

## ABSTRACT

*In Network Analysis HFC & FTTH coexistence for Broadband in the area that you want to study, a building or network infrastructure is needed. Preliminary designed a simulation design with optisystem with HFC and FTTH network technology. device determination determines to be simulated using Optisystem. Software assistance in this study uses Google Earth and Optisystem. In order to carry out the power link budget calculation using some of the supporting benchmarks that are used in accordance with the ITU-T standard, namely transmit power for FTTH 7 dBm, downlink wavelength 1596 nm, uplink wavelength 1270 nm, maximum receiver sensitivity -28dbm, optical fiber 0.38dB/km , connector 0.4 dB/km, splicing loss 0.8 dB/km, attenuation 14.10 for type (1:16) And For HFC Power Transmit 9 dBm downlink wavelength 1550 nm, uplink wavelength 1270 nm, maximum receiver sensitivity -43 dBm, Fiber Optical 0.28dB/km Connector 0.3 dB/km, splicing loss 0.6 dB/km, Redman 14.10 dBm For Type (1:16).*

**Keywords :** HFC, FTTH, Power Link Budget