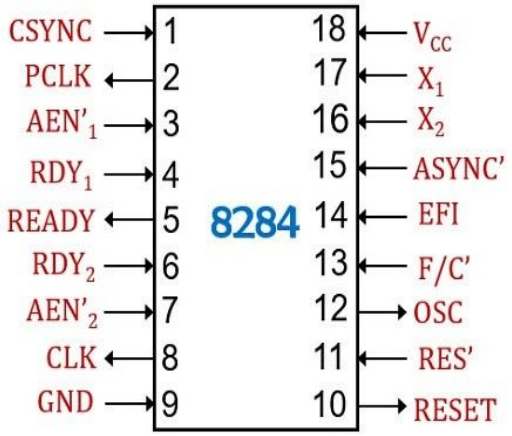
HARDWARE DESIGN

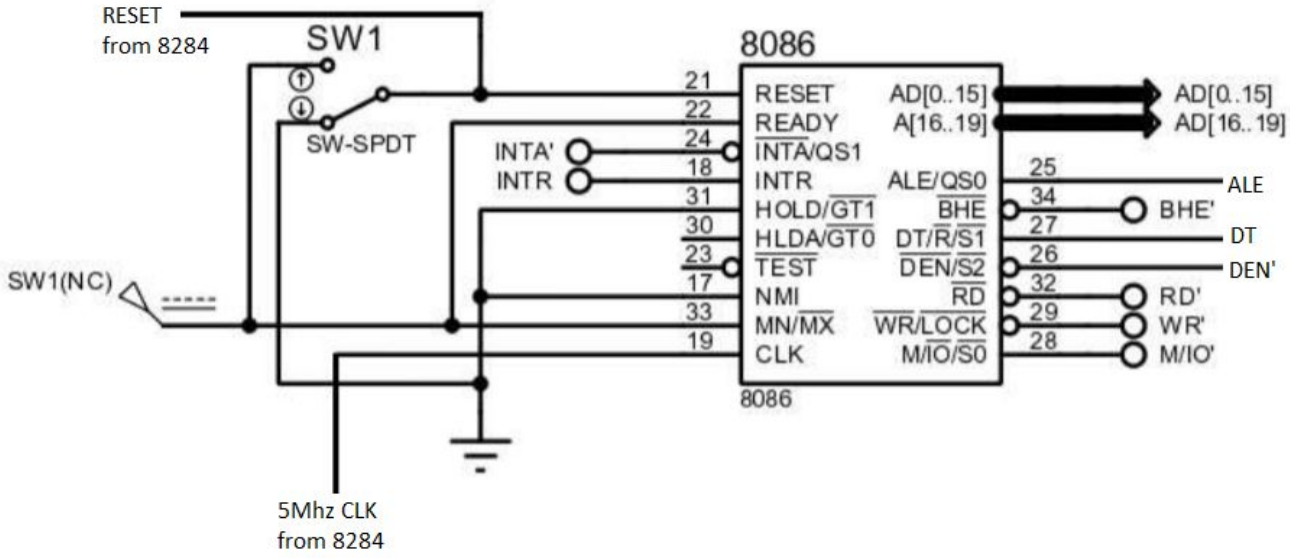
8284 Pin Diagram:

Pin Description of 8284

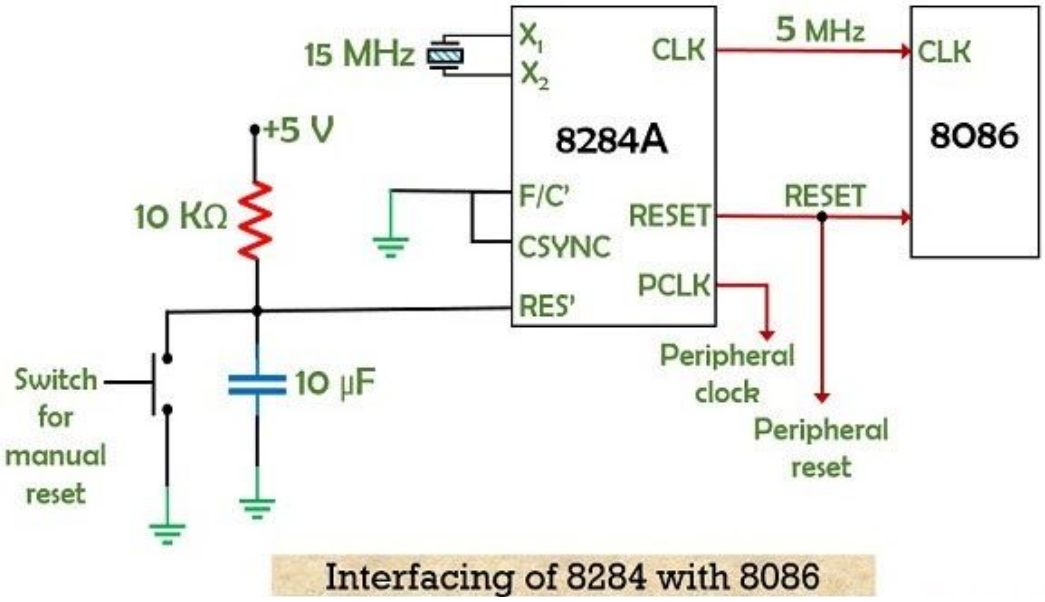


Pin Configuration of 8284

8086:

