

[illegible]

系统电源

The schematic diagram illustrates the system power supply circuit, which includes two DC-DC converters and various passive components.

Main Converter (U2, MP2451):

- Input:** 5V supply connected to VIN (pin 5).
- Output:** 3.3V supply connected to SW (pin 6).
- Control:** EN (pin 4) is connected to GND via R4 (100k). FB (pin 3) is connected to GND.
- Output Filter:** Inductor L3 (4.7uH) and capacitor C7 (22uF) are connected between SW and the 3.3V output.
- Load:** The 3.3V output is connected to a load network consisting of R3 (56k), R5 (50k), and R6 (39K) in parallel, with C14 (33pF) in parallel with R5 and R6.
- Protection:** A diode D1 (S14) is connected between SW and GND.
- Capacitors:** C12 (22uF) and C13 (22uF) are connected between the 5V input and GND.

Secondary Converter (U3, SPX5205):

- Input:** 3.3V supply connected to VIN (pin 1).
- Output:** 1.8V supply connected to VOUT (pin 3).
- Control:** EN (pin 2) is connected to GND via C15 (1uF). BYP (pin 4) is connected to GND.
- Output Filter:** Capacitor C16 (4.7uF) is connected between VOUT and GND.
- LED:** An LED (LDG1) is connected between the 1.8V output and GND via R10 (560).

The schematic diagram illustrates the power management and monitoring circuitry for the RM_Langya_Logo board. It features two INA260 current monitors (U4 and U5) for input and output voltage sampling, respectively. A dual power selection circuit (U6) using an LTC1473LCGN IC and four NMOS transistors (Q1, Q2, Q3, Q4) allows for switching between two power sources. The circuit includes various passive components such as capacitors (C17, C18, C19, C20, C21), resistors (R11, R12, R13, R14), and inductors (L4, L5). It also shows the connection of the board to a USB (P1) and a DC power source (P3), with a logo output (P2). The board is powered by a 24V source and a 3V3 source, with a 3V3 output (VOUT) and a 3V3 input (VPowerPath).

CAN通信3.3V

The diagram shows the CAN bus connection for a 3.3V system. It includes two CAN transceivers, U7 and U8, both TCAN330. U7 is connected to CAN1TX, CAN1RX, CAN1H, CAN1L, and SW_DIP. U8 is connected to CAN2TX, CAN2RX, CAN2H, CAN2L, and SW_DIP. The SW_DIP component is a 2-pin DIP switch. The CAN1H and CAN1L pins are connected to CAN1L and CAN1H respectively, and the CAN2H and CAN2L pins are connected to CAN2L and CAN2H respectively. The VCC and GND pins are connected to 3V3 and GND respectively. The SW_DIP component is a 2-pin DIP switch.

SWDIO

SWCLK

3V3

R24

10k

SW1

Header 4

GND

GH1.25立式!!!!

