

Table 1 Workstation features

	@XI COMPUTER Xi MTower 2P64	HEWLETT-PACKARD HP xw6000	HYPERSONIC Fusion AMP	IBM IBM IntelliStation Z Pro	MONARCH G64 Custom Opteron Workstation	POLYWELL PolyStation 940X4	SYS TECHNOLOGY SYS PowerHouse 3066D
Star rating	5 Stars	4 Stars	3.5 Stars	3.5 Stars	4.5 Stars	4.5 Stars	4.5 Stars
Phone	800.432.0486	800.888.9909	800.520.0498	888.746.426	866.627.2472	800.999.1278	800.613.9963
Web site	www.xicomputer.com	www.hp.com/workstations	www.hypersonic-pc.com	www.ibm.com	www.monarchcomputer.com	www.polywell.com	www.sys.com
Estimated street price	\$5,799	\$6,019	\$4,386	\$6,425	\$5,699	\$5,450	\$4,895
Warranty; labor/parts/onsite (months)	36/36/12	36/36/36	12/12/12, 36 available	36/36/36	12/12/12; 36 available	60/36/12	36/36/36
Return policy/restocking fee	30 days/no restocking fee	30 days/no restocking fee	30 days/no restocking fee	30 days/shipping and handling	15% restocking fee for custom	30 days/15% restocking fee	Free 7 days; 15% restocking fee 30 days; pay shipping/handling
CPU type-speed	AMD Opteron 246 (2.0GHz)	3.2GHz Intel Xeon	AMD Athlon MP 2800	3.06GHz Intel Xeon	AMD Opteron 246	Intel Xeon 3.06GHz	Intel Xeon 3.06GHz (DP version)
Dual CPU support/installed	Yes/two	Yes/two	Yes/two	Yes/two	Yes/two	Yes/two	Yes/two
L2 cache size/speed	1,024KB	512kb/533MHz	512kb/full	512kb/533MHz	1MB	1MB/3.06GHz	512kb, CPU core (cache on-die)
Chipset	AMD 8151	Intel E7505	AMD 762; AMD 768	Intel E7505	AMD 8000	Intel E7505	Intel E7505
Front-side bus speed	Hypertransport @ 800MHz	533MHz	200/266MHz	533MHz	200MHz	533MHz	533MHz
PCI bus size/speed	32bit/33MHz	32bit/33MHz	Two 64-bit/66MHz PCI slots; three 32-bit/33MHz PCI slots	Four 64-bit/100MHz; one 32-bit/33MHz	32-bit/33MHz	Six 32bit PCI/33MHz	Two PCI-X 64-bit/100KHz; one PCI 64-bit/66Mhz; two 32-bit/33MHz
Motherboard vendor/model	ARIMA/HDAMB	Hewlett-Packard/HP xw6000	MSI/K7D Master L	MSI/9121	Rioworks/ HDAMB	Tyan/S2668	Intel/SE7505VB2
Memory type/speed	DDR 333	266MHz DDR SDRAM	PC2100 ECC DDR	PC2100-266MHz	PC2700	DDR PC2100/266MHz	PC2100 DDR SDRAM (DDR266)
Memory as tested/maximum	2GB/8GB	2GB (four 512MB)/8GB	2GB/4GB	2GB/8GB	2GB/8GB	2GB/8GB	2GB/8GB
Memory sockets; total/free	4/4	4/0	4/2	4/2	4/2	4/0	4/0
Supports DDR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hard drive vendor/type	Western Digital/ATA100	Varies/Ultra ATA/100	Western Digital/SATA	IBM Deskstar/80GB EIDE 7200rpm	Western Digital/ WD1200JD	Hitachi WD/IDE / SATA	Seagate/ATA 150 (SATA/150)
Drive size	Two 200GB; 400GB	160GB; 7200rpm	Two 230GB	Two 80GB	120GB; 240GB RAID	250GB; two 36GB	Two 120GB; 240GB, RAID 0
CD-ROM drive vendor	Toshiba	Varies	Pioneer DVD-R / Samsung Combo	IBM Multiburner (CD&DVD)	Sony	Sony DVD-RW/BTC CD-RW	Pioneer
