



# SPINQ

# Bringing Quantum Computer to Life

### Bringing the Future of Quantum Computing to our Life

"As a new technology that uses the laws of quantum mechanics to perform calculations, quantum computers are designed to tackle complex problems that traditional computers cannot solve. Quantum computing is shaping the future. From creating new medicines to crafting advanced materials, and from fine-tuning investments to addressing climate change, its impact is profound. As we stand on the brink of a new industrial wave, our goal is simple: to bring this powerful technology to more people, making its benefits widely accessible and understood."

——Jingen Xiang, Founder&CEO of SPINQ

# SPINQ is a one-stop solution provider dedicated to the industrialization and popularization of quantum computing



- Product sales span over 30+ countries and regions worldwide.
- **Top-selling** quantum computer company worldwide.
- The **FIRST** company to distribute quantum computing products across all five continents.
- Launch the world's **FIRST** programmable desktop quantum computer, "SPINQ Gemini."
- The **FIRST** Chinese company to export superconducting quantum chips overseas.



# Driven by Both Technology R&D and Commercialization



Through breakthrough innovations in MINIATURIZED QUANTUM COMPUTER, to take the lead in the industry to achieve commercial implementation

Advancing toward the industrial-grade market through a FULL-STACK technological R&D approach

# Products





# **BUSINESS**





# Educational Grade NMR Quantum Products & Services

The SPINQ Education Grade NMR quantum computer series is based on the principles of nuclear magnetic resonance (NMR) quantum computing. Currently, various models, including experimental, desktop, and portable versions, have been launched. These products are characterized by low cost, maintenance-free operation, and high stability, offering a complete set of products and services for quantum computing research and teaching.





# **SPINQ Gemini Lab**

### **Quantum Computing Experimental Platform**

SPINQ Gemini Lab is as a one-stop experimental platform, it covers everything from quantum mechanics to computing. Equipped with advanced Radio Frequency technology and a highly open architecture, SPINQ Gemini Lab supports experiments from pulselevel to gate-level, and algorithm-level, making it ideal for both teaching and research in higher education.





### **Master Quantum Computing Fundamentals**

Help students, even beginners, build a solid foundation in quantum computing through hands-on experiments that quickly teach essential concepts and operations.

### **Explore Rich Quantum Algorithm Experiments**

Dive into various quantum algorithms with graphical and quantum programming, and validate your results on both real quantum systems and classical simulators.

### **Broaden Quantum Technology Experiments**

Gain expertise in quantum technologies like simulation, precision measurement, communication, spin resonance, and pulse control through experiment switching, equipment setup, and pulse waveform design

### **Unlock Open Research-Oriented Quantum Experiments**

Participate in semi-open exploratory experiments, including quantum optimization algorithms, simulations, and control optimization, all while also serving as a platform for quantum information research.

# **Features**





# **Advantages**



#### **Full Access to Low-Level Operations**

Each step of low-level operations provides a complete experience, from understanding and measuring quantum systems to controlling them and executing quantum computing tasks.



#### **Universal Experimental Principles**

These principles are adaptable across all leading quantum computing technologies, fostering the development of talent in quantum information science.



#### **Experimental Insight**

The open chassis provides a clear view of key components, including experimental samples, magnetic field, uniformity control, RF, and main control modules.



#### **Enhanced Experimental Design**

With clear objectives, procedures, and outcomes, the setup is ready for courses like classical mechanics, modern physics, and research experiments, offering a 'ready-to-use' solution.



# **SPINQ Gemini Mini/ Mini Pro**

### 2-qubit portable NMR quantum computer

SPINQ's next-generation 2-qubit portable NMR quantum computer SPINQ Gemini Mini series offers a comprehensive solution for quantum computing education and demonstration.

SPINQ Gemini Mini provides a complete solution for quantum computing education and demos, with a built-in touchscreen, control system, and curriculum for teaching and self-learning. It enables people with diverse academic backgrounds and knowledge levels to quickly grasp quantum computing basics and algorithm design.

SPINQ Gemini Mini Pro also offers enhanced performance, practical new features, and improved stability and accuracy, making it adaptable to a variety of applications.





### **Complete Quantum Logic Gate Operations**

Enables the real implementation of all single-qubit and two-qubit logic gates, laying the foundation for universal quantum computing.

### **Multi-Mode Quantum Programming**

Supports graphical quantum programming and a Python-based hybrid framework, offering flexible algorithm design and a learning path from basic to advanced levels.

### **Open Low-Level Hardware Access**

Offers access to qubit measurement and control, allowing for deeper insights into quantum computing by exploring the underlying physical phenomena and qubit operations.

#### **Comprehensive Quantum Learning Resources**

Includes courses, exercises, and real quantum computing practice, making it an ideal platform for learning and teaching quantum information.

# **Features**





# **Advantages**



#### **Authentic Quantum Computing Device**

Leveraging NMR principles, it enables quantum computations on real teaching instruments, ensuring highly credible results.



#### Improved Room-Temperature Stability

Runs consistently across a broader range of room temperatures, offering excellent cost-efficiency and requiring no maintenance.



#### **Streamlined Control Experience**

Featuring a built-in touchscreen and control system, it offers an all-in-one operation without external devices, making it more convenient and easy to use.



#### **Expanded Use Cases**

Connects seamlessly with SpinQit, SpinQ' s custom software toolkit, enabling diverse quantum programming applications.



# **SPINQ Triangulum**

### 3-qubit desktop NMR quantum computer

SPINQ Tirangulum Provides a complete solution for quantum computing education and demonstrations, supporting any 3-qubit quantum algorithm and allowing users to freely write quantum programs. It also features open hardware-level pulse sequence editing. And it is cost-effective, maintenancefree, and highly stable.





### **Real Quantum Algorithm Demonstration**

With a 3-qubit quantum system, it supports single, double, and triple-qubit logic gates. Paired with SpinQuasar software, it can handle operations with over 40 single-qubit gates or at least 8 multi-qubit gates.

### **Classical-Quantum Hybrid Programming**

Supports quantum algorithm development in Python, with the option to use the SpinQit toolkit for combining classical and quantum logic in hybrid programming.

#### **Quantum Computing Fundamental Research**

Open access to NMR-based pulse control, signal acquisition, and system parameters allows deeper insights into qubit evolution by designing quantum control logic from physical principles.

### **Remote Hardware Access**

Enables remote access to quantum hardware via network API, with masterslave software allowing multiple users to connect simultaneously—ideal for collaborative use.

# **Features**





# **Advantages**



#### Improved Room-Temperature Stability

Runs reliably at room temperature with minimal maintenance, offering excellent cost-effectiveness and virtually no upkeep costs.



Provides open hardware-level pulse sequence editing with greater flexibility, accommodating various needs and applications.



#### Flexible Program Design

Users can freely create and customize quantum programs, enabling advanced algorithms with rapid execution and quick results.



#### Independent and Intuitive Experimentation

Each experiment runs on its own, with straightforward controls, manageable quantum resources, and no waiting time.



