

Will NVIDIA GeForce RTX 3000 make 4K gaming on PC a 'new normal'?

The leap to 7nm process seems to play an important role in helping NVIDIA to affirm its position in the market of general-purpose graphics cards.

Recently, a series of media channels and YouTube have leaked information about the power of upcoming graphics cards from NVIDIA, GeForce RTX 3000. Most of this information revolves around the GA102 GPU, in theory, will be the company's most powerful gaming GPU Ampere, expected to equip the RTX 3080 Ti.



At the moment, though only in the form of engineering samples - rows of samples, this GPU clocked up to 2.2 GHz with computing power up to 21 TFLOPs. The vRAM memory of this graphics card will also have bandwidth of up to 864 GB / s, 40% higher than the 616 GB / s of RTX 2080 Ti. Of course, this graphics card will support the latest PCIe 4.0 standard to ensure users can take full advantage of it. Intel users will probably have a hard time, wondering whether to upgrade the graphics card when the RTX 3000 is released or wait for Rocket Lake - S, Intel's first CPU series supporting PCIe 4.0, to be sold. out.

With the impressive clock rate of GA102, it is expected that lower-range GPUs such as GA103 and GA104, used on the RTX 3080 or 3070 series, may have clock speeds up to 2.5 GHz. With more power than the previous generation and 7nm process, playing games at 1080p and 1440p may cause CPU bottlenecks because the amount of GPU frame can be exported is too much for the CPU to up the script in time. Ampere GPUs will make 4K gaming a "new normal" thing. Thanks to technology leaps, from 12nm to 7nm, RTX 3080 Ti is up to 40% more efficient than its predecessor RTX 2080 Ti and up to 70% in most games on the market. .



Meanwhile, in Ray Tracing technology, the number of RT cores will remain unchanged. However, NVIDIA will optimize them for better performance. The difference in performance can be up to 4 times that of the current Turing generation. As a result, even mid-range graphics cards like the RTX 3060 will be able to achieve a temporary FPS level when Ray Tracing is enabled.

The cooling design of the RTX 3000 Founders Edition series seems to change a lot when increasing the number of fans from 2 to 3. However, NVIDIA will still keep the square design of the very popular RTX 2000. Not only that, electricity Power consumption will also be greatly improved as even the RTX 3080 Ti only needs 2 8-pin power pins. DLSS 3.0 technology promises to be also greatly improved compared to the current 2.0 version.

According to the information received, gaming graphics cards equipped with GPU Ampere will be released in the third quarter of this year. According to NVIDIA tradition, it is possible that the RTX 3080 Ti, RTX 3080 and RTX 3070 will hit the shelves first. Meanwhile, the mid-range and popular graphics cards (from RTX 3060 and below) will be released later.

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