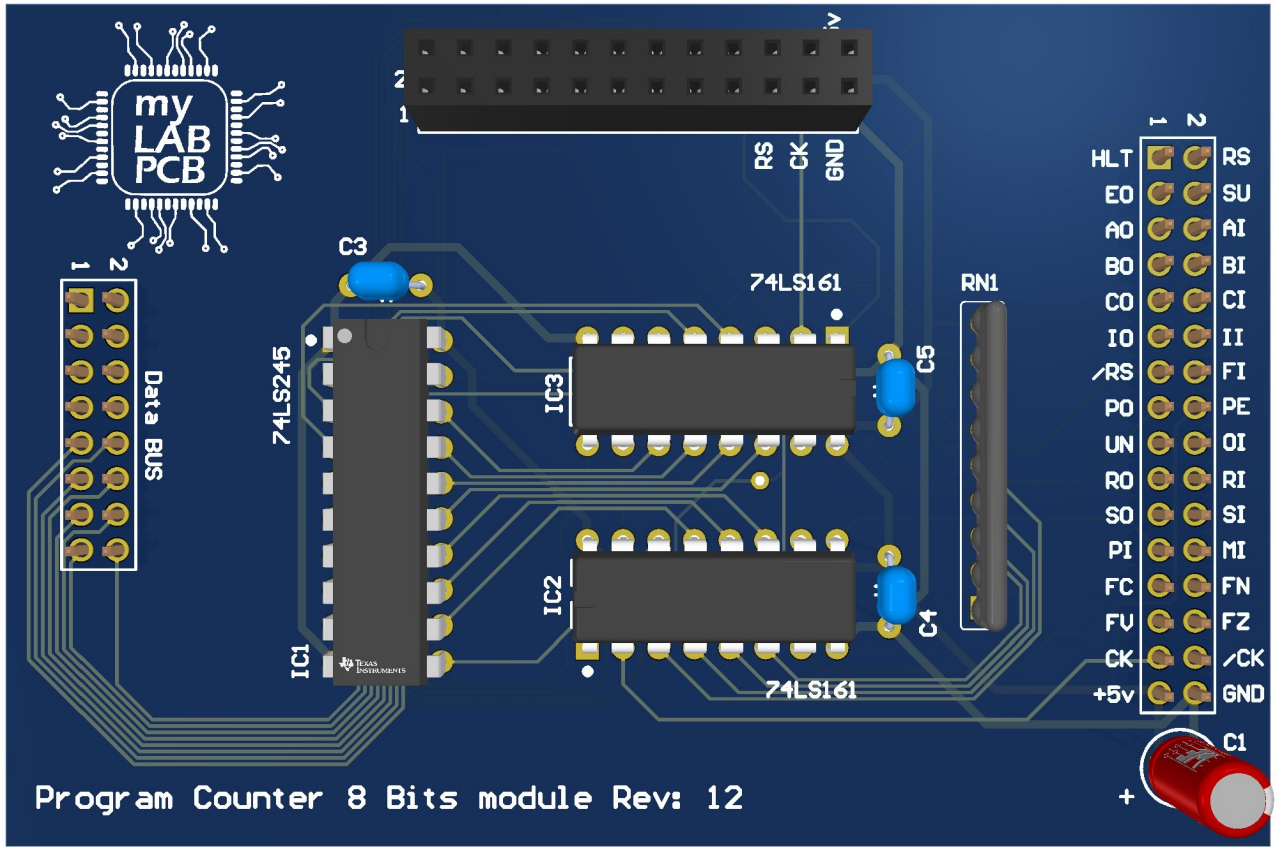
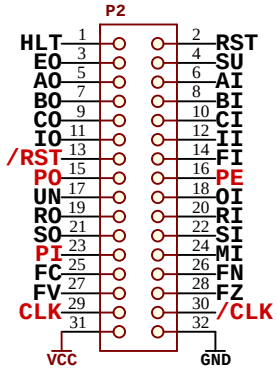
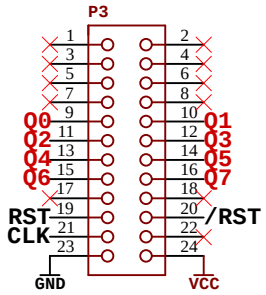

my
LAB
PCB
RS
CK
GND
C3
74LS161
RN1
74LS245
IC3
C5
Data BUS
IC2
C4
IC1
74LS161
HLT
EO
AO
BO
CO
IO
/RS
PO
UN
RO
SO
PI
FC
FV
CK
+5v
RS
SU
AI
BI
CI
II
FI
PE
OI
RI
SI
MI
FN
FZ
/CK
GND
C1
+
Program Counter 8 Bits module Rev: 12

