

Article Overview

Australia has successfully trialed 100G GPON technology on live networks, with Nokia's Lightspan MF platform demonstrating multi-speed PON capabilities including 10G, 25G, 50G, and 100G.

Overview of 100G GPON Trials

Australia's NBN, the government-owned wholesale broadband provider, has conducted live network trials of next-generation PON technologies capable of delivering 100G broadband speeds over existing fiber infrastructure . Using Nokia's Lightspan MF-14 platform, the trials demonstrated simultaneous operation of multiple PON speeds (10G, 25G, 50G, and 100G) on the same fiber network, achieving a maximum wholesale download speed of 83 Gbps in a real-world environment . This trial represents a significant step toward commercial deployment of ultra-high-speed GPON in Australia.

Technology and Capabilities

- o Multi-speed support: The platform allows operators to run 10G, 25G, 50G, and 100G PON services concurrently over the same fiber, providing flexibility for residential, enterprise, and mobile backhaul services .
- o Future-proofing: The trials show that existing fiber infrastructure can support higher speeds without replacing passive components, reducing capital and operational expenditures .
- o Applications: 100G GPON is suitable for high-density urban areas, commercial developments, and data-intensive applications such as cloud services, video streaming, and enterprise connectivity.

Current GPON Equipment in Australia

While 100G GPON is still in the trial phase, commercially available GPON equipment in Australia includes devices like the PLANET GPN-100 ONT, which supports standard GPON speeds of 2.5 Gbps downstream and 1.25 Gbps upstream, with 1:128 split ratio and coverage up to 20 km . Suppliers such as ONT Australia and FS Australia provide GPON ONTs, OLTs, and SFP modules for deployment in FTTx networks, supporting integration of data, TV, and other services . These devices are compatible with existing GPON infrastructure and can serve as a foundation for future upgrades to higher-speed PON technologies.

Considerations for Deployment

- o Compatibility: Operators planning to adopt 100G GPON should ensure that their OLTs and ONTs are compatible with multi-speed PON standards.
- o Network planning: High-speed PON requires careful bandwidth allocation and dynamic bandwidth management to maintain service quality.

100G Australian ODM GPON Equipment

o Supplier selection: Nokia is currently leading in 100G PON trials in Australia, but other vendors like Huawei and ZTE have demonstrated multi-speed PON solutions internationally .

Conclusion

100G GPON technology in Australia is currently in advanced trial stages, with Nokia's Lightspan MF platform proving the feasibility of delivering ultra-high-speed broadband over existing fiber networks. While commercial 100G GPON equipment is not yet widely deployed, standard GPON devices are available from suppliers like PLANET, ONT, and FS Australia, providing a pathway for future upgrades to 100G services . This positions Australia to scale fiber networks efficiently while supporting next-generation broadband demands.

Gigabit Passive Optical Network (GPON) We live in a time of great technological change. The constant pressure on organisations to

This Who Makes What installment is an update to Light Reading's August 2008 Who Makes What: GPON Equipment,

High Scalability and Flexibility in Multiple Applications PLANET GPN-100 provides ultra-high-speed Internet connection with PLANET

What is a Gigabit Passive Optical Network (GPON)? A gigabit passive optical network (GPON) is currently the leading form of

Open ONU for fiber optic network design and FTTH, XGS-PON, FWA, 25GS-PON, 50G-PON, 100G-PON deployment is explored in

Nokia recently announced that nbn, Australia's biggest wholesale broadband provider, achieved a world first by successfully

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The demo in Australia is "the next step in 100G development, being able to show 100G

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Press release Nokia and nbn show world's first 10G, 25G, 50G and 100G speeds over live fiber broadband network Nokia and nbn

The GPN-100 complies with GPON ITU-T G.984/G.988 standards and PRC communications industrial standards for GPON Access

Australia's National Broadband Network (NBN) has marked a historic milestone by utilizing

In a major boost to Australia's broadband landscape, the government-owned nbn has achieved a maximum wholesale

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