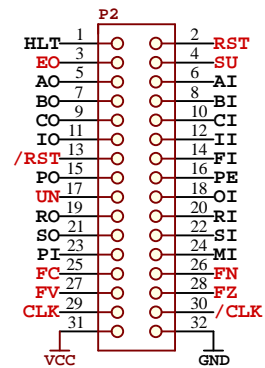
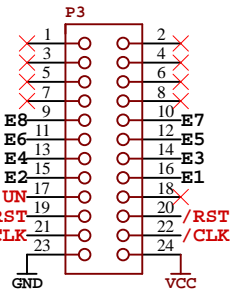




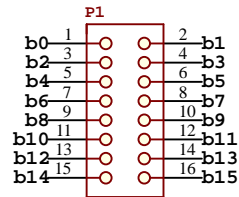
## Control BUS Connector



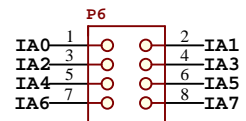
## OUTPUT Connector



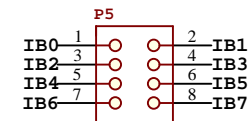
## Data BUS Connector



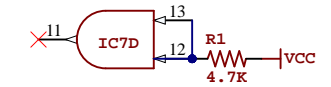
## Register A input



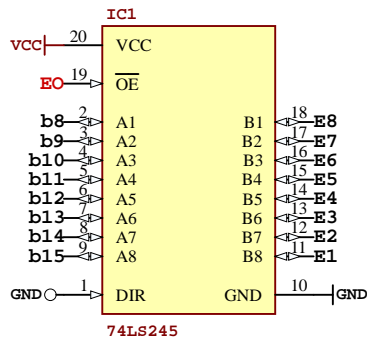
## Register B Input



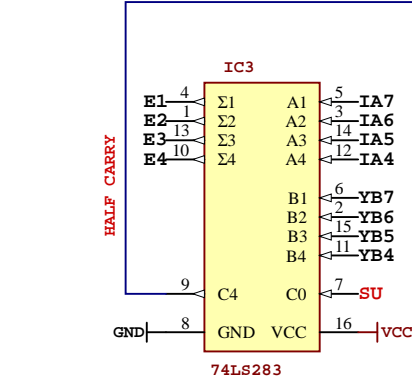
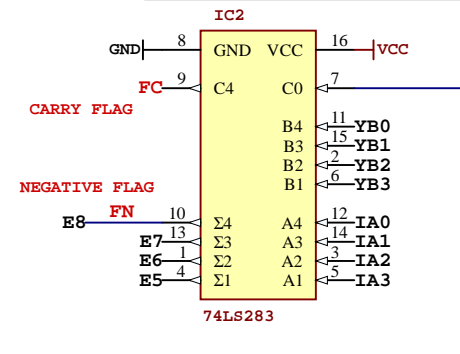
## Unused TTL Inputs



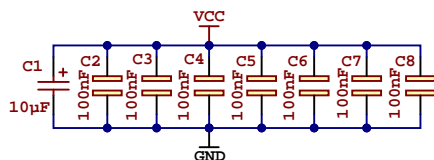
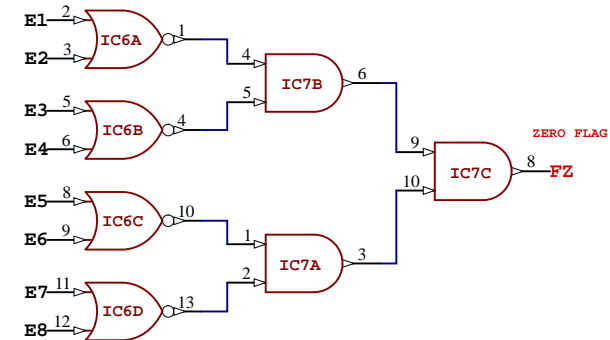
Operation goes from E1 to E4 and carry is passed from C4 to C0. The ADDER inputs order goes from A1, B1 to A4, B4. Cascade is from IC3 to IC2.



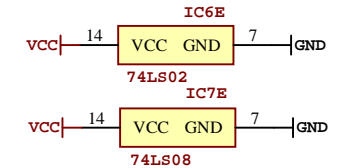
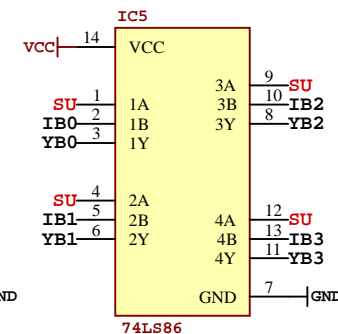
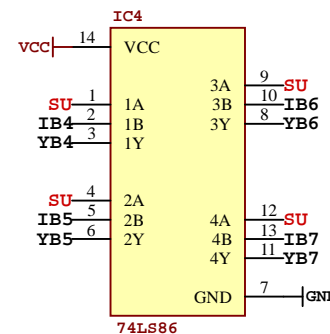
Input significant bit weigh goes from IA7 or YB7 (lower) to IA0 or YB0 (higher)