P8

1 TX

2 PC11/USART4_RX

3 PC10/USART4_TX

4 GND

裁判系统/GH1.25-3p立式

裁判系统接口

P9

1 VCC

2 GND

3 GND

4 TX

5 RX

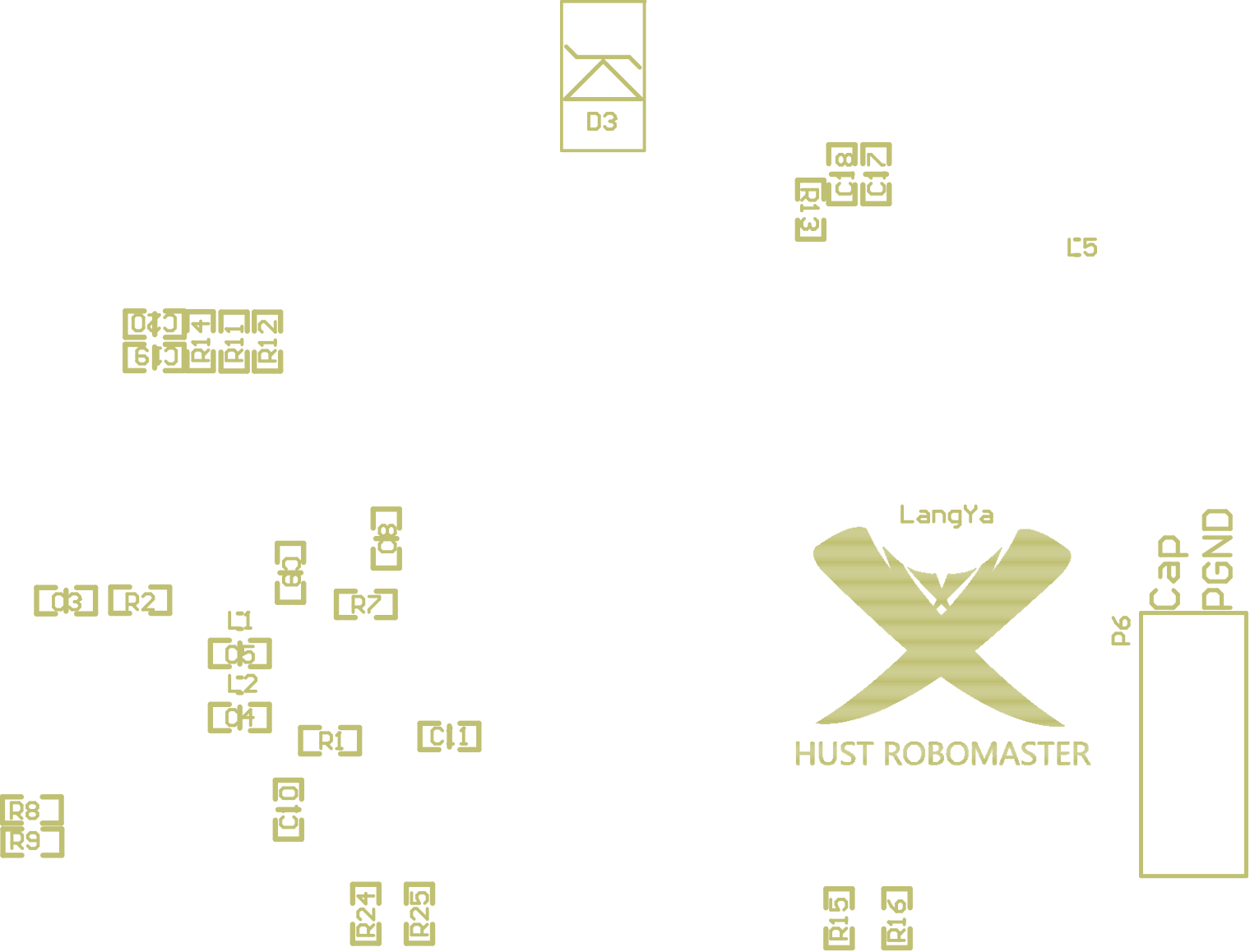
6 PA2/UART2_TX

