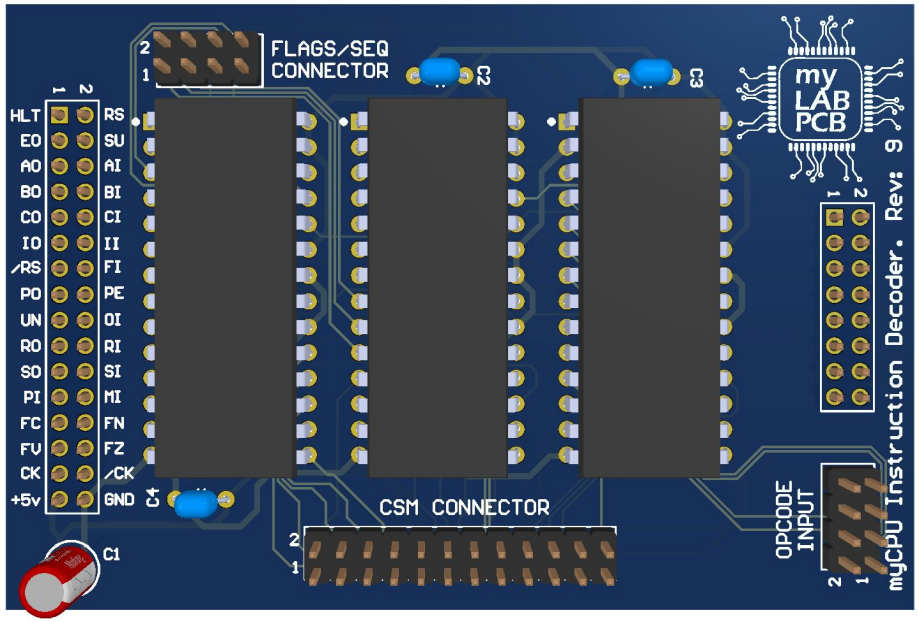
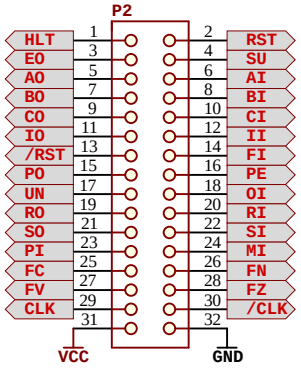
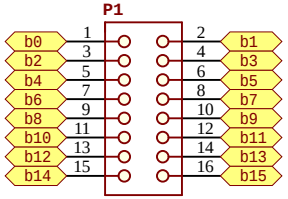

FLAGS/SEQ
CONNECTOR
C2
C3
C4
C1
CSM CONNECTOR
OPCODE
INPUT
my
LAB
PCB
HLT
EO
AO
BO
CO
IO
/RS
PO
UN
RO
SO
PI
FC
FV
CK
+5v
RS
SU
AI
BI
CI
II
FI
PE
OI
RI
SI
MI
FN
FZ
/CK
GND
myCPU Instruction Decoder. Rev: 9

