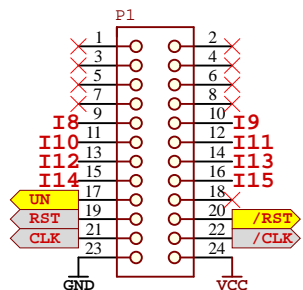




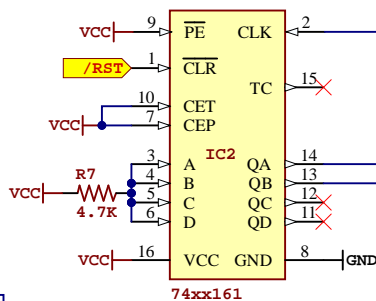


## INPUT Data Connector



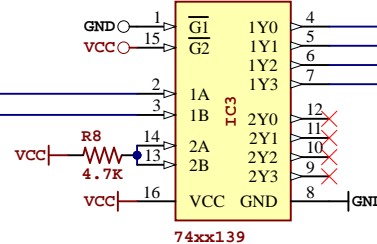
This counter, don't need load and always is counting. So CET, CET is connected to VCC and /PE is connected to VCC too to disable load.

## DIGIT Counter

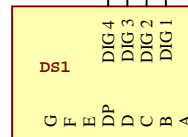


Counter control digit switch from D1 to D4. Output weight goes from QA to QD.

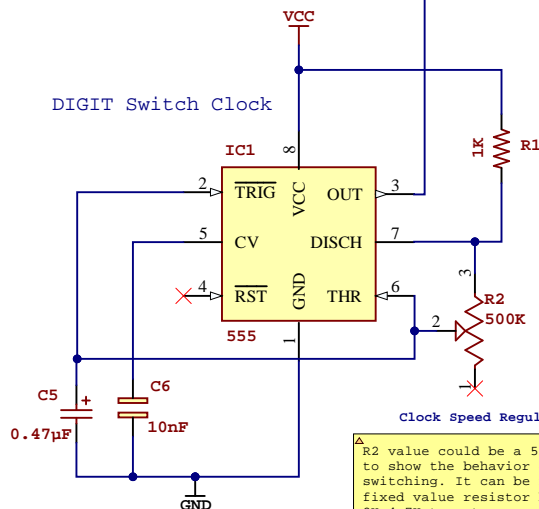
## DIGIT Switcher



Digit selection must be synchronizing with the decoder addresses A8, A9 and the decoding code. In our case selection goes from Y3 (Dig1) to Y0 (Dig4)

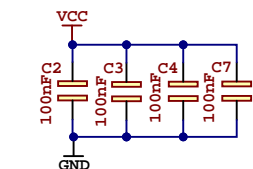


## DIGIT Switch Clock



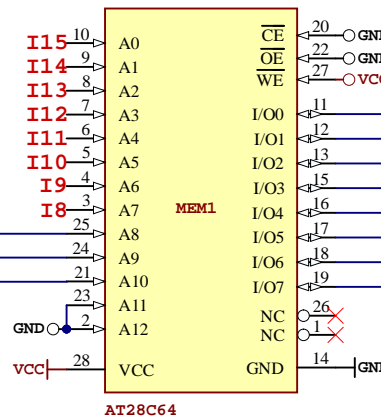
## Clock Speed Regulator

R2 value could be a 500k in order to show the behavior of digit switching. It can be replaced by a fixed value resistor between 2K-4.7K to set a constant speed for a digit switch at a good rate. A recommended value to a fixed resistor could be 3.3K



## Decoupling Capacitors

"UN" signal sets the behavior of display to 2's complement representation. LOW by default.

