IBM @server pSeries
and IBM RS/6000
Facts and Features

June, 2001

**IBM @server
pSeries 620
Model 6F0 /
Model 6F1**

**IBM @server
pSeries 660
Model 6H0 /
Model 6H1**

**IBM @server
pSeries 680**

Product Line	IBM RS/6000[®]	IBM RS/6000	IBM RS/6000
Machine type	7043-150	7044-170	7044-270
System packaging	tower	tower	tower
Microprocessor type	32-bit 604e	64-bit POWER3-II	64-bit POWER3-II
# of processors/system	1	1	1, 2, 3 or 4
Clock rates available	250 MHz / 375 MHz	333 MHz / 400 MHz / 450 MHz	375 MHz
System memory (standard/maximum)	128MB / 1GB	256MB / 2GB	256MB / 16GB[a]
Data/instruction (L1) cache	32KB / 32KB	64KB / 32KB	64KB / 32KB[b]
Level 2 (L2) cache	1MB	1MB / 4MB / 8MB	4MB / 8MB[b]
Reliability, availability, serviceability			
Chipkill memory	-	-	-
Service processor	-	X	X
Hot-swappable disks (internal and external)	-	-	-
Dynamic Processor Deallocation	-	-	X
Hot-plug slots	-	-	-
Redundant hot-plug power	-	-	-
Redundant hot-plug cooling	-	-	-
NEBS3	-	-	-
Capacity			
PCI slots available	5 (32-bit)	6 (4 32-bit, 2 64-bit)	5 (2 32-bit, 3 64-bit)
PCI bus speed (MHz)	33	33 / 50	33 / 50
Disk/media bays	2 / 3	3 / 3	2 / 3
Minimum/maximum internal disk storage	9.1GB / 54.6GB	9.1GB / 145.6GB	9.1GB / 109.2GB
Storage interfaces			
Ultra SCSI SE and Ultra SCSI Differential	X	X	X
PCI 2-channel Ultra2 SCSI	X	X	X
PCI 4-channel Ultra3 SCSI RAID	X	X	X
SSA Advanced SerialRAID Plus	X	X	X
Gigabit Fibre Channel	-	X	X
Communications and connectivity			
EIA RS232D	X	X	X
Token-Ring 4/16 Mbps	X	X	X
4-port 10/100 Mbps Ethernet	X	X	X
10/100 Mbps Ethernet	X	X	X
Gigabit Ethernet (Fibre / UTP)	-	X / X	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X	X / X
ATM 622 Mbps (Fibre)	-	X	X
ISDN	X	X	X
SP System Attachment	-	-	-
ESCON[®] Control Unit (host attach)[k]	-	-	-
ESCON Emulation (tape attach)[k]	-	-	-
HIPPI[k]	-	-	-
Digital Trunk Quad / Resource Adapter[k]	X / X	X / X	X / X
X.25[k]	X	X	X
SDLC	X	X	X
BSC	X	X	X
Graphics accelerators	GXT130P, 300P, 2000P, 3000P	GXT130P, 300P, 2000P, 3000P, 4000P, 6000P	GXT130P, 300P, 2000P, 3000P, 4000P, 6000P
Benchmarks	(250 / 375 MHz)	(333 / 400 / 450 MHz)	(1, 2, 3, 4-way)[p]
SPECweb99	-	- / 460 / -	2175 (4-way)
SPECint_base95	10.9 / 14.5	18.6 / 23.5 / 26.9	22.7
SPECfp_base95	8.28 / 9.76	34.0 / 46.0 / 56.3	50.7
SPECint_base2000	99.4 / -	177 / 239 / 286	247
SPECfp_base2000	90.8 / -	225 / 295 / 356	327
SPECint_base_rate95	-	-	-
SPECfp_base_rate95	-	-	-
SPECint_base_rate2000	-	-	-, 5.6, -, 11.2
SPECfp_base_rate2000	-	-	-, 7.0, -, 11.5
TPC-C: tpmC; $/tpmC[m]	-	-	-
TPC-H: QphH (@ 300GB)	-	-	-
TPC-H: $/QphH (@ 300GB)	-	-	-
Relative OLTP performance	4.0 / 6.0	14.0 / 17.3 / 19.0	-, 51.0, -, 92.0

