# Documentation for Motor Controller Board

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ PRU #1 ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

| Bit # | Name | Purpose | Header Pin |
|---|---|---|---|
| R30.t0 | M3-0 | Motor 3 control signal | P8_45 |
| R30.t1 | M3-1 | Motor 3 control signal | P8_46 |
| R30.t2 | M1-0 | Motor 1 control signal | P8_43 |
| R30.t3 | M1-1 | Motor 1 control signal | P8_44 |
| R30.t4 | M2-0 | Motor 2 control signal | P8_41 |
| R30.t5 | M2-1 | Motor 2 control signal | P8_42 |
| R30.t6 | M4-0 | Motor 4 control signal | P8_39 |
| R30.t7 | M4-1 | Motor 4 control signal | P8_40 |

| Bit # | Name | Purpose | Header Pin |
|---|---|---|---|
| R31.t7 | PRU0_INT | Interrupt from accelerometer | P9_25 |
| R31.t8 | ENC1 | Encoder 1 input | P8_27 |
| R31.t9 | ENC2 | Encoder 2 input | P8_29 |
| R31.t10 | ENC3 | Encoder 3 input | P8_28 |
| R31.t11 | ENC4 | Encoder 4 input | P8_30 |

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ PRU #0 ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

| Bit # | Name | Purpose | Header Pin |
|---|---|---|---|
| R30.t5 | BUF_ENA | Enables tri-state buffers | P9_27 |
| R30.t15 | LED | PRU #0 LED | P8_11 |

| Bit # | Name | Purpose | Header Pin |
|---|---|---|---|
| R31.t14 | SWITCH | PRU #0 Switch | P8_16 |

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ GPIO ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

| GPIO # | Name | Purpose | Header Pin |
|---|---|---|---|
| 44 | GPIO1[12] | GPIO LED | P8_12 |
| 47 | GPIO1[15] | GPIO Switch | P8_15 |
| 2 | GPIO0[2] | Accelerometer GPIO interrupt | P9_22 |

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ I2C-2 ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

| | | |
|---|---|---|
| I2C-2 SCLK | I2C Bus #2 serial clock | P9_17 |
| I2C-2 SDA | I2C Bus #2 serial data | P9_18 |