Port, Memory Encyclopedia Article

Port, Memory

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Port, Memory

A **port** memory, also known as **memory**-mapped I/O (**Input and Output**), is, along with port-mapped I/O, a means to connect external devices to a computer's **central processing unit**.

In memory-mapped I/O, each device has a separate address that is mapped into the system memory, along with **random-access memory (RAM)** and **read-only memory (ROM)**. The machine's normal memory **access** instructions enables a device to be activated and used.

An advantage of memory-mapped I/O is that every instruction that can convey information to memory can be used to manipulate an I/O device, such as a **printer** or a monitor. A disadvantage to this mode of operation is that the entire identifying address must be fully decoded for every device. For extensive addresses, this can add to **hardware** costs.