

Learn about DDR5 RAM: The new standard for RAM

The following article will help readers answer some of the big questions surrounding this latest RAM standard, such as when DDR5 will be released, whether DDR5 RAM is worth buying or how DDR5 is better than DDR4.

News of another DDR has been announced, generating great interest from both technology enthusiasts and experts. At this point, many tech forums are constantly posting posts about the specifications of the latest types of RAM. For this reason, **TipsMake.com** decided to make a comprehensive review of DDR5 and what it offers from a consumer perspective.

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Performance of DDR5 RAM

Information on DDR5 lasted until early 2018, however, there was not much to talk about performance until earlier this year.



RAM DDR5

Compare DDR4 and DDR5

Developers are promising some impressive figures for DDR5. A lot of information is cited that the latest RAM modules will double the performance of current DDR4-3200 RAM. Moreover, DDR5 will be able to reach at least 6400MHz in consumer options.

The following table outlines some of the details users can expect from the latest module.

DDR4 Features **DDR5 Advantages of DDR5** Data rate 3200Mhz 4800-6400mhz Increase performance and bandwidth VDD / VDDQ / VPP 1.2 1.1 Lower power Device density 16GB up to 64GB Monolithic devices larger than Prefetch 8n 16n Keep inner core clock low CRC Write Read / write Enhance system RAS by protecting read data Burke length (string) BL8 BL16, BL32 Allows fetching 64B cache lines (group of adjacent bytes in buffer memory) with only one DIMM (subchannel).

As you can see, DDR5 offers a much higher data rate, lower overall power consumption, higher density per bar and burst BL16 when all paired together shows potential. The real power of this hardware.

The data rate is one of the better improvements compared to DDR4, which actually allows an increase in effective bandwidth by 1.36 times (when comparing DDR4 with DDR5 at 3200MHz). If you do the same math with the higher-speed DDR5 (4800Mhz), the result is almost double what DDR4 has to offer.

There are other benefits to DDR5 including two independent 40-bit channels per mode, improved command bus efficiency, etc.

DDR5 release date

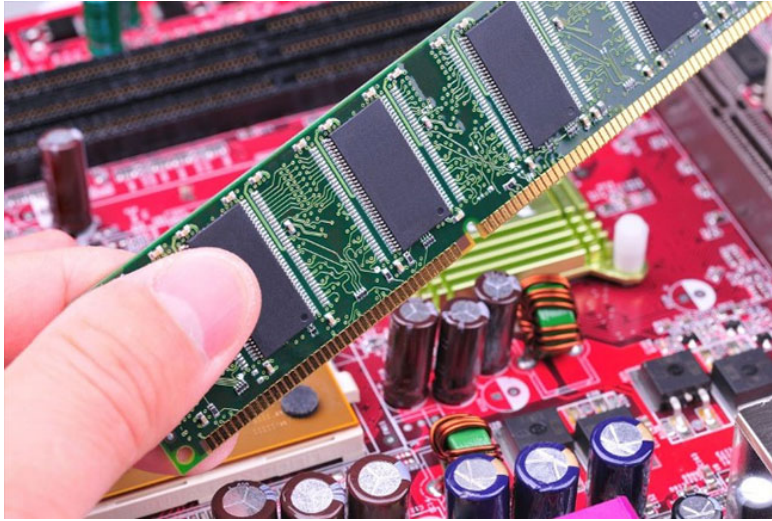
Back in March 2017, JEDEC announced that DDR5 will be released in 2018. By November 2018, SK Hynix has finally announced its first DDR5 compliant RAM module, which will be available for consumers in 2020.

Pricing and availability of DDR5

There is always much speculation about new hardware prices and DDR5 is no exception. At the moment there is no exact information about the price of DDR5 but it is likely to be higher than DDR4.

It is predicted that 25% of total sales of the memory market will be held by DDR5 in 2020 and by 2021, the expected increase is more than 40%.

Is DDR5 worth buying?



Whether or not to buy DDR5 RAM depends on the price

This is a big question. It all depends on how much these modules will cost when they are released.

For years, upgrading RAM was probably the least effective way to increase performance in the system. However, since the release of AMD's new CPU & APU hierarchy, that's no more.

AMD CPUs thrive when paired with higher-speed RAM, which means the arrival of DDR5 6400Mhz will be welcome, especially when the new Ryzen 3000 chip is available. There is no complete information on which hardware will be fully compatible with the new modules, so the best thing now is to wait patiently.

Above is everything we currently know about DDR5 RAM. It will be interesting to see the real improvements coming from this new fast memory deployment into the system in the future.

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