



Pinout diagram for the P2 port of the 68000 microprocessor. The diagram shows 32 pins arranged in two columns. The left column pins are labeled 1 through 31, and the right column pins are labeled 2 through 32. The pins are connected to various signals: HLT (1), EO (3), AO (5), BO (7), CO (9), IO (11), /RST (13), PO (15), UN (17), RO (19), SO (21), PI (23), FC (25), FV (27), CLK (29), VCC (31), SU (4), AI (6), BI (8), II (10), FI (12), PE (14), RI (16), SI (18), MI (20), FN (22), FZ (24), /CLK (26), and GND (32).

## REGISTER SETUP

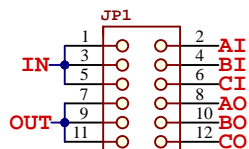
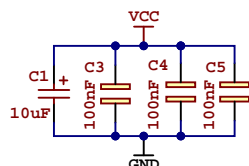
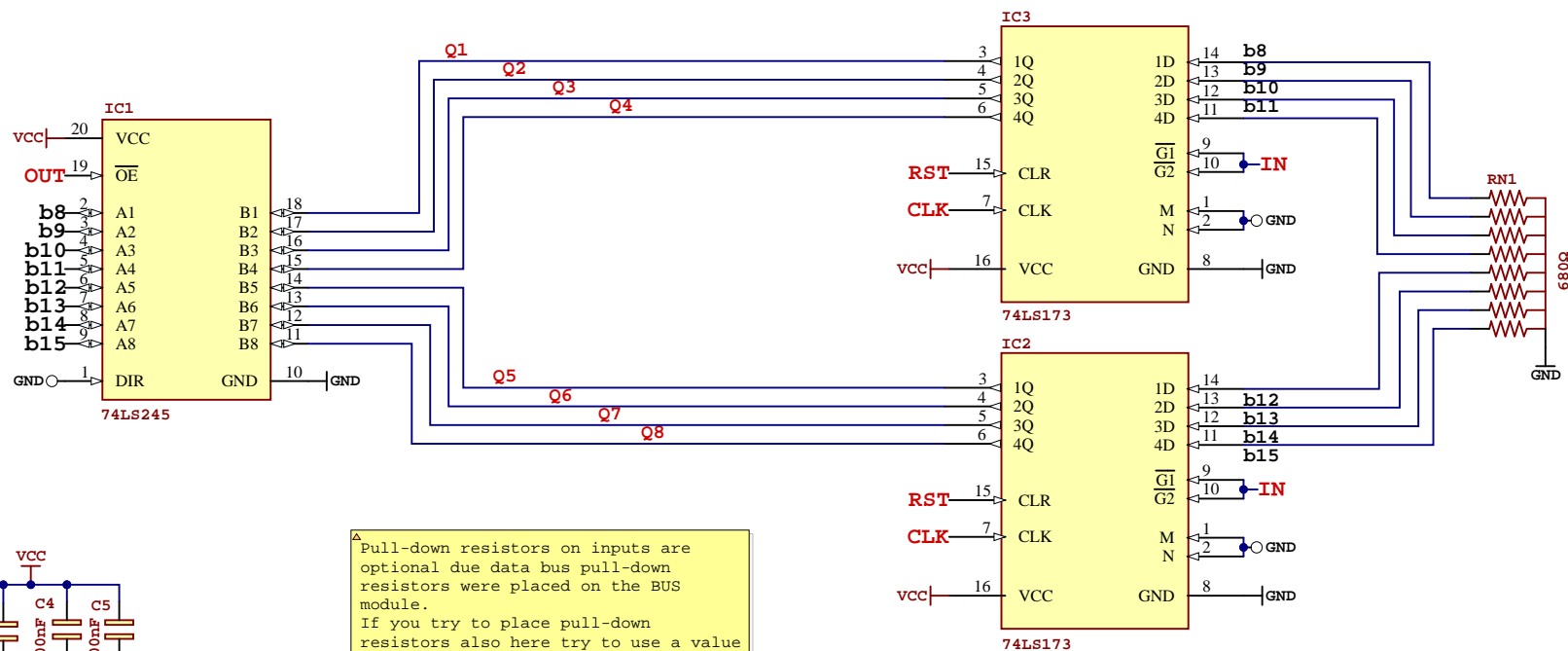



Diagram illustrating a 16-bit parallel adder using two 8-bit adders (P1 and P2). The 16-bit input is split into two 8-bit inputs, b0-b7 and b8-b15. The 8-bit adders are connected to the 16-bit input. The output of the 8-bit adder P1 is connected to the 8-bit adder P2. The output of the 8-bit adder P2 is connected to the 16-bit output b16-b23.



