ABSTRACT

Nowadays, the need for communication, especially in fiber optic communication systems, is growing rapidly. Fiber To The Home is a fiber optic technology that is widely used so that it is able to divert the use of conventional cables whose use is combined with GPON technology. GPON technology is a technology used to analyze the performance of fiber optic systems caused by damping and power acting along fiber optic cables. This research will analyze the FTTH network with GPON technology in the Jakarta Bullet Warehouse complex. The results of the power link budget calculation from 12 customers intheapat average value of receiver sensitivity of -25.6215 dBm (uplink) and -25.4375 dBm (downlink). The results of the rise time budget calculation obtained an average value of 0.25017 ns (uplink) and 0.25257 ns (downlink) both of which are still below the maximum rise time budget of the NRZ signal bit rate of 0.584 ns (uplink) and 0.292 ns (downlink). This shows that the FTTH network in Cluster Area Gudang Peluru Jakarta has met Pt.Telkom's standards, namely the sensitivity of the receiver does not exceed -27 dBm.

Keywords : *FTTH, GPON, Power Link Budget, Rise Time Budget*