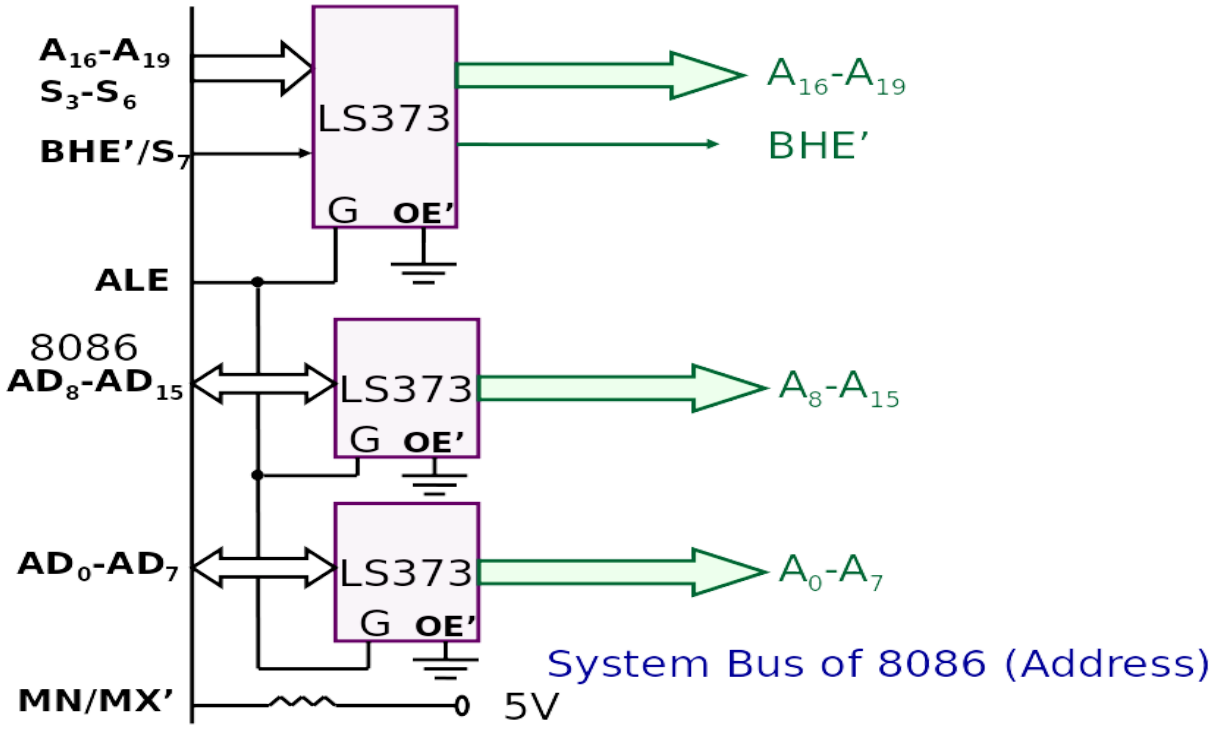


8284 interfacing with 8086:



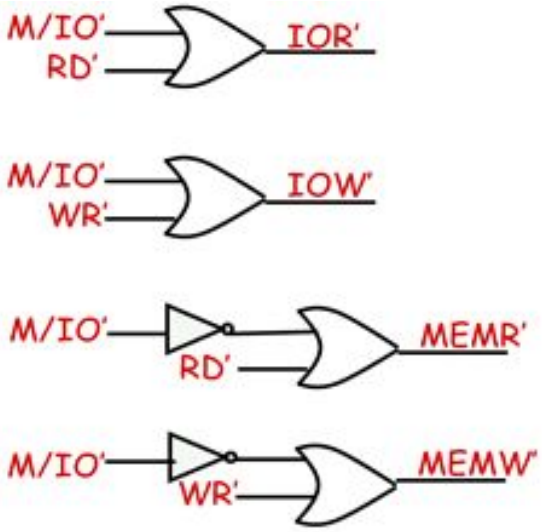
Interfacing of 8284 with 8086

System Bus (Address):



