

Engineering Workstations Compared

		<u>Lenovo E30</u> workstation (one 3.2GHz Intel Xeon E3-1230 quad-core CPU [3.6GHz turbo], NVIDIA Quadro 600, 4GB RAM)		<u>HP Z210</u> workstation (one 3.36GHz Intel Xeon E3-1245 quad-core CPU [3.7GHz turbo], NVIDIA Quadro 2000, 8GB RAM)		<u>BOXX 3D/BOXX 3970 EXTREME</u> workstation (one 3.4GHz Intel Core i7-2600K quad-core CPU over-clocked to 4.5GHz, NVIDIA Quadro 4000, 8GB RAM)		<u>Dell Precision T1600</u> workstation (one 3.4GHz Intel Xeon E3-1270 quad-core CPU, NVIDIA Quadro 2000, 4GB RAM)		<u>@Xi Computer MTower</u> workstation (one 3.4GHz Intel Core i7 2600K quad-core CPU over-clocked to 4.1GHz, NVIDIA Quadro 5000, 16GB RAM)		<u>BOXX 3D/BOXX 8550/EXTREME</u> workstation (two 3.33GHz Intel Xeon X5680 six-core CPUs over-clocked to 4.2GHz, NVIDIA Quadro 5000, 24GB RAM)		<u>Dell T5500</u> workstation (two 3.33GHz Intel Xeon X5680 six-core CPUs, NVIDIA Quadro 5000, 6GB RAM)	
Price as tested		\$1,099		\$2,269		\$4,048		\$1,875		\$4,465		\$11,396		\$9,242	
Date tested		4/21/12		2/12/12		10/12/11		9/11/11		4/30/11		3/20/11		1/14/11	
Operating System		Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit	Windows XP	Windows 7 64-bit
<u>SPECviewperf</u>	higher														
<u>3dsmax-04</u>		79.01 ¹	77.43 ¹	80.67	79.46	n/a	99.03 ¹	83.61	81.72	n/a	89.36	95.97	95.44 ¹	76.05	78.72
<u>catia-02</u>		77.80 ¹	77.68 ¹	94.20	91.47	n/a	124.75 ¹	96.38	93.28	n/a	121.7 ¹	120.44	121.1 ¹	98.48	100.25
<u>ensight-03</u>		48.20 ¹	49.27 ¹	75.78	73.57	n/a	109.56 ¹	76.62	74.16	n/a	131.19 ¹	132.41	130.13 ¹	118.29	121.70
<u>maya-02</u>		156.64 ¹	157.63 ¹	291.17	270.83	n/a	399.43 ¹	297.27	270.53	n/a	465.88	529.89	476.95 ¹	490.95	435.44
<u>proe-04</u>		60.66 ¹	60.79 ¹	88.48	84.83	n/a	120.33 ¹	89.24	85.86	n/a	128.25	113.84	113.24	92.19	90.61
<u>SW-01</u>		94.38 ¹	94.68 ¹	168.06	161.45	n/a	231.44 ¹	169.31	160.61 ¹	n/a	239.78	221.31	214.06	180.49	169.75
<u>tcvis-01</u>		34.25 ¹	34.22 ¹	56.41	54.43	n/a	79.05 ¹	56.76	54.24	n/a	97.45	98.58	94.17	93.99	90.34
<u>ugrx-01</u>		29.01 ¹	29.16 ¹	43.41	42.49	n/a	65.91 ¹	43.40	42.47	n/a	88.87 ¹	89.32	86.90	89.31	87.95
<u>SPECapc SolidWorks</u>	lower														
Score	seconds	127.48 ¹	n/a	110.91	n/a	n/a	n/a	106.63 ¹	n/a	n/a	n/a	106.56 ¹	n/a	146.86	n/a
Graphics	seconds	48.40 ¹	n/a	35.71	n/a	n/a	n/a	34.24 ¹	n/a	n/a	n/a	35.33 ¹	n/a	58.42	n/a
CPU	seconds	27.90 ¹	n/a	25.89	n/a	n/a	26.44 ¹	25.05 ¹	n/a	n/a	27.48 ¹	25.99 ¹	n/a	32.27	n/a
I/O	seconds	55.17 ¹	n/a	50.74	n/a	n/a	47.01 ¹	48.26 ¹	n/a	n/a	49.48 ¹	46.51 ¹	n/a	60.76	n/a
<u>SPECapc SolidWorks</u>	higher														
Score	ratio	6.25 ¹	n/a	7.92	n/a	n/a	n/a	8.04 ¹	n/a	n/a	n/a	8.23 ¹	n/a	5.32	n/a
Graphics	ratio	3.89 ¹	n/a	5.78	n/a	n/a	n/a	5.74 ¹	n/a	n/a	n/a	6.08 ¹	n/a	3.23	n/a
CPU	ratio	11.57 ¹	n/a	12.46	n/a	n/a	12.20 ¹	12.88 ¹	n/a	n/a	11.74 ¹	12.61 ¹	n/a	10.00	n/a
I/O	ratio	5.74 ¹	n/a	6.24	n/a	n/a	6.73 ¹	6.56 ¹	n/a	n/a	6.40 ¹	6.81 ¹	n/a	5.21	n/a
<u>Autodesk Render Test</u>	lower														
Time	seconds	85.66 ¹	71.75 ¹	71.66 ¹	62.33 ¹	n/a	45.6 ¹	82.2 ¹	60.5 ¹	n/a	49.8 ¹	34.0 ¹	19.0 ¹	42.0 ¹	28.0 ¹

Numbers in blue indicate best recorded results. Numbers in red indicate worst recorded results. 1=Hyper-threading enabled.