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r/buildapc • 5 yr. ago
marcinbogdanski



Multi-GPU (seven) RTX 3090 workstation, possible? - build critique request

I'm looking to build a new multi-gpu 3090 workstation for deep learning. My original idea was to go with Threadripper 3960x and 4x Titan RTX, but 1) NVidia released RTX 3090, and 2) I stumbled upon this [ASRock motherboard with 7 PCIe 4.0 x16 slots](#). I'm reasonably comfortable building PCs and DIY, but server stuff is a bit new and I'm worried I'm missing something obvious, hence this post.

The requirements (driven by the nature of compute I'm doing):

- NVidia GPUs with largest possible memory - but not Tesla/Quadro
- approx 4 cores / 8 threads and 32GB mem per GPU
- fit as many GPUs into the rig as possible - compute across PCs is more tricky

The build:

• [ASRock DOME8-2T Motherboard](#)

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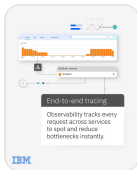
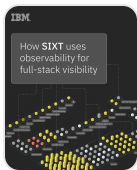


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sowoky • 5y ago

You don't want 3090(ga102), you want big ampere, ga100. The pie version is called "A100" They are quite different actually. Ga102 spends area on things gamers need, ga100 is much bigger and spends area on compute needs.

For some compute tasks ga102 may be fine, but for some it will be severely limited.



5

[Skip to main content](#)[Log In](#)**DanPlaysVGames** • 5y ago

This is the most absurdly cool compute build I've seen in a while, wow!

You should really consider the proper server approach to this. Redundant power supplies, RAM should be bought as a kit not in single sticks for validation (and that RAM is listed as "Sample" and not in production yet). EPYC and Threadripper use the same physical socket, SP3, so cooler's good.

Really consider talking to a sub like [r/homelab](#). While HPC isn't really their subject, they know a thing or two about putting parts in racks without killing 20K in electronics.

Edit: This is more like 30-40K in electronics, holy shit. Not even Puget has/will have a workstation like this AFAIK.



3

**jigglybrick** • 5y ago

Agree, this is going to be expensive even if it's DIY. If this is for work and not home, maybe look at a proper server: <https://www.supermicro.com/en/Aplus/system/4U/4124/AS-4124GS-TNR.cfm>

I'm not certain about the 3090, but that box will take 8x P100/V100's so it doesn't seem unreasonable.



3

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**immoralcombat** • 5y ago

7 gpu? Of cos heat will be a problem !



2

**pancakelover48** • 5y ago

Honestly everything looks pretty good only thing I would change is the 2 1600 watt psu there are some psus now do all the way up to 2000 watts and that should be enough for 4 GPUs and your cpu.



1

**AnomalyNexus** • 5y ago

Tell me heat won't be a problem...

At this scale you might as well get a split unit & cool the entire room down. Probably will need to anyway given how much heat this is going to pump out haha



1

**zrgardne** • 5y ago

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lolilover9002 • 5y ago

You should build it and send it over to me to test to see if it works

1

1 reply ▾

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r/buildapc • 2 yr. ago

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5070 ti Gaming Rig Help

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r/pcmasterrace • 1 mo. ago

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r/nvidia • 24 days ago

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r/buildapc • 19 days ago

Is upgrading from a 3070 to a 4080 really worth it if my current setup still performs well?

170 upvotes · 80 comments



r/buildapc • 11 days ago

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6 upvotes · 10 comments



r/pcmasterrace • 15 days ago

Thinking of upgrading my PC to RTX 5090, would my CPU & RAM be an issue

1 upvote · 12 comments



r/buildapc • 2 mo. ago

Just purchased my build! 9800x3d with RTX5080 Zotac solid oc

1 upvote · 6 comments



r/Prebuilts • 3 mo. ago

Is this 5080 pre-built good?

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Can someone break this down for me? RTX 5080 paired with Ryzen 7 9800X3D paired with 1080p monitor

48 comments



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Upgrading From A 3080

6 upvotes · 47 comments



r/nvidia • 4 mo. ago

My mini 5090 PC build begins.

8 comments



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