

Article Overview

Fiber optic cable deployment in Cambodia follows national regulatory oversight, technical installation standards, and coordination with urban planning authorities to ensure safe, efficient, and high-capacity telecommunications networks.

Regulatory and Institutional Framework

In Cambodia, the Ministry of Post and Telecommunications (MPTC) is responsible for telecommunications policy, including fiber optic networks, while the Ministry of Land Management, Urban Planning and Construction oversees land use and construction compliance . Coordination between these ministries ensures that fiber optic infrastructure is integrated into urban developments, industrial zones, and special economic zones, with proper allocation of ducts, cable routes, and technical access for service providers . Construction permits for new buildings often include requirements to reserve space for fiber optic and other telecom utilities.

National Fiber Optic Networks

Cambodia's fiber optic backbone is operated by three licensed providers: Telecom Cambodia (state-owned), Viettel Cambodia, and CFOCN . These networks connect to international submarine cables such as the AAG cable, providing high-capacity connectivity for both urban and rural areas . The networks support broadband, mobile backhaul, and enterprise connectivity, forming the foundation for nationwide digital services.

Technical Standards and Installation Practices

While Cambodia does not publicly publish a single fiber optic standard document, current practices emphasize:

- o Underground installation along existing rights-of-way to minimize land acquisition and environmental impact .
- o Trenching and backfilling with proper waste management and dust control during construction .
- o In-building systems to extend coverage into commercial buildings, malls, and residential complexes, ensuring indoor signal quality .
- o Coordination with local authorities to ensure safe placement of cables, compliance with road infrastructure regulations, and long-term operational safety .
- o Environmental and social safeguards, including occupational health, safety measures, and grievance redress mechanisms for affected communities .

Recent Developments

CFOCN has proposed underground fiber optic expansions across nine provinces, including Kandal, Kampot, Kampong Speu, Kampong Thom, Kep, Sihanoukville, Koh Kong, Takeo, and Svay Rieng . The project involves technical feasibility studies, compliance with public facility regulations, and collaboration with provincial authorities to ensure orderly and sustainable deployment.

Summary

Cambodia's fiber optic cable standards are shaped by a combination of regulatory oversight, urban planning coordination, and technical best practices. Key points include:

- o Integration with urban and industrial developments.
- o Underground installation along existing public utilities.
- o Compliance with environmental, safety, and social impact requirements.
- o Coordination among MPTC, MPWT, and local authorities for construction and operational safety.
- o Deployment by licensed national backbone operators connected to international submarine cables. These measures collectively ensure that Cambodia's fiber optic networks are high-capacity, reliable, and scalable, supporting the country's digital infrastructure goals and bridging connectivity gaps between urban and rural areas .

The construction of the optical cable network will pass five provinces - Kampot, Prey Veng, Tbong Khmum, Kampong

So far, the MPTC simultaneously played the roles of policymaker, regulator and operator of Cambodia's fixed-line telephone network.

This latest initiative from CFOCN follows the company's installation of extensive fibre optic cable networks in urban

Cambodia Fiber Optics Market explores emerging internet penetration trends within the national telecommunication and urban

China Unicom Group, one of China's major telecommunications operators, has revealed plans for the construction of

Telecom Cambodia (TC) Viettel Cambodia Cambodia Fiber Optic Cable Network (CFOCN) 9

With a loan from Japan, the government will begin laying more than 400 km of fiber-optic cable early next year to connect Phnom

The data is sourced from the Telecommunication Regulator of Cambodia, and covers updates from January 2022 to

Cambodia ICT Master Plan (2020) Which aims to improve ICT industry and human resources development, internet connectivity,

Thailand-Cambodia-Viet Nam Backbone: 1997-1999 The first fiber optic network was built in Cambodia

The Cambodia Fiber Optic Cable Market is expected to experience significant growth in the coming years due to the increasing

Cambodia Fibre Optic Communication Networks Co., Ltd (CFOCN) requested approval from the Ministry of Public

Background Telecommunications infrastructure planning increasingly intersects with urban development, construction

Backbone networks at the present Fiber optic cable network - 45,933 km (1) Capable of transmitting STM-1 data (155Mbps),STM- 64

Cambodia's Ministry of Post and Telecommunications and the Telecommunication Regulator of Cambodia opened

State-owned Telecom Cambodia is the main fixed telephone service provider. In addition, there are seven other operators licensed

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