128 bit
64 bit
32 bit
16 bit
8 bit
Byte

Bus

Memory

MR

CLK

SM

Inputs

Outputs

Deduction Machines - processor
We need to connect as many 2716s as possible to form a complete 8088 (as in the figure below). We simplified this problem for a personal computer. In order to populate the address bus, we need to separate the address and data buses.
Figure 10-14: The 74LS138 3-to-8 line decoder and function.
Access Address Logic

(FFFF - FEE0)
(CS2)
(MRD)

(FFFF - FE00)
(CS2)

(FFFF - FE0F)
(CS)

(FFFF - FE7F)
(CS)

(FFFF - FE7E)
(CS)

(FFFF - FEO0)
(CS)

(FFFF - FEE0)
(CS)

(free)

Note: Memory Read