Afghanistan Fiber Optic Cable Project

Overview

The Ministry of Communications and Information Technology has announced the approval of a project to lay 488 kilometers of fiber optic cable across Afghanistan.

Key Takeaways

Afghanistan is developing a national fiber optic network spanning thousands of kilometers, connecting all major cities and provinces while linking to regional and international networks. Overview and ObjectivesAfghanistan's fiber optic project aims to modernize the country's telecommunications infrastructure, improve internet access, and integrate Afghanistan into global digital markets. The primary objectives include: Extending high-speed internet and telecommunication services to all 34 provinces.

Establishing the Afghanistan National Ring Network, a fiber optic backbone connecting major cities such as Kabul, Herat, Mazar-i-Sharif, Kandahar, and Jalalabad. Enhancing regional connectivity through cross-border links with Iran, Pakistan, Turkmenistan, Uzbekistan, Tajikistan, and future connections to China. Supporting economic growth, education, governance reforms, and the development of IT and BPO sectors.

Technical Deployment

The network combines multiple deployment methods to ensure resilience and coverage: Aerial cables: ADSS (All-Dielectric Self-Supporting) cables co-located with power lines, resistant to UV and extreme temperatures. Underground cables: Armored GYTA53 with anti-rodent PE sheaths for rocky or flood-prone areas. High-altitude and power tower routes: OPGW (Optical Ground Wire) providing lightning protection and data transmission.

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Rapid installation: Air-blown micro-cable technology allows up to 80 km/day deployment. Climate resilience: Cables certified for -40°C to +70°C, with IP68-rated connectors for harsh environments. Capacity: Backbone supports 10 Gbps, connecting over 200 rural communities and 15 urban data centers.

Current Status and Expansion

Over 4,000 km of fiber optic cables have been laid, covering 24 provinces. An additional 488 km expansion project has been approved to connect remaining provinces and enhance regional integration. The network is part of the broader Digital Silk Road, linking Afghanistan to regional knowledge economies in Central, South, and Southwest Asia.

Memorandums of Understanding have been signed with China, Kyrgyzstan, Tajikistan, Turkmenistan, and Pakistan to expand cross-border connectivity.

Governance and Investment

Managed by Afghan Telecom, deployed by the Ministry of Communications and IT, and regulated by the Afghanistan Telecommunications Regulatory Authority (ATRA).

ATR

A has drafted an Open Access Policy to encourage private sector investment and competition in fiber optic services. The project has received funding from international donors, including the World Bank, with a total investment of approximately USD 101 million. Regional cooperation with Central Asian countries and India is emphasized to enhance economic benefits and connectivity.

Benefits and Opportunities

Improved internet access and reduced latency for mobile operators, supporting IoT, smart city applications, and 5G rollout.

Expansion of IT and BP

O sectors, leveraging Afghanistan's youthful and educated population. Lower-cost access to international bandwidth and increased domestic penetration. Potential to transform Afghanistan into a regional digital hub, fostering economic development and integration into global markets.

The Afghan fiber optic project represents a strategic investment in national infrastructure, regional connectivity, and economic modernization, positioning the country for long-term digital growth and technological integration.

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Article Content

Afghanistan''s Fiber Optic Network Project: A Key to

The project includes the laying of thousands of kilometers of fiber optic cables, enabling high-speed internet and telecommunication services for

Digital Silk Road

Once completed, the 4,600 Afghan Fiber Optic Ring (also known as the Afghan National Civil Optical Fiber Cable-OFC ring network) within the broader regional “Digital Silk Road” aims to improve

488 KM Fiber Optic Expansion Project in Afghanistan Approved

The Ministry of Communications and Information Technology has announced the approval of a project to lay 488 kilometers of fiber optic cable across Afghanistan.

Afghanistan''s fiber optics key to regional connectivity

The primary objective of Afghanistan''s fiber optic network project is to extend internet access to all 34 provinces and improve the quality and

Agreement of Fiber Optic project Signs for Central & Northeastern ...

Eng. Said: following the previous program, this time we sign the Fiber Optic project contract of central provinces (Bamian, Daikundi, Takhar, Ghor Badakhshan) and 13 districts of these province under

GL FIBER & High-Performance Fiber Optic Network

Scope: Deployment of a 1,200-km fiber optic backbone network integrating aerial, underground, and submarine routes to enhance national

Fiber Optic Network Project To Be Completed In 7 Months

Afghanistan and China will be connected to a fiber optic network via Wakhan port within the next seven months, Ajmal Ayan, head of Afghan Telecom Telecommunication Company said on

Afghan Fiber Optic Network Analysis

Afghanistan''s Fiber optical network is owned by government. Currently it is connected with 24 provinces and its active length is 4000/km. 101 million USD has been invested on this fiber optical network. In

GL FIBER & High-Performance Fiber Optic Network

High-Performance Fiber Optic Network Deployment in Location: Afghanistan Scope: Deployment of a 1,200-km fiber optic backbone

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42m afs fiber optic project launched in Herat – Pajhwok

Practical work on a 45-kilometre fiber-optic project worth 42 million afghanis has been launched in western Herat province, an official said on

Digital CASA Afghanistan Project | Ministry of communications & IT

Digital CASA Afghanistan Project Digital CASA Afghanistan Project Digital CASA (Central Asia South Asia) is a World Bank funded regional program that includes projects in Afghanistan and some

AWCC inaugurates Kabul-Mazar-Hairatan fiber optic network

Afghan Wireless Communication Company (AWCC) on Monday inaugurated the Kabul-Mazar-e-Sharif and Mazar-Hairatan fiber optic network, which was officially put into operation. Dr.

Fiber Optic development strategic Objectives in Afghanistan

Providing basic infrastructure for connecting usage the National Fiber Optic Network Providing foundation for creating an information society. In order to achieve the above objectives, the

Microsoft PowerPoint

Islamic Republic of Afghanistan, Ministry of Communications and Information Technology (MCIT) Presentation by MCIT on Afghan Fiber Optic Ring International Conference, “Practical steps towards

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Fiber Optic Network Project To Be Completed In 7 Months

Nearly 480km of fiber optic cable will connect Afghanistan to China''s fiber optic network, he said. With the expansion of fiber optic network, internet services will be better, said Saer Zaland,

Item: Relocating culvert .. Tender in Vietnam, 1405665|Tender Impulse

Bid for tender to Item Relocating culvert infrastructure, fiber optic cables, copper cables and telecommunications stations under the East West Road Site Clearance Subproject in Buon Ma Thuot

CHINA TELECOM AND AFGHANISTAN TELECOM START FIBER OPTIC CABLE PROJECT ...

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China Telecom has signed cooperation agreements with Silk Road optical fiber cables with partners in Kyrgyzstan, Tajikistan and Afghanistan and formed a Silk Road Optical Cable Management

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