

The bus in the figure defines a single address space. Therefore, to avoid address conflicts, each of the memories and devices attached to the bus must be assigned a unique address range. For example, if we assume the memories are each 1 MByte and the devices each require twelve memory locations, four address ranges can be assigned for use on the bus as Figure 14.12 lists.

Device	Address Range
Memory 1	0x000000 through 0x0fffff
Memory 2	0x100000 through 0x1fffff
Device 1	0x200000 through 0x20000b
Device 2	0x20000c through 0x200017

Figure 14.12 One possible assignment of bus addresses for the set of devices shown in Figure 14.11.

We can also imagine the address space drawn graphically like the illustrations of a memory address space in Chapter 9. However, because the space occupied by a device is extremely small compared to the space occupied by a memory, the result is not very instructive. For example Figure 14.13 shows the address space that results from the assignments in Figure 14.12.

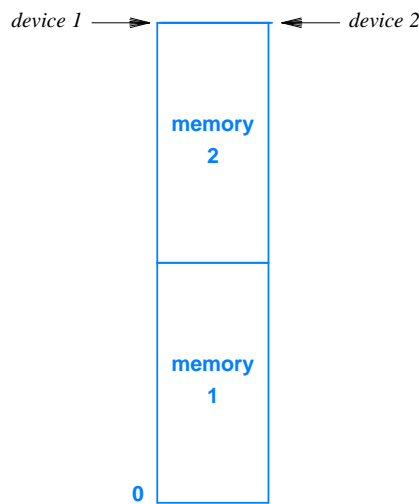


Figure 14.13 Illustration of the address space that results from the assignments in Figure 14.12. The amount of space taken by each device (twelve bytes) is insignificant compared to the amount of space taken by each memory (1 Mbyte).