# **SPINQ Triangulum Mini** 3-qubit portable NMR quantum computer

SPINQ Triangulum Mini is a 3-qubit portable NMR quantum computer launched by SPINQ. The instrument with a newly designed pulse scheme, it provides a more stable experimental process, allowing for more diverse quantum computing experiments and meeting higher-level design requirements.





## **Features**

### **Three-Qubit Quantum Logic Gates**

Supports real quantum logic gates from 1 to 3 qubits, enabling the creation and execution of complex multi-qubit algorithms on an actual quantum system.

### **Multi-Mode Quantum Programming**

Supports graphical quantum programming and Python-based hybrid frameworks, allowing flexible algorithm design with a learning path from basics to advanced techniques.

### **Open Low-Level Hardware Functions**

Provides access to qubit measurement and control, enabling deeper understanding of quantum computing by exploring physical phenomena and qubit manipulation.





# **Advantages**



performance requirements for 3-qubit experiments.



#### **More Qubits**

The SpinQ Triangulum Mini, compared to 2qubit devices, offers more quantum gates and supports a wider range of experiments.



#### **Comprehensive Built-In Courses**

These courses cover a wide range of topics to meet diverse teaching needs, making them ideal for educators, students, and tech enthusiasts.



## INDUSTRIAL GRADE SUPERCONDUCTING QUANTUM PRODUCTS & SERVICES

From QPUs and QPU EDA to quantum control & measurement systems, SPINQ offers **a full-stack product ecosystem** including **superconducting quantum computers, algorithms, and software** to provide customers with cost-effective modular units, integrated systems, and complete solutions, paving the way for industrial applications.





# **SPINQ SQC** Superconducting Quantum Computer

SPINQ superconducting quantum computer uses the superconducting circuit with Josephson junctions for quantum computing. The qubits are formed by the macroscopic quantum effects of the superconducting circuits. Superconducting quantum computer's advantages include the scalability of qubits, high fidelity quantum logical gates, and the controllable coupling between multiple qubits, making it currently the fastest-developing and most industrialized quantum computing platform.







# **Module / Specifications**



#### **SPINQ SQC S20**

- Number of qubits: 20
- Single-qubit gate fidelity: 99.9%
- Double-qubit gate fidelity: 98%
- Average decoherence time T1: 30 us
- Space: 25 square meters
- Weight: 1500 kg
- Height: 3.0m
- Average power consumption: 20 kW

\* Subject to actual user requirements and installation





# **Advantages**



#### Long Qubit Lifetime & High-fidelity Gates

SPINQ superconducting quantum computers support various chips, including 20 high-fidelity qubits, ideal for complex tasks in quantum chemistry, materials science, and quantum finance, enabling advanced research and commercial applications.



#### **Comprehensive, Integrated Service**

We prioritize user needs with full-service support, including consultation, installation, and lifelong maintenance. Our approach covers the selection and installation of quantum chips, measurement and control systems, dilution refrigerators, accessories, and the SpinQit programming framework.





# **SPINQ** QPU Superconducting QPU

SPINQ QPU series features features 1D or 2D chain topologies and operates in an environment around 20mK. , It offers a high Qi value, long qubit lifetime and high stability, allowing qubits to maintain their quantum state for extended periods. This capability enables more computing operations and enhances the reliability and accuracy of quantum computing. Additionally, SPINQ's proprietary QPU fabrication center ensures independent control over product quality and QPU manufacturing process, minimizing crosscontamination risks and guaranteeing product quality and stability.





SPINQ QPU

# **Advantages**

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#### Standardized & Mass-produced

Through standardized QPU design simulation, fabrication, packaging, and testing processes, SPINQ has achieved the capability to produce commercially available highperformance QPUs with decoherence time (T1) of up to 100 µs or more.



#### Stable and Reliable, Highly Integrated, Easy to Use

SPINQ' s QPUs are fully packaged for straightforward installation and use in any experimental environment, eliminating the need for additional handling. They offer high flexibility and excellent thermal contact performance, ensuring stability and reliability.

#### **Robust Performance & Fully Controllable Qubits**

Users can achieve high-precision control over each qubit through independent control lines. When combined with SPINQ's QCM system, this setup enables high-fidelity quantum logic gate operations on SPINQ QPUs. Specifically, the fidelity of singlequbit gates can reach up to 99.9% or higher; two-qubit gate fidelity can reach up to 98% or higher.



#### **Factory Testing Report Included**

Each QPU product comes with a standard factory characterization report that includes measurements such as resonant cavity frequency, qubit frequency, decoherence time, and more, ensuring the product's reliability.



#### **Flexible Options for Diverse Applications**

SPINQ's QPU products are available in various configurations with different numbers of qubits, catering to diverse application scenarios and budgets requirements.



#### **Professional 1-on-1 Services**

We provide a variety of professional services for our QPU products, including customization, foundry services, design services, system solution tailoring, professional installation and training, as well as technical support.



SPINQ QPU

# **Module / Specifications**







### SPINQ QPU C2/C5/C10/C20

- Number of qubits: 2/5/10/20
- Topology: 1D chain/2D chain
- Qubit-qubit coupling strength: 10-20 MHz
- Qubit-qubit coupling type: Fixed capacitance coupling
- Qubit frequency (Max): 4-6 GHz
- Readout resonator frequency: 7-8 GHz
- Decoherence time (T1): 20~102 us
- Single-qubit gate fidelity: >99.9%
- Two-qubit gate fidelity: >99%



SPINQ QPU

# **Applications**

Quantum Computer Development and Validation



2-qubit/5-qubit QPUs are suitable for quantum computing development & validation tasks such as fundamental quantum computing research, proof-of-concept studies, and cryogenic system validation.

#### Quantum Computing Application Exploration



10-qubit/20-qubit QPUs offer more powerful computational capability. These 10-qubit/20-qubit QPUs can handle more complex quantum computing tasks and are applicable in broader and more sophisticated fields, including quantum chemistry, materials science, quantum simulations, and fintech.



# **SPINQ**

#### **Quantum Control & Measurement System**

SPINQ QCM System is designed for high compatibility with superconducting QPUs and features a modular architecture with high-precision RF control electronics. It is versatile, supporting various quantum computing platforms and capable of managing the measurement and control of hundreds of qubits. Utilizing FPGA for hardware-level acceleration, the system offers high vertical resolution and includes extensive tutorial codes for qubit characterization and calibration. This ensures users can achieve faster, more accurate, and more efficient qubit measurement and control.





# **Advantages**

# nhm

#### Faster

SPINQ QCM System features built-in hardware acceleration components. By utilizing FPGAs for distributed edge computing, it calculates and generates waveform files directly from pulse sequences at the hardware level. The system also performs real-time initial processing of collected signals and provides immediate feedback on qubit states to the host computer. This reduces data transmission between the system and the host computer, significantly decreasing experiment time.

