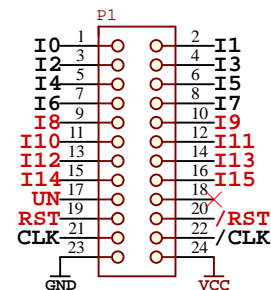


INPUT Data Connector

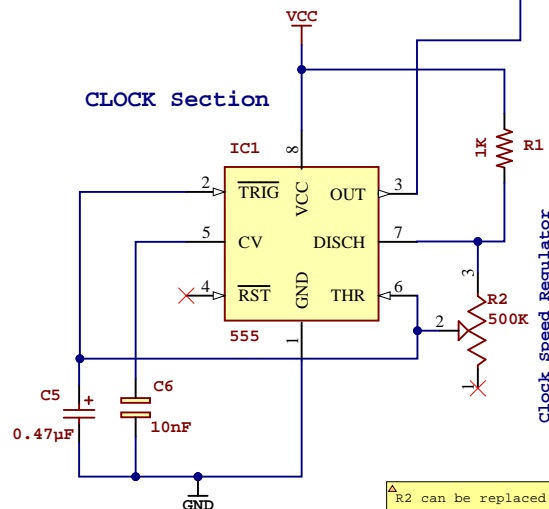


This counter, dont need load and allways is counting. So CET, CET is connected to VCC and /PE is connected too.

Enable only channel 1 (GND)

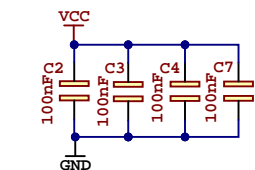
Digit selection must be synchronizing with the decoding addresses A8,A9 and the decode programming, in our case selection goes from Y3 (Dig1) to Y0 (Dig4)

CLOCK Section



Counts operation goes from QA to QD. QA is less significative

R2 can be replaced by a low value resistor like 100-200Ω to remove the speed control of the digit switch.

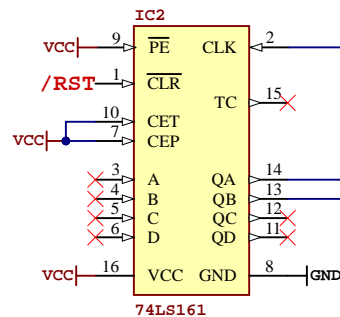


Decoupling Capacitors

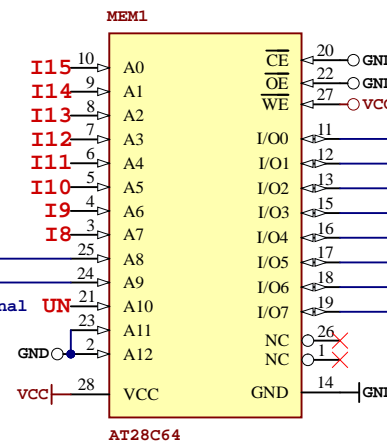
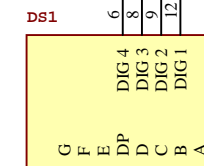
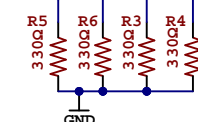
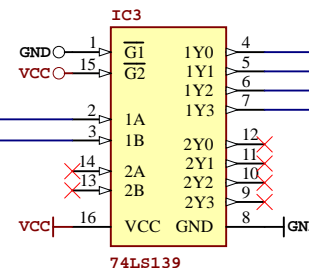
2

3

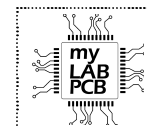
4



Digit Decoder Address Bits



UN signal sets the behavior of display between 256 or +-128. Using this signal as an address bit to addressing the decoding block



