

Fabrication of a communication module between the microcontroller and the telephone network via SIM 900

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Abstract: In the modern context, smart connectivity between automated systems and mobile devices has become important. This topic focuses on developing a communication module based on a microcontroller with a telephone network via SIM 900 to create a flexible solution for automation applications requiring Internet of Things (IoT) connectivity. The objective of the research is to design and fabricate this system, including the implementation of an efficient communication algorithm and energy optimization. The methodology includes both theoretical research on IoT and SIM 900 technology as well as practical testing on a microcontroller platform. The expected results provide significant scalability for automation systems, improving performance and reducing connection costs.

Keywords: IoT, microcontroller, SIM 900, mobile communication, automation