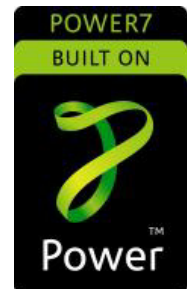




IBM Power Facts and Features IBM Power Systems, IBM PureFlex and Power Blades

October 2013



IBM Power Systems™ servers and IBM BladeCenter® blade servers using IBM POWER6® and POWER6+™ processors are described in a separate Facts and Features report dated April 2010 (POB03004-USEN-14).

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These notes apply to the description tables for IBM POWER7® POWER7+ ® systems:

Y	Standard / Supported
Optional	Optionally Available / Supported
N/A or -	Not Available / Supported or Not Applicable
M	CoD capabilities include: Capacity Upgrade on Demand option – permanent processor or memory activation, Elastic Capacity on Demand (previously called On/Off)– temporary processor or memory activation by the day, Utility Capacity on Demand – temporary processor activation by the minute, and Trial Capacity on Demand.
M+	Elastic COD built-in to new Power 780 or Power 795 servers and includes a block of no-charge processor and memory days
N	Power 760 has processor Capacity Upgrade on Demand (permanent activations). Memory CUoD and Elastic CoD not provided
SOD	Statement of General Direction announced
SLES	SUSE Linux Enterprise Server
RHEL	Red Hat Enterprise Linux

a	If installed in BladeCenter E or T chassis, Advanced Management Module is required and other restrictions may apply.
b	The Power 770 and Power 780 “B” and “C” models are not included in this document.
d	The PowerLinux 7R1 model L1C/L1S and PowerLinux 7R2 model L2C/L2S are not included in this document
e	Hot Node Repair and Memory Upgrade for 2-, 3- and 4-processor enclosure systems.
f	The Power 710, 720, 730, 740 Express “B” and “C” models introduced earlier are not included in this document.
g	CPW values for servers with more than 32 cores shown using two or more partitions. For example two 24-core partitions for a 48-core CPW listing. Or two 32-core partitions for a 64-core CPW listing. Or a 24-core and 12-core partitions or two 18-core partitions for a 36-core CPW listing.
h	Maximum drives refers to a system limit. There may also be per-partition limits. For example IBM i has a maximum of about 2800 paths per partition.
j	Each Power 795 4.0 GHz processor book has four sockets, with each socket having eight POWER7 processor cores. If run in optional TurboCore mode at 4.25 GHz, only half the cores in each socket are available to be activated, with each of those cores having access to 8 MB of Level 3 (L3) cache, rather than the standard 4 MB of L3 cache. At least three processor books must be installed to run in TurboCore mode.
k	The Power 750 Express “B” model introduced earlier is not included in this document
l	EXP12S & EXP24S & EXP30 drawers not supported on 4-core Power 710 Express and PowerLinux 7R1 configurations.
m	EXP 12S & EXP24S & EXP30 drawers and 12X I/O drawers not supported on 4-core Power 720 Express configurations.
n	Option is supported on IBM i only through VIOS.
o	Not included in the five PCIe Gen2 system slots is an additional (6 th) dedicated PCIe 4x slot for LAN adapter usage
p	rPerf values for 96-core 780 shown using three 32-core partitions and 128-core 780 using two 64-core partitions
r	Max 64 cores (128 threads) per AIX 5.3 partition. Max 64 cores (256 threads) per AIX 6 partition. Max 256 cores (1024 threads) per AIX 7 partition. Max 32 cores (128 threads) per IBM i partition except when an approved RPQ allows greater than 32 cores.
s	The Power 710 8268-E1D is only offered in specific countries
*	Full benchmark results are located at ibm.com/systems/power/hardware/reports/system_perf.html

For additional connectivity information, please reference the IBM Sales Manual for more information on I/O features and adapters.

IBM Power Systems

On a Smarter Planet, the rise of mobile devices, big data, analytics and social business are creating explosive growth in compute intensive workloads including transaction processing, ERP, and other data-centric workloads. These applications are remaking businesses and driving the need for smarter computing. Today, businesses need to differentiate themselves, gain business insights faster and deliver an exceptional client experience through solutions that are efficient, secure and affordable. For more than a decade, businesses have relied on IBM Power Systems to deliver industry leading performance, scalability and virtualization flexibility to address their compute intensive requirements. With the new IBM Power Systems servers with POWER7+ businesses of all sizes can:

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- **Deliver an exceptional client experience** with systems and software that provide unique capabilities, Power Experts and expertise and a vast network of Business Partners and Solution Providers to ensure you're receiving rapid and long lasting benefits from your investment

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Power 710 and 730 Express ^f

Product Line	IBM Power 710 Express	IBM Power 730 Express
Machine type	8231-E1D,8268-E1D ^s	8231-E2D
System packaging	19" rack drawer (2U)	19" rack drawer (2U)
Microprocessor type	64-bit POWER7+	64-bit POWER7+
# of processor sockets per server	1	2
Processor options	3.6 GHz (4) 4	4.3 GHz (4) 8
GHz (cores/socket) # of cores	4.2 GHz (6) 6	4.2 GHz (6) 12
	4.2 GHz (8) 8	3.6 GHz (8) 16
		4.2 GHz (8) 16
EnergyScale	Y	Y
Level 2 (L2) cache per core	256 KB	256 KB
Level 3 (L3) cache per core	10 MB	10 MB
System memory (minimum - maximum)	8 GB – 256 GB (1066 MHz DDR3)	8 GB -512 GB (1066 MHz DDR3)
Active Memory Expansion	Optional	Optional
Reliability, availability, serviceability		
Chipkill memory	Y	Y
Service processor	Y	Y
Hot-swappable disks	Y	Y
Dynamic Processor Deallocation	Y	Y
Processor Instruction Retry	Y	Y
Alternate Processor Recovery	Y	Y
Dynamic deallocation: PCI bus slots	Y	Y
Hot-plug PCI slots	N/A	N/A (in system unit) Y (in 12X I/O drawers)
Blind-swap PCI slots in system unit	N/A	N/A
Redundant hot-plug power	Optional	Y
Redundant hot-plug cooling	Y	Y
Node Add, Node Repair, Memory Upgrade	N/A	N/A
Dual VIOS	Optional	Optional
Capacity and expandability		
Capacity on Demand (CoD) functions	N/A	N/A
PowerVM Express Edition	Optional	Optional
PowerVM Standard Edition	Optional	Optional
PowerVM Enterprise Edition	Optional	Optional
Max logical partitions/micro-partitions	160 (20 per core)	320 (20 per core)
Maximum system unit PCI slots ^o	5 PCIe 8x low profile	5 PCIe 8x low profile
Max PCI slots: system unit ^o	5 PCIe 8x low profile	5 PCIe 8x low profile
+ PCI-X 12X I/O drwrs	12X drawer not supported	12X PCI-X drawer not supported
Max PCI slots: system unit ^o	5 PCIe 8x low profile	4 PCIe 8x low profile +
+ PCIe 12X I/O drwrs	12X drawer not supported	20 PCIe 8x full high
System Unit: Disk/SSD bays media bays (select one of three options)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)
Maximum disk storage in system unit	5.4 TB (with six 900 GB disks)	5.4 TB (with six 900 GB disks)
Maximum I/O loops (12X)	N/A	1
Maximum PCI-X 12X I/O drawers	N/A	N/A
Maximum PCIe 12X I/O drawers	N/A	2
Max disk drives (sys unit +I/O drawers) Storage	102 91 TB (900 SFF GB drives in system unit and in EXP24S drawer ^l ,)	378 340 TB (900 GB SFF drives in system unit, in EXP24S drawers and in #5802 12X drawers.)
Max Ultra SSD I/O Drawer TB	½ 11.6 TB	1 11.6TB
Performance*		
AIX rPerf	3.6 GHz (4): 53.9 (4)	4.3 GHz (4): 120.4 (8)
GHz (cores/socket): perf (# cores)	4.2 GHz (6): 90.6 (6)	4.2 GHz (6): 176.6 (12),
	4.2 GHz (8): 115.5 (8)	3.6 GHz (8): 197.7 (16)
		4.2 GHz (8): 223.1 (16)
IBM i CPW	3.6 GHz (4): 28,400 (4)	4.3 GHz (4): 59,700 (8)
GHz (cores/socket): perf (# cores)	4.2 GHz (6): 49,400 (6)	4.2 GHz (6): 89,200 (12),
	4.2 GHz (8): 64,500 (8)	3.6 GHz (8): 104,700 (16)
		4.2 GHz (8): 117,600 (16)

Power 720 and 740 Express ^f

Product Line	IBM Power 720 Express	IBM Power 740 Express
Machine type	8202-E4D	8205-E6D
System packaging	19" rack drawer (4U) or tower	19" rack drawer (4U)
Microprocessor type	64-bit POWER7+	64-bit POWER7+
# of processor sockets per server	1	1 or 2
Processor options GHz (cores/socket) # of cores	3.6 GHz (4) 4	4.2 GHz (6) 6, 12
	3.6 GHz (6) 6	3.6 GHz (8) 8, 16
	3.6 GHz (8) 8	4.2 GHz (8) 8, 16
EnergyScale	Y	Y
Level 2 (L2) cache per core	256 KB	256 KB
Level 3 (L3) cache per core	10 MB	10 MB
System memory (minimum - maximum)	4-core: 8 GB – 64 GB (1066 MHz DDR3) 6- or 8-core: 8 GB – 512 GB (1066 MHz DDR3)	1-socket 8 GB – 512 GB (1066 MHz DDR3) 2-socket 8 GB – 1024 GB (1066 MHz DDR3)
Active Memory Expansion	Optional	Optional
Reliability, availability, serviceability		
Chipkill memory	Y	Y
Service processor	Y	Y
Hot-swappable disks	Y	Y
Dynamic Processor Deallocation	Y	Y
Processor Instruction Retry	Y	Y
Alternate Processor Recovery	Y	Y
Dynamic deallocation: PCI bus slots	Y	Y
Hot-plug PCI slots	N/A (in system unit) Y (in 12X I/O drawers)	N/A (in system unit) Y (in 12X I/O drawers)
Blind-swap PCI slots in system unit	N/A	N/A
Redundant hot-plug power	Optional	Y
Redundant hot-plug cooling	Y	Y
Node Add & Repair, Memory Upgrade	N/A	N/A
Dual VIOS	Optional	Optional
Capacity and expandability		
Capacity on Demand (CoD) functions	N/A	N/A
PowerVM: Express, Standard or Enterprise Edition	Optional	Optional
Max logical partitions/micro-partitions	160 (20 per core)	320 (20 per core)
Maximum system unit PCI slots ^o	5 PCIe 8x full high + optional 4 PCIe 8x low profile	5 PCIe 8x full high + optional 4 PCIe low profile
Max PCI slots: system unit ^o + PCI-X 12X I/O drwrs	5 PCIe 8x full high + 24 PCI-X DDR (64-bit)	5 PCIe 8x full high + 48 PCI-X DDR (64-bit)
Max PCI slots: system unit ^o + PCIe 12X I/O drwrs	5 PCIe 8x full high + 20 PCIe 8x	5 PCIe 8x full high + 40 PCIe 8x
System Unit: Disk/SSD bays media bays (select one of two options)	6 SFF 2 (DVD & tape) ⁿ 8 SFF w/ RAID 2 (DVD & tape)	6 SFF 2 (DVD & tape) ⁿ 8 SFF w/ RAID 2 (DVD & tape)
Maximum disk storage in system unit	7.2 TB (with eight 900 GB disks)	7.2 TB (with eight 900 GB disks)
Maximum I/O loops (12X)	1	2
Maximum PCI-X 12X I/O drawers ^m	4 (max 4 drawers per loop)	8 (max 4 drawers per loop)
Maximum PCIe 12X I/O drawers ^m	2 (max 2 drawers per loop)	4 (max 2 drawers per loop)
Max disk drives (sys unit +I/O drawers) Storage	380 342 TB (900 GB SFF drives in system unit, #5802 and EXP24S drawers ^m)	416 374 TB (900 GB SFF drives in system unit, #5802 and EXP24S drawers),
Maximum Ultra SSD I/O Drawer TB	1 11.6 TB	2 23.2 TB
Performance*		
AIX rPerf	3.6 GHz (4): 53.9 (4)	4.2 GHz (6): 90.6 (6), 176.6 (12)
GHz (cores/socket): perf (# cores)	3.6 GHz (6): 79.5 (6), 3.6 GHz (8): 102.4 (8)	3.6 GHz (8): 102.4 (8), 197.7 (16) 4.2 GHz (8): 115.5 (8), 223.1 (16)
IBM i CPW	3.6 GHz (4): 28,400 (4)	4.2 GHz (6): 49,000 (6), 91,700 (12)
GHz (cores/socket): perf (# cores)	3.6 GHz (6): 42,400 (6), 3.6 GHz (8): 56,300 (8)	3.6 GHz (8): 56,300 (8), 106,500 (16) 4.2 GHz (8): 64,500 (8), 120,000 (16)

