University of Edinburgh
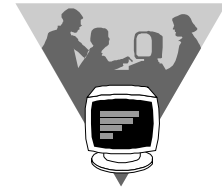
Library Systems Department

Installing Memory in a PC

1 Document Control

1.1 Amendment History

Version	Date	Description	Initials
1.0	14/4/99	Current and Initial Version (awaiting testing)	KM

1.2 Filename Path

Document can be found at the following path:

\\lib-srv4\apps\systems\training\train0009.doc

2   Introduction

This document aims to advise system personnel how to install memory modules on RM machines.   The document has been created for the event of systems upgrading memory.

3   Pre-Requisites

- Appropriate Memory Modules
- Earth Wrist Band
- Phillips Screwdriver.

4   Instructions

Motherboards

The motherboard (or mainboard) is the most important part of the PC. The motherboard is the main circuit board within the computer. All the expansion cards, such as, the video card, sound card, modem and networks cards are "plugged into" the motherboard, through expansion slots (see Fig 4.1). You will find the CPU and ROM chips on the motherboard. The hard and floppy disk drives are also connected directly to the motherboard, via I/O (input/output) slots. One of the most important areas of the motherboard is the memory slots, where memory can be upgraded.

Read Only Memory (RAM)

RAM comes in two types, SIMMS and DIMMs.

<u>SIMM</u>

SIMMS come in 30, 32 or 72 pin types. Some SIMMs need to be installed in certain amounts. For example, you can only install 32 pin SIMMs in groups of four (ie 4 x 8mb SIMMs). The 72 pin SIMM must be installed in pairs if they are being installed on a Pentium processor (ie 2 x 16mb SIMMs). However, they can be installed one at a time on the older 486 boards. You should always have SIMMs of the same speed.

Here are some examples:

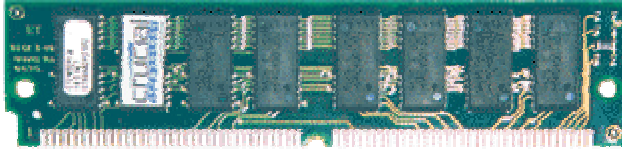<u>30 Pin SIMM (We won't be using these)</u>
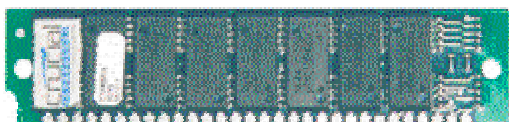
This memory module is no longer in use and is very difficult to get hold of. It was used generally in pre-486 motherboards. We do not have any requirement to purchase or upgrade these in the Library.

70 Pin SIMM (EDO) (We will be using these)

This memory module is the most common SIMM that is still in use. The 72 pin SIMM (EDO) can be found on 486 and Pentium motherboards. You must install this SIMM in equal sized pairs. In the Library, we will be upgrading the RM 85619 computers, which currently have 32mb RAM, to 64mb RAM. We shall do this by installing an additional 2 x 16mb EDO SIMMs.

168 DIMM (We will be using these)
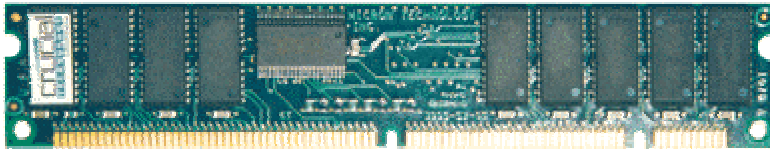
This memory module is now the standard and can be found in most Pentium boards. You do not need to install these modules in pairs, instead they are usually installed one at a time and are generally much easier to install. In the library, we will be upgrading the RM D4243 computers, which currently have 32mb RAM, to 64mb RAM. We shall do this by installing a single 32mb DIMM.

Installing SIMMs and DIMMs

Note: ALWAYS HOLD SIMMs AND DIMMs BY THE EDGES.

SIMMs on 85619 Machines

- Take new SIMMs out of the packaging.
- Plug in the computers power cord, but make sure the socket switch is OFF.
- Remove the screws that hold the case on.
- Remove the case by sliding forward and upwards.

- Secure the Static Wristband to your wrist and clip the crocodile clip to the computer case. This will earth the computer.

- Locate the existing memory, which is usually in banks and look something like those below:
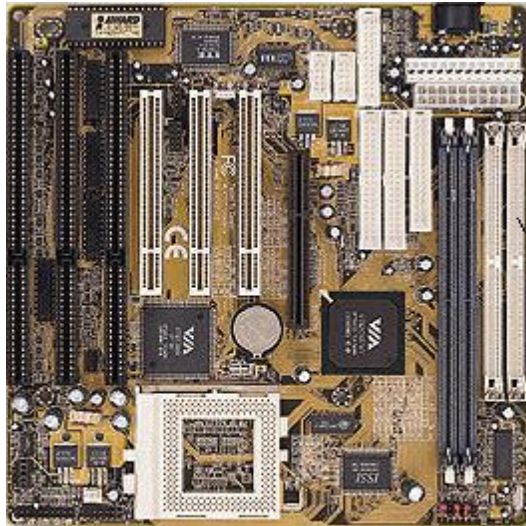
SIMM Slots (there are usually 4 of these in RMs - two will already be used)

- There should be 2 spare slots next to existing memory.

- Insert the memory module into the slot, at about a 45 degree angle and slowly push upward into place. You can only place the module in one way because there is a gap to prevent wrongful insertion. If it doesn't go in, turn it around.

- DO NOT force it in or you'll bend the pins.

- When the SIMM is in place, you may need to pull it backward until it clicks into the plastic tabs.

- Repeat this with the remaining module.

DIMMs on D4243 Machines

- Take new DIMM out of the packaging.

- Plug in the computers power cord, but make sure the socket switch is OFF.

- Remove the screws that hold the case on.

- Remove the case by sliding forward and upwards.

- Secure the Static Wristband to your wrist and clip the crocodile clip to the computer case. This will earth the computer.
- Locate the existing DIMM memory, which is usually in banks and look something like those below:
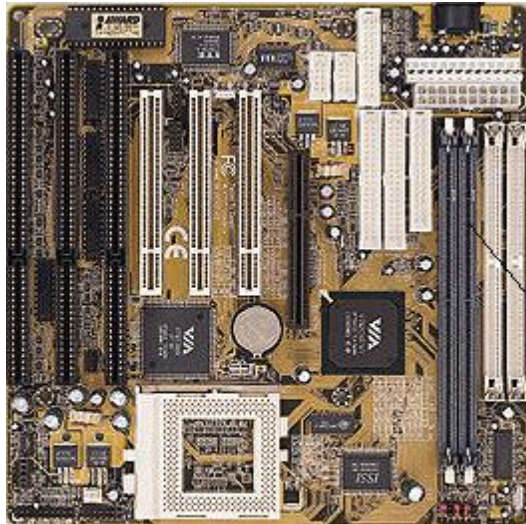
DIMM Slots are located here and are longer than the SIMM slots. There are usually 3 or 4 of these slots. There is 1 × 32mb DIMM in the D4243

- There should be 2 or 3 spare slots for you to put the memory.
- You will notice with the DIMM that there are 2 gaps along the bottom. One near to the end of the module and one near the middle.
- You will also notice that there are 2 filled areas in the slots which correspond with the gaps. Use this these to establish which way round the DIMM goes.
- Pull the two clips (on either side of the DIMM slot) outward.
- Insert the DIMM directly into the slot, pushing firmly.
- Hold in securely by pushing the two clips back into place.

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