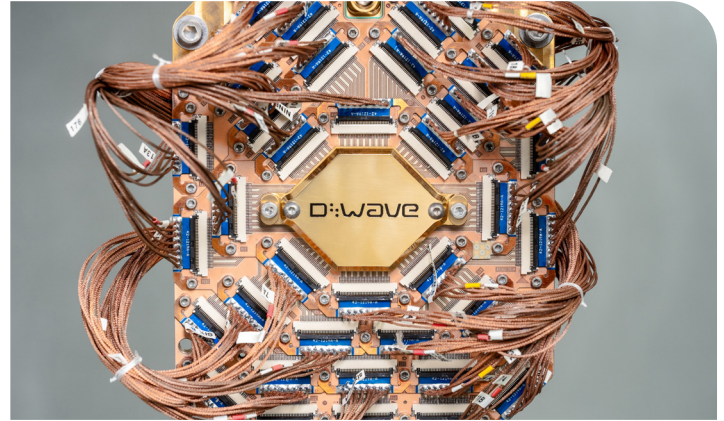


D-WAVE

advantage2™

QUANTUM COMPUTER

Production-Ready
Quantum Performance
for Business and Science



The Advantage2 system, available via the Leap quantum cloud service, is D-Wave's most advanced annealing quantum computer, offering energy-efficient computing to solve computationally hard problems. It is capable of solving problems beyond the reach of classical computers. The Advantage2 system features 4,400+ qubits, 20-way connectivity, and hybrid solver integration, delivering enhanced scale, speed, and solution quality.

D-Wave's sixth-generation annealing quantum computer, the Advantage2 system is production-ready and built to address real-world use cases in areas such as optimization, materials simulation, and artificial intelligence (AI). D-Wave's quantum computers are trusted by enterprises, researchers, and governments.

Customers can access the Advantage2 system via D-Wave's Leap real-time quantum cloud service, which is available in 40+ countries and offers 99.9% availability and uptime, sub-second response times and SOC 2 Type 2 compliance to meet enterprise needs and security requirements. For hyperscalers and supercomputing centers that want to integrate quantum computing into their infrastructure, the Advantage2 system is also available for on-premises installation. D-Wave has successfully deployed systems around the world since 2011. No matter how customers choose to access D-Wave's quantum computers, our multidisciplinary team is here to support with on-call technical experts, robust documentation and training.

Key System Features

4,400+ Qubits

Solve more complex computational problems

40,000+ Couplers

Dense connectivity supports compact, high-fidelity problem embeddings

20-Way Connectivity*

Zephyr™ topology enables embedding of more complex problems

40% Higher Energy Scale*

Contributes to faster time-to-solution and high-quality results

2x Coherence*

Enhances overall performance and drives faster time-to-solution

4x Lower Noise*

Reduces noise for enhanced solution stability

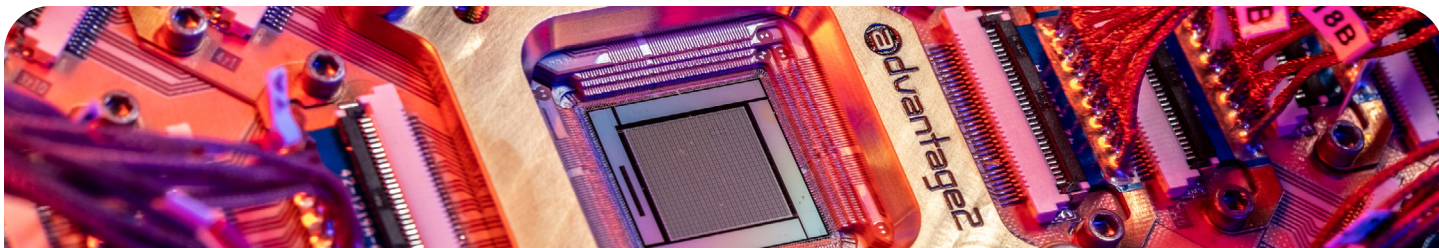
Fast Anneal

Enables quicker, more coherent quantum computations

Hybrid Solver Integration

Enables scaling via quantum-hybrid computing, with support for up to 2 million variables

