```
START BTN
                                                                                                                                                          SHARP 0
                                                                                                                                                                                                                                                           SDA SW1
                                                                                                                                                                  SHARP 1
                                                                                                                                                                                      SHARP<sup>-</sup>
                                                                                                                                                                                                                                                                                         ils 0
UI_13
ils_1
                                                                                                                                                                                                                                                    SCL
                                                                                                                                                                                                                                       BAT
                                                                                                                                            Analog Reference
                                                                                                                                                                                                                          Analog pin 10
Analog pin 11
                                                                                                                                                                                                                                      Analog pin 12
                                                                                                                                                                                                                                                           Analog pin 15
                                                                                                                                                                                                                                            Analog pin 13
                                                                                                                                                                                                                                                                                               Digital pin 23
Digital pin 24
                                                                                                                                                  Analog pin 0
                                                                                                                                                                                                                                                     Analog pin 14
                                                                                                                                                                                                                    Analog pin 9
                                                                                                                                                                                                                                                                                         Digital pin 22
                                                                                                                                                          Analog pin 1
                                                                                                                                                                  Analog pin 2
                                                                                                                                                                               Analog pin 4
                                                                                                                                                                                      Analog pin 5
                                                                                                                                                                                             Analog pin 6
                                                                                                                                                                                                    Analog pin 7
                                                                                                                                                                                                              ω
                                                                                                                                                                        Analog pin 3
                                                                                                                                                                                                             Analog pin
                                                                                                                                                                                                                                                                     GND
                                                                                                                                                                                                                                                     | S | PK6 (ADC14/PCINT22) | R | PK7 (ADC15/PCINT23) | R | GND | R | VCC | L | PJ7 | R | PA0 (AD0) | L | PA1 (AD1) | R | PA2 (AD2) | R | PA3 (AD3) | R | PA3 (AD2) | R | PA3 (AD3) | R | PA3 (AD2) | R | PA3 (AD3) | R | PA3 (AD2) | R | PA3 (AD3) | R | PA3 (A
                                                                                                                                                                                                                          PK2 (ADC10/PCINT18)
                                                                                                                                                                                                                                 B PK4 (ADC12/PCINT20)
                                                                                                                                                                                                                                             PK5 (ADC13/PCINT21)
                                                                                                                                                                                            ⊕ PF6 (ADC6/PCINT14)
                                                                                                                                                                                                           B PK0 (ADC8/PCINT16)
                                                                                                                                                                                                                  ® PK1 (ADC9/PCINT17)
                                                                                                                                                                                                    SPF7 (ADC7/PCINT15)
                                                                                                                                                                                      ® PF5 (ADC5/TMS)

□ PF4 (ADC4/TMK)

                                                                                                                            ☐ AVCC
⑥ GND
◎ AREF
② PFO (ADCO)
                                                                                                                                                          哥PF2 (ADC2)
                                                                                                                                                                        PF3 (ADC3)
                                                                                          PG5 (OC0B) 1
    mot1_1 Digital pin 4 (PWM)
                                                                                                                                                                                                                                                                                                                 75 PA3 (AD3)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 25 UI_12
                                 Digital pin 0 (RX0) PE0 (RXD0/PCINT8) 2
                                                                                                                                                                                                                                                                                                                 74 PA4 (AD4)
                                                                                                                                                                                                                                                                                                                                                                                                     ils_2
   USB RX
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 26
                                                                                             PE1 (TXD0) 3
                                                                                                                                                                                                                                                                                                                 73 PA5 (AD5)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 27
                                                                                                                                                                                                                                                                                                                                                                                                     UI_11
   USB TX
                                  Digital pin 1 (TX0)
                                                                                PE2 (XCK0/AIN0) 4
                                                                                                                                                                                                                                                                                                                  72 PA6 (AD6)
                                                                                                                                                                                                                                                                                                                                                                                                     ils 3
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 28
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 29 UI_10
                                                                                                                                                                                                                                                                                                                 71 PA7 (AD7)
    mot1_2
                                                                                PE3 (OC3A/AIN1) 5
                               Digital pin 5 (PWM)
                                                                                                                                                                                                                                                                                                                 70 PG2 (ALE)
                                                                                 PE4 (OC3B/INT4) 6
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 39 UI 5
    cod1 A
                               Digital pin 2 (PWM)
                                                                                   PE5 (OC3C/INT5) 7
                               Digital pin 3 (PWM)
                                                                                                                                                                                                                                                                                                                 69 PJ6 (PCINT 15)
     cod1 B
                                                                                                                                                                                                                                                                                                                 68 PJ5 (PCINT14)