Product Line	IBM RS/6000	IBM @server p640
Machine type	7046-B50	7026-B80
System packaging	rack drawer (2U)	rack drawer (5U)
Microprocessor type	32-bit 604e	64-bit POWER3-II
# of processors/system	1	1, 2, 3 or 4
Clock rates available	375 MHz	375 MHz
System memory (standard/maximum)	128MB / 1GB	256MB / 16GB[a]
Data/instruction (L1) cache	32KB / 32KB	64KB / 32KB[b]
Level 2 (L2) cache	1MB	4MB / 8MB[b]
Reliability, availability, serviceability		
Chipkill™ memory	-	-
Service processor	-	X
Hot-swappable disks (internal and external)	-	X
Dynamic Processor Deallocation	-	X
Hot-plug slots	-	-
Redundant hot-plug power	-	X
Redundant hot-plug cooling	-	X
NEBS3	-	X
Capacity		
PCI slots available	2 (32-bit)	5 (1 32-bit, 4 64-bit)
PCI bus speed (MHz)	33	33 / 50
Disk/media bays	2[h] / 2	5
Minimum/maximum internal disk storage	9.1GB / 72.8GB	9.1GB / 145.6GB
Storage interfaces		
Ultra SCSI SE and Ultra SCSI Differential	X	X
PCI 2-channel Ultra2 SCSI	X	X
PCI 4-channel Ultra3 SCSI RAID	X	X
SSA Advanced SerialRAID Plus	X	X
Gigabit Fibre Channel	-	X
Communications and connectivity		
EIA RS232D	X	X
Token-Ring 4/16 Mbps	X	X
4-port 10/100 Mbps Ethernet	X	X
10/100 Mbps Ethernet	X	X
Gigabit Ethernet (Fibre / UTP)	-	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X
ATM 622 Mbps (Fibre)	X	X
ISDN	X	-
SP System Attachment	-	-
ESCON Control Unit (host attach)[k]	-	-
ESCON Emulation (tape attach)[k]	-	-
HIPPI[k]	-	-
Digital Trunk Quad / Resource Adapter[k]	- / -	X / X
X.25[k]	X	X
SDLC	X	X
BSC	X	X
Graphics accelerators	GXT130P	GXT130P, 4000P[s], 6000P[s]
Benchmarks		(1, 2, 3, 4-way)[p]
SPECweb99	-	2175 (4-way)
SPECint_base95	14.5	22.7
SPECfp_base95	9.76	50.7
SPECint_base2000	-	247
SPECfp_base2000	-	327
SPECint_base_rate95	-	-
SPECfp_base_rate95	-	-
SPECint_base_rate2000	-	-, 5.6, -, 11.2
SPECfp_base_rate2000	-	-, 7.0, -, 11.5
TPC-C: tpmC; $/tpmC[m]	-	-
TPC-H: QphH (@ 300GB)	-	-
TPC-H: $/QphH (@ 300GB)	-	-
Relative OLTP performance	6.0	-, 51.0, -, 92.0

