8 bit 8 bit

Read

Instruction Memory

Data Memory

Write

24 24

24 bit

R1

R2

R3

R4

R

MAR

MDR

PC

MBRU

AC

8 bit

10 bit

24 bit

24 bit

24 bit

8 bit

**B Bus**

24 bit

24 bit

24 bit

24 bit

24 bit

Inc.

Fetch

Read

**B Bus**

8 bit

8 bit

24 bit

24 bit

24 bit

24 bit

**Control Unit**

Control Signals

Z

24 bit

24 bit

ALU

4 bit

Control

1 bit

**C Bus**

Mem out

Data in

Inc

Load

PC

Data out

Memory

Load C

Data out

MDR 8 bit register

C in

Load M

Data out

Load

MAR 24 bit register

Data in

Data out

Load

MBRU 8 bit register

Data in

Data out

Load

GPR 24 bit register

Data in

ALU

Load

AC 24 bit register

Data in

Load C

Data out

GPR 8 bit register

C in

Inc