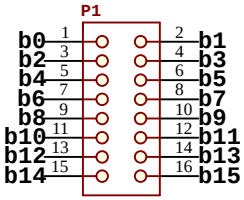
Control BUS Connector



OUTPUT Connector

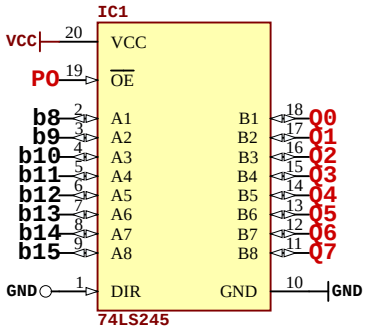


Data BUS Connector

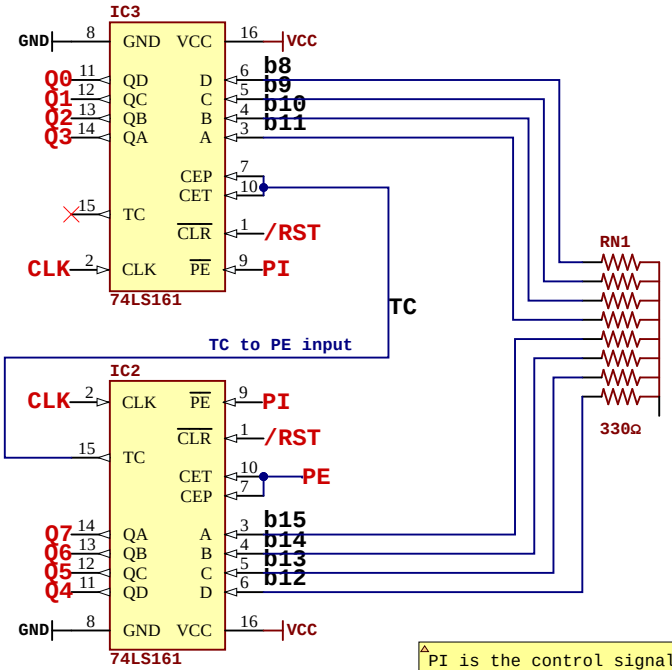


Cascade goes from IC2 to IC3 through pin TC (Terminal Count Output) to pin CET/CEP (10) forcing a count step.

Counts operation goes from QA to QD, A is less significative bit.

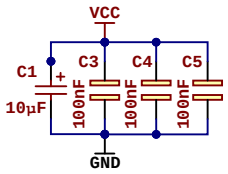


Pin DIR to GND means data flow from B >> A when a low PO signal comes.