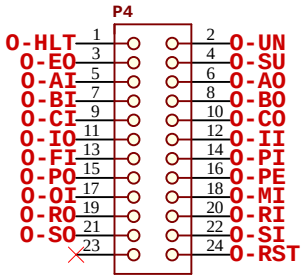
Control BUS Connector



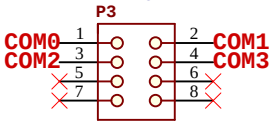
Data BUS Connector



CSM Connector

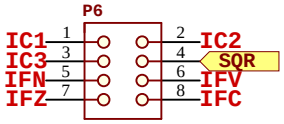


Instruction Register Connector

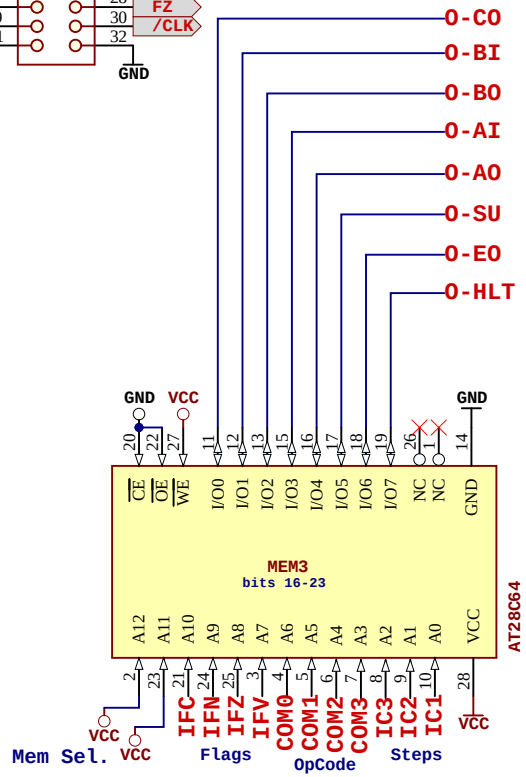


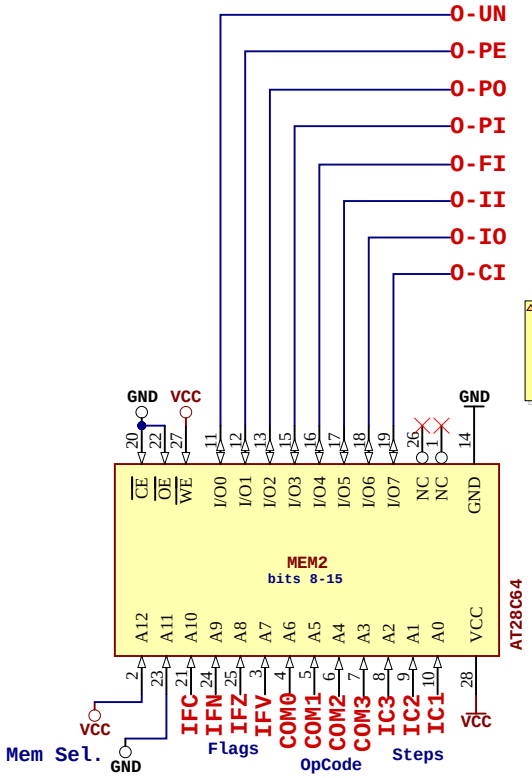
This I.Decoder revision use only the most 4 significative bits from instruction register corresponding to the instruction OPCODE.

Flags register + Sequencer Connector

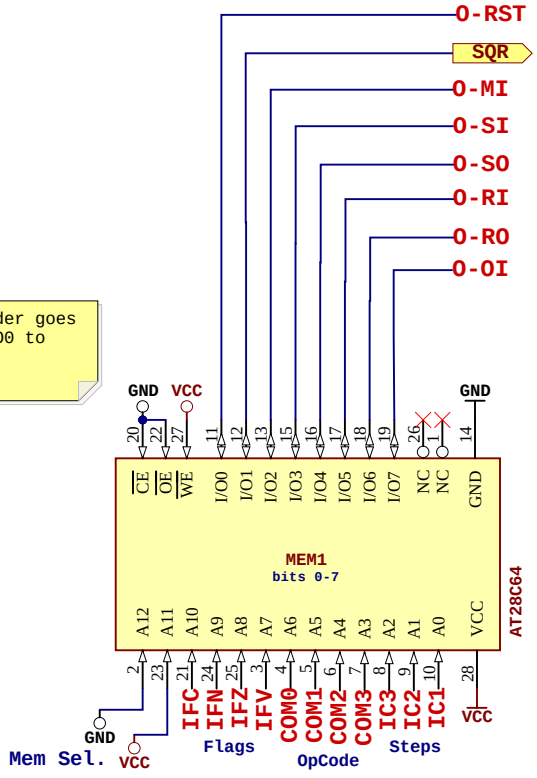


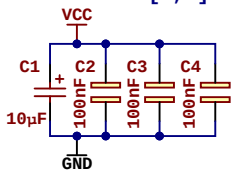
Flags inputs (IFN,IFV,IFZ,IFC) come from the Flag Register, there are not the current values of FV,FZ,FN,FC placed on the control BUS but the values stored in the Flags register.