IBM Power Systems
PowerLinux 7R1^d

Product Line	IBM PowerLinux™ 7R1	IBM PowerLinux 7R1
Machine type	8246-L1D	8246-L1T
System packaging	19" rack drawer (2U)	19" rack drawer (2U)
Microprocessor type	64-bit POWER7+	64-bit POWER7+
# of processor sockets per server	1	1
Processor options	3.6 GHz (8) 4 4.2 GHz (8) 6 4.2 GHz (8) 8	3.6 GHz (8) 4 4.2 GHz (8) 6 4.2 GHz (8) 8
EnergyScale	Y	Y
Level 2 (L2) cache per core	256 KB	256 KB
Level 3 (L3) cache per core	10 MB	10 MB
System memory (minimum - maximum)	32 GB – 256 GB (1066 MHz DDR3)	32 GB – 256 GB (1066 MHz DDR3)
Active Memory Expansion	N/A	N/A
Reliability, availability, serviceability		
Chipkill memory	Y	Y
Service processor	Y	Y
Hot-swappable disks	Y	Y
Dynamic Processor Deallocation	Y	Y
Processor Instruction Retry	Y	Y
Alternate Processor Recovery	Y	Y
Dynamic deallocation: PCI bus slots	Y	Y
Hot-plug PCI slots	N/A	N/A
Blind-swap PCI slots in system unit	N/A	N/A
Redundant hot-plug power	Optional	Optional
Redundant hot-plug cooling	Y	Y
Node Add, Node Repair, Memory Upgrade	N/A	N/A
Dual VIOS	Optional	Optional
Capacity and expandability		
Capacity on Demand (CoD) functions	N/A	N/A
PowerVM for IBM PowerLinux	Required	Required
Max logical partitions/micro-partitions	160 (20 per core)	160 (20 per core)
Maximum system unit PCI slots ^o	5 PCIe 8x low profile	5 PCIe 8x low profile
Max PCI slots: system unit ^o	5 PCIe 8x low profile	5 PCIe 8x low profile
PCIe 12X I/O drwrs	12X drawer not orderable	12X drawer not orderable
System Unit: Disk/SSD bays media bays (select one of three options)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)
Maximum disk storage in system unit	5.4 TB (with six 900 GB disks)	5.4 TB (with six 900 GB disks)
Maximum I/O loops (12X)	N/A	N/A
Maximum PCI-X 12X I/O drawers	N/A	N/A
Maximum PCIe 12X I/O drawers	N/A	N/A
Max Ultra SSD I/O Drawer TB	N/A	½ 11.6 TB
Max disk drives (sys unit +/- O drawers) Storage	5.4 TB (with six 900 SFF GB drives) (No drawer available)	102 91 TB (900 SFF GB drives in system unit and in EXP24S drawer ¹ ,)
Performance*		
Linux performance	IBM internal testing shows performance is similar to the Power 710 system on workloads running the same software stack.	IBM internal testing shows performance is similar to the Power 710 system on workloads running the same software stack.

IBM Power Systems
PowerLinux 7R2^d

Product Line	IBM PowerLinux 7R2	IBM PowerLinux 7R2
Machine type	8246-L2D	8246-L2T
System packaging	19" rack drawer (2U)	19" rack drawer (2U)
Microprocessor type	64-bit POWER7+	64-bit POWER7+
# of processor sockets per server	2	2
Processor options	3.6 GHz (8) 16	3.6 GHz (8) 16
GHz (cores/socket) # of cores	4.2 GHz (8) 16	4.2 GHz (8) 16
EnergyScale	Y	Y
Level 2 (L2) cache per core	256 KB	256 KB
Level 3 (L3) cache per core	10 MB	10 MB
System memory (minimum - maximum)	32 GB – 512 GB (1066 MHz DDR3)	32 GB – 512 GB (1066 MHz DDR3)
Active Memory Expansion	N/A	N/A
Reliability, availability, serviceability		
Chipkill memory	Y	Y
Service processor	Y	Y
Hot-swappable disks	Y	Y
Dynamic Processor Deallocation	Y	Y
Processor Instruction Retry	Y	Y
Alternate Processor Recovery	Y	Y
Dynamic deallocation: PCI bus slots	Y	Y
Hot-plug PCI slots	N/A	N/A
Blind-swap PCI slots in system unit	N/A	N/A
Redundant hot-plug power	Y	Y
Redundant hot-plug cooling	Y	Y
Node Add, Node Repair, Memory Upgrade	N/A	N/A
Dual VIOS	Optional	Optional
Capacity and expandability		
Capacity on Demand (CoD) functions	N/A	N/A
PowerVM for PowerLinux	Optional	Optional
Max logical partitions/micro-partitions	320 (20 per core)	320 (20 per core)
Maximum system unit PCI slots ^o	5 PCIe 8x low profile	5 PCIe 8x low profile
Max PCI slots: system unit ^o + PCI-X 12X I/O drwrs	5 PCIe 8x low profile 12X drawer not supported	5 PCIe 8x low profile 12X drawer not supported
Max PCI slots: system unit ^o + PCIe 12X I/O drwrs	5 PCIe 8x low profile 12X drawer not supported	4 PCIe 8x low profile + 20 PCIe 8x full high
System Unit: Disk/SSD bays media bays (select one of three options)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)	3 SFF 2 (DVD & tape) ⁿ 6 SFF 1 (DVD) ⁿ 6 SFF w/ RAID 1 (DVD)
Maximum disk storage in system unit	5.4 TB (with six 900 GB disks)	5.4 TB (with six 900 GB disks)
Maximum I/O loops (12X)	N/A	1
Maximum PCI-X 12X I/O drawers	N/A	N/A
Maximum PCIe 12X I/O drawers	N/A	2
Max Ultra SSD I/O Drawer TB	N/A	1 11.6TB
Max disk drives (sys unit +I/O drawers) Storage	6 5.4 TB (900 SFF GB drives in system unit)	378 340 TB (900 GB SFF drives in system unit, in EXP24S drawers and in #5802 12X drawers.)
Performance*		
Linux performance	IBM internal testing shows performance is similar to the Power 730 system on workloads running the same software stack.	IBM internal testing shows performance is similar to the Power 730 system on workloads running the same software stack.

PowerLinux 7R4

Product Line	IBM PowerLinux 7R4
Machine type	8248-L4T
System packaging	19" rack drawer (5U)
Microprocessor type	64-bit POWER7+
# of processor sockets per server	4
Processor options	3.5 GHz (8-core DCM) 16, 32
GHz (cores/socket) # of cores	4.0 GHz (8-core DCM) 16, 32
EnergyScale	Y
Level 2 (L2) cache per core	256 KB
Level 3 (L3) cache per core	10 MB
System memory (minimum - maximum)	32 GB – 1 TB (1066 MHz DDR3)
Active Memory Expansion	Optional
Reliability, availability, serviceability	
Chipkill memory	Y
Service processor	Y
Hot-swappable disks	Y
Dynamic Processor Deallocation	Y
Processor Instruction Retry	Y
Alternate Processor Recovery	Y
Dynamic deallocation: PCI bus slots	Y
Hot-plug PCI slots	Y
Blind-swap PCI slots in system unit	Y
Redundant hot-plug power	Y
Redundant hot-plug cooling	Y
Node Add, Node Repair, Memory Upgrade	N/A
NEBS compliant	N/A
Dual VIOS	Optional
Capacity and expandability	
Capacity on Demand (CoD) functions	-
PowerVM Express Edition	Optional
PowerVM Standard Edition	Optional
PowerVM Enterprise Edition	Optional
Max logical partitions/micro-partitions	640 (20 per core)
Maximum system unit PCI slots	6 PCIe-Gen2
Max PCI slots: system unit + PCI-X 12X I/O drwrs	6 PCIe-Gen2 + 0 PCI-X slots
Max PCI slots: system unit + PCIe 12X I/O drwrs	6 PCIe-Gen2 + 40 PCIe Gen1 slots
System Unit: Disk/SSD bays media bays	6 SFF 1
Maximum disk storage in system unit	5.4 TB (with six 900 GB disks)
Maximum I/O loops (12X)	2
Maximum PCI-X 12X I/O drawers	N/A
Maximum PCIe 12X I/O drawers	4 (max 2 drawers per loop)
Max disk drives (sys unit +I/O drawers) Storage	1302 ⁿ 1,171 TB with 900 GB drives
Maximum Ultra SSD I/O Drawer TB	2 23.2 TB
Performance*	
Linux performance	IBM internal testing shows performance is similar to the Power 750 system on workloads running the same software stack.

