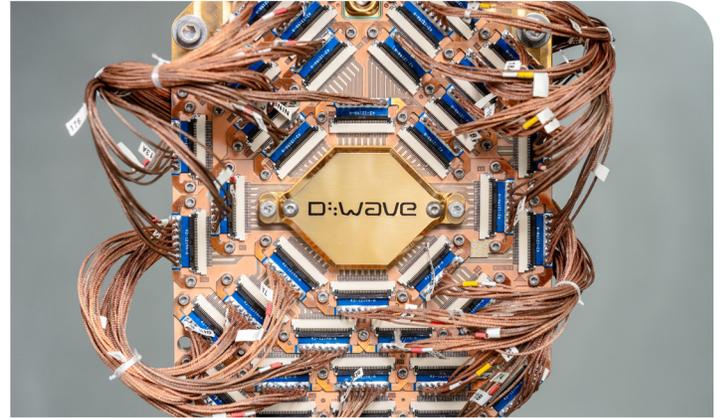


D:wave

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 in business and science that are 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.

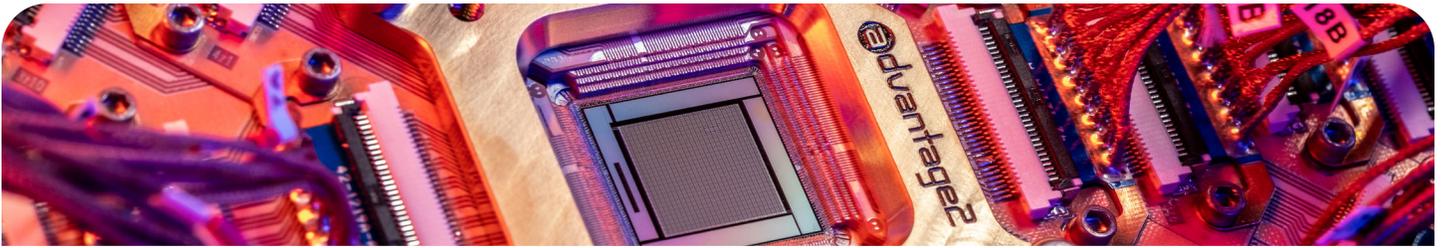
D-Wave's sixth-generation annealing quantum computer, the Advantage2 system is production-ready and built to address real-world use cases in areas such as optimization, materials simulation, and artificial intelligence (AI). D-Wave's quantum computers are trusted by enterprises, researchers, and governments.

Customers can access the Advantage2 system via D-Wave's Leap real-time quantum cloud service, which is available in 42 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 to purchase for on-premises ownership. 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 larger, more complex computational problems	44,000+ Couplers Dense connectivity supports compact, high-fidelity problem embeddings	20-Way Connectivity* Zephyr™ topology enables embedding of larger problems with fewer physical qubits	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: Empowering Customers to Go Beyond Classical



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.

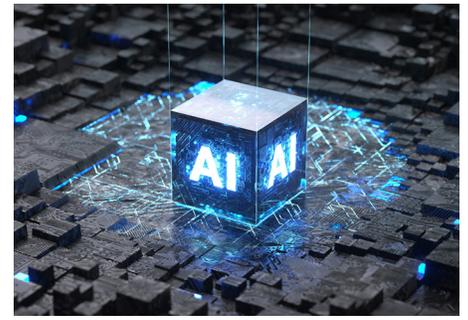
Learn more [here](#).



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.

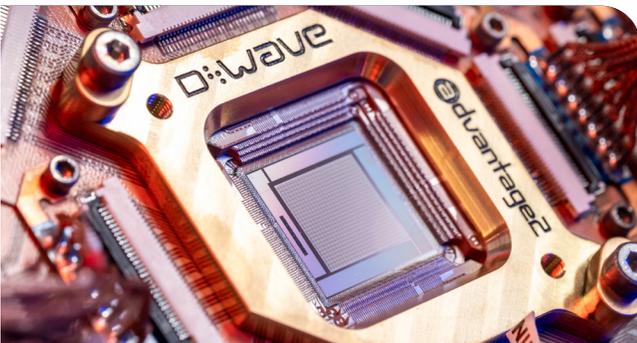
Learn more [here](#).



AI

Shionogi 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.