IBM POWER8™ Scale-out Systems Quick Reference Guide
April 2014

	Power S812L	Power S822L	Power S814	Power S822	Power S824
System package	2U, 19″ rack	2U, 19″ rack	4U, 19″ rack or tower	2U, 19″ rack	4U, 19″ rack
# of processor sockets	1	2	1	1 or 2	1 or 2
POWER8 Processor Options GHz - # of cores	3.42 GHz – 10 3.02 GHz – 12	3.42 GHz – 20 3.02 GHz –24	3.02 GHz - 6 3.72 GHz - 8	3.89 GHz - 6,12 3.42 GHz - 10,20	3.89 GHz - 6, 12 4.15 GHz - 8, 16 3.52 GHz – 24
Min - max. memory (1066 MHz DIMMs)	16 - 512 GB	32 – 1024 GB	16 - 512 GB	1-socket 16 - 512GB 2-sockets 32 - 1024 GB	1-socket 32 - 512GB 2-sockets 32 - 1024 GB
PCIe Gen3 slots[1,2]	6	9	7	6 (1 socket) 9 (2 socket)	7 (1-socket) 11 (2-socket)
System unit disk/SSD bays with standard or split backplane	12 SFF-3 or 6+6 SFF-3	12 SFF-3 or 6+6 SFF-3	12 SFF-3 or 6+6 SFF-3	12 SFF-3 or 6+6 SFF-3	12 SFF-3 or 6+6 SFF-3
System unit disk/SSD bays with expanded function backplane[3]	8 SFF-3	8 SFF-3 plus 6 1.8-inch SSD bays	18 SFF-3	8 SFF-3 plus 6 1.8-inch SSD bays	18 SFF-3 plus 8 1.8-inch SSD bays
Max EXP24S storage drawers	14	14	14	14	14
Max total system unit plus EXP24S disk/SSD	348	348	348	348	348
Max total system TB with 1.2TB drives[2]	417 TB	417 TB	417 TB	417 TB	417 TB
AIX® rPerf Ranges	N/A	N/A	97.5 – 143.9	120.8 – 346.7	120.8 – 421.9
IBM i CPW Ranges	N/A	N/A	59,500 - 85,500	N/A	72,000 - 230,500
Capacity on Demand	N/A	N/A	N/A	N/A	N/A
Warranty	3-yr 9x5, next business day	3-yr 9x5, next business day	3-yr 9x5, next business day	3-yr 9x5, next business day	3-yr 9x5, next business day
Max partitions	240	480	160	400	480
IBM i level	N/A	N/A	7.1, 7.2 *	N/A *	7.1, 7.2 *
AIX level	N/A	N/A	6.1, 7.1 *	6.1, 7.1 *	6.1, 7.1 *
Linux support	SLES 11 * RHEL 6.5 * Ubuntu 14.04	SLES 11 * RHEL 6.5 * Ubuntu 14.04	SLES 11 * RHEL 6.5 *	SLES 11 * RHEL 6.5 *	SLES 11 * RHEL 6.5 *
PowerVM Standard	Optional	Optional	Optional	Optional	Optional
PowerVM Enterprise	Optional	Optional	Optional	Optional	Optional
Systems Director Editions (w/VMControl)	Optional	Optional	Optional	Optional	Optional
Machine type – model	8247-21L	8247-22L	8286-41A	8284-22A	8286-42A

1. One x8 PCIe slot must contain a 4-port 1Gb Ethernet LAN available for client use
2. Use of expanded function storage backplane uses one PCIe slot
3. Backplane provides dual high performance SAS controllers with 1.8GB write cache expanded up to 7.2GB with compression plus two SAS ports for running an EXP24S drawer plus Easy Tier capability
* Or later

RAS and other features	Power S812L	Power S822L	Power S814	Power S822	Power S824
Redundant / Hot Swap Fans & Blowers	Std	Std	Std	Std	Std
Hot Swap Disk/SSD Bays / Media	Std	Std	Std	Std	Std
Hot Swap PCI Adapters	Std[4]	Std[4]	Std	Std	Std
Concurrent Firmware Update	Std[4]	Std[4]	Std	Std	Std
Redundant / Hot Swap Power Supplies	Std	Std	Std	Std	Std
Dual disk controllers (split backplane for AIX, IBM i, Linux)	Opt	Opt	Opt	Opt	Opt
Processor Instruction Retry	Std	Std	Std	Std	Std
Alternate Processor Recovery	Std[4]	Std[4]	Std	Std	Std
Storage Keys (AIX only)	N/A	N/A	Std	Std	Std
PowerVM Live Partition Mobility / Live Application Mobility	Opt	Opt	Opt	Opt	Opt
PowerVM Active Memory™ Sharing[2]	Opt	Opt	Opt	Opt	Opt
Dual VIOS	Opt[4]	Opt[4]	Opt	Opt	Opt
Active Memory Expansion for AIX	N/A	N/A	Opt	Opt	Opt
Chipkill Memory	Std	Std	Std	Std	Std
PowerVM Management (IVM/HMC)	I/H[4]	I/H[4]	I/H	I/H	I/H

4. Not available for PowerKVM environment
See the Power Systems™ Scale-Out Servers POWER8 Facts and Features document (POB03046-USEN) for more detailed information

For benchmark results, see http://www.ibm.com/systems/power/hardware/reports/system_perf.html

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