Job you selected

Senior Packaging Engineer - Quantum

📅 12 days ago
📍 Redmond, Washington, United States
📍 Microsoft on-site only

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See details
Overview

Microsoft’s Quantum research group is exploring ways to build a full-stack quantum computer and has become the world’s center of expertise on topological quantum computing. The research effort includes theoretical and experimental teams around the world, who have been designing and optimizing all aspects of the quantum computer, from topological qubit designs to cryogenic control and readout circuitry, to runtime software and quantum language compilers. Microsoft Quantum will change the world of computing and help solve some of humankind’s currently unsolvable problems. For more information about our team, visit https://www.microsoft.com/en-us/quantum.

We are looking for a Senior Packaging Engineer - Quantum, with a focus on the development of assembly processes and materials to meet the unique requirements of quantum devices.

Microsoft’s mission is to empower every person and every organization on the planet to achieve more. As employees we come together with a growth mindset, innovate to empower others, and collaborate to realize our shared goals. Each day we build on our values of respect, integrity, and accountability to create a culture of inclusion where everyone can thrive at work and beyond.

In alignment with our Microsoft values, we are committed to cultivating an inclusive work environment for all employees to positively impact our culture every day.

Qualifications

Required/Minimum Qualifications

- Bachelor’s Degree in mechanical, electrical, or materials engineering, or other related fields AND 6+ years experience in industry or in a research and development environment
  - OR Master’s Degree in mechanical, electrical, or materials engineering, or other related fields AND 4+ years experience in industry or in a research and development environment
  - OR Doctorate in mechanical, electrical, or materials engineering, or other related fields AND 1+ year(s) experience in industry or in a research and development environment, could
include completion of a post doctoral research position
○ OR equivalent experience.

Other Requirements:
Ability to meet Microsoft, customer and/or government security screening requirements are required for this role. These requirements include, but are not limited to the following specialized security screenings:

• Microsoft Cloud Background Check: This position will be required to pass the Microsoft Cloud background check upon hire/transfer and every two years thereafter.
• Citizenship & Citizenship Verification: This role will require access to information that is controlled for export under export control regulations, potentially under the U.S. International Traffic in Arms Regulations or Export Administration Regulations, the EU Dual Use Regulation, and/or other export control regulations. As a condition of employment, the successful candidate will be required to provide proof of citizenship, U.S. permanent residency, or other protected status (e.g., under 8 U.S.C. § 1324b(a)(3)) for assessment of eligibility to access the export-controlled information. To meet this legal requirement, and as a condition of employment, the successful candidate’s citizenship will be verified with a valid passport. Lawful permanent residents, refugees, and asylees may verify status using other documents, where applicable.

Additional or Preferred Qualifications
• Master’s or PhD in mechanical, electrical, or materials engineering, or other related fields.
• 5+ years of experience with packaging of complex (optomechanical, MEMS, microwave, ...) devices
• Demonstrated history of adapting or inventing materials and processes to solve packaging challenges in complex devices.
• Ability to work in a team and effectively communicate to meet deadlines and deliver results.
• Experience with industry standard packaging processes (wire bonding, die bonding, dispense, flip chip bonding, ...)
• Experience with preparing component specifications and sourcing vendor technical management.
• Experience in cryogenic materials is a plus.
• Experience in microwave device packaging is a plus.
• Travel up to 25% of the time.

Quantum Engineering IC4 - The typical base pay range for this role across the U.S. is USD $112,000 - $218,400 per year.
There is a different range applicable to specific work locations, within the San Francisco Bay area and New York City metropolitan area, and the base pay range for this role in those locations is USD $145,800 - $238,600 per year.


Microsoft will accept applications for the role until May 29, 2024.

**Responsibilities**

Responsibility will include adapting standard packaging processes and materials to the unique requirements of quantum devices. You will be working with a diverse team of engineers and scientists on assembling and scaling complex quantum hardware devices. To be successful, you will actively work with our globally distributed team to invent and develop assembly processes and materials that enable the scaling of quantum devices. Specifically, your work will include:

- Investigate the performance of package materials and structures under cryogenic temperatures and develop new materials or processes to enable quantum device performance.
- Regularly interact with different teams to support the function and scaling of new quantum devices.
- Work with internal and external component suppliers to support assembly of quantum devices
- Drive development of advanced packaging technologies to support the scaling of quantum hardware. May require management of external development programs.
- Work in teams or independently as required.

**Other**

Embody our [culture](#) and [values](#)

Benefits/perks listed below may vary depending on the nature of your employment with Microsoft and the country where you work.

• Industry leading healthcare
Microsoft is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to age, ancestry, citizenship, color, family or medical care leave, gender identity or expression, genetic information, immigration status, marital status, medical condition, national origin, physical or mental disability, political affiliation, protected veteran or military status, race, ethnicity, religion, sex (including pregnancy), sexual orientation, or any other characteristic protected by applicable local laws, regulations and ordinances. If you need assistance and/or a reasonable accommodation due to a disability during the application process, read more about requesting accommodations.