#### **More Accurate**

SPINQ QCM System offers exceptional stability in frequency, power, and phase, with extremely low noise levels. It achieves sub-nanosecond synchronization accuracy and provides up to 16-bit vertical resolution. These features ensure highly precise and reliable qubit control and measurement.

### **More Convenient**

SPINQ QCM System features a modular design that enables scalability, allowing users to easily expand control capabilities by adding identical or similar units for up to hundreds of qubits. It integrates built-in network analyzer functions and spectrum analysis functions, which are essential for qubit control and measurement. The system supports remote FPGA program upgrades and includes automated qubit characterization and calibration functions. Additionally, it offers a comprehensive set of code examples for qubit characterization and calibration.



#### SPINQ QCM System

# **Module / Specifications**



### QCM-AWG-2208A

- Arbitrary waveform output channels: 8
- Frequency range: DC 450 MHz
- High-speed DAC (two output stages): 1 Vpp / 2 Vpp
- Real-time sampling rate: 2 GSa/s
- Vertical resolution: 16-bit
- Two output stages for DC bias: ±1 VDC / ±2 VDC
- FPGA direct connection DIO function: supported
- Microwave signal output channels: 4, supporting 2 independent frequency points (1 GHz 10 GHz)
- Onboard memory: 2 GB
- Power consumption: ~65 W (DC12V)
- Programming interface: Python API
- Dimensions: fits 19-inch standard cabinet



### QCM-QA-2124

- Data acquisition channels: 2
- Input frequency range: 100 kHz 400 MHz
- Sampling rate: 1 GSa/s
- Vertical resolution: 14-bit
- Maximum input signal amplitude: 2 Vpp
- Onboard memory: 1 GB
- Integrated functions: built-in network analysis function / built-in spectrum analysis function

- Arbitrary waveform output channels: 4
- Frequency range: DC 450 MHz
- High-speed DAC (two output stages): 1 Vpp / 2 Vpp
- Two output stages for DC bias: ±1 VDC / ±2 VDC
- Real-time sampling rate: 2 GSa/s
- Vertical resolution: 16-bit
- Onboard memory: 1 GB
- Microwave signal output channels: 2, supporting 1 independent frequency point (1 GHz - 10 GHz)
- Power consumption: ~65 W (DC12V)
- Programming interface: Python API
- Dimensions: fits 19-inch standard cabinet



#### SPINQ QCM System

# **Module / Specifications**



### QCM-TDU-101R

- Trigger signal output: supports up to 25 synchronous trigger outputs
- Channel synchronization: <100 ps
- Trigger signal input: DC 200 MHz
- Rise/fall time: <1 ns
- Power consumption: ~8 W (DC12V)
- Dimensions: fits 19-inch standard cabinet



### QCM-CDU-101R

- Clock signal output: supports up to 25 synchronous clock outputs
- Channel synchronization: <100 ps
- Clock signal input: 1 100 MHz
- Output waveform: square wave, AC coupled
- Power consumption: ~8 W (DC12V)
- Dimensions: fits 19-inch standard cabinet



### QCM-PDU-101J

- Power output: 18 channels DC / 12 V (total power 1800 W)
- Full-range AC input: 90 264 V (compliant with international standards)
- Features: built-in active Power Factor Correction (PFC) function
- One-button on/off switch
- Efficiency: up to 92%
- Protection modes: overvoltage / overtemperature
- Dimensions: fits 19-inch standard cabinet



# **Applications**

Qubit Control & Measurement



SPINQ QCM System is designed to meet the RF control electronic needs of various quantum computing platforms, including superconducting qubits, trapped ions, nerual atoms, semiconductor qubits, and NMR quantum computers.

#### Other Scientific Research Fields



With its enhanced speed, accuracy, and convenience, the SPINQ QCM System also finds significant applications in other scientific research areas, such as radar technology, general RF electronics, and electron paramagnetic resonance.



# QPU Foundry & Characterization Services

SPINQ provides QPU foundry services and professional QPU characterization. Our goal is to support companies and institutions that lack the necessary equipment or expertise, aiding them in the development and application of quantum computing technology.



# **Foundry Services**

We provide an integrated and cost-effective standard solution that combines superconducting QPU design consulting with foundry services, allowing clients to process and research superconducting QPU without the need for expensive manufacturing equipment or QPU design expertise.



### **Custom Chip Layout Design**

Tailored QPU layout design based on customer requirements.



### **Chip Fabrication**

QPU processing based on the provided layout design.



# **QPU Testing Services**

Whether it is the qubit characterization & calibration or the quantum algorithm verification, our testing center provides professional QPU testing services to meet the needs of users from various fields.






# **SPINQ Cloud** Quantum Computing Cloud Platform

SPINQ Cloud is a cloud platform developed by SPINQ that links various real quantum computing systems, featuring quantum computers with 2, 3, 5, and 8 qubits, and a high-performance simulation platform with up to 24 qubits. SPINQ Cloud not only meets the research needs of scientific researchers but also provides sufficient machine time for enthusiasts in the field of quantum computing.







#### **Real Machine Resources**

Connect to real quantum computers of various scales and technologies, e.g., NMR and superconducting, to meet diverse quantum computing task requirements.

#### **Online Advanced Programming**

Users can program and debug quantum tasks online using Python with Jupyter Notebook, enabling multi-user collaboration.

### **Features**



# High-Performance Quantum Simulator

Offers a 24-qubit full-amplitude quantum simulator for real-time instance creation and immediate execution without waiting.

#### **Clear task management**

Tasks are finely divided to display status, execution platform, source data, and easy import/export of code.

#### **Convenient Quantum Circuit Design**

Supports graphical interface circuit design and Open QASM editing, with synchronization between the graphical interface and code.

#### Algorithmic application of real cases

Provides visual, configurable quantum computing application cases that display algorithm details based on real-world problems.





# **Advantages**



#### **Custom Quantum Gate Operations**

Supports arbitrary single and two-qubit gate operation, including custom gate creation for complex circuit design.



#### **Local Task Submission**

Users can submit quantum computing tasks from their local computers to the cloud platform using SPINQit.



#### Multi-User Collaboration and File Management

Allows group file creation and simultaneous editing by multiple users within the same group.



#### **Rich Quantum Algorithm Examples**

Includes numerous typical quantum algorithm demonstrations, such as Grover's algorithm and quantum neural networks, within different modules.

### 0

#### Scalable Quantum Computing

Supports machine management of quantum computers of different sizes for different technological routes, queuing, and scheduling multi-user tasks to available machines.

### **Graphical Experiment Result Display**

Graphically displays experiment runs and results, with large-qubit experiment results sortable by probability, searchable, and supporting fuzzy query.



# **Application**

### **Text Classification**

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Applications include intelligent Q&A, sentiment analysis, and content recommendation. Text data is converted into high-dimensional vectors, and classification algorithms often require extensive computation of distances between sample vectors. Quantum computing can exponentially accelerate these classification algorithms.

