

## Workstation PC Build

PDF version 2025.05.25

Initiated: Fall 2022 from salvaged parts of 2020 workstation  
 PC Build Link: [PcPartPicker Build](#)  
 Updated: 5/25/2025  
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Plaintext Link ([PCPARTPICKER](#))  
<https://pcpartpicker.com/list/3Jy6Fg>  
*This list is outdated as of 2025.05 but contains the correct motherboard*

## Engineering Workstation Parts 2024

(2023 reconfig, 2022 August rebuild, 2020 Feb build, ongoing adjustments thru 2025)

Amazon affiliate links are included under "vendor" but text indicates the vendor from my purchase. -DM

Date	2024 Include	Component	Brand	Model	PN	Info:	Vendor	Price (pre-tax)	purch
2021	▶ 1	CPU	AMD	Ryzen 7 3700x	712-000075 REV C	i2	<a href="#">Meadow</a>	144	2020-Jan
2022	▶ 1	SSD	Samsung	SSD 980 Pro, M.2	MZ-V8P1T0		<a href="#">microcenter</a>	99.99	2023-Feb
2024	▶ 1	mobo	ASUS	PRIME B550M-A/CSM (ATX)	90MB1410-M0AAC	i17	<a href="#">Amazon</a>	109.99	2024-Oct
2022	▶ 1	WiFi	TP-Link	AX3000, Archer TX50E(UN)	152502390	i6	<a href="#">Amazon</a>	49.99	2022-May
2024	▶ 1	graphics	AMD	Radeon Pro WX4100	102D0150600_029157	i7	<a href="#">Amazon</a>	141.62	2023-Nov
2022	▶ 1	SSD	Samsung	SSD 980, NVME	MZ-V8V1T0	i1	<a href="#">Amazon</a>	109.99	2022-Feb
2021	▶ 1	PSU	Corsair	RM750x	CP-9020179-NA	i10	<a href="#">Amazon</a>	94.32	2021-Dec
2022	▶ 1	RAM	Corsair	Vengeance RGB Pro 3200	CMW32X4M2E3200C16		<a href="#">Amazon</a>	112.99	2022-Nov
2023	▶ 1	monitor	HP	27h	737K9AA	i4.1	<a href="#">Amazon</a>	132.99	2023-Feb
2023	▶ 1	monitor	HP	27h	737K9AA	i4.2	<a href="#">Amazon</a>	132.99	2023-Feb
2022	1	keyboard	Logitech	MK540 Keyboard	MK540		<a href="#">Amazon</a>	50.46	2022-Nov
2024	▶ 1	USB Panel	EZDIY-FAB	Ezdiy 5.25in 10GB/s Gen2 Hub	ASIN B07T5QQZG4	i16	<a href="#">Amazon</a>	41.99	2023-Sep
2020	▶ 1	case	coolermaster	Silencio S400		i20	<a href="#">Amazon</a>	144.99	2022-Aug
2025	▶ 1	mouse	Logitech	M720	Model 910-006036	i15	<a href="#">Amazon</a>	44.99	2025-Feb

## Removed Components

Parts previously included in the build & later replaced

Date	include	Component	Brand	Model	PN	Info:	Vendor	Price (pre-tax)	purch
2020	▶ 0	graphics	Nvidia	Zotac Gaming Geforce RTX 2060	9288-6N527-201Z8	i12	Meadow	MYR	2020
2022	▶ 0	case	Coolermaster	Silencio S600	MCS-S600-KN5N-S00	i9	amazon	129.99	
2022	▶ 0	RAM	Corsair	Vengeance RGB Pro 3200	CMW32X4M2E3200C16		<a href="#">Amazon</a>	112.99	2022-Oct
2020	▶ 0	WiFi	D-Link	DWA-582		i3	Meadow	MYR	2020
2024	▶ 0	wifi	intel	M.2 2230 kit					
2021	▶ 1	keyboard	Havit	HV-KB939L		i8	Amazon	\$35.99	1905-Jul
2022	▶ 1	mobo	Asus	TUF Gaming B550-Plus WiFi II	90MB19U0-MVAAY0	i18	<a href="#">microcenter</a>		2020-Jan
2022	▶ 1	storage	Toshiba	Canvio Advance DTCA10 1TB	HDTCA10XK3AA	i5	<a href="#">Amazon</a>	52.03	2022-Feb

## Notes & Details

See notes associated with parts in the tables above

info item	about
i1	increase size of main hard drive to 1TB and improve hdd speed
i2	AMD socket AM4, 8-Core, 16-Thread, 3.6-4.4 GHz base/boost, from Meadow Computer SDN BHD in Johor
i3	Dual band AC1200 PCIe with 4.5dBi antennas
i4.1	HP 27h FHD Monitor, speakers (no.1 RH)
i4.2	HP 27h FHD Monitor, speakers (no.2 LH)
i5	portable drive for backup & rebuild, 1TB, 135MB/s (tested write), 2.8w peak power
i6	WiFi 6, bluetooth 5.0, 802.11AX dual band, installed but idle
i7	4GB DDR5, Solidworks-certified GPU selection
i8	wired keyboard, with LED lights, for secure wired connection, (temporary)
i9	Mid Tower Sound-dampened, no window
i10	modular PSU to omit unnecessary cables, 160x150x86mm (See issue 4)
i11	Issue 5, 1.20v rating, 2 of 4 sticks good
i12	6gb GDDR6, non-solidworks certified
i13	ATX form factor, Socket AM4 Issue 2, issue 4
i14	my largest mouse by a small margin (better fit in hand), uses logitech unifying RX
i15	Logitech dongle pairs with both mouse & keyboard, purchased separately.
i16	front panel adds full-speed USB3.2, usb-c ports x2, and QC 3.0 charging (tested up to 15w)
i17	motherboard reduced back to micro-atx, commercial model has more robust drivers
i18	multiple computer issues forced me to rebuild, concerns with BIOS security, 2022 hacking incident
i19	keyboard kit comes with mouse but I upgraded mouse after it broke
i20	truly quiet, rugged case. glass panel sold separately, in malaysian it sold together with micro ATX case

## Exclusions

Exclusions are added when a component is removed from the build, or desired item requiring further research.

These parts are still relevant as good options - but not the latest choice. The parts inform the pathway & thinking processes from earlier stages.

Possible references for parts investigations described in research activities on other pages of this doc.

For "issues" see issues-tab of this document

Date	Priority	Component	Brand	Model	PN	Info:	Vendor	Price (pre-tax)	shop
2022	3	RAM	Corsair	Vengeance LPX 3000	MK8GX4M1D3000C16	Issue 1		0.00	2/24/2022
2022	3	RAM	Corsair	Vengeance LPX 3000	MK8GX4M1D3000C16	Issue 1			
2022	3	RAM	Crucial	CT2K16G4DFRA32A	CT16G4DFRA32A.C8FE	i11	Newegg	140.84	11/14/2022
2025	3	CPU cooler	Thermalright	AXP90 series	AXP-90_X47_full_copper	i17	Amazon	42.59	5/25/2025