

## 5.2 ONU Capacity

~~In order to address the anticipated bandwidth demand in both residential and business applications, two classes of ONUs should be supported in NG-EPON.~~

~~A residential-class ONU should be able to support at least one wavelength channel in the downstream direction and one wavelength channel in the upstream direction, supporting up to 10 Gb/s in the upstream direction and at least 10 Gb/s in the downstream direction. A residential-class ONU is intended for asymmetric data rate services.~~

~~A business-class ONU should be able to support at least 4 wavelength channels in downstream and at least four wavelength channels in upstream directions, supporting at least 40 Gb/s symmetric data rates. There is no upper limit on the number of downstream and upstream wavelength channels supported by the ONU and this number is left open as an implementation choice. A business-class ONU is intended for symmetric data rate services.~~

NG-EPON will provide service to two general classes of users: residential users and business users. Residential users tend to use data services asymmetrically (more downstream than upstream) and tolerate best-effort delivery. Business customers typically demand committed symmetrical data rates with frame-loss and delay limits.

NG-EPON should support each of these user classes by enabling flexible ONU configurations. For example, an ONU targeted at the residential user might support only one wavelength channel operating at greater than 10Gb/s in the downstream direction and one wavelength channel operating up to 10Gb/s in the upstream direction. Similarly, an ONU targeted at the business-class user might support multiple wavelength channels to enable aggregate upstream and downstream bandwidth of 40Gb/s or more.

NG-EPON should enable such flexible ONU configurations and the coexistence of varying configurations on the same PON.