## Decoupling Capacitors

Pull-down resistors on inputs are optional due data bus pull-down resistors were placed on the BUS module.  
 If you try to place pull-down resistors also here try to use a value for  $R_N$  according the parallel resistors formula.  

$$1/R_T = 1/R_1 + 1/R_2 + \dots + 1/R_N$$
 to get a final value between 100 and 200 $\Omega$

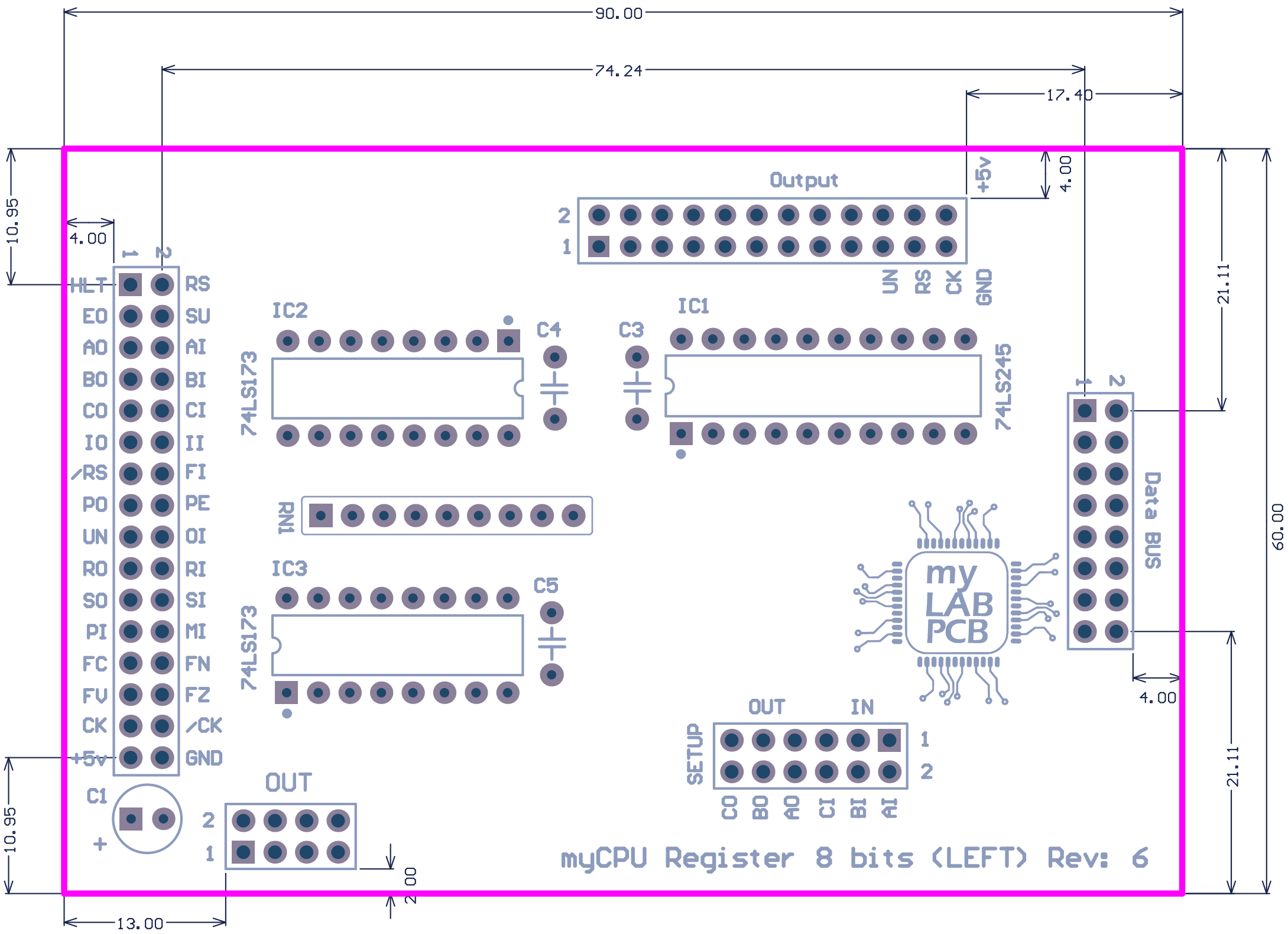


