

# Compare DDR3 and DDR4

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## General data about DDR3 and DDR4

### DDR3

1. Launched: 2007
2. Maximum capacity: 8GB per module
3. Operating voltage: 1.5V
4. Lowest speed: 800 million transfers per second (MT / s)
5. Latency: 12.5 milliseconds

1. Launched: 2014
2. Maximum capacity: 16GB for each module
3. Operating voltage: 1.2V
4. Speed: 1600 million MT / s
5. Hysteresis: 12.75 milliseconds

The best way to visualize DDR3 and DDR4 is to treat them like Windows versions, rather than competing products. DDR stands for '**Double Data Rate**' and is a standard. Despite the diversity among the different brands, each brand will comply with the standard. The numbers refer to the version of the standard, with DDR4 being the latest version. Although the RAM types often look the same, remember that you should stick with a brand when replacing RAM.

DDR3 and DDR4 standards use different battery packs in motherboards, so DDR3-compatible motherboards will not be compatible with DDR4 and vice versa. Any computer manufactured from 2007 to 2013 will only be compatible with DDR3 and probably DDR2. For any computer made in 2014 or later, you will need to refer to the computer manual.

This question mostly comes up when you argue about replacing an old device or reusing it for purposes like running a print server or maintaining a home network, in which case you might consider. Replacing DDR2 RAM with DDR3 in certain circumstances.

# Advantages and disadvantages of DDR3

## Advantages:

1. Low price
2. Popular
3. Can improve the speed of old equipment

## Defect:

1. Not compatible with some CPUs.
2. May require an application and driver upgrade.
3. The motherboard will need a DDR3 battery configuration to work.
4. Will become harder to find over time.

Just like DDR3 and DDR4 have an incompatible battery design, the same holds true for DDR2 and DDR3. However, there are a number of motherboards that have slots for both, typically found in computers manufactured around 2007, when DDR3 first appeared. Whether you can upgrade or not will be determined by the motherboard in the device.

There are benefits to upgrading if you can do so. Keep in mind that your CPU will need to be compatible with DDR3, and not all applications and tools you use are built to support it. But it can help you keep an older device working longer and is worth considering in specific situations. However, DDR3 will become harder to find as it becomes increasingly obsolete.



DDR3 and DDR4

# Advantages and disadvantages of DDR4

## Advantages:

1. Fastest RAM available
2. Maximum module size
3. Will work with all current motherboards

## Defect:

1. Higher price
2. Performance will depend on the CPU
3. To be replaced by 2020

Replacing DDR3 with DDR4 is usually not an option. A small number of motherboards support both chipsets, but they are rare and often not used in consumer devices to reduce costs.

The main problem with DDR4 is that it is about to be replaced. JEDEC Electronics Design Council, a unit that controls the DDR standard, announced that the fifth version of the standard, DDR5, will be available to manufacturers by 2020, two years after the It was planned for the first time. While DDR4 RAM will still be used, this will begin to dwindle by 2020 in high-end products to consumer-grade devices.

## Final conclusion

Whether you upgrade RAM or not will depend on some very specific cases. However, if you're considering whether to upgrade an old device or exchange it for a new one, it's probably better to wait.

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