Lumen® Wavelength Services

High-Capacity connectivity for AI and next-gen apps. Designed to be the #1 provider of AI-ready network infrastructure.

With AI, the Internet of things (IoT) and cloud computing driving digital transformation, enterprise and government organizations need to evolve their networks.

Next generation network architectures must be flexible and scalable to address not only today's requirements but also increasing AI use and evolving dynamic environments — connecting employees to information, applications to each other, businesses to suppliers and data, and machines to machines.

To keep up with the pace of change, enterprises need networks that can deliver high-performance applications, fuel AI and ML, and connect data across clouds and datacenters — with enhanced reliability, scalability, and efficiencies.

Scalability

With up to 400G connectivity speeds for Wavelength services and expansive route diversity, Lumen is the trusted network for AI.

Application performance

Deliver fast, high-availability services and applications leveraging low latency routes and competitive SLAs based on network redundancy with diverse gateways and route options.

Consultative design

Smooth network optimizations, migrations and upgrades with custom routing, cloud and data center connectivity, and design transparency developed by Lumen Solutions Architecture.

Operational efficiency and reduced costs

Resiliency to handle more bandwidth with fewer network elements utilizing a custom-designed network solution that's more scalable, operational, and economical than legacy solutions
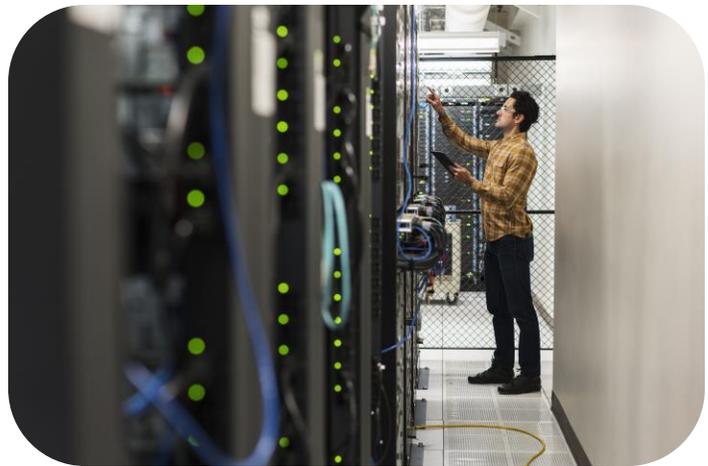
"Digital economy leaders need 100G and 400G wavelength connectivity to help bolster the performance of the underlying network supporting their digital platform journeys. Lumen's portfolio of wavelength solutions continues to lead the industry in providing innovative, adaptive networks with the necessary global reach, route diversity, and low latency performance needed to enable the seamless distribution of applications, Edge to Core."

- **Ian Redpath**

  Practice Leader Transport Networks, Omdia

Common use cases

- Multi-site and hybrid cloud connectivity
- Cloud and data centers mirroring for business continuity & disaster recovery
- Rapid access to vast amounts of data with ultra-low latency to make decisions
- Industries such as banking, media, oil & gas, and healthcare & pharma that adopt more effective and nimble data collection and connection strategies

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Features and Specs

Next-gen networks with AI-powered features

- Ethernet speeds: 10, 100, 400G
- OTU speeds: OTU 2, 2e, 4
- Service Diagnostics & Control Portal to run Laser network diagnostics, self-serve network testing, generate reports, and optimize performance
- Topology Viewer to create new wavelength circuits, create paths, calculate best routes, and view latency
- Proactive Notifications to be notified of network issues automatically
- AI-enabled diagnostics that provide forecasting of equipment failures and help to ensure equipment replacement before failure
- SDN enabled – allowing for automated capacity provisioning

Experience

Simplicity, visibility, and network control

- Transparent, simple quoting
- Streamlined service deployment
- Network visibility and control within a simple portal
- AI-driven automated workflows and monitoring, including service quoting, preventative maintenance, and repairs
- Custom routing and transparent network design, including private data networks

Lumen Network

**Connect your employees, partners, and customers**

- Largest ultra-low-loss intercity fiber network in North America
- 78,300 Next-Gen 400G-enabled wavelength route miles
- 400+ PoPs pushing further to the metro edge with 10-20 data centers per market
- Extensive low-latency route diversity
- 125+ North America optical cloud on ramps
- 70 North America markets
- 2,200+ global on-net third-party data centers
- ~163,000 global on-net buildings
- ~340,000 global fiber route miles

Innovative Leader in Wavelengths
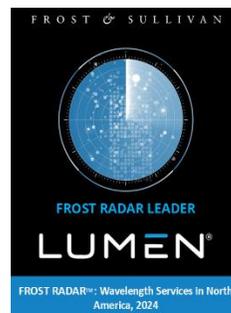
Ranked #1 in Wavelength services in North America **2024 Frost Radar™**

#1 U.S. Wavelength Services Provider for the **fourth consecutive time** by Vertical Systems Group

Why Lumen?

Lumen Wavelengths combines an industry-leading network with low latency routes, industry-competitive SLA's, cloud and data center connectivity, and a wide range of dynamic bandwidth options for maximum efficiency. Simple quoting and installs enable faster time to market and bypassing complex and lengthy deployments.

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