

# Custom PC Build

**CPU:**

Model - Xeon Platinum 8180M (2x)  
Socket - LGA 3647  
Lithography - 14nm  
Cores - 28  
Threads - 56  
Base Clock - 2.50 GHz  
Turbo Clock - 3.80 GHz  
Cache - 38.5 MB L3  
TDP - 205 watts  
PCIe Lanes - 48

CPU Total - Aprox. \$26,022.00

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**Motherboard:**

Model - ASUS WS C621E Sage  
Socket - Dual LGA 3647  
Chipset - Intel C621  
On board GPU Chipset - Aspeed AST2500 with 64MB VRAM

Motherboard Total - Aprox. \$561.04

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**GPU:** (PCIe not NVLink)

Model - Tesla V100 (4x)  
Interconnect Bandwidth - 32 GB/s  
Memory - 32 GB HBM2 Memory  
Memory Bandwidth - 900 GB/s

GPU Total - Aprox. \$36,000.00

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**RAM:**

Model - Kingston ValueRAM 32GB 2133MHz DDR4 ECC  
Modules - 32GB Per Stick (12x) for 384GB Total System RAM

RAM Total - Aprox. \$4936.92

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**Power Supply:**

Model - Platinum Conversion 2200W Power Supply  
Wattage - 2200 watts

Power Supply Total - Aprox. \$172.99

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**Case:**

Model - Rosewill RSV-L4500 - 4U Rackmount Server Case

Case Total - Aprox. \$112.99

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**Solid State Drive:**

Model - Intel DC P3608 SSDPECM040T401

Connection Type - PCIe 3.0

Capacity - 4TB

Read - 5 GB/s

Write - 3 GB/s

SSD Total - Aprox. \$4889.39

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**Mechanical Hard Drive:**

Model - Lenovo PM1633a (5x)

Connection Type - SATA (2.5" Form Factor)

Capacity - 15.36TB

Read - 1200 MB/s

Write - 900 MB/s

HDD Total - Aprox. \$100,541.05

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**CPU Heatsink(s):**

Model - Supermicro 2U Active CPU Heat Sink (2x)

CPU Heatsink Total - \$84.10

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Hardware Grand Total - \$173,320.48

Cinebench Score - 8000

Geekbench CUDA Test (Single V100) - 320031 Aprox. (743537 via SXM2/NVLink)

Links:

Motherboard. - [https://www.newegg.com/Product/Product.aspx?Item=N82E16813119064&ignorebbr=1&nm\\_mc=KNC-GoogleAdwords-PC&cm\\_mmc=KNC-GoogleAdwords-PC-\\_-pla-\\_-Motherboards+--+Server-\\_-N82E16813119064&gclid=CjwKCAjw8uLcBRACEiwAaL6MSVWYlgx71IGYqpdwbX4vNhXmxE8GtV1adPMC0Y9QQuTBOtVCxz2njhoCKEoQAvD\\_BwE&gclsrc=aw.ds](https://www.newegg.com/Product/Product.aspx?Item=N82E16813119064&ignorebbr=1&nm_mc=KNC-GoogleAdwords-PC&cm_mmc=KNC-GoogleAdwords-PC-_-pla-_-Motherboards+--+Server-_-N82E16813119064&gclid=CjwKCAjw8uLcBRACEiwAaL6MSVWYlgx71IGYqpdwbX4vNhXmxE8GtV1adPMC0Y9QQuTBOtVCxz2njhoCKEoQAvD_BwE&gclsrc=aw.ds)

CPU - [https://ark.intel.com/products/120498/Intel-Xeon-Platinum-8180M-Processor-38\\_5M-Cache-2\\_50-GHz](https://ark.intel.com/products/120498/Intel-Xeon-Platinum-8180M-Processor-38_5M-Cache-2_50-GHz)