Product Line	IBM @server p620	IBM @server p620
Machine type	7025-6F0	7025-6F1
System packaging	tower	tower
Microprocessor type	64-bit RS64 III / RS64 IV	64-bit RS64 III / RS64 IV
# of processors/system	1, 2, or 4	1, 2, 4 or 6
Clock rates available	450 MHz / 600 MHz	450 MHz (1, 2, 4-way)
		600 MHz (1, 2, 4-way), 668 MHz (6-way)
System memory (standard/maximum)	512MB / 32GB[a,n]	512MB / 32GB[a,n]
Data/instruction (L1) cache	128KB / 128KB[b]	128KB / 128KB[b]
Level 2 (L2) cache	2MB (1-way) / 4MB (2, 4-way)[b]	2MB (1-way) / 4MB (2, 4-way) / 8MB (6-way)[b]
Reliability, availability, serviceability		
Chipkill memory	X	X
Service processor	X	X
Hot-swappable disks (internal and external)	X	X
Dynamic Processor Deallocation	X	X
Hot-plug slots	X	X
Redundant hot-plug power	O	O
Redundant hot-plug cooling	O	O
NEBS3	-	-
Capacity		
PCI slots available	10 (64-bit)	10 (64-bit)
PCI bus speed (MHz)	33 / 66	33 / 66
Disk/media bays	14 / 3	14 / 3
Minimum/maximum internal disk storage	9.1GB / 509.6GB	9.1GB / 509.6GB
Storage interfaces		
Ultra SCSI SE and Ultra SCSI Differential	X	X
PCI 2-channel Ultra2 SCSI	X	X
PCI 4-channel Ultra3 SCSI RAID	X	X
SSA Advanced SerialRAID Plus	X	X
Gigabit Fibre Channel	X	X
Communications and connectivity		
EIA RS232D	X	X
Token-Ring 4/16 Mbps	X	X
4-port 10/100 Mbps Ethernet	-	-
10/100 Mbps Ethernet	X	X
Gigabit Ethernet (Fibre / UTP)	X / X	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X
ATM 622 Mbps (Fibre)	X	X
ISDN	-	-
SP System Attachment	-	-
ESCON Control Unit (host attach)[k]	X	X
ESCON Emulation (tape attach)[k]	X	X
HIPPI[k]	X	X
Digital Trunk Quad / Resource Adapter[k]	X / X	X / X
X.25[k]	X	X
SDLC	X	X
BSC	X	X
Graphics accelerators	GXT130P	GXT130P
Benchmarks	(1, 2, 4-way - 600 MHz)	(1, 2, 4, 6-way - 600 / 668 MHz)
SPECweb99	3,279 (4-way)*	3,279 (4-way)*
SPECint_base95	-	-
SPECfp_base95	-	-
SPECint_base2000	295	295
SPECfp_base2000	245	245
SPECint_base_rate95	-	-
SPECfp_base_rate95	-	-
SPECint_base_rate2000	-, -, 14.1	-, -, 14.1, 24.9
SPECfp_base_rate2000	-, -, 10.9	-, -, 10.9, 16.9
TPC-C: tpmC; $/tpmC[m]	-	-
TPC-H: QphH (@ 300GB)	-	-
TPC-H: $/QphH (@ 300GB)	-	-
Relative OLTP performance	32.3, 69.0, 117.0	32.3, 69.0, 117.0, 191.2

