Why Build A PC?

Not having to travel and carry my computer with me

Apple products are too restrictive and lack versatility

I wanted enough performance to build out labs, software and virtual environments (Docker, Vmware, password cracking, etc…)

Chose hardware that is compatible with Linux (Ubuntu)

Enough power to handle many connected devices

Technology

AMD Processor - New chipsets offer great value (lots of performance without a high price tag), but they are not available

Graphics Card - While I don't game, I wanted an Nvidia card for password cracking and video editing/exporting. RTX 30 series is awesome, but not available

Storage - You can just never have enough storage

USB - Be certain the motherboard has all/most of the USB standards

RAM - Max it out. I want to run Slack, Teams, Discord, Chrome and multiple VMs at the same time

What I Built

Power supply was $249

MyPC - Threadripper

Edit Part List | Edit Details | Delete

Component	Selection		Price	
CPU		AMD Threadripper 3960X 3.8 GHz 24-Core Processor	$1411.00	Buy
CPU Cooler		Fractal Design Celsius S24 87.6 CFM Liquid CPU Cooler	$131.26	Buy
Motherboard		Asus Prime TRX40-Pro ATX sTRX4 Motherboard	$472.94	Buy
Memory		G.Skill Trident Z RGB 256 GB (8 x 32 GB) DDR4-3600 CL18 Memory	$1399.99	Buy
Storage		Samsung 970 Evo Plus 1 TB M.2-2280 NVME Solid State Drive	$164.99	Buy
Video Card		Asus GeForce GTX 1080 Ti 11 GB Turbo Video Card	$749.99	Buy
Case		Cooler Master MasterCase H500 ATX Mid Tower Case	$119.99	Buy
Power Supply		be quiet! Straight Power 11 1200 W 80+ Platinum Certified Fully Modular ATX Power Supply	No Prices Available	Buy
Custom		Sonnet Allegro Pro USB 3.1 PCIe (USB3-PRO-4P10-E)	$139.99	Buy

Total (Not Yet Purchased): **$3700.17**

Total (Purchased): **$889.98**

Total: **$4590.15**

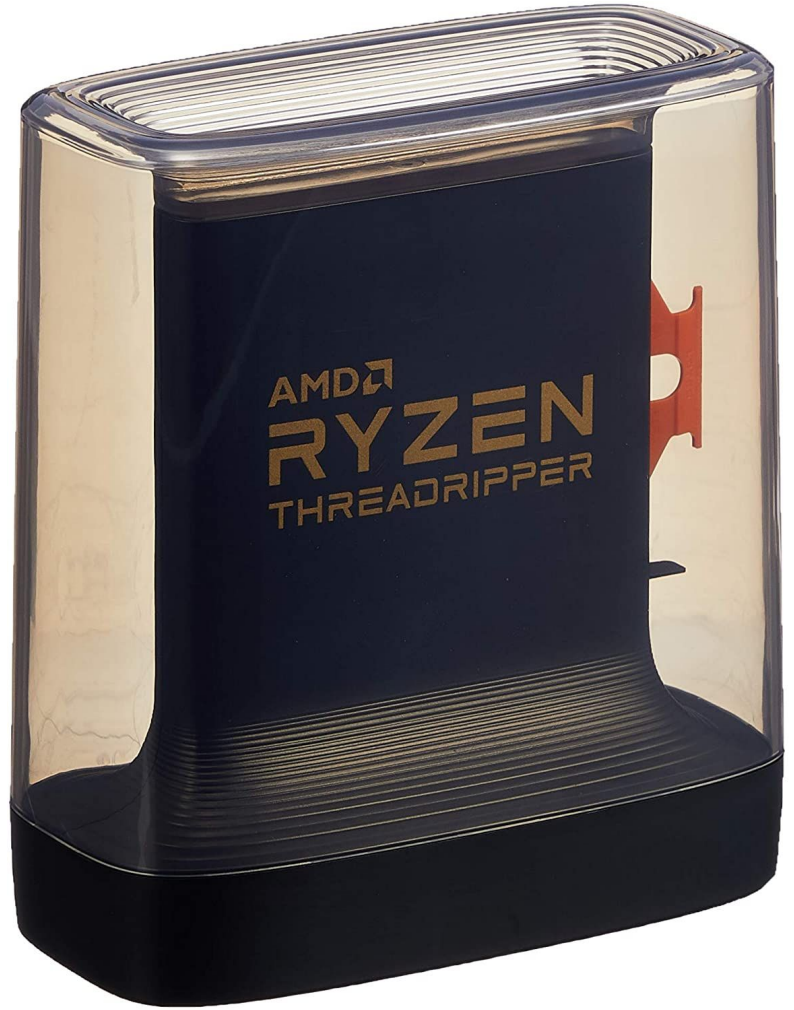
Buy From Amazon

Processor

AMD Ryzen Threadripper 3960X 24-Core, 48-Thread

3970X was $600 more

	Model	Launch date	Core name	Tech. (micron)	Socket type	Cores	Threads	Freq. (MHz)	Turbo freq (MHz)	L3 cache (KB)	TDP (Watt)
☐	1900X	Aug 2017	Whitehaven	0.014	Socket TR4	8	16	3800	4000	16384	180
☐	1920		Whitehaven	0.014	Socket TR4	12	24	3200	3800	32768	140
☐	1920X	Aug 2017	Whitehaven	0.014	Socket TR4	12	24	3500	4000	32768	180
☐	1950X	Aug 2017	Whitehaven	0.014	Socket TR4	16	32	3400	4000	32768	180
☐	2920X	Oct 2018	Colfax	0.012	Socket TR4	12	24	3500	4300	32768	180
☐	2950X	Aug 2018	Colfax	0.012	Socket TR4	16	32	3500	4400	32768	180
☐	2970WX	Oct 2018	Colfax	0.012	Socket TR4	24	48	3000	4200	65536	250
☐	2990WX	Aug 2018	Colfax	0.012	Socket TR4	32	64	3000	4200	65536	250
☐	3960X	Nov 2019	Castle Peak	0.007	Socket sTRX4	24	48	3800	4500	131072	280
☐	3970X	Nov 2019	Castle Peak	0.007	Socket sTRX4	32	64	3700	4500	131072	280
☐	3990X	Feb 2020	Castle Peak	0.007	Socket sTRX4	64	128	2900	4300	262144	280



Motherboard

I wanted A LOT of USB capacity:

3 x USB 3.1 / USB 3.2 Gen 2 Type-A
1 x USB 3.1 / USB 3.2 Gen 2 Type-C
6 x USB 3.1 / USB 3.2 Gen 1 Type-A

Supports 256GB RAM

RAM

G.Skill Trident Z RGB 256 GB (8 x 32 GB) DDR4-3600 CL18 Memory

I want to run LOTS of VMs

Cooling & Case

Cooler Master MasterCase H500 ATX Mid Tower Case - Used on other builds, love the fans

Fractal Design Celsius S24 87.6 CFM Liquid CPU Cooler - I love the self-contained liquid coolers!

Power

be quiet! Straight Power 11 1200 W 80+ Platinum Certified Fully Modular ATX Power Supply

Full modular is nice!

1200W is enough to power many devices (~858W consumption as configured)

Graphics Card

I had this card already

I picked it up refurbished from Amazon for $749

It works great, and I will have to wait before it can be upgraded.

Storage

Samsung 970 Evo Plus 1 TB M.2-2280 NVME Solid State Drive

Just for the operating system.

I will add more SATA drives for storage down the line...

Benchmarks

System manufacturer System Product Name

Compare

Set Baseline

Share

Tweet

Geekbench 5 Score

1354	23275
Single-Core Score	Multi-Core Score

Geekbench 5.3.2 Tryout for Linux x86 (64-bit)

Result Information

Upload Date	March 4th 2021, 12:24pm
Views	1

System Information

System Information	
Operating System	Ubuntu 20.04.2 LTS 5.8.0-44-generic x86_64
Model	System manufacturer System Product Name
Motherboard	ASUSTeK COMPUTER INC. PRIME TRX40-PRO
Processor Information	
Name	AMD Ryzen Threadripper 3960X
Topology	1 Processor, 24 Cores, 48 Threads
Identifier	AuthenticAMD Family 23 Model 49 Stepping 0
Base Frequency	3.80 GHz
L1 Instruction Cache	32.0 KB x 24
L1 Data Cache	32.0 KB x 24
L2 Cache	512 KB x 24
L3 Cache	16.0 MB x 8
Memory Information	
Size	251.63 GB
Type	

Processor	Score
AMD Ryzen Threadripper 3990X 2.9 GHz (64 cores)	25025
AMD Ryzen Threadripper 3970X 3.7 GHz (32 cores)	22320
Intel Xeon W-3175X 3.1 GHz (28 cores)	21662
AMD Ryzen Threadripper 3960X 3.8 GHz (24 cores)	19859
Intel Xeon W-3275M 2.5 GHz (28 cores)	18575
AMD Ryzen 9 5950X 3.4 GHz (16 cores)	17020
Intel Core i9-10980XE 3.0 GHz (18 cores)	16040
Intel Core i9-7980XE 2.6 GHz (18 cores)	15580
Intel Core i9-9980XE 3.0 GHz (18 cores)	15259
AMD EPYC 7742 2.2 GHz (64 cores)	15005
Intel Xeon W-3245 3.2 GHz (16 cores)	14658
AMD Ryzen 9 3950X 3.5 GHz (16 cores)	14220
AMD Ryzen 9 5900X 3.7 GHz (12 cores)	14196

Links

Full build: https://pcpartpicker.com/list/WZQhTJ