Data bit order goes from pin I/O0 to I/O7



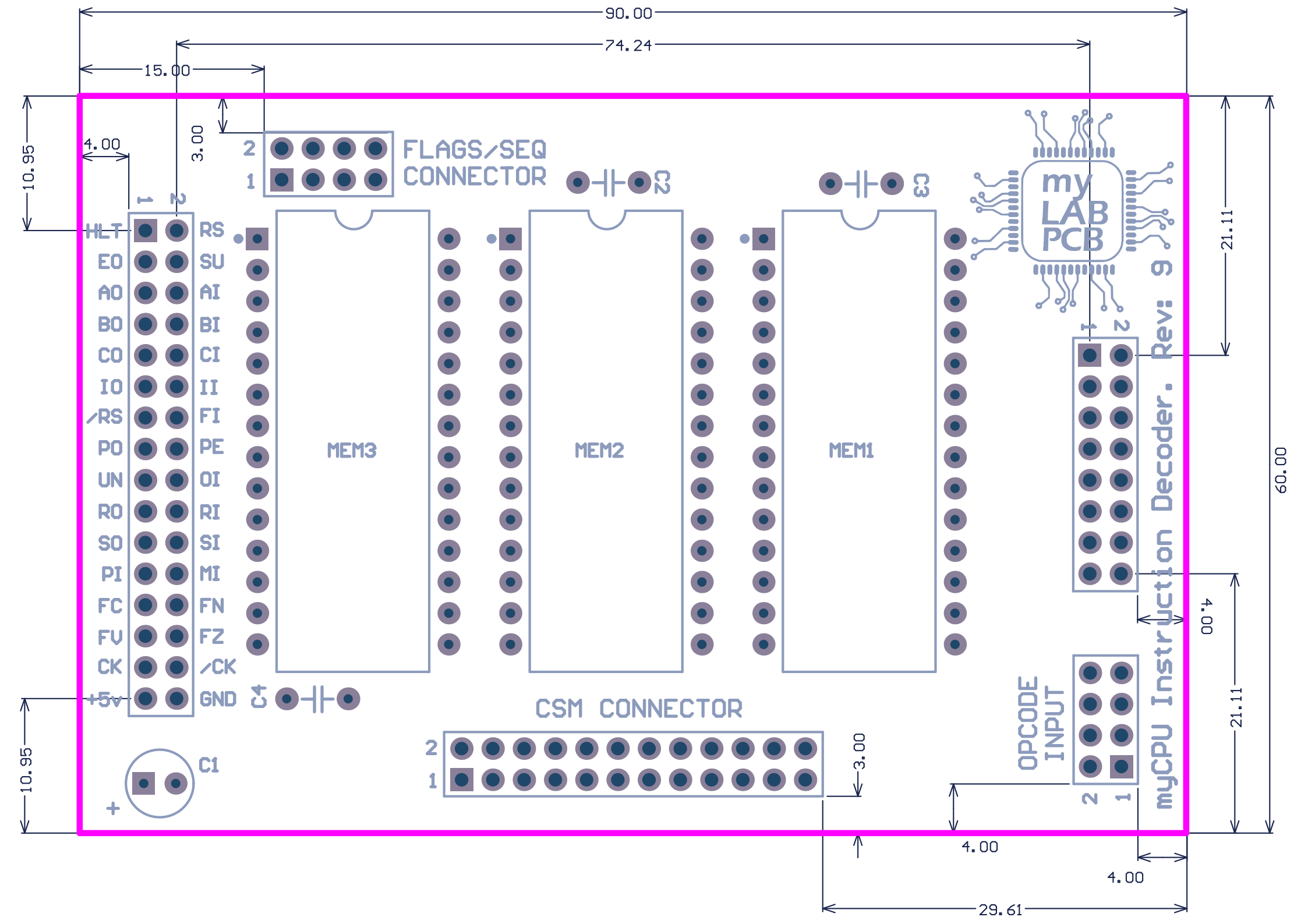


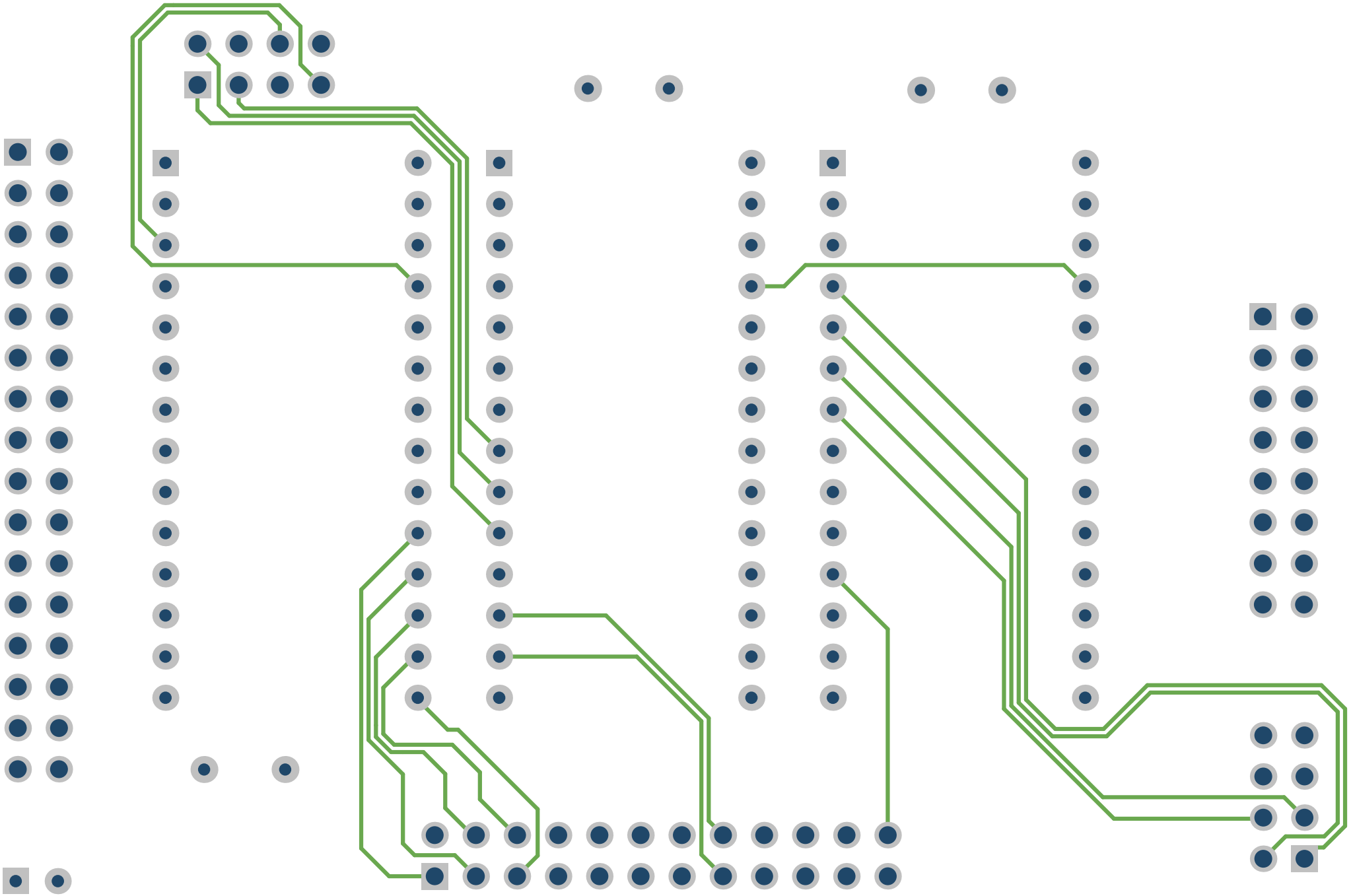
