

ABSTRACT

The keyboard as input device that most widely used by users has an important role in technology, the reason being that because the keyboard is a universal input device both keyboard physical and virtual has the same form, function, and way of working. So because of that, the keyboard is used in all types of technological devices as standard input in the form of typing to enter general information to personal data.

However, there is a possibility that anything that we type on the keyboard can be read by others, for example by installing a keylogger or a special program to record every key that we typed on the keyboard even manipulating the operating system of the device so that anything we input through the keyboard can be read by others . With these problems, the idea come up to make a secure keyboard device that guarantees the security of user data typed through the keyboard. The solution is to make the device encrypted, so that the data sent by the keyboard to the main device seems to be hidden therefore it cannot be read by others. Then the encrypted input data will be decrypted by the application so the input corresponds to what the user typed on the keyboard.

The results of the implementation of the keyboard are successfully encrypted messages sent in each typing, with an average percentage of avalanche effect 50.57%. The data sent in the form of payload is much different from the keyboard in general so that it cannot be detected by the keylogger, also the encryption time only takes less than 1 ms, which means the performance of the keyboard is not much different from the keyboard in general.

Keywords : *Keyboard, Encrypted, Teensy, Arduino, Hardware, Security*