Power 750 Express ^k



Watson and the IBM Power 750 Express

Watson is based on a cluster of 90 IBM Power 750 servers, each with 32 POWER7 cores running at 3.55 GHz with a combined total of 16 Terabytes of memory. Designing Watson on commercially available Power 750 servers will ensure more rapid adoption of optimized systems in industries such as healthcare and financial services. For a white paper on Watson – A System Designed for Answers, see <https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=stg-600BE30W>

Product Line	IBM Power 750 Express
Machine type	8408-E8D
System packaging	19" rack drawer (5U)
Microprocessor type	64-bit POWER7+
# of processor sockets per server	1 – 4
Processor options	3.5 GHz (8-core DCM) 8, 16, 24, 32 4.0 GHz (8-core DCM) 8, 16, 24, 32
GHz (cores/socket) # of cores	
EnergyScale	Y
Level 2 (L2) cache per core	256 KB
Level 3 (L3) cache per core	10 MB
System memory (minimum - maximum)	32 GB – 1 TB (1066 MHz DDR3)
Active Memory Expansion	Optional
Reliability, availability, serviceability	
Chipkill memory	Y
Service processor	Y
Hot-swappable disks	Y
Dynamic Processor Deallocation	Y
Processor Instruction Retry	Y
Alternate Processor Recovery	Y
Dynamic deallocation: PCI bus slots	Y
Hot-plug PCI slots	Y
Blind-swap PCI slots in system unit	Y
Redundant hot-plug power	Y
Redundant hot-plug cooling	Y
Node Add, Node Repair, Memory Upgrade	N/A
NEBS compliant	N/A
Dual VIOS	Optional
Capacity and expandability	
Capacity on Demand (CoD) functions	-
PowerVM Express Edition	Optional
PowerVM Standard Edition	Optional
PowerVM Enterprise Edition	Optional
Max logical partitions/micro-partitions	640 (20 per core)
Maximum system unit PCI slots	6 PCIe-Gen2
Max PCI slots: system unit + PCI-X 12X I/O drwrs	6 PCIe-Gen2 + 0 PCI-X slots
Max PCI slots: system unit + PCIe 12X I/O drwrs	6 PCIe-Gen2 + 40 PCIe Gen1 slots
System Unit: Disk/SSD bays media bays	6 SFF 1
Maximum disk storage in system unit	5.4 TB (with six 900 GB disks)
Maximum I/O loops (12X)	1-socket: 0, 2- to 4-socket: 2
Maximum PCI-X 12X I/O drawers	N/A
Maximum PCIe 12X I/O drawers	4 (max 2 drawers per loop)
Max disk drives (sys unit +I/O drawers) Storage	1302 ⁿ 1,171 TB with 900 GB drives
Maximum Ultra SSD I/O Drawer TB	2 23.2 TB
Performance*	
AIX rPerf	3.5 GHz (8): 104.5 (8), 197.0 (16), 275.9 (24), 354.9 (32)
GHz (cores/socket): perf (# cores)	4.0 GHz (8): 117.1 (8), 220.7 (16), 309.2 (24), 397.7 (32)
IBM i CPW	3.5 GHz (8): 52,000(8), 96,000(16), 141,500(24), 185(32)
GHz (cores/socket): perf (# cores)	4.0 GHz (8): 59,000(8), 108,000(16), 158,000(24), 208,000(32)

IBM Power Systems
Power 760 Express

Product Line		IBM Power 760	
Machine type		9109-RMD	
System packaging		19" rack drawer (5U)	
Microprocessor type		64-bit POWER7+	
# of processor sockets per server		1 – 4	
Processor options		3.1 GHz (12-core DCM) 12,,24, 36, 48	
GHz (cores/socket) # of cores		3.4 GHz (12-core DCM) 12, 24, 36, 48	
EnergyScale		Y	
Level 2 (L2) cache per core		256 KB	
Level 3 (L3) cache per core		10 MB	
System memory (minimum - maximum)		32 GB – 2 TB (1066 MHz DDR3)	
Active Memory Expansion		Optional	
Reliability, availability, serviceability			
Chipkill memory		Y	
Service processor		Y	
Hot-swappable disks		Y	
Dynamic Processor Deallocation		Y	
Processor Instruction Retry		Y	
Alternate Processor Recovery		Y	
Dynamic deallocation: PCI bus slots		Y	
Hot-plug PCI slots		Y	
Blind-swap PCI slots in system unit		Y	
Redundant hot-plug power		Y	
Redundant hot-plug cooling		Y	
Node Add, Node Repair, Memory Upgrade		N/A	
NEBS compliant		N/A	
Dual VIOS		Optional	
Capacity and expandability			
Capacity on Demand (CoD) functions		Y ^N , CUoD processors	
PowerVM Express Edition		N/A	
PowerVM Standard Edition		Optional	
PowerVM Enterprise Edition		Optional	
Max logical partitions/micro-partitions		960 (20 per core)	
Maximum system unit PCI slots		6 PCIe-Gen2	
Max PCI slots: system unit + PCI-X 12X I/O drwrs		6 PCIe-Gen2 + 0 PCI-X slots	
Max PCI slots: system unit + PCIe 12X I/O drwrs		6 PCIe-Gen2 + 40 PCIe Gen1 slots	
System Unit: Disk/SSD bays media bays		6 SFF 1	
Maximum disk storage in system unit		5.4 TB (with six 900GB drives)	
Maximum I/O loops (12X)		1-socket: 0, 2- to 4-socket: 2	
Maximum PCI-X 12X I/O drawers		N/A	
Maximum PCIe 12X I/O drawers		4 (max 2 drawers per loop)	
Max disk drives (sys unit +I/O drawers) Storage		1302 ^h 1,171 TB with 900 GB drives	
Maximum Ultra SSD I/O Drawer TB		2 23.2 TB	
Performance*			
AIX rPerf		3.1 GHz (12): 142.1 (12), 264.8 (24), 370.7 (36), 476.7 (48)	
GHz (cores/socket): perf (# cores)		3.4 GHz (12): 151.4 (12), 282.1 (24), 395.0 (36), 507.8 (48)	
IBM i CPW ^g		3.1 GHz (12): 69,800(12), 129,000(24), 194,700(36), 258,000(48)	
GHz (cores/socket): perf (# cores)		3.4 GHz (12): 75,200(12), 137,000(24), 209,000(36), 274,000(48)	

IBM Power Systems
Power 770^b

Product Line		IBM Power 770
Machine type	9117-MMD	
System packaging	19" rack drawer (4U per node) 1 – 4 nodes per CEC	
Microprocessor type	64-bit POWER7+	
# of processor sockets per server	4, 8, 12, 16 (4 per CEC enclosure)	
Processor options	3.8 GHz (4) 16, 32, 48, 64	
GHz (cores/socket) # of cores Min. 4 active	4.2 GHz (3) 12, 24, 36, 48	
EnergyScale	Y	
Level 2 (L2) cache per core	256 KB	
Level 3 (L3) cache per core	10 MB	
System memory (min physical/min active/maximum)	64 GB/32 GB/4 TB (1066 MHz DDR3)	
Active Memory Expansion	Optional	
Reliability, availability, serviceability		
Chipkill memory	Y	
Service processor	Redundant SP and clock with failover (2 nodes or more)	
Hot-swappable disks	Y	
Dynamic Processor Deallocation	Y	
Processor Instruction Retry	Y	
Alternate Processor Recovery	Y	
Dynamic deallocation: PCI bus slots	Y	
Hot-plug PCI slots	Y	
Blind-swap PCI slots in system unit	Y	
Active Memory Mirroring	Optional	
Redundant hot-plug power	Y	
Redundant hot-plug cooling	Y	
Node Add, Node Repair, Memory Upgrade	Y ^e	
Dual VIOS	Optional	
Capacity and expandability		
Capacity on Demand (CoD) functions	Y ^m	
PowerVM Express Edition	N/A	
PowerVM Standard Edition	Optional	
PowerVM Enterprise Edition	Optional	
Max logical partitions/micro-partitions ^r	1000	
Maximum system unit PCI slots	24 PCIe 8x (6 per enclosure)	
Max PCI slots: system unit + PCI-X 12X I/O drawers	24 PCIe + 192 PCI-X DDR	
Max PCI slots: system unit + PCIe 12X I/O drawers	184 PCIe	
System unit: Disk bays media bays	24 SFF 4 (optional)	
Maximum disk storage in system unit	21.6 TB (with 24 900 GB disks)	
Maximum I/O loops (12X)	8	
Maximum PCI-X 12X I/O drawers	32	
Maximum PCIe 12X I/O drawers	16	
Max disk drives (system unit+I/O drawers) Storage	3024 ⁿ 2731 TB with 900 GB drives	
Maximum Ultra SSD I/O Drawer TB	8 92.8 TB (2 per enclosure)	
Performance*		
AIX rPerf	3.8 GHz (4): 219.3(16), 410.8(32), 570.1(48), 729.3(64)	
GHz (cores/socket): perf (# cores)	4.2 GHz (3): 184.2(12), 345.1(24), 478.9(36), 612.7(48)	
IBM i CPW	3.8 GHz (4): 110,000(16), 191,500(32), 290,500(48) ⁹ ,	
GHz (cores/socket): perf (# cores)	379,300(64) ⁹	
	4.2 GHz (3): 90,000(12), 154800(24), 242,600(36) ⁹ ,	
	306,600(48) ⁹	

Power 780^b

Product Line	IBM Power 780
Machine type	9179-MHD
System packaging	19" rack drawer (4U per node) 1 – 4 nodes per CEC
Microprocessor type	64-bit POWER7+
# of processor sockets per server	4, 8, 12, 16 (4 per CEC enclosure)
Processor options	3.7 GHz (8) 32, 64, 96, 128
GHz (cores/socket) # of cores Min. 4 active	4.4 GHz (4) 16, 32, 48, 64
EnergyScale	Y
Level 2 (L2) cache per core	256 KB
Level 3 (L3) cache per core	10 MB
System memory (min physical/min active/maximum)	64 GB/32 GB/4 TB (1066 MHz DDR3)
Active Memory Expansion	Optional
Reliability, availability, serviceability	
Chipkill memory	Y
Service processor	Redundant SP and clock with failover (2 nodes or more)
Hot-swappable disks	Y
Dynamic Processor Deallocation	Y
Processor Instruction Retry	Y
Alternate Processor Recovery	Y
Dynamic deallocation: PCI bus slots	Y
Hot-plug PCI slots	Y
Blind-swap PCI slots in system unit	Y
Active Memory Mirroring	Y
Redundant hot-plug power	Y
Redundant hot-plug cooling	Y
Node Add, Node Repair, Memory Upgrade	Y ^e
Dual VIOS	Optional
Capacity and expandability	
Capacity on Demand (CoD) functions	Y ^{M, M+}
PowerVM Express Edition	-
PowerVM Standard Edition	Optional
PowerVM Enterprise Edition	Optional
Max logical partitions/micro-partitions ^r	1000
Maximum system unit PCI slots	24 PCIe 8x (6 per enclosure)
Max PCI slots: system unit + PCI-X 12X I/O drawers	24 PCIe 8x + 192 PCI-X DDR
Max PCI slots: system unit + PCIe 12X I/O drawers	24+160 PCIe 8x
System Unit: Disk bays media bays	24 SFF 4 (optional)
Maximum disk storage in system unit	21.6 TB (with 24 900 GB disks)
Maximum I/O loops (12X)	8
Maximum PCI-X 12X I/O drawers	32
Maximum PCIe 12X I/O drawers	16
Max disk drives (system unit+I/O drawers) Storage	3024 ^h 2731 TB with 900 GB drives
Maximum Ultra SSD I/O Drawer TB	8 92.8 TB (2 per enclosure)
Performance*	
AIX rPerf GHz (cores/socket): perf (# cores)	3.7 GHz (8): 383.9(32), 690.1(64), 1151.6(96) ^p , 1380.19(128) ^p 4.4 GHz (4): 245.7(16), 460.3(32), 638.7(48), 817.1(64)
IBM i CPW GHz (cores/socket): perf (# cores)	3.7 GHz (8): 209,500(32), 414,900(64), 622,300(96) ^g , 829,800(128) ^g 4.4 GHz (4): 123,500(16), 214,000(32), 326,100(48) ^g , 424,400(64) ^g

