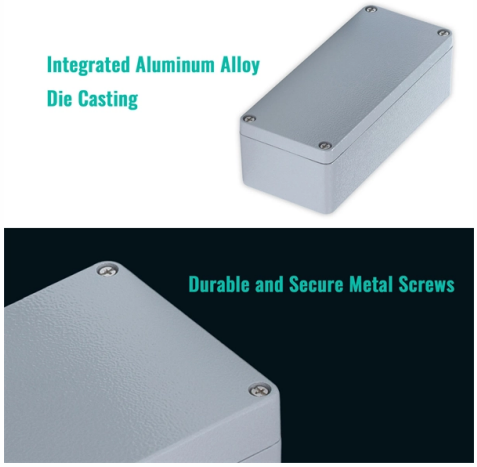
Relocation of Russian Telecom Fiber Optic Cables



Overview

Before the shutdown, the facility produced about 4 million kilometers (2.5 million miles) of optical fiber annually, supplying roughly 20 Russian cable manufacturers that used the material...

Key Takeaways

Russia's fiber optic network is currently reliant on Chinese imports due to domestic production shutdowns, with large-scale cable replacement and a domestic production roadmap planned by 2030. Current Supply ChallengesRussia's only domestic optical fiber producer, Optic Fiber Systems in Saransk, has been offline since May 2025 following Ukrainian drone strikes, which damaged production facilities and caused fires, halting annual output of about 4 million kilometers of fiber. This shutdown forced Russian telecom and military sectors to rely entirely on Chinese fiber optic imports, which have surged in price due to high demand, including military applications.

Chinese exports to Russia reached record levels in 2025, with shipments sufficient to support thousands of drones.

Aging Infrastructure and Replacement Needs



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More than 50-70% of Russia's west-east fiber optic cables are approaching the end of their 20-25 year warranty period, with over 400,000 km needing replacement by 2030. Backbone networks, particularly from Moscow to Ulan-Ude, are operating near capacity (60-70%), and signal degradation is expected as older cables cloud over time. The total replacement cost is projected to run into hundreds of billions of rubles.

Government Strategy and Domestic Production Roadmap

The Russian government has outlined a communications industry strategy through 2035, aiming to establish a full domestic production cycle for all grades of optical fiber by 2030. This includes manufacturing fiber for trunk lines, land-based and subsea communications, broadband Internet access, and a gradual transition to fiber-optic networks. The plan also emphasizes the use of domestically certified telecom equipment and cryptographic security systems to protect critical communications infrastructure.

Implications for Relocation and Network Resilience

Due to the reliance on imports and aging infrastructure, Russia faces both strategic and operational risks. The relocation or replacement of fiber optic cables involves: Importing Chinese fiber to maintain current network operations Replacing aging west-east backbone cables to prevent signal degradation and capacity bottlenecks Investing in domestic production to reduce foreign dependency and enhance national security The combination of these factors indicates that Russia's fiber optic network is in a transitional phase, balancing immediate operational needs with long-term self-sufficiency goals. SummaryRussia's telecom fiber optic infrastructure is currently heavily dependent on Chinese imports due to the shutdown of its only domestic plant, while a significant portion of existing cables is nearing obsolescence.

The government's roadmap aims to restore full domestic production by 2030, ensuring network resilience, modernization, and reduced foreign dependency, particularly for both civilian and military communications.

Article Content

Russia Forced to Rely on Chinese Optical Fiber Imports After

Before the shutdown, the facility produced about 4 million kilometers (2.5 million miles) of optical fiber annually, supplying roughly 20 Russian cable manufacturers that used the material...

Russia''s Only Fiber Optic Plant Shut Down For Nearly A Year After ...

The country''s only plant producing optical fiber, which is used in the telecommunications industry and by the Russian military in the war against Ukraine, has stopped working in Russia since

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More Than 50% Of Fiber Optic Cables In Russia Will Be Obsolete By

It is estimated that by 2030 Russia will need to replace more than 400,000 km of fiber-optic cables with a service life of more than 20 years. The load of backbone networks from Moscow

The Only Fiber Optic Plant in Russia Shut Down for Nearly a Year

According to The Moscow Times, the facility, Optic Fiber Systems, is located in Saransk. The plant produced fiber-optic cables for both the telecommunications industry and the Russian

Fiber optics becomes critical shortage in Russia | RBC-Ukraine

Russia has been forced to postpone the mandatory localization of fiber optic production for at least two years. The reason is the complete shutdown of the country''s only specialized plant,

Russia''s only fiber optic plant halts after Ukrainian strike, China ...

Since May 2025, the only optical fiber production plant in Russia has been shut down after Ukrainian Armed Forces attacks. At the same time, China, which now supplies 100% of fiber

The Russian Federation is creating an Internet bridge between Europe ...

The Polar Express trans-Arctic undersea fiber optic line being created in Russia will become a bridge for Internet traffic between Asia and Europe. This is stated in the Roscongress report.

Industry roadmap calls for Russia to create full-cycle optical fiber ...

Plans are in place to create a full production cycle for all grades of optical fiber by 2030, according to the Russian government''s communications industry strategy covering the period up to...

Production of fiber-optic cables has fallen in Russia

Sergey Gladkikh, Chairman of the Telecommunications and Data Cables section of the Electrocable Association, explained the drop in output by active supplies of products from China and

Russia says its undersea telecom cable in Baltic Sea damaged by ...

The damage comes amid a series of recent disruptions to undersea telecom and power cables in the Baltic Sea. Western experts and officials have accused Russia of engaging in hybrid

Telecoms: Efforts to Damage Undersea Cables Could

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A group of Europe''s largest telecom companies urge NATO to fight back against damage allegedly done at the behest of Russia. The repercussions

CO-DEPLOYMENT OF FIBRE OPTIC CABLES FOR CROSS

6.1 ber optic cables infrastructure, operation and maintenance technologies tegic initiatives" headed by the President of the Russian Federation Vladimir Putin and the relevant ministries in April 2014. The

Russia Suspected as Baltic Undersea Cables Cut in Apparent Sabotage

Russia is suspected of orchestrating another major act of sabotage in Europe after two key fiber-optic data cables running below the Baltic Sea were cut off in quick succession earlier this

Russia starts laying 12,650 km of undersea fiber optic

MURMANSK — Russia on Friday begins laying its first undersea fiber optic communications cable through the Arctic as part of a state-run project to

Undersea cables cut or damaged, leading European nations to

A Chinese-flagged cargo ship draws attention after undersea internet cables were severed, leading European countries to investigate possible sabotage.

Russian firm won''t seek compensation for damaged Baltic cable

Russian state company Rostelecom will not seek compensation for damage to a fiber optic cable that was severed in the Baltic Sea last month and will complete the repair at its own

Russia has Begun Laying Submarine Optic Fiber Cables in the Arctic ...

The laying of the submarine fibre optic communication cable in Russia through the Arctic Circle has started as part of a state-run project.

Cable Damage Slows Internet for Millions of Customers Across Russia ...

A damaged fiber-optic cable in central Russia disrupted internet access for nearly 4 million customers across 21 regions, authorities said Wednesday afternoon.

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