## Zero Flag Logic



Decoupling Capacitors

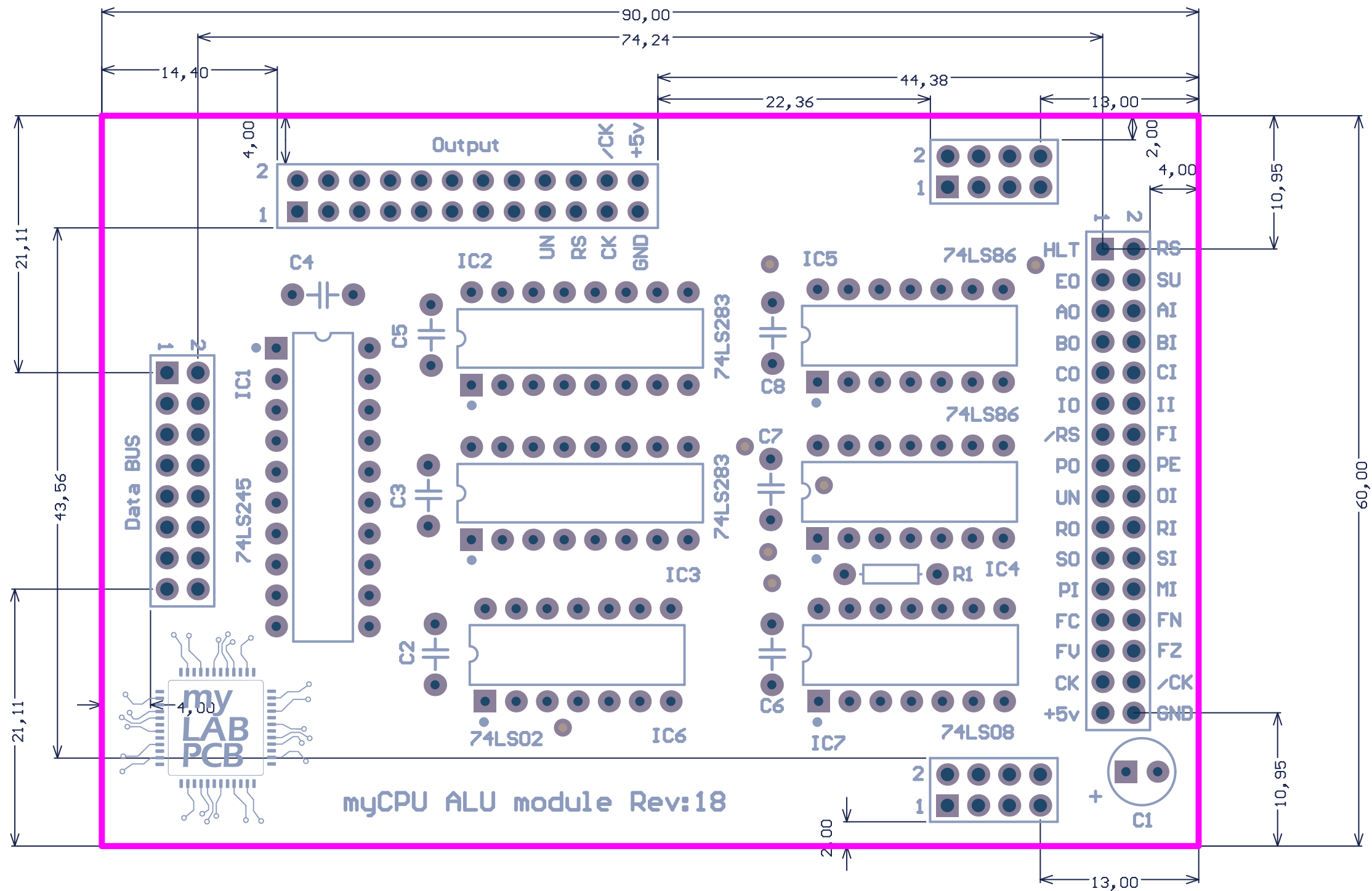


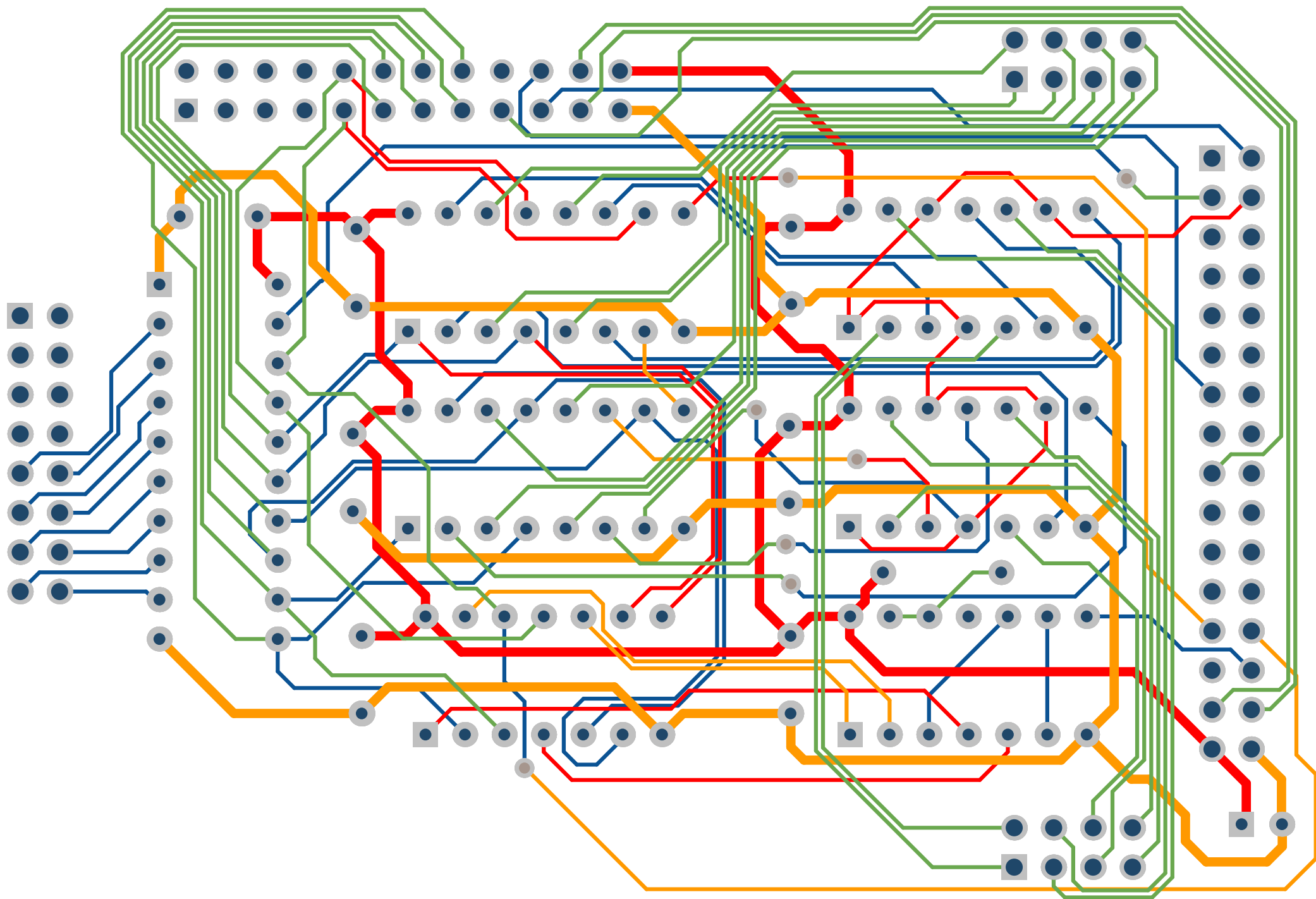
Project: myCPU ALU module

Revision: 18

Date: 05/11/2022

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	6
C8	Ceramic capacitor	100nF	1
IC1	Non inverting bus transceiver	74LS245	1
IC2, IC3	4-Bits Full adder with fast carry	74LS283	2
IC4, IC5	Quad 2-input XOR gates	74LS86	2
IC6	Quad 2-input NOR gates	74LS02	1
IC7	Quad 2-input AND gates	74LS08	1
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	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical,	24p	1
P5, P6	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p	2
R1	Resistor Axial	4.7K	1



# Assembly List

Designator	Description	Value
C1	Electrolytic capacitor 16v/50v	10 $\mu$ 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
C7	Ceramic or tantalum capacitor	100nF
C8	Ceramic capacitor	100nF
IC1	Non inverting bus transceiver	74LS245
IC2	4-Bits Full adder with fast carry	74LS283
IC3	4-Bits Full adder with fast carry	74LS283
IC4	Quad 2-input XOR gates	74LS86
IC5	Quad 2-input XOR gates	74LS86
IC6	Quad 2-input NOR gates	74LS02
IC7	Quad 2-input AND gates	74LS08
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	Socket Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p
P5	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p
P6	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p
R1	Resistor Axial	4.7K