Drive speed	16x10x40x12x	48x CDRW; 16x DVD-ROM	52x CD-R/W; 4x DVD-R	Not specified CD/12x DVD	32x CD-R/8x DVD/4x DVD-R	4x DVD-RW/ 523523243 CD-RW	40x CD/24x CD-R/W/16x DVD/ 43 DVD-RW
Other drive	RAID	No	7-in-1	3.50 floppy	N/A	7-in-1	Lite-On (LDW-401S)
AGP bus	AGP 8x	AGP 8x/ Pro50	AGP 4x	AGP 8x	AGP 8x	AGP 8x	Supports AGP 4x/8x and AGP Pro50
Expansion slots (PCI/PCI-ISA/ISA)	5/0/0	5/0/0	5/0/0	6/0/0	5/0/0	5/0/0	2/1/2
Filled (PCI/PCI-ISA/ISA)	1/0/0	0/0/0	3/0/0	1/0/0	1/0/0	2/0/0	1/0/0
External drive bays (5.25"/3.5")	4/1	3/0	2/0	2/1	4/3	4/2	3/2
Internal drive bays (5.25"/3.5")	0/5	0/2	0/4	0/3	0/5	0/4	0/3
Ports							
USB 1.x/2.x	2/4	0/4 (2 front, 2 rear)	2/4	0/4 (2 front, 2 back)	0/4 (works with 1.x)	0/6 (2 front, 4 rear)	0/4
Serial/parallel/midi/game	2/1/1/1	2/1/0/0	2/1/1/1	2/1/0/0	2/1/1/1	1/1/0/1	1/1/1/1
External SCSI	Optional	Yes	No	Two 16-bit channels	No	Yes	No
Network card (modem)	On-board 1GB Ethernet (10/100/1000)	Integrated Broadcom 5702 1GB (10/100/1000)	Integrated Intel 10/100 (with Wake-On-LAN)	Broadcom Netxtreme 10/100/1000	Broadcom 100/1000	Built-in gigabit/USB modem	One 10/100; One 10/100/1000 NICs (integrated)
Dimensions (h×w×d)	17.9" x 7.9" x 17.5"	17.7" x 6.6" x 17.6"	18" x 7.8" x 21.3"	17.4" x 6.5" x 19.4"	18.1" x 8.3" x 20.7"	16.5" x 7.9" x 18.9"	18.6" x 8.7" x 16.5"
Graphics card bus (AGP/PCI)	AGP 8X	AGP 8X/Pro50	AGP 4X	AGP 8X	AGP 8X	AGP 8X	AGP 8X
Graphics card vendor/model	NVIDIA Quadro FX 3000	NVIDIA Quadro4 980 XGL	NVIDIA Quadro FX 3000	NVIDIA FX 1000	NVIDIA FX 3000	NVIDIA Quadro FX 3000	NVIDIA Quadro FX 2000
Chipset	Quadro FX3000	NVIDIA NV25GL GPU	NVIDIA Quadro FX 3000	VCQFX1000-PB	VCQFX3000-PB	QuadroFX 3000	NVIDIA Quadro FX 2000
Frame-buffer memory installed/max.	256MB/256MB	128MB DDR/128MB DDR	256MB/256MB	128MB/128MB	256MB/256MB	256MB/256MB	128MB/128MB
Texture memory installed/max.	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Driver version	6.14.10.4471	6.13.10.4254	6.14.10.4471	6.14.10.4523	6.14.10.4523	6.14.10.5175	6.14.10.4471
Max 3D resolution; double buffer/ 16bit z-buffer (70Hz min)	Two 2048x1536@85Hz; one at 3840x2400	2048x1536	3840x2400	3840x2400	3840x2400	3840x2400	Two monitors 3840x2400, 2048x1536 on one monitor
Colors/refresh	32-bit@85Hz	32-bit@85Hz	32-bit@85Hz	32-bit@85Hz	32-bit@85Hz	32-bit@85Hz	32-bit@85Hz
AutoCAD (driver version)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)
Total Weighted Score	92.71	75.04	64.04	73.37	84.52	86.82	77.70
C2001 v3.0 Total Index†	123.71	102.21	82.08	95.80	111.55	112.08	101.87
Max Bench v4.00.29)† high/low average	54.66	45.88	34.62	45.84	50.99	56.29	44.26
Viewperf v7 proe-01 test suite†	37.78	22.7	29.34	33.6	36.98	41.58	38.65

*32-bit color/double buffer/16-bit z-buffer (70Hz min).