Decoupling Capacitors

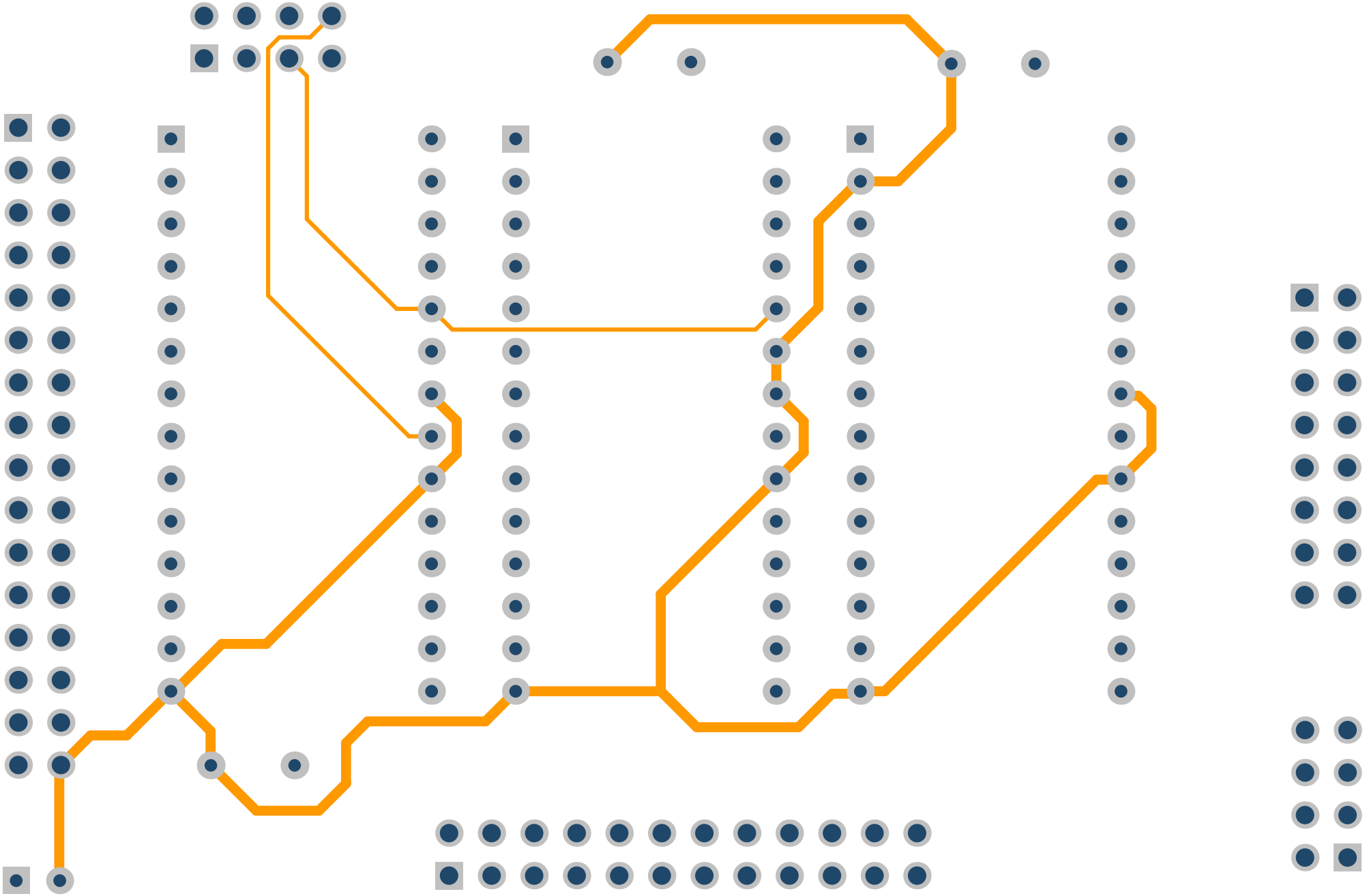
Memory selector set which microinstruction part, of the entire microinstruction, are stored in each memory module: MEM1 holds the less significative byte of bits 0-7, MEM2 holds the byte 8-15 and MEM3 holds byte 16-23

