

Hardware Manual

Hardware used in our project

- RFid Scanner used on firebird
- Gripper Arm used on firebird

CONNECTIONS FOR RFID SCANNER:

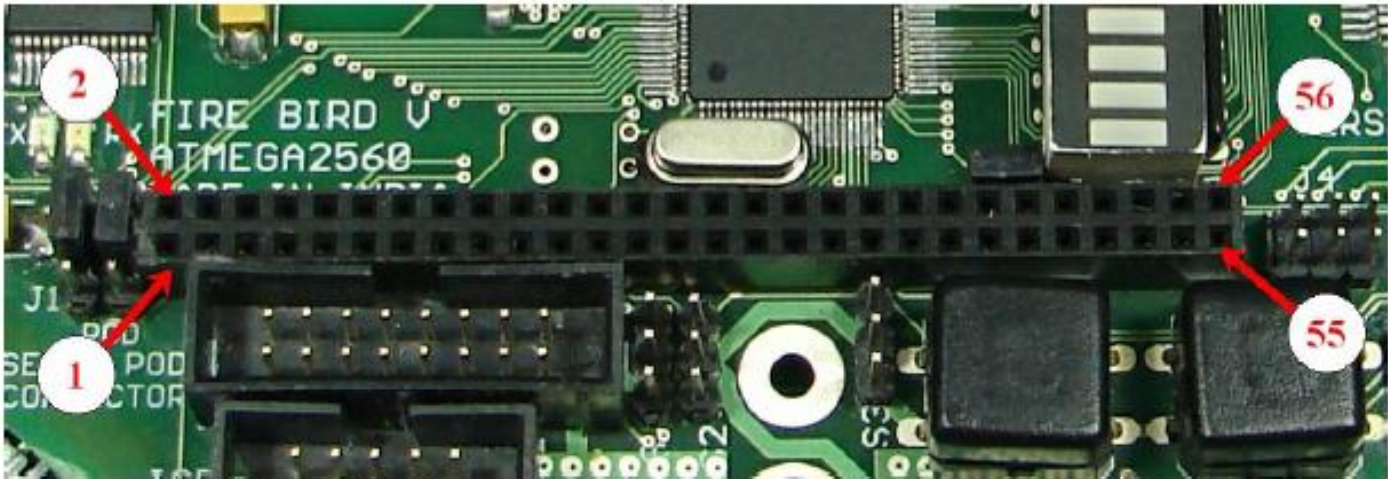
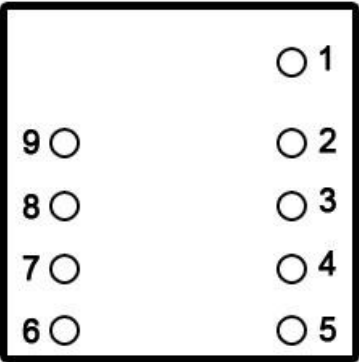


Figure 3.63: Expansion Header on Microcontroller Board

EM-18 RFid Scanner



The connections of RFid Scanner are done over here.

Pin 1 and Pin 6 of the scanner require 5V.

This is done using the pins 21 and 22 above.

Pin2 of the scanner is ground.

This is done using any one of pin23 or pin24 above.

Pin7 of the scanner is the signal sending pin.

It is connected to the receiving pin for UART3. It is pin 45 in the diagram above.

To use this pin, we need to remove the jumper J3, which is just above pin 45.

GRIPPER ARM CONNECTIONS:

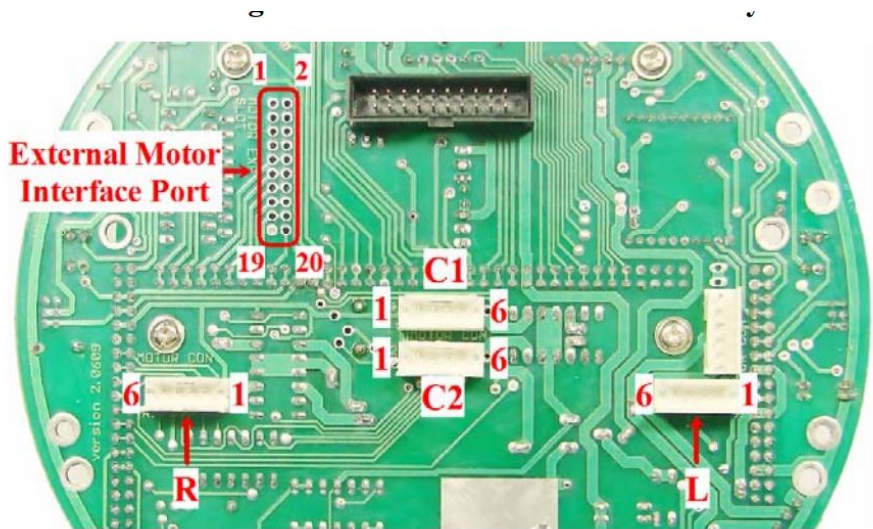


Figure 8.30: Motion control connections on the main board

Connector Name	Description
L	Left motor connector 1
R	Right motor connector 2
C1	C1 motor connector
C2	C2 motor connector
External Motor Interface Port	Logic signals of pins 47 to 55 of the main board socket for interfacing external high current motor drivers

The C1 and C2 shown in the figure are connected to portA of the microcontroller.

The two motors of the gripper arm are connected to them.

Pin 5 and Pin 6 on each C1 and C2 are used to make the connections