

Optical Zonu RFoF Technology Selected by Quantum Center to Support Network Testing

VAN NUYS, CA, UNITED STATES, September 16, 2025 /EINPresswire.com/ -- [Optical Zonu Corporation](#), a leader in radio frequency over fiber (RFoF) solutions, announced today that its J-Chassis and pluggable CWDM Modules are being deployed by the [Duke Quantum Center \(DQC\)](#) to facilitate the monitoring and testing of advanced quantum networks. Among other research, DQC is aiming to solve the challenge of generating high-fidelity entangled states between single quantum memories separated by kilometer distances.

As part of its research, the DQC is building an experimental quantum network of trapped ion quantum computers in the Durham, NC area. The project involves transmitting single photons emitted by trapped atoms through fiber optic cables to a remote detection site, where superconducting nanowire single-photon detectors (SNSPDs) capture the signals and convert them into Transistor-Transistor Logic (TTL) pulses. These photon detection events, reaching rates of 100s per second, herald the generation of entanglement between qubits. They must be reliably signaled back to the originating site with minimal latency so that operations with the entangled state can commence before the quantum memory decoheres.

"Quantum networking requires levels of accuracy and stability that push the boundaries of today's communications technologies," said Meir Bartur, CEO at Optical Zonu. "We are pleased that the Duke Quantum Center has chosen our RFoF solutions as part of their pioneering work in quantum communications."

Optical Zonu's J-Chassis and pluggable CWDM modules provide the low-latency, high-fidelity transport required to monitor this type of sensitive experimentation. By enabling seamless transmission of detection signals from the remote site back to the originating node, the equipment ensures that the DQC team can accurately monitor photon events.

This collaboration highlights the versatility of Optical Zonu's RFoF systems, which are designed to perform in demanding environments where signal integrity, timing, and reliability are critical. The DQC initiative represents a significant step toward the realization of scalable quantum networks that could form the backbone of future quantum communication and computing infrastructure.

The first research of the DQC experiment "Kilometer-Scale Ion-Photon Entanglement with a Metastable Sr⁺ Qubit" can be found here: <https://arxiv.org/abs/2506.11257>

About Optical Zonu Corporation

Optical Zonu Corporation (OZC) is a leading provider of radio frequency over fiber (RToF) transport solutions for the wireless, defense, and aerospace industries. OZC is the only company fully committed to custom solutions for every deployment and offers easy centralized management and patented fiber fault detection. The company provides a wide range of turnkey, modular, and OEM solutions that support satellite antenna remoting, GPS distribution, ground station redundancy, and radar calibration. OZC maintains strategic global relationships across the industries it serves, cooperating with major vendors and suppliers to enable rapid production of cutting-edge solutions. For more information, visit <http://www.opticalzonu.com/>.

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