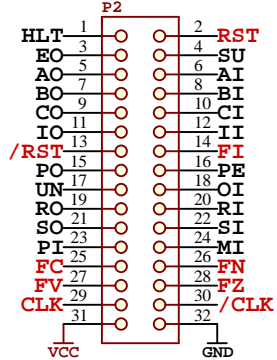
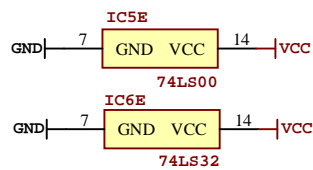
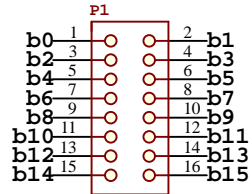


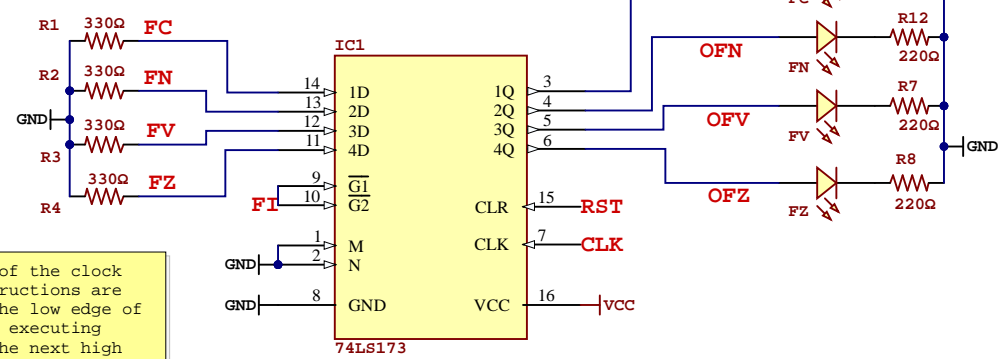
Control BUS Connector



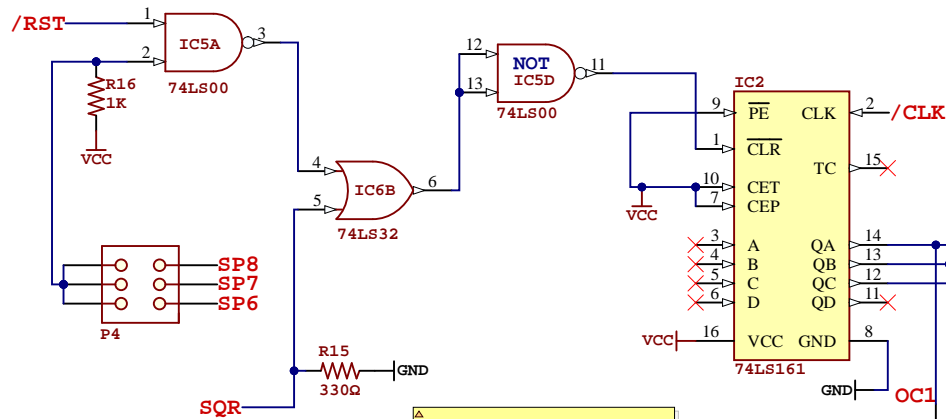
Data BUS Connector



Step counter use the low edge of the clock signal for counting. Microinstructions are placed on control bus during the low edge of clock signal, some of them are executing immediately and others during the next high edge.

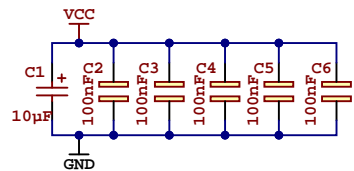


Setup Jumper and RST/SQR/SP(MAX) logic

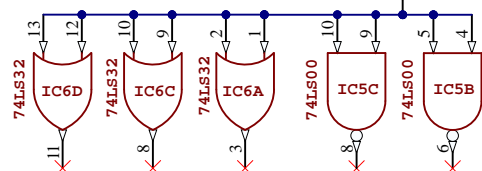


P4 allows to set the step limit of the microinstruction execution. Allows 5,6,7 or 8 steps before resetting the sequence. The 8 steps limit is set with no jumper.