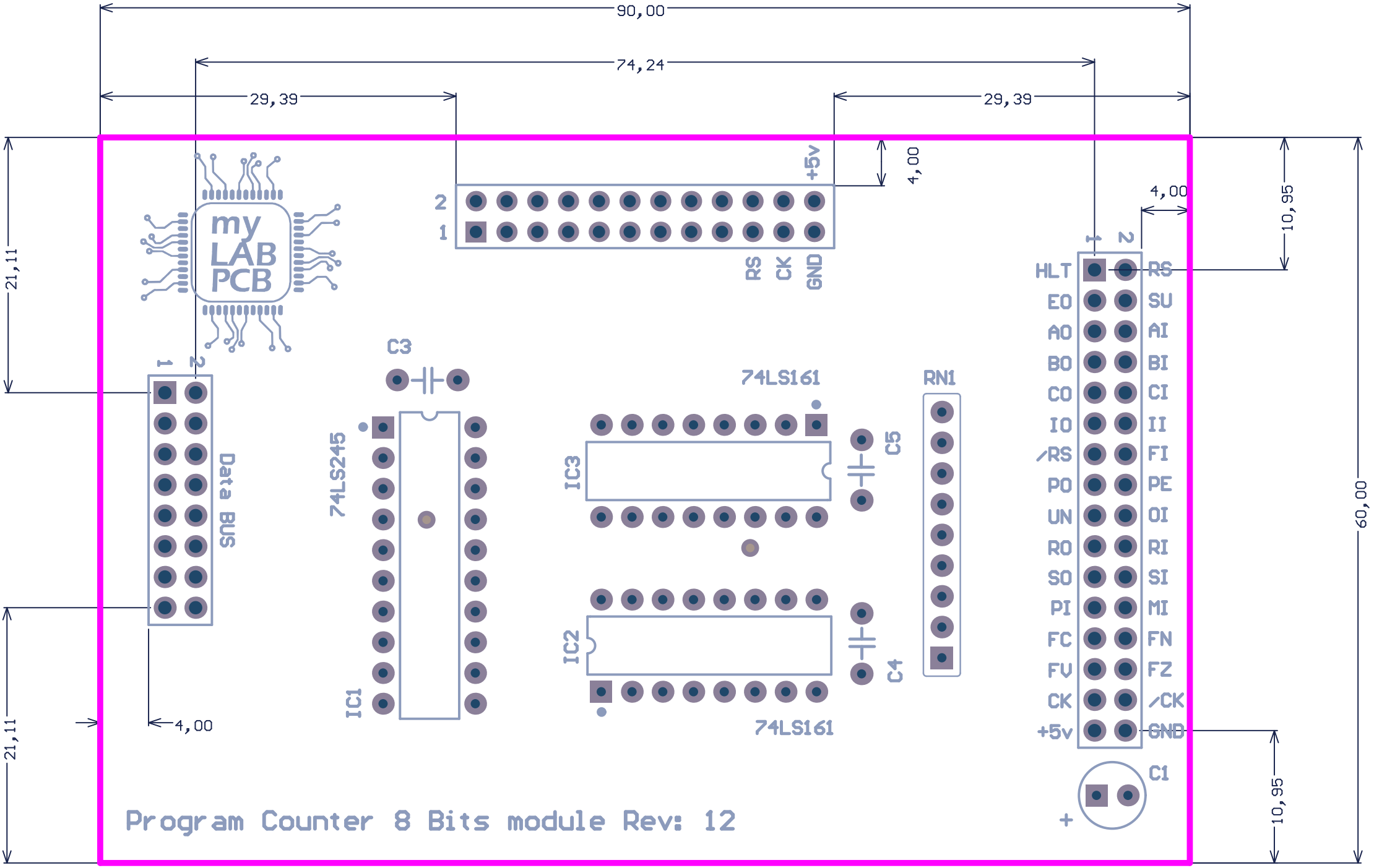
**PE signal is not related to /PE pin

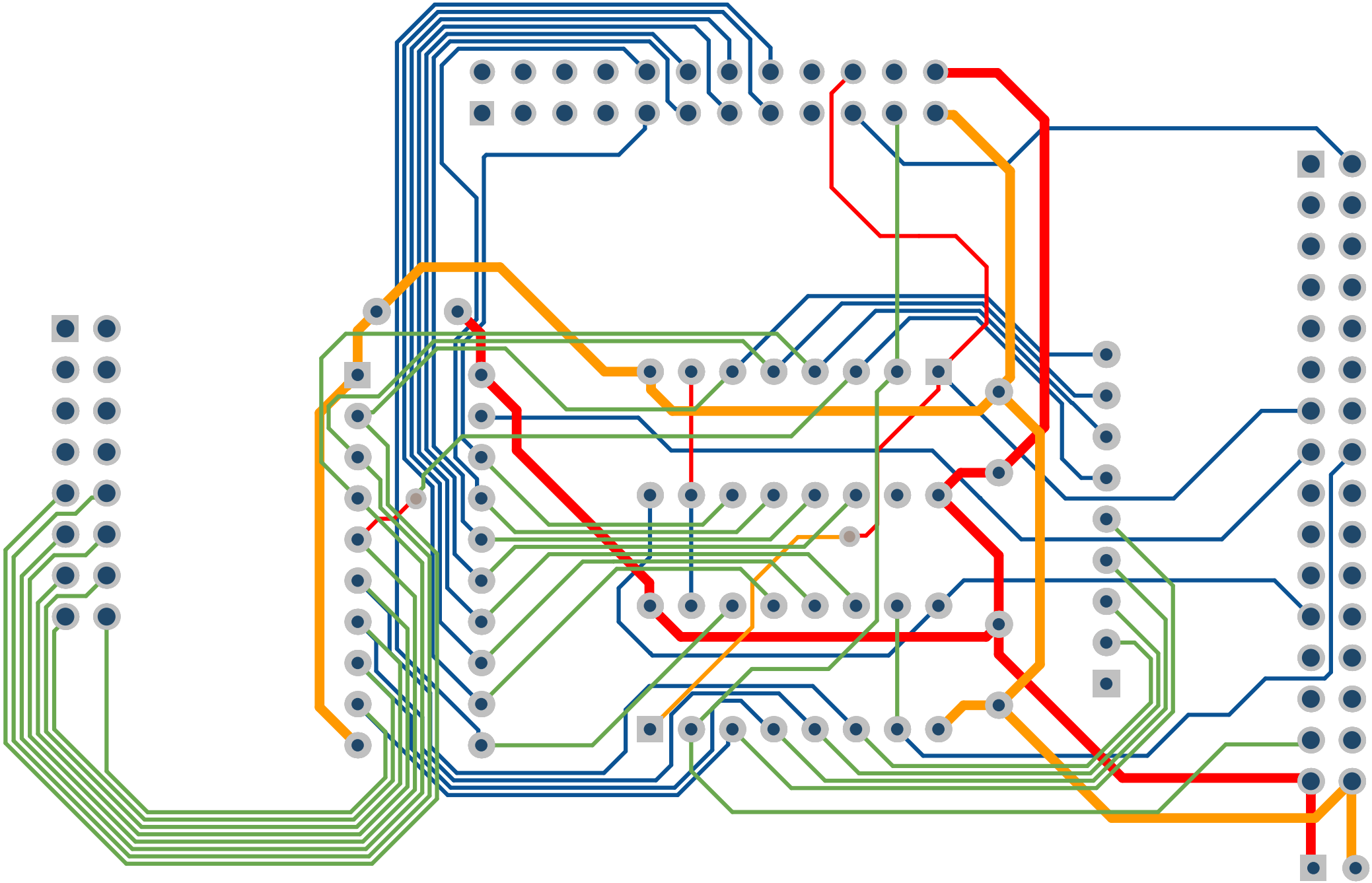
PI is the control signal to load the current value from the DATABUS to the counters.



Decoupling Capacitors

Project: myCPU Program Counter module	
Revision: 12	**Date:** 31/5/2022
Author: Rafa Hernández	


90,00
74,24
29,39
29,39
21,11
4,00
4,00
10,95
60,00
+5v
2
1
RS
CK
GND
my
LAB
PCB
C3
74LS161
RN1
C5
IC3
74LS245
IC2
C4
IC1
74LS161
1
2
Data BUS
4,00
21,11
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
C1
+
10,95
Program Counter 8 Bits module Rev: 12



Bill of Materials

Designator	Description	Value	Q
C1	Electrolytic capacitor 16v/50v	10µF	1
C3, C4, C5	Ceramic or tantalum capacitor	100nF	3
IC1	Non inverting bus transceiver	74LS245	1
IC2, IC3	4-Bit sync counter	74LS161	2
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p	1
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p	1
P3	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical	24p	1
RN1	Resistor array 8 elements,9 pins	330Ω	1

Assembly List

Desig.	Description	Value
C1	Electrolytic capacitor 16v/50v	10µF
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 sync counter	74LS161
IC3	4-Bit sync counter	74LS161
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p
P3	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical	24p
RN1	Resistor array 8 elements,9 pins	330Ω