* Submitted to SPEC, awaiting approval

Product Line	IBM @server p660	IBM @server p660
Machine type	7026-6H0	7026-6H1
System packaging	rack drawer (5U processor / 5U I/O)	rack drawer (5U processor / 5U I/O)
Microprocessor type	64-bit RS64 III / RS64 IV	64-bit RS64 III / RS64 IV
# of processors/system	1, 2 or 4	1, 2, 4 or 6
Clock rates available	450 MHz / 600 MHz	450 MHz (1, 2, 4-way)
		600 MHz (1, 2, 4-way), 668 MHz (6-way)
System memory (standard/maximum)	512MB / 32GB[a,n]	512MB / 32GB[a,n]
Data/instruction (L1) cache	128KB / 128KB[b]	128KB / 128KB[b]
Level 2 (L2) cache	2MB (1-way) / 4MB (2, 4-way)[b]	2MB (1-way) / 4MB (2, 4-way) / 8MB (6-way)[b]
Reliability, availability, serviceability		
Chipkill memory	X	X
Service processor	X	X
Hot-swappable disks (internal and external)	External only	External only
Dynamic Processor Deallocation	X	X
Hot-plug slots	X	X
Redundant hot-plug power	O	O
Redundant hot-plug cooling	X	X
NEBS3	X	X
Capacity		
PCI slots available	28 (8 32-bit, 20 64-bit)	28 (8 32-bit, 20 64-bit)
PCI bus speed (MHz)	33 / 66	33 / 66
Disk/media bays	2 / 4	2 / 4
Minimum/maximum internal disk storage	0 / 36.4GB	0 / 36.4GB
Storage interfaces		
Ultra SCSI SE and Ultra SCSI Differential	X	X
PCI 2-channel Ultra2 SCSI	X	X
PCI 4-channel Ultra3 SCSI RAID	X	X
SSA Advanced SerialRAID Plus	X	X
Gigabit Fibre Channel	X	X
Communications and connectivity		
EIA RS232D	X	X
Token-Ring 4/16 Mbps	X	X
4-port 10/100 Mbps Ethernet	-	-
10/100 Mbps Ethernet	X	X
Gigabit Ethernet (Fibre / UTP)	X / X	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X
ATM 622 Mbps (Fibre)	X	X
ISDN	-	-
SP System Attachment	X	X
ESCON Control Unit (host attach)[k]	X	X
ESCON Emulation (tape attach)[k]	X	X
HIPPI[k]	X	X
Digital Trunk Quad / Resource Adapter[k]	X / X	X / X
X.25[k]	X	X
SDLC	X	X
BSC	X	X
Graphics accelerators	GXT130P	GXT130P
Benchmarks	(1, 2, 4-way - 600 MHz)	(1, 2, 4, 6-way - 600 / 668 MHz)
SPECweb99	3,279 (4-way)*	4,522 (6-way)
SPECint_base95	-	-
SPECfp_base95	-	-
SPECint_base2000	295	295
SPECfp_base2000	245	245
SPECint_base_rate95	-	-
SPECfp_base_rate95	-	-
SPECint_base_rate2000	-, -, 14.1	-, -, 14.1, 24.9
SPECfp_base_rate2000	-, -, 10.9	-, -, 10.9, 16.9
TPC-C: tpmC; $/tpmC[m]	-	57,346.93, 32.59 (6-way)
TPC-H: QphH (@ 300GB)	-	-
TPC-H: $/QphH (@ 300GB)	-	-
Relative OLTP performance	32.3, 69.0, 117.0	32.3, 69.0, 117.0, 191.2

* Submitted to SPEC, awaiting approval

Product Line	IBM RS/6000	IBM @server p680
Machine type	7026-M80	7017-S85
System packaging	rack drawer (8U processor / 5U I/O)	frame (+ I/O rack)
Microprocessor type	64-bit RS64 III	64-bit RS64 III, RS64 IV
# of processors/system	2, 4, 6 or 8	4, 6, 12, 18 or 24[u]
Clock rates available	500 MHz	450 MHz / 600 MHz
System memory (standard/maximum)	1GB / 32GB[a]	2GB / 96GB[a]
Data/instruction (L1) cache	128KB / 128KB[b]	128KB / 128KB[b]
Level 2 (L2) cache	4MB[b]	8MB / 16MB[b]
Reliability, availability, serviceability		
Chipkill memory	-	X
Service processor	X	X
Hot-swappable disks (internal and external)	External only	X
Dynamic Processor Deallocation	X	X
Hot-plug slots	X	-
Redundant hot-plug power	X	X
Redundant hot-plug cooling	X	X
NEBS3	X	-
Capacity		
PCI slots available	56 (16 32-bit, 40 64-bit)	53 (33 32-bit, 20 64-bit)
PCI bus speed (MHz)	33 / 66	33
Disk/media bays	2 / 8	48 / 8
Minimum/maximum internal disk storage	0 / 36.4GB	9.1GB / 873.6GB
Storage interfaces		
Ultra SCSI SE and Ultra SCSI Differential	X	X
PCI 2-channel Ultra2 SCSI	X	X
PCI 4-channel Ultra3 SCSI RAID	X	-
SSA Advanced SerialRAID Plus	X	X
Gigabit Fibre Channel	X	X
Communications and connectivity		
EIA RS232D	X	X
Token-Ring 4/16 Mbps	X	X
4-port 10/100 Mbps Ethernet	-	-
10/100 Mbps Ethernet	X	X
Gigabit Ethernet (Fibre / UTP)	X / X	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X
ATM 622 Mbps (Fibre)	X	X
ISDN	X	-
SP System Attachment	X	X
ESCON Control Unit (host attach)[k]	X	X
ESCON Emulation (tape attach)[k]	X	X
HIPPI[k]	X	-
Digital Trunk Quad / Resource Adapter[k]	X / -	- / -
X.25[k]	X	X
SDLC	X	X
BSC	X	X
Graphics accelerators	GXT130P	GXT130P
Benchmarks	(2, 4, 6, 8-way)	(4, 6, 12, 18, 24-way)
SPECweb99	5,509 (8-way)	9,106 (12-way)[q]
SPECint_base95	20.7	-
SPECfp_base95	28.5	-
SPECint_base2000	264	-
SPECfp_base2000	243	-
SPECint_base_rate95	-, -, -, 1489	-
SPECfp_base_rate95	-, -, -, 1910	-
SPECint_base_rate2000	-, -, -, 24.0	-
SPECfp_base_rate2000	-, -, -, 20.6	-
TPC-C: tpmC; $/tpmC[m]	66,750.27, 39.24 (8-way)	220,807.27, 35.73 (24-way)[q]
TPC-H: QphH (@ 300GB)	-	-
TPC-H: $/QphH (@ 300GB)	-	-
Relative OLTP performance	65.0, 115.3, 169.3, 222.5	161.7, 306.7, 428.7, 533.3[r] / 149.0, 219.0, 416.0, 583.3, 736.0[q]

