8 Bit Computer Architecture

Bus (8 bits)

Clock

Cstop

Program Counter

PCin
PCout
PCincrement

4 bits (LSB)

Memory Address Register

MARin

Register A

RAin
RAout

4 bits (LSB)

8 bits

4 bits (LSB)

RAM

RAMin
RAMout

8 bits

8 bits

ALU

SRout
SRsubstract

8 bits

Instruction Register

IRin
IRout

8 bits

8 bits

Register B

RBin

4 bits (LSB)

4 bits (MSB)

Instruction Decoder

3 bits

Ring Counter

RCreset

Output Register

ORin

8 bits

8 bits

Digits Display

Digits Display Decoder

8 bits

Display Digit Counter

2 bits