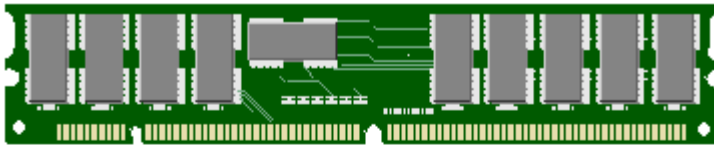
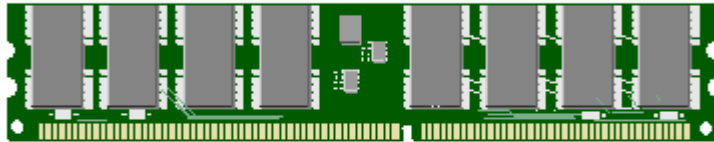


## Memory

168-pin DIMM (FPM, EDO, SDRAM)



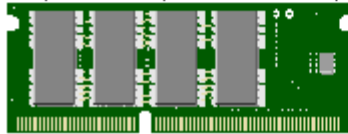
184-pin DIMM (DDR SDRAM)



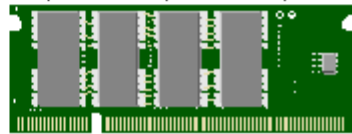
184-pin RDRAM (Rambus) Chips are covered with metal heat sink.



144-pin SODIMM (FPM, EDO, SDRAM)



200-pin SODIMM (DDR SDRAM)



DIMM - Dual In-line Memory Module

Laptops use SO-DIMM - Small Outline Dual In-line Memory Module

SDRAM (Synchronous Dynamic Random Access Memory) has a synchronous interface. It waits for a clock pulse before transferring data and is therefore synchronous with the computer system bus and processor. This greatly improved performance over asynchronous DRAM. Notebook SDRAM modules are usually 144-pin SO-DIMMs

DDR SDRAM (DDR stands for Double Data Rate) sends and receives data twice as often as SDRAM. This is achieved by transferring data on both the rising edge and the falling edge of a clock cycle. DDR memory usually comes in the form of a 200-pin DDR SO-DIMM.

Second generation DDR memory provides greater bandwidth and works on a voltage of 1.8V instead of the 2.5V used by DDR memory modules, DDR2 consumes less power than its predecessor, helping to extend notebook battery life. DDR2 memory modules are 240-pin DDR2 SO-DIMMs.

Memory Speed: Two factors are used for this measurement. 1. The operating frequency and 2. the bandwidth. SDRAM rated PC100 and PC133 work at 100MHz and 133MHz and provide 800MB/s and 1066MB/s bandwidth respectively. SDRAM and DDR/DDR2 SDRAM all use 8-byte (64bit) wide DIMM (transfer 8-byte data per clock cycle).

DDR and DDR2 memory uses different notation. DDR266 memory works at 266MHz, providing 2100MB/s bandwidth (Corresponding to the PC2100 designation). DDR400 memory is called PC3200 for its 3200MB/s bandwidth. The DDR2 533 is also called PC2 4200 or PC2 4300 but 'PC2' is used here to refer to DDR2 instead. DDR2 800 is the same as PC2 6400.

## **Socket Types And Processors**

LGA 775 (Socket T)	Intel	Pentium, Core 2, Xeon and Celeron
LGA 1156 (Socket H)	Intel	Celeron, Core i3, Core i5, Core i7, Pentium, Xeon
LGA 1155 (Socket H2)	Intel	Replacement for LGA 1156
LGA 1150 (Socket H3)	Intel	Replacement for LGA 1156
LGA 1136 (Socket B)	Intel	Core i7, Xeon, Celeron
LGA 2011 (Socket R)	Intel	Replacement for LGA 1136
Socket AM3	AMD	Phenom II, Athlon II, Semperon, Opteron
Socket AM3+	AMD	Same as AM3
Socket FM1	AMD	For AMD Fusion Accelerated Processing Units (APU's)
Socket FM2	AMD	Trinity and Richland APU's
Socket FM2+	AMD	Steamroller APU's (Kaveri and Godavari

## **Server Processors**

Intel Xeon

AMD Opteron

## **Non Server Processors**

Intel Pentium, Core 2, Celeron, Core i3, Core i5, Core i9

AMD Phenom, Athlon, Semperon, Duron, Turion

## **Virtualisation Technologies**

Intel VT-x

AMD AMD-V