

Article Overview

Turkmenistan is rapidly expanding its optical fiber network, aiming to enhance national connectivity and international transit capacity while supporting digital transformation across all sectors.

National Fiber-Optic Infrastructure

Turkmenistan's fiber-optic backbone forms the core of its digital infrastructure, connecting major cities, industrial facilities, and cross-border links with neighboring countries. The network consists of high-capacity underground optical cables, optical cross-connects, communication nodes, and data centers, supporting voice communication, mobile internet, corporate networks, banking systems, telemedicine, and e-government services. This backbone is critical for industrial control systems, pipeline transport, rail logistics, customs, and banking settlements, making it a cornerstone of the national economy.

International Connectivity

Currently, Turkmenistan is connected to eight international fiber-optic networks, with plans to expand to eleven by 2028. Key projects include:

- o Serhetabat - Herat via Arkadagyn Ak yoly: A cross-border line enhancing transit traffic and providing access to the Indian telecommunications market.
- o Submarine fiber-optic cable with Azerbaijan: Laid along the Caspian Sea by Turkmentelekom and Azertelekom to strengthen regional connectivity.
- o Terrestrial trunk lines: Routes such as Etrek-Incheburun and Bekdash-Temirbaba are under construction to improve international data transmission capacity. These projects position Turkmenistan as a strategic information and communications bridge between East and West, as well as North and South in Central Asia.

Coverage and Digital Transformation

Turkmenistan has achieved 100% high-speed internet coverage across all settlements, leveraging a combination of satellite, mobile, and fixed-line technologies. The country's digital transformation initiatives include building data centers, cloud computing infrastructure, smart cities like Arkadag, and integrating ICT solutions into healthcare, education, and government services. These efforts are part of broader state programs for 2026-2028, emphasizing technological sovereignty and economic resilience.

Strategic Importance

The expansion of fiber-optic networks not only enhances domestic connectivity but also increases transit

Details of Turkmenistan Fiber Optic Communication

traffic capacity, enabling Turkmenistan to participate in international internet traffic and regional IT markets . This infrastructure supports economic diversification beyond traditional commodities, strengthens cybersecurity, and lays the foundation for advanced digital services and smart city ecosystems . In summary, Turkmenistan's optical fiber communication network is a key enabler of national digital transformation, international connectivity, and economic modernization, with ongoing projects set to significantly expand both domestic and cross-border capabilities by 2028 .

6Wresearch actively monitors the Turkmenistan Fiber Optics Market and publishes its comprehensive annual report, highlighting

Telecommunications in Turkmenistan Turkmenistan has a state-controlled press and monitored communication systems.

Work is underway to create fiber-optic communication along the bottom of the Caspian Sea between the telecom

The Turkmen company Döwletli showcased its products at an exhibition on March 17 at the

A document "On the organisation of activities by communication operators of Azerbaijan and Turkmenistan in relation to the joint

An overview of fiber optic coverage and internet usage in Turkmenistan in 2026, highlighting digital infrastructure and connectivity

The implementation of these projects will increase the number of international fiber-optic connections from eight to eleven. By

Currently, the country is connected to eight international fiber-optic trunk lines: links with Kazakhstan, Iran, two with

Technologically, the network consists of high-capacity underground optical cables, optical cross-connects,

6Wresearch actively monitors the Turkmenistan Optical Fiber Cables Market and publishes its comprehensive annual report,

Kazakhstan and Turkmenistan have agreed to jointly construct an underground fiber-optic communication line

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annual report,

Conclusion: In cooperation with international organizations, Turkmenistan is drawing up new sectoral development programmes and

As part of the State Program for 2026-2028, the construction of new cross-border fiber-optic trunk lines is planned. The Ministry of

6Wresearch actively monitors the Turkmenistan Optical Fiber and Accessories Market and publishes its comprehensive annual

Turkmenistan is modernizing its telecommunications infrastructure: by 2028, the number of international fiber-optic

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