| | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|

**A**

SBC5V
PB5V — 5V
PB1 — 12V
PB2
PB3
GND

U2
AMS1117
IN  OUT
GND
5V — 3V3
C8 100nF
C9 100nF
GND

3V3
C1 100nF
GND
R3 1k
I2C1_SDA
I2C1_SCL
SWCLK

12V  P1  Vcc
Cam
TIM1_CH1 — Cam  PWM
GND
Micro-ROV
GPIO — T1 NMOS 2R6
GND

**ESC/GPIO**

PWM1/GPIO1 — R6 0 — TIM1_CH1
PWM2/GPIO2 — R7 0 — TIM2_CH1
PWM3/GPIO3 — R8 0 — TIM2_CH2
PWM4/GPIO4
PWM5/GPIO5
PWM6/GPIO6
PWM7/GPIO7
PWM8/GPIO8

XT
8MHz
OSC_IN — OSC_OUT
C2 22pF   C3 22pF
GND

**B**

U1  STM32F103C8T6

48 VDD_3
47 VSS_3
46 PB9
45 PB8
44 BOOT0
43 PB7
42 PB6
41 PB5
40 PB4
39 PB3
38 PA15
37 PA14

1 VBAT
2 PC13/RTC
3 PC14/OSC32_IN
4 PC15/OSC32_OUT
5 PD0/OSC_IN
6 PD1/OSC_OUT
7 NRST
8 VSSA
9 VDDA
10 PA0/WKUP
11 PA1
12 PA2

OSC_IN
OSC_OUT
Reset

TIM2_CH1
TIM2_CH2

36 VDD_2
35 VSS_2
34 PA13 — SWDIO
33 PA12
32 PA11
31 PA10 — USART1_TX
30 PA9 — USART1_RX
29 PA8 — TIM1_CH1
28 PB15
27 PB14
26 PB13 — GPIO
25 PB12

3V3
C6 100nF
GND

3V3
C5 100nF
GND

3V3
R1 4.7k  R2 4.7k
I2C1_SCL
I2C1_SDA
P2  SCL  SDA
恐龍板

D1 LED
R5 1k
GND

12V  P3  Vcc
TIM2_CH1 — PWM
GND
LED Driver 1

**Power Sensing**

MotorState
IBat
VBat

3V3
R9 4.7k  R10 4.7k
I2C2_SDA
I2C2_SCL

**I2C-1**

SDA
SCL

3V3
R4 10k
Reset
SW1
C4 1uF
GND

13 PA3
14 PA4
15 PA5
16 PA6
17 PA7
18 PB0
19 PB1
20 PB2
21 PB10
22 PB11
23 VSS_1
24 VDD_1

I2C2_SCL
I2C2_SDA

3V3
C7 100nF
GND

12V  P4  Vcc
TIM2_CH2 — PWM
GND
LED Driver 2

**C**

**CAN**

CANH
CANL

3V3
R11 1k
D2 LED
GND

Cam  P5  Cam  GND
GND
Cam OUT

**UART**

TX — Workstation_TX
RX — Workstation_RX

Workstation_TX   USART1_RX

Workstation_RX   USART1_TX

3V3  P6  Vcc
SWDIO — DIO
SWCLK — CLK
GND
GND
ST-Link

**D**

| Comment | Description | Designator | Footprint | LibRef | Quantity |
|---|---|---|---|---|---|
| 100nF | | C1, C5, C6, C7, C8, C9 | C0805 | Cap | 6 |
| 22pF | | C2, C3 | C0805 | Cap | 2 |
| 1uF | | C4 | C0805 | Cap | 1 |
| 2x10pin | | Con1 | 2x10pin | 2x10pin | 1 |
| 2x6pin | | Con2 | 2x6pin | 2x6pin | 1 |
| LED | | D1, D2 | LED-0805 | LED | 2 |
| Micro-ROV | | P1 | XH2.54-4PIN_SMD | 4Pin | 1 |
| Hung Lone v1 | | P2 | XH2.54-2Pin_SMD | 2Pin | 1 |
| LED Driver 1 | | P3 | XH2.54-3Pin_SMD | 3Pin | 1 |
| LED Driver 2 | | P4 | XH2.54-3Pin_SMD | 3Pin | 1 |
| Cam OUT | | P5 | XH2.54-2Pin_SMD | 2Pin | 1 |
| ST-Link | | P6 | XH2.54-4pin | 4Pin | 1 |
| 4.7k | pull-up resistor, [NoValue] | R1, R2, R9, R10 | R0805 | Resistor | 4 |
| 1k | | R3, R5, R11 | R0805 | Resistor | 3 |
| 10k | pull-up resistor | R4 | R0805 | Resistor | 1 |
| 0 | | R6, R7, R8 | R0603 | Resistor | 3 |
| SW-PB | | SW1 | Switch-2pin | SW-PB | 1 |
| NMOS 2R6 | | T1 | TPH2R608NH | MOSFET-N | 1 |
| STM32F103C8T6 | | U1 | LQFP48 | STM32F103C8T6 | 1 |
| AMS1117 | | U2 | SOT-223 | AMS1117 | 1 |
| 8MHz | | XT | 3225-P | Passive Crystal | 1 |