POWER SUPPLY

battery1
Conn_01x02_Pin
12V
1k
GND
D2
LED
R4
AMS1117-3.3
U2
VI VO
GND
3.3V_un
3.3V
C2
10uF
C4
10uF
R3
D1
LED
3.3V
1k
GND

12V
U1
LM2576
VIN FB
ON/OFF OUT
GND
C1
100uF
GND
FB
L1
470uH
D3
B5819W
Cout1
470uF
R5
5k
R6
3k
GND
TP3
TestPoint
3.3V_un
GND

H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole

GYROSCOPE AND BLUETOOTH MODULE

R1
3.3V 4.7K I2C3_SDA
R2
3.3V 4.7K I2C3_SCL

C3
0.1uF
3.3V
3.3V
C5
0.1uF
GND
GND

I2C3_SDA 24 SDA
I2C3_SCL 23 SCL
GND 9 AD0
VLOGIC 8
VDD 13
INT 12 MPU_INT
AUX_DA 6
AUX_CL 7
C7
2.2nF
GND 11 FSYNC
CLKIN 1
CPOUT 20
REGOUT 10
C6
0.1uF
GND
GND
U3
MPU-6050
GND 18

3.3V BT_WKP BT_PDN
VDD 7
WAKEUP 6
PDN 5
GND 4
USART1_TX 8 RXD
USART1_RX 9 TXD
GND 10 GND
NC 11
GND 3 GND
GND 2 GND
INT 1 BT_INT
HOPERF1

C8 10uF
C9 100nF
C10 100nF
C11 100nF
C13 100nF
C14 100nF
GND

C17 100nF
3.3V
GPIO_BOOT0
Q1 BC107
C15 100nF
GND
10K
SW1 SW_SPST
NRST

3.3VA
3.3V
C18 100nF
C19 1uF
FB1 120R
3.3V
C20 1uF
GND
GND

HSE_IN 12 PH0
HSE_OUT 13 PH1
GND
Y1 Crystal_GND24
C12 10pF
C16 10pF
GND

MOTOR1_H1
Conn_01x02_Pin
ENC1A
ENC1B
MOTOR2_H1
Conn_01x02_Pin
ENC2A
ENC2B

J2 Conn_01x20_Pin
PIN_77
PIN_78
PIN_79
PIN_80
PIN_81
PIN_82
PIN_83
PIN_84
PIN_85
PIN_86
PIN_87
PIN_88
PIN_89
PIN_90
PIN_91
PIN_92
PIN_95
PIN_96
PIN_97
PIN_98

3.3V 4
SWDIO 3
SWCLK 2
1
J1 Conn_01x04_Pin
GND

NRST 14 NRST
BOOT0 94 BOOT0
VREF+ 21 VREF+
3.3VA

U4 STM32F407VETx

VBAT
VDD 11 19 28 50 75 100
VDDA 22

PA0 23 ENC2B
PA1 24 ENC2A
PA2 25
PA3 26
PA4 29 ADC2_IN4
PA5 30 ADC2_IN5
PA6 31 ADC2_IN6
PA7 32 IR2
PA8 67 I2C3_SCL
PA9 68 USART1_TX
PA10 69 USART1_RX
PA11 70
PA12 71 IR4
PA13 72 SWDIO
PA14 76 SWCLK
PA15 77 M2_A

PE0 97 PIN_97
PE1 98 PIN_98
PE2 1
PE3 2
PE4 3
PE5 4
PE6 5
PE7 38 IR1
PE8 39 BT_WKP
PE9 40
PE10 41
PE11 42
PE12 43
PE13 44 IR3
PE14 45
PE15 46

PB0 35
PB1 36
PB2 37 BT_PDN
PB3 89 M2_B
PB4 90 PIN_90
PB5 91 PIN_91
PB6 92 PIN_92
PB7 93 GPIO_BOOT0
PB8 95 PIN_95
PB9 96 PIN_96
PB10 47
PB11 48
PB12 51 MPU_INT
PB13 52
PB14 53
PB15 54

PD0 81 PIN_81
PD1 82 PIN_82
PD2 83 PIN_83
PD3 84 PIN_84
PD4 85 PIN_85
PD5 86 PIN_86
PD6 87 PIN_87
PD7 88 PIN_88
PD8 55
PD9 56
PD10 57
PD11 58
PD12 59 M1_A
PD13 60 M1_B
PD14 61
PD15 62

PC0 15
PC1 16
PC2 17 ADC3_IN12
PC3 18
PC4 33 ADC2_IN14
PC5 34 BT_INT
PC6 63 ENC1A
PC7 64 ENC1B
PC8 65
PC9 66 I2C3_SDA
PC10 78 PIN_78
PC11 79 PIN_79
PC12 80 PIN_80
PC13 7
PC14 8
PC15 9 IR5

VCAP_1 49
VCAP_2 73
VSS 10
VSSA 20
GND

1.5A CONT. CURRENT MOTOR DRIVER

MOTOR1
12V 12V
NC VM
INA OUTA
INB OUTB
NC GND
M1_B
M1_A
C21 C23
0.1uF
M1_OUTA
M1_OUTB
J3 Conn_01x02_Pin
M1_OUTA
M1_OUTB

MOTOR2
12V
NC VM
INA OUTA
INB OUTB
NC GND
M2_B
M2_A
C22 C24
0.1uF
M2_OUTA
M2_OUTB
J4 Conn_01x02_Pin
M2_OUTA
M2_OUTB

IR_emitter_receiver
File: untitled.kicad_sch

Sheet: /
File: micromouse_v3.kicad_sch
Title:
Size: A4   Date:
KiCad E.D.A. 8.0.3
Rev:
Id: 1/2

IR_emitter_receiverpair

R13 R
Q4
BC547
IR1
D10
IR204A
GND

R16 R
ADC2_IN5
Q7
BPW40
GND

R12 R
Q3
BC547
IR2
D9
IR204A
GND

R15 R
ADC2_IN4
Q6
BPW40
GND

R17 R
Q8
BC547
IR3
D11
IR204A
GND

R20 R
ADC2_IN6
Q11
BPW40
GND

R11 R
Q2
BC547
IR4
D8
IR204A
GND

R14 R
ADC2_IN14
Q5
BPW40
GND

R18 R
Q9
BC547
IR5
D12
IR204A
GND

R19 R
ADC3_IN12
Q10
BPW40
GND