

Performansi Kalkulasi Hash SHA-1 pada Sistem Embedded Arduino

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Abstrak

The development of digital electronic devices that can communicate with each other causing the need for data security or data protection. However, in the many digital electronic devices are not equipped with security or protection of the data. In this study has the main objective to design an embedded system that can be added to the digital electronic devices to provide security or protection of the data. As the initial phase of the study, in this paper have measured performance data security in embedded systems with Arduino using a cryptographic algorithm SHA-1 hash function. Performance of SHA-1 hash calculation using linear regression approach of measurement results show for 1 byte of data takes time 2,505 ms. Each additional 1 byte of data calculation time hash function SHA-1 increased 0.0715 ms.