

NG-EPON aggregate system capacity requirements are driven by a number of factors, including the mix of services offered by the given service provider, customer population and demographics, etc. The evolution of existing services, as well as anticipated future service types, drive the need for different sustained and peak data rates, as well as different symmetry ratios between upstream and downstream data rates.

To address a cost-effective delivery of differentiated services over optical access networks, service providers expect to deliver services to both residential and ~~commercial-business~~ customers on the same access platform. In this case, requirements for the aggregate bandwidth supported by NG-EPON are primarily driven by ~~commercial-business~~ customers and growing bandwidth demand.

~~CommercialBusiness~~ customers are typically provided with symmetric ~~service~~ service rates, while residential customers are typically provided with asymmetric service rates, thus NG-EPON is expected to support both symmetric and asymmetric data rates.

Projecting based on premium-tier offerings and market drivers in the ~~commercial-business spaces~~ services market, NG-EPON is expected to support the aggregate capacity of at least 40 Gb/s in the downstream and upstream directions. Given that it is impossible to precisely predict ~~what~~ future service evolution within the next decade, especially in terms of emergence of new disruptive services, NG-EPON needs to be designed in a scalable fashion to support also higher data rates up to at least 100 Gb/s.

~~Service providers expect NG-EPON to support a pay as you grow scalability, providing an option to add capacity to downstream and/or upstream channels, for example, via the means of adding / enabling more parallel wavelength channels sharing the same ODN.~~

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