

## ABSTRACT

Automatic sorting box device is device which designed for sorting box automatically quick and without human help therefore to sort box will be precision for distribute box. With this final project hoped a company can distribute their product quickly an precision so they can increase a profit. This final project will be make a automatic sorting box device based on RFID so the distribution can be monitored.

In this device, a box which plestered stiker tag *RFID mifare 1k* placed in conveyor dan moved, a box will be detected by *RFID reader DFR0231*. aRFID stiker tag send unique code for search which one the data which match with data base, it using searching metode especially searching sequential then processed by Arduino Uno. This metode worked matching every unique binary code from RFID stiker tag, so this metode hoped make precision output and quick output. Result from that metode wll triggering DC motor to pushing a box to match path corresponding code in stiker tag.

Result of design and implementation of device to sorting box based RFID on conveyor with searching metod for processing data is make precision output although every one cycle need 10,42 second per-box. Although, the success rate of this prototype get 100%. Generally, this device could help lighten human job.

**Keyword : Distribution, RFID, Conveyor, Searching Methodh.**