SQR signal is provided through the I. Decoder connector to reset the microsequence by instruction.

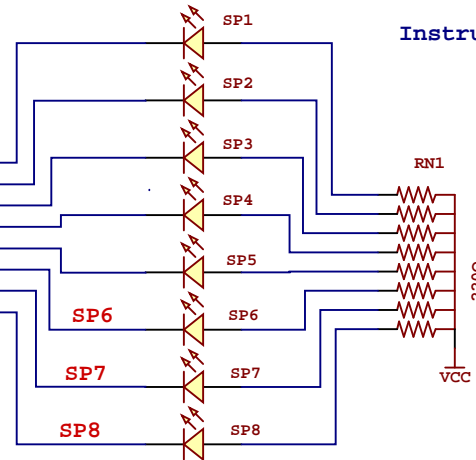
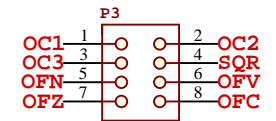


Decoupling Capacitors



Unused TTL Inputs

Instruction Decoder Connector



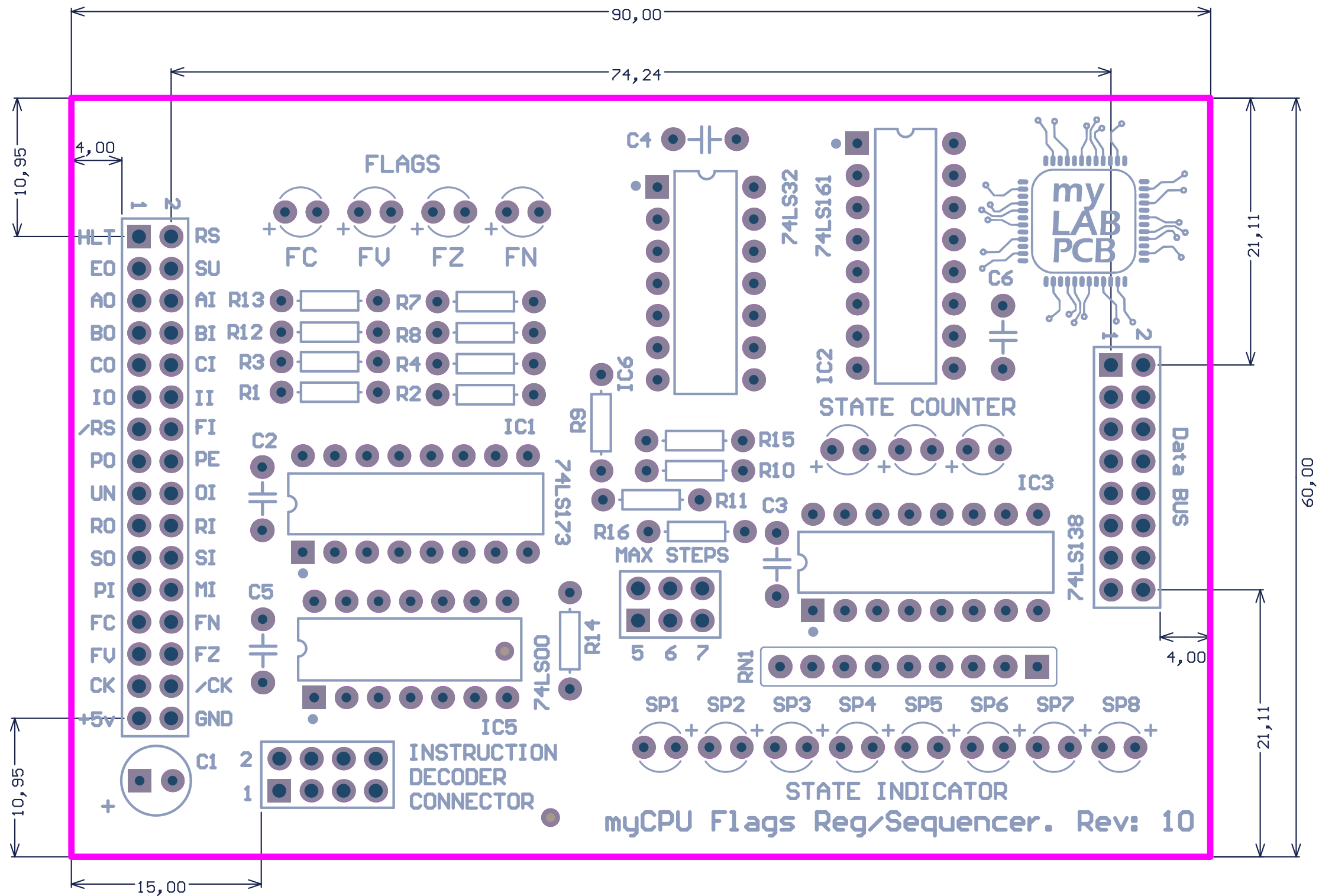
Project: myCPU Flags Register / Sequencer