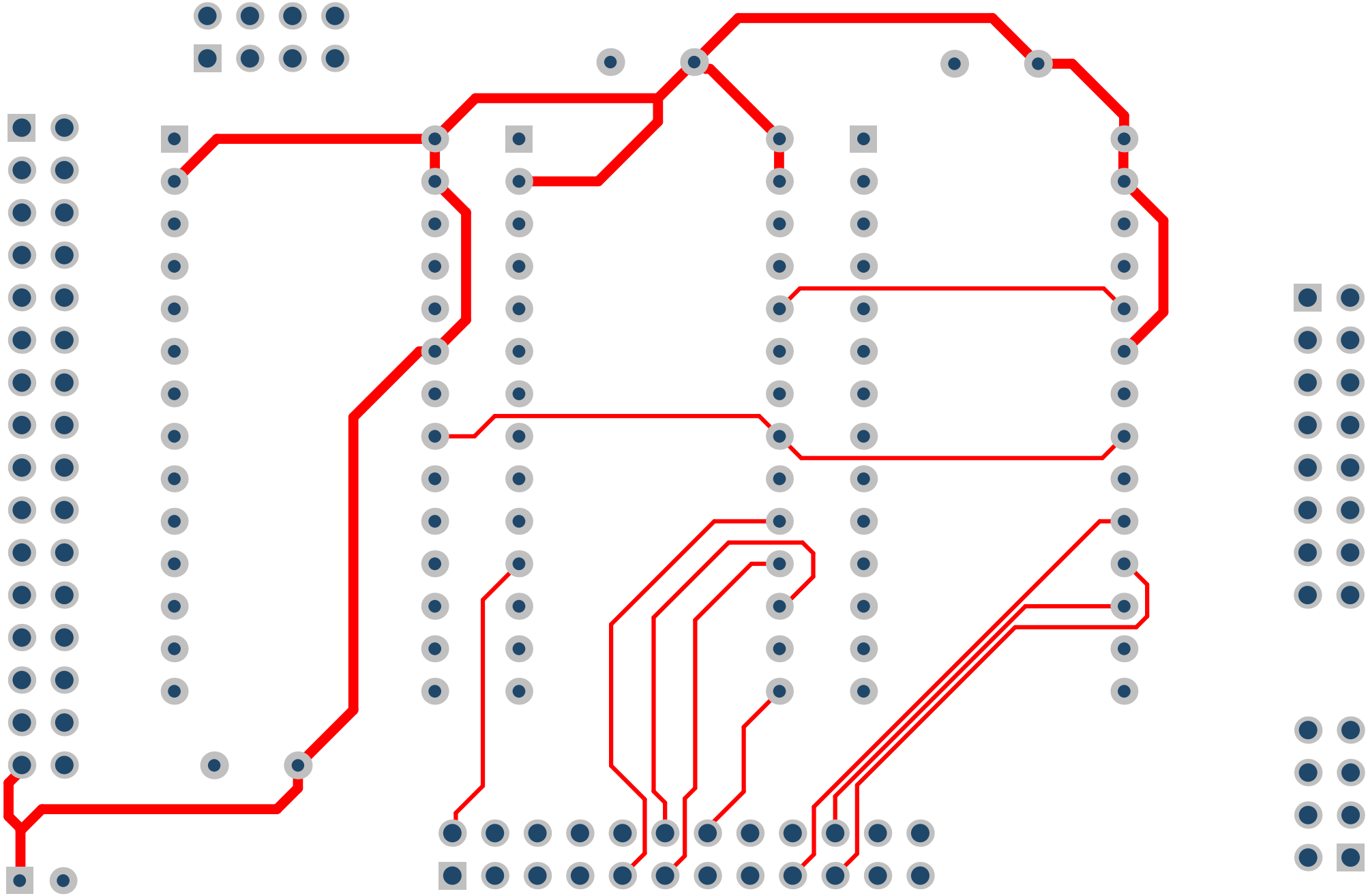
my LAB PCB

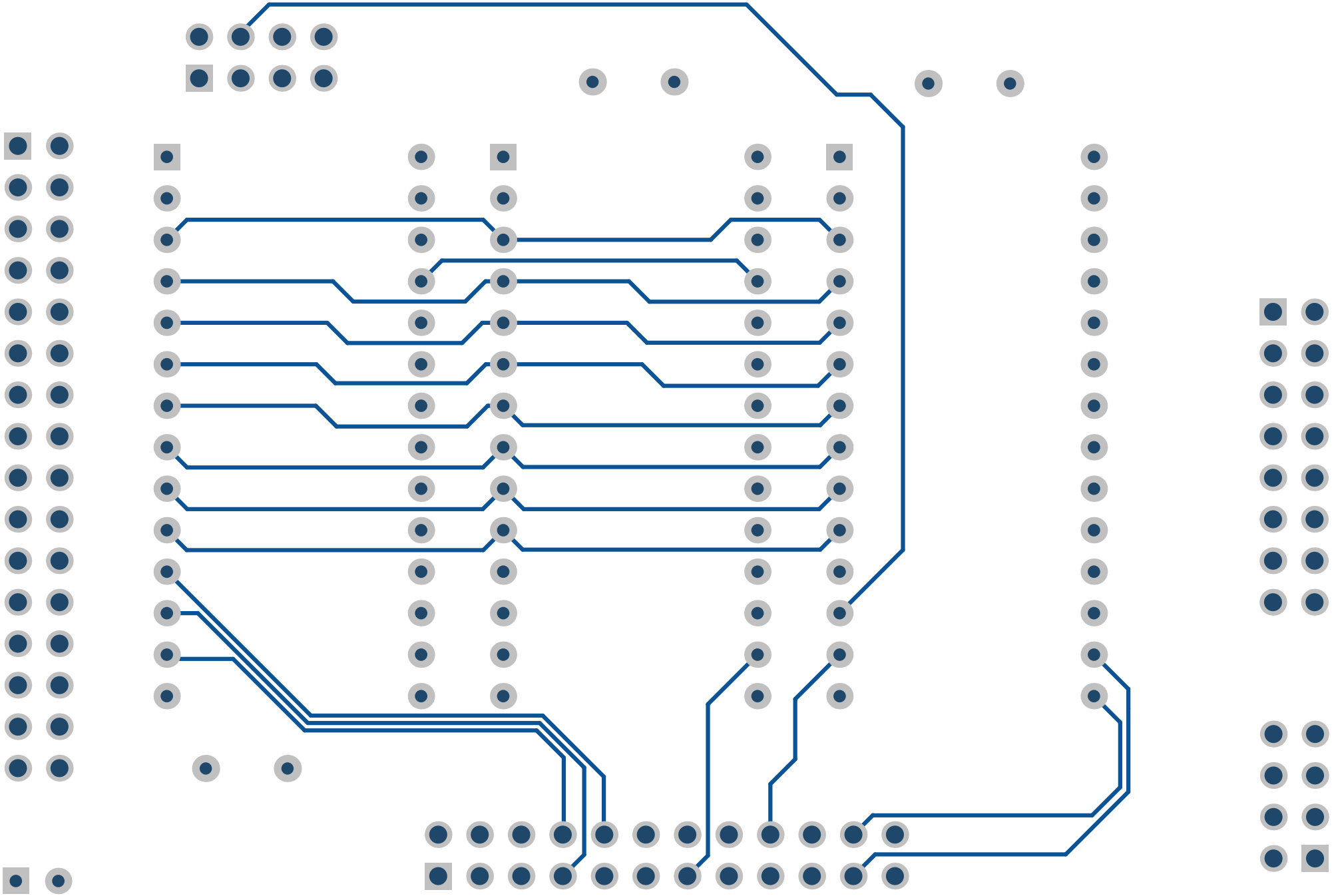
Project: myCPU Instruction Decoder module	
Revision: 9	**Date:** 04-Jan-24
Author: Rafa Hernández	


90.00
74.24
15.00
10.95
4.00
3.00
FLAGS/SEQ
CONNECTOR
C2
C3
HLT
EO
AO
BO
CO
IO
/RS
PO
UN
RO
SO
PI
FC
FV
CK
+5v
RS
SU
AI
BI
CI
II
FI
PE
OI
RI
SI
MI
FN
FZ
/CK
GND
C4
MEM3
MEM2
MEM1
my
LAB
PCB
21.11
60.00
myCPU Instruction Decoder. Rev: 9
4.00
OPCODE
INPUT
CSM CONNECTOR
C1
+
10.95
3.00
4.00
4.00
29.61









Bill of Materials

myCPU Instruction Decoder

Description	Value	Q
Electrolytic capacitor 16v/50v	10µF	1
Ceramic capacitor	100nF	3
EEProm 64K, 8K x 8 bits	AT28C64	3
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p	1
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p	1
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	8p	2
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	24p	1

Assembly List

myCPU Instruction Decoder

Designator	Description	Value
C1	Electrolytic capacitor 16v/50v	10µF
C2	Ceramic capacitor	100nF
C3	Ceramic capacitor	100nF
C4	Ceramic capacitor	100nF
MEM1	EEProm 64K, 8K x 8 bits	AT28C64
MEM2	EEProm 64K, 8K x 8 bits	AT28C64
MEM3	EEProm 64K, 8K x 8 bits	AT28C64
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p
P3	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	8p
P4	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	24p
P6	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	8p