

## POWER7+ vs. POWER8 vs. POWER9 ScaleOut Models

Data Comparison done by @Richie\_Palma

POWER7+						POWER8						POWER9						Net Increase P7+ > P9			Net Increase P8 > P9		
Model	Sockets	Cores	GHz	CPW	CPW/Core	Model	Sockets	Cores	GHz	CPW	CPW/Core	Model	Sockets	Cores	GHz	CPW	CPW/Core	CPW Total	CPW/Core	% Increase	CPW Total	CPW/Core	% Increase
720	1	4	3.6	28.4K	7,100	S814	1	4	3.02	37.4K	9,360	S914	1	4	2.3 – 3.8	52.5K	13,125	24.1K	6,025	84.9%	15.1K	3,765	40.2%
720	1	6	3.6	42.4K	7,067	S814	1	6	3.02	56.4K	9,400	S914	1	6	2.3 – 3.8	78.5K	13,083	36.1K	6,017	85.1%	22.1K	3,683	39.2%
720	1	8	3.6	56.3K	7,038	S814	1	8	3.72	81.1K	10,131	S914	1	8	2.8 – 3.8	122.5K	15,313	66.2K	8,275	117.6%	41.5K	5,181	51.1%
No Comparable Make/Model						S822*	1	4	4.15	50.0K	12,490	S922*	1	4	3.4 – 3.9	68.0K	17,000	No Comparable Make/Model			18.0K	4,510	36.1%
No Comparable Make/Model						S822*	1	4	3.42	42.5K	10,618	S922*	1	4	2.9 – 3.8	60.0K	15,000	No Comparable Make/Model			17.5K	4,383	41.3%
No Comparable Make/Model						S822*	2	12	3.89	135.7K	11,305	No Comparable Make/Model						No Comparable Make/Model					
No Comparable Make/Model						S822*	2	16	4.15	204.8K	12,800	S922*	2	16	3.4 – 3.9	272.0K	17,000	No Comparable Make/Model			67.2K	4,200	32.8%
No Comparable Make/Model						S822*	2	20	3.40	212.4K	10,618	S922*	2	20	2.9 – 3.8	300.0K	15,000	No Comparable Make/Model			87.7K	4,383	41.3%
740	1	6	4.2	49.0K	8,167	S824	1	6	3.89	68.3K	11,375	No Comparable Make/Model						No Comparable Make/Model					
740	1	8	4.2	64.5K	8,063	S824	1	8	4.15	89.6K	11,198	S924	1	8	3.8 – 4.0	145.5K	18,188	81.0K	10,125	125.6%	55.9K	6,990	62.4%
No Comparable Make/Model						No Comparable Make/Model						S924	1	10	3.5 – 3.9	174.5K	17,450	No Comparable Make/Model			No Comparable Make/Model		
740	2	12	4.2	91.7K	7,642	S824	2	12	3.89	123.2K	10,270	No Comparable Make/Model						No Comparable Make/Model					
740	2	16	4.2	120.0K	7,500	S824	2	16	4.15	164.5K	10,279	S924	2	16	3.8 – 4.0	268.5K	16,781	148.5K	9,281	123.8%	104.0K	6,502	63.3%
No Comparable Make/Model						No Comparable Make/Model						S924	2	20	3.5 – 3.9	318.0K	15,900	No Comparable Make/Model			No Comparable Make/Model		
750	3	24	3.5	141.5K	5,896	S824	2	24	3.52	218.5K	9,105	S924	2	24	3.4 – 3.9	370.7K	15,446	229.2K	9,550	162.0%	152.2K	6,341	69.6%

Performance data pulled from "IBM Power Systems Performance Report" released on 4/17/2018.

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\* Power S822 & S922 and IBM i: IBM i support is provided at a price-attractive P10 software tier even though the S822 & S922 has two sockets. However, there are limitations to the maximum size of the partition, and all I/O must be virtualized through VIOS. Up to four cores (real or virtual) per IBM i partition are supported. Multiple IBM i partitions can be created and run concurrently, and each individual partition can have up to four cores.



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