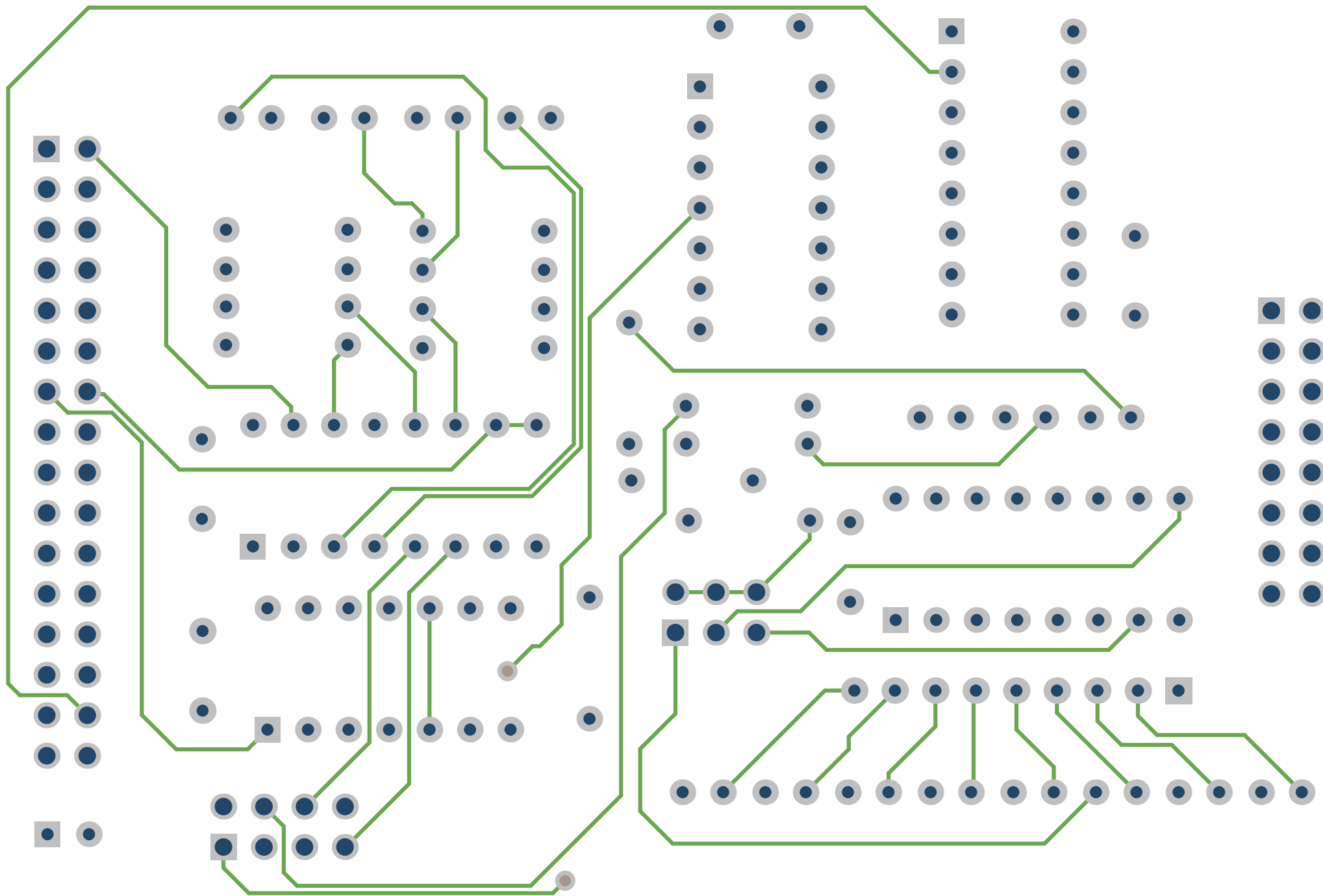
Revision: 10

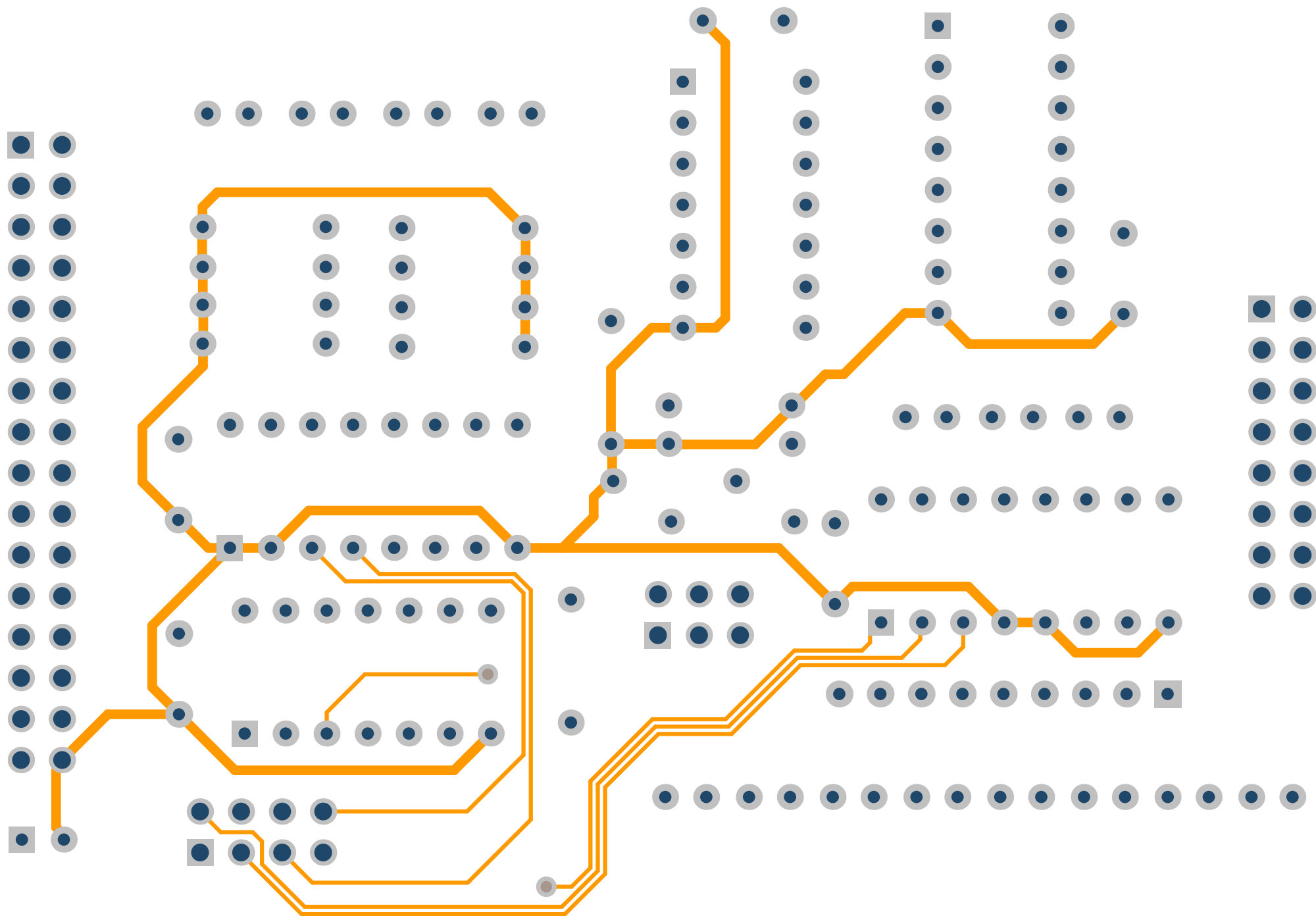
Date: 09/01/2023

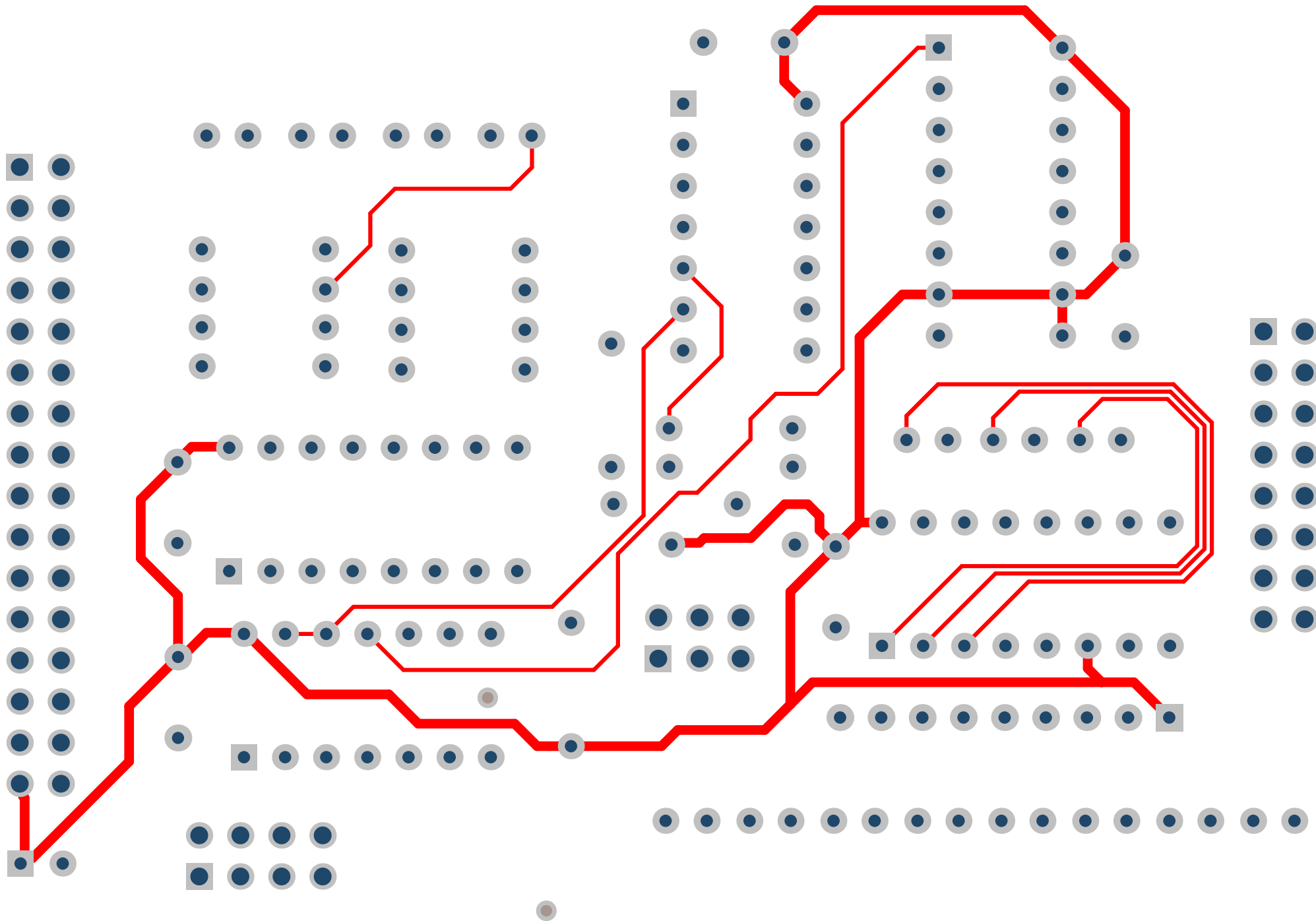
Author: Rafa Hernández

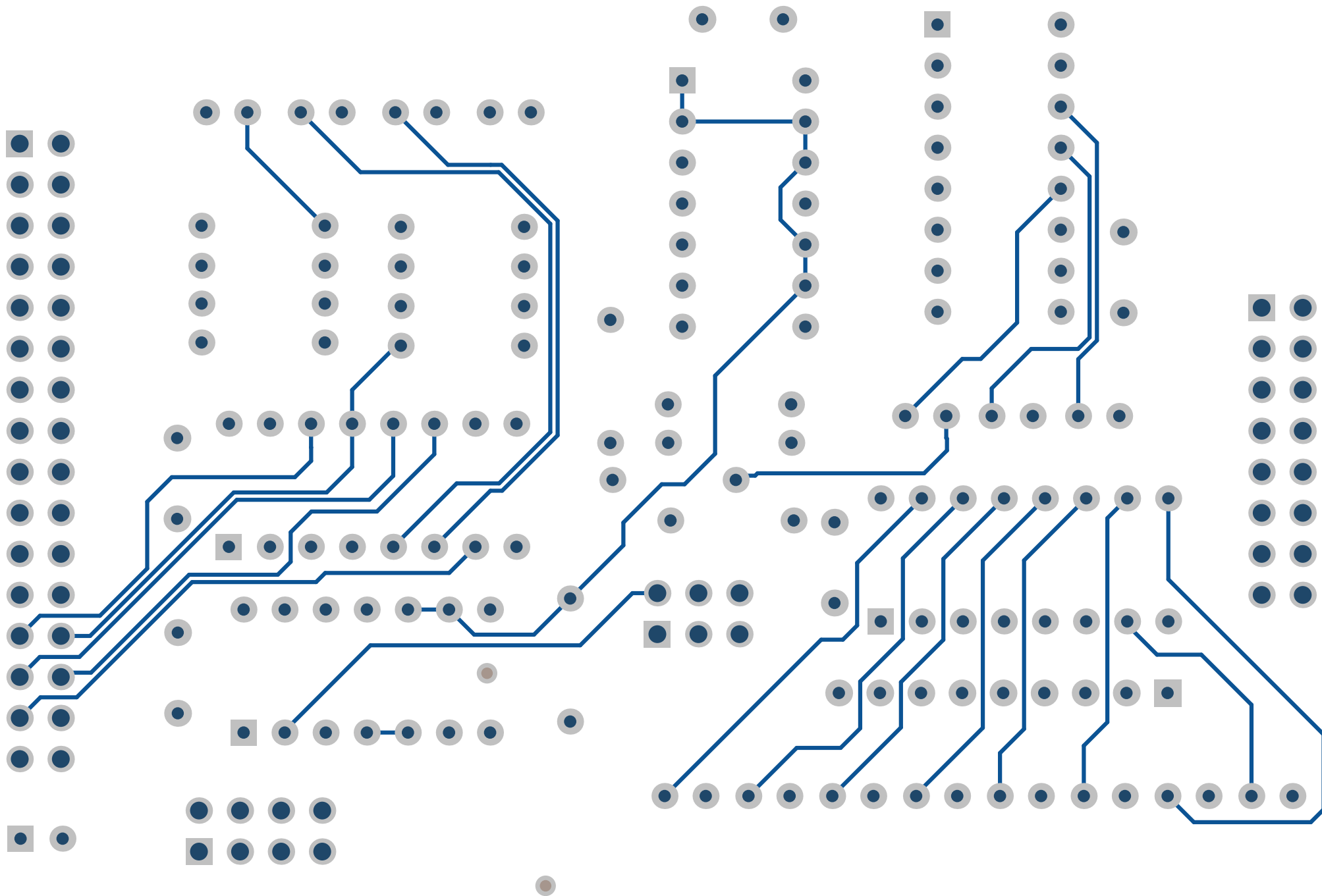














Bill of Materials

| Designator | Description | Value | Q |
|---------------------|--|---------|---|
| C1 | Electrolytic capacitor 16v/50v | 10μF | 1 |
| C2, C3, C4, C5, C6 | Ceramic or tantalum capacitor | 100nF | 5 |
| FC, FN, FV, FZ | Led 3mm Round | Red | 4 |
| IC1 | 4-bit D-Type Register with 3 state outputs | 74LS173 | 1 |
| IC2 | 4-Bit sync counter | 74LS161 | 1 |
