

## ABSTRACT

*is the trigger for making a higher speed and stable service, the service in here is; iP Phone, The need of fast, secure, comfortable communication and information service each year is increasing, especially in urban areas. Easton Park Residence is one of the apartments located in West Java, in Sumedang, on St. Jatinangor 78, District. Sumedang West Java 45363, this apartment has around 1408 residential, with a total 26 floors written. The number of people living in this apartment Internet and IPTV. To complete three demand of services, we need a broadband technology with a high-speed service, PT. Jabar Telematika (JATEL) is service provider company that will create the Fiber To The Building (FTTB) network to fullfil these demand of service by utilizing the E-PON (Ethernet – Passive Optical Network) technology.*

*E-PON is one of the access technology that uses fiber optic core as a medium to transmit data to the user, with this technology PT. Jabar Telematika able to create a network to fullfil the demands of iP Phone, Internet, and IPTV or services that can be called TriplePlay with high speed ability. By using the E-PON to fullfil the demands of this TriplePlay then every user could be able to get access speeds up to 100 Mbps or higher according to the demand needs of user it self.*

*The design of the access network requires Passive Optical Splitter (POS) as a tool to divide bandwidth from E-PON and delivered to the more than 100 existing user, the writer also made calculations of Power Link Budget (PLB) and Rise Time Budget (RTB) as the design quality level parameter of the network to be made in Easton Park Residence.*

*Key word: E-PON, TriplePlay, Broadband, PLB, RTB, FTTB,POS.*