†Tests ran at 1280×1024; true-color.

Table 1 CAD workstation features continued

	TRI CAD/CAM SYSTEMS PowerStation FX	VELOCITY MICRO ProMagix Plus
Star rating	4.5 Stars	4 Stars
Phone	800.800.1714	800.303.7866
Web site	www.tricadcam.com	www.velocitymicro.com
Estimated street price	\$5,495	\$6,983
Warranty; labor/parts/onsite (months)	3 Year Limited Warranty *	36/36/12
Return policy/restocking fee	Restocking Fee	30 days, 15% only if non-defective
CPU type-speed	Intel Xeon 3.06GHz	Intel Xeon 3.06GHz
Dual CPU support/installed	Yes/two	Yes/two
L2 cache size/speed	512kb/full	512kb/full
Chipset	Intel E7505	Intel E7505
Front-side bus speed	533MHz	533MHz
PCI bus size/speed	Two 32bit@33MHz, two 64bit@100MHz, one 64-bit/66MHz	Two PCI-X 64-bit@100MHz, one PCI 64-bit@66MHz, two PCI 32-bit@33MHz
Motherboard vendor/model	Intel/ SE7505VB2	Intel/ SE7505VB2
Memory type/speed	Four Legacy 512MB PC2700	Corsair DDR2700 Registered ECC
Memory as tested/maximum	2GB/8GB	2GB/8GB
Memory sockets; total/free	4/0	4/2
Supports DDR	Yes	Yes
Hard drive vendor/type	512kb/full	512kb/full
Drive size	Western Digital/ ATA / WD800	Seagate and Hitachi/ Two SCSI 15Krpm, one IDE 7200rpm
CD-ROM drive vendor	Two 80GB	Two 36GB in RAID, one 250GB
Drive speed	Sony	Plextor CD-RW and Sony DVD/RW
Other drive	52x24x52x	52x32x52x
AGP bus	Toshiba DVD	Sony 4x DVD/RW
Expansion slots (PCI/PCI-ISA/ISA)	AGP 8X	AGP 8X
Filled (PCI/PCI-ISA/ISA)	5 PCI/0/0	5/0/0
External drive bays (5.25"/3.5")	1 PCI blocked / 1 PCI used	2/0/0
Internal drive bays (5.25"/3.5")	4/2	4/2
Ports	0/3	4/7
USB 1.x/2.x	0/4/1/1/1/1	3/0/1/1/0/0
External SCSI	No	No
Network card (modem)	One Intel PRO/1000/ one ntel PRO 100+	Integrated 10/100 and 10/100/1000
Dimensions (h3w3d)	21.25" x 8" x 19"	20.75" x 8.75" x 19"
Graphics card bus (AGP/PCI)	AGP 8X	AGP 8X (board includes integrated ATI)
Graphics card vendor/model	NVIDIA Quadro FX 3000	NVIDIA Quadro FX 3000
Chip set	Quadro FX	Quadro FX 3000
Frame-buffer memory installed/max.	256MB/256MB	256MB/256MB
Texture memory installed/max.	Integrated	Integrated
Driver version	6.14.10.4471	6.14.10.4471
Max 3D resolution; double buffer/ 16bit z-buffer (70Hz min)	Two 2048x1536@85Hz	Two 2048x1536@85Hz
Colors/refresh	32-bit@85Hz	32-bit@85Hz
AutoCAD (driver version)	Standard (wopengl8.hdi)	Standard (wopengl8.hdi)
Total Weighted Score	80.40	83.55
C2001 v3.0 Total Index†	102.27	109.15
Max Bench v4.00.29)† high/low average	55.47	50.19
Viewperf v7 proe-01 test suite†	39.74	40.13

*32-bit color/double buffer/16-bit z-buffer (70Hz min).

†Tests ran at 1280x1024; true-color.