| IC3 | 3-Line to 8-Line decoder/demultiplexer | 74LS138 | 1 |
| IC5 | Quad 2-input NAND gates | 74LS00 | 1 |
| IC6 | Quad 2-input OR gates. | 74LS32 | 1 |
| L1, L2, L3 | Led 3mm Round | Yellow | 3 |
| 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 | Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p | 8p | 1 |
| P4 | Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 6p | 6p | 1 |
| R1, R2, R3, R4, R15 | Resistor Axial | 330Ω | 5 |
| R7, R8, R9, R10, R1 | Resistor Axial | 220Ω | 7 |
| R14 | Resistor Axial | 4.7K | 1 |
| R16 | Resistor Axial | 1K | 1 |
| RN1 | Resistor array 8 elements, 9 pins | 220Ω | 1 |
| SP1, SP2, SP3, SP4, | Led 3mm Round | Blue | 8 |



Assembly List

| Designator | Description | Value |
|------------|--|--------------|
| C1 | Electrolytic capacitor 16v/50v | 10 μ F |
| C2 | Ceramic or tantalum capacitor | 100nF |
| C3 | Ceramic or tantalum capacitor | 100nF |
| C4 | Ceramic or tantalum capacitor | 100nF |
| C5 | Ceramic or tantalum capacitor | 100nF |
| C6 | Ceramic or tantalum capacitor | 100nF |
| FC | Led 3mm Round | Red |
| FN | Led 3mm Round | Red |
| FV | Led 3mm Round | Red |
| FZ | Led 3mm Round | Red |
| IC1 | 4-bit D-Type Register with 3 state outputs | 74LS173 |
