H-Bridge

10nF, 16V min, X7R

2.2uF, 6.3V

C2 10uF

IC2

VM
GND

VM
GND

VCP
VINT

AIN1
AIN2

AIN1
AIN2

AOUT1
AOUT2

AOUT1
AOUT2

BIN1
BIN2

BIN1
BIN2

AISEN

BOUT1
BOUT2

BOUT1
BOUT2

SLEEP
FAULT

BISEN

PAD

DRV8833PWPR

CON2
1
2
3
4

4UCON-10679

GND

VCC

VCC

GND

GND

GND

GND

Annotations for channel A outputs are reversed on PCB, that is AOUT1 = 2 and AOUT2 = 1

Pinout

VCC

PIN1

RESET 1
3V3 2
3
5
4
VM 6

RST
3.3V
5V
GND
GND
VIN

GND
POT 7
8
9
10
11
12

A0
A1
A2
A3
A4
A5

28
27
26
25
24
23
22
21

AREF
GND
D13
D12
D11
D10
D9
D8

AIN2
AIN1
BIN2
BIN1
BUZZER

20
19
18
17
16
15
14
13

D7
D6
D5
D4
D3
D2
D1
D0

BUTTON
SERVO2
SERVO1
BTAT
SCL
SDA
RX
TX

DIP4
DIP3
DIP2
DIP1

I2C port (optional)

VCC

R7 10K

R6 10K

SDA

SCL

X1-1
X1-2
X1-3
X1-4

MICROMATCH-4

GND

Footprint

SDA ② ④ SCL
VCC ① ③ GND

4uConnector

Power

VCC VM

CON1
1
2
3

4UCON-19836

GND

Potentiometer

VCC

POT1 10K

SJ7

S 1

A

E

2 POT

GND

Servo motors

VCC

SERVO1

JP1
1
2
3

VCC

SERVO2

JP2
1
2
3

GND

GND

Buzzer

SG1

BUZZER

R5 330R

2 1 BUZZER

SJ4

GND

Button

BTN1 BUTTON

SJ1
1 2

3 4

SJ2
1 2

RESET

R8 10K VCC

BUTTON

GND

Can be used as a MCU reset button or a normal button with a 10K pull-up resistor.

Bluetooth (optional)

Bluetooth AT mode selector BTAT

For HC-05 model only

RX

R9 1K

TX

R10 2K

IC1

UART-TX
UART-RX

1
2

3V3
GND0

12
13

3V3

GND1

BLUETOOTH

PIO(11)

PIO(8)

GND3

34

31

22

R13 1K

R12 2K

R11 1K

LED2 STATUS

GND

GND

GND

GND2

21

GND

See datasheet for AT commands

DIP switch

R1 R2 R3 R4

10K x4

TX
RX
SDA
SCL

8 7 6 5

ON

SW1

On

Off

1 2 3 4

VCC

GND

Mount holes

GND

H1
MOUNT-PAD-ROUND3.2

H2
MOUNT-PAD-ROUND3.2

WARNING: The DIP switch and Bluetooth/I2C port cannot be used at the same time!

Robopoly Shield

robopoly

EPFL