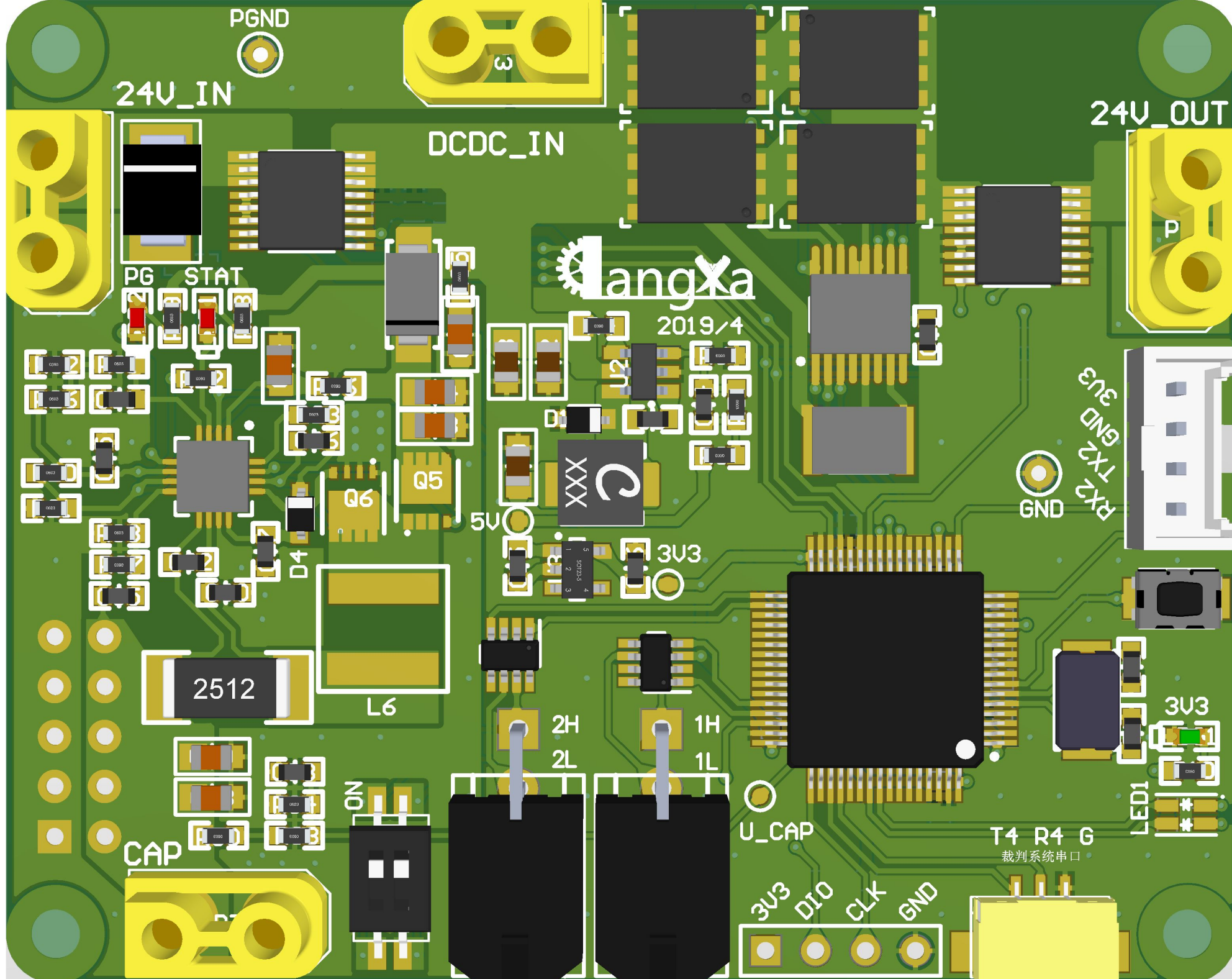
7 PA3/UART2_RX

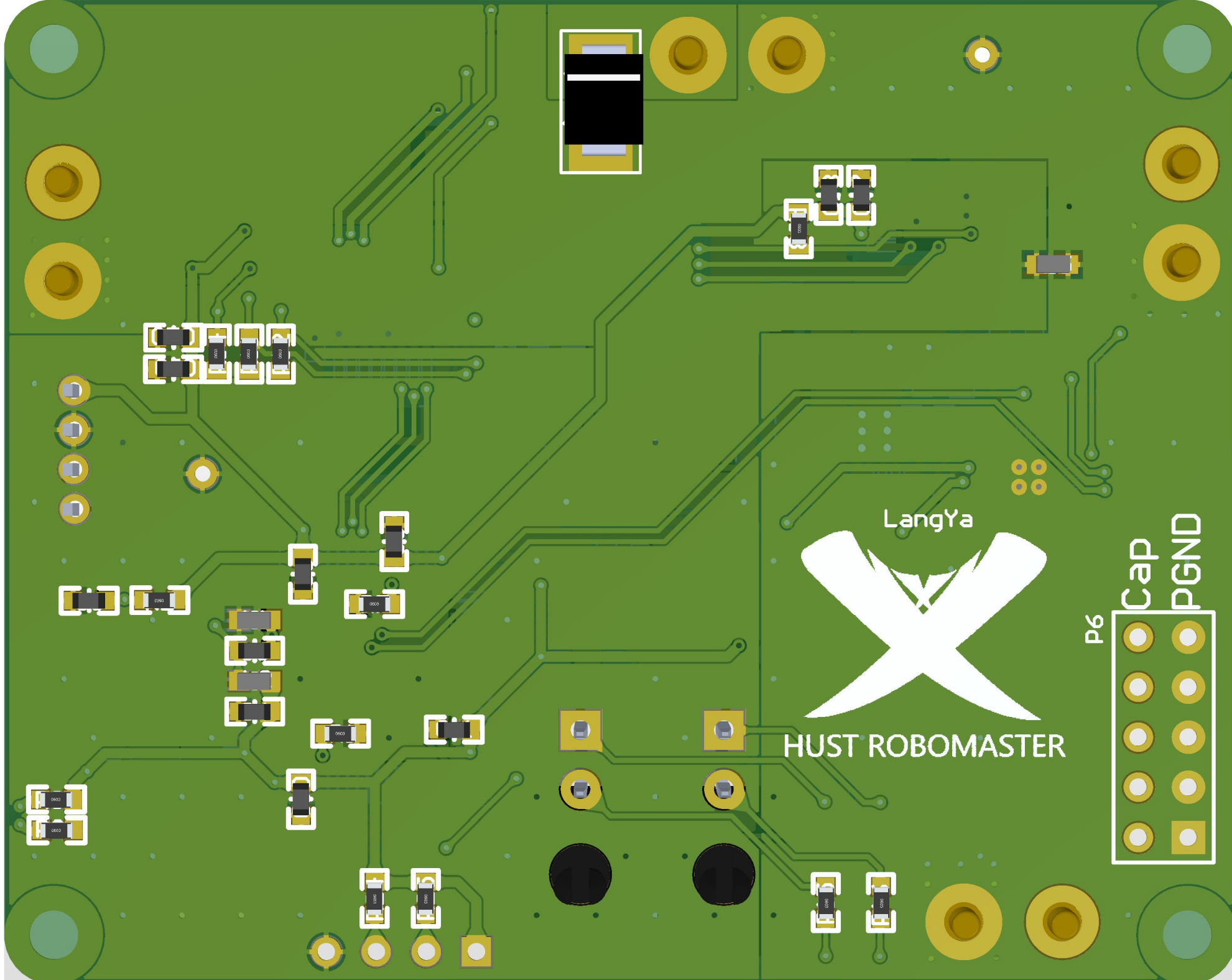
USART/UART

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LangYa

HUST ROBOMASTER

P6

Cap
PGND