



# PASQAL

## Harness the Power of Quantum Computing

### WHO ARE WE?

Founded in 2019, PASQAL develops and markets scalable Quantum Processing Units (QPUs) that have the potential to address complex computing issues, from fundamental science to real-world grand challenges.

The company is a spin-out from Institut d'Optique Graduate School in Palaiseau (France), one of the leading quantum research centres in the world.

PASQAL is the only European company offering Quantum Processing Units with a number of qubits, level of performance and maturity allowing practical use for both industrial and academic applications as of today.



A sketch of the QPU

*We are building multi-purpose quantum processors in the 100 – 1000 qubit range*

### Technology

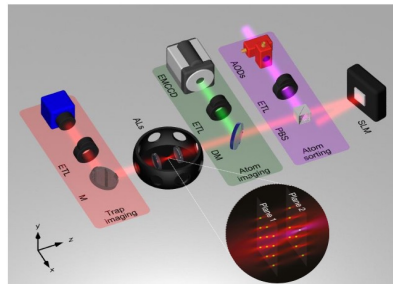
Our QPUs are built around a core of neutral atoms which can be precisely addressed, controlled and arranged in 1D, 2D and 3D geometries, thus providing outstanding flexibility to model and process various use cases and calculations.

100 qubit QPUs are available as of 2021 and 1000 qubit QPUs will be available by 2023.

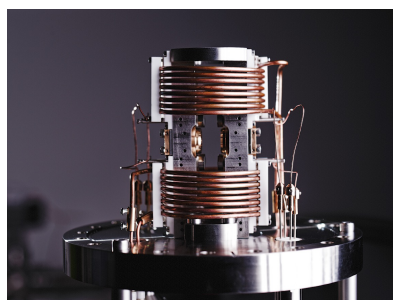
Our processors are designed as accelerators which integrate easily into High Performance Computing (HPC) Centres, and are operated at room temperature. They come with a full software stack, allowing control from any standard computer.

### Applications

Our QPUs address complex computing issues, from fundamental science to real-world grand challenges that are out of the reach of today's most powerful classical computers, covering a vast range of topics: Optimisation, Simulation, Quantum Machine Learning (QML), Material Sciences, Quantum Chemistry, etc.



Thousands of qubits shaped by light



The core of the QPU

### Our Offer

- PASQAL's Quantum Computing Power can be made available to our clients:
  - Through appliances in national HPC centres / clients' premises
  - On the Cloud, with QPUs operated at PASQAL (Software as a Service & Platform as a Service)
- Clients also benefit from the support of PASQAL's expert engineers: we build with our partners Proof of Concept (PoC) studies on specific problematics related to their activities. We implement a co-design approach, centred on our partners needs, as we work closely with them on defining the problems to be solved and benchmarking with classical technics.

Reach out at: [contact@pasqal.io](mailto:contact@pasqal.io)