

ABSTRACT

Development of rapidly technology has an impact on various fields. In the industrial world, the use of computer technology in the world have an impact on the use of industrial automation systems, like CNC (computer Numerical Control). Implementation of these systems provide increased production because all the systems performed by device that has been programmed.

In this final project designed a CNC (Computer Numerical Control) machine, which used for laser engraving. Design has been drawn through the personal computer will be converted in the form of numerical control programming language (G-Code). Then, microcontroller will receive the digital data input from a personal computer via serial communication. Mikrokontroler will read the data that has been transferred to a personal computer, data read command used for switch laser and logic movement the stepper motor.

Having done the research and testing, produced capable of being used for the purposes of laser engraving. The system has speed of 19.25 mm / min, accuracy 0.32263 mm, and 0.215 mm shifting error. With the system that has been designed, can assist in making PCB track with the help of laser engraving method.

Keyword : *Microcontroller, Computer Numerical Control, Laser Engraving, G-Code.*