TYPES OF SDRAM

SDRAM became industry-standard with the introduction of the Intel Pentium. It uses 133mm-wide dual inline memory modules (DIMMs). Four generations followed: DDR, DDR2, DDR3, DDR4. Each subsequent generation uses the DIMM form factor, but interfaces with a different number of contacts, preventing forward and backward compatibility between them.

Aside from storage size, SDRAM varies in speed, measured in Megatransfers per second. This measurement is meaningless to most users, so in subsequent generations (DDR and newer) the industry nomenclature identifies them by the rounded value of their actual data transfer rate, in Megabytes per second. To identify a DDR commercial name from its standard name, take the 3- or 4-digit number in the standard name, and multiply it by 8 to yield the number in the commercial name.

Table 1.1: SDRAM Module Types

RAM STANDARD	DATA RATE	COMMERCIAL NAME
SDRAM 100	100 MT/s	PC-100
SDRAM 133	133 MT/s	PC-133
DDR 200	200 MT/s	PC-1600
DDR 266	266 MT/s	PC-2100
DDR 333	333 MT/s	PC-2700
DDR 400	400 MT/s	PC-3200
DDR2 400	400 MT/s	PC2-3200
DDR2 533	533 MT/s	PC2-4200
DDR2 667	667 MT/s	PC2-5300
DDR2 800	800 MT/s	PC2-6400

RAM STANDARD	DATA RATE	COMMERCIAL NAME
DDR2 1066	1066 MT/s	PC2-8500
DDR3 800	800 MT/s	PC3-6400
DDR3 1066	1066 MT/s	PC3-8500
DDR3 1333	1333 MT/s	PC3-10600
DDR3 1600	1600 MT/s	PC3-12800
DDR3 1866	1866 MT/s	PC3-14900
DDR3 2133	2133 MT/s	PC3-17000
DDR4 1600	1600 MT/s	PC4-12800
DDR4 1866	1866 MT/s	PC4-14900
DDR4 2133	2133 MT/s	PC4-17000
DDR4 2400	2400 MT/s	PC4-19200