Quantum Computing

Return to Glossary

Quantum Computing is an area of computing focused on developing computer technology based on the principles of quantum theory (which explains the behavior of energy and material on the atomic and subatomic levels). Computers used today can only encode information in bits that take the value of 1 or 0—restricting their ability.

Quantum Computing, on the other hand, uses quantum bits or qubits. It harnesses the unique ability of subatomic particles that allows them to exist in more than one state (i.e., a 1 and a 0 at the same time).

- Quantum computing is the study of how to use phenomena in quantum physics to create new ways of computing.
- Quantum computing is made up of qubits.
- Unlike a normal computer bit, which can be 0 or 1, a qubit can be either of those, or a superposition of both 0 and 1.
- The power of quantum computers grows exponentially with more qubits.
- This is unlike classical computers, where adding more transistors only adds power linearly.

Source: https://www.investopedia.com/terms/q/quantum-computing.asp