Project: myCPU Decimal Display 4 Digit 8 bit

Revision: 10

Date: 04/11/2021

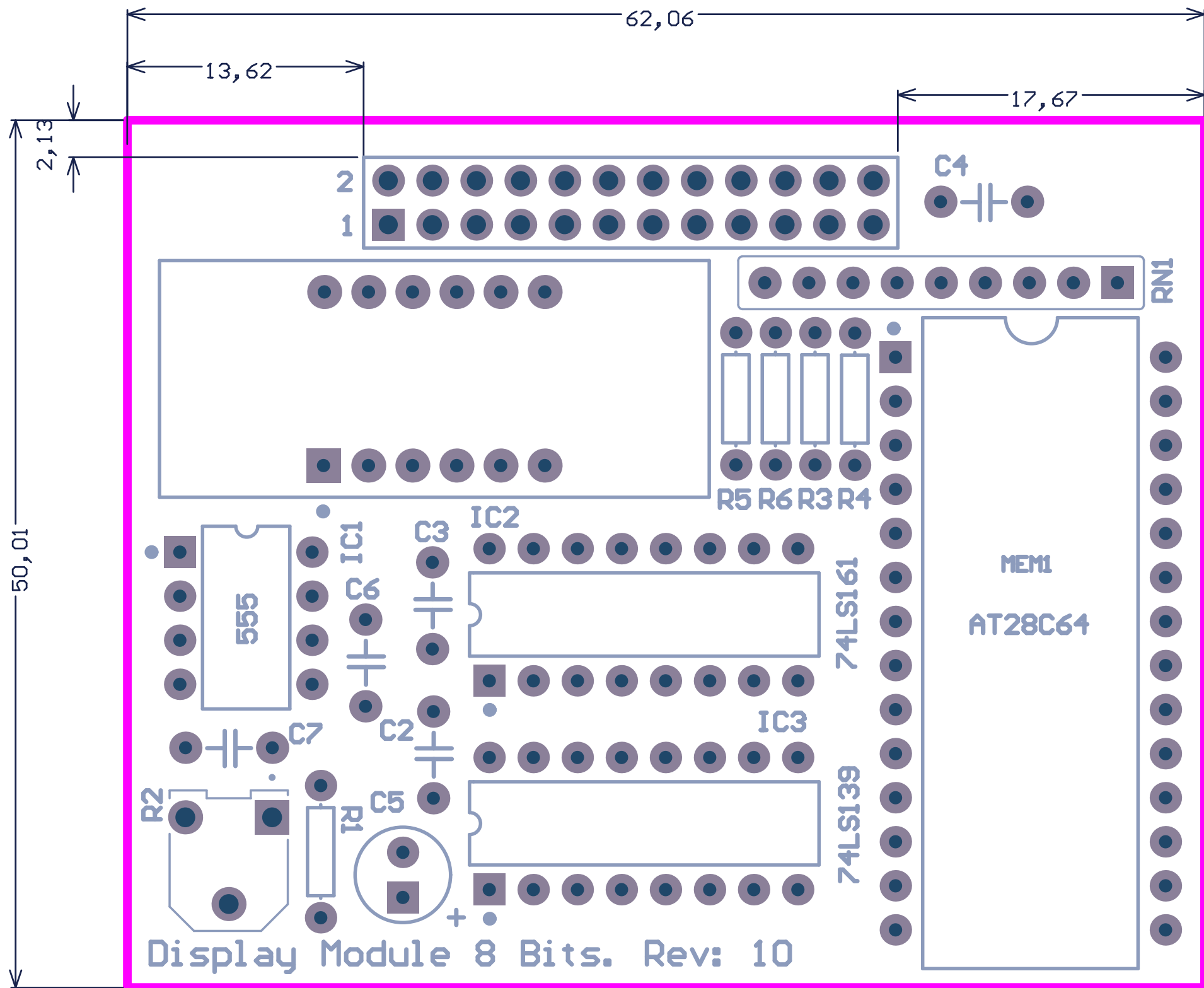
Author: Rafa Hernández

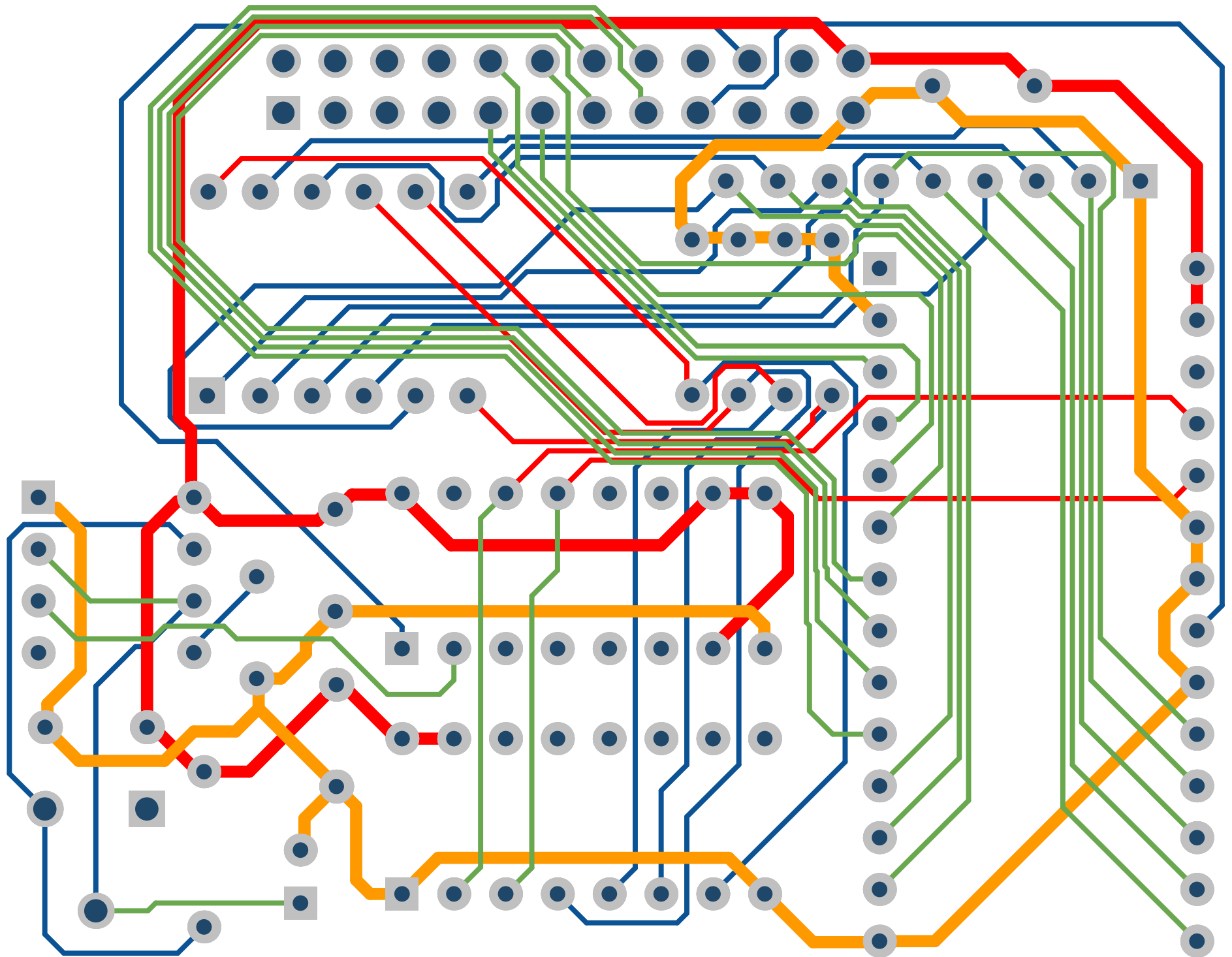
1

2

3

4

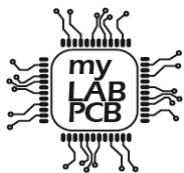






Bill of Materials

Designator	Description	Value	Q
C2, C3, C4, C7	Ceramic or tantalum capacitor	100nF	4
C5	Electrolytic capacitor 16v/50v	0.47 μ F	1
C6	Ceramic or tantalum capacitor	10nF	1
DS1	Display 7 segments 4 digits, common cathode, size 0.36"	Red	1
IC1	555 Timer	555	1
IC2	4-Bit sync counter	74LS161	1
IC3	Decoder/Demultiplexer Dual 2-to-4	74LS139	1
MEM1	EEProm 64K, 8K x 8 bits	AT28C64	1
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p	1
R1	Resistor Axial	1K	1
R2	Variable resistor, Horizontal, 3 pins	500K	1
R3, R4, R5, R6	Resistor Axial	330 Ω	4
RN1	Resistor array 8 elements,9 pins	220 Ω	1



Assembly List

Desig.	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	0.47 μ F
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	330 Ω
R4	Resistor Axial	330 Ω
R5	Resistor Axial	330 Ω
R6	Resistor Axial	330 Ω
RN1	Resistor array 8 elements,9 pins	220 Ω