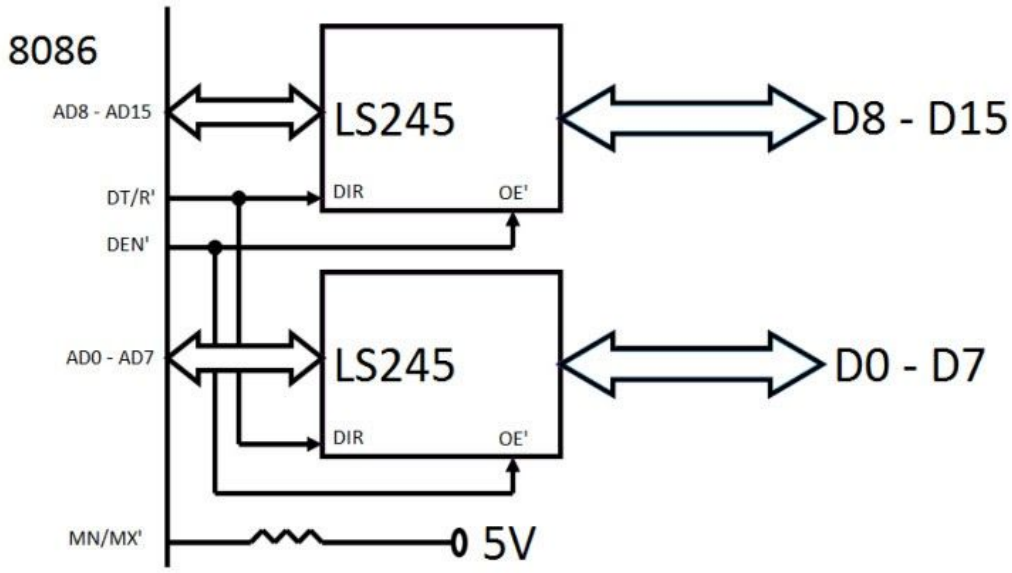
System Bus of 8086 (Address)

Control signals:

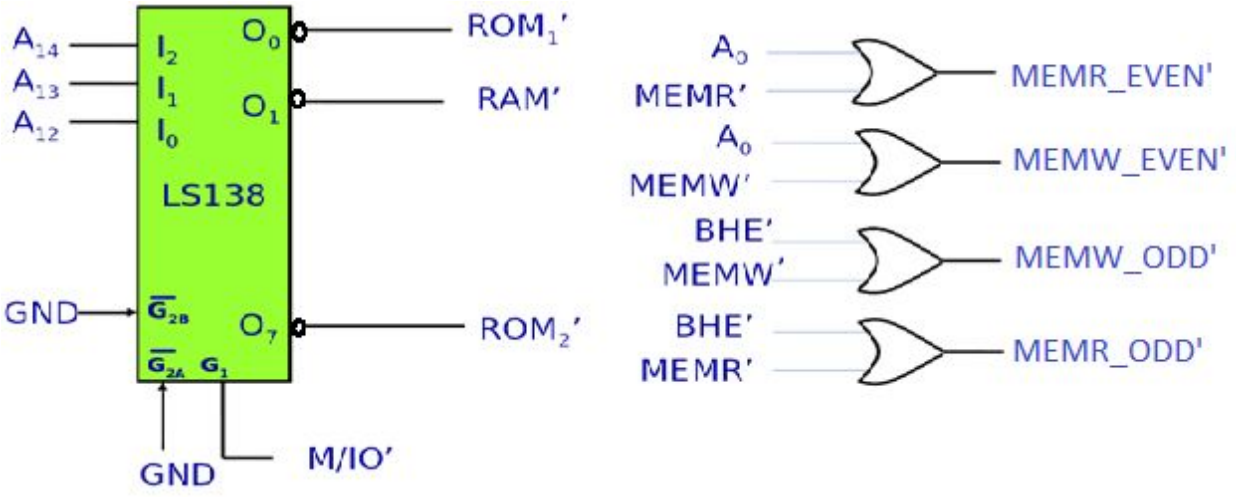


M/IO'	RD'	WR'	Bus cycle
1	0	1	MEMR'
1	1	0	MEMW'
0	0	1	IOR'
0	1	0	IOW'

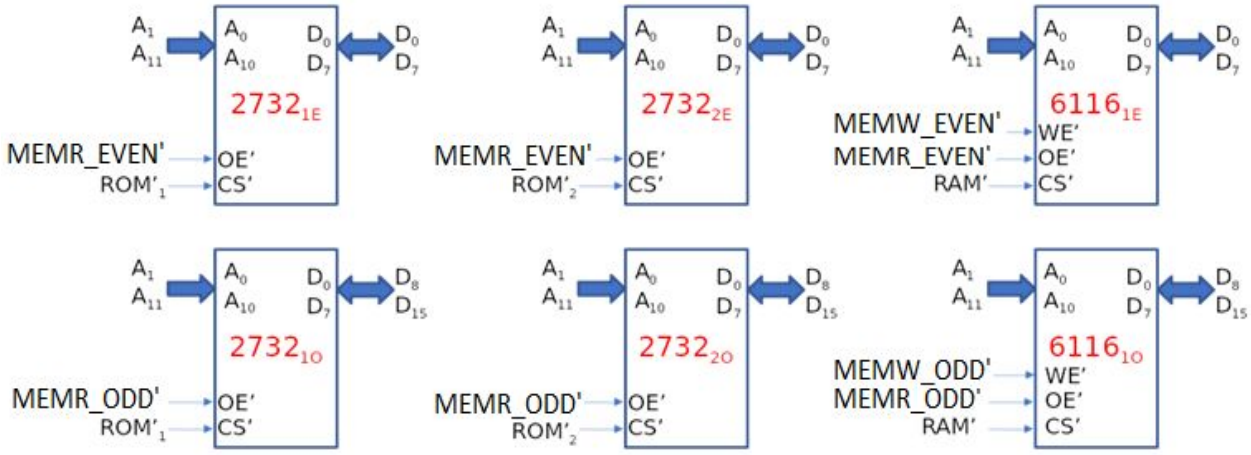
System Bus (Data):



