



The Next Generation of IBM® Power Systems™ with POWER9® technology

POWER9 is the first family of systems built with artificial intelligence and machine learning in mind

These POWER9-based scale-out systems, including S914, S922, S924, H922, H924 and L922, provide leadership capabilities in non-accelerated compute spaces such as in-memory databases, advanced analytics and cloud environments. POWER9 scale-out servers are cloud-ready and include built-in PowerVM virtualization capabilities, enabling you to deploy the cloud environment to meet your organization's changing business needs. POWER9 scale-out servers for IBM i, AIX and Linux easily integrate into your organization's cloud and AI strategy, while delivering the performance and RAS needed for your mission-critical workloads like Db2 and Oracle. IBM also offers POWER9 scale-out servers built and optimized for SAP HANA®, boasting a memory footprint of up to 4TB in a 2U form factor for gaining insights faster while delivering superior reliability and performance.

POWER9 continues in the tradition of previous generations by delivering improved per core performance capabilities compared to its predecessor. When compared to similar POWER8 systems, POWER9 delivers 1.25-1.5X per core the performance capability, enabling clients to further reduce software spending on stacks that are licensed per core. This focus on core architecture and capabilities delivers over 2X the per-core performance over compared x86 systems across a wide range of benchmarks.

These new systems incorporate the latest I/O technology, including 25 GB/sec high-speed interconnect for CAPI and OpenCAPI along with embedded PCI-Express 4.0 connectivity which doubles the I/O bandwidth versus PCI-Express 3.0. POWER9 2-socket systems provide up to 4TB of memory, 33 percent more than compared Intel x86 Xeon systems, delivering additional benefit to in-memory databases such as SAP HANA. The focus has not been just on performance, but also delivering value to clients in the form of cost reductions. The L922 delivers 2.4X the price performance over compared Intel x86 systems in database and advanced analytics environments such as Db2 Warehouse.



POWER9 Quick Reference Chart

Cognitive Systems