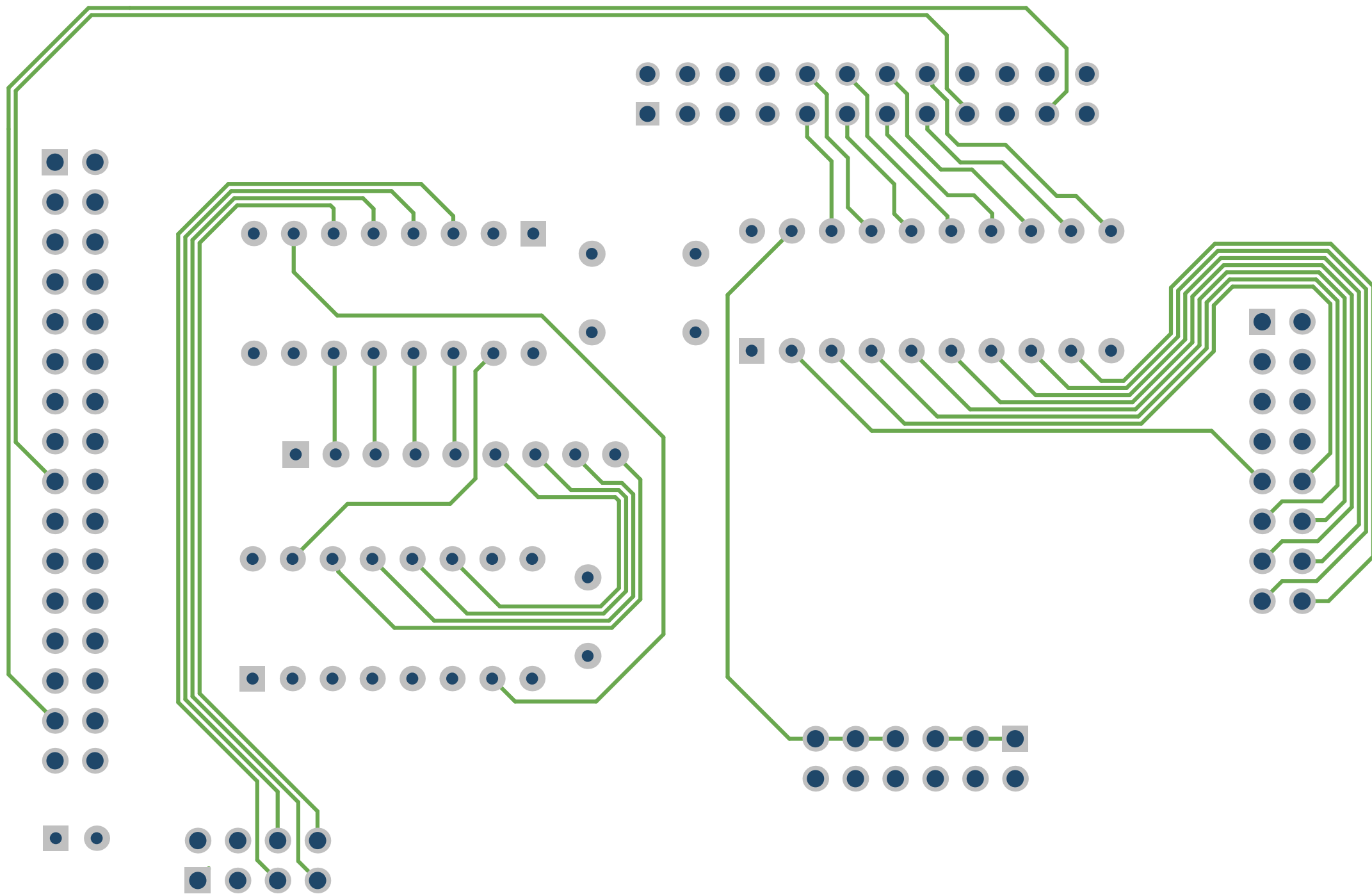
**Project:** myCPU Register 8 bit LEFT

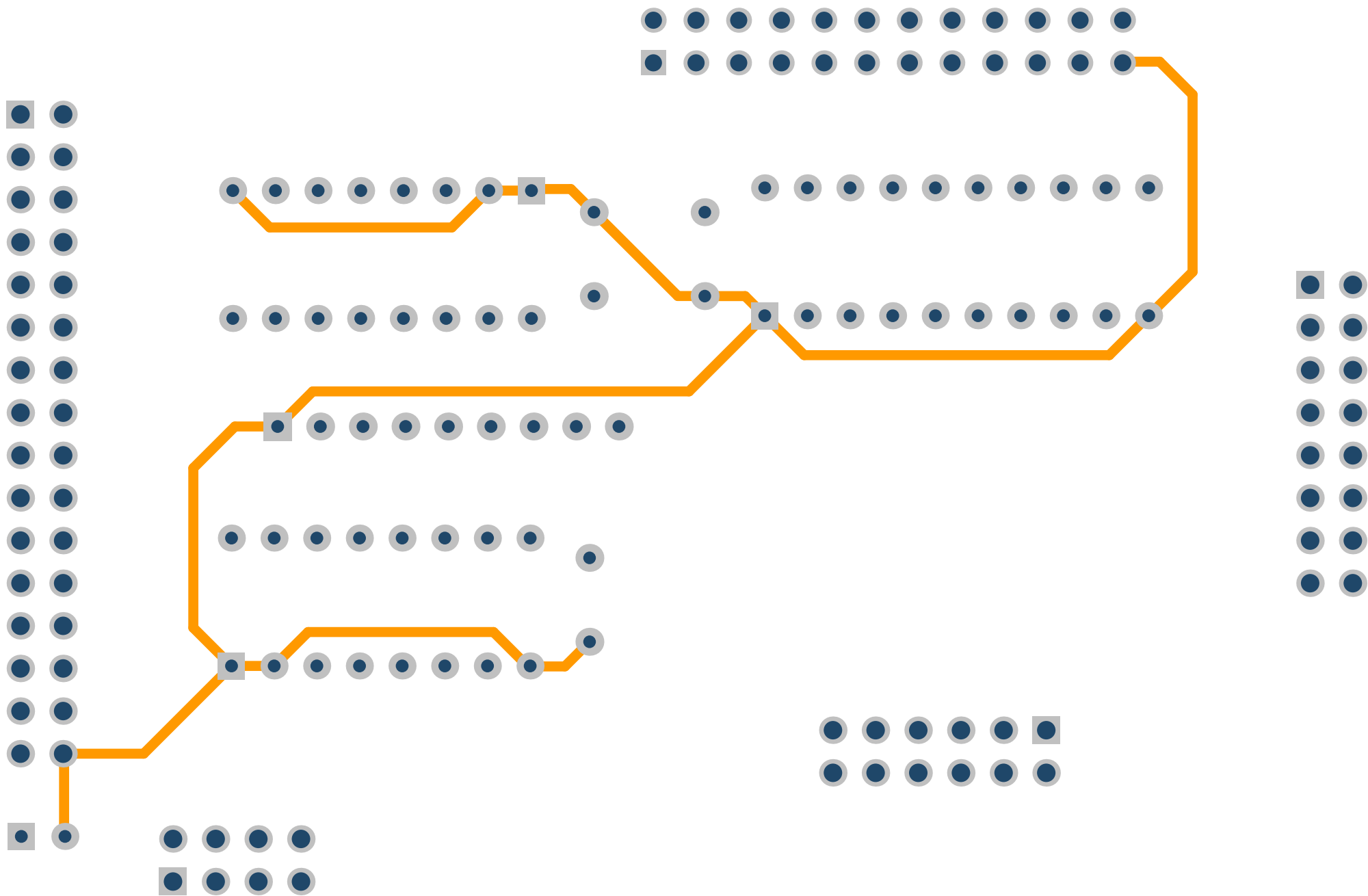
Revision: 6

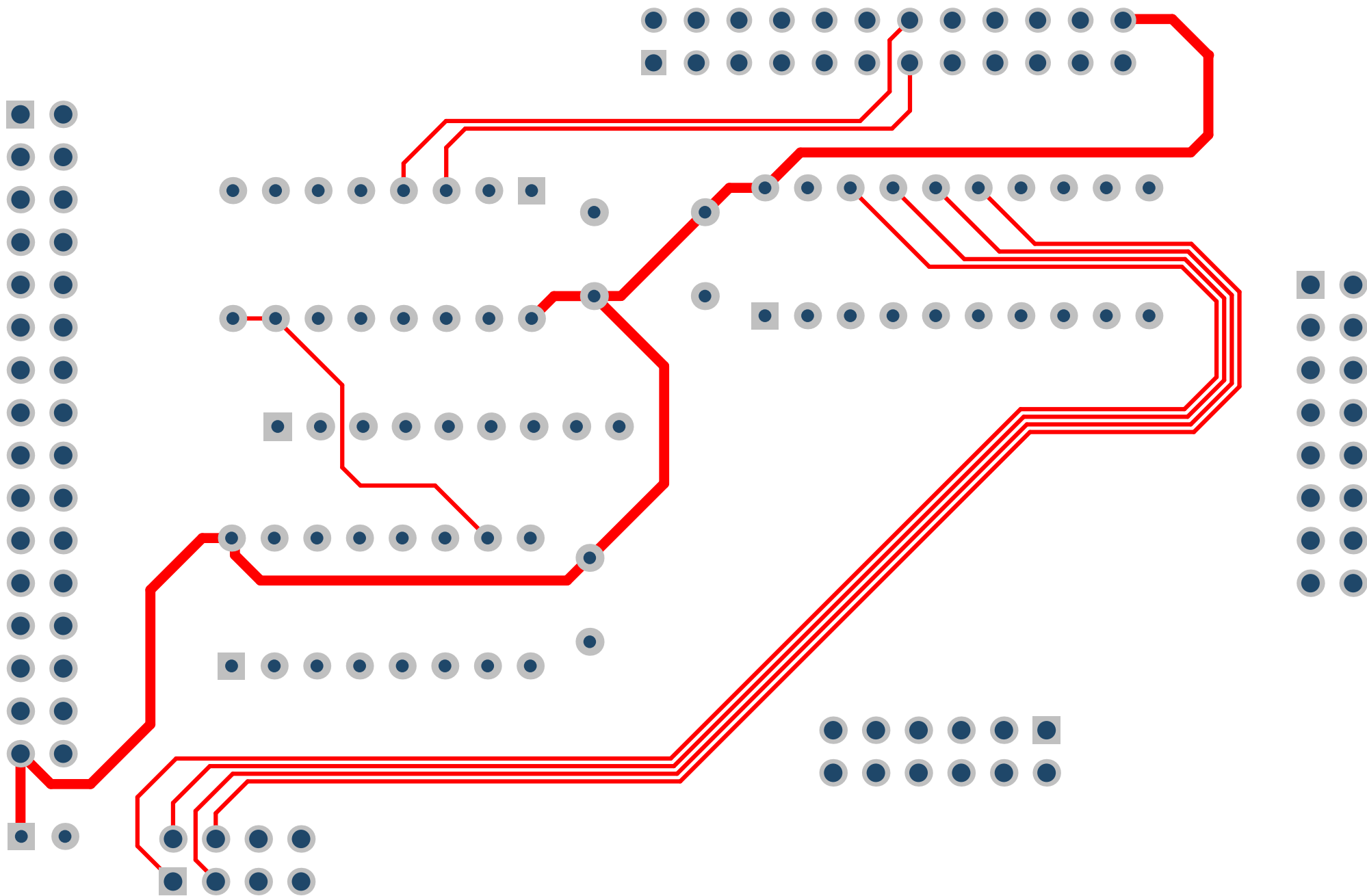
**Date:** 03-Jun-23

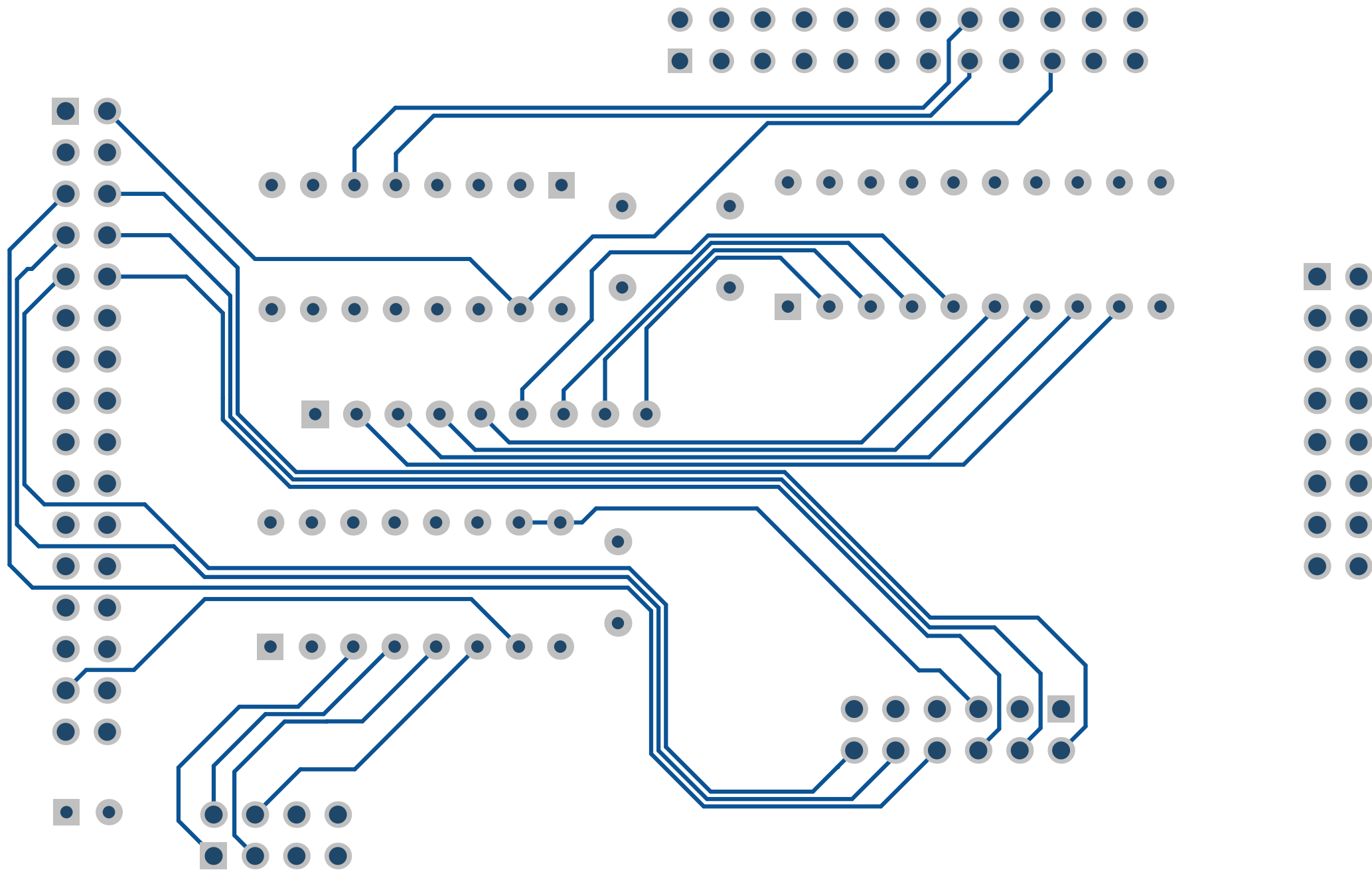
**Author:** Rafa Hernández















# Bill of Materials

Designator	Description	Value	Q
C1	Electrolytic capacitor 16v/50v	10uF	1
C3, C4, C5	Ceramic or tantalum capacitor	100nF	3
IC1	Non inverting bus transceiver	74LS245	1
IC2, IC3	4-bit D-Type Register with 3 state outputs	74LS173	2
JP1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 12p	12p	1
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 16p	16p	1
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 32p	32p	1
P3	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical,	24p	1
P4	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p	1
RN1	Resistor array 8 elements,9 pins	680Ω	1



# Assembly List

Designator	Description	Value
C1	Electrolytic capacitor 16v/50v	10uF
C3	Ceramic or tantalum capacitor	100nF
C4	Ceramic or tantalum capacitor	100nF
C5	Ceramic or tantalum capacitor	100nF
IC1	Non inverting bus transceiver	74LS245
IC2	4-bit D-Type Register with 3 state outputs	74LS173
IC3	4-bit D-Type Register with 3 state outputs	74LS173
JP1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 12p	12p
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 16p	16p
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 32p	32p
P3	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p
P4	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p
RN1	Resistor array 8 elements, 9 pins	680Ω