#### Manufacturing Part Selection



Manufacturing parts have coupling or exclusion relationships, forming constraints. Manufacturers need to select parts to meet the functional requirements of a specific product, such as a car, effectively solving a complex satisfiability problem. Quantum search algorithms are well-suited for addressing these types of problems.

### **Path Optimization**



Many scenarios require path planning, such as optimizing inspection routes in a factory. An inspector needs to check several key locations in different workshops and must choose a route that minimizes total travel distance. Quantum optimization algorithms offer new solutions to these path optimization problems.



# **SpinQit**

# Quantum Computing Programming Framework

It supports quantum programming based on Python, provides users with rich quantum algorithm interfaces, supports cross-platform execution, realizes connection with quantum computers, quantum simulators, and the SpinQ cloud platform, and provides new, flexible, and efficient software tools for developers or scientific research enthusiasts. Four shadde input first, shall shadde and the
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#### Quantum Computing Programming Framework

#### **Versatile Frontend Syntax**

Supports advanced programming in Python and is compatible with Open QASM 2.0 and Qiskit syntax.

#### **Classical-Quantum Hybrid Programming**

Easily integrates with classical machine learning frameworks like PyTorch, TensorFlow, and PaddlePaddle.

#### **Cross-Platform Execution**

Quantum programs can be submitted to real quantum computers, quantum simulators, the SpinQ cloud, and any QASM-based cloud platform.

#### **Rich Quantum Algorithm Library**

Provides foundational fault-tolerant quantum algorithms as well as variational quantum algorithms and quantum machine learning algorithms for the NISQ era.

#### **Multi-Level Compilation Optimization**

Offers quantum circuit optimizations including redundant gate simplification, single- and two-qubit gate fusion, and removal of control qubits along with hardware topology-based circuit transformation and qubit mapping.

#### **Efficient Quantum Simulator**

Includes both CPU and GPU quantum simulators, supporting advanced features like backpropagation and noise simulation.

### **Features**

```
14
15 # Four bits grover
16 from spinqit import Circuit, BasicSimulatorConfig
17 from spinqit import H, CNOT
18 from spinqit import get_compiler, get_basic_simulator
19
20 # Create circuit
21 circ = Circuit()
22 q = circ.allocateQubits(4)
23 circ << (H, (q[0]))
24 circ << (CNOT, (q[0], q[1]))
25 circ << (CNOT, (q[1], q[2]))
26 circ << (CNOT, (q[2], q[3]))
27 # Compile
28 comp = get_compile(circ, 0)
39 # Run
31 config = BasicSimulatorConfig()
32 config.configure_shots(1024)
</pre>
```

- 33 simu\_engine = get\_basic\_simulator()
- 34 result = simu\_engine.execute(exe, config)
  35 print(result.counts) # {'0000': 512, '1111': 512}



#### Quantum Computing Programming Framework

# **Advantages**

#### • Easily Extensible Framework

The intermediate representation-based compilation system allows for the flexible addition of frontend syntax and backend platforms.

### **Comprehensive Platform Support**

Supports connections to local NMR and superconducting quantum computers, multiple quantum simulators, the SPINQ cloud platform, and any third-party quantum platform that supports Open QASM.



#### Unified Interface with Multiple Configurations

Uses a consistent interface to flexibly configure execution platforms, measurement methods, gradient algorithms, and more for efficient computation based on the execution platform.



#### Online Open Resources and Community Sharing

The code has been open-sourced, providing a community for quantum computing professionals to communicate and share, facilitating the development and application of quantum computing.



# SPINQ QEDA

### **QPU EDA**

SPINQ QEDA is a highly automated superconducting QPU EDA design software, that generates quantum devices through parameterization and excellent automatic wiring algorithms. SPINQ QEDA enables fast and efficient design and iteration. It not only helps industry professionals improve design efficiency but also allows enthusiasts of superconducting quantum computing to quickly get started and participate in QPU design.





### **Parametric Component Settings**

Users can customize quantum component parameters such as length, width, and position according to various design needs and application scenarios.

### **Features**

### **One-Click Layout Generation**

Enables automatic generation of a complete QPU layout with a single click after setting all necessary design parameters, including component dimensions, positions, and connections.

### **Routing Path Modification**

Facilitates easy modification of existing routing paths or re-planning new routes to meet specific design requirements or resolve routing conflicts.

### **Drag-and-Drop Interface**

Permits users to intuitively select, move, and position components on the design interface using the mouse, simplifying the layout adjustment for optimal design.



![](_page_45_Picture_0.jpeg)

![](_page_45_Picture_1.jpeg)

# **Advantages**

![](_page_45_Picture_3.jpeg)

### **Intelligent and Efficient**

Provides efficient, intelligent, and easyto-use quantum chip design and simulation functions.

![](_page_45_Picture_6.jpeg)

### **Rich Component Library**

A diverse and extensive component library enables researchers and tech enthusiasts to engage in more professional QPU design and simulation.

![](_page_45_Picture_9.jpeg)

### **Graphical Interface**

An intuitive, simplified, and responsive experience with a friendly GUI.

# </code>

### **Parametric Design**

Quickly modify component parameters or add customized components.

![](_page_45_Picture_15.jpeg)

#### Online Access No Download Required

Free access anytime and anywhere through the web browser.

![](_page_45_Picture_18.jpeg)

#### **Automatic Wiring Algorithm**

High-performance and intelligent automatic wiring greatly improve the efficiency, success rate, and reliability of quantum chip design and manufacturing.

![](_page_46_Picture_0.jpeg)

Official Website

#### Languages 🗸

# **Private Quantum Cloud**

# Services

SPINQ offers comprehensive and customized quantum cloud platform development services, designed to create efficient and reliable quantum computing solutions based on user requirements. A private cloud platform can be fully independent of public cloud providers, offering an exclusive, secure, and private cloud environment. Users can leverage quantum computing resources while enjoying enhanced data security and business flexibility.

### Sign in to Taurus

Account	Phone	QR Code	
Account ID OR Ema	il		
Password			
Maintain login-i	Forget Password		
	Log In		
Visitor Logi	n	Sign Up	

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### **Comprehensive Features as in the SPINQ Cloud**

Full range of quantum cloud platform functionalities, supporting teaching, research, and external service provision.

### **Customizable Solutions**

Detailed functional design tailored to customer needs, adaptable to various hardware scales from a single machine to clusters.

#### **Robust Backend Management System**

Detailed device status monitoring, user data management, and scalable resource management capabilities.

### **Thorough After-Sales Support**

Comprehensive customer training, prompt issue resolution, and system troubleshooting.

