Server Builds

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Z490 OMV Server

Z490 Server Parts List and Cost

The parts used int he Z490 server build for OMV are all brand new. This entire system could have been built for much less if I sourced the parts out better or bought used parts. This build (just like any build) is completely subjective to whatever the use case may be. I plan to use this for Emby streaming and several other docker services. It will do the job just fine.

Case:

Rosewill RSV-L4412U 4U Rackmount Server Chassis

This case has 12 SATA hotswap bays and tons of room for cable management. It fits a wide range of motherboard sizes. Maximum holding: 12" x 13" E-ATX; 12" x 9.6" ATX, 11.2" x 8.2" Mini-ATX. It has 2 front USB ports. 1 x USB 3.0 and 1 x USB 2.0.

Price: $359 plus tax and shipping. Total $381.55



Motherboard:

The motherboard was bundled with the CPU when I bought it. ASUS Prime Z490-P Micro ATX. It only has 4 on board SATA ports. Supports up to 128GB RAM with an LGA 1200 CPU socket. Dual M.2 slots, 11 DrMOS power stages, HDMI, DisplayPort, SATA 6 Gbps, 1 Gb Ethernet, USB 3.2 Gen 2, Thunderbolt 3 support.

Price: Motherboard and CPU bundle was $369.99 plus tax. Total $392.19



CPU:

Intel Core i5-10600K. 6 Cores, 12 threads up to 4.8 GHz Unlocked. LGA1200 socket. Again part of a bundle on Amazon.

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CPU Cooler:

Noctua NH-L9i. Ultra-compact low-profile cooler with only 37mm total height – ideal for HTPCs, ITX and Small Form Factor builds.

Price: $44.95 plus tax. Total $48.22

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RAM:

Crucial 32GB Kit (16GBx2) DDR4 2666

Price: $164.98 plus tax. Total $174.88

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SATA Controller:

Rivo PCIe 6 Port SATA Card with 6 SATA Cablesx2. Fully programmable on-chip transceivers support SATA, at 6 Gb/s and are backward compatible to 1.5 Gb/s and 3 Gb/s. Built-in support for SATA Port Multipliers with FIS-based switching ensures maximum performance. Provide a one-lane PCIe 2.0 interface and SATA controller functions.

Price: $66.88x2 plus tax. Total $141.78

PSU:

Seasonic PRIME Fanless TX-700. 700 watts, 80 PLUS TITANIUM, FULL MODULAR, 12 YEAR WORRY-FREE WARRANTY.