Product Line	IBM RS/6000 SP™	IBM RS/6000 SP	IBM RS/6000 SP
Machine type	9076	9076	9076
Node type	375MHz POWER3 SMP Thin[e]	375MHz POWER3 SMP Wide[e]	375MHz POWER3 SMP High[e]
System packaging	frame	frame	frame
Microprocessor type	64-bit POWER3-II	64-bit POWER3-II	64-bit POWER3-II
Minimum/maximum of each node type / system	1/128[f]	1/128[f]	1/128[f]
# of processors/system	2 or 4	2 or 4	4, 8, 12 or 16
Clock rates available	375 MHz	375 MHz	375 MHz
System memory (standard/maximum)	256MB / 16GB[a]	256MB / 16GB[a]	1GB / 64GB[a]
Data/instruction (L1) cache	64KB / 32KB[b]	64KB / 32KB[b]	64KB / 32KB[b]
Level 2 (L2) cache	8MB[b]	8MB[b]	8MB[b]
Reliability, availability, serviceability			
Chipkill memory	-	-	-
Service processor	X[d]	X[d]	X[d]
Hot-swappable disks (internal and external)	External only	External only	X[g]
Dynamic CPU Deallocation	X	X	X
Hot-plug slots	-	-	X[g]
Redundant hot-plug power	-	-	-
Redundant hot-plug cooling	-	-	-
NEBS3	-	-	-
Capacity			
PCI slots available	2 (32-bit)	10 (2 32-bit, 8 64-bit)	53 (1 32-bit, 52 64-bit)
PCI bus speed (MHz)	33	33	33
Disk/media bays	2	4	2 (26[g])
Minimum/maximum internal disk storage	0 / 36.4GB	0 / 109.2GB	0 / 946.4GB[g]
Storage interfaces			
Ultra SCSI SE and Ultra SCSI Differential	X	X	X
PCI 2-channel Ultra2 SCSI	X	X	X
PCI 4-channel Ultra3 SCSI RAID	-	-	-
SSA Advanced SerialRAID Plus	X	X	X
Gigabit Fibre Channel	X	X	X
Communications and connectivity			
EIA RS232D	X	X	X
Token-Ring 4/16 Mbps	X	X	X
4-port 10/100 Mbps Ethernet	X	X	X
10/100 Mbps Ethernet	X	X	X
Gigabit Ethernet (Fibre / UTP)	X / X	X / X	X / X
FDDI 100 Mbps (Fibre / UTP)	X / X	X / X	X / X
ATM 155 Mbps (Fibre / UTP)	X / X	X / X	X / X
ATM 622 Mbps (Fibre)	X	X	X
ISDN	-	-	-
SP System Attachment	N/A	N/A	N/A
ESCON Control Unit (host attach)[k]	X	X	X
ESCON Emulation (tape attach)[k]	X	X	X
HIPPI[k]	X	X	X
Digital Trunk Quad / Resource Adapter[k]	X / X	X / X	X / X
X.25[k]	X	X	X
SDLC	X	X	X
BSC	X	X	X
Graphics accelerators	-	-	-
Benchmarks	(2, 4-way)	(2, 4-way)	(4, 8, 2, 16-way)
SPECweb99	-	-	-
SPECint_base95	22.6	22.6	21.8
SPECfp_base95	47.1	47.1	48.8
SPECint_base2000	248	248	229
SPECfp_base2000	330	330	322
SPECint_base_rate95	407, 812	407, 812	786, 1569, 2345, 3121
SPECfp_base_rate95	804, 1359	804, 1359	1670, 3290, 4832, 6202
SPECint_base_rate2000	-	-	10.6, 21.0, 31.4, 41.7
SPECfp_base_rate2000	-	-	14.1, 27.0, 39.0, 49.7
TPC-C: tpmC; $/tpmC[m]	-	-	-
TPC-H: QphH (@ 1TB)	-	12,866.8 (32 nodes)	-
TPC-H: $/QphH (@ 1TB)	-	670.00 (32 nodes)	-
Relative OLTP performance	51.0, 67.7	51.0, 92.0	81.7, 160.3, 242.3, 319.3

