

# IBM Power™ Systems Family Quick Reference Guide

January 2009

									
	<b>BladeCenter® JS12 Express</b>	<b>BladeCenter JS22 Express</b>	<b>Power® 520 Express</b>	<b>Power 550 Express</b>	<b>Power 560 Express</b>	<b>Power 570</b>	<b>Power 575</b>	<b>Power 595</b>	
Machine type-model	7998-60X	7998-61X	8203-E4A 9407-M15 <sup>1</sup> 9408-M25 <sup>1</sup>	8204-E8A 9409-M50 <sup>1</sup>	8234-EMA	9117-MMA	9125-F2A	9119-FHA	
System package	Chassis mount	Chassis mount	4U, 19" rack or tower	4U, 19" rack or tower	4U / node, 19" rack	4U / node, 19" rack	2U / node, 24" frame	42U, 24" CEC frame	
Processor	POWER6™	POWER6	POWER6	POWER6	POWER6	POWER6	POWER6	POWER6	
# of cores (GHz)	2 (3.8)	4 (4.0)	1, 2, 4 <sup>1</sup> (4.2)	2, 4 <sup>1</sup> , 6, 8 (3.5, 4.2 <sup>2</sup> )	4, 8, 16 (3.6)	<u>2 to 16</u> (3.5, 4.2, 4.4, 4.7, 5.0) <u>4 to 32</u> (4.2)	32 per node (4.7)	<u>8 to 64</u> (4.2) <u>16 to 64</u> (5.0)	
Min - max. memory	2 – 64 GB	4 – 32 GB	1 – 64 GB (max 16 per core)	1 – 256 GB (max 64 per proc card)	8 – 384 GB (max 96 per proc card)	2 – 768 GB (max 96 per proc card)	32 – 256 GB per node	16 – 4096 GB (max 512 per proc book)	
Max CEC disk bays / TB storage	2 / 0.29	1 / 0.14	6 / 2.7	6 <sup>2</sup> / 2.7	12 / 5.4 (6 / 2.7 per drawer)	24 / 10.8 (6 / 2.7 per drawer)	2 / 0.292 per node	16 / 4.8 per 24-inch I/O drawer	
Max CEC PCI slots	1 PCIe + 1 PCI-X	1 PCIe + 1 PCI-X	3 PCIe + 2 PCI-X DDR	3 PCIe + 2 PCI-X DDR	8 PCIe + 4 PCI-X DDR	16 PCIe + 8 PCI-X DDR	4 PCIe per node	6 PCI-X + 14 PCI-X DDR per drawer	
Max I/O loops (RIO and/or 12X)	0	0	1-core = 0 2-core = 1 4-core = 2	2-core = 1, 4->8-core = 2	4-core = 1, 8-core = 2, 16-core = 3	8 (1 per processor card)	1 per node	32 (4 per processor book)	
Max 12X I/O drawers <sup>3</sup>	0	0	8	8	12	32	1 per node	30	
Max RIO I/O drawers <sup>3</sup>	0	0	12	12	0 (IBM i) 18 (AIX)	48	0	12 (AIX) 96 (IBM i)	
Max disk bays with I/O drawers <sup>4</sup>	2 +12 bays if BladeCenter S	1 +12 bays if BladeCenter S	1-core = 6 2-core = 294 4-core = 294	582	1332	1344	714 per node	480 (AIX) 2200 (IBM i)	
Max PCI slots w/ 12X I/O drawers	1 PCIe + 1 PCI-X	1 PCIe + 1 PCI-X	2 PCIe + 50 PCI-X DDR	1 PCIe + 50 PCI-X DDR	7 PCIe + 76 PCI-X DDR	12 PCIe + 200 PCI-X DDR	4 PCIe per node	180 PCI-X + 420 PCI-X DDR	
Max PCI slots w/ RIO I/O drawers	1 PCIe + 1 PCI-X	1 PCIe + 1 PCI-X	2 PCIe + 2 PCI-X DDR + (84 AIX or 168 i PCI-X)	1 PCIe + 2 PCI-X DDR + (84 AIX or 168 i PCI-X)	7 PCIe + 4 PCI-X DDR + 126 AIX PCI-X	12 PCIe + 8 PCI-X DDR + (336 AIX or 672 i PCI-X)	4 PCIe (node only)	600 AIX or 1336 IBM i PCI-X	
AIX rPerf Subset of 570 ranges	14.71	30.26	<u>4.2 GHz:</u> 8.39 (1), 15.95 (2), 31.48 (4)	<u>3.5GHz:</u> 15.85–58.80 <u>4.2GHz:</u> 18.38-68.2	<u>3.6GHz:</u> 31.3-100.3	<u>3.5GHz:</u> 15.85-105.75 <u>5.0GHz:</u> 21.16-141.21 <u>4.2GHz(4-32):</u> 35.5-193.25	N/A	<u>4.2GHz:</u> 75.58-479.89 <u>5.0GHz:</u> 164.67-553.01	
i CPW Subset of 570 ranges	7100	13800	<u>4.2 GHz:</u> 4300 (1), 8300 (2), 15600 (4)	<u>3.5GHz:</u> 7750–27600 <u>4.2GHz:</u> 9200-32650	<u>3.6GHz:</u> 14100-48500	<u>3.5GHz:</u> 8150-57600 <u>5.0GHz:</u> 11000-77600 <u>4.2GHz (4-32):</u> 16200-104800	IBM i not supported	<u>4.2GHz:</u> 35500-256200 <u>5.0GHz:</u> 41000-294700	
CoD options	N/A	N/A	N/A (except 9408-M25 CUoD)	N/A (except 9409- M50 CUoD)	N/A	CUoD, On/Off, Utility, Trial	N/A	CUoD, On/Off, Utility, Trial	
Warranty	3-year			1-year 9x5			1-year 24x7		

