

The image displays a PCB layout for an STM32F407V development board, divided into two main functional sections: 8 BIT LED LOGIC and 4X4 KEYBOARD.

8 BIT LED LOGIC

This section is located in the upper half of the board (rows A and B). It features two 10-pin FRC connectors, J21 and J22, which interface with the LED and switch components.

- LEDs (LD0-LD7):** Eight red LEDs are connected to the J21 connector. Each LED is driven by a 330Ω resistor (R60-R67) and a 330E resistor (R59-R66). The LEDs are connected to the +5V_LG and GND_LG rails.
- Switches (SW_0-SW_7):** Eight switches are connected to the J22 connector. Each switch is driven by a 1KΩ resistor (R62-R69) and a 330E resistor (R59-R66). The switches are connected to the +5V_LG and GND_LG rails.

4X4 KEYBOARD

This section is located in the lower half of the board (rows C and D). It features a 10-pin FRC connector, J13, which interfaces with the keyboard matrix.

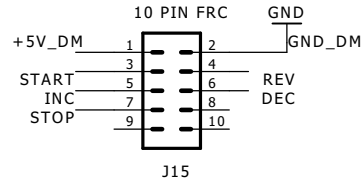
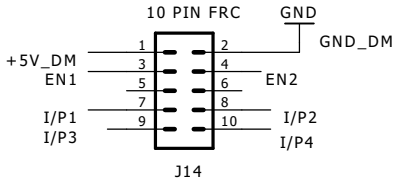
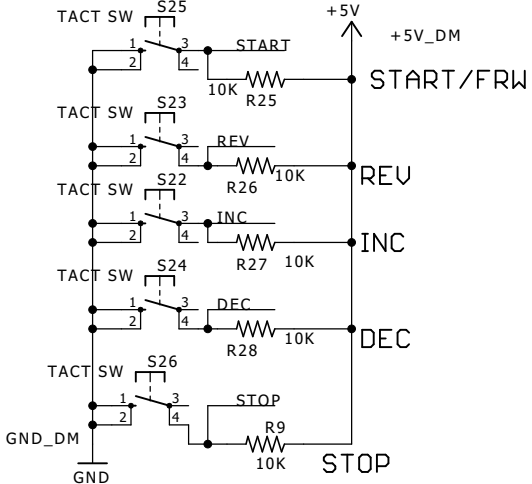
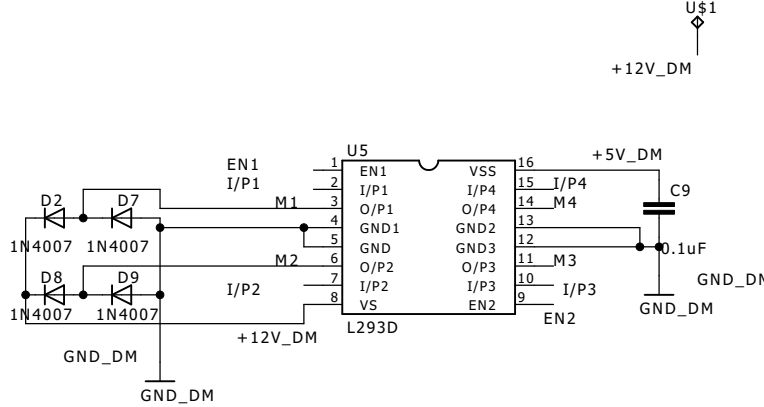
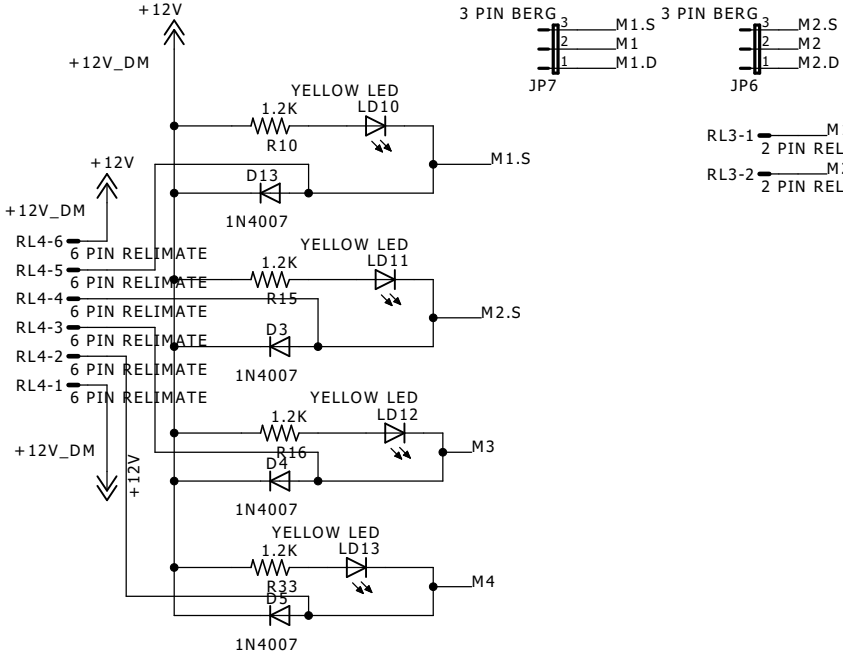
- Keyboard Matrix:** A 4x4 matrix of 16 tact switches (S1-S16) is connected to the J13 connector. Each switch is driven by a 10KΩ resistor (R1-R4) and a 330E resistor (R59-R66). The switches are connected to the +5V_LG and GND_LG rails.

The PCB layout includes a grid system with columns labeled 1 through 6 and rows labeled A through D. The components are distributed across these grid lines, with the 8 BIT LED LOGIC section occupying rows A and B, and the 4X4 KEYBOARD section occupying rows C and D.

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STEEPER MOTOR

DC MOTOR



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