Dirac 3

3rd Generation QUDIT Entropy Quantum Computer

Summary

Discrete optimization problems involve identifying the most favorable solution from a finite and discrete set of possibilities. Some prominent examples include the traveling salesman problem, knapsack problem, graph coloring, spanning tree, matching, set covering, and set packing.

Specifications

Solver Type	Constrained Discrete Number Optimization
Hardware Type	Hybrid Analog Machine with Quantum Optics and Digital Electronics
Maximum Number of Variables	949
Order of Correlation	Any types of first- through fifth-order correlations, where the interaction amongst variables can be repulsive (positive correlation) or attractive (negative correlation).
Connectivity	All-to-all
System Power Consumption	under 100 Watts
Storage Temperature	-25°C to 85°C
Operating Temperature	20°C to 27°C
Maximum Rate of Change	2°C per hour
Software Requirement	**On-prem:** eqc-direct software package, Python 3.10.6 (recommended) **Cloud:** qci-client software package
OS requirement	**On-prem:** Linux (recommended)
Dimension	5U rack-mounted

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