GPU - [https://www.dihuni.com/shop/server-components-cpu-gpu-memory-ssd-etc/nvidia-tesla-v100-gpu-32gb-hbm2-volta-cuda-pcie-for-accelerated-machine-deep-learning-artificial-intelligence-finance-oil-gas-cad-physics-research-iot/?gclid=CjwKCAjw8uLcBRACEiwAaL6MSdJMtYA534-VYFjT0OholwpNhMpJEyK-a\\_Y89oMrfWdDUZn79sUFqhoC1FkQAvD\\_BwE](https://www.dihuni.com/shop/server-components-cpu-gpu-memory-ssd-etc/nvidia-tesla-v100-gpu-32gb-hbm2-volta-cuda-pcie-for-accelerated-machine-deep-learning-artificial-intelligence-finance-oil-gas-cad-physics-research-iot/?gclid=CjwKCAjw8uLcBRACEiwAaL6MSdJMtYA534-VYFjT0OholwpNhMpJEyK-a_Y89oMrfWdDUZn79sUFqhoC1FkQAvD_BwE)

RAM - <https://www.amazon.com/Kingston-ValueRAM-2133MHz-KVR21R15D4-32/dp/B017WDZ3IQ>

Power Supply - [https://www.newegg.com/Product/Product.aspx?Item=9SIAC5F6UN3964&ignorebbr=1&nm\\_mc=KNC-GoogleMKP-PC&cm\\_mmc=KNC-GoogleMKP-PC-\\_-pla-\\_-Power+Supplies-\\_-9SIAC5F6UN3964&gclid=CjwKCAjw8uLcBRACEiwAaL6MSYBwKAcOKto5-8LkSsBuUviNjCzPZelzQsTRF6hFewe5OGaoLiYj1xoCdQMMAvD\\_BwE&gclsrc=aw.ds](https://www.newegg.com/Product/Product.aspx?Item=9SIAC5F6UN3964&ignorebbr=1&nm_mc=KNC-GoogleMKP-PC&cm_mmc=KNC-GoogleMKP-PC-_-pla-_-Power+Supplies-_-9SIAC5F6UN3964&gclid=CjwKCAjw8uLcBRACEiwAaL6MSYBwKAcOKto5-8LkSsBuUviNjCzPZelzQsTRF6hFewe5OGaoLiYj1xoCdQMMAvD_BwE&gclsrc=aw.ds)

Case - [https://www.newegg.com/Product/Product.aspx?Item=N82E16811147164R&cm\\_re=e\\_atx\\_open\\_case-\\_-11-147-164R-\\_-Product](https://www.newegg.com/Product/Product.aspx?Item=N82E16811147164R&cm_re=e_atx_open_case-_-11-147-164R-_-Product)

SSD - [https://www.newegg.com/Product/Product.aspx?Item=9SIA67S77M3943&ignorebbr=1&nm\\_mc=KNC-GoogleMKP-PC&cm\\_mmc=KNC-GoogleMKP-PC-\\_-pla-\\_-Solid+State+Disk+--+Enterprise-\\_-9SIA67S77M3943&gclid=CjwKCAjw8uLcBRACEiwAaL6MSam3LgE26\\_ucc8YWP9IPeGKfWYRMIUxbeZgY\\_RYOvDKl\\_4AQq\\_z8ahoC\\_bYQAvD\\_BwE&gclsrc=aw.ds](https://www.newegg.com/Product/Product.aspx?Item=9SIA67S77M3943&ignorebbr=1&nm_mc=KNC-GoogleMKP-PC&cm_mmc=KNC-GoogleMKP-PC-_-pla-_-Solid+State+Disk+--+Enterprise-_-9SIA67S77M3943&gclid=CjwKCAjw8uLcBRACEiwAaL6MSam3LgE26_ucc8YWP9IPeGKfWYRMIUxbeZgY_RYOvDKl_4AQq_z8ahoC_bYQAvD_BwE&gclsrc=aw.ds)

HDD - <https://nebumax.com/Products/Overview/?id=M017922547>

CPU Heatsink - <https://store.supermicro.com/2u-active-cpu-cooler-x11-snk-p0068aps4.html>

PCIe vs SXM2 - <https://www.nextplatform.com/micro-site-content/achieving-maximum-compute-throughput-pcie-vs-sxm2/>