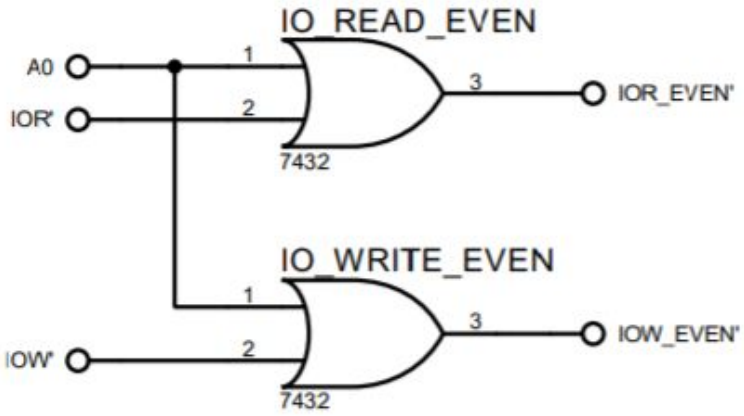
Memory Decoder:

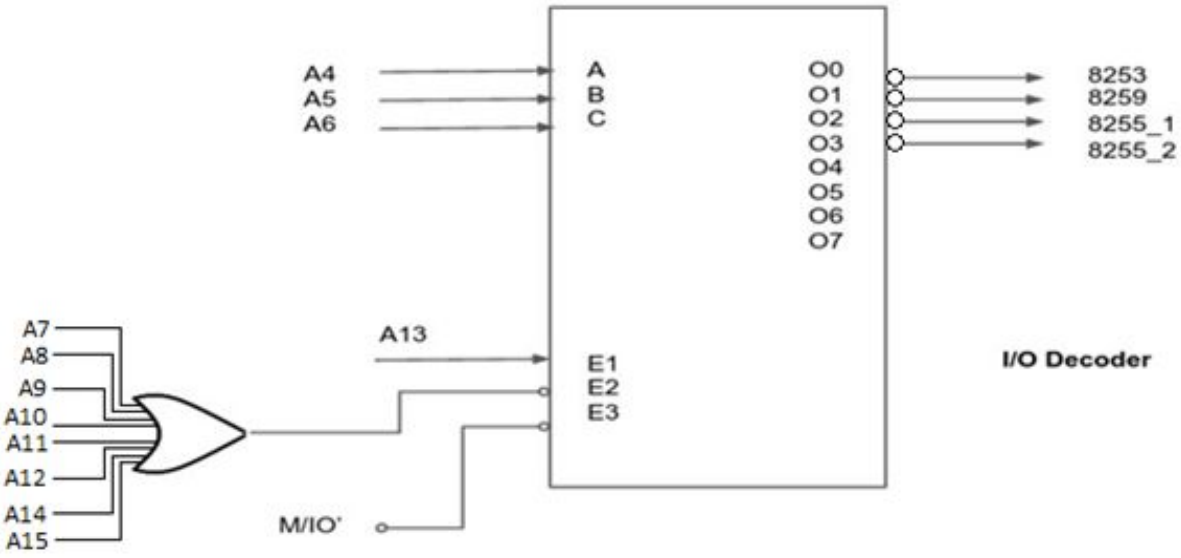


Memory Interfacing:

