

WINDSTREAM
WHOLESALE

Windstream Wholesale Sets 400G ZR+ Record with Acacia Coherent Pluggable Module Reaching over 1,000 km in Live Network

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LITTLE ROCK, Ark.--(BUSINESS WIRE)--Windstream Wholesale, a leading provider of advanced optical solutions, today announced the completion of a live network trial that successfully deployed 400 gigabits per second single-wavelength transmission over 1,027 kilometers across Windstream's long-haul network between Phoenix and Los Angeles. The trial set an industry-leading real-world benchmark of 400G using Acacia Communications' digital coherent optics technology. These compact, low-power, industry-compliant 400G pluggable modules represent the next evolution in driving high-capacity optical connections to the network edge to deliver ultra-fast speeds to more end-users than ever before.

In addition to the industry-leading real-world performance at 400G, Windstream set another industry record by looping back the signal to achieve 300G transmission over 2,054 kilometers using Acacia pluggables.

The optical performance results of the trial mark a milestone in optical networking by demonstrating that high-speed optical transmissions, such as 400G and 300G, can be deployed over Windstream's high-performance fiber network using compact pluggable modules. At a fraction of the size of comparable network electronics currently in use and as much as 10 times more energy efficient, these multi-MSA compliant pluggables allow for deployment models that were not feasible with previous generations of long-reach optics.

"This record-setting accomplishment by Windstream Wholesale is a gamechanger for optical networks going forward," said Buddy Bayer, chief network officer at Windstream. "Windstream is executing a well-crafted architectural strategy that embraces fundamental design principles of disaggregation, openness and flexibility. Windstream continues as an early adopter of coherent optical technologies to drive efficient growth and scale of our network and services for our customers. We expect to begin deploying ZR+ coherent pluggable modules in the second half of 2021, a technology that has applicability in as many as 80% of our existing links."

"Windstream's live network trial demonstrates the real performance of 400G pluggable outside of a controlled environment," said Jimmy Yu, vice president of Dell'Oro Group's Optical Transport research. "This is a significant development in the industry, paving the way for network operators to operationalize the benefits of pluggable optics in the network."

"Windstream has demonstrated that 400G pluggable coherent modules can support not only metro, but also regional and long-haul network applications," said Benny Mikkelsen, founder and chief technology officer of Acacia Communications. "Built on highly scalable technology that offers benefits in cost, size and power, we are excited about the opportunities for these pluggables in service provider networks."

The pending [acquisition](#) of Acacia by Cisco will further accelerate the trend toward coherent technology and pluggable solutions.

“Windstream is one of the first network providers to leverage the full capability of 400G pluggable optics in data center interconnect to metro and long-haul applications,” said Bill Gartner, senior vice president of optics and optical at Cisco. “With the emergence of 400G pluggable DWDM optics, we will be able to simplify network design and operations.”

Bayer noted that Acacia’s compact modules can be cost effectively deployed closer to the network edge than conventional electronics for a range of applications from 1000 km long-haul segments to multi-span edge networks. These coherent pluggables can deliver greater bandwidth not only to Windstream’s large wholesale and hyperscale customers, but also to support its business and residential customers.

In particular, Bayer said the technology will support Windstream’s nearly \$2 billion initiative to deliver gigabit per second broadband service to 2 million residential customers.

About Windstream

Windstream Holdings is a privately held communications and software company. Windstream offers managed communications services, including SD-WAN and UCaaS, and high-capacity bandwidth and transport services to businesses across the U.S. The company also provides premium broadband, entertainment and security services through an enhanced fiber network and 5G fixed wireless service to consumers and small and midsize businesses primarily in rural areas in 18 states. Additional information is available at windstream.com or windstreamenterprise.com. Follow us on Twitter at [@Windstream](https://twitter.com/Windstream).

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