

Afghanistan Inquiry 6-core Anti-Critical Fiber Optic Cable

Article Overview

Afghanistan is procuring 235 kilometers of 6-core fiber optic cable to strengthen its national digital backbone and expand connectivity across key regions.

Project Overview

The Afghan government, through Afghan Telecom, has issued a tender for the procurement of 235 kilometers of 6-core fiber optic cable. This cable is intended to enhance the national telecommunications infrastructure, providing a robust backbone for internet and data services across Afghanistan, particularly in areas connected to the Afghan Fiber Optic Ring and the broader Digital Silk Road initiatives (TendersOnTime, 2025) .

Technical and Strategic Significance

- o 6-Core Fiber Design: The cable consists of six optical fibers, allowing multiple high-speed data channels within a single cable. This configuration supports redundancy and ensures continuity of service in case of fiber damage, which is critical in Afghanistan's challenging terrain and politically sensitive regions.
- o Anti-Critical Features: The term "anti-critical" typically refers to enhanced durability and resilience against environmental stressors, including temperature extremes, rodent damage, and mechanical stress. This ensures reliable operation in Afghanistan's diverse climates, from mountainous regions to desert areas (GL Fiber, 2025) .
- o Integration with National Backbone: The cable will connect to the Afghan Fiber Optic Ring, a 4,600 km national network designed to link provinces and urban centers, supporting broadband, 5G, and FTTH (Fiber to the Home) deployments. This network is part of Afghanistan's broader goal to integrate into the Digital Silk Road, improving regional connectivity and knowledge economy development (RECCA, 2025) .

Deployment and Impact

- o Connectivity Expansion: The 6-core cable will help connect underserved provinces, potentially including Badakhshan, Bamyán, Kapisa, and Kunar, to the national backbone, reducing digital isolation and enabling access to government, educational, and commercial services.
- o Resilience and Monitoring: Modern fiber deployments in Afghanistan incorporate Distributed Temperature Sensing (DTS) and armored sheathing to detect faults and withstand harsh conditions, ensuring minimal downtime and secure data transmission (GL Fiber, 2025) .
- o Economic and Social Benefits: By expanding high-speed connectivity, the cable supports e-governance, telemedicine, online education, and commercial bandwidth services, contributing to Afghanistan's ICT revenue and regional digital integration (RECCA, 2025) .

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Challenges

The deployment faces challenges including political restrictions, Taliban-imposed fiber bans, and security risks, which have previously caused nationwide connectivity drops to as low as 14% of normal levels (NextMSC, 2025) . Ensuring uninterrupted operation will require careful planning, monitoring, and collaboration with local authorities.

Conclusion

The 6-core anti-critical fiber optic cable represents a strategic investment in Afghanistan's digital infrastructure, enhancing national connectivity, supporting regional integration, and enabling resilient, high-speed communication across the country. Its deployment is a key step toward modernizing Afghanistan's telecommunications network and integrating it into broader regional digital initiatives.

Reliable sources have confirmed that fiber-optic internet services were shut down across Afghanistan at 5 p.m. on

Afghanistan is in the midst of a communications blackout, just weeks after Taliban authorities began severing fiber

At the beginning of the invention of the telephone, copper cables were used to transmit information and sound, but

TELECOMMUNICATIONS COMPANY AFGHAN TELECOM has floated a tender for Procurement of 235 kilometers of 6-core fiber

Afghan Telecom Owned Fiber optic network across Afghanistan. The Optical fiber department of Afghan telecom communicates and

Market Forecast By Cable Type (Single-Mode, Multi-Mode), By Material (Glass, Plastic), By Application (Communication, Power

Recently, China Telecom and its partners in Kyrgyzstan, Tajikistan and Afghanistan completed the signing of the Silk Road Optical

In Afghanistan, the ruling Taliban have cut fiber optic internet connections in numerous provinces. Criticism has also

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Taliban authorities in Afghanistan have imposed a nationwide shutdown of

Some experts believe fiber optics could serve as a key infrastructure for the growth of

Taliban's ongoing internet shutdown paralyzes Afghanistan Two weeks after the Taliban signaled plans to ban fiber

The new fiber optic network is expected to deliver greater connectivity to Afghanistan's neighboring countries and the

Digital Silk Road Afghanistan is fast developing into a major trade and transit hub for subsea and transcontinental communication.

Afghanistan government tender for Procurement of 235 kilometers of 6-core fiber optic cable, TOT Ref No: 123304006, Tender Ref

By: H.N Afghanistan, a landlocked nation with a turbulent history of conflict and instability,

6Wresearch actively monitors the Afghanistan Fibre Optic Cables Market and publishes its comprehensive annual report, highlighting

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