

Four Reasons Why 10G XGS-PON Adoption is Growing 5x Year Over Year

A recent technology research firm that tracks the broadband industry reported that [worldwide gigabit subscriptions are set for 'big increase' in 2022](#). Global gigabit subscriptions are expected to jump to 50 million this year, more than doubling from 24 million at the end of 2020, according to a new report from analyst firm Omdia.

At the same time, industry analysts are reporting that network operators' purchases of [10G XGS-PON OLT ports are growing at a rate of 500% year-over-year](#).

With all the media focus on communities that are under-served and non-served from a broadband perspective, what has been a bit under-reported is that broadband network providers, both new and expanding, are rapidly deploying fiber-based passive networks leveraging 10G XGS-PON technology as almost the defacto standard for greenfield builds.

What's driving this enormous growth? Here are the primary reasons why operators are choosing 10G XGS-PON as the architecture of choice for their broadband access networks, and why their subscribers are increasingly gravitating to their highest bandwidth tiers:

1) The pandemic accelerated demand for high-speed symmetrical broadband

The pandemic has accelerated behavioral changes that drive increased bandwidth consumption, especially upstream traffic. Work from home & e-learning applications require high speed symmetrical broadband that can most easily be delivered via fiber-based services. Access and aggregation traffic forecasts were moved up significantly, prompting the saying "2021 is the new 2031" from a network traffic perspective.

The pandemic drove network planners to revisit near-term and long-term network forecasts for access and aggregation capacity, with many companies deciding to augment their networks to reflect the "new normal." XGS-PON has proven to be the de factor standard for many operators—giving them the bandwidth and flexibility they need to meet their customers' needs for the life of the investment.

2) Competition has surged

2020 brought a new appreciation for fiber, particularly from the capital markets. A surge of investment has flowed into the broadband sector over the past 18 months. In several countries, significant funding is being made available to spur deployment of broadband to underserved and non-served areas.

Many dominant broadband providers that previously had no meaningful rivals for their copper and/or coaxial networks find themselves gearing up for long-term battle with deep-pocketed fiber builders. The unending increase in upstream traffic demands are rendering legacy asymmetric broadband services as insufficient for the 'new normal' and are exposing older copper and coax networks as non-sustainable.

Network operators are increasingly choosing to deploy fiber-based passive optical networks not just in their new greenfield builds, but also in their existing markets. This 'overlay network' approach enables the operator to quickly go to market with new high speed symmetrical services, new tier packages, and customized offers to meet the growing bandwidth needs of their customers. It also simplifies their operational efforts, as they can minimize outside plant disruption of their existing coax or copper infrastructure and move higher bandwidth customers or neighborhoods nearing saturation over to the PON overlay network.

3) Operators are serving multiple customer segments

The third primary driver behind the huge increase in XGS-PON adoption is the increasing realization within the broadband industry that PON technologies like XGS-PON can be leveraged for multiple customer segments beyond residential—small business, enterprise, and wholesale. Network operators appreciate the simplicity of deploying a single access network that can be used to provide broadband services to homes, multi-tenant residential locations like apartments, small businesses, enterprise customers, schools and hospitals, and even mobile network operators.

Open Access operators choose XGS-PON because the architecture elegantly enables their Broadband Service Provider and ISP customers to utilize the network to provide bespoke broadband services to their customer segments. In some parts of the world, operators are moving existing business customers off point-to-point ethernet networks onto an XGS-PON network, freeing up fibers that can be used for very high bandwidth requirements like data center connectivity and interface to hyperscale cloud providers.

4) Industry standards drive efficiencies and de-risks supply chain concerns

Finally, operators have been deploying XGS-PON en masse due to the benefits derived from embracing solutions that leverage industry standards. By adopting the ITU-T's XGS-PON standard, operators realize improved economics, as a wide variety of vendors build solutions to meet the industry standard, increasing competition and driving down prices. In a pandemic-affected environment marked by significant supply chain delays, network operators can confidently roll out new services and deploy to new markets by de-risking their supply chain concerns and leveraging solutions that integrate across multiple

vendors. Operators have steered clear of solutions based on proprietary standards that introduce supply chain risk due to complete reliance on vertically integrated solutions from a single vendor.

As we start a new year in 2022, the industry will continue to be focused on procuring funding and designing and building new greenfield networks. If recent history is any indicator, 10 XGS-PON technology will continue to be widely deployed across the world by network operators of all types.

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