



Main Challenge

As Openreach accelerated the expansion of its nationwide fiber network, it needed a technology partner to deliver optical network terminals (ONTs) capable of supporting multi-gigabit broadband services at national scale while complying with the UK's stringent Telecommunications Security Act (TSA).

This raised the bar for device security assurance and deployment readiness, leaving little tolerance for delay as fiber rollout continued across millions of homes and businesses.

At the same time, Openreach required solutions aligned with its own high standards of environmental, social and governance (ESG), prioritizing recycled materials and zero-plastic packaging. As the organization transitioned from legacy digital subscriber line (DSL) and Ethernet networks to full fiber, the need increased for equipment that could deliver reliable performance at scale without slowing deployment.

Solution

Openreach chose Zyxel for its ability to meet the UK's stringent Telecommunications Security Act requirements at scale. Zyxel's ONTs incorporate built-in Secure Boot and advanced Airoha chipset technology, enabling TSA compliance while supporting a fast, efficient deployment.

Zyxel also satisfied Openreach's sustainability requirements by delivering devices constructed from 95% post-consumer recycled plastics and packaged using zero-plastic minimal packaging.



Main Story

To support Openreach's nationwide fiber expansion, Zyxel worked closely with the organization to design and deliver a bespoke ONT solution tailored to UK regulatory, security and deployment requirements. These ONTs were engineered to support higher-speed broadband services while complying with the TSA through Secure Boot and proven chipset architecture.

Beyond performance and compliance, the solution was designed to support Openreach's transition from legacy DSL and Ethernet networks to full fiber. By combining scalable architecture with a purpose-built design, Zyxel enabled Openreach to deploy fiber more efficiently, support speeds of up to 1.8 Gbps, and maintain consistency across a rollout connecting millions of homes and businesses.

Success | Result

The partnership delivered a custom, secure ONT solution to support Openreach's large-scale fiber rollout and transition to full fiber. With Zyxel's GPON platform, Openreach can continue expanding higher-speed broadband services while meeting UK regulatory and sustainability requirements.

Openreach engineers have already installed more than 500,000 Zyxel devices and expect to continue rapid expansion with the growth of its full fiber deployment.



We've already passed more than 23 million homes and businesses to our broadband network, and more people across the UK are choosing full fiber as they rely on fast, reliable connectivity more than ever."

- Trevor Linney, Network Technology Director
Openreach



With Zyxel, we have a partner that shares our focus on reducing the environmental impact of our build - from using recycled materials in the equipment to cutting plastic in packaging - while still supporting secure deployment at scale."

- Abby Chicken, Head of Sustainability
Openreach

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Openreach Ltd. is the UK's largest wholesale broadband network – supporting more than 680 service providers like BT, SKY, TalkTalk, Vodafone and Zen to provide broadband, TV, phone, data and mobile services to their customers. With a workforce of around 25,000, the company is investing £15 billion to expand its full fiber network to 25 million premises by 2026, with ambitions to reach up to 30 million by early next decade - assuming conditions for investment remain supportive. A wholly owned and independent subsidiary of the BT Group, Openreach reported revenues of £6.19bn for the year up to the end of March 2026.

Product Solution

Zyxel Communications developed a custom ONT solution for Openreach.

Designed for Openreach's nationwide rollout, the solution supports secure, consistent deployment at scale. By combining robust security with scalable performance, the custom ONT enables Openreach to deliver speeds of up to 1.8 Gbps while maintaining a reliable service experience across a growing fiber footprint.



Contact your local Zyxel Communications sales contact
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