

Using the 8051 microcontroller to design a password-based door opening circuit.

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Abstract: In the context of increasing attention to information security, this topic focuses on applying the 8051 microcontroller to design a password-based door opening system. The main objective of the topic is to build an automated solution for the access control process through password authentication. The research method includes both theory and experimentation, with programming the 8051 microcontroller to process and compare the entered password with the stored password. The expected results from the topic not only provide an effective technical solution but also contribute to the field of network security, raising awareness about protecting personal information.

Keywords: 8051 microcontroller, Password door opening, Network security, Automation programming, Access control