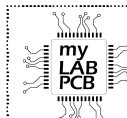


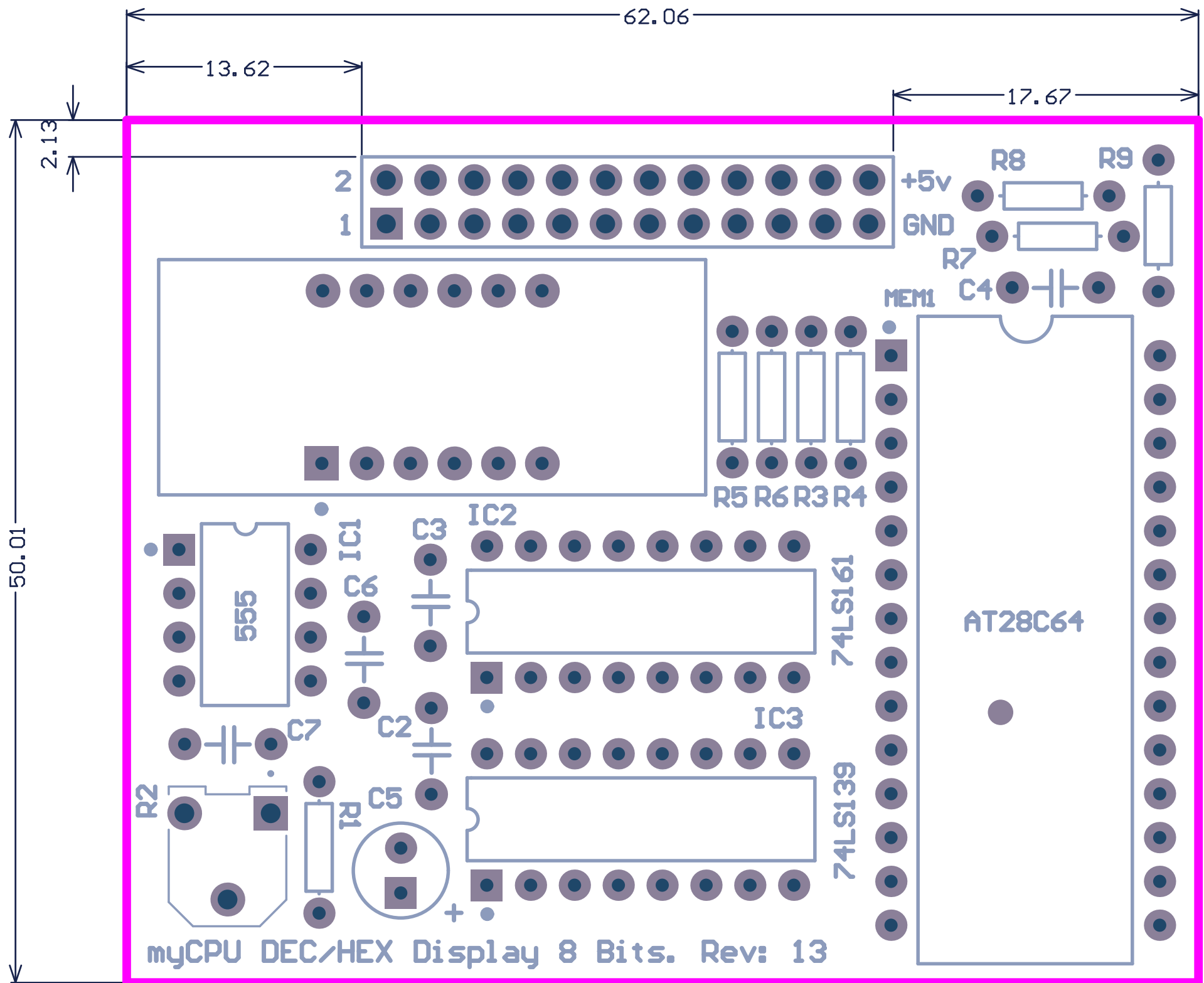
**Project:** myCPU DEC/HEX Display 4 Digit 8 bit

