IC1
ATMEGA328P-PU

RESET

1 PC6 RESET#   PC0 ADC0 23
2 PD0 RXD   PC1 ADC1 24
3 PD1 TXD   PC2 ADC2 25
               PC3 ADC3 26
               PC4 ADC4 27
9 PB6 XTAL1   PC5 ADC5 28
10 PB7 XTAL2

C1
22pF

X1
16MHz

C2
22pF

+5V
7 VCC
20 AVCC
21 AREF

C4
100nF

4 INT0 PD2
5 INT1 PD3
6 T0 PD4
11 T1 PD5
12 AIN0 PD6
13 AIN1 PD7

LED1   R1
          1k

8 GND
22 GND

14 PCINT0 PB0
15 PCINT1 PB1
16 PCINT2 PB2
17 PCINT3 PB3   MOSI
18 PCINT4 PB4   MISO
19 PCINT5 PB5   SCK

+12V
U1
uA7805
1 IN   OUT 3   +5V
   GND
2

C3
10uF

J1
ISP

6 GND   RESET 5 RESET
4 MOSI   SCK   3 SCK
2 VCC   MISO 1 MISO

MOSI

red

ATMega setup based on:

https://www.instructables.com/Build-an-Arduino/

https://www.youtube.com/watch?v=Sww1mek5rHU

https://wolles-elektronikkiste.de/atmega328p-standalone-betreiben (german)