DAFTAR PUSTAKA

[1] Republik Indonesia, “Peraturan Walikota (Perwali) Kota Bandung Nomor 589 Tahun 2013 tentang Penyelenggaraan Saluran *Fiber optic* Bersama Bawah Tanah,” pp. 1–9, 2013, Accessed: Oct. 19, 2024. [Online]. Available: https://peraturan.bpk.go.id/Details/170687/perwali-kota-bandung-no- 589-tahun-2013

[2] J. Kennedy, G. Armitage, dan J. Thomas, “Household bandwidth and the ‘need for speed’: Evaluating the impact of active queue management for home internet traffic,” Journal of Telecommunications and the Digital Economy, vol. 5, no. 2, pp. 113–130, 2017, doi: 10.18080/jtde.v5n2.99.

[3] R. A. Riano, D. P. Setiawan, and Yudiansyah, “Analisis Jaringan *Fiber* To The Home Berbasis Gpon Di Cluster Michelia,” 2024.

[4] H. Y. Ahmed, M. Zeghid, A. N. Khan, dan S. A. Abd El-Mottaleb, “Fuzzy Logic-Based Performance Enhancement of FSO Systems Under Adverse Weather Conditions,” Photonics, vol. 12, no. 5, Art. no. 495, May 2025.\

[5] N. S. Arifianti, Y. H. P. Isnomo, and K. Koesmarijanto, “Implementasi Transmisi Sinyal TV pada Media Transmisi *Fiber optic* Singlemode”, Jartel, vol. 10, no. 3, pp. 156-161, Sep. 2020.

[6] A. S. Adam Fatta'ah Ramadhan, “Analisis Pembuatan Jaringan Fiber To The Home (FTTH) di Perum Bumi Karawang Baru,” Jurnal Ilmiah Wahana Pendidikan, p. 3, 2024.

[7] A. S. Wira Maulana Prayoga, “Perancangan Jaringan Fiber To The Home (FTTH) Menggunakan Teknologi Gigabit Passive Optical Network (GPON),” Jurnal Ekonomi Bisnis Digital, vol. 2, p. 184, 2023.

[8] [Expert Views: The Next-Generation PON," ZTE Technologies, Apr. 2021. [Online]. Available: https://zte.com.cn/global/about/magazine/zte- technologies/2021/4-en/expert-views/1.html#:~:text=The%20next-generation%20PON%20will,be%20increased%20to%2050%20Gbps. [Accessed: Dec. 22, 2024].

[9] ITU-T, *40-Gigabit-capable passive optical networks (NG-PON2): Definitions, abbreviations and acronyms*, ITU-T Recommendation G.989, Oct. 2015. [Online]. Available: https://www.itu.int/rec/T-REC-G.989-201510-I/en

[10] R. Firdaus, R. A. I. Asyari, dan E. Indarto, "Optical network design for 4G LTE," *arXiv preprint arXiv:2203.12309*, Mar. 2022. doi: 10.48550/arXiv.2203.12309

[11] S. Fitri, S. Aulia, dan Aprinal Adila Asril, J. Teknik Elektro, P. Negeri Padang, and J. Limau Manih Padang, “Perancangan Dan Pengukuran Performansi Jaringan Fiber To The Home Dengan Teknologi Gigabit Passive Optical Network Menggunakan Optisystem Di Kelurahan Surau Gadang,” vol. 11, 2021.

[12] R. F. Adiati, A. Kusumawardhani, dan H. Setijono, "Analisis Parameter Signal to Noise Ratio dan Bit *Error* Rate dalam *Backbone* Komunikasi *Fiber optic* Segmen Lamongan-Kebalen," Jurnal Teknik ITS, vol. 6, no. 2, pp. A233–A237, 2017, doi: 10.12962/j23373520.v6i2.28284.

[13] Z. N. Karimah, A. Hambali, and Suwandi "Analisis Perbandingan Kinerja Mach-Zehnder berdasarkan Ragam Format Modulasi pada Jaringan FTTH," Jurnal ELKOMIKA |, vol. 5, pp. 2338–8323, 2017.

[14] M. N. 'Aunurrafieq, A. Hambali, and B. Pamukti, "Perancangan dan Analisis Sistem Komunikasi Fiber optic *Link* Samarinda-Penajam Paser Utara Menggunakan Teknologi DWDM," TELKATIKA, vol. 2, no. 2, pp. 72, Jun. 2023.

[15] T. Subekti, A. F. Isnawati, and D. Zulherman, "Optimization Free-Space Optics (FSO) Design with Kim Model Using Space Diversity," Jurnal Infotel, vol. 11, no. 3, pp. 93–98, Aug. 2019, doi: 10.20895/infotel.v11i3.444.

[16] A. A. Anis, C. B. M. Rashidi, A. K. Rahman, S. A. Aljunid, and N. Ali, "Analysis of the effect of BER and *Q-Factor* on Free-Space Opticsal communication system using diverse wavelength technique," in EPJ Website of Conferences, vol. 162, p. 01024, 2017, doi: 10.1051/epjconf/201716201024.

[17] World Meteorological Organization, "Aviation Hazards: Precipitation," WMO Community, n.d. [Online]. Available: https://community.wmo.int/en/activity-areas/aviation/hazards/precipitation. Accessed: May 21, 2025.

[18] M. G. Lawrence, "The Relationship between Relative Humidity and the Dewpoint Temperature in Moist Air: A Simple Conversion and Applications," Bull. Amer. Meteor. Soc., vol. 86, no. 2, pp. 225–233, Feb. 2005, doi: 10.1175/BAMS-86-2-225

[19] Hordofa, T.H., & Liu, J. (2025). Speed and Direction Control of DC Motor Using Arduino UNO Microcontroller. Open Access Library Journal, 12(3), e13007.

[20] L. Santos, T. Costa, J. M. L. P. Caldeira, and V. N. G. J. Soares, "Performance assessment of ESP8266 wireless mesh networks," Information, vol. 13, no. 5, p. 210, Apr. 2022, doi: 10.3390/info13050210.

[21] A. Hartono, D. I. Widodo, S. T. H. Putri, R. Zainul, M. Abdullah, A. Zikri, and I. A. Laghari, "Development of an integrated air quality monitoring system for temperature, humidity, CO, and PM10 measurement," Asian Journal of Green Chemistry, vol. 8, no. 3, pp. 319–335, 2024, doi: 10.48309/ajgc.2024.445430.1481.

[22] Pakpahan, I.E.A., Sihombing, P., & Nasution, M.K.M. (2020). Analysis of the SW-420 Vibration Sensor Performance on Vibration Tools by Using a Fuzzy Logic Method. Proceedings of the 12th International Conference on Agents and Artificial Intelligence, 103360.

[23] S. A. Akinwumi, O. Okey-Amadi, W. A. Ayara, and O. A. Akinwumi, "Eco-friendly Weather Monitoring Device using Arduino UNO Mega and Sensor Integration," IOP Conf. Ser.: Earth Environ. Sci., vol. 1428, p. 012006, 2024. doi: 10.1088/1755-1315/1428/1/012006.

[24] B. Li, Q. Wang, Q. Wang, and Y. Huang, "Development of a Methane-Detection System Using a Distributed Feedback LASER Diode and Hollow-*Core* Photonic Crystal Fiber," Electronics, vol. 12, no. 4, p. 838, Feb. 2023, doi: 10.3390/electronics12040838.

[25] N. Thaker and A. Shukla, "Python as Multi Paradigm Programming Language," *International Journal of Computer Applications*, vol. 177, no. 31, pp. 38–42, Jan. 2020.

[26] D. C. Cassidy, G. Holton, and F. J. Rutherford, Understanding Physics. New York: Springer, 2002, p. 341.

[27] Keputusan Menteri Komunikasi dan Digital Republik Indonesia Nomor 43 Tahun 2025 tentang Standar Teknis Perangkat Telekomunikasi Free Space Optics.

[28] International Telecommunication Union, Gigabit-capable Passive Optical Networks (GPON): Physical Media Dependent (PMD) layer specification, ITU-T Recommendation G.984.2, Mar. 2003. [Online]. Available: https://www.itu.int/rec/T-REC-G.984.2

[29] H. A. Fathi, D. P. Setiawan, dan L. Hafiza, "Analisis Perbandingan Jaringan FTTH dengan Teknologi GPON dan XGPON," e-Proceeding of Engineering, vol. 11, no. 4, hlm. 2646, Agustus 2024. ISSN: 2355-9365.

[30] N. S. Effendi, Y. Natali, dan C. Apriono, "Quality Signal Degradation in Single-Channel Fiber Using 10 Gbps Bit Rate," International Journal on Advanced Science, Engineering and Information Technology, vol. 11, no. 1, pp. –, Feb. 2021, doi: 10.18517/ijaseit.11.1.13462.

[31] S. D. Hutami, T. Prakoso, dan I. Santoso, "Analisis perbandingan teknologi GPON dan XGS-PON pada perancangan jaringan akses Fiber To The Home Perumahan Harmony Residence Jangli," TRANSIENT, vol. 8, no. 3, pp. 193, Sep. 2019. [Online]. Tersedia: https://ejournal3.undip.ac.id/index.php/transient

[32] ["Pengaruh Panjang Gelombang terhadap Kinerja Serat Optik (Kunci Efisiensi Jaringan Global)," Department Teknik Elektro, Telkom University, 2025. [Online]. Available: https://dte.telkomuniversity.ac.id/pengaruh-panjang-gelombang-terhadap-kinerja-serat-optik-kunci-efisiensi-jaringan-global/. [Accessed: 02-Jul-2025].

[33] "Laser," Wikipedia, [Online]. Available: https://en.wikipedia.org/wiki/Laser. [Accessed: 02-Jul-2025].

[34] Y. D. Aktas, K. Wang, Y. Zhou, M. Othman, J. Stocker, M. Jackson, C. Hood, D. Carruthers, M. T. Latif, D. D'Ayala, dan J. Hunt, "Outdoor Thermal Comfort and Building Energy Use Potential in Different Land-Use Areas in Tropical Cities: Case of Kuala Lumpur," Atmosphere, vol. 11, no. 6, Art. no. 652, Jun. 2020. doi: 10.3390/atmos11060652

[35] S. M. Makruf, L. R. Ramadhani, F. Sandha, P. A. P. Rini, S. A. Najwa, A. H. Amrullah, S. Anatasa, dan A. S. Prastia, "Analisis Kelembaban Udara terhadap Tingginya Suhu di Sekaran Semarang," Jurnal Analis, vol. 4, no. 1, pp. 93–100, Jun. 2025.

[36] T. Horvath, P. Munster, V. Oujezsky, and J. Vojtech, "Activation Process of ONU in EPON/GPON/XG-PON/NG-PON2 Networks," Applied Sciences, vol. 8, no. 10, p. 1885, Oct. 2018, doi: 10.3390/app8101885.

[37] T. A. Taroni, U. K. Usman, dan A. Hambali, "Analisis fitur komputasi *Link* Power Budget pada website Opti*link*Pro," e-Proceeding of Engineering, vol. 11, no. 4, pp. 2918–2924, Aug. 2024, ISSN: 2355-9365.

[38] S. Burdah, O. N. Samijayani, A. Syahriar, R. Ramdhani, dan R. Alamtaha, "Performance Analysis of Q Factor Optical Communication in Free Space Optics and Single Mode Fiber," Universal Journal of Electrical and Electronic Engineering, vol. 6, no. 3, pp. 167–175, 2019, doi: 10.13189/ujeee.2019.060311.

[39] R. P. Prakoso, E. Wahyudi, dan K. Masykuroh, "Optimalisasi Bit *Error* Rate Jaringan Optik Hybrid Pada Sistem DWDM Berbasis Soliton," J. Telecommun., Electron., Control Eng. (JTECE), vol. 3, no. 2, pp. 64–72, Jul. 2021, doi: 10.20895/jtece.v3i2.320.