Power 795

Product Line		IBM Power 795
Machine type		9119-FHB
System packaging		24" system frame (+ expansion frames)
Microprocessor type		64-bit POWER7
# of processor sockets per server		4 – 32 (4 sockets per processor book)
Processor options		3.7 GHz (6) 24 - 192
GHz (cores/socket) # of cores Min. 24 active		4.0 GHz (8) 32 - 256
		4.25 GHz (4) ^j 24 – 128 (TurboCore mode)
EnergyScale		Y
Level 2 (L2) cache per core		256 KB
Level 3 (L3) cache per core		4 MB (MaxCore mode) 8 MB (TurboCore mode) ^j
System memory (min physical/min active/maximum)		64 GB/32 GB/16 TB (1066 MHz DDR3)
Active Memory Expansion		Optional
Reliability, availability, serviceability		
Chipkill memory		Y
Service processor		Redundant SP and clock with failover
Hot-swappable disks in I/O drawer		Y
Dynamic Processor Deallocation		Y
Processor Instruction Retry		Y
Alternate Processor Recovery		Y
Dynamic deallocation: PCI bus slots		Y
Hot-plug PCI slots in I/O drawer		Y
Blind-swap PCI slots in I/O drawer		Y
Active Memory Mirroring		Y
Redundant hot-plug power		Y
Redundant hot-plug cooling		Y
Node Add, Node Repair, Memory Upgrade		Y
Dual VIOS		Optional
Capacity and expandability		
Capacity on Demand (CoD) functions		Y ^{M, M+}
PowerVM Express Edition		-
PowerVM Standard Edition		Optional
PowerVM Enterprise Edition		Optional
Maximum logical partitions/micro-partitions ^r		1000
Maximum system unit PCI slots		Use I/O drawers
Max PCI slots: system unit + PCI-X 12X I/O drawers		600 PCI-X
Max PCI slots: system unit + PCIe 12X I/O drawers		640 PCIe
System Unit: Disk bays media bays		Use I/O drawers
Maximum disk storage in system unit		Use I/O drawers
Maximum I/O loops (12X)		32
Maximum PCI-X 12X I/O drawers		30
Maximum PCIe 12X I/O drawers		32
Max disk drives (system unit+I/O drawers) Storage		4032 ⁿ 3628 TB with 900 GB drives
Maximum Ultra SSD I/O Drawer TB		N/A
Performance*		
AIX rPerf		3.7 GHz (6): 273.51 (24) – 2,188.08 (192)
GHz (cores/socket): perf (# cores) *		4.0 GHz (8): 372.27 (32) – 2,978.16 (256)
		4.25 GHz (4): 347.36 (24) – 1,852.56 (128)
IBM i CPW		3.7 GHz (6): 39,300 (6) – 288,500 (2 x 24-core LPARs)
GHz (cores/socket): perf (# cores) **		4.0 GHz (8): 55,100 (8) – 399,200 (2 x 32-core LPARs)
		4.25 GHz (4): 162,100 (24) – 218,400 (2 x 16-core LPARs)

* rPerf estimates shown for the Power 795 assume the LPAR size equal to the number of cores in one processor book (24-core for 3.7 GHz, 32-core for 4.0 GHz and 16-core for 4.25 GHz).

** To obtain CPW estimates for larger configurations than those shown, use the IBM Systems Workload Estimator at <http://www.ibm.com/systems/support/tools/estimator>.

IBM Flex System p24L

Form factor	Flex System standard node
Microprocessor type	64-bit POWER7
# of processor sockets per server	2
Processor options GHz (cores/socket) # of cores	3.7 GHz (6) 12 3.2 GHz (8) 16 3.5 GHz (8) 16
Level 2 (L2) cache	256 KB per processor core
Level 3 (L3) cache	4 MB per processor core
Memory (min/max)	8 GB up to 512 GB, 16 DIMM slots, ECC IBM Chipkill DDR3 SDRAM running at 1066 MHz
Internal disk storage	Up to two 2.5" Hard Disks or two 1.8" Solid State Drives
Networking/Expansion	Two PCI-E Expansion Slots
Systems management	Integrated systems management processor, light path diagnostics, Predictive Failure Analysis, Cluster Systems Management (CSM), Serial Over LAN, IPMI compliant
RAS features	Chassis redundant/hot plug Power & Cooling Front Panel and FRU/CRU LEDs Concurrent code update Processor deallocation ITE hot plug Dual AC Power Supply Auto reboot on power loss Internal and chassis-external temperature monitors 64B Marking ECC code supporting x8 IS DDR3 DIMMs System mgmt alerts IBM Chipkill ECC detection and correction
Operating systems	RHEL 5.7, 6.2 SLES11 SP2
Energy management	EnergyScale™ energy management

IBM Flex System p260

Form factor	Flex System standard node
Microprocessor type	64-bit POWER7+
# of processor sockets per server	2
Processor options GHz (cores/socket) # of cores	4.0 GHz (2) 4 4.0 GHz (4) 8 3.6 GHz (8) 16 4.1 GHz (8) 16
Level 2 (L2) cache	256 KB per processor core
Level 3 (L3) cache	10 MB per processor core on P7+ offerings
Memory (min/max)	8 GB up to 512 GB, 16 DIMM slots, ECC IBM Chipkill DDR3 SDRAM running at 1066 MHz plus Active Memory Expansion with hardware assist
Internal disk storage	Up to two 2.5-inch Hard Disks or two 1.8-inch Solid State Drives
Networking/Expansion	Two PCIe Expansion Slots
Systems management	Integrated systems management processor, light path diagnostics, Predictive Failure Analysis, Cluster Systems Management (CSM), Serial Over LAN, IPMI compliant
RAS features	Chassis redundant/hot-plug power and cooling Front Panel and FRU/CRU LEDs Concurrent code update and Processor deallocation Compute node hot plug and Dual VIOS support Dual AC Power Supply Auto reboot on power loss Internal and chassis-external temperature monitors System management alerts IBM Chipkill ECC detection and correction
Operating systems	AIX 6.1, AIX 7.1 IBM i 6.1 and 7.1 RHEL 5.7, 6.2; SLES11 SP2
Energy management	EnergyScale™ energy management


IBM Flex System p270

Form factor	Flex System standard node
Microprocessor type	64-bit POWER7+
# of processor sockets per server	2
Processor options GHz (cores/socket) # of cores	3.1 GHz (12) 24 3.4 GHz (12) 24
Level 2 (L2) cache	256 KB per processor core
Level 3 (L3) cache	10 MB per processor core
Memory (min/max)	8 GB up to 512 GB, 16 DIMM slots, ECC IBM Chipkill DDR3 SDRAM running at 1066 MHz plus Active Memory Expansion with hardware assist
Internal disk storage	Up to two 2.5-inch Hard Disks or two 1.8-inch Solid State Drives
Networking/Expansion	Two PCIe Expansion Slots One ETE adapter card slot (provides dedicated Dual VIOS on internal drives with optional adapter)
Systems management	Integrated systems management processor, light path diagnostics, Predictive Failure Analysis, Cluster Systems Management (CSM), Serial Over LAN, IPMI compliant
RAS features	Chassis redundant/hot-plug power and cooling Front Panel and FRU/CRU LEDs Concurrent code update and Processor deallocation Compute node hot plug and Dual VIOS support Dual AC Power Supply Auto reboot on power loss Internal and chassis-external temperature monitors System management alerts IBM Chipkill ECC detection and correction
Operating systems	AIX 6.1, AIX 7.1 IBM i 6.1, IBM i 7.1 RHEL 6.4, SLES11 SP2
Energy management	EnergyScale™ energy management

IBM Flex System p460

Form factor	Flex System double-wide node
Microprocessor type	64-bit POWER7 and POWER7+
# of processor sockets per server	4
Processor options GHz (cores/socket) # of cores	3.3 or 4.0 GHz (4) 16 3.2, 3.5, 3.6 or 4.1 GHz (8) 32
Level 2 (L2) cache	256 KB per processor core
Level 3 (L3) cache	4 MB per processor core on 3.3, 3.2 and 3.5 GHz P7 offerings 10 MB per processor core on 3.6, 4.0 and 4.1 GHz P7+ offerings
Memory (min/max)	16 GB up to 1 TB node, 32 DIMM slots, ECC IBM Chipkill DDR3 SDRAM running at 1066 MHz plus Active Memory Expansion with hardware assist
Internal disk storage	Up to two 2.5-inch Hard Disks or two 1.8-inch Solid State Drives
Networking/Expansion	Four PCIe Expansion Slots
Systems management	Integrated systems management processor, light path diagnostics, Predictive Failure Analysis, CSM, Serial Over LAN, IPMI compliant
RAS features	Chassis redundant/hot-plug power and cooling Front Panel and FRU/CRU LEDs Concurrent code update and Processor deallocation Compute Node hot plug and Dual VIOS support Dual AC Power Supply Auto reboot on power loss Internal and chassis-external temperature monitors System management alerts IBM Chipkill ECC detection and correction
Operating systems	AIX 6.1, AIX 7.1 IBM i 6.1 and 7.1 RHEL 5.7, 6.2; SLES11 SP2
Energy management	EnergyScale energy management