*Compared to the D-Wave Advantage system



Who It's For: Realizing the Benefits of Quantum Today



Businesses

- Solve supply chain, logistics, scheduling, and operations optimization problems
- Gain quantum-optimized decision support for portfolio planning and modeling
- Accelerate innovations in AI/ML and intelligent systems and applications



Researchers

- Conduct more precise quantum experiments with improved coherence
- Model complex, high-dimensional systems—beyond toy problems
- Access through Leap quantum cloud service and the Ocean™ SDK



National Labs, Government Agencies, and Advanced Computing Centers

- Align your Advantage2 system configuration to meet specific research and operational needs
- Accelerate scientific discovery through advanced research enablement
- Unlock new potential for integration with high-performance computing (HPC) environments, enabling scalable hybrid quantum-classical workflows



Proven Performance Advantages

The Advantage2 system delivers measurable enhancements in quantum performance over the previous Advantage™ quantum system that directly translate to business and science outcomes.

More than 20 million jobs were submitted to the Advantage2 prototypes during the two-year period that they were available in the Leap service, demonstrating strong demand and early validation of the real-world applicability of this technology.

D-Wave demonstrated quantum supremacy on an Advantage2 prototype, solving a real-world problem in magnetic materials simulation.

A team of scientists simulated quantum dynamics in spin-glass materials using both D-Wave's Advantage2 prototype and the Frontier supercomputer at Oak Ridge National Laboratory. The quantum system completed the most challenging simulation in minutes—a task estimated to take **nearly one million years** on one of the world's most powerful supercomputers.

Customer Spotlight

D-Wave's annealing quantum computers are supporting enterprise production applications and pioneering research and scientific breakthroughs.



Optimization

Ford Otosan created a hybrid quantum application utilizing D-Wave quantum technology to optimize vehicle production sequencing in the body shop, reducing scheduling of 1,000 vehicles from 30 minutes to less than 5 minutes, a 6x improvement.

Learn more [here](#).



Research

The Jülich Supercomputing Centre uses a D-Wave Advantage system to facilitate breakthroughs in quantum AI and quantum optimization and expects to connect it with the JUPITER supercomputer, Europe's only exascale HPC for advanced research.

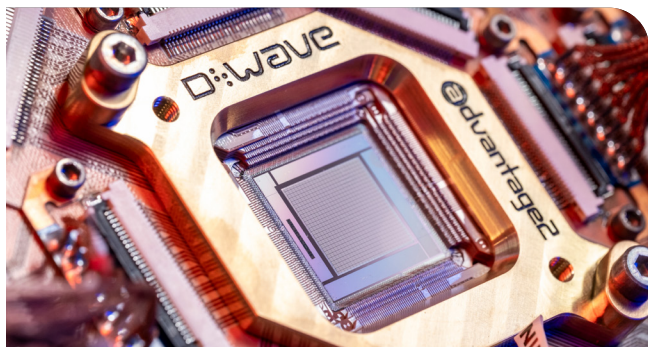
Learn more [here](#).



AI

Japan Tobacco leveraged D-Wave's quantum hybrid workflow to improve Large Language Model training for early-phase drug discovery. The quantum-enhanced approach achieved better learning accuracy with fewer parameters than classical methods.

Learn more [here](#).



Ready to Get Started?

Whether you're solving optimization problems, exploring quantum AI, or deploying quantum infrastructure, D-Wave's Advantage2 system is built to deliver real-world results—today!

[Explore what's possible.](#)

System Specifications at a Glance

The Advantage2 system is available for on-premise installation. For its physical specifications, and for details of its electrical, cooling, environmental, and networking requirements, see the D-Wave [documentation](#).

D·WAVE
QUANTUM REALIZED.