

ABSTRACT

Nowadays, the effect of science growth rapidly caused technology extended positive impact for human life. Robot is one of technology impact that worldly growth rapidly. By using robot technology, everything become effective and efficiency. For example, the use of robot arm in industry to move a product from a coordinate to other coordinate without stoppage, will increase the capacity of production. Or, another example, the use of robot arm in dangerous area for human life, such as in chemical reactive laboratory, nuclear test room, etc.

In this final project, already designed and implemented robot arm controller based on microcontroller ATmega128. The concentration of this final project in designing and implementing robot arm controller that integrated between microcontroller ATmega128 with motor servo. Motor servo which is used in this final project is AX-12 from Robotis.

The robot arm that has been designed is able to move from a coordinate to other coordinate in X,Y, and Z space, based on the instruction from user as long as the destination coordinate has been defined in flash memori ATmega128. Because this robot movement coordinate has been defined and saved in flash memori ATmega128. The coordinates X, Y and Z which has been defined is about 61 coordinates.

Keyword: robot arm, motor servo AX-12, microcontroller ATmega128, X, Y and Z space coordinate.