



NEWS RELEASE

New Ciena Research: Service Providers Expect High-Capacity AI Services and MOFN to Fuel Revenue Growth, But Network Upgrades are Needed

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- Majority (90%¹) of service providers expect high-capacity AI-driven network service to be a primary driver of revenue growth
- 88%² of survey respondents had a strong sense of urgency on the need for optical network upgrades to support the demands of premium enterprise AI-driven connectivity services
- 60% expect physical AI ecosystems to account for more than 15% of their total enterprise AI revenue within five years

FULTON, Md.--(BUSINESS WIRE)-- A recent Ciena survey of service providers underscores the revenue potential of AI-driven networking. Ninety percent¹ of respondents expect high-capacity AI network services – connectivity to AI infrastructure required by enterprises, hyperscalers, and neoscalers – to drive revenue growth over the next three to five years, with 56% citing them as their primary source of net-new revenue. Confidence is equally strong in managed optical fiber network (MOFN) services, with 96%³ expecting them to generate revenue from connecting distributed AI compute clusters over the next three years, and 51% identifying MOFN as their primary vehicle for delivering data center interconnect (DCI) services.

However, as service providers pursue new AI-driven revenue opportunities, the majority (88%²) of survey respondents had a strong sense of urgency on the need for optical network upgrades to support the demands of premium enterprise AI service level agreements (SLAs). Additionally:

- Nearly half (48%) believe those upgrades are critical, and 39% said they are needed within the next 12-18 months.
- Only 11% believe routine upgrades will be sufficient to meet the demand.
- Advanced network automation, including agentic AI, is seen as essential (96%⁴ surveyed agree) to capitalize on AI-driven opportunities.

The Ciena survey, conducted in collaboration with Censuswide questioned more than 1,200 telecom, wholesale, and regional service provider experts across 12 countries and found that service providers see multiple emerging opportunities to expand AI-related revenue streams:

- **AI Inference:** Nearly half (49%) of those surveyed believe growth in AI inference data centers will create new revenue opportunities by increasing demand for data center interconnect (DCI) services.
- **GPU-as-a-Service:** Service providers see significant opportunities to capture GPU-as-a-service revenue, with 94%⁵ viewing strategic partnerships with cloud and neocloud providers as essential to success. Among those surveyed, 44% plan to adopt revenue-sharing models as their primary go-to-market strategy.
- **Connecting AI in day-to-day life:** The growing use of AI in everyday life is presenting additional revenue opportunities for service providers. Almost all respondents (95%¹) believe immersive and AI-driven entertainment will contribute to new revenue streams in the next three years. Nearly one-third (29%) named AI wearables and personal devices, including smart glasses and health trackers, as the leading consumer hardware category expected to drive premium service revenue.
- **The network edge:** 39% of service providers surveyed believe services hosted at the network edge, such as edge compute, GPUaaS and localized AI inference, will drive more than 20% of enterprise revenue over the next three years, while 88% expect it to drive at least 10%.
- **Physical AI:** Nearly two-thirds (60%) of respondents expect physical AI ecosystems, including industrial robotics and remote-control systems, to account for more than 15% of their total enterprise AI revenue within five years.

Beyond revenue opportunities, the survey highlights how AI is reshaping service provider priorities, from network performance and cloud connectivity to security and new service delivery models. Additional findings include:

- **The race for reliability, not just bandwidth:** AI workloads are increasingly critical to business processes and the networks supporting them must be capable of delivering high-performance connectivity consistently to keep applications running satisfactorily. 35% of service providers identify network consistency - including guaranteed performance stability and low jitter - as the top opportunity for monetization through premium service offerings.
- **The rise of scale-across AI infrastructure:** As power constraints limit data center expansion on a single campus, hyperscalers are scaling compute capacity across distributed locations. These facilities need to be

tightly integrated requiring ultra-high-speed synchronous communications. In the case of distributed synchronous training of large frontier models, these connections can reach tens of petabits-per-second, requiring up to hundreds of fiber pairs lit in parallel at full capacity. 95%6 of the respondents see hyperscaler scale-across demand as a substantial contributor for wholesale revenue growth.

- **Revenue drivers for multi-cloud enterprise environments:** Service providers are shifting toward dynamic connectivity models as their main revenue drivers. Multi-cloud connectivity management (56%) and consumption-based bandwidth services (50%) rank highest, outpacing traditional fixed-capacity services (38%). Additionally, 47% expect enterprises moving large datasets between cloud environments for AI processing to drive demand for high-capacity, flexible cloud connectivity.
- **Quantum-safe encryption is critical:** Secure networking remains top of mind with quantum-safe technology emerging as a key focus for service providers preparing their networks for AI-driven demand. More than half of respondents (51%) stated that they have already launched or expect to launch commercial quantum-safe encryption services, including QKD-protected links and/or PQC-ready managed security, within 12 months. Another 48%7 are in the early stages of development or evaluation, underscoring the importance of preparing for quantum computer threats. Additionally, 'advanced physical and cyber security' capabilities were cited as the leading commercial driver of sovereign network infrastructure.

"The survey findings show that service providers are approaching AI with both optimism and urgency," said Brodie Gage, Chief Product and Technology Officer, Ciena. "Service providers see significant opportunities around AI inference, GPU-as-a-Service, high-capacity network services, and quantum-safe encryption, while recognizing that many existing networks must evolve to meet new performance demands. The message is clear: AI is creating new sources of revenue, and success will depend on having the network foundation to support them."

Methodology

The research was conducted by Censuswide, among a sample of 1,200 Telecommunications Providers, Wholesale Fiber Network Operators, and Regional Service Providers. The survey was conducted across 12 countries: USA, Canada, Brazil, Mexico, UK, UAE, Kingdom of Saudi Arabia, Australia, India, Vietnam, Indonesia and Singapore (100 respondents per market). The data was conducted between July 13 and July 23, 2026. Censuswide is a member of the Market Research Society (MRS) and the British Polling Council (BPC), a signatory of the Global Data Quality Pledge, and adheres to the MRS Code of Conduct and ESOMAR principles.

About Ciena

Ciena is the global leader in high-speed connectivity. We build the world's most advanced networks to support exponential growth in bandwidth demand. By harnessing the power of our networking systems, interconnects, automation software, and services, Ciena revolutionizes data transmission and network management. With

unparalleled expertise and innovation, we empower our customers, partners, and communities to thrive in the AI era. For updates on Ciena, follow us on **LinkedIn** or visit the **Ciena website**.

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1 "Strongly agree" and "Somewhat agree" answers combined.

2 "Critical urgency" and "High urgency" answers combined.

3 "Significant contributor" and "Moderate contributor" answers combined.

4 "Absolutely critical" and "Important" answers combined.

5 "Heavily reliant" and "Moderately reliant" answers combined.

6 "Very substantially" and "Moderately substantially" answers combined.

7 "Early development" and "Early exploration" answers combined.

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