### **Features**

		Contraction (1) Distanti Contraction (1)		
Index	Task ID	Platform	Status	Source
1	M-240524-0001	Full-amplitude Quantum Simulator	Success	SpinQ Cloud
2	M-240327-0001	Full-amplitude Quantum Simulator	Success	SpinQ Cloud
3	G-240306-0001	2 Qubits NMR	Success	SpinQ Cloud
4	G-240116-0001	2 Qubits NMR	Success	SpinQ Cloud
5	M-240122-0002	Full-amplitude Quantum Simulator	Success	SpinQ Cloud
6	M-240122-0001	Full-amplitude Quantum Simulator	Success	SpinQ Cloud
7	G-240112-0024	2 Qubits NMR	Success	SpinQ Cloud
8	S-240112-0001	3 Qubits NMR	Success	SpinQ Cloud
9	G-231007-0003	2 Qubits NMR	Success	SpinQ Cloud
10	0.230022.0011	2 Oubits NMR	Succase	SpinO Cloud

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#### Quantum Cloud Platform Deployment Services

# **Advantages**

### **Fully Private Deployment**

Utilizing SPINQ's proprietary systems and open-source software modules, eliminating dependency on public cloud services.

# Elastic Resource Scheduling

Supporting elastic container management, enabling resource sharing with other computational tasks.

![](_page_48_Picture_7.jpeg)

#### High-Performance Large-Scale Simulators

Integrating with GPU-accelerated largescale quantum simulators to significantly enhance execution speed.

![](_page_48_Picture_10.jpeg)

#### Industrial-Grade High Availability

Reliable system design ensures continuous and stable quantum computing cloud services.

# Solutions

![](_page_49_Picture_1.jpeg)

![](_page_50_Picture_0.jpeg)

# EDUCATIONAL-GRADE QUANTUM COMPUTING SOLUTIONS

We provide comprehensive and cutting-edge quantum education solutions tailored for universities, K12 education, and various science popularization scenarios. By combining in-depth theoretical teaching with practical exercises, we offer customized classroom setups, professional teaching teams, and educational quantum computing equipment to help teachers and students master essential future skills in quantum computing.

![](_page_50_Picture_3.jpeg)

**Quantum Computing Classroom** 

#### University Quantum Computing Experimental Classroom

Designed for undergraduate students with a basic knowledge of linear algebra. Through the lab's equipment and courses, students can understand the underlying principles of quantum computing, master quantum control operations, practice quantum algorithms, and develop quantum programming skills, enabling them to analyze and solve quantum computing problems from multiple dimensions.

#### High School Quantum Experimental Classroom

Targeted at high school students with basic knowledge of sets and vector mathematics. With the lab's equipment and courses, students can learn the fundamental concepts of quantum mechanics, basic principles of quantum computing, foundational linear algebra, quantum algorithm design, and basic quantum programming.

![](_page_51_Picture_0.jpeg)

# **University Quantum Computing Experimental Classroom**

### **Quantum Computing Innovation Classroom**

Equipped with desktop NMR quantum computers and quantum computing experimental platforms, this setup allows for stable, high-performance quantum computing experiments. Users can design quantum circuits, run them on the corresponding teaching instruments, and engage in quantum operations. These teaching instruments meet the teaching requirements for quantum information science in quantum computing. The software facilitates quick and convenient multi-user design and execution of quantum computing experiments.

Category	No	Product/Service	Quantity
	1	SPINQ Triangulum/SPINQ Gemini Lab	4
Quantum computing hardware	2	Classic computer used for operation	4
Quantum computing software	3	Quantum computing desktop application software/Quantum computing experimental platform software	4
	4	Quantum computing desktop application secondary software	Optional
	5	Theoretical courses	one set
Quantum computing course	6	Experiment Course	one set
	7	Instrument principle training	one time
Training service	8	Equipment use training	one time
	9	Course content training	one time
	10	Instrument technical support	one term

![](_page_52_Picture_0.jpeg)

# **University Quantum Computing Experimental Classroom**

### **Physics Laboratory**

The SPINQ Gemini Lab offers experiments in quantum computing, quantum mechanics, and nuclear magnetic resonance, fulfilling the diverse teaching needs of the Physics major. The lab's extensive quantum mechanics experimental courses provide students with deeper insights into quantum computing concepts.

Category	No	Product/Service	Quantity
	1	SPINQ Gemini Lab	4
Quantum computing hardware	2	Desktop computer used for operation	4
Quantum computing software	3	Quantum computing experimental platform software	4
Quantum computing course	4	Theoretical courses	one set
	5	Experiment Course	one set
Training service	6	Instrument principle training	one time
	7	Equipment use training	one time
	8	Course content training	one time
	9	Instrument technical support	one term

![](_page_53_Picture_0.jpeg)

# **University Quantum Computing Experimental Classroom**

### **Computer Science Laboratory**

NMR quantum computers enable students to run and test algorithms on real quantum hardware, enhancing their practical skills. Our quantum computing courses introduce quantum concepts and algorithms in an accessible manner, opening new realms of exploration and understanding for Computer Science students.

Category	No	Product/Service	Quantity
	1	SPINQ Triangulum	3
Quantum computing hardware	2	Classic computer used for operation	3
	3	Quantum computing desktop application software	3
Quantum computing software	4	Quantum computing desktop application secondary software	Optional
Quantum computing course	5	Theoretical courses	one set
	6	Experiment Course	one set
Training service	7	Instrument principle training	one time
	8	Equipment use training	one time
	9	Course content training	one time
	10	Instrument technical support	one term

![](_page_54_Picture_0.jpeg)

## University quantum computing experimental classroom

### **Other Science and Engineering Laboratories**

NMR quantum computers and software offer an intuitive and practical platform, allowing students from various science and engineering disciplines to directly experience and operate real quantum devices, thereby validating theoretical knowledge.

Category	No	Product/Service	Quantity
	1	SPINQ Triangulum	2
Quantum computing hardware	2	Classic computer used for operation	2
	3	Quantum computing desktop application software	2
Quantum computing software	4	Quantum computing desktop application secondary software	Optional
Quantum computing course	5	Theoretical courses	one set
	6	Experiment Course	one set
Training service	7	Instrument principle training	one time
	8	Equipment use training	one time
	9	Course content training	one time
	10	Instrument technical support	one term

![](_page_55_Picture_0.jpeg)

# **High School Quantum Computing Experimental Classroom**

### **Small to Medium Innovative Experiment Classrooms (10-30 Students)**

Teachers use desktop products for instruction, while students operate portable products. Students can immediately perform experiments and experience handson operation, with experiments conducted instantly and connected to an online teaching management system.

Category	No	Product/Service	Quantity
	1	SPINQ Triangulum	1
Quantum computing hardware	2	Classic computer used for teacher operation	1
	3	SPINQ Gemini Mini/MiniPro	10
Quantum computing software	4	Quantum computing desktop application software	1 SET
	5	Quantum Education Platform	10 SET
Quantum computing course	6	Theoretical courses	one set
	7	Experiment Course	one set
Training service	8	Instrument principle training	one time
	9	Equipment use training	one time
	10	Course content training	one time
	11	Instrument technical support	one term

![](_page_56_Picture_0.jpeg)

# **High School Quantum Computing Experimental Classroom**

### Medium to Large Innovative Experiment Classrooms (20-40 Students)

Teachers use desktop products as teaching tools, while students utilize auxiliary software or portable products for algorithm design and other operations. The teaching demonstration interface and student interface are unified, ensuring a cohesive learning experience.