IBM Flex System Enterprise Chassis

IBM Flex System Enterprise Chassis	The IBM Flex System™ Enterprise Chassis is an all-in-one solution that allows you to customize your solution with any mix of storage, networking, and computing power. The solution is easily scalable with additional chassis, and multiple chassis can be monitored from a single screen.	
	Node Bays	14 (7 full wide)
	Height (mm)	440
	Width (mm)	447
	Depth (mm)	847
	Ship Loadable	Yes
Description	Base model	
Height	440 mm (10 EIA rack standard units)	
Width	447 mm (EIA 19-inch rack standard width, minus 3 mm clearance)	
Depth	800 mm (measured from front bezel to rear of chassis) 847 mm (measured from ITE latch handle to the power supply handle)	
Rack mount weight	505 lbs	
Minimum loadout weight	218 lbs	
Maximum loadout weight	493 lbs	
Heat load minimum	1,365 BTUs/hr (est)	
Heat load maximum	44,017 BTUs/hr (est)	
Air flow minimum*	270 CFM	
Air flow maximum*	1020 CFM	
Voltage minimum	180 VAC	
Voltage nominal	200-240 VAC + 10%	
Voltage maximum	265 VAC	
Frequency minimum	47Hz	
Frequency nominal	50/60Hz	
Frequency maximum	63Hz	
Power minimum	400 W (estimate)	
Power maximum	12,900 watts (12.9 kW)	
Maximum Input Current	13.85 A per supply	
Node bays	14 node bays (7 full wide)	
Power supplies	2/6 2500W 200 - 240 VAC	
Power supplies	10 Gb	
Switch modules	Optional	
80 mm fans	4/8	
40 mm fans	2/2	
Chassis Management Module (CMM)	1/2	
Machine type	8721	
* Assumes full chassis configuration with all nodes, IO, PSU and fan pack modules		

BladeCenter PS700 Express

Product Line	IBM BladeCenter PS700 Express
Machine type	8406-70Y
System packaging	Chassis mount (1 wide)
BladeCenter chassis supported	E ^a , H, HT, S, T ^a
Microprocessor type	64-bit POWER7
# of processor sockets per blade	1
Processor options	
GHz (cores/socket) # of cores	3.0 GHz (4) 4
EnergyScale™	Y
Level 2 (L2) cache per core	256 KB
Level 3 (L3) cache per core	4 MB
Blade memory (minimum - maximum)	8 GB – 64 GB (1066 MHz DDR3)
Active Memory™ Expansion	Optional
Reliability, availability, serviceability	
Chipkill memory	Y
Service processor	Y
Hot-swappable disks	Y (in BladeCenter S chassis)
Dynamic Processor Deallocation	Y
Processor Instruction Retry	Y
Alternate Processor Recovery	Y
Dynamic deallocation: PCI bus slots	Y
Redundant hot-plug power	Y (in chassis)
Redundant hot-plug cooling	Y (in chassis)
Hot-Node Add, Hot-Node Repair, Memory Upgrade	Hot-swap blades
Dual VIOS	Optional
Capacity and expandability	
Capacity on Demand (CoD) functions	N/A
PowerVM™ Express Edition	Optional
PowerVM Standard Edition	Optional
PowerVM Enterprise Edition	Optional
Max logical partitions/micro-partitions	40 (10 per core)
Available expansion card slots	1 PCIe CIOv + 1 PCIe CFFh
Maximum disk bays Storage on blade	2 SFF 1.2 TB
RAID support for disk on blade	Y
Maximum disk bays Storage in BladeCenter S	12 12.0 TB
Maximum media bays in chassis	1 - BladeCenter E, H, HT, S 2 - optional in BladeCenter HT
Connectivity	
Integrated Gigabit Ethernet ports	2
Gigabit Ethernet	Optional
10 Gbps Ethernet	Optional
4 Gbps Fibre Channel	Optional
8 Gbps Fibre Channel	Optional
10 Gbps Fibre Channel over Ethernet	Optional
4X InfiniBand®	Optional
3 Gbps SAS	Optional
Performance*	
AIX® rPerf range	3.0 GHz (4): 45.13 (4)
GHz (cores/socket): perf (# cores)	
IBM i CPW	3.0 GHz (4): 21100 (4)
GHz (cores/socket): perf (# cores)	

BladeCenter PS701 & PS702 & PS703 Express

Product Line	IBM BladeCenter PS701 Express	IBM BladeCenter PS702 Express	IBM BladeCenter PS703 Express
Machine type	8406-71Y	8406-71Y + FC 8358	7891-73X
System packaging	Chassis mount (1 wide)	Chassis mount (2 wide)	Chassis mount (1 wide)
BladeCenter chassis supported	H, HT, S	H, HT, S	H, HT, S
Microprocessor type	64-bit POWER7	64-bit POWER7	64-bit POWER7
# of processor sockets per blade	1	2	2
Processor options GHz (cores/socket) # of cores	3.0 GHz (8) 8	3.0 GHz (8) 16	2.4 GHz (8) 16
EnergyScale	Y	Y	Y
Level 2 (L2) cache per core	256 KB	256 KB	256 KB
Level 3 (L3) cache per core	4 MB	4 MB	4 MB
Blade memory (minimum - maximum)	16 GB – 128 GB (1066 MHz DDR3)	32 GB – 256 GB (1066 MHz DDR3)	16 GB – 256 GB (1066 MHz DDR3)
Active Memory Expansion	Optional	Optional	Optional
Reliability, availability, serviceability			
Chipkill memory	Y	Y	Y
Service processor	Y	Y	Y
Hot-swappable disks	Y (in BladeCenter S chassis)	Y (in BladeCenter S chassis)	Y (in BladeCenter S chassis)
Dynamic Processor Deallocation	Y	Y	Y
Processor Instruction Retry	Y	Y	Y
Alternate Processor Recovery	Y	Y	Y
Dynamic deallocation: PCI bus slots	Y	Y	Y
Redundant hot-plug power	Y (in chassis)	Y (in chassis)	Y (in chassis)
Redundant hot-plug cooling	Y (in chassis)	Y (in chassis)	Y (in chassis)
Hot-Node Add, Hot-Node Repair, Memory Upgrade	Hot-swap blades	Hot-swap blades	Hot-swap blades
Dual VIOS	Optional	Optional	
Capacity and expandability			N/A
Capacity on Demand (CoD) functions	N/A	N/A	Optional
PowerVM Express Edition	Optional	Optional	Optional
PowerVM Standard Edition	Optional	Optional	Optional
PowerVM Enterprise Edition	Optional	Optional	160 (10 per core)
Max logical partitions/micro-partitions	80 (10 per core)	160 (10 per core)	1 PCIe CIOv + 1 PCIe CFFh
Available expansion card slots	1 PCIe CIOv + 1 PCIe CFFh	2 PCIe CIOv + 2 PCIe CFFh	1 SFF 600 GB
Maximum disk bays Storage on blade	1 SFF 600 GB	2 SFF 1.2 TB	-
RAID support for disk on blade	-	Y	12 12.0 TB
Maximum disk bays Storage in BladeCenter S	12 12.0 TB	12 12.0 TB	1 - BladeCenter H, HT, S 2 - optional in BladeCenter HT
Maximum media bays in BladeCenter chassis	1 - BladeCenter H, HT, S 2 - optional in BladeCenter HT	1 - BladeCenter H, HT, S 2 - optional in BladeCenter HT	Optional
Connectivity			
Integrated Gigabit Ethernet ports	2	4	2
Gigabit Ethernet	Optional	Optional	Optional
10 Gbps Ethernet	Optional	Optional	Optional
4 Gbps Fibre Channel	Optional	Optional	Optional
8 Gbps Fibre Channel	Optional	Optional	Optional
10 Gbps Fibre Channel over Ethernet	Optional	Optional	Optional
4X InfiniBand	Optional	Optional	Optional
3 Gbps SAS	Optional	Optional	Optional
Performance*			
AIX rPerf GHz (cores/socket): perf (# cores)	3.0 GHz (8): 81.24 (8)	3.0 GHz (8): 154.36 (16)	2.4 GHz (8): 134.11 (16)
IBM i CPW GHz (cores/socket): perf (# cores)	3.0 GHz (8): 42100 (8)	3.0 GHz (8): 76300 (16)	2.4 GHz (8): 64,000 (16)

System Unit Details (POWER7 Express Servers : 710 / 720 / 730 / 740)

System Unit Details	Power 710 Express 8231-E1D 8268-E1D ^s	Power 720 Express 8202-E4D	Power 730 Express 8231-E2D	Power 740 Express 8205-E6D
SAS Disk bays in CEC	3 ¹ or 6 SFF	6 ² or 8 SFF	3 ¹ or 6 SFF	6 ² or 8 SFF
Available media bays	1 or 2 ¹	2	1 or 2 ¹	2
Standard HH size	1 for opt. tape ¹	1 for opt. tape	1 for opt. tape ¹	1 for opt. tape
Slimline size	1 for DVD-RAM	1 for DVD-RAM	1 for DVD-RAM	1 for DVD-RAM
System / serial ports ³	2	2	2	2
USB ports	3	3	3	3
HMC ports	2	2	2	2
SPCN ports	0	2	2 Optional	2
Integrated Ethernet adapter ports ⁸	- ⁸	- ⁸	- ⁸	- ⁸
Integrated storage controllers	1 SAS/SATA	1 SAS/SATA	1 SAS/SATA	1 SAS/SATA
Max SAS speed	3.0 Gbps	3.0 Gbps	3.0 Gbps	3.0 Gbps
Protected write cache for integrated SAS controller	Opt. dual 175 MB. enable RAID 5/6 & help disk performance	Opt. dual 175 MB. enable RAID 5/6 & help disk performance	Opt. dual 175 MB. enable RAID 5/6 & help disk performance	Opt. dual 175 MB. enable RAID 5/6 & help disk performance
Optional more disk bays with write cache via external SAS port ¹⁰	Yes, 24 SAS with EXP24S #5887 ⁴	Yes, 24 SAS with EXP24S #5887 ⁵	Yes, 24 SAS with EXP24S #5887	Yes, 24 SAS with EXP24S #5887
PCI adapter slots	6	6 + 4 optional	6	6 + 4 optional
PCIe 8x Long	-	-	-	-
PCIe 8x Short	5 LP	5 FH + 4 opt. LP ⁸	5 LP	5 FH + 4 opt. LP ⁸
PCIe 4x Short	1 LP ⁸	1 ⁸	1 LP ⁸	1 ⁸
Max PCIe bus speed (GHz)	5.0 (Gen2)	5.0 (Gen2)	5.0 (Gen2)	5.0 (Gen2)
GX adapter slots	1 GX++	1 GX++ ⁷	2 GX++ ⁶	1GX++ (1-socket) 2 GX++ (2-sockets) ⁷ ₉
PCIe 12X I/O drawers	N/A	Up to 2 ⁵	Up to 2	Up to 4
PCI-X 12X I/O drawers	N/A	Up to 4 ⁵	N/A	Up to 8
LED diagnostics	Y	Y	Y	Y

Note: The terms LP (low profile) and FH (full high or full height) refer to the size of a PCI slot or size of a PCI adapter card.

