

Russia lays optical cables



Overview

Russia Forced to Rely on Chinese Optical Fiber Imports Russia's only domestic producer of optical fiber has been offline since May 2025 following As Russia.

Key Takeaways

Russia is actively laying the “Polar Express” undersea fiber-optic cable through the Arctic while relying on Chinese optical fiber due to domestic production disruptions. The “Polar Express” Undersea Cable

Russia has begun laying its first undersea fiber-optic communications cable through the Arctic, known as the “Polar Express”, as part of a state-run initiative to provide high-speed internet to remote northern regions rich in hydrocarbons . The cable will stretch approximately 12,650 kilometers (7,860 miles) along Russia's northern coast, linking Teriberka on the Barents Sea to Vladivostok in the Far East . It is intended to supply stable internet connections to Arctic port towns, the Kamchatka Peninsula, and Sakhalin, improving communications infrastructure in areas previously underserved . The project is financed entirely by the Russian state, with an estimated cost of 65 billion roubles (\$889 million) . The cable is manufactured in Murmansk using Chinese optical fiber combined with Russian components .

Dependence on Chinese Optical Fiber



Russia's domestic optical fiber production has been severely disrupted. The country's only domestic plant, Optic Fiber Systems in Saransk, has been offline since May 2025 following Ukrainian drone strikes . Before the shutdown, the plant produced about 4 million kilometers of optical fiber annually, supplying roughly 20 Russian cable manufacturers . With the plant offline, Russia now relies entirely on imports from China, which has led to significant price increases. For example, the cost of G.652D fiber rose from 16 yuan per kilometer in early 2025 to 40 yuan per kilometer by January 2026 . This surge is driven by growing demand for telecommunications, AI infrastructure, and military applications, including fiber-optic control of drones resistant to electronic jamming .

Strategic and Operational Implications

The combination of the Arctic undersea cable project and reliance on imported fiber highlights several strategic priorities for Russia:

- Telecommunications expansion: The “Polar Express” will enhance connectivity along the Northern Sea Route and remote Arctic regions .
- Military and security applications: Fiber-optic cables are critical for controlling drones and ensuring secure communications resistant to electronic warfare .
- Supply chain vulnerability: Dependence on Chinese fiber exposes Russia to price volatility and potential geopolitical risks .
- Infrastructure modernization: The project reflects efforts to modernize long-distance and backbone networks, supporting both civilian and defense needs . In summary, Russia is actively expanding its optical cable infrastructure through the Arctic while navigating significant supply challenges due to the shutdown of its domestic fiber plant, making Chinese imports essential for both civilian and military telecommunications projects.

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The Russian Threat to Subsea Cable Internet Infrastructure

Increased Russian naval activity in recent years around deep-sea cables, the critical infrastructure of the global

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The Ukrainians recently captured a Russian drone which communicates via a fiber-optic link, making it jam-proof. This

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Ukraine Counters Fibre-Optic Drones with Lasers That Fry the Cables

Very interesting footage from Russians indicating that Ukrainian Forces use laser light

Could Russia sabotage undersea cables linking the world?

Is Moscow interested in cutting or tapping the cables that connect the world's calls, emails, and texts?

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Russia Starts Arctic Cable Laying Project

By Gleb Stolyarov (Reuters) – Russia on Friday begins laying its first undersea fiber optic communications cable

Russian firm says Baltic telecoms cable was severed as Chinese ship ...

A Russian fiber optic cable under the Baltic Sea was completely severed last month when a Chinese container ship

Russia is adding fiber-optic cables to its cheap "Molniya" strike ...

Russia is using fiber-optic cables to control some of its larger, fixed-wing strike drones, making them effectively

"A Revolution in Drone Warfare": As Russian Fiber-Optic Drones

But the industrialization of fiber-optic drones still depends on access to the cables necessary for their operation —

Kyiv finds a way to stop the unstoppable fibre-optic drones launched

Russia's adoption of fibre-optic drones has been bolstered by Chinese technology, with new video evidence showing

Why Is Russia Interested in Undersea Internet Cables?

Undersea cables are generally around a mere 3 inches in diameter and composed of various layers of insulation, steel cables and

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