| IC2 | 4-Bit sync counter | 74LS161 |
| IC3 | 3-Line to 8-Line decoder/demultiplexer | 74LS138 |
| IC5 | Quad 2-input NAND gates | 74LS00 |
| IC6 | Quad 2-input OR gates. | 74LS32 |
| L1 | Led 3mm Round | Yellow |
| L2 | Led 3mm Round | Yellow |
| L3 | Led 3mm Round | Yellow |
| 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 | Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p | 8p |
| P4 | Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 6p | 6p |
| R1 | Resistor Axial | 330 Ω |
| R2 | Resistor Axial | 330 Ω |
| R3 | Resistor Axial | 330 Ω |
| R4 | Resistor Axial | 330 Ω |
| R7 | Resistor Axial | 220 Ω |
| R8 | Resistor Axial | 220 Ω |
| R9 | Resistor Axial | 220 Ω |
| R10 | Resistor Axial | 220 Ω |
| R11 | Resistor Axial | 220 Ω |
| R12 | Resistor Axial | 220 Ω |
| R13 | Resistor Axial | 220 Ω |
| R14 | Resistor Axial | 4.7K |
| R15 | Resistor Axial | 330 Ω |
| R16 | Resistor Axial | 1K |
| RN1 | Resistor array 8 elements, 9 pins | 220 Ω |
| SP1 | Led 3mm Round | Blue |
| SP2 | Led 3mm Round | Blue |
| SP3 | Led 3mm Round | Blue |
| SP4 | Led 3mm Round | Blue |
| SP5 | Led 3mm Round | Blue |
| SP6 | Led 3mm Round | Blue |
| SP7 | Led 3mm Round | Blue |
| SP8 | Led 3mm Round | Blue |