- 1 On the Power 710 and 730 Express servers, the backplane option with 3 SSF bays + DVD slot + HH tape slot is supported on IBM i only through VIOS.
- 2 On the Power 720 and 740 Express servers, the backplane option with 6 SSF bays + DVD slot + HH tape slot is supported on IBM i only through VIOS.
- 3 AIX uses only for modem and async terminal connections. Not supported by AIX when HMC ports are connected to Hardware Management Console or SDMC. IBM i can use for status link to UPS.
- 4 Not supported on 4-core Power 710 Express configurations.
- 5 Not supported on 4-core Power 720 Express configurations.
- 6 Power 730: GX adapter for I/O loop is double wide plus an SPCN adapter card is needed. Thus both GX slots are used and the 4x PCIe slot and an 8x PCIe slot is covered when an I/O loop is configured
- 7 The GX++ slot on the Power 720 Express and the first GX++ slot on the Power 740 Express are not available if the optional PCIe Riser with four PCIe LP adapter slots is used.
- 8 Required 4-port Ethernet adapter used in PCIe 4x slot. (If a GX adapter is placed in the 2nd GX slot of a 730 or 740 covering up the 4x slot, the Ethernet adapter should be moved to another PCI slot on the server.)
- 9 Power 740: GX adapter in 2nd GX slot covers the PCIe 4x slot, reducing by one the total number of PCIe slots available in the system unit.
- 10 EXP12S #5886 Drawer also supported vs just EXP24S #5887 Drawer, but EXP12S withdrawn from marketing

System Unit Details (PowerLinux : 7R1 / 7R2 / 7R4)

System Unit Details	PowerLinux 7R1 8246-L1D 8246-L1T	PowerLinux 7R2 8246-L2D 8240-L2T	PowerLinux 7R4 8248-L4T
SAS Disk bays in CEC	3 or 6 SFF	3 or 6 SFF	6 SFF
Available media bays	1 or 2	1 or 2	1
Standard HH size	1 for opt. tape	1 for opt. tape	-
Slimline size	1 for DVD-RAM	1 for DVD-RAM	1 for DVD-RAM
System / serial ports ³	2	2	0 + IMFC ²
USB ports	3	3	1 + IMFC ² (3 max ² per system)
HMC ports	2	2	2
SPCN ports	0	2 Optional	2 Optional
Integrated Ethernet adapter ports ¹	- ¹	- ¹	-
Integrated Multifunction Card ²	-	-	Four Ethernet ports ⁴ Plus 1 serial port Plus 2 USB ports
Integrated storage controllers	1 SAS/SATA	1 SAS/SATA	2 SAS 1 SATA (media)
Max SAS speed	3.0 Gbps	3.0 Gbps	3.0 Gbps
Protected write cache for integrated SAS controller	Opt. dual 175 MB. enable RAID 5/6 & help disk performance	Opt. dual 175 MB. enable RAID 5/6 & help disk performance	Opt. dual 175 MB. enable RAID 5/6 & help disk performance
Optional more disk bays with write cache via external SAS port	8246-L1T supports additional disk bays with external EXP24S	8246-L2T supports additional disk bays with external EXP24S	Yes, With external EXP24S
PCI adapter slots	6	6	6
PCIe 8x Long	-	-	6 FH
PCIe 8x Short	5 LP	5 LP	-
PCIe 4x Short	1 LP ¹	1 LP ¹	-
Max PCIe bus speed (GHz)	5.0 (Gen2)	5.0 (Gen2)	5.0 (Gen2)
GX adapter slots	1 GX++	2 GX++ ³	2 GX++
PCIe 12X I/O drawers	N/A	Up to 2	Up to 4
PCI-X 12X I/O drawers	N/A	N/A	N/A
LED diagnostics	Y	Y	Y

Note: The terms LP (low profile) and FH (full high or full height) refer to the size of a PCI slot or size of a PCI adapter card.

- Required 4-port Ethernet adapter used in PCIe 4x slot. (If a GX adapter is placed in the 2nd GX slot of a 7R2 covering up the 4x slot, the Ethernet adapter should be moved to another PCI slot on the server or I/O drawer.)
- IMFC = Integrated Multifunction Card has 2 USB ports. Note the 3rd USB port on console requires IMFC to be active. Total quantity ignores USB ports provided by optional additional PCIe adapters.
- 7R2: GX adapter for I/O loop is double wide plus an SPCN adapter card is needed. Thus both GX slots are used and the 4x PCIe slot and an 8x PCIe slot is covered when an I/O loop is configured
- IMFC 4 Ethernet ports: Two ports are SFP+ @ 10Gb and depending on which IMFC selected have CNA capability. Two ports are RJ-45 and depending on which IMFC selected have a max of either 10Gb or 1Gb.

System Unit Details (POWER7 Servers: 750 / 750 / 760 / 770 / 780 / 795)

System Unit Details	Power 750 Express 8408-E8D	Power 760 9109-RMD	Power 770 Node 9117-MMD	Power 780 Node 9179-MHD	Power 795 9119-FHB
SAS Disk bays in CEC	6 SFF	6 SFF	6 SFF	6 SFF	-
Available media bays	1	1	1	1	2 in media drawer
Standard HH size	-	-	-	-	1 for opt. tape
Slimline size	1 for DVD-RAM	1 for DVD-RAM	1 for DVD-RAM	1 for DVD-RAM	1 for opt. DVD
System / serial ports	0 + IMFC ⁵	0 + IMFC ⁵	0 + IMFC ⁵	0 + IMFC ⁵	-
USB ports	1 + IMFC ⁵ (3 max ⁵ per system)	1 + IMFC ⁵ (3 max ⁵ per system)	1 + IMFC ⁵ (9 max ⁵ per system)	1 + IMFC ⁵ (9 max ⁵ per system)	-
HMC ports	2	2	2 (4 max per system)	2 (4 max per system)	4
SPCN ports	2	2	2 ⁶	2 ⁶	
Integrated Ethernet controller ports	-	-	-	-	-
Integrated Multifunction Card ⁴	4 Ethernet ports ⁸ Plus 1 serial port Plus 2 USB ports	4 Ethernet ports ⁸ Plus 1 serial port Plus 2 USB ports	4 Ethernet ports ⁸ Plus 1 serial port Plus 2 USB ports ⁴	4 Ethernet ports ⁸ Plus 1 serial port Plus 2 USB ports ⁴	-
Integrated storage controllers	2 SAS, 1 SATA (media)	2 SAS, 1 SATA (media))	2 SAS, 1 SATA (media)	2 SAS, 1 SATA (media)	-
Max SAS speed	3.0 Gbps	3.0 Gbps	3.0 Gbps	3.0 Gbps	3.0 Gbps
Protected write cache for integrated SAS controller	Optional dual 175 MB. enable RAID 5/6 & help disk/SSD performance	Optional dual 175 MB. enable RAID 5/6 & help disk/SSD performance	Optional dual 175 MB. enable RAID 5/6 & help disk/SSD performance	Optional dual 175 MB. enable RAID 5/6 & help disk/SSD performance	N/A
Optional more disk bays with write cache via integrated external SAS port	Yes, 24 SAS with EXP24S ₇ #5887	Yes, 24 SAS with EXP24S ₇ #5887	Yes, 24 SAS with EXP24S ₇ #5887	Yes, 24 SAS with EXP24S ₇ #5887	N/A
PCI adapter slots	6	6	6	6	-
PCIe 8x Long	6	6	6	6	-
PCIe 8x Short	-	-	-	-	-
PCI-X DDR Long	-	-	-	-	-
Max PCIe bus speed (GHz)	5.0 (Gen2)	5.0 (Gen2)	5.0 (Gen2)	5.0 (Gen2)	2.5 (Gen1 in #5803/5873 drawer)
GX++ adapter slots	0 (1-socket) 2 (2-4 socket)	0 (1-socket) 2 (2-4 socket)	2	2	4 per processor book
PCIe 12X I/O drawers	Up to 4	Up to 4	Up to 4	Up to 4	Up to 32 ³
PCI-X DDR 12X I/O drawers	-	-	Up to 8	Up to 8	Up to 30
LED diagnostics	Y	Y	Y	Y	Y

³ Total number of 12X PCIe I/O drawers per system is 32. The maximum for I/O drawer #5873 is 31.

⁴ Integrated Multifunction card required for first and second node, optional for third and fourth node.

⁵ IMFC = Integrated Multifunction Card has 2 USB ports. Note the 3rd USB port on console requires IMFC to be active. Total quantity ignores USB ports provided by optional additional PCIe adapters.

⁶ SPCN located on service processor cards located on first two processor nodes. Max 4 SPCN ports per server.

⁷ EXP12S #5886 Drawer also supported but not shown as EXP12S withdrawn from marketing

⁸ IMFC 4 Ethernet ports: Two ports are SFP+ @ 10Gb and depending on which IMFC selected have CNA capability. Two ports are RJ-45 and depending on which IMFC selected have a max of either 10Gb or 1Gb.

System Unit Details (POWER7 Express Servers: Blades)

System Unit Details	BladeCenter PS700 Express	BladeCenter PS701 Express	BladeCenter PS702 Express	BladeCenter PS703 Express
SAS Disk bays in CEC	2 SFF	1 SFF	2 SFF	1 SFF
Available media bays	- ¹	- ¹	- ¹	- ¹
Standard HH size	-	-	-	-
Slimline size	-	-	-	-
System ports	1 ²	1 ²	1 ²	1 ²
Serial ports	-	-	-	-
USB ports	2	2	2	2
HMC ports	n/a ³	n/a ³	n/a ³	n/a ³
Integrated Ethernet controller ports	2 at 1 Gbps	2 at 1 Gbps	4 at 1 Gbps	2 at 1 Gbps
Integrated storage controllers	1 SAS	1 SAS	1 SAS	1 SAS
Max SAS speed	3.0 Gbps	3.0 Gbps	3.0 Gbps	3.0 Gbps
Protected write cache for integrated SAS controller	-	-	-	-
Optional more disk bays with write cache	-	-	-	-
PCIe expansion slots				
PCIe CIOv	1 (Gen1)	1 (Gen1)	2 (Gen1)	1 (Gen2)
PCIe CFFh	1 (Gen1)	1 (Gen1)	2 (Gen1)	1 (Gen2)
Max PCIe bus speed (GHz)	2.5	2.5	2.5	5.0
LED diagnostics	Y	Y	Y	Y

¹ Media bay available in BladeCenter H or S chassis

² Serial over LAN (SOL) connection from service processor on blade to Adv. Mgmt. Module in BladeCenter chassis.

³ HMC not used. Use either SDMC or IVM for consoles specialized functions

Server I/O Drawers

Drawer	Server Loop Attachment	PCI Slots per Drawer	Bays per Drawer	Availability	Max Drwrs per Loop	Footprint
#5797	12X SDR	14 PCI-X DDR + 6 PCI-X	16 SCSI	withdrawn	1	24" rack
#5798	12X SDR	14 PCI-X DDR + 6 PCI-X	16 SCSI	withdrawn	1	24" rack
#5803	12X DDR	20 PCIe Gen1	26 SFF SAS	Y	1	24" rack
#5873	12X DDR	20 PCIe Gen1	0	Y	1	24" rack
7314-G30	12X SDR	6 PCI-X DDR	0	withdrawn	4	19" rack 1/2 4U ²
#5796	12X SDR	6 PCI-X DDR	0	withdrawn	4	19" rack 1/2 4U ²
#5802 ³	12X DDR ¹	10 PCIe Gen1	18 SFF SAS	Y	2	19" rack
#5877 ³	12X DDR ¹	10 PCIe Gen1	0	Y	2	19" rack
EXP30 Ultra SSD #EDR1 ^{3,4}	GX++ PCIe2	0	30 1.8" SSD	Y	n/a	19" rack 1U
EXP12S #5886	via SAS	0	12 3.5-inch SAS	withdrawn	n/a	19" rack 2U
EXP24S #5887 ³	via SAS	0	24 SFF-2 SAS	Y	n/a	19" rack 2U

Note SCSI EXP24 (#5786 or 7031-D24) not shown in table above as its withdrawn and not supported on some of the newer POWER7+ and SOD indicates will not be supported on servers following POWER7/POWER7+

¹ Runs at DDR (Double Data Rate) speed assuming GX adapter and 12X cable are also DDR. Otherwise runs at SDR.