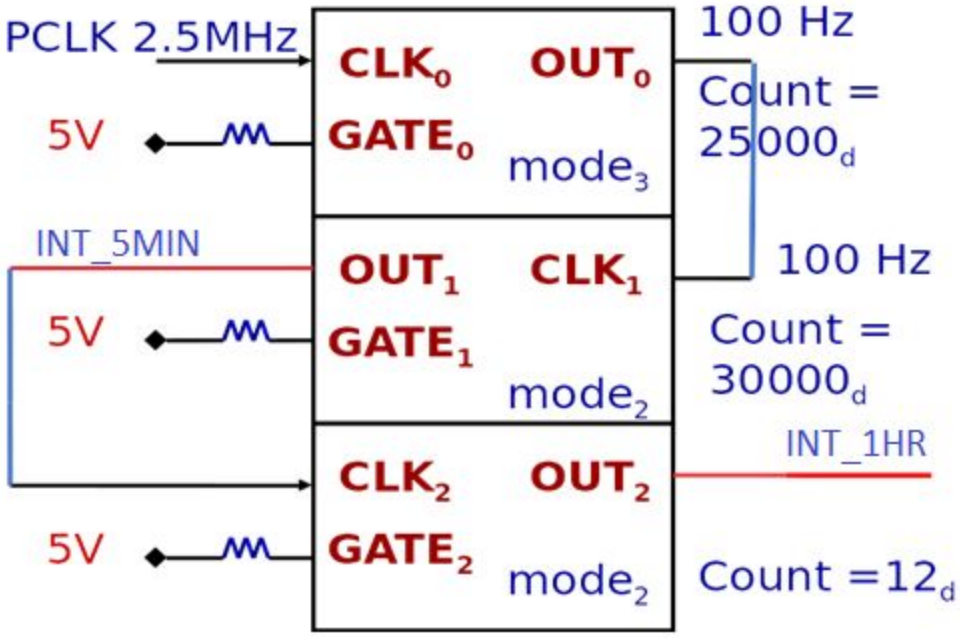


IO Decoder:

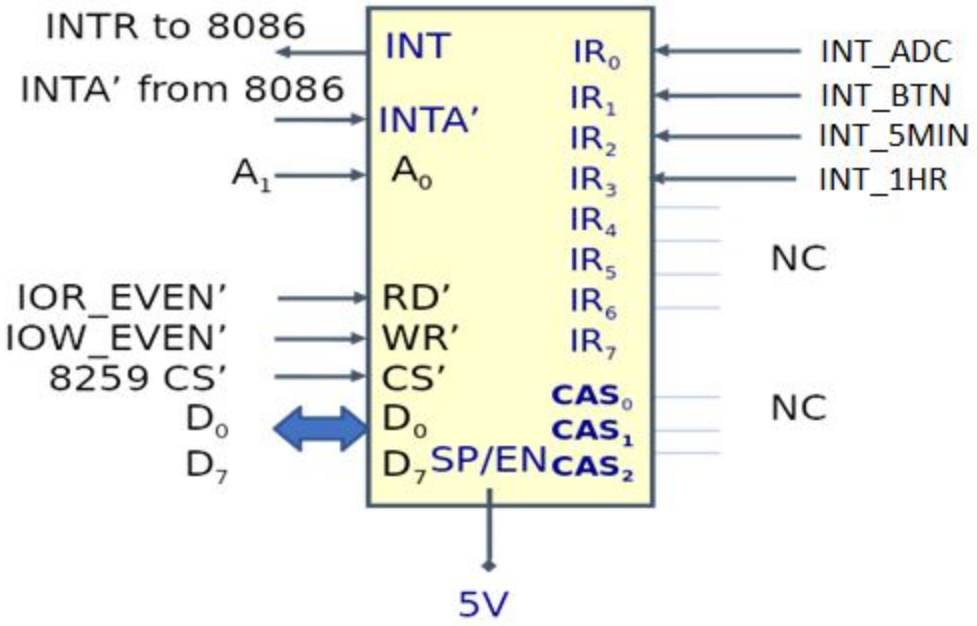

IO_READ_EVEN
A0
IOR'
1
2
3
7432
IOR_EVEN'
IO_WRITE_EVEN
IOW'
1
2
3
7432
IOW_EVEN'


A4
A5
A6
A
B
C
O0
O1
O2
O3
O4
O5
O6
O7
8253
8259
8255_1
8255_2
A7
A8
A9
A10
A11
A12
A14
A15
A13
E1
E2
E3
M/IO'
I/O Decoder

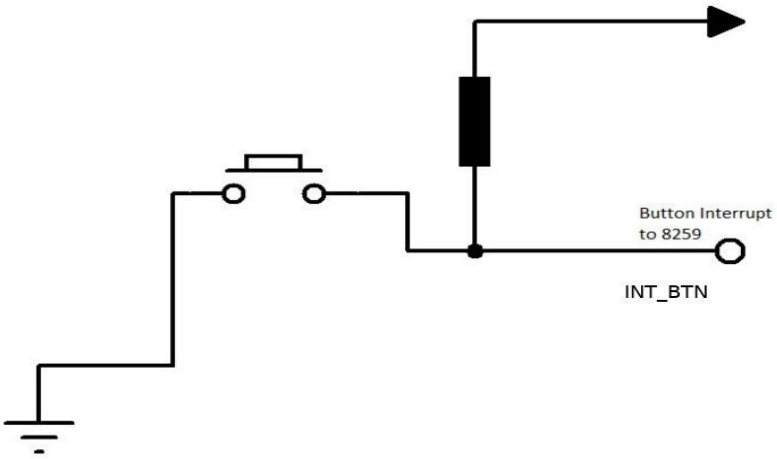
8253A:


