

## ABSTRACT

Saving money is an activity that everyone can do. The activity of saving money is usually carried out by everyone with the aim of buying an item or saving and using it when needed. There are quite a number of types of money storage places that are often found, including safes, cashboxes, wallets and piggy banks. In using these media, users often experience problems where users feel insecure and less practical when they want to know the nominal amount of money that has been saved.

In this research, a device for storing rupiah banknotes has been designed in the form of a smart box for storing banknotes with a security system based on E-KTP. This tool can detect the presence of rupiah banknotes issued in 2016 starting from a nominal value of Rp.1,000-Rp.100,000 by using a color sensor. as a data storage of money detection results that are inserted into the box, the internal memory on the microcontroller is used, namely EEPROM. In the security system, an E-KTP is used as an RFID tag. The results of testing E-KTP as an RFID tag using 4 different E-KTP cards and a total of 120 times testing resulted in 100% accuracy. The test for detecting nominal money and implementing EEPROM using rupiah banknotes with nominal Rp.1,000-Rp.100,000 each of 10 pieces resulted in an accuracy rate of 97,5% from 200 times testing.

Keywords: Money, money storage, RFID, E-KTP