Assembly, Integration, and Test Technician

New Haven, CT

Hardware Engineering / Full-Time / On-Site

Quantum Circuits, Inc. (QCI) is developing a full-stack quantum computing platform using superconducting devices and a modular, robust, and scalable architecture. QCI's mission is to build the first truly useful quantum computers.

Our novel approach to building quantum computers is based on technology developed over a decade of research at Yale University's world-class quantum labs. Our machines have built-in error correction, unique software features that enable lightning-fast algorithm execution, and multiple modes of operation to solve more algorithms than ever, all in one quantum computer.

Why join QCI? You'll be working with the latest technology at our state-of-the-art facilities, where your curiosity, ingenuity, and initiative will thrive - you'll learn a ton by working with us and have a lot of fun doing it. We have a deep, fast-paced team that's passionate about building the best quantum computers in the world. Join us if you want to be at the forefront of the quantum revolution.

This position plays a critical role in the core mission of QCI: building scalable, high-performance quantum computers. Quantum devices are superconducting circuits that require specialized handling, measurement, and analysis and your work will have a direct impact on the performance of the computer.

As a QCI AIT Engineer, here's what you'd be working on:

- Manage the assembly, screening, and preparation of the devices and perform initial testing.

- Create test plans and manufacturing assembly processes for quality, robustness, performance, and repeatability.

- Define procedures to verify assembly processes and payload connectivity.

- Assembly and testing of quantum devices including packaging of on-wafer superconducting circuits and related mechanical components.

- Full system integration into a cryogenic fridge.

- Engage with a cross-functional team to support any debugging activity.

- Generate documentation to ensure full traceability of all assembled devices in production.

- Development of future computer subsystems with the physicist, mechanical and electrical teams.

- Participate in design reviews to ensure manufacturability of future hardware.

- Preventative Maintenance, calibration and tuning of tools and equipment.

We are seeking candidates with the following qualifications:

- Prior experience in fine pitch soldering or microcircuit assembly/wire bonding experience.

- Proven ability to develop new assembly processes and procedures and enhance existing ones to ensure quality and repeatability.

- Familiarity with probing stations, optical microscopes, wire bonders, or sonicators.

- Background in laboratory environments or highly complex system integration settings.

- Diligence in following standard operating procedures.

- Exceptional attention to detail.

- Strong motivation and a desire to learn and pioneer innovative techniques and procedures.

- Excellent communication skills and the ability to collaborate effectively with technicians, engineers, and scientists.

Preferred qualifications:

- Experience working in a clean room environment.

- Background in semiconductor, electronics, or aerospace manufacturing industries.

- Proficiency with RF systems.

- Educational background in engineering or physics.

- J-STD-001 certification highly preferred

- Experience with PFMEA

Quantum Circuits Inc. is an equal opportunity employer. All applicants will be considered for employment regardless of race, color, national origin, religion, sex, age, disability, sexual orientation, gender identity, veteran, or disability status.

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