DAFTAR GAMBAR

Gambar 2.1 Arsitektur NG-PON2[1] 5

Gambar 2.2 Mach-Zehnder [4] 7

Gambar 2.3 Lithium Niobate (LiNb) Mach-Zehnder [4] 8

Gambar 2.4 Struktur *Electro-absorption* Modulator (EAM) [11] 9

Gambar 2.5 *Line Coding* NRZ[4] 10

Gambar 2.6 *Line Coding* RZ [4] 10

Gambar 2.7 Blok diagram dari RZ-DPSK pemancar[8] 12

Gambar 2.8 Skema modulasi DQPSK[8] 13

Gambar 3.1 Diagram Alir Proses Analisis 17

Gambar 3.2 Model Sistem Skenario 1 23

Gambar 3.1 Model Sistem Skenario 2 26

Gambar 4.1 Hasil Perhitungan LPB Skenario 1 28

Gambar 4.2 *Optical Power Meter* NRZ (EAM) 28

Gambar 4.3 Hasil Simulasi LPB Skenario 1 29

Gambar 4.4 Hasil Perhitungan SNR Skenario 30

Gambar 4.5 *Electrical Carrier Analyzer* NRZ (EAM) 30

Gambar 4.6 Hasil Simulasi SNR Skenario 1 31

Gambar 4.7 Hasil Perhitungan *Q-Factor* Skenario 1 32

Gambar 4.8 *Q-Factor* NRZ(EAM) 32

Gambar 4.9 Hasil Simulasi Q-Factor Skenario 1 33

Gambar 4.10 Hasil Perhitungan BER Skenario 1 34

Gambar 4.11 *Bit Error Rate NRZ (EAM)* 34

Gambar 4.12 Hasil Simulasi BER Skenario 1 35

Gambar 4.13 Hasil Perhitungan LPB Skenario 2 36

Gambar 4.14 *Optical Power Meter* NRZ (EAM) (a) NRZ (EAM) jarak 5 km (b) NRZ (EAM) jarak 20 km 37
Gambar 4.15 Hasil Simulasi LPB Skenario 2 37
Gambar 4.16 Hasil Perhitungan SNR Skenario 2 39
Gambar 4.17 *Signal to Noise Ratio* NRZ (EAM) (a) NRZ (EAM) jarak 5 km (b) NRZ (EAM) jarak 20 km 40
Gambar 4.18 Hasil Simulasi SNR Skenario 2 40
Gambar 4.19 Hasil Perhitungan *Q-Factor* Skenario 2 41
Gambar 4.20 *Q-factor* NRZ (EAM) (a) NRZ (EAM) jarak 5 km (b) NRZ (EAM) jarak 20 km 43
Gambar 4.21 Hasil Simulasi Q-Factor Skenario 2 43
Gambar 4.22 Hasil Perhitungan BER Skenario 2 45
Gambar 4.23 *Bit Error Rate* NRZ (EAM) (a) NRZ (EAM) jarak 5 Km (b) NRZ (EAM) jarak 20 Km 46
Gambar 4.24 Hasil Simulasi BER Skenario 2 47