PCLK 2.5MHz
CLK0
OUT0
100 Hz
5V
GATE0
mode3
Count = 25000d
INT_5MIN
OUT1
CLK1
100 Hz
5V
GATE1
mode2
Count = 30000d
INT_1HR
CLK2
OUT2
5V
GATE2
mode2
Count =12d

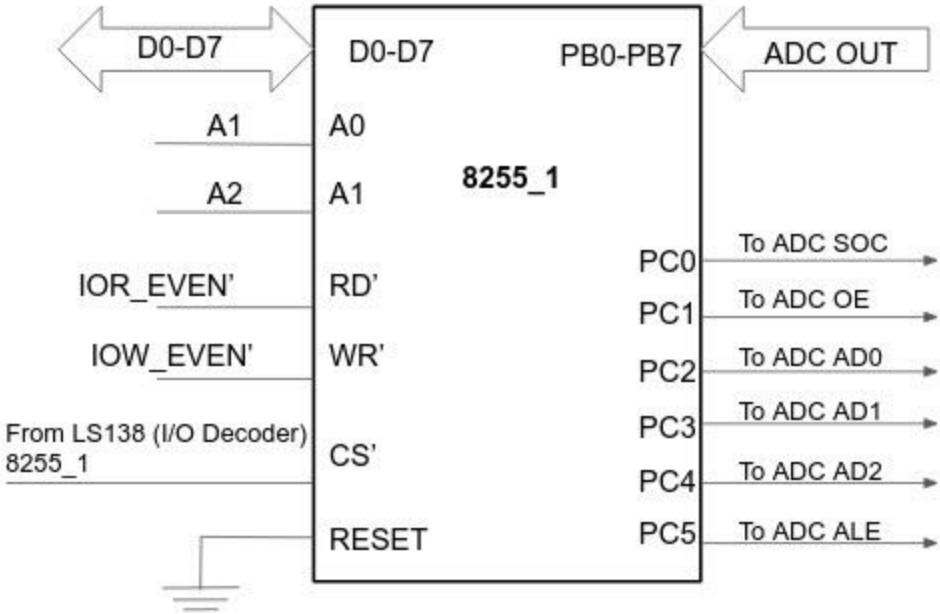
8259:


INTR to 8086
INT
IR0
INT_ADC
INTA' from 8086
INTA'
IR1
INT_BTN
IR2
INT_5MIN
A1
A0
IR3
INT_1HR
IR4
IR5
NC
IOR_EVEN'
RD'
IR6
IOW_EVEN'
WR'
IR7
8259 CS'
CS'
CAS0
NC
D0
D0
CAS1
D7
D7 SP/EN
CAS2
5V

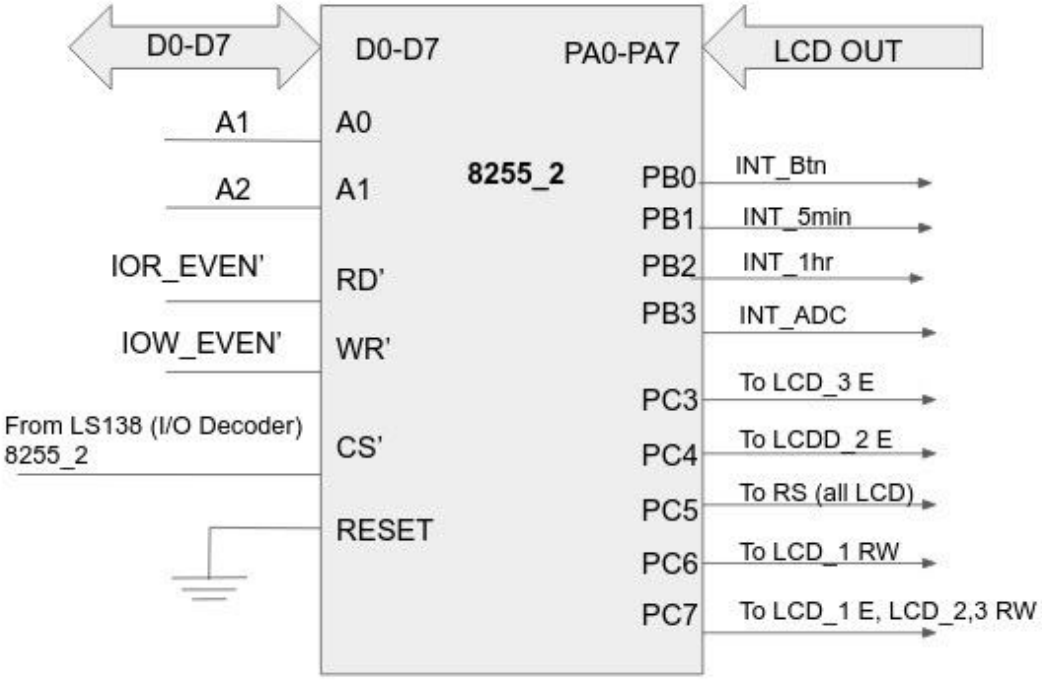
External Button:



