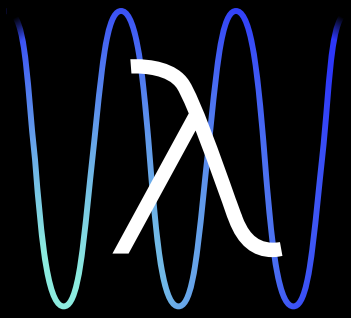
Arelion

Wavelengths DWDM



Deliver today and scale for tomorrow

Our global Wavelength services deliver dedicated, protocol-agnostic optical capacity across long-distances —built to support AI, cloud, and hyperscale growth

Carrying heavy data-loads
When traffic growth puts your network under pressure across metro, regional, long-haul routes, DWDM delivers the dedicated capacity to scale. Multiple Wavelengths of light carry more data over the same fiber, maximizing infrastructure utilization and lowering cost per bit.
Arelion's #1 ranked backbone is not an accident, it is built on the same global fiber and DWDM infrastructure we use to deliver DWDM Waves. That shared foundation is continuously validated in our network through high-capacity optical trials and long-distance transmission milestones.

Point-to-point dedicated connections
Our Wavelength services enable next-generation technologies and support diverse applications such as IoT, AI, ML, video, voice and storage across your global sites, with access to more capacity when needed. The simplicity of Wavelengths makes your network more versatile and efficient when deploying point-to-point dedicated connections between your sites and data centers.

400GE to 800 GE Wavelengths and beyond
Arelion has led DWDM innovation for decades, first commercializing Wavelength services in 1998 and pioneering 100GE Wavelengths on both sides of the Atlantic. Today, 400GE is widely deployed across our long-haul network (≈95% in Europe and ≈80% in the US), with 800GE service availability approaching as next-generation optics move from field trials into production.

Securing resilience and availability of your network largely depends on the criticality of your data. You can choose single links or a redundant ring network topology to build your network and connect key sites. The highest level of availability comes with the dual or protected link service option which provides two fully diverse routes between the same endpoints, designed for mission-critical connectivity. Protected Waves provide built-in protection for improved service continuity, while dual link delivers two fully diverse routes between the same endpoints, enabling customer-managed protection.

Benefits in brief

High-capacity
Leverage our investments in optical fiber to significantly reduce your cost of building a high-capacity network

Versatile
Supports diverse application traffic using multiple colors of light on the same fiber

Monitoring
The network is monitored 24/7 by Arelion's NOC

Future-proof
Direct on-ramps to the top 5 cloud providers

Did you know that...

...Arelion partnered with Facebook to successfully trial a DWDM transponder on our fiber route between Stockholm and Hamburg

...we leveraged 1.6 Tb/s Waves and scalable 400G coherent pluggable optics on an open line system (OLS)

...we completed 1,069 km transmission using 800G ZR+ coherent optics

High-capacity	Network monitoring	Direct on-ramps to
400GE	24/7	Top 5 CSPs

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Technical highlights

Service Options

Single link	Protected link	Dual link
		

Interface and characteristics

Interface	Capacity
Ethernet	1 GE, 10 GE, 100 GE, 400 GE
SDH	STM 16/OC 48, STM 64/OC 192
ODU	OTU 2, OTU 2e, OTU 4

Arelion's network is engineered to provide diversity at the physical level – duct, cable, and fiber. State-of-the-art network architecture combined with strict design guidelines provides fully diverse, end-to-end routing between all Arelion's PoPs.

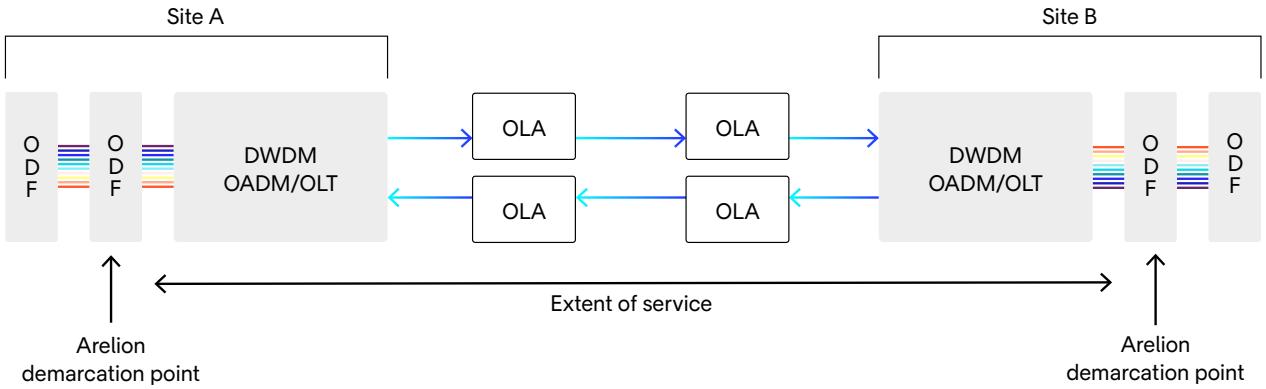
Use cases

Data center interconnection
DCs, including AI DC, use Waves optical solutions to interconnect facilities, enabling the transport of large-scale high-bandwidth services for data-intensive workloads

Neoscale and hyperscale connectivity
Big data organizations use Wavelengths for efficient, large-scale deployments to transport data between key sites

Long-haul networking
DWDM continues to be the technology of choice for wholesale service providers building long-haul optical networks to serve their markets

Large Enterprises
Geographically diverse, multi-site data centers requiring high-bandwidth and availability



Wavelengths network components

Note: This document provides indicative service information and is not contractually or legally binding. Updated April, 2026. Discover more at arelion.com.