                                                                                         PE6 (T3/INT6) 8
                                                                        PE7 (CLKO/ICP3/INT7) 9
                                                                                                                                                                                                                                                                                                                 67 PJ4 (PCINT13)
                                                                                                          VCC 10
                                                                                                                                                                                                                                                                                                                 66 PJ3 (PCINT12)
                                                        VCC
                                                       GND
                                                                                                          GND 11
                                                                                                                                                                                                                                                                                                                 65 PJ2 (XCK3/PCINT11)
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 14 (TX3) EXT_TX
        BT RX Digital pin 17 (RX2)
                                                                                            PH0 (RXD2) 12
                                                                                                                                                                                                                                                                                                                 64 PJ1 (TXD3/PCINT10)
        BT TX Digital pin 16 (TX2)
                                                                                            PH1 (TXD2) 13
                                                                                                                                                                                                                                                                                                                 63 PJ0 (RXD3/PCINT9)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 15 (RX3) EXT RX
                                                                                                                                                                                                                                                                                                                 62 GND
                                                                                            PH2 (XCK2) 14
                                                                                                                                                                                                                                                                                                                                                                      GND
                                                                                                                                                                                                                                                                                                                 61 VCC
                                                                                                                                                                                                                                                                                                                                                                      VCC
                                                                                            PH3 (OC4A) 15
 mot1_en Digital pin 6 (PWM)
                                                                                            PH4 (OC4B) 16
                                                                                                                                                                                                                                                                                                                 60 PC7 (A15)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 30 ils_4
    mot2 1
                             Digital pin 7 (PWM)
                                                                                                                                                                                                                                                                                                                 59 PC6 (A14)
    mot2 2
                              Digital pin 8 (PWM)
                                                                                            PH5 (OC4C) 17
                                                                                                                                                                                                                                                                                                                                                                                                    UI_9
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 31
                               Digital pin 9 (PWM)
                                                                                                                                                                                                                                                                                                                 58 PC5 (A13)
                                                                                                                                                                                                                                                                                                                                                                       Digital pin 32 ils_5
 mot2_en
                                                                                            PH6 (OC2B) 18
   SPI_SS0
                                                                                  PB0 (SS/PCINT0) 19
                                                                                                                                                                                                                                                                                                                 57 PC4 (A12)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 33 UI_8
                                  Digital pin 53 (SS)
  SPI_SCK Digital pin 52 (SCK)
                                                                                                                                                                                                                                                                                                                 56 PC3 (A11)
                                                                                                                                                                                                                                                                                                                                                                                                     SCL SW2
                                                                               PB1 (SCK/PCINT1) 20
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 34
                                                                                                                                                                                                                                                                                                                                                                                                     UI 7
                                                                                                                                                                                                                                                                                                                 55 PC2 (A10)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 35
SPI_MOSI Digital pin 51 (MOSI)
                                                                             PB2 (MOSI/PCINT2) 21
                                                                                                                                                                                                                                                                                                                                                                                                     SDA_SW2
                                                                                                                                                                                                                                                                                                                 54 PC1 (A9)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 36
                                                                             PB3 (MISO/PCINT3) 22
  SPIMISO Digital pin 50 (MISO)
                                                                            PB4 (OC2A/PCINT4) 23
                                                                                                                                                                                                                                                                                                                  53 PC0 (A8)
    mot3_1 Digital pin 10 (PWM)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 37
                                                                                                                                                                                                                                                                                                                                                                                                      UI 6
    mot3_2 Digital pin 11 (PWM)
                                                                            PB5 (OC1A/PCINT5) 24
                                                                                                                                                                                                                                                                                                                 52 PG1 (RD)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 40
                                                                           PB6 (OC1B/PCINT6) 25
                                                                                                                          51 PG0 (WR)
                                                                                                                                                                                                                                                                                                                                                                      Digital pin 41
                                                                                                                                                                                                                                                                                                                                                                                                     UI 4
 mot3_en Digital pin 12 (PWM)
                                                                                                                                                                                                                                                                                 PD4 (ICP1) ½PD5 (XCK1) %PD6 (T1) %PD7 (T0) ©G
                                                                                                                                                                                                                                                                                         PD5 (XCK1)
                                                                                                                                                                                                                                                                                                       Digital pin 38
                                                                                                                                                                                                                                                            cod3_B/SDA_HW cod2_A cod2_B
                                                                                                                                                                                                                                                     cod3 A/SCL HW
```