

# Digital revolution across the Strait of Messina: Open Fiber completes 81.6 Terabit-per-second test

- Open Fiber is the first wholesale operator globally to successfully complete this trial
- Fewer network devices needed, with savings in energy consumption and space

**Rome, March 7, 2025** – A digital bridge of **81.6 terabits per second** across the Strait of Messina. Reliable, sustainable, and ultra high-capacity. A significant technological leap forward, essential to support both current and future innovations in the world of computing and telecommunications. Open Fiber, a pioneer in the field of digital innovations serving families and businesses since its inception, is the first wholesale operator at a global level to have completed a trial capable of revolutionizing the methods of data transmission in an even more efficient and sustainable way. The test was successfully conducted on **Zion**, Open Fiber's national transport network, particularly along the section connecting mainland Italy to Sicily via the Strait of Messina.

Today, it is therefore possible to transmit a staggering **81.6 Tbps** over a single optical fiber using **34 channels of 2.4 Tbps each**. This represents a fundamental paradigm shift, allowing for a complete rethink of current network architectures, drastically reducing the number of devices needed to manage infrastructure, and consequently lowering both energy consumption and physical space requirements. This provides a tangible response to the growing computational demands driven by the expansion of edge data centers, which are becoming increasingly distributed and widespread across the territory to deliver more stable, secure, and high-quality services to end users. An even more important result in the face of the increase in the volume of internet traffic, which is growing at a rate of 30 percentage points per year.

“We are constantly pursuing technological innovation to expand the network's capacity efficiently and reliably, with a particular focus on future-proof, sustainable, secure, and green solutions,” said Nicola Grassi, Technology Director at Open Fiber.

“The 81.6 Tbps test on our Zion network is a milestone in maximizing the integration of network resources and delivering faster, more reliable services to users, effectively building a high-capacity digital highway. One potential first application is in the Edge Data Center Interconnection (DCI) scenario, enabling ultra high-capacity connections. With the use of this new platform, Open Fiber will also be able to provide extremely reliable, ultra-low latency services, capable of transporting the traffic of all national operators for decades to come, thanks to a wholesale model closely linked to the mission of Open Fiber”.

This crucial innovation has a major impact especially on Sicily, a region that Open Fiber has extensively covered, from metropolitan areas to the most remote villages. The company, led by CEO Giuseppe Gola and founded less than a decade ago, has already built a state-of-the-art telecommunications network across the island, extending over **13,000 kilometers** and reaching more than **1.4 million housing units**. Not to mention **over a thousand schools and around 4,500 electrical cabinets** connected with fiber optics. A region well equipped to face the technological challenges of the future.