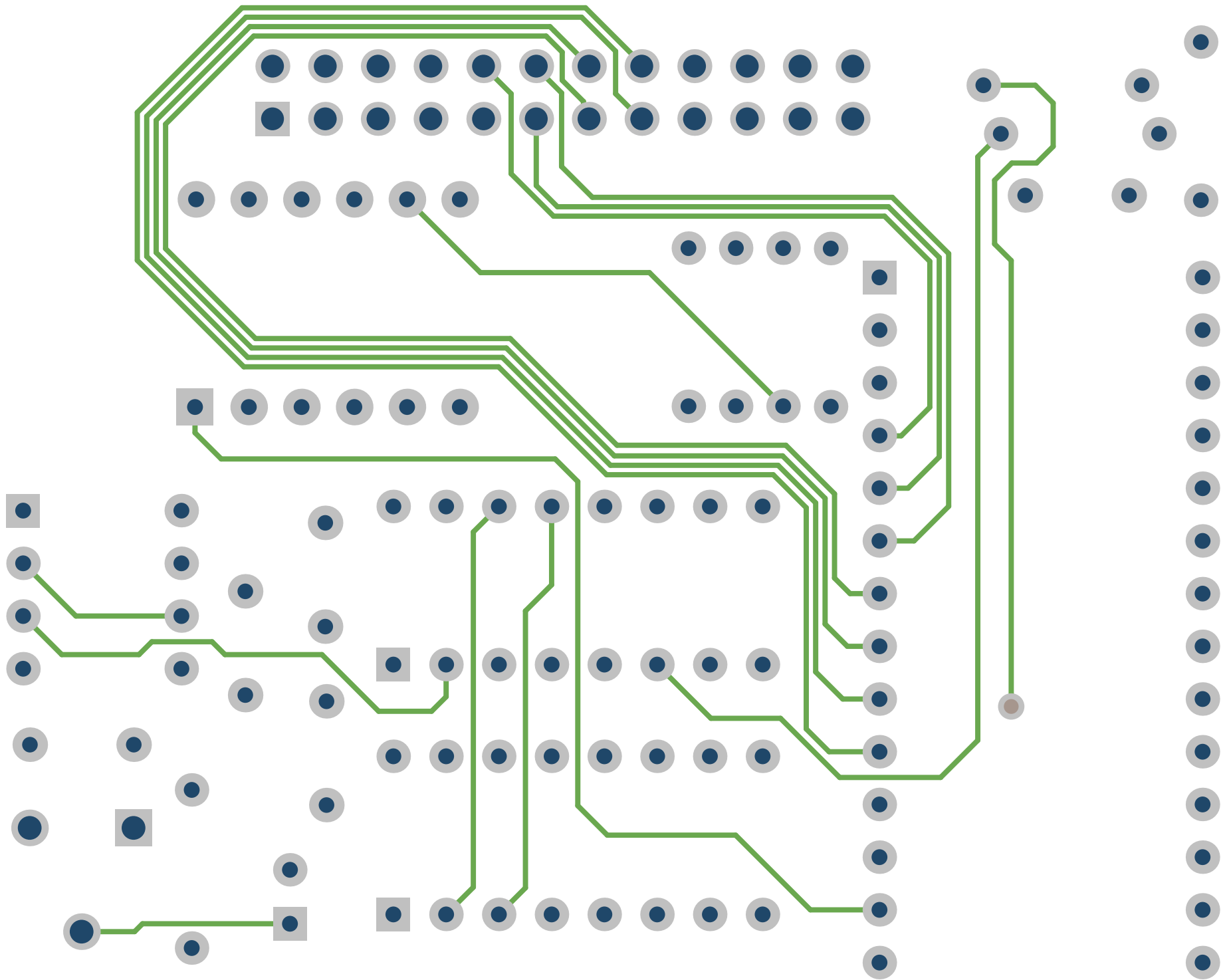
**Revision:** 13

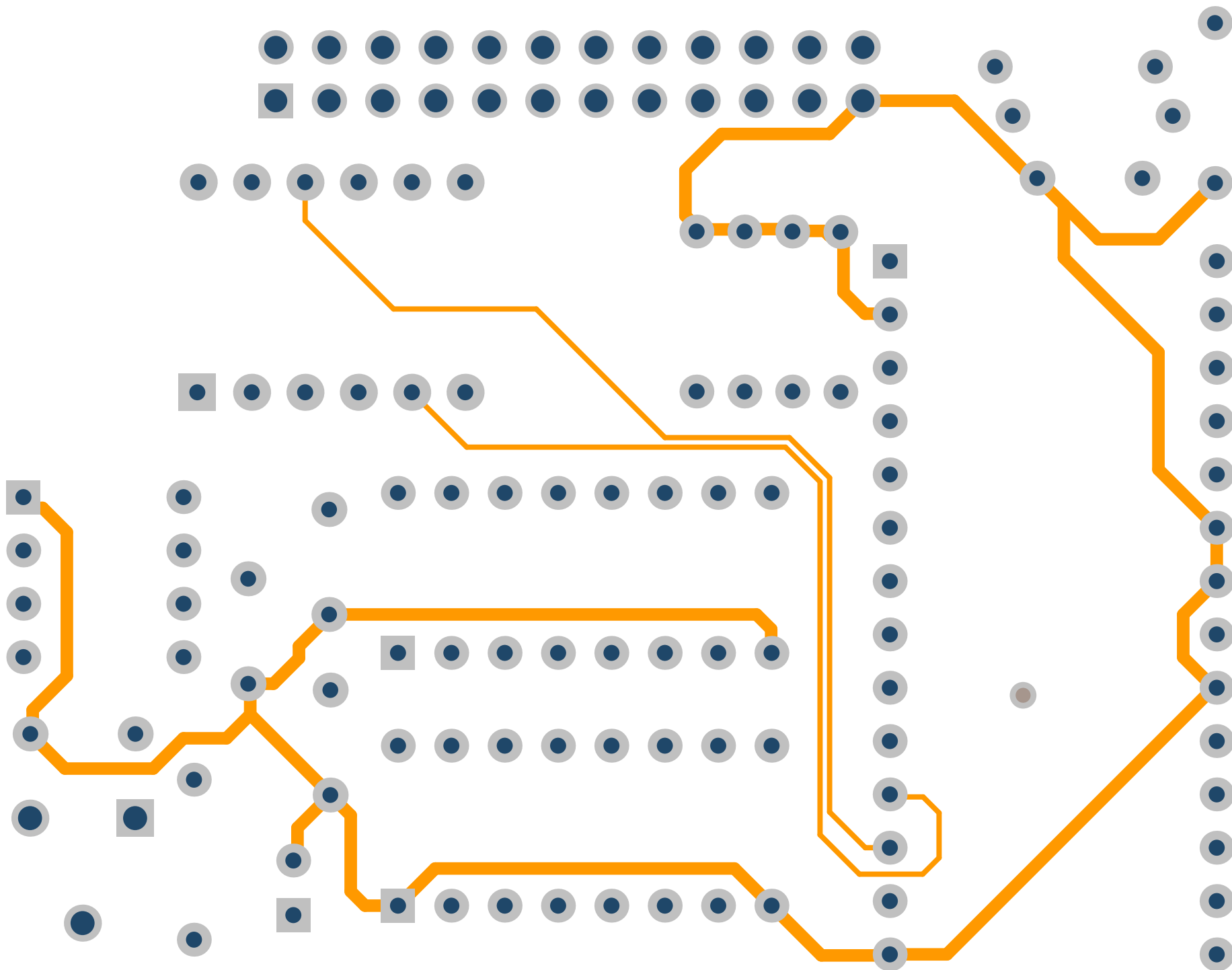
**Date:** 05-Jan-24

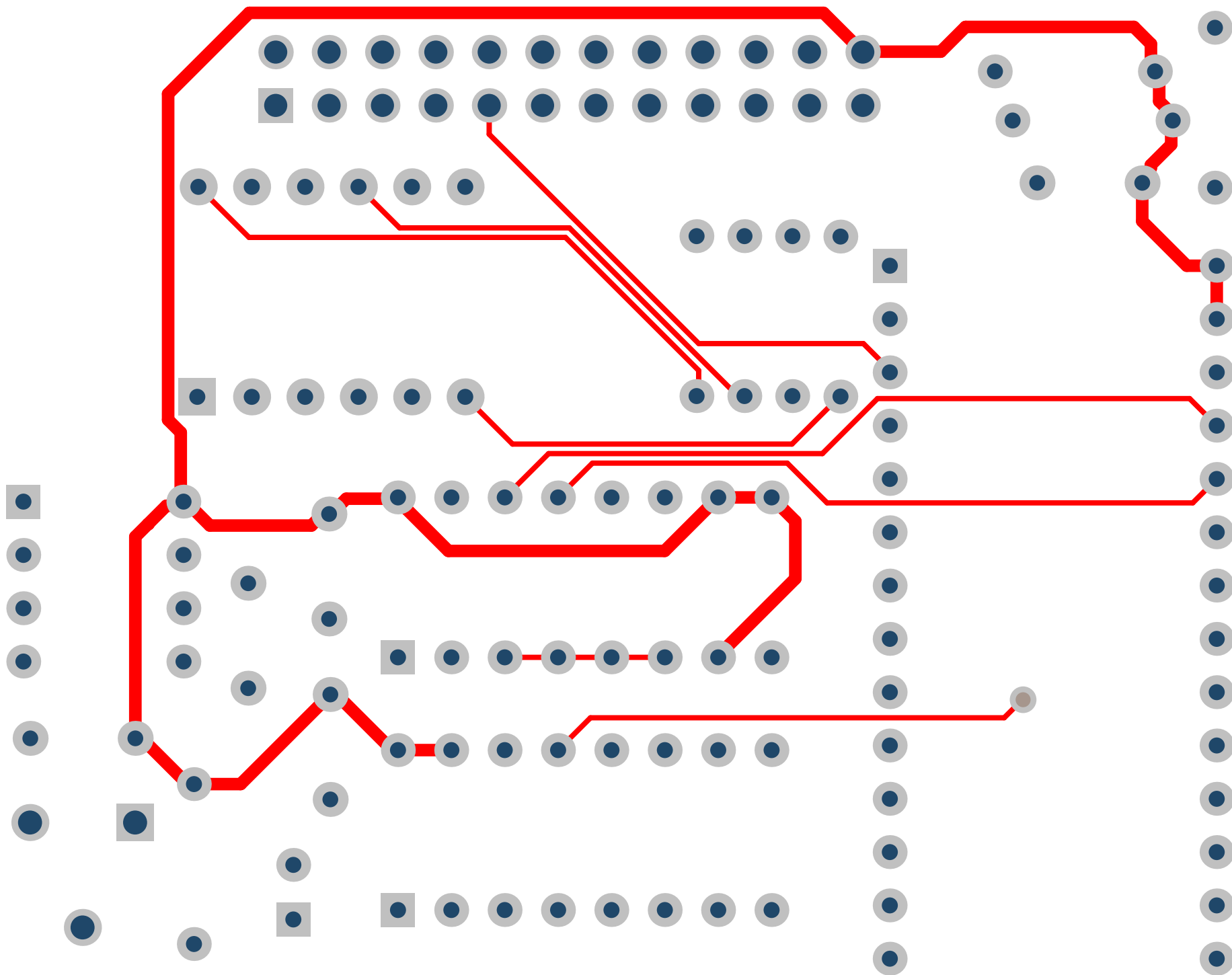
**Author:** Rafa Hernández

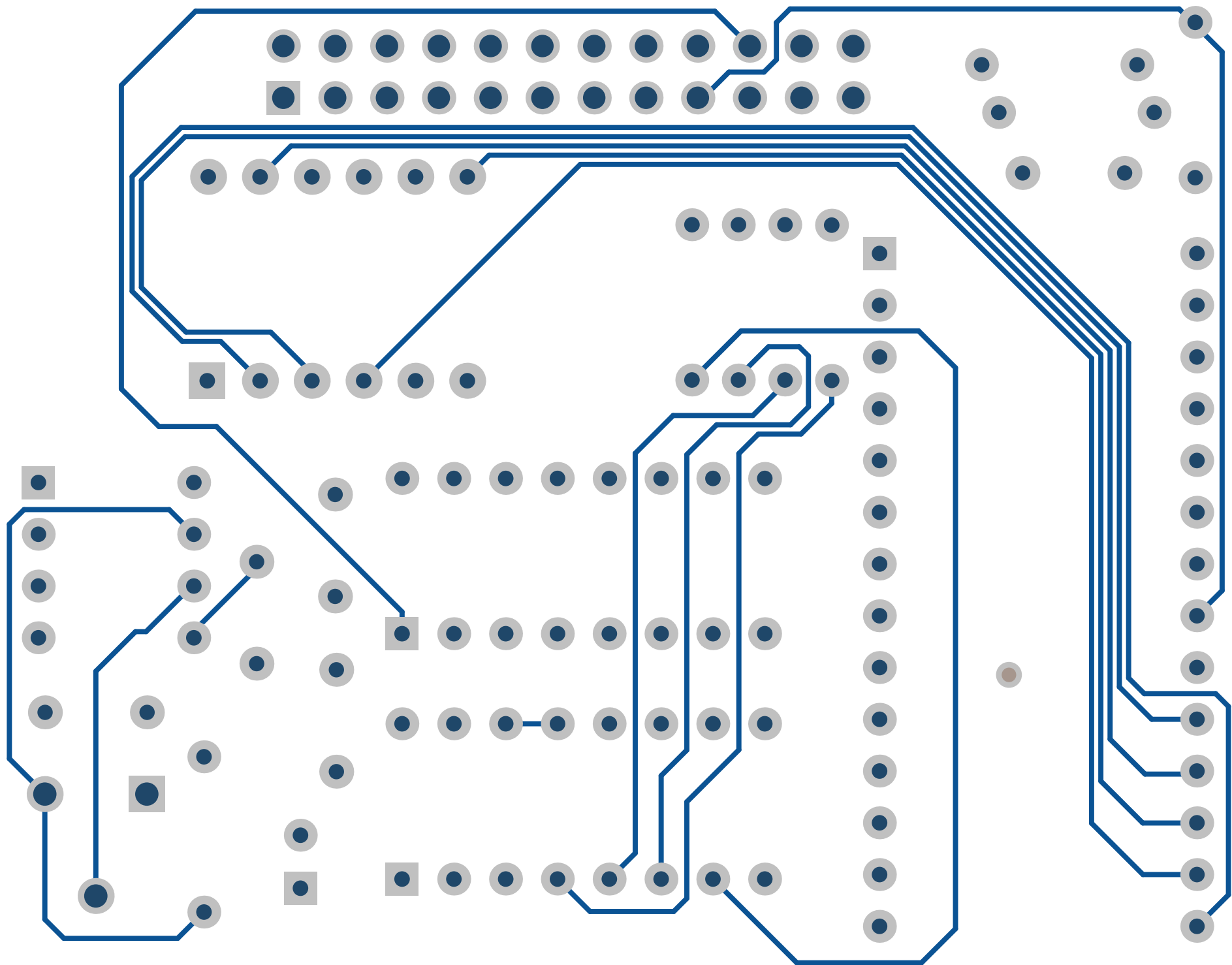
















# Bill of Materials

## myCPU DEC/HEX Display 4 Digit 8 bit

Description	Value	Q
Ceramic or tantalum capacitor	100nF	4
Electrolytic capacitor 16v/50v	0.47 $\mu$ F	1