Footnotes

X = Supported
O = Optionally Available
N/A = Not Applicable
§ = Statement of Direction
a Shared memory
b Per processor
d Via control workstation and PSSP software
e Node types can be intermixed on system
f   Up to 512 available via special order
g With SP Expansion I/O units
h Third disk bay available via RPQ
k Requires additional software; check on availability
m p660-6H1, M80 and p680 TPC-C results are V5; others are pre-V5
n 256MB/16GB on 1-way system
p Using 8MB of L2 cache
q Using 600 MHz processors
r   Using 450 MHz processors
s Supported via RPQ and PRPQ
u 4-way option available with 600 MHz processors

I/O device options	RS/6000 150	RS/6000 170/270	RS/6000 B50	pSeries 640	pSeries 620/660	RS/6000 M80	pSeries 680	RS/6000 SP
Disk drives and subsystems								
7203-001 Portable Disk Drive	X	X	X	-	X*	X*	X*	-
7204-409/419 External Disk Drive	X	X	-	X	X*	X*	X*	-
7133-D40/T40 Serial Disk System	X	X	X	X	X	X	X	X
2104-DU3/TU3 Expandable Storage Plus	X	X	X	X	X	X	X	X
2105-F10/F20 Enterprise Storage Server™	-	X	-	X	X	X	X	X
Fibre Channel hubs and switches								
2032-001 Enterprise Fibre Channel Director	-	X	-	X	X	X	X	X
2103-H07 Fibre Channel Storage Hub	X	X	X	X	X	X	X	X
2109-S08/S16 SAN Fibre Channel Switch	-	X	-	X	X	X	X	X
Optical drives and libraries								
3995-Cxx Optical Library	X	X	-	X	X	X	X	X
7210-020 CD-ROM Drive	X	X	-	X	X	X	X	X
4.7GB SCSI-2 DVD-RAM Drive (internal)	X	X	X	X	X	X	X	-
Tape drives and libraries								
7205-311 DLT Tape Drive	X	X	X	X	X*	X*	X*	-
7206-005 4 mm Tape Drive	X	X	-	X	X*	X*	X*	-
7206-110 4 mm Tape Drive	X	X	X	X	X	X	X	X
7207-122 4GB 1/4-inch Tape Drive	X	X	X	X	X	X	X	X
7208-341/345 8 mm Tape Drive	X	X	X	X	X*	X*	X*	-
3490E-Fxx 1/2-inch Tape Subsystem (18/36-track)	X	X	X	X	X	X	X	X
3494-L12/L10/D12/D10 Magstar® Tape Library	X	X	-	X	X	X	X	X
3494-B18 Magstar Virtual Tape Server	-	-	-	-	X	X	X	X
3570-Cxx Magstar MP Tape Subsystem	X	X	X	X	X	X	X	X
3575 Magstar MP Tape Library Dataserver	X	X	X	X	X	X	X	X
3580-H11/L11 Ultrium Tape Drive	X	X	X	X	X	X	X	X
3581-H17/L17 Ultrium Tape Autoloader	X	X	X	X	X	X	X	X
3583-L18/L36/L72 Ultrium Scalable Tape Library	X	X	X	X	X	X	X	X
3584-D32/L32 UltraScalable Tape Library	X	X	X	X	X	X	X	X
3590-E11/B11/C12 Magstar Tape Drive	X	X	X	X	X	X	X	X
7331-305 8 mm Tape Library	X	X	X	X	X	X	X	X
7332-110 4 mm DDS-3 Tape Autoloader	X	X	-	X	X*	X*	X*	-
7337-305/306 DLT Tape Library	X	X	X	X	X	X	X	X
20GB/40GB 4 mm Tape Drive (internal)	-	X	-	-	X	X	X	X
20/40GB 8 mm Tape Drive (internal)	X	X	-	X	X	X	X	X
Communications subsystems								
8361-110 IBM Network Station™	X	X	X	X	X	X	X	-