Category	No	Product/Service	Quantity
Quantum computing hardware	1	SPINQ Triangulum/SPINQ Gemini Lab	2
	2	Classic computer used for teacher operation	2
	3	SPINQ Gemini Mini/MiniPro	20
Quantum computing software	4	Quantum computing desktop application software/Quantum computing experimental platform software	2
	5	Quantum Education Platform	20
Quantum computing course	6	Theoretical courses	one set
	7	Experiment Course	one set
Training service	8	Instrument principle training	one time
	9	Equipment use training	one time
	10	Course content training	one time
	11	Instrument technical support	one term

![](_page_57_Picture_0.jpeg)

![](_page_57_Picture_1.jpeg)

### **Use Case: The University of Western Australia** Creating interactive teaching experiences in quantum computing

The University of Western Australia, founded in 1911, is one of Australia's most historical research universities. In the field of quantum computing, it has maintained a leading position and is committed to providing advanced quantum computing resources for students and researchers, promoting research and application of quantum computing technology.

Problems

Professors at the University of Western Australia believe that, apart from theoretical knowledge, the acquisition of practical experience is equally if not more important:

- The lack of ideal quantum teaching tools prevents us from providing students with a genuine interactive platform.
- There is a limited availability of quantum computing teaching materials.

Achievements

By using SPINQ's self-developed desktop NMR quantum computers, we provide students with real devices and interactive experiences with quantum control design capabilities, which in turn enhance their quantum computing skills.

![](_page_57_Picture_10.jpeg)

![](_page_58_Picture_0.jpeg)

![](_page_58_Picture_1.jpeg)

### **Use Case: Oslo Metropolitan University**

Helps Quantum Education, Research, and Popularization Development

Problems

OlsoMet offers a course on "Quantum Information Technology". In the past, students used cloud-based quantum computing platforms such as IBM Qiskit, and could only understand these abstract concepts through limited quantum circuit design and presentation of results.

Achievements

Using SPINQ's desktop quantum computers, the students carried out two master's research projects related to realworld quantum computing, both of which analyzed the implementation of different parameterized quantum circuits through quantum computers. The teaching model of "theory + practice" has also brought significant results for student's career development and social practice.

![](_page_58_Picture_8.jpeg)

![](_page_59_Picture_0.jpeg)

![](_page_59_Picture_1.jpeg)

# **Use Case: Beijing Institute of Technology**

Introduces Hands-on Quantum Technology to the Classroom Using Teaching-Grade Quantum Computers

#### Problems

Beijing Institute of Technology (BIT) has opened a quantum technology course for undergraduates in order to help more students master quantum science knowledge and experimental skills, but it faces many practical problems: including insufficient space for experimental teaching and a lack of teaching aids and equipment for experimental teaching.

Achievements

By conducting hands-on quantum technology classes, BIT utilizes SPINQ's educational-grade quantum computers to give students a better grasp of the theoretical and experimental fundamentals of quantum information.

![](_page_59_Picture_8.jpeg)

![](_page_60_Picture_0.jpeg)

![](_page_60_Picture_1.jpeg)

**Use Case: Harbin Institute of Technology (Shenzhen)** Theoretical teaching + real machine experiments, chiseling away the walls of quantum education

![](_page_60_Picture_3.jpeg)

The volume of theoretical knowledge in quantum information courses is large and difficult, and many counter-intuitive quantum effects are difficult to experience realistically on classical computers or quantum simulators, and the lack of relevant experimental equipment and practical sessions will not allow students to have an intuitive understanding and in-depth experience of quantum technology.

Achievements

Harbin Institute of Technology (Shenzhen) has taken the first step on the way of cultivating quantum information theory talents, and through the educational level quantum computer of SPINQ, it has brought the real experience of quantum computing hardware to our university and even to the undergraduate and graduate students in Shenzhen University City, which has effectively pushed forward the development of the quantum computing industry, academia and research in colleges and universities.

![](_page_60_Picture_7.jpeg)

![](_page_61_Picture_0.jpeg)

![](_page_61_Picture_1.jpeg)

**Problems** 

**Achievements** 

## **Use Case: Shenzhen Middle School**

# Building a Quantum Computing Elective Program from Scratch, Cultivating Talents for Basic Education

Teachers at Shenzhen High School believe that, due to the fundamental differences in basic principles, no tool such as a classical computer or simulator can replace a real quantum computer. Just teaching theoretical lectures does not allow students who are used to using classical computers to actually experience the characteristics of quantum computers.

Due to its small size, room temperature operation, and maintenance-free features, SPINQ 's quantum computer has been successfully equipped in the Quantum Innovation Laboratory of Shenzhen High School and introduced into high school classrooms.

Based on the students' knowledge base and cognitive level, SPINQ experts helped Shenzhen Middle School customize a "theory + practice" teaching model to help students strengthen their understanding and application of quantum knowledge.

![](_page_61_Picture_7.jpeg)

![](_page_62_Picture_0.jpeg)

![](_page_62_Picture_1.jpeg)

# Use Case: Shenzhen Gezhi Academy

Facilitating the exploration of new models for quantum talent cultivation

Shenzhen Gezhi High School is an innovative high school with the goal of creating a national science and technology-oriented school, focusing on exploring new models for innovative talent cultivation. Quantum computing is one of the key distinctive directions it emphasizes and develops.

#### Problems

However, there are many challenges in building it from scratch. Firstly, advanced experimental equipment and technical support are required, providing professional algorithm examples and teaching case demonstrations. Additionally, interactive experiences tailored to high school students' characteristics are also necessary. Secondly, it is essential to design and develop course content that is suitable for the comprehension and acceptance of high school students, effectively igniting their interest.

Achievements Achievements In addition to the portable and small size of the real machine equipment, SPINQ's quantum education solutions, also equipped with a complete quantum computing teaching curriculum, can be for quantum computing teaching and demonstration, to provide a complete set of curriculum systems. It allows students to visualize the results of quantum algorithms and helps to increase their interest.

![](_page_62_Picture_8.jpeg)

![](_page_63_Picture_0.jpeg)

![](_page_63_Picture_1.jpeg)

# **Use Case: Guilin Shoufu experiment Middle School** SpinQ helps to create a complete quantum computing curriculum system

#### Problems

In contrast to the high school stage, which is an important period for the formation of students' scientific thinking and independent exploration spirit, the number of teachers with specialized knowledge and skills in quantum computing is extremely scarce at the basic education level. The first problem faced when planning a special course on quantum computing is the shortage of teachers.

Achievements

By empowering school teachers, SPINQ hopes to help high school schools that are willing to build a special teaching system for "quantum computing" to train a group of teachers with the ability to teach quantum computing courses, so as to open up the whole chain of high school quantum computing education, including "practical teaching aids, systematic lesson plans, and teacher training". In this way, we can fully open up the "practical teaching aids + systematic lesson plans + teacher training" of high school quantum computing education, and explore a new model for cultivating quantum computing talents.