	BladeCenter JS12	BladeCenter JS22	Power 520	Power 550	Power 560	Power 570	Power 575	Power 595
Max partitions	20	40	40	80	160	160	254	254
AIX® level & group	V5.3, V6.1 C5	V5.3, V6.1 C5	V5.3, V6.1 D5	V5.3, V6.1 E5	V5.3, V6.1 E5	V5.2 <sup>7</sup> , V5.3, V6.1 F5	V5.3, V6.1 <sup>6</sup> F5	V5.3, V6.1 H5
IBM i level & tier	6.1 P05	6.1 P10	5.4 <sup>6</sup> , 6.1 <sup>6</sup> P05 / P10	5.4 <sup>6</sup> , 6.1 <sup>6</sup> P20	6.1 P20	5.4, 6.1 P30	n/a	5.4, 6.1 P50
Linux® support	RHEL4.6, RHEL5.1, SLES10SP2	RHEL4.6, RHEL5.1, SLES10SP1	RHEL4.5, RHEL5.1, SLES10SP1	RHEL4.5, RHEL5.1, SLES10SP1	RHEL4.5, RHEL5.1, SLES10SP1	RHEL4.5, RHEL5.1, SLES10SP1	RHEL4.6, RHEL5.2, SLES10SP2	RHEL4.7, RHEL5.2, SLES10SP2
PowerVM™ Express	N/A	N/A	Optional	Optional	N/A	N/A	N/A	N/A
PowerVM Standard	Standard	Standard	Optional <sup>5</sup>	Optional <sup>5</sup>	Optional	Optional	Optional	Optional
PowerVM Enterprise	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

- 1 9407-M15 is 4.2GHz 1-core only, 9408-25 is 4.2GHz 2-core only, 9409-M50 is 4.2GHz 4-core only
- 2 Power 550 has 8 disk slots with SFF disk planned to be available by April 2009
- 3 Assuming maximum number of I/O loops
- 4 Ignoring SAN drives, using the maximum whether SAS or SCSI, ignoring IBM i disk controller implications
- 5 IBM i edition may require PowerVM Standard or higher as a minimum
- 6 Starting 21 November 2008 for the 8203, 8024 and 8234
- 7 AIX 5.3 or higher needed for the 4.2, 4.4 and 5.0 GHz Power 570 processors announced October 2008

RAS Features	Power 520	Power 550	Power 560	Power 570	Power 595
Redundant / Hot Swap Fans & Blowers	Std	Std	Std	Std	Std
Hot Swap DASD / Media / PCI Adapters	Std	Std	Std	Std	Std
Concurrent Firmware Update	Std	Std	Std	Std	Std
Redundant / Hot Swap Power Supplies	Opt	Opt	Std	Std	Std
Dual disk controllers (split backplane for AIX)	Opt	Opt	Opt	Opt	Std
Processor Instruction Retry / Alternate Processor Recovery	Std	Std	Std	Std	Std
Storage Keys	Std	Std	Std	Std	Std
PowerVM Live Partition Mobility/Live Application Mobility	Opt	Opt	Opt	Opt	Opt
Redundant Service Processors	N/A	N/A	Std*	Std*	Std
Redundant System Clocks	N/A	N/A	Std*	Std*	Std
Redundant / Hot Swap Power Regulators	N/A	N/A	Std	Std	Std
Dynamic Processor Sparing	N/A	N/A	N/A	Opt	Opt
Memory Sparing	N/A	N/A	N/A	Opt	Opt
Hot GX Adapter Add and Cold Repair	N/A	N/A	N/A	Std	Std
Hot-node Add / Cold-node Repair	N/A	N/A	N/A	Std	Std*
Hot-node Repair / Hot-memory Add	N/A	N/A	N/A	Std*	Std*
POWER6 Enhanced Memory	N/A	N/A	N/A	Std	Std
Dynamic System Clock Failover	N/A	N/A	N/A	N/A	Std
Hot-node Repair / Hot-memory Add for all nodes	N/A	N/A	N/A	N/A	Std*
Mid-plane connection for inter-nodal communication	N/A	N/A	N/A	N/A	Std

\* Requires two or more nodes.

See the Power Systems Facts and Features document (G320-9878 or POB03004-USEN ) for more detailed information

For more benchmark results, see [http://www.ibm.com/systems/power/hardware/reports/system\\_perf.html](http://www.ibm.com/systems/power/hardware/reports/system_perf.html)

The IBM Power Systems home page on the Internet can be found at: [ibm.com/systems/power/](http://ibm.com/systems/power/)

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