

Gaming PC Project

Step 1: Research and Planning: During this phase, I had a fair understanding on which components were required and which specific components I wanted. I encountered a website named [PCPartPicker](#) that allowed me create a list of the parts I wanted while making sure all the parts were compatible with each other.











Component	Selection
CPU	 Intel Core i7-13700K 3.4 GHz 16-Core Processor
CPU Cooler	 Corsair iCUE H100i ELITE CAPELLIX 75 CFM Liquid CPU Cooler
Motherboard	 MSI PRO Z790-P WIFI ATX LGA1700 Motherboard
Memory	 G.Skill Trident Z5 RGB 32 GB (2 x 16 GB) DDR5-6000 CL36 Memory
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Storage	 Samsung 980 Pro 1 TB M.2-2280 PCIe 4.0 X4 NVME Solid State Drive
Video Card	 Gigabyte GAMING OC GeForce RTX 4080 16 GB Video Card
Case	 Corsair 4000D Airflow ATX Mid Tower Case
Power Supply	 Corsair RM1000e (2022) 1000 W 80+ Gold Certified Fully Modular ATX Power Supply
Monitor	 LG 27GL83A-B 27.0" 2560 x 1440 144 Hz Monitor

Figure 1: My Gaming PC Components

Step 2: Assemble the PC: Install the CPU, RAM, motherboard, PSU, storage, GPU, and cooling system. Pay attention to cable management.

This step was the most challenging, yet, entertaining of them all. I had to watch multiple YouTube videos to make sure I was doing the right things while cross referencing the information obtained from the videos to the one provided by the manual of each specific component.



Figure 2: Pre-assembly picture of PC Components

Even though many people that build custom PCs decide to ignore the wire management step which can be tedious, I decided to do my best during this step to have a clean work space. A good wire management will help the builder during future upgrades of the system.



Figure 3: Before Wire Management



Figure 4: Post Wire Management

Step 3: Power On and Test: Turn on the PC and check the BIOS/UEFI to ensure all components are recognized.

This step involved turning on the PC for the first time before installing Windows. This was the “scariest” part about the build since the first time turning it on is where one will find out whether everything was properly connected. Fortunately, everything worked out for me and all I had to do was change the RAM settings to the maximum of 6,000 MHz.

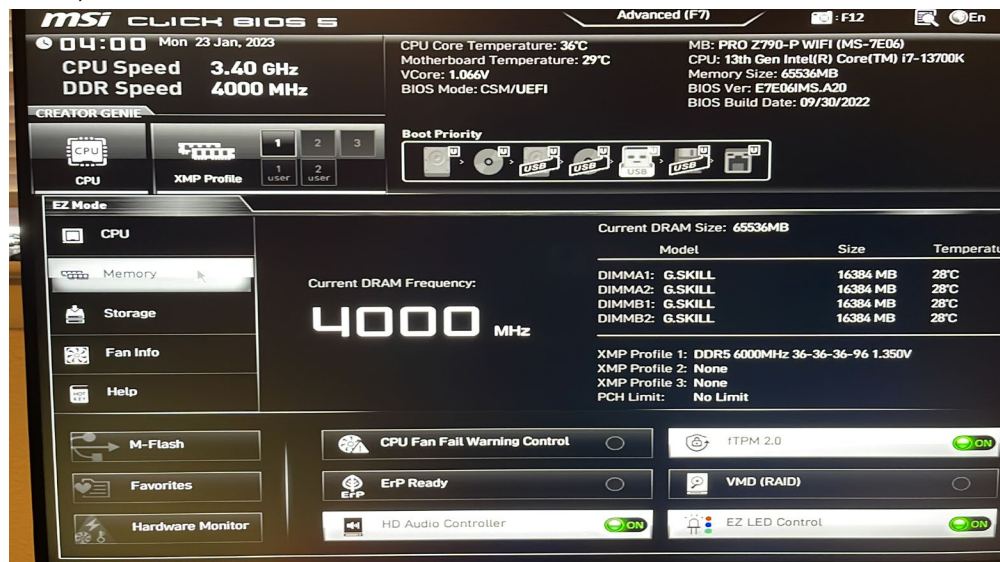


Figure 5: BIOS

Step 4: Install Operating System: Use a USB drive or optical disk to install your OS. Install Drivers and Updates. Optimize Settings: Adjust the BIOS/UEFI and OS settings for best performance.

For this final step, the only challenge I encountered was installing Windows 10, since I was trying to install it from a MicroSD card on an adapter, it would not work and it involved doing some more research to figure out that it had to be done with a USB using a specific format (FAT32).

Even though it is not necessary to update the BIOS after doing a PC build, I decided to update it to increase compatibility with any software.

Results:



I was completely satisfied with the results of this project. I was able to put in practice what I learned through videos and manuals to build an outstanding system that will outperform most other systems for years to come. I added an extra personal touch to the build with the Spiderman Funko-Pop since he's my favorite Marvel Superhero.