Ceramic or tantalum capacitor	10nF	1
Display 7 segments 4 digits, common cathode, size 0.36"	Red	1
555 Timer	555	1
4-Bit sync counter	74LS161	1
Decoder/Demultiplexer Dual 2-to-4	74LS139	1
EEProm 64K, 8K x 8 bits	AT28C64	1
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p	1
Resistor Axial	1K	1
Variable resistor, Horizontal, 3 pins	500K	1
Resistor Axial	330 $\Omega$	5
Resistor Axial	4.7K	2



# Assembly List

## myCPU DEC/HEX Display 4 Digit 8 bit

Designator	Description	Value
C2	Ceramic or tantalum capacitor	100nF
C3	Ceramic or tantalum capacitor	100nF
C4	Ceramic or tantalum capacitor	100nF
C5	Electrolytic capacitor 16v/50v	0.47µF
C6	Ceramic or tantalum capacitor	10nF
C7	Ceramic or tantalum capacitor	100nF
DS1	Display 7 segments 4 digits, common cathode, size 0.36"	Red
IC1	555 Timer	555
IC2	4-Bit sync counter	74LS161
IC3	Decoder/Demultiplexer Dual 2-to-4	74LS139
MEM1	EEProm 64K, 8K x 8 bits	AT28C64
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p
R1	Resistor Axial	1K
R2	Variable resistor, Horizontal, 3 pins	500K
R3	Resistor Axial	330Ω
R4	Resistor Axial	330Ω
R5	Resistor Axial	330Ω
R6	Resistor Axial	330Ω
R7	Resistor Axial	4.7K
R8	Resistor Axial	4.7K
R9	Resistor Axial	330Ω