![](_page_63_Picture_7.jpeg)

![](_page_64_Picture_0.jpeg)

# **Fintech Solutions**

Quantum computing has a wide range of application scenarios in fintech, including portfolio optimization, risk management, and predictive modeling. By leveraging the super-parallelism of quantum computing, investors can optimize their portfolios more efficiently and increase returns while reducing risk. Quantum computing can also accelerate the modeling and simulation processes of largescale complex systems, which is of immense value in scenarios such as market trend analysis, credit rating, and fraud detection. Quantum computing not only improves the efficiency of financial ope rations but also helps enable more accurate forecasting and management decisions.

Using Quantum Neural Network to Accelerate Financial-Related Business

Case: Using SPINQ Quantum Computer to Predict the Abandonment and Addition of ATM Machines.

"Quantum Technology in Commercial Banking" - The Banker Magazine, 2020/December issue

![](_page_64_Picture_6.jpeg)

**G** 华夏银行 The First Prize

Achievements of The 2020 Financial Technology Development Award issued by People's Bank of China

 Application of Quantum Clustering Algorithm in the Intelligent Operation Scenario of Commercial Banks

Case: Solve the dynamic management of intelligent devices with quantum K- means clustering unsupervised learning method.

The Banker Magazine, Issue 2022/01

![](_page_64_Picture_12.jpeg)

![](_page_64_Picture_13.jpeg)

![](_page_65_Picture_0.jpeg)

### **Use Case: Huaxia Bank**

![](_page_65_Picture_2.jpeg)

**Problems** 

### Assisting commercial banks in making intelligent decisions by constructing Quantum AI Models

- Due to changes in payment habits, the demand for cash has greatly decreased, leading to a usage rate decline in ATM machines. While usage has sharply decreased, the costs of ATM machines, though, remain consistently high.
- ATM machines are widely distributed, with a large number of them, and they are located in regions with complex customers and environments.
- The operational speed, and time of modeling, together with the model accuracy, are unsatisfied when utilizing human labor and machine learning for modeling.

• The urgency to accurately screen and decommission underperforming ATM machines.

![](_page_65_Figure_8.jpeg)

![](_page_65_Picture_9.jpeg)

The case was awarded "First Prize for Financial Technology Development in 2020" by The People's Bank of China.

![](_page_66_Picture_0.jpeg)

# **Biomedical Solutions**

Applications of quantum computing in the biomedical field include gene sequencing, drug discovery, and disease modeling. We can use quantum computers to simulate complex chemical structures at the molecular level, which can also help predict the interactions of new drugs with organisms and speed up the development of new drugs. In addition, quantum computing can also process and analyze genetic data more efficiently, providing more possibilities for diagnosis and treatment. Overall, quantum computing g in the biomedical field can improve R&D efficiency, reduce costs, and in the future help achieve the goal of personalized medicine.

Calculation of Ground State Energy of Two Coupled Identical Particles

![](_page_66_Picture_4.jpeg)

![](_page_66_Figure_5.jpeg)

![](_page_66_Figure_6.jpeg)

SPINQ Quantum Computer Computing 2 Electronic Architecture Energy level calculation of 12 hydrogen atoms with long chain structure

![](_page_66_Picture_9.jpeg)

Google Quantum Computing Team form Google, Science 369, 1084, 2020

![](_page_67_Picture_0.jpeg)

![](_page_67_Picture_1.jpeg)

### **Use Case: BGI Research**

Cracking the Genome Assembly Challenge Using VQE Algorithms

#### Problems

As the core research institution under BGI Group, BGI Research Institute for Life Sciences is genomics-based and focuses on cutting-edge areas and key questions in the field of basic research, including research on application scenarios that combine bioinformatics and quantum computing. Conventional computers exhibit significantly slow processing speeds when handling large-scale genomic data, which has become a bottleneck in genetic research.

Achievements

By employing a distributed quantum-classical hybrid algorithm, BGI Research makes full use of the quantum properties of superposition and entanglement, effectively enhancing computational capacity with fewer quantum resources. This approach allows for the simulation of larger quantum systems and addresses the issue of excessive computational resource consumption during high-throughput gene sequencing assembly processes.

![](_page_67_Picture_8.jpeg)

# About

![](_page_68_Picture_1.jpeg)

![](_page_69_Picture_0.jpeg)

# **OUR ADVANTAGE**

![](_page_69_Picture_2.jpeg)

![](_page_69_Picture_3.jpeg)

# **Top-tier product ENGINEERING capabilities in the industry**

The core team consists of quantum computing experts from leading research institutions both domestically and internationally, possessing profound expertise in core technologies including quantum computing hardware, software, and algorithms. Particularly in the realm of engineering implementation, they have abundant experience, enabling rapid transformation from research achievements to commercial products.

![](_page_69_Picture_6.jpeg)

# The fastest quantum computing company to accomplish INTERNATIONAL market expansion

"The world's first company to distribute quantum computing products to all five continents, with customers spanning across countries and regions such as the United States, Canada, Australia, the United Kingdom, Germany, Switzerland, Norway, Slovenia, Brazil, Japan, and the United Arab Emirates."

![](_page_69_Picture_9.jpeg)

#### Achieves the Industry Milestone of Pioneering Quantum Computing for Personal ACCESSIBILITY

By developing portable, stable, maintenance-free, and costeffective desktop quantum computers, we have taken the lead internationally in promoting the accessibility of the quantum computing industry. This allows more people to recognize the value of quantum computing.

![](_page_70_Picture_0.jpeg)

# TEAM

![](_page_70_Picture_2.jpeg)

- B.S., and Ph.D. degrees in physics from Tsinghua University
- Postdoctoral fellow and former associate researcher at Harvard University
- National-level entrepreneurial talent
- First-class prize in provincial-level scientific and technological development
- Shenzhen Excellent Talents with Diamond Card (National Leading Talent)
- Director of the Quantum Information Network Industry Alliance of the Ministry of Industry and Information **Technology of China**

• Director of the Quantum Information Special Committee of the Shenzhen City Computer Federation

#### Founder / CEO

![](_page_70_Picture_11.jpeg)

- Professor of physics and director of the IAS Center for Quantum Technologies
- Quantum information theorist at the HKUST
- B.S., and M.S. degrees in physics from Tsinghua University
- Ph.D. degrees in quantum computing from MIT
- More than 20 years of experience in quantum computing research APS Fellow
- **Bei Zeng**

![](_page_70_Picture_18.jpeg)

Chairman of the QIP2020

![](_page_70_Picture_20.jpeg)

### Guanru Feng Natural

Cofounder &

**Senior Scientist** 

- Ph.D. degree from Tsinghua University Postdoctoral fellow at the University of Waterloo
  - More than 10 years of research experience in guantum computing
  - Experts in the fields of quantum control and quantum chips
  - The First Prize winner of the 2021 Shandong Provincial
  - Science Competition in Quantum Computing

