Bench Tests

Since 2017 or so, I've been running **GeekBench** statistics on most machines I've custom built or buy pre-built. Since GeekBench measuring standards updates fairly often, I always have a level set where I've got a device benched in the latest version and the previous version. Everything is proportional, so I can make some assumptions that way. I also will run renders on whatever machines I have available to me every few months to see which performs best. It's a good level set.

You'll notice that I don't run a Maxon based Cinebench because I don't do a lot of 3D work and Apple devices don't have NVIDIA GPUs so they cannot be evaluated for CUDA. In general, dollar for dollar, Windows boxes out perform Apple here to a massive degree. I will run Cinebench to evaluate if a media server is having issues with a GPU, or if I'm just curious.

Latest and Greatest Render Tests (ca. 2024)

128,000,000 pixel source composition grid file, split into 5 renders of different sizes. This resolution in exponential K is closest to 16k, but if you measure by number of 1920x1080 that fit into it, it's the equivalent of about 61k.

Competition

- M3 Max Mac OS Sonoma with 16-Core CPU and 40-core GPU / 128GB Ram / 2TB / w/ 500GB Cache
  - GeekBench 6 Single-core: 3193 / Multi-core: 21393 / Compute: 154180
- M1 Max Mac OS Sonoma with 10-core CPU and 32-core GPU / 64GB Ram / 4TB w/ 400GB Cache
  - GeekBench 6 Single-core: 2438 / Multi-core: 12769 / Compute: 120302
- Boxx Win 10 Pro Intel i9-12900K 16-Core (24 logical) 2x RTXA4000 16GB / 128GB Ram / 2TB OS / 4TB w/ 450GB Cache on a secondary internal M2
  - GeekBench 6 Single-core: 2684 / Multi-core: 15422 / Compute: 121267

Results

The M1 out-performed the Boxx machine by a factor of 2:1 when initially rendering these files out of After Effects directly to Apple Pro Res 422. Frame rendering into an image sequence (PNG, TIFF, etc) performed at the same proportion. If I wanted to re-assemble those breakouts into combination files, the Boxx machine outperforms the M1 by a factor of 2:1. The M3 functioned

proportionally to that.

As expected, rendering as a bench test is variable based on what you’re rendering. Even if it’s as simple as combining files or splitting them up. That the M1 outperforms the Boxx in any rendering bench is very good. For most of the last two decades, you’d never see an Apple device do this.

Running splits or “tiles” of rendered content via FFMPEG, the M3 outperforms the M1 and the Boxx by a factor of 2.5:1 in some cases. Pretty wild.

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