X = *Available*
* Not supported when a pSeries 660-6H0, pSeries 660-6H1, pSeries 680, RS/6000 H80, RS6000 M80 or RS/6000 S80 is attached to the RS/6000 SP.
Note: For the devices listed, not all models are supported on all systems. For more information, contact your IBM marketing representative or IBM Business Partner

Graphics accelerators	150	170	270	p640
POWER GXT130P - 2D	X	X	X	X
POWER GXT300P - 2D/3D (Softgraphics)	X	X	X	-
POWER GXT2000P - 2D/3D	X	X	X	-
POWER GXT3000P - 2D/3D	X	X	X	-
POWER GXT4000P - 2D/3D	-	X	X	X (RPQ)
POWER GXT6000P - 2D/3D	-	X	X	X (RPQ)

Workstation performance (with AIX 4.3.3)	150 (375 MHz)	150 (333 MHz)		170 (400 MHz)		170 (450 MHz)		270 (2-way; 4MB L2)		270 (4-way; 4MB L2)	
Graphics accelerators	GXT2000P	GXT4000P/ GXT6000P		GXT4000P/ GXT6000P		GXT4000P/ GXT6000P		GXT4000P/ GXT6000P		GXT4000P/ GXT6000P	
Xmark93	42.2	71.0	70.6	79.1	79.4	84.2	84.2	77.4	77.1	77.4	77.1
PLBwire93	253	583	943	726	1120	821	1190	1120	1270	1370	1180
PLBsurf93	458	887	1290	1050	1490	1180	1640	1440	1790	1830	1900
ProCDRS-03	6.6	14.9	31.6	17.8	33.1	19.5	33.2	17.0	32.8	17.0	32.8
DX-06	3.68	6.87	14.6	8.30	17.0	9.34	17.9	7.91	15.9	7.91	15.9
DRV-07	2.13	3.18	13.3	3.67	15.1	4.23	15.3	3.60	14.6	3.60	14.6
Light-04	1.16	1.73	3.22	2.13	3.80	2.35	4.05	1.97	3.61	1.97	3.61
AWadvs-04	15.0	24.1	59.0	28.9	67.0	32.5	71.4	27.6	65.0	27.6	65.0

System software	150	170	270	B50	p640	p620-6F0	p620-6F1
Operating system support							
AIX® 4.3 (5765-C34)[1]	4.3.2+	4.3.3	4.3.3	4.3.3	4.3.3	4.3.3	4.3.3
AIX 5.1 (5765-E61)[1]	X	X	X	X	X	X	X
Linux®	X	X	X	X	X	-	-
HACMP	X	X	X	-	X	X	X

	p660-6H0	p660-6H1	M80	p680
Operating system support				
AIX 4.3[1]	4.3.3	4.3.3	4.3.3	4.3.3
AIX 5.1[1]	X	X	X	X
Linux	-	-	-	-
HACMP	X	X	X	X

