

Custom PCB – 2.54mm JST Connectors

The diagram illustrates a custom PCB layout for a servo motor system, featuring two main sections: the front board and the rear board.

Front Board:

- Relay Connections:**
 - FROM RELAY: - (Ground), + (Power)
 - TO RELAY: - (Ground), + (EN)
 - +5V: Power input
- Servo Motor Connections:**
 - SERVO NECK: GND, POWER, SIGNAL
 - SERVO XL, XR, ZL, ZR: Standard 3-pin servo connectors
- Stepper Motor Connections:**
 - STEP-X, STEP-Y, STEP-Z: GND, PULSE, DIR
 - LIM-X, LIM-Y, LIM-Z: C, NO, NC
- Resistors:** R1 (G), R2 (10K), R3 (G)

Rear Board:

- Relay Connections:**
 - FROM RELAY: - 7V BUCK VOUT- [BLK], + RELAY COM [RED]
 - 5V TERMINAL: - 5V BUCK VOUT- [BLK], + 5V BUCK VOUT+ [RED]
- Stepper Motor Connections:**
 - STEP AUX1, STEP AUX2, STEP AUX3: GND, PULSE, DIR
- Capacitor:** C1 (47uF)

Legend:

- TO RELAY: - EMPTY, + RELAY CH1
- FROM RELAY: - 7V BUCK VOUT- [BLK], + RELAY COM [RED]
- 5V TERMINAL: - 5V BUCK VOUT- [BLK], + 5V BUCK VOUT+ [RED]
- REAR BOARD: SCL: IMU SCL, SDA: IMU SDA, TX2: NEXTION RX, RX2: NEXTION TX
- STEPPERS, SERVOS, LSe AS LABELLED
- C1: 47uF Capacitor

Nexion LCD Screen

Nexion native arduino library available on Nexion website
Edit 'NexConfig.h' to use Serial2

The diagram shows a rectangular module with a large central display area. To the right of the module, four horizontal lines represent pins, each labeled with a pin name and its function:

- PWR ————— 5V Rail
- GND ————— GND Rail
- RX ————— TX2 MEGA
- TX ————— RX2 MEGA