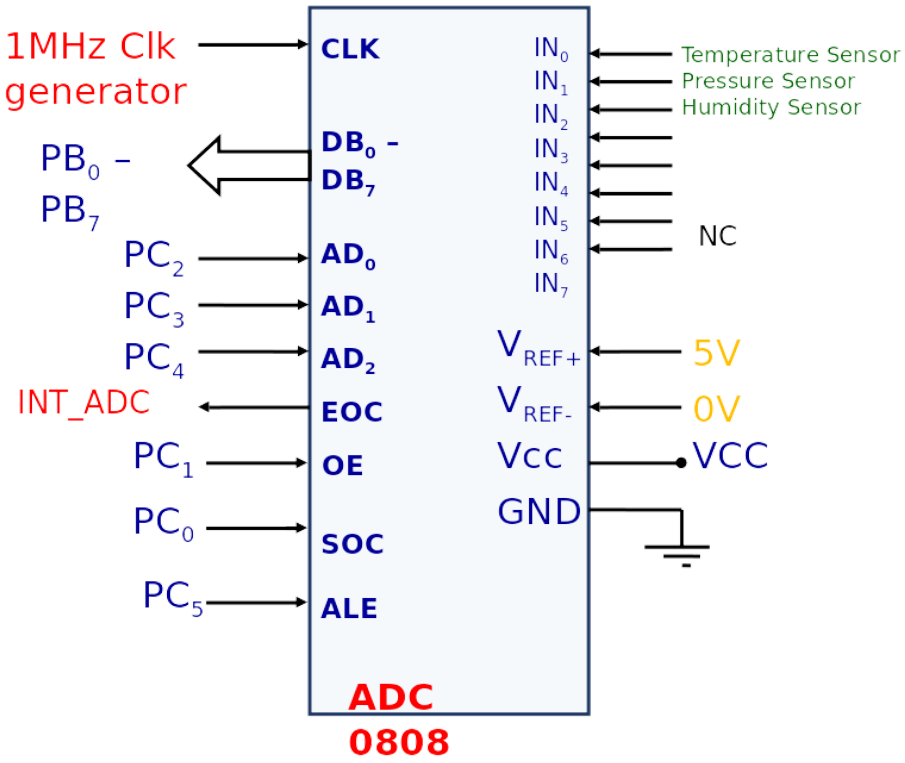
8255 interface with ADC:



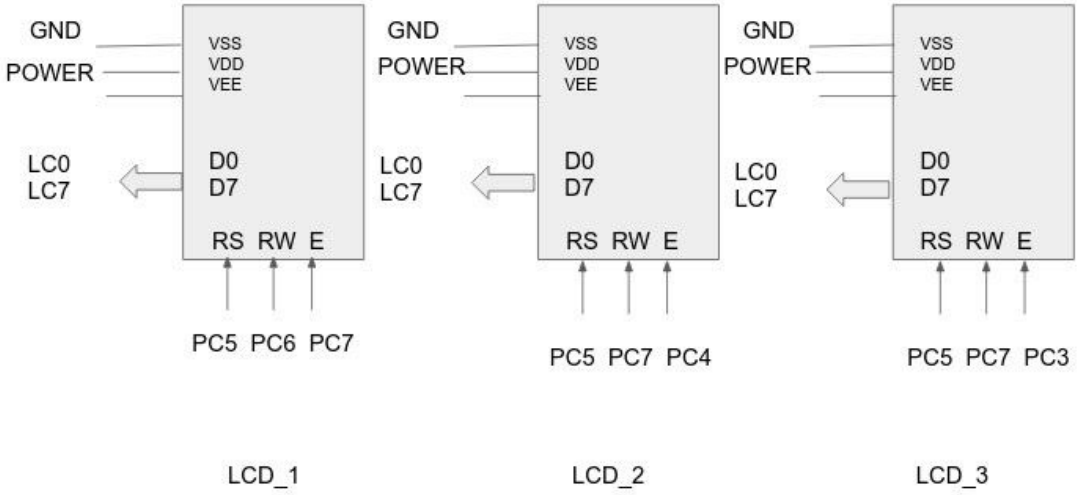
8255 interface with LCD:



