

RIVO MULTITRADE OPTICAL SYSTEMS

Tuvalu ADSS power fiber optic cable



Overview

Tuvalu ADSS power fiber optic cable Google-backed Tuvalu undersea cable targets climate-resilient As the cable is laid, engineers are building it on a high.

Key Takeaways

The Tuvalu Vaka Cable is Tuvalu's first international submarine fiber optic cable, designed to provide high-speed, reliable internet connectivity and digital inclusion, with proactive measures against rising sea levels.

Overview
The Tuvalu Vaka Cable is a landmark project connecting Tuvalu to the global internet for the first time. It links Funafuti, the capital of Tuvalu, to the Bulikula cable system, part of Google's Pacific Connect initiative, and is named after the traditional Tuvalu canoe, symbolizing resilience and connectivity . The project is a collaboration between Tuvalu Telecommunications Corporation (TTC), Google, and supported by funding from the US, Australia, Japan, New Zealand, and Taiwan . The total project cost is approximately USD 56 million (AUD 80 million), fully grant-funded, with Australia contributing up to USD 37 million .

Technical Details



The cable system contains four fiber pairs and is designed to deliver high-speed, reliable internet to Tuvalu . While the Tuvalu Vaka Cable is a submarine system, the project also incorporates ADSS (All-Dielectric Self-Supporting) cable technology for land-based sections, which allows fiber optic cables to be installed without metal support, reducing strain and maintaining low optical loss over long distances . ADSS cables are lightweight, UV-resistant, and capable of supporting long spans between structures, making them suitable for Tuvalu's coastal and overhead installations.

Construction and Resilience Measures

The cable landed in Funafuti in December 2025 and is expected to be operational by Q3 2026 . During construction, proactive measures were taken to mitigate environmental risks, including elevating the cable landing platform, installing solar panels for power, and implementing rainwater harvesting . These steps aim to ensure the cable's reliability despite rising sea levels and extreme weather conditions.

Benefits and Impact

The Tuvalu Vaka Cable will provide:

- Faster and more reliable internet for individuals, businesses, and government services .
- Enhanced access to digital information, education, healthcare, and global communication .
- Economic development opportunities by connecting Tuvalu to international markets and services .
- Resilient infrastructure designed to withstand environmental challenges, supporting long-term connectivity .

Funding and Support

The project is fully grant-funded, with contributions from multiple countries and organizations. The Australian Infrastructure Financing Facility for the Pacific (AIFFP) played a key role in supporting the land-based works, including the beach manhole, duct work, and cable landing station . Google provided technical expertise and support, while SubCom supplied the cable system .

Summary

The Tuvalu Vaka Cable represents a transformative step for Tuvalu, providing its first international fiber optic connection. By combining submarine and ADSS cable technologies, and incorporating sustainable and resilient design measures, the project ensures that Tuvalu can access reliable, high-speed internet while mitigating risks from climate change and rising sea levels .

Article Content

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All-dielectric self-supporting (ADSS) cable is a type of optical fiber cable that is strong enough to support itself between structures

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ADSS Cable, All Dielectric Self-Supporting Fiber Optic Cable

ADSS Fiber Optic Cables ADSS cable is a kind of all composed of media materials, it contains the necessary support system, can be

Cable: Tuvalu

The activation of submarine fiber infrastructure represents a structural shift in Tuvalu's digital capacity, transitioning the country from

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