

Tower Workstations Compared

Lenovo P630 Ultra workstation
(one 2.4GHz Intel Core i9-12900 16-core CPU, NVIDIA RTX A2000, 32GB RAM, 1TB SSD)

BOXX APEXX S3 workstation
(one 3.0GHz Intel Core i9-13900K 24-core CPU, NVIDIA RTX A4000, 64GB RAM, 1TB SS

HP Z2 Tower G9 workstation
(one 3.6 GHz Intel Core i7-12700K 12-core CPU, NVIDIA RTX A4000, 64 GB RAM, 1TB SSD)

Velocity Micro ProMagix HD60 workstation
(one 3.2 GHz Intel Core i9-12900K 16-core CPU, NVIDIA RTX A4000, 32 GB RAM, 2TB SSD)

HP Z2 Tower G8 workstation
(one 3.5 GHz Intel Core i9-11900K 8-core CPU, NVIDIA RTX A4000, 32 GB RAM, 1TB SSD)

Lenovo ThinkStation P620 workstation
(one 2.7GHz AMD Ryzen Threadripper Pro 3995WX 64-core CPU, NVIDIA Quadro RTX6000, 32GB RAM, 512GB SSD

	Lenovo P630 Ultra workstation	BOXX APEXX S3 workstation	HP Z2 Tower G9 workstation	Velocity Micro ProMagix HD60 workstation	HP Z2 Tower G8 workstation	Lenovo ThinkStation P620 workstation
Price as tested	\$2,432.00	\$6,244.00	\$2,463.00	\$5,428.00	\$2,875.00	\$12,878
Date tested	4/10/23	3/1/23	10/17/22	6/21/2022	9/24/21	12/18/20
Operating System	Windows 11 Pro	Windows 10 Pro	Windows 11 Pro	Windows 11 Home	Windows 10 Pro	Windows 10 Pro
SPECviewperf 2020 V3.1 (higher is better)						
3dsmax-07	80.49	145.59	147.12	148.98	138.50	277.80
catia-06	63.08	120.83	116.69	119.17	110.92	375.67
creo-03	119.12	186.69	177.96	182.06	162.60	385.90
energy-03	33.83	67.02	68.43	69.75	67.62	78.48
maya-06	269.74	461.11	459.82	449.61	400.91	387.76
medical-03	40.86	68.70	68.55	70.86	63.43	160.60
showcase-01	n/a	n/a	n/a	n/a	n/a	190.35
snx-04	382.26	468.71	476.83	455.95	452.85	985.51
solidworkws-05	162.17	272.39	271.81	279.59	260.35	195.02
SPECapc SOLIDWORKS 2015 (higher is better)						
Graphics Composite	n/a	n/a	n/a	n/a	n/a	4.63
Shaded Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	2.83
Shaded w/Edges Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	3.47
Shaded w/ RealView Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	3.34
Shaded w/Edges using RealView Sub-Composite	n/a	n/a	n/a	n/a	n/a	4.03
Shaded using RealView and Shadows Sub-Composite	n/a	n/a	n/a	n/a	n/a	3.84
Shaded with Edges using RealView and Shadows Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	4.27
Shaded using RealView and Shadows and Ambient Occlusion Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	12.86
Shaded with Edges using RealView and Shadows and Ambient Occlusion Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	12.60
Wireframe Graphics Sub-Composite	n/a	n/a	n/a	n/a	n/a	3.60
CPU Composite	n/a	n/a	n/a	n/a	n/a	5.46
SPEC workstation v3.1 (higher is better)						
Media and Entertainment	3.56	6.50	n/a	4.78	3.18	5.92
Product Development	3.82	5.24	4.29	5.10	3.24	4.78
Life Sciences	3.35	6.93	4.07	5.20	3.05	4.21
Financial Services	3.45	6.92	3.79	4.83	2.59	9.43
Energy	3.78	7.50	4.44	3.29	1.85	5.15
General Operations	3.16	4.66	3.01	3.44	2.31	2.14
Time						
AutoCAD Render Test (in seconds, lower is better)	22.1	14.20	15.9	19.4	18.9	25.00

Numbers in blue indicate best recorded results. Numbers in red indicate worst recorded results.