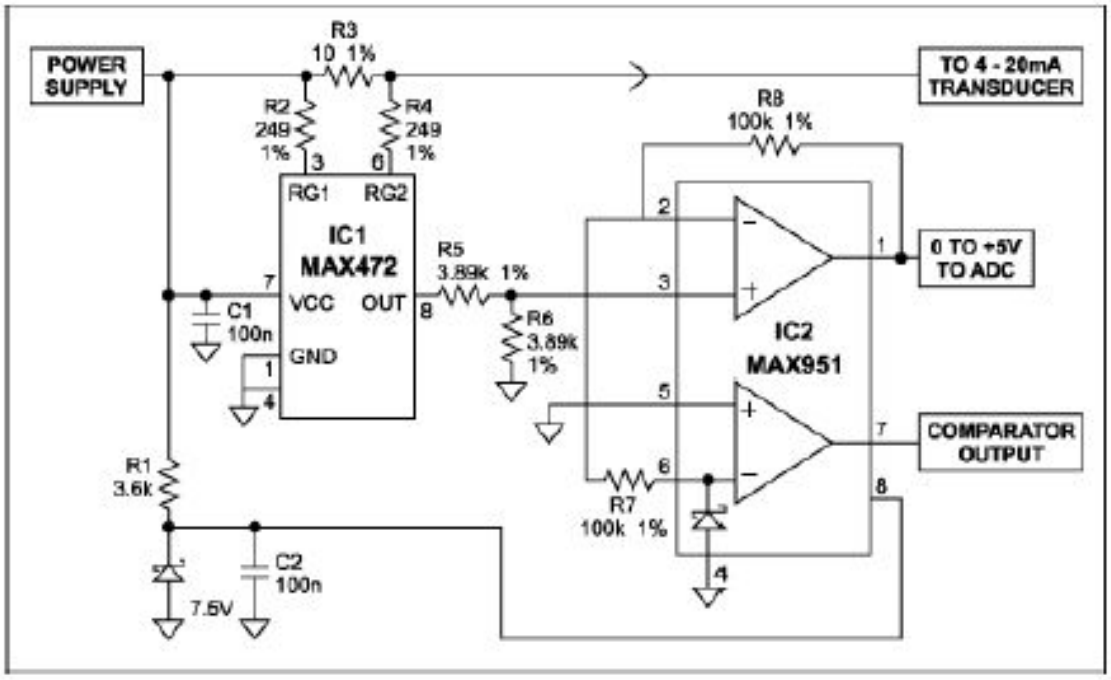
ADC 0808:



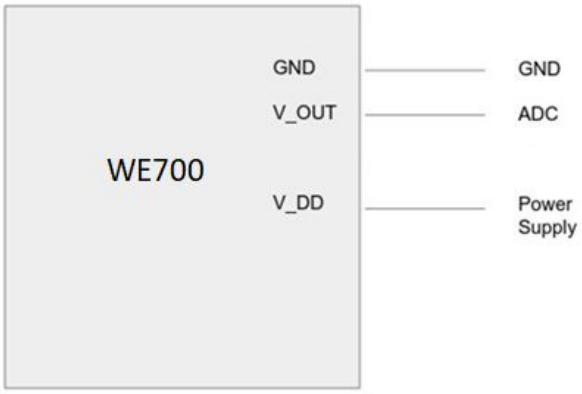
LCD:



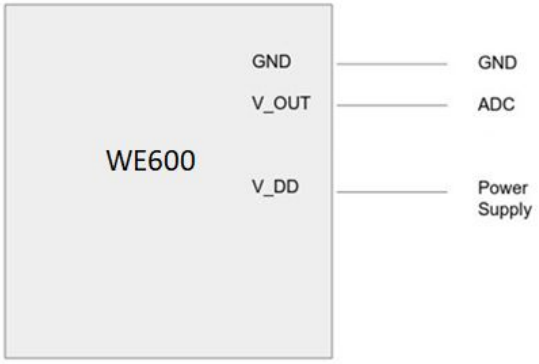
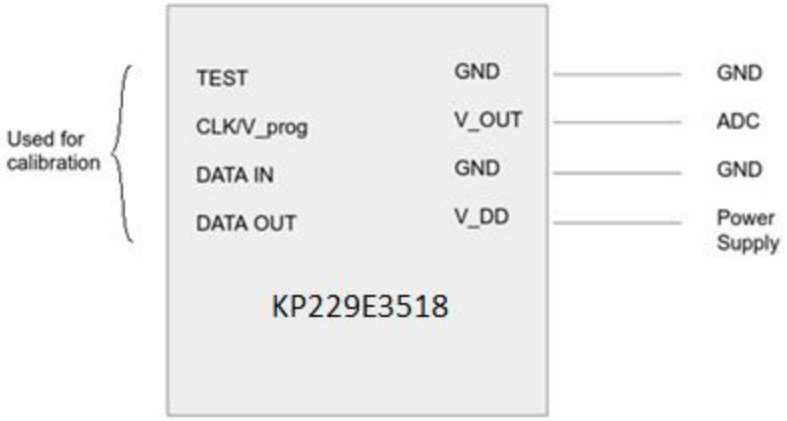
Current to voltage converter:



Temperature Sensor:



Humidity Sensor:



Air Pressure Sensor: