

A Comparative Analysis of Microcontroller and Microprocessor

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Abstract: *This research paper explores the fundamental distinctions between microcontrollers and microprocessors. Focusing on key characteristics such as processing power, memory, and peripheral integration, the study aims to provide a clear understanding of their individual strengths and weaknesses. Even the pin diagram of 8086 and 8051 are explained briefly. This paper consists of various advantages and applications of microcontroller and microprocessor..*

Keywords: Microcontroller 8051, Microprocessor 8086, ALU, Registers, BUS Architecture, I/O ports

REFERENCES

- [1] B.Ram, "Fundamentals of Microprocessor and Microcomputers".
- [2] Muhammad Ali Mazidi, Janice Gillispie Mazidi and Rolin D. McKinlay, "The 8051 Microcontroller and Embedded Systems".
- [3] <https://www.javatpoint.com/8086-microprocessor>.
- [4] Prof. Rohini Rathod, Vicky Pawar, Shivam Mandal and Vikas Iyer, "Microprocessor VS Microcontroller" vol 8, pp 1-4, 3 March 2020.
- [5] https://www.tutorialspoint.com/microprocessor/microprocessor_overview.htm
- [6] John Crisp, "Introduction to Microprocessor and Microcontroller", 2nd edition.
- [7] <https://www.guru99.com/difference-between-microprocessor-and-microcontroller.html>
- [8] <https://en.wikipedia.org/wiki/Microcontroller>
- [9] <https://www.vlsifacts.com/different-applications-microcontroller/>
- [10] Krishna Kant, Microprocessor and Microcontrollers, 2nd edition.
- [11] Prem R. Chadha and Sarita Chadha, "Question Bank In Electronics and Communication Engineering".