![](_page_71_Picture_0.jpeg)

# **MILESTONES**

![](_page_71_Picture_2.jpeg)

SPINO was founded

![](_page_71_Picture_4.jpeg)

![](_page_71_Picture_5.jpeg)

Released "SPINQ Triangulum", the 3-qubit desktop NMR quantum computer

![](_page_71_Picture_7.jpeg)

![](_page_71_Picture_8.jpeg)

Upgraded all three businesses at the 2023 strategic press conference event

![](_page_71_Picture_10.jpeg)

#### 2019 04

Released 2-qubit desktop NMR quantum computer prototype

![](_page_71_Picture_13.jpeg)

![](_page_71_Picture_14.jpeg)

WON THE FIRST PRIZE OF THE 2020 FINANCIAL TECHNOLOGY DEVELOPMENT AWARD ISSUED BY THE PEOPLE' S BANK OF CHINA

![](_page_71_Picture_16.jpeg)

![](_page_71_Picture_17.jpeg)

Honored with the title of "Specialized and Innovative Small and Medium-sized Enterprise" by the Shenzhen Municipal Government

![](_page_71_Picture_19.jpeg)

![](_page_71_Picture_20.jpeg)

Released "SPINO Gemini", the world`s first programmable desktop NMR quantum computer (2-qubit)

![](_page_71_Picture_22.jpeg)

![](_page_71_Picture_23.jpeg)

Released "SPINQ Gemini Mini", the world's first portable NMR quantum computer

![](_page_71_Picture_25.jpeg)

07

Successfully organized the 2nd "SPINQ Cup" Quantum Computing Challenge.

![](_page_71_Picture_28.jpeg)

### 10

Released "SPINO Cloud", the new generation of general quantum computing cloud platform

![](_page_71_Picture_31.jpeg)

03

Obtained the national hightech enterprise certification of China

![](_page_71_Picture_34.jpeg)

![](_page_71_Picture_35.jpeg)

Delivered an independently developed superconducting quantum chip overseas.

![](_page_71_Picture_37.jpeg)

### 12

Completed Round-A financing of tens of millions of CNY

![](_page_71_Picture_40.jpeg)

![](_page_71_Picture_41.jpeg)

Completed nearly 100 million CNY in Pre-Series B financing

![](_page_71_Picture_43.jpeg)

2024 01

Launched "SPINQ Gemini Lab", a one-stop quantum computing platform focused on experimental teaching scenarios ( alim) and

![](_page_71_Picture_46.jpeg)

![](_page_71_Picture_47.jpeg)


## **R&D INVESTMENT**

R&D personnel account for more than 50% A large number of senior R&D personnel come from Harvard University, Massachusetts Institute of Technology, Tsinghua University, Peking University, University of Science and Technology of China, and other top research institutions.



Awards	Investment in R&D	Owned/Applying	Layout
1 First Prize in provincial and ministerial scientific development 1 First Prize of Provincial Natural Science	Nearly RMB 100 million	Over 100 invention Patents & Copyrights	Layout patents around product technology and consolidate core technical barriers



# **MEDIA COVERAGE**

# Neue Zürcher Zeitung

*"SPINQ's quantum computer is an 'INCREDIBLE ENGINEERING ACHIEVEMENT'..... It is the first milestone on the road to personal quantum computing."* 

### Rene Sürcher Zeitung

### Quantencomputer gibt's nur in Labors? Von wegen – ein chinesisches Startup verkauft Desktop-Modelle

Die Firma SpinQ aus Shenzhen bietet als eine der ersten weltweit kleine Quantencomputer an. Die Kunden sind meist Schulen und Universitäten. Sie sitzen auch in der Schweiz und Deutschland.

Matthias Sander, Shenzhen 13.01.2023, 10.56 Uhr

😡 Hören 🗍 Merken 🖨 Drucken 🛱 Teilen



"The Neue Zürcher Zeitung (NZZ), founded in 1780, is the oldest newspaper in Switzerland and one of the world's largest-circulation newspapers. It holds significant influence in the German-speaking region of Europe."



"There are too many companies advertising they can put a quantum computer on your desktop. But SPINQ will sell you one FOR A REASONABLE PRICE......"



QUANTUM COMPANIES \* QUANTUM PROGRAMMING \* QUANTUM JOBS \* ARTICLES \* ABOUT \* LANGU

#### SpinQ – Quantum Desktop Dreams

There are:t many companies advertising they can put a quantum computer on your desktop. But spin0 will sell you one for a reasonable price of \$5.000. Spin0 Technology is a Chinese start-up company based in Shenzten, China. Spin0 focuses on quantum computing and aims to lead the world into a new quantum science era. It has also protected its innovations with patents. It hopes to do this by promoting the industrialization and popularization of Quantum computing.

We have included Spino because they fundamentally show that devices are "real", "available" and affordable. Of course, as costs come down, we could see devices sporting higher counts of qubits. Anything that gets people excited about Quantum Computing is worth watching in our book.



Triangulum is a desktop quantum computer that uses nuclear magnetic resonance (NMR) technology and has three qubits. It allows users to customize quantum circuits at the hardware level through pulse sequence engineering and external port

"Quantum Zeitgeist" is a global quantum computing online publication that covers quantum computing news, quantum technology developments, and content related to the quantum industry.

# **MCPRO**

"When it comes to applications in education, SPINQ's quantum computer is the OPTIMAL CHOICE. Its pursued goal is precisely to become the most differentiating revolutionary element in the market: achieving the popularization of quantum computing."

## 0000

## MCPRO



"Muycomputerpro is a Spanish website dedicated to hardware, software solutions, cloud computing, virtualization, services, and networking. It empowers IT experts and professionals to stay informed about the latest technologies and business news in the most advanced professional technology markets."



## HONORS



The First Prize of the 2020 Financial Technology Development Award issued by the People's Bank of China



The First Prize winner of the 2021 Shandong Provincial Natural Science Competition



National high-tech enterprise certification of China



Specialized and Innovative Small and Medium-sized Enterprise of Shenzhen Municipal Government



Fifth Shenzhen Internet Summit - 2022 Most Promising Brand of the Year



The "Top 100 High-Growth Enterprises in the Greater Bay Area" of 2023



The "TOP100 Most Investment Valuable Enterprises in 2023"



The "Top 50 Future Industry Leading Enterprises in Shenzhen"



## **Partners**





## **About SPINQ**

Established in 2018, SPINQ is a company that provides one-stop solutions in quantum computing. We view our missions as promoting the commercialization and popularization of quantum computing by means of technology R&D and commercial landings. SPINQ has extensive business coverage from superconducting quantum computers, desktop NMR quantum computers, and general quantum computing cloud platforms to software for the areas of scientific research, education, drug research and development, financial technology, artificial intelligence, and many other frontier technologies. We are working closely with our partners to find solutions to specific scenarios to make quantum computing available and usable in real life.



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