

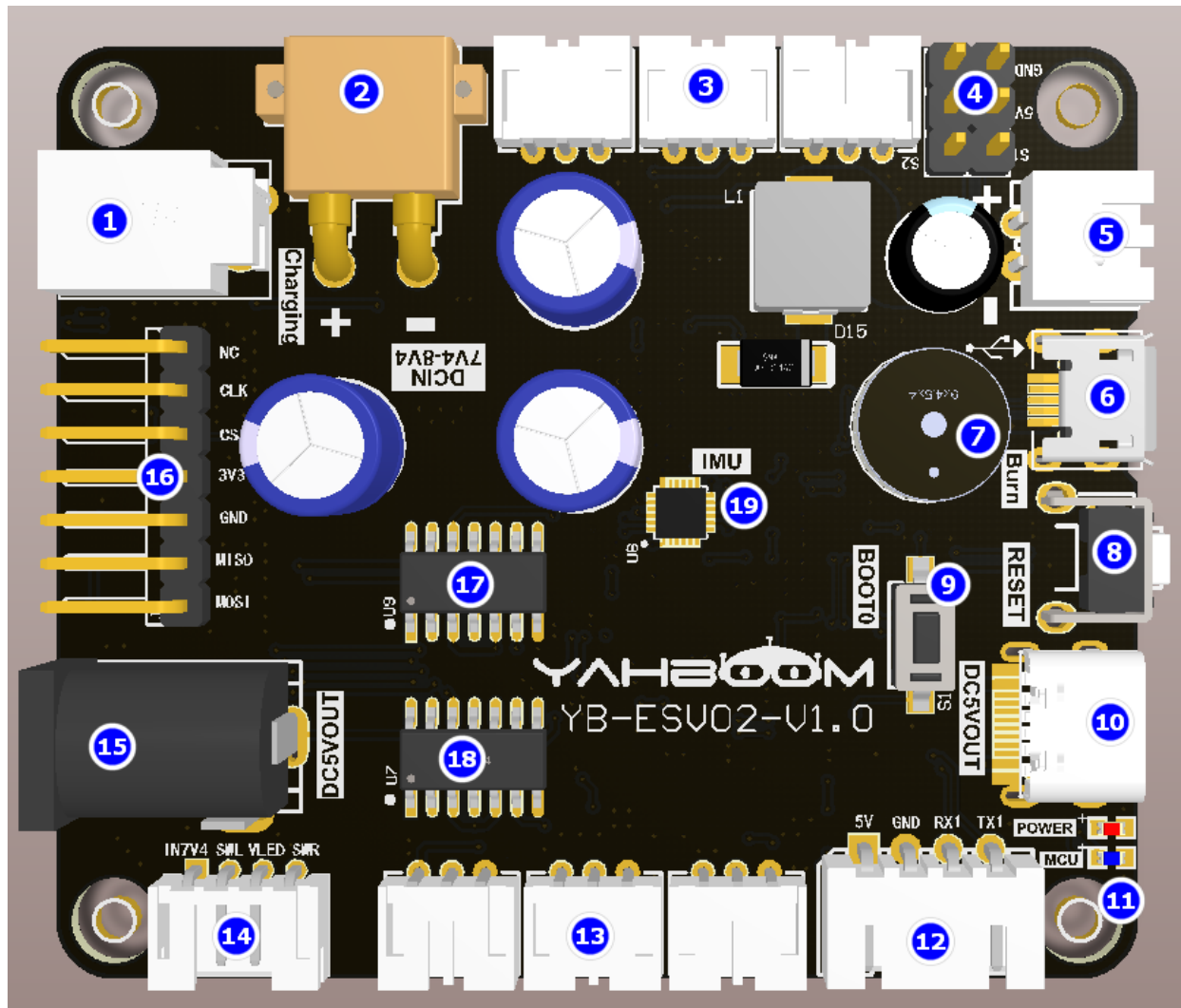
Introduction to Muto expansion board

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Introduction to onboard components

GPIO pin assignments

Introduction to onboard components



(1) Charging interface: Connect the 8.4V charger to charge the robot.

(2) Battery power supply interface: An 8.4V battery needs to be connected to power the robot.

(3) Left leg servo interface: There are three identical interfaces in total, connected to the three-leg servo interface on the left.

(4) PWM servo interface: S1 and S2 servo interface.

(5) USB Hub board power supply output: The output voltage is the battery voltage value.

(6) Micro-USB communication interface: used for secondary development of control robots, the serial port baud rate is 115200bps.

(7) Buzzer: The robot can be controlled to whistle.

(8) Reset button: Reset the base microcontroller.

(9) Boot button: used to update the baseboard microcontroller.

(10) type-C power supply interface: output voltage and current: DC 5V 3A.

(11) POWER indicator light: Indicates the power supply status of the robot. It is normally on and off when it is abnormal.

MCU indicator light: Indicates the operating status of the microcontroller. It flashes twice every 3 seconds in the normal state. It flashes continuously when the battery is low. If it is always on or off, it indicates that the microcontroller is operating abnormally.

(12) Serial communication interface: Connect to the same serial port as the Micro-USB communication interface, only one of them can be used.

(13) Right leg servo interface: There are three identical interfaces in total, connected to the three-leg servo interface on the right.

(14) Power switch interface: connect the metal switch button (with LED indicator light).

(15) DC power supply interface: Output voltage and current: DC 5V 5A.

(16) PS2 controller interface: connect to PS2 controller.

(17) Servo driver chip.

(18) Servo driver chip.

(19) IMU attitude sensor: a component that provides robot attitude.

GPIO pin assignments

Components	Pin name	GPIO port
buzzer	BEEP	PA8
MCU indicator light	MCU_LED	PC13
switch indicator light	SW_LED	PC0
Communication serial port	USART1	TX--PA9, RX--PA10
Right leg driver serial port	USART2	TX--PA2, RX--PA3
Left leg driver serial port	USART3	TX--PB10, RX--PB11
PS2 controller interface	模拟SPI	MOSI--PA7, MISO--PA6, SCK--PA5, CS--PA4
IMU attitude sensor	I2C1	SDA--PB7, SCL--PB6
Servo S1	模拟PWM	PA15

Components	Pin name	GPIO port
Servo S2	模拟PWM	PB3