² Logically two drawers in one 4-U foot print. Drawers can be configured on the same or different loops.

³ PowerLinux servers can use features #EL36 (#5802), #EL37 (#5877), EL1S (#5887), EL30 (#EDR1) to order drawer

⁴ Original EXP30 Ultra SSD drawer #5888 not shown as only supported on 710-730 "C" models. It is still orderable.

Withdrawn Withdrawn from marketing, not orderable from IBM Manufacturing

Server I/O Drawer Attachment

Server Drawer ¹	Power 710 Express	Power 730 Express	Power 720 Express	Power 740 Express	PowerLinux 7R1 (L1T)	PowerLinux 7R2 (L2T)	PowerLinux 7R4	Power 750 Power 760	Power 750 Power 760	Power 770 Power 780	Power 795
	0 Loop	0-1 Loop	0-1 Loop	0-2 Loops	0 Loop	0-1 Loop	0-2 Loops	0-2 Loops	0-2 Loops	0-8 Loops	1-32 loops
#5797	0	0	0	0	0	0	0	0	0	0	30
#5798	0	0	0	0	0	0	0	0	0	0	30
#5803	0	0	0	0	0	0	0	0	0	0	32
#5873	0	0	0	0	0	0	0	0	0	0	31
7314-G30	0	0	Max 4 ⁴	Max 8	0	0	0	0	0	Max 32	0
#5796	0	0	Max 4 ⁴	Max 8	0	0	0	0	0	Max 32	0
#5802	0	Max 2 ⁵	Max 2 ⁴	Max 4	0	Max 2 ⁵	Max 4 ⁵	Max 4	Max 4	Max 16	0
#5877	0	Max 2 ⁵	Max 2 ⁴	Max 4	0	Max 2 ⁵	Max 4 ⁵	Max 4	Max 4	Max 16	0
#EDR1	Max 1/2 ⁶	Max 1 ⁵	Max 1 ^{4,6}	Max 2 ⁶	Max 1/2 ⁶	Max 1 ⁵	Max 2 ⁵	Max 2	Max 2	Max 8	0
#5886	Max 8 ³	Max 28, ⁷	Max 28 ⁴	28	0	0	0	Max 27	Max 27	Max 110	Max 185
#5887	Max 4 ^{3,5}	Max 14 ⁵	Max 14 ⁴	Max 14	Max 4 ⁵	Max 14 ⁵	Max 51 ⁵	Max 51	Max 51	Max 126	Max 168

For Additional I/O and I/O Adapter Information - Please reference the sales manual

¹ Though you can mix 12X PCI-X DDR I/O drawers with 12X PCIe I/O drawers on a system with two or more loops, within a loop it must be all PCIe or all PCI-X DDR I/O drawers.

² In addition to the #5786, the EXP24 #5787 Disk Tower is supported, but not orderable, on the Power 770 and 780.

³ Disk-only I/O drawers or Ultra Drawer are not supported on 4-core Power 710 Express configurations..

⁴ 12X I/O drawers or disk-only drawers or Ultra Drawers are not supported on 4-core Power 720 Express configurations.

⁵ PowerLinux servers can use features #EL36 (#5802), #EL37 (#5877), EL1S (#5887), EL30 (#EDR1),

⁶ "D" model 710/720/730/740 only. Note a single Power 710 can not attach one #EDR1 by itself, but can attach in conjunction with another server. Power 720, 730, 740 can attach more Ultra Drawers than shown assuming attached in conjunction with other servers.

Physical Planning Characteristics (POWER7 Servers)

Note: More comprehensive information may be found in the IBM Site and Hardware Planning document) at http://pic.dhe.ibm.com/infocenter/powersys/v3r1m5/index.jsp?topic=p7hdx/p7_systems.htm. Plus, additional summary information can be found in the IBM Sales Manual for each server at ibm.com/common/ssi

Server	Power 710 Express	Power 720 Express	Power 730 Express	Power 740 Express	PowerLinux 7R1 & 7R2	PowerLinux 7R4
Packaging	19" rack drawer (2U)	19" rack drwr (4U) + tower	19" rack drawer (2U)	19" rack drwr (4U) + tower***	19" rack drawer (2U)	19" rack drawer (5U)
Voltage (AC)	100 -127 (1-ph.) 200 - 240 (1-ph.)	100 -127 (1-ph.) 200 - 240 (1-ph.)	200 - 240 (1-ph.)	200 - 240 (1-ph.)	100 -127 (1-ph.)* 200 - 240 (1-ph.)**	200 - 240 1-phase
Power supply	N +1 optional	N +1 optional	N +1 standard	N +1 standard	N +1 standard	N +1 standard
Maximum altitude						
feet	10000	10000	10000	10000	10000	10000
meters	3048	3048	3048	3048	3048	3048

* 7R1

** Both 7R1 and 7R2

Server	Power 750 Express	Power 760	Power 770 *	Power 780 *	Power 795
Packaging	19" rack drawer (5U)	19" rack drawer (5U)	19" rack drawer (4U)	19" rack drawer (4U)	24" system frame (+expansion frames)
Voltage (AC)	200 - 240 1-phase	200 - 240 1-phase	200 - 240 1-phase	200 - 240 1-phase	200 - 240 (3-phase) 380 - 415 (3-phase) 480 - 510 (3-phase)
Power supply	N +1 standard	N +1 standard	N+1 standard	N+1 standard	N+1 standard
Maximum altitude					
feet	10000	10000	10000	10000	10000
meters	3048	3048	3048	3048	3048

* Figures are for a single building block or node. Up to 4 nodes per system.

** For system configurations installing above 2400 meters, additional ambient room temperature limits are in effect. Please refer to the Site and Hardware Planning Guide for details.

*** The newer Power 740, 8205-E6D and E6C, is offered only as a rack drawer, not as a tower

19-inch I/O Drawer	#5802	#5877	7314-G30 or #5796
	12X DDR attach, 10 PCIe slots, 18 disk bay	12X DDR attach, 10 PCIe slots, 0 disk bay	12X SDR attach, 6 PCI slots
Packaging	19" rack drawer	19" rack drawer	19" rack drawer
Rack space	1 unit in 4U space	1 unit in 4U space	2 units fit side by side in 4U space
Power supply	N+1 standard	N+1 standard	N+1 standard
Voltage	200-240V, single phase	200-240 V, single phase	200-240 V, single phase
Maximum altitude			
feet	10000	10000	10000
meters	3048	3048	3048

Racks	7014-S25 or #0555	7014-T00 or #0551	7014-T42 or #0553	7014-B42	7953-94X Flex rack
	25U	36U	42U	42U	42U
Height					
inches	49.0	71.0 - 75.8	79.3	79.3	78.8
millimeters	1344	1804 - 1926	2015	2015	2002
Width (can vary depending on use of side panels)					
inches	23.8	24.5 - 25.4	24.5 - 25.4	24.5 - 25.4	23.6
millimeters	605	623 - 644	623 - 644	623 - 644	600
Depth (can vary depending on door options selected)					
inches	39.4	41.0 - 45.2	41.0 - 45.2	41.0 - 55.5	43.1 - 48.2
millimeters	1001	1042 - 1098	1043 - 1098	1042 - 1409	1095 - 1224

Physical Planning Characteristics (POWER7 Blades)Note: Additional summary information can be found in the IBM Sales Manual at ibm.com/common/ssi.

Server	BladeCenter PS700 / PS701 / PS703 Express	BladeCenter PS702 Express	BladeCenter S Chassis	BladeCenter H Chassis	BladeCenter HT Chassis ¹
Machine type (AC model)	8401-70Y / 8401-71Y / 7891-73X	8401-71Y+FC 8358 / 7891-74X	7779-BCS	7989-BCH	8750-1RX
Machine type (DC model)	-	-	-	-	8740-1RX
Packaging	Chassis mount	Chassis mount	19" rack blade cabinet (7U)	19" rack blade cabinet (9U)	19" rack blade cabinet (12U)
Number blades	-	-	Up to 6 blades	Up to 14 blades	Up to 12 blades
Maximum KVA	-	-	3.5	8.0	7.8
Maximum watts	-	-	3500	8000	7773
Maximum BTU/hour	-	-	11942	27280	26552
Voltage (AC)	-	-	110 – 127 200 – 240	200 - 240	200 – 240
Voltage (DC)	-	-	-	-	-48 - -60 ²
Power supply	-	-	N+1 standard	N+N standard	N+N standard
Height					
inches	9.65	9.65	7U - 12.0	9U - 15.75	12U - 21.0
millimeters	245	245	306	400	528
Width					
inches	1.14	2.32	17.5	17.5	17.4
millimeters	29	59	444	444	441
Depth					
inches	17.55	17.55	28.9	28.0	27.8
millimeters	445	445	733	711	706
Maximum altitude					
feet	7000	7000	7000	7000	6000
meters	2133	2133	2133	2133	1800

1 Orderable only through HVEC fulfillment system (not AAS)

2 NEBS environment

Warranty¹ / Installation

Warranty Service Levels	Power 710 & 730 Express	Power 720 & 740 Express	PowerLinux 7R1 & 7R2	PowerLinux 7R4	Power 750 Express ⁷	Power 760
24x7 with two hour service objective ²	Optional	Optional	Optional	Optional	Optional	Optional
24x7 with four hour service objective	Optional	Optional	Optional	Optional	Included	Included
9x5 with four hour service objective	Optional	Optional	Optional	Optional	Optional	Optional
9x5 next-business-day	Standard ³	Standard ³	Standard ³	Standard ³	Standard ³	Standard ³
Warranty Period	3 years ⁶	3 years	3 years	3/1 years ⁸	3/1 years ⁵	3/1 years ⁵
Server install⁴	CSU	CSU	CSU	CSU	CSU	IBI

Warranty Service Levels	Power 770	Power 780	Power 795	BladeCenter PS700, PS701 & PS702 & PS703 Express & BladeCenter Chassis H, HT, S
24x7 with two hour service objective ²	Optional	Optional	Optional	Optional
24x7 with four hour service objective	Optional	Standard	Standard	Optional
9x5 with four hour service objective	Optional	-	-	Optional
9x5 next-business-day	Standard ³	-	-	Standard ³
Warranty Period	1 year	1 year	1 year	3 years
Server installation⁴	IBI	IBI	IBI	CSU

¹ These warranty terms and conditions are for the United States and may be different in other countries. Consult your local IBM representative or IBM Business Partner for country-specific information.

