Atmega328

AREF
ADC6
ADC7

+5V
VCC AVCC

AREF 20
ADC6 19
ADC7 22

PB0 12 B-IN-2
PB1 13 B-IN-3
PB2 14 B-IN-4
PB3 15 B3_MOSI
PB4 16 B4_MISO
PB5 17 B5_SCK
XTAL1/PB6 7 XTAL1
XTAL2/PB7 8 XTAL2

PC0 23 C0
PC1 24 C1
PC2 25 C2
PC3 26 C3
PC4 27 C4
PC5 28 C5
RESET/PC6 29 RESET

PD0 30 D0_RXD
PD1 31 D1_TXD
PD2 32 ENABLE
PD3 1 A-IN-1
PD4 2 A-IN-2
PD5 9 A-IN-3
PD6 10 A-IN-4
PD7 11 B-IN-1

GND

U1
ATmega328P-AU
GND

+5V
C1 4.7uF   C2 100nF
GND

Y1 16MHz
XTAL1 1   3 XTAL2
C3 12pF   C4 12pF
GND

J2 ICSP   +5V
B4_MISO 1 2
B5_SCK 3 4 B3_MOSI
RESET 5 6
GND

+5V
R9 10K
RESET
SW1 SW_Push
GND

+5V
D2 1N4148W
D0_RXD 1KR11 1
D1_TXD 1KR12 2
3
4
J3 SERIAL TTL
GND

3V3 Buck Converter

VDD
FB1 470R   PWR_FLAG
D5 1N4448W
U8 MCP16301
C5 4.7uF   C6 4.7uF   1M R13
5 Vin   BOOST 6
4 EN   SW 1
GND   Vfb 3
C7 100nF   L1 PA4319.223NLT
D4 B140-13-F
FB2 470R   +5V PWR_FLAG
R16 300
C10 10uF   C11 10uF
R14 52.3k
R15 10K
D6 GREEN
GND

VDD
J4 PWR_Supply 1 2
D3 SMBJ30A
GND

+5V TP1 5V
VDD TP2 VDC
PWR_FLAG
GND TP3 GND
PWR_FLAG

IN-RELES

J1 IN-RELES
1
I-1 2
I-2 3
I-3 4
I-4 5
6
TP4 COM
PWR_FLAG

R1 4.7K   U2 PC817   R5 10K   +5V
I-1   1 4   C0
2 3
GND

R2 4.7K   U3 PC817   R6 10K   +5V
I-2   1 4   C1
2 3
GND

R3 4.7K   U4 PC817   R7 10K   +5V
I-3   1 4   C2
2 3
GND

R4 4.7K   U5 PC817   R8 10K   +5V
I-4   1 4   C3
2 3
GND

+5V VDD
C9 100nF   C13 100nF   C15 100uF
GND   GND

U6 L293DD013TR
VDD +5V
VS 10
VSS 20
A-IN-1 2 INPUT1   OUTPUT1 3 A-OUT-1
ENABLE 1 ENABLE1
A-IN-2 9 INPUT2   OUTPUT2 8 A-OUT-2
A-IN-3 12 INPUT3   OUTPUT3 13 A-OUT-3
ENABLE 11 ENABLE2
A-IN-4 19 INPUT4   OUTPUT4 18 A-OUT-4
GND GND GND GND GND GND GND GND
4 5 6 7 14 15 16 17
GND

+5V VDD
C8 100nF   C12 100nF   C14 100uF
GND   GND

U7 L293DD013TR
VDD +5V
VS 10
VSS 20
B-IN-1 2 INPUT1   OUTPUT1 3 B-OUT-1
ENABLE 1 ENABLE1
B-IN-2 9 INPUT2   OUTPUT2 8 B-OUT-2
B-IN-3 12 INPUT3   OUTPUT3 13 B-OUT-3
ENABLE 11 ENABLE2
B-IN-4 19 INPUT4   OUTPUT4 18 B-OUT-4
GND GND GND GND GND GND GND GND
4 5 6 7 14 15 16 17
GND

J5 OUT-RELES
A-OUT-1 1
A-OUT-2 2
A-OUT-3 3
A-OUT-4 4
B-OUT-1 5
B-OUT-2 6
B-OUT-3 7
B-OUT-4 8

J Agredo Samboni

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