — the lowest executable gate count of any approach. What to watch next: when the post-improvement executable gate count and two-qubit gate fidelity are published — without those two numbers, the conclusion counts only as directionally positive.

07 Other

Editor's Note



The most notable thing today is not any single technical advance but a change in the form of the money. Five government awards landed, and the money points at 300mm wafers, electro-optic switching materials, packaging and single-photon detectors; only D-Wave's explicitly names targets of a 100,000-qubit system and a 10,000-physical-qubit QPU[19] — and one of the recipients handed over a minority equity stake. This means the yardstick is sliding from "whose chip has more qubits" toward "who can get a process running and deliver capacity." Echoing that is the crystallization of the foundry model — a standardized process platform plus multiple customers, the road the semiconductor industry walked for forty years, which quantum hardware has reached in under ten. For hardware startups this cuts both ways: the barrier to entry has come down, but so has the

value of a valuation story built on proprietary process as the core defense.

The other undercurrent is the transfer of verification authority. Once advantage-adjudication protocols with provable classical limits mature, claims of quantum advantage will no longer be settled by the claimant's white paper; compiling the resources for breaking elliptic-curve signatures all the way down to error-correction primitives likewise swaps "we think it's soon" for "you can work it out yourself." These two point the same way: the industry is moving from a phase that runs on trust to one that runs on verifiable numbers. For researchers, that means reproducibility becomes hard currency again; for investors, it means diligence finally has an independent entry point that does not depend on vendor explanations. Meanwhile, progress on the classical side has not paused — chemical accuracy has now been touched inside conventional software by a data-trained functional, a reminder to everyone that what a quantum machine has to prove was never "it can compute this," but "classical cannot." That bar was raised a little higher again today.

References

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[2] FBK Sensors and Devices Center advances research from biocomposites to quantum tech

[3] Kvanttinova ecosystem powers Finland’s leadership in semiconductors, microelectronics and quantum technologies

[4] You’re legally responsible.

[5] IonQ | We Just Published the First Full-Stack Blueprint for Breaking 256-Bit Elliptic-Curve Signatures — Here’s What That Means

[6] Helium-3 lifts new quantum computing concept with faster tunneling rates

[7] A new game demonstrates quantum advantage with provable classical limits

[8] Superfluid qubit could help scale up quantum computers

[9] A photon that challenges Einstein: According to current physics, it should never have reached Earth

[10] Researchers shrink double-slit experiment to atomic scale

[11] IonQ Compiles Shor’s Attack on secp256k1 Down to 19,397 Ions and 26 Days per Attempt

[12] Research Group Leader in Numerics for Quantum and AI – QuTe, Saarland University

[13] Research Group Leader in Quantum Mathematics – QuTe, Saarland University

[14] Research Group Leader in Quantum Informatics – QuTe, Saarland University

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[16] PhD Scholarship: Practical self-correcting quantum memories | University of Sydney, Australia in partnership with Sygaldry

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[18] PsiQuantum Executes Definitive $100 Million CHIPS Act Award with U.S. Department of Commerce

[19] IonQ Debuts Sixth-Generation Superion QPU Architecture Featuring On-Chip Electronic Control and CMOS Integration

[20] IonQ Publishes End-to-End Fault-Tolerant Resource Estimate for Shor’s Algorithm on 256-Bit Elliptic Curves

[21] IonQ Raises Full-Year 2026 Revenue Outlook to $450 Million–$460 Million Post-SkyWater Consolidation

[22] IonQ and Congruity360 Execute $8.18 Million Commercial Quantum-Safe Network Agreement

[23] SkyWater Technology and Qolab Establish Midwest Commercial Foundry Agreement for Superconducting Devices

[24] SkyWater Launches Dedicated Quantum Solutions Merchant Foundry Division

[25] D-Wave Finalizes Definitive $100 Million CHIPS Act Agreement with U.S. Department of Commerce

[26] Fujitsu Fabricates Diamond-Spin QPU Prototype Integrating Tin-Vacancy Centers and Photonic ICs

[27] Researchers create a quantum gate with a single, flat metasurface

[28] Researchers Extend Qubit Coherence with Modulated Microwaves

[29] New method automatically finds errors in quantum states

[30] New method boosts accuracy of quantum molecular dynamics

[31] Researchers Find Glass Behaviour on Quantum Computer

[32] Researchers Validate Skala Interface in CP2K, Achieving 0.020 Kcal/mol Error

[33] Researchers Rebuild Hamiltonians from Limited Data

[34] QUDORA wins EU backing to scale its microwave qubit control tech

[35] GlobalFoundries wins $375M to build US quantum chip manufacturing

[36] Rigetti wins $100M from US government for quantum R&D

[37] Researchers Simulate Molecule Reactions with Quantum Methods

[38] Quantinuum gets $100 million to build quantum computers in the US

[39] RAQM: Eight qubits stored in a single superconducting memory module

[40] Qoro and Hartree Centre link quantum software to UK supercomputers

[41] University of Surrey designs superfluid helium qubit to cut errors by 100x

[42] Scientists find a way to slash computer memory energy use by orders of magnitude

[43] An important step towards detecting fractons in quantum spin liquids

[44] Scientists observe Einstein’s gravity in the quantum world for the first time

[45] This cosmic particle was never meant to reach Earth. Now scientists think they finally know why it did

[46]

There are just five perfect shapes in math—here's why

[47] OpenAI claims blockbuster math breakthrough amid swirl of controversy

[48] Something unique seems to be happening to the brain in menopause

[49] New Google DeepMind atlas could transform our understanding of genetic diseases

[50] AI may have just solved a million-dollar math problem. The field will never be the same

[51] Bosses are using AI to spy on employees' productivity—does it work?

[52] Do birds enjoy flying? Scientists asked cockatoos

[53] Physicists Find Useful Energy Hiding in Quantum "Waste Heat"

[54] IonQ Uses Investor Day to Detail Superion Roadmap, SkyWater Strategy and Quantum Security Plans

[55] Quantum Startups Among 16 Finalists Selected for Constructor Start Demo Day

[56] QUDORA Joins EuroHPC Quantum Grand Challenge With Near Field Quantum Control Project

[57] Daniel Freedman Joins Quantum X Labs as Distinguished Quantum Scientist

[58] IonQ Launches Superion 256 Quantum Computing Platform

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[60] PsiQuantum Finalizes $100 Million Award with the U.S. Department of Commerce

[61] NLM Photonics Adds New Investors to Scale Organic Photonics Technology

[62] IonQ and Congruity360 Sign $8.18M Quantum-Safe Network Agreement

[63] SkyWater Launches Quantum Semiconductor Manufacturing Business

[64] Guest Post: How Tokenized Finance Can Prepare for Post-Quantum Security

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