

# Memory Mapping

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## 1 Memory Mapping

- The CPU has an *Address Space*
  - This *Address Space* is the range of addresses the CPU can work with
  - The *Address Space* is defined by the number of lines in the address bus
  - Some of our addresses are used for dealing with memory mapped devices
    - This means the devices is linked to a specific memory location
  - Advantages of memory mapping:
    - Very easy to program by treating the devices as a memory location
  - Disadvantages of memory mapping:
    - You lose certain memory locations the the IO devices
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## 2 The VDU

- SMS32's VDU is a memory mapped device
  - It is technically *Write-Only*
  - It uses the address space from *C0-FF*
  - It accepts hexadecimal bytes
  - It displays the ASCII equivalent character
  - the screen is 4 rows of 16 characters
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