Price: $264.99 plus tax and shipping. Total $288.88

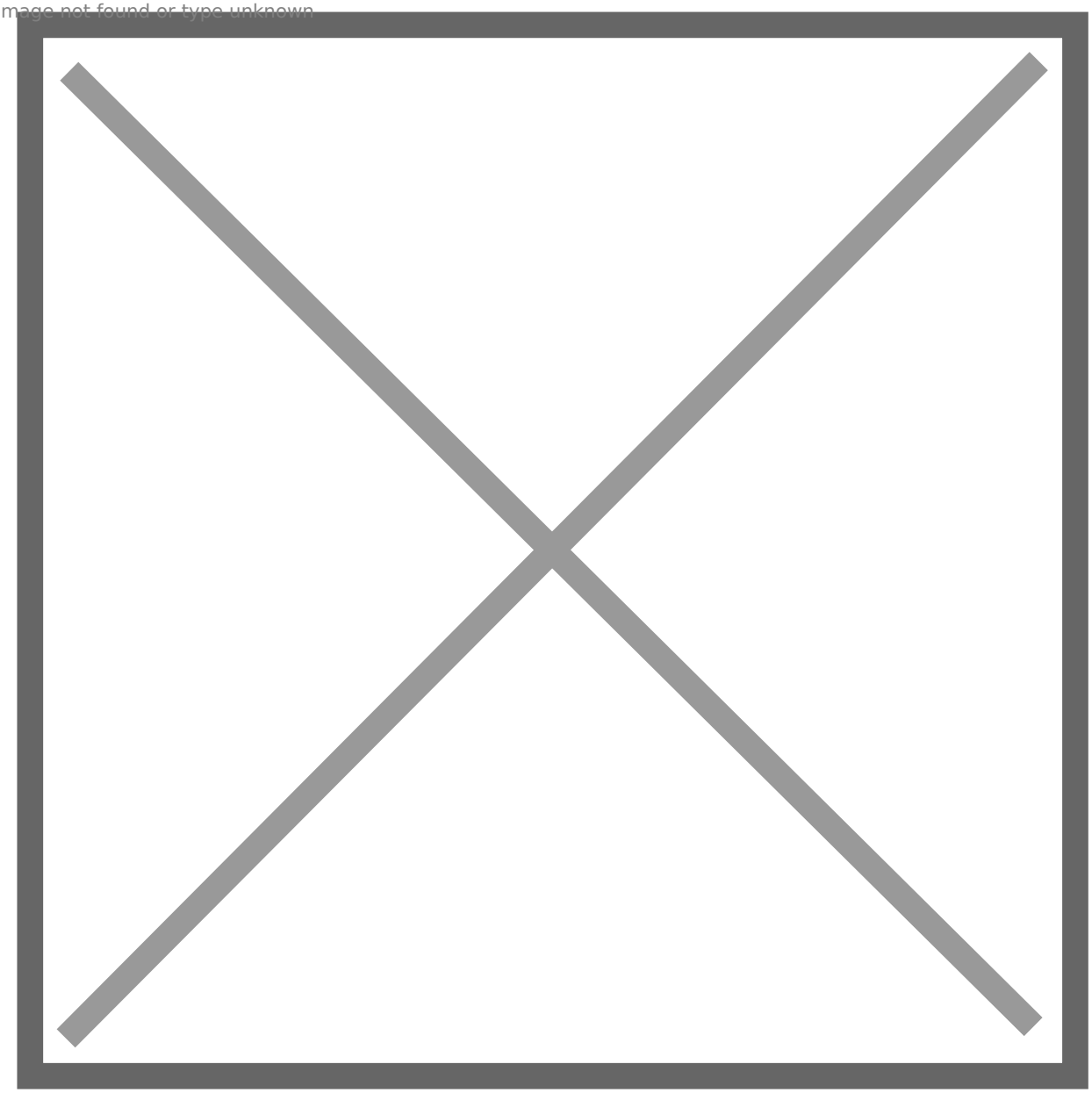
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Total price: $1,427.50

Z490 Photo Gallery

The Z490 Server photos and cable management. For details about the parts, please see the Z490 Parts List and Cost.

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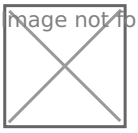


What a stringy mess! But a beautiful mess at that.

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This small CPU cooler is such a blast! I'm keep temps in the low 30C range consistently.



CPU cooler box just for referencing later.



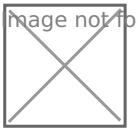
Ready for installing OMV. Where is my iodd?



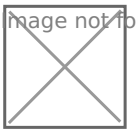
Ah yes, there you are! If you don't have an iodd, add it to your Christmas wishlist. These things are so underrated!



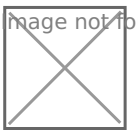
Install successful now to install Glances to check those CPU temps! Then tidy up those cables.



All the hot-swap drive bays! Mmmmmm yes!



Morerrrre!



Temps are doing good but I'll let it run for an hour to make sure. Click here for a closer look.

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Clean, minimal setup. Nothing too fancy.

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Cables look good. I like the cross bar on this case for helping tidy up the cables. It really does make this case/chassis clean up well!

Why no LSI card? Well, I did think about it but I already had these SATA cards. I may switch to one in the near future but most cards I could find were 8 port cards I need at least 12. That and LSI cards are not cheap by any means. Data transfers are not any faster so I really can’t justify the cost. All I’d really get out of it is a bit more cable management and less frustration if a drive were to fail.

if I were doing much more data transfer intensive work, I would have went with a hardware RAID setup. I don’t feel like it’s something our household needs at this point however.

https://www.youtube.com/embed/Kpbntzk9hPY