

DAFTAR ISI

| | |
|---|------|
| HALAMAN JUDUL | i |
| LEMBAR PERNYATAAN..... | ii |
| LEMBAR PENGESAHAN | iii |
| ABSTRAK | iv |
| KATA PENGANTAR | vi |
| DAFTAR ISI..... | viii |
| DAFTAR GAMBAR | x |
| DAFTAR TABEL..... | xii |
| BAB I : PENDAHULUAN | |
| 1.1 Latar Belakang | 1 |
| 1.2 Rumusan Masalah | 2 |
| 1.3 Tujuan Penelitian | 2 |
| 1.4 Batasan Penelitian | 2 |
| 1.5 Metode Penelitian..... | 3 |
| 1.6 Sistematika Penulisan | 3 |
| BAB II: LANDASAN TEORI | |
| 2.1 Tinjauan Pustaka | 5 |
| 2.2 FTTH (<i>Fiber To The Home</i>) | 6 |
| 2.2.1 Fiber Optic | 7 |
| 2.2.2 Kelemahan dan Kelebihan Fiber Optic..... | 9 |
| 2.2.3 Arsitektur GPON | 10 |
| 2.3 Konfigurasi FTTx | 15 |
| 2.3.1 <i>Fiber To The Building</i> (FTTB)..... | 15 |
| 2.3.2 <i>Fiber To The Curb</i> (FTTC)..... | 15 |
| 2.3.3 <i>Fiber To The Home</i> (FTTH)..... | 16 |
| 2.3.4 <i>Fiber To The Zone</i> (FTTZ)..... | 17 |
| 2.3.5 <i>Fiber To The Tower</i> (FTTT)..... | 17 |
| 2.4 Perkembangan PON | 18 |
| 2.5 Komponen GPON | 19 |
| 2.5.1 Keunggulan GPON | 26 |
| 2.5.2 Konfigurasi Jaringan..... | 27 |
| 2.6 Parameter Untuk Kelayakan Hasil Perancangan | 27 |
| 2.6.1 Link Power Budget..... | 28 |

| | |
|--|-----------|
| 2.6.2 Rise Time Budget | 28 |
| 2.6.3 Daya Sinyal Yang Di Terima (Pr) | 29 |
| 2.6.4 Derau (<i>Noise</i>)..... | 30 |
| 2.7 <i>Optisystem</i>..... | 30 |
| BAB III : METODE PENELITIAN | |
| 3.1 Diagram Alir Perencanaan | 32 |
| 3.2 Pengumpulan Data | 33 |
| 3.2.1 Studi Pustaka | 33 |
| 3.2.2 Studi Lapangan | 33 |
| 3.4 Penentuan Lokasi | 34 |
| 3.5 Perancangan Jaringan Akses FTTH..... | 35 |
| 3.6 Optical Line Terminal (OLT) | 37 |
| 3.6.1 <i>Fiber Optic</i> | 38 |
| 3.6.2 Konektor | 39 |
| 3.6.3 Splitter..... | 39 |
| 3.7 Simulasi Perancangan | 40 |
| BAB IV: HASIL DAN ANALISA | |
| 4.1 PLB (<i>Power Link Budget</i>) | 44 |
| 4.2 RTB (<i>Rise Time Budget</i>)..... | 44 |
| 4.3 Link Budget..... | 45 |
| 4.4 OpsiSystem Permata Puri Harmoni II | 47 |
| 4.5 Konfigurasi Downstream..... | 48 |
| 4.6 Konfigurasi Upstream..... | 50 |
| BAB V: PENUTUP | |
| 5.1 Kesimpulan..... | 53 |
| 5.2 Saran..... | 54 |
| DAFTAR PUSTAKA | 55 |