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The Crucial System Scanner takes the mystery out of finding the right RAM

Introduction to DDR-2: The DDR Memory Replacement



Abstract: In this article, PCstats will look at the features and specifications of DDR2 memory, and take a sneak peek at some of its future applications.

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Introduction to DDR-2: The DDR Memory Replacement

Spring is here and things are happening in the computer world. Already there are several [technologies](#) waiting for their promised turn in the spotlight, such as PCI-Express, the BTX form factor, and Intel's next set of chipsets for the [Pentium 4](#). To these you can add DDR-2, an evolutionary upgrade to the current memory standard, DDR-SDRAM.

DDR2 is in fact already here. Companies including [Micron](#), [Crucial](#), [Kingston](#) and [Corsair](#) have already begun shipping [DDR2 memory](#) modules, though there are no desktop applications for it as yet. In this article, PCstats will look at the features and specifications of DDR2 memory, and take a sneak peek at some of its future applications, like the upcoming Intel i915P 'Alderwood' and i925X 'Grantsdale' chipsets.

What is DDR2? Well, it's a new memory standard, as defined by JEDEC (Joint Electronic Engineering Council), whose members include many of the major [computer memory](#) manufacturers. [JESD 79-2A](#) to be exact. DDR2 picks up where DDR memory cu

While you might have seen reviews of recent video cards with DDR2 memory, these [cards](#) is actually a separate type developed specifically for the video cards different to the 'desktop' DDR2 memory we are now exploring.



[DDR2-SD](#)
evolution:
DDR mem

Shown above is a pair of 256MB modules of DDR2 PC4300 RAM (533MHz) from [Crucial](#) same core memory. DDR2 modules have 240-pins, compared to the 184-pins of DDR, meaning they are not backwards compatible.

64 bits of cycle for a twice that of the front-side bus (FSB) of a [computer system](#), and an effective bus speed x 8.

Of course, DDR2 introduces some new features which allow it to ramp up to much higher bandwidth) and higher memory densities, all the while good doesn't it? Let's look at the 'big' facts first, before we explore the memory uses a new form factor, a 240 pin DIMM (Dual Inline Memory Module) which is current DDR [memory slots](#). Upcoming chipsets by Intel and other manufacturers specifically, and are not backwards compatible.



In terms of speed, DDR2 will start up where DDR memory left off, at 400MHz (DDR PC3200). DDR2 will also be available at 533MHz DDR, 667MHz DDR and 800MHz

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