Profibus/Profinet

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REFERENCES

- Jasperneite, Jürgen, and Joachim Feld. "PROFINET: an integration platform for heterogeneous industrial communication systems." 2005 IEEE Conference on Emerging Technologies and Factory Automation. Vol. 1. IEEE, 2005.
- [2] Belai, Igor, and Peter Drahoš. "The industrial communication systems Profibus and PROFInet." Applied Natural Sciences 1 (2009): 329-336.
- [3] Trikaliotis, Spiro, and André Gnad. "Mapping wirelesshart into profinet and profibus fieldbusses." 2009 IEEE Conference on Emerging Technologies & Factory Automation. IEEE, 2009.

- [4] Kjellsson, Jimmy, et al. "Integration of a wireless I/O interface for PROFIBUS and PROFINET for factory automation." IEEE Transactions on Industrial Electronics 56.10 (2009): 4279-4287.
- [5] Powell, James, and P. Eng. "Profibus and Modbus: a comparison." Automation. com 2013 (2013): 1-5.
- [6] Musa, Yasmin, et al. "Low-Cost Remote Supervisory Control System for an Industrial Process using Profibus and Profinet." 2019 SoutheastCon. IEEE, 2019
- [7] Ficzere, Dániel, et al. "5G public network integration for a reallife PROFINET application." NOMS 2022-2022 IEEE/IFIP Network Operations and Management Symposium. IEEE, 2022.
- [8] Niemann, Karl-Heinz. "Automatisierungsnetzwerke EMV-gerecht installieren: Potentialausgleich und Schirmung von Profibus und Profinet." atp magazin 2019.4 (2019): 1-9.