² Available in selected cities.

³ Mandatory Customer Replaceable Unit (CRU) and On-site service.

⁴ CSU = Customer Set Up, IBI = Installation by IBM For server hardware only. Note except for 795 I/O, feature I/O drawers added later as MES are CSU.

⁵ This system is provided with a one year standard warranty 9x5 NBD. For your convenience, IBM has provided two additional years of extended warranty services PLUS an upgrade to 24x7 coverage. (Varies by country)

⁶ The Power 710 8231-E1D has a three year warranty. The Power 710 8268-E1D is offered as an alternative with a one year warranty in selected countries.

⁷ This is for the POWER7+ 750. POWER7 750 is a 1 year 9x5 NBD warranty

⁸ This system is provided with a one year standard warranty. For your convenience, IBM has provided two additional years of extended warranty services at 9x5 NBD. (Varies by country)

Power Systems Express Servers Software Support

Power Systems Software	Power 710 Express	Power 720 Express	Power 730 Express	Power 740 Express	PowerLinux 7R1 & 7R2	PowerLinux 7R4	Power 750 Express
Software Tier	Small	Small	Small	Small	N/A	N/A	Small
PowerVM™							
PowerVM Express	Supported	Supported	Supported	Supported	N/A	N/A	Supported
PowerVM Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
IBM PowerVM for IBM PowerLinux	N/A	N/A	N/A	N/A	Supported	Supported	N/A
AIX							
AIX 5.3 Standard Edition	Supported*	Supported*	Supported*	Supported*	N/A	N/A	Supported*
AIX 6.1 Express ¹ Standard and Enterprise Editions	Supported TL 3/4/5/6	Supported TL 3/4/5/6	Supported TL 3/4/5/6	Supported TL 3/4/5/6	N/A	N/A	Supported TL 2/3/4/5
AIX 7.1 Express ¹ , Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
AIX 5.2 Workload Partitions for AIX 7	Supported	Supported	Supported	Supported	N/A	N/A	Supported
IBM i							
IBM i Software Tier	Small P05(4-core) P10(6/8-core)	Small P05(4-core) P10(6/8-core)	Small P20	Small P20	N/A	N/A	Small P20
IBM i 6.1.1 Express, Standard and Enterprise Editions ⁷	Supported	Supported	Supported	Supported	N/A	N/A	Supported
IBM i 7.1 Express, Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
Linux							
Red Hat Enterprise Linux 5.5	Supported ³	Supported ³	Supported ³	Supported ³	Supported ^{4,5}	Supported ^{4,5}	Supported
Red Hat Enterprise Linux 6	Supported	Supported	Supported	Supported	Supported ^{4,5}	Supported ^{4,5}	Supported
Novell SUSE Linux Enterprise Server 10 SP3	Supported	Supported	Supported	Supported	Supported ^{4,5}	Supported ^{4,5}	Supported
Novell SUSE Linux Enterprise Server 11	Supported SP1	Supported SP1	Supported SP1	Supported SP1	Supported ^{4,5} SP1	Supported ^{4,5} SP1	Supported
PowerHA™							
PowerHA SystemMirror for AIX 6.1 ² Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
PowerHA SystemMirror for AIX 7 ² Standard Edition	Supported	Supported	Supported	Supported	N/A	N/A	Supported
PowerHA SystemMirror for i 6.1	Supported	Supported	Supported	Supported	N/A	N/A	Supported
PowerHA SystemMirror for i 7.1 Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
IBM Systems Director for Power							
Express, Standard and Enterprise Editions	Supported	Supported	Supported	Supported	N/A	N/A	Supported
IBM Systems Director for IBM PowerLinux	Supported	Supported	Supported	Supported	Supported	Supported	Supported
SmartCloud Entry							
SmartCloud Entry	Supported	Supported	Supported	Supported	Supported ⁸	Supported ⁸	Supported

* General support for the AIX V5.3 operating system ended April 30, 2012. A service extension is available

1 – Note that AIX 6.1 and AIX 7.1 Express Edition may be used for partitions of up to 4 cores and 8 GB of memory per core.

2 – PowerHA SystemMirror for AIX 6.1 is supported on AIX 5.3, AIX 6.1 and AIX 7.1. PowerHA SystemMirror for AIX 7 is supported with both AIX 6.1 and AIX 7.1

3 – Power 710 8231-E1C, Power 720 8202-E4C, Power 730 8231-E2C, and Power 740 8231-E2C require Red Hat Enterprise Linux 5.7

4 – PowerLinux 7R1 requires Red Hat Enterprise Linux 6.2, Red Hat Enterprise Linux 5.8, or SUSE Linux Enterprise Server 11 SP2

5 – PowerLinux 7R2 requires Red Hat Enterprise Linux 6.1, Red Hat Enterprise Linux 5.7, SUSE Linux Enterprise Server 10 SP4, or SUSE Linux Enterprise Server 11 SP1

6 – Not supported on the 7R1

7 – IBM i 6.1 is a client partition under IBM i 7.1 or VIOS (no native I/O) on POWER7+. With #EB34 native I/O support available for 710/720/730/740/770/780

8 – SmartCloud Entry can “manage to” PowerLinux, Management console runs on AIX on Power.

Power Systems Servers Software Support

Power Systems Software	Power 760	Power 770	Power 780	Power 795	BladeCenter PS700 Express	BladeCenter PS701/PS702 PS703 Express
Software Tier	Medium	Medium	Large	Large	Small	Small
PowerVM™						
PowerVM Express	N/A	N/A	N/A	N/A	Supported	Supported
PowerVM Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
AIX						
AIX 5.3 Standard Edition	Supported *	Supported *	Supported *	Supported *	Supported *	Supported *
AIX 6.1 Express ¹ , Standard and Enterprise Editions	Supported TL 2/3/4/5/6	Supported TL 2/3/4/5/6	Supported TL 2/3/4/5/6	Supported TL 3/4/5/6	Supported TL 5	Supported TL 5
AIX 7.1 Express ¹ , Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
AIX 5.2 Workload Partitions for AIX 7	Supported	Supported	Supported	Supported	Supported	Supported
IBM i						
IBM i Software Tier	Medium P30	Medium P30	Large P50	Large P50	Small P05	Small P10
IBM i 6.1.1 Express, Standard and Enterprise Editions ³	Supported	Supported	Supported	Supported	Supported	Supported
IBM i 7.1 Express, Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
Linux						
Red Hat Enterprise Linux 5	Supported 5	Supported 5.7	Supported 5.7	Supported 5.7	Supported	Supported
Red Hat Enterprise Linux 6	Supported 6	Supported 6.3	Supported 6.3	Supported 6.3	Supported	Supported
Novell SUSE Linux Enterprise Server 10	Supported 10	Supported 10 SP3	Supported 10 SP3	Supported 10 SP3	Supported	Supported
Novell SUSE Linux Enterprise Server 11	Supported 11	Supported 11 SP2	Supported 11 SP2	Supported 11 SP2	Supported SP1	Supported SP1
PowerHA™						
PowerHA SystemMirror for AIX 6.1 ² Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
PowerHA SystemMirror for AIX 7 ² Standard Edition	Supported	Supported	Supported	Supported	Supported	Supported
PowerHA SystemMirror for i 6.1	Supported	Supported	Supported	Supported	Supported	Supported
PowerHA SystemMirror for i 7.1 Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
IBM Systems Director for Power						
Express, Standard and Enterprise Editions	Supported	Supported	Supported	Supported	Supported	Supported
SmartCloud Entry						
SmartCloud Entry	Supported	Supported	Supported	Supported	Supported	Supported

* General support for the AIX V5.3 operating system ended April 30, 2012. A service extension is available

1 – Note that AIX 6.1 and AIX 7.1 Express Edition may be used for partitions of up to 4 cores and 8 GB of memory per core.

2 – PowerHA SystemMirror for AIX 6.1 is supported on AIX 5.3, AIX 6.1 and AIX 7.1. PowerHA SystemMirror for AIX 7 is supported with both AIX 6.1 and AIX 7.1

3- IBM i 6.1 is a client partition under 7.1 or VIOS (no native I/O) on POWER7+. Feature #EB34 will provide native 6.1 I/O support for 710/720/730/740/770/780 only.

Performance Notes

The performance information contained herein is current as of the date of this document. 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.

rPerf (Relative Performance) is an estimate of commercial processing performance relative to other IBM UNIX® systems. It is derived from an IBM analytical model which uses characteristics from IBM internal workloads, TPC and SPEC benchmarks. The rPerf model is not intended to represent any specific public benchmark results and should not be reasonably used in that way. The model simulates some of the system operations such as CPU, cache and memory. However, the model does not simulate disk or network I/O operations.

rPerf estimates are calculated based on systems with the latest levels of AIX and other pertinent software at the time of system announcement. Actual performance will vary based on application and configuration specifics. The IBM eServer™ pSeries® 640 is the baseline reference system and has a value of 1.0. Although rPerf may be used to approximate relative IBM UNIX commercial processing performance, actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration. Note that the rPerf methodology used for the POWER6 processor-based systems is identical to that used for the POWER5 processor-based systems. Variations in incremental system performance may be observed in commercial workloads due to changes in the underlying system architecture. For additional information about rPerf, contact your local IBM office or IBM authorized reseller.

Commercial Processing Workload (CPW) is a relative measure of performance of systems running the IBM i operating system. Performance in client environments may vary. The value is based on maximum configurations. Please refer to the “IBM Power Systems Performance Capabilities Reference—IBM i operating system Version 6.1” at the following Web site for a complete description of CPW and the CPW rating for IBM Power Systems. (ibm.com/systems/i/advantages/perfmgmt/pdf.pcrm.pdf)

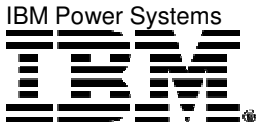
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SPEC – <http://www.spec.org>

TPC – <http://www.tpc.org>

More information

- Contact your IBM marketing representative or IBM Business Partner
- Access the Power Systems Products and Services page on IBM’s World Wide Web server at ibm.com/systems/power and then select the appropriate hardware or software option
- Product announcement letters and Sales Manual containing more details on hardware and software offerings are available at ibm.com/common/ssi
- More detailed benchmark and performance information is available at ibm.com/systems/p/hardware/benchmarks , ibm.com/systems/p/hardware/system_perf.html and at ibm.com/systems/i/solutions/perfmgmt/resource.html .



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When referring to storage capacity, total TB equals total GB divided by 1000; accessible capacity may be less.

The IBM home page on the Internet can be found at ibm.com.

This brochure provides detailed technical specifications of all IBM POWER7 processor-based Power Systems servers and BladeCenter blades in a tabular, easy-to-scan format for easy comparison between systems. These systems are UNIX (AIX), IBM i and Linux operating system servers. Not all features listed in this document are available on all three operating systems.

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