	SP 375 MHz POWER3 SMP Thin	SP 375 MHz POWER3 SMP Wide	SP 375 MHz POWER3 SMP High
Operating system support			
AIX 4.3[1]	4.3.3	4.3.3	4.3.3
AIX 5.1[1]	X	X	-
Linux	-	-	-
HACMP	X	X	X

X = Available or standard feature
[1] *AIX – unlimited user license*

IBM services

IBM services provide the capabilities and solutions needed to manage virtually every aspect of an open systems environment and at any level chosen. They complement the support already included with IBM @server pSeries and IBM RS/6000 systems. IBM world-class services and support allow you to better manage resources and focus on what matters most – your business.

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- IBM and non-IBM software customization
- IBM application development
- Site planning services

Continuing support services

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   - IBM and non-IBM hardware and software
- On-site software maintenance support
- Capacity planning
- Maintenance services, including multivendor environment
- Technical/application specialists
- Network custom services
- Education

Benchmark notes:

Values shown in the performance benchmarks section were derived using particular, well-configured, development-level computer systems, and used 32-bit applications and external cache if external cache is supported on the system. All performance benchmark values and estimates are provided "AS IS" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information, including system benchmarks, to evaluate the performance of a system they are considering. Actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration. IBM recommends application-oriented testing for performance predictions. Additional information about the performance benchmarks, values, and systems tested is available from your IBM marketing representative or IBM Authorized Reseller or access the following on the Web:

SPEC http://www.spec.org
TPC http://www.tpc.org

Unless otherwise indicated, new or updated system benchmarks were conducted using AIX Version 4.3.

tpmC: TPC Benchmark C throughput measured as the average number of transactions processed per minute during a valid TPC-C configuration run of at least twenty minutes.

$/tpmC: TPC Benchmark C price-performance ratio reflects the estimated five year total cost of ownership for system hardware, software, and maintenance divided by the tpmC for the system.

QppH is the power metric of TPC-H and is based on a geometric mean of the 17 TPC-H queries, the insert test and the delete test. It measures the ability of the system to give a single user the best possible response time by harnessing all available resources. QppH is scaled based on database size from 30GB to 1TB.

QthH is the throughput metric of TPC-H and is a classical throughput measure characterizing the ability of the system to support a multiuser workload in a balanced way. A number of query users is chosen, each of which must execute the full set of 17 queries in a different order. In the background, there is an update stream that runs a series of insert/delete operations. QthH is scaled based on the database size from 30GB to 1TB.

QphH is the geometric mean of the power tests (QppH) and the throughput tests (QthH).

$/QphH: Price-performance metric for the TPC-H benchmark where QpH is the geometric mean of QppH and QthH. The price reflects the estimated five year cost of ownership for the tested hardware configuration, software and maintenance.

Relative OLTP performance: Estimate of commercial processing performance derived from an IBM analytical model which simulates some of the system's operations such as CPU, cache and memory. The model does not simulate disk or network I/O operations. Although general database and operating system parameters are used, the model does not reflect specific databases or AIX version or releases. The model assumes the use of 32-bit applications. An IBM RS/6000 Model 250 is the baseline reference system and has a value of 1.0. Although Relative OLTP may be used to compare estimated commercial processing performance, actual system performance may vary and is dependent upon many factors, including system hardware configuration and software design and configuration.

More information

- Contact your IBM marketing representative or IBM Business Partner.
- Access **ibm.com**/eserver/pseries on the Internet to get to the IBM Web Servers Products and Services page[1] on IBM's World Wide Web server, and then select the appropriate hardware or software option.
- Product announcement letters containing more details on hardware and software offerings are available at **ibm.com**/ibmlink.
- Benchmark and performance information is available at:
   ibm.com/eserver/pseries/hardware/ system_perf.html
   ibm.com/rs6000/hardware/graphics_perf.html.

[1] The IBM home page on the Internet can be found at **www.ibm.com**

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