

# Altnets

## Why your choice of network technology will be key during the global fibre shortage

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## Introduction

Optical fibre shortages are nothing new; previous industry booms have led to supply issues across the telecoms sector. Back at the turn of the millennium, huge demand from the fast-growing telecoms market led to a global shortage of fibre, as demand massively outstripped supply.

In 2017, many telecoms providers in the UK and Europe experienced a further shortage of fibre, with lead times lengthening from a few weeks to up to six months for some. Again, the shortage came down to a large increase in demand due to emerging technology and the ramping up of infrastructure builds.<sup>1</sup> Manufacturing was unable to keep up, and the big telecoms players tended to come off better as they were placing larger orders which were naturally prioritised over smaller accounts. Those with stronger, more diversified supplier relationships were often better placed to navigate the disruption.

The telecoms industry has bounced back from previous fibre shortages, which have previously had an impact over several years. Now, new pressures on the telecoms industry are leading businesses into a similar position to the one seen in 2000. These include: the rapid deployment of data centres (DC); the growth of AI and cloud computing; and the impact of the United States' rapid deployment of fibre upgrades.

Fibre shortages don't just cause immediate supply chain challenges; they also lead to wider business planning difficulties, as builds are delayed or halted, plus increased competition for products inevitably leads to higher prices. The 'just-in-time' model of procurement and forecasting is no longer relevant to the telecoms industry due to increasing demands on the supply chain. Long-term risk management for specialised products, including fibre and other key components, is essential.

In this white paper, we will explore practical strategies that telecoms businesses across the data centre, telecoms, and computing sectors can adopt to minimise the risks associated with the global fibre shortage, remain competitive, and, most importantly, stay in business. As supply

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<sup>1</sup><https://www.ispreview.co.uk/index.php/2017/08/shortage-high-capacity-optical-cable-biting-full-fibre-broadband-isps.html>

constraints intensify, procurement strategy becomes just as critical as technology choice. Operators can achieve more with less by leveraging advanced fibre technologies if they are prepared to source the best products and invest at the design stage. Working through a trusted solutions partner such as Altnets can strengthen supply chain resilience and provide access to diversified manufacturing relationships. In a market defined by volatility, simplifying procurement while protecting continuity of supply will be central to maintaining momentum in network build programmes.

## **The fibre market reality**

Firstly, the fact that a fibre shortage is on the horizon is a certainty, not a prediction. Broadband upgrades, the data centre boom, smart infrastructure (such as unmanned aerial vehicle comms systems), and other infrastructure builds, are driving the huge increase in demand for fibre optic cables.

We've already seen a surge in the price of fibre cable, which has created market pressure. According to data collected by CRU in February 2026, some fibre solutions have increased in price by 30% since the beginning of 2025.<sup>2</sup>

Data centres, in particular AI-optimised hyperscale DCs such as the £3bn Humber Tech Park, are the driving force behind increased demand for fibre. DCs require five to ten times the fibre optics of traditional cloud computing facilities, with global DC demand increasing by a whopping 75.9% year-on-year since 2025. Future forecasts predict that DC fibre demand will be 30% of the global supply by next year (it was only 4% back in 2024). The increasing amount of data to be processed leads to the need for more fibre, power and infrastructure.

Not only do they require a high density of fibre within their footprint, but the capability of the fibre deployed often needs to be bigger too. In preparation for the ongoing demand, many DC operators are already placing bulk orders for some of the highest-grade fibre products on the market, which has already led manufacturers to switch their focus to producing these over and above any conventional fibre, thereby creating even more of a bottleneck for procurement teams.

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<sup>2</sup><https://www.oyii.net/news/structural-price-rally-in-fiber-optic-cables-ai-powered-demand-supply-constraints-2026-forecast/>

As the DC industry booms and supply chains diversify, long-term scheduling will help protect UK networks from procurement pressures. However, leaning on emerging technology products will also protect businesses from the market movement by future-proofing their networks while reducing exposure to supply constraints. As technology experts here at Altnets, we are supporting our clients from initial product suite selection through to linking up with the best manufacturers to fulfil long-term orders.

## **New tech key for supply chain security and future-proofed networks**

As telecoms procurement teams look to source products for their builds, they have a decision to make on what products they invest in. The DC industry is eyeing products with higher fibre utilisation per strand, known as multi-core or ribbon fibre. These types of cables have the architecture to transmit multiple wavelengths of up to 800G in a single strand of fibre. Although with a far higher CapEx spend required, they have the ability to take a far higher capacity of data without adding any physical fibre, plus the higher-grade materials involved means a breakdown (and associated maintenance) is also less likely.

However, in the current climate, product selection cannot be separated from supply chain strategy. Access to higher-specification fibre at scale depends not only on budget allocation, but on the resilience and structure of the procurement model supporting it.

More sophisticated technology carries a higher price point and has seen some of the steepest price rises, with hollow-core fibre commanding a “20% to 30% premium”, according to the CRU figures. The question is, why spend any extra money on multi-core products when you can achieve lower build costs by choosing standard, single-mode fibre?

Choosing the right products for the build at this moment of huge pressure on supply chains will be the difference between a project that is future proof and one that has a shorter lifespan. There is, in fact, a massive opportunity for telecoms companies to look ahead to the future demand in DC and smart technology, as well as FTTx, and design their decision-making to facilitate this.

That decision-making extends beyond technical specification to how materials are secured. Operators who commit exclusively to direct frame agreements with individual manufacturers may find flexibility reduced in

a market where allocation and lead times remain volatile. Working alongside Altnets can introduce a more flexible sourcing structure, helping operators navigate allocation pressures while preserving access to next-generation products.

Multi-core fibre has the ability to increase its bandwidth ten times overnight within the same footprint of traditional fibre cable, and without the need for cable replacement. It breaks the density limitations of traditional solid core fibre cables. As well as serving the immediate needs of the DC, it retains capacity for inevitable increased demand in the future. Most crucially, this keeps networks relevant in an ever-advancing industry where cable lifespans can exceed 50 years.

Maximising the output of existing duct space has the additional benefit of lowering the carbon footprint of a build and supporting ESG targets. Over a build or facility's lifetime, the initial higher CapEx investment in emerging technology can lead to a lower Total Cost of Ownership (TCO), as higher capacities mean product maintenance and upgrades are less frequent.

As well as increasing the level of data transferred, new fibre cable technology can achieve speeds of light 50% faster than solid core glass cables. They have also been proven to reduce latency by 30%. The capabilities of products such as ribbon fibre are a gamechanger for the industry, unlocking new DC network design possibilities and allowing DCs to grow in real time.

### **Commercial strategies to manage the fibre shortage**

When combined with a coordinated partner model that aggregates demand across multiple builds and works with a broad manufacturing base, operators can streamline procurement and improve supply visibility across projects. In times of constraint, structural clarity and purchasing scale become as important as the technology itself.

Alongside investing in innovative and future-proofed technology, telecoms operators also need to consider their commercial and structural approach to procurement. There are several tactics to consider.

Firstly, securing multi-year contracts rather than purchasing fibre on a project-by-project basis. Hyperscale DC operators should target supply agreements for at least three years, and commit to minimum purchase volumes. Suppliers will allocate products to those with long-term

contracts first. This locks in price points and protects against raw material spikes in a tightening market, leading to long-term CapEx savings. As well as de-risking supply chains, multi-year contracts create peace of mind amongst investors and increase the value of the business.

In some cases, this approach is strengthened when demand is aggregated across multiple builds or operators, enabling greater purchasing leverage and improved allocation certainty than isolated, single-project agreements.

Secondly, regionalising procurement is a powerful solution to securing supply chains. Fibre manufacturing is predominantly located in Europe, North America and Asia. In light of current geopolitical tensions, which show no signs of easing, and challenging trade policies, supply chains are at risk of logistics disruption and export tariffs. DC operators are looking at regions where fibre cables are manufactured as well as assembled ahead of shipping to reduce these risks. Regional procurement policies do need to be weighed up against potentially higher costs involved. They also require confidence in supplier competency and quality.

Working with partners such as Altnets that maintain established relationships across multiple manufacturing regions can further reduce exposure to geopolitical and logistics risk, while preserving flexibility if supply conditions shift.

Additionally, standardising designs across multiple projects is desirable as it allows for larger orders to be placed with supply partners and streamlines the procurement process. Using similar product ranges within a range of builds means working with fewer cable SKUs (Stock Keeping Units), leading to easier installation and maintenance, thereby giving projects further security.

A coordinated procurement model can support this standardisation, simplifying the supply chain and reducing complexity across the lifecycle of the build.

### **Conclusion: intense sector growth presents an opportunity for future outcomes**

The telecoms market is going through a clear transition from laying more fibre to focusing on extracting more capacity per fibre laid.

Fibre cable shortages are a current market reality - there is a finite amount of fibre being manufactured across the world - and telecoms operators have a range of ways to mitigate the impact of this through smart product procurement and commercial strategies. The new fibre technologies emerging are not a replacement for solid core fibre; they are a revolution for the industry. Selecting emerging tech for a build not only gives projects a technical edge, but actively mitigates supply chain constraints.

The acceleration of the DC sector which is pressuring fibre markets is a positive sign of growth, and therefore should be welcomed by operators. Operators that prioritise future planning, rather than focusing on the current state of play, will stay ahead of the curve during this period. Accessing the technology needed now and in years to come is vital for delivering the networks the UK needs to stay relevant as an economy.

Altnets works alongside DC operators to support this transition, combining advanced technology solutions with long-term supply planning to help build resilience into both network design and procurement strategy.