

DAFTAR PUSTAKA

- [1] Embitel Technologies, *A Hand-book of OBD Modes and Services: Your go-to-guide for the OBD Software*, Bangalore, India, 2018. [Online]. Available: <https://www.embitel.com>
- [2] Arduino Community Forum, “ESP32 WROOM D32 DEV Board - UART, Flash, etc. Question,” <https://forum.arduino.cc/t/esp32-wroom-d32-dev-board-uart-flash-etc-question/1267145/2>, 2024, post ke-2 dalam diskusi forum; Diakses pada 14 Desember 2025.
- [3] How2Electronics, “ESP32 CAN Bus Communication with MCP2515 Module,” <https://how2electronics.com/esp32-can-bus-communication-with-mcp2515-module/>, 2024, diakses pada 14 Desember 2025.
- [4] F. Haque and M. A. Abas, “Review of driving behavior towards fuel consumption and road safety,” *Jurnal Mekanikal*, vol. 41, no. 1, pp. 59–68, June 2018.
- [5] D. Reis, R. Tomás, M. C. Coelho, and E. Macedo, “Correlating driving behavior with safety performance: from the heart to the pedals with a driving simulator,” *Transportation Research Procedia*, vol. 69, pp. 217–224, 2023.
- [6] Badan Pusat Statistik, “Jumlah kendaraan bermotor menurut provinsi dan jenis kendaraan (unit),” Feb 2024. [Online]. Available: <https://www.bps.go.id/id/statistics-table/3/VjJ3NGRGa3dkRk5MTIU1bVNfOTVbYmQyVURSTVFUMDkMw=/jumlah-kendaraan-bermotor-menurut-provinsi-dan-jenis-kendaraan>
- [7] H. M. Boland, M. I. Burgett, A. J. Etienne, and R. M. S. III, *An Overview of CAN-BUS Development, Utilization, and Future Potential in Serial Network Messaging for Off-Road Mobile Equipment*. IntechOpen, 10 2021.
- [8] O. Rybitskyi, V. Golian, N. Golian, Z. Dudar, O. Kalynychenko, and D. Nikitin, “Using obd-2 technology for vehicle diagnostic and using it in the information system,” *Bulletin of National Technical University "KhPI". Series: System Analysis, Control and Information Technologies*, pp. 97–103, 7 2023.
- [9] D. Hanes, G. Salgueiro, P. Grossetete, R. Barton, and J. Henry, *IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things*. Cisco Press, 2017.
- [10] W. B. Ribbens, *Understanding Automotive Electronics: An Engineering Perspective*, 8th ed. Butterworth-Heinemann, 2017.

- [11] Junaidi and S. Dianing Asri, "Rancang bangun sistem monitoring kendaraan secara realtime menggunakan obd2 scanner," *Media Bina Ilmiah*, vol. 18, no. 5, p. 1257–1262, Jan 2024.
- [12] M. R. Dainendra and A. S. Budi, "Sistem monitoring data kendaraan menggunakan protokol can bus berbasis internet of things," *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, vol. 8, no. 2, Feb 2024. [Online]. Available: <https://j-ptiik.ub.ac.id/index.php/j-ptiik/article/view/13311>
- [13] J. L. Bell, M. A. Taylor, G. X. Chen, R. D. Kirk, and E. R. Leatherman, "Evaluation of an in-vehicle monitoring system (ivms) to reduce risky driving behaviors in commercial drivers: Comparison of in-cab warning lights and supervisory coaching with videos of driving behavior," *Journal of Safety Research*, vol. 60, pp. 125–136, 2 2017.
- [14] A. B. C. Douss, R. Abassi, and D. Sauveron, "State-of-the-art survey of in-vehicle protocols and automotive ethernet security and vulnerabilities," *Mathematical Biosciences and Engineering*, vol. 20, pp. 17 057–17 095, 2023.
- [15] A. Anwar, A. Anwar, L. Moukahal, and M. Zulkernine, "Security assessment of in-vehicle communication protocols," *Vehicular Communications*, vol. 44, 12 2023.
- [16] A. Neumann, M. Mytych, D. Wesemann, L. Wisniewski, and J. Jasperneite, "Approaches for in-vehicle communication – an analysis and outlook," 06 2017.
- [17] W. Voss, "History and development of the controller area network (can bus) - jcom1939 monitor pro," Apr 2025. [Online]. Available: <https://jcom1939.com/history-and-development-of-the-controller-area-network-can-bus/>
- [18] K. H. Johansson, M. Törngren, and L. Nielsen, "Vehicle applications of controller area network," KTH Royal Institute of Technology, Tech. Rep., 2005.
- [19] N. M. B. Lakhal, O. Nasri, L. Adouane, and J. B. H. Slama, "Controller area network reliability: Overview of design challenges and safety related perspectives of future transportation systems," pp. 1727–1739, 12 2020.
- [20] R. V. Glabbeek and P. Höfner, "Split, send, reassemble: A formal specification of a can bus protocol stack *," University of New South Wales, Tech. Rep., 2017.
- [21] S. Microelectronics, "How to design a robust automotive can system," 2022.
- [22] A. W. Wardhana, A. Mubyarto, and A. Taryana, "A controller area network (can) bus temperature and humidity data monitoring system," *Transmisi: Jurnal Ilmiah Teknik Elektro*, vol. 25, pp. 115–125, 7 2023.

- [23] M. Falch, "Can bus explained - a simple intro (2021)," Jan 2025. [Online]. Available: <https://www.csselectronics.com/pages/can-bus-simple-intro-tutorial>
- [24] D. Saibannavar, M. M. Math, and U. Kulkarni, "A survey on on-board diagnostic in vehicles," in *International Conference on Mobile Computing and Sustainable Informatics*, 2020. [Online]. Available: <http://www.springer.com/series/15427>
- [25] Dadilov, "The history of development of system the car diagnostics obd-ii," *History of Science and Engineering*, no. 3, Mar 2021.
- [26] P. D. Hagawane, "Design and development of automotive on-board diagnostic protocol system," *International Scientific Journal of Engineering and Management*, vol. 04, pp. 1–7, 5 2025.
- [27] P. Dzhelekarski and D. Alexiev, "Reading and interpreting diagnostic data from vehicle obdii system," 2005. [Online]. Available: <https://api.semanticscholar.org/CorpusID:65458268>
- [28] S.-A. Drăgușin, N. Bizon, R.-M. Teodorescu, D. Toma, R.-N. Boștinăru, and G. Anghel, "Communication protocols in embedded systems for automotive applications: Comparative analysis and implementation through virtual instruments," in *2025 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, 2025, pp. 1–8.
- [29] D. Rimpas, A. Papadakis, and M. Samarakou, "Obd-ii sensor diagnostics for monitoring vehicle operation and consumption," in *Energy Reports*, vol. 6. Elsevier Ltd, 2 2020, pp. 55–63.
- [30] B. Anton and A. Florescu, "Measuring vehicle's powertrain parameters using diagnostics interface," *2020 12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, pp. 1–4, 2020. [Online]. Available: <https://doi.org/10.1109/ECAI50035.2020.9223259>
- [31] M. M. Oluwaseyi and A. M. Sunday, "Specifications and analysis of digitized diagnostics of automobiles: A case study of on board diagnostic (obd ii)," *International Journal of Engineering Research and*, vol. V9, no. 01, Jan 2020.
- [32] S. Barone, "Statistics-driven development of obd systems: An overview," *Quality and Reliability Engineering International*, vol. 22, no. 6, p. 615–628, Aug 2006.
- [33] A. Yadav, G. Bose, R. Bhange, K. Kapoor, N. Iyengar, and R. D. Caytiles, "Security, vulnerability and protection of vehicular on-board diagnostics," *International Journal of Security and Its Applications*, vol. 10, no. 4, p. 405–422, Apr 2016.

- [34] A. E. Campos-Ferreira, J. d. J. Lozoya-Santos, J. C. Tudon-Martinez, R. A. R. Mendoza, A. Vargas-Martínez, R. Morales-Menendez, and D. Lozano, "Vehicle and driver monitoring system using on-board and remote sensors," *Sensors*, vol. 23, no. 2, p. 814, Jan 2023.
- [35] P. Visconti, G. Rausa, C. Del-Valle-Soto, R. Velázquez, D. Cafagna, and R. D. Fazio, "Innovative driver monitoring systems and on-board-vehicle devices in a smart-road scenario based on the internet of vehicle paradigm: A literature and commercial solutions overview," *Sensors*, vol. 25, no. 2, p. 562–562, Jan 2025.
- [36] C. R. Kothari and G. Garg, *Research Methodology: Methods and Techniques*, 4th ed. New Delhi, India: New Age International Publishers, 2019.
- [37] J. W. Creswell and C. N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. Thousand Oaks, CA: SAGE Publications, 2018.
- [38] J. O. De Sordi, *Design Science Research Methodology: Theory Development from Artifacts*. Cham, Switzerland: Springer, 2021.
- [39] J. W. Creswell and J. D. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. Thousand Oaks: SAGE Publications, 2018.
- [40] OASIS Standard, *MQTT Version 3.1.1*, 2014, standard for Message Queuing Telemetry Transport. [Online]. Available: <http://docs.oasis-open.org/mqtt/mqtt/v3.1.1/mqtt-v3.1.1.html>

