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Discrete variable gate-model quantum computing

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Source

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This is the generalization of digital computing where bits are replaced by qubits and logical transformations by a finite set of unitary gates that can approximate any arbitrary unitary operation. A classical digital circuit transforms bit strings to bit strings through logical operations, whereas a quantum circuit transforms a special probability distribution over bit strings—the quantum state—to another quantum state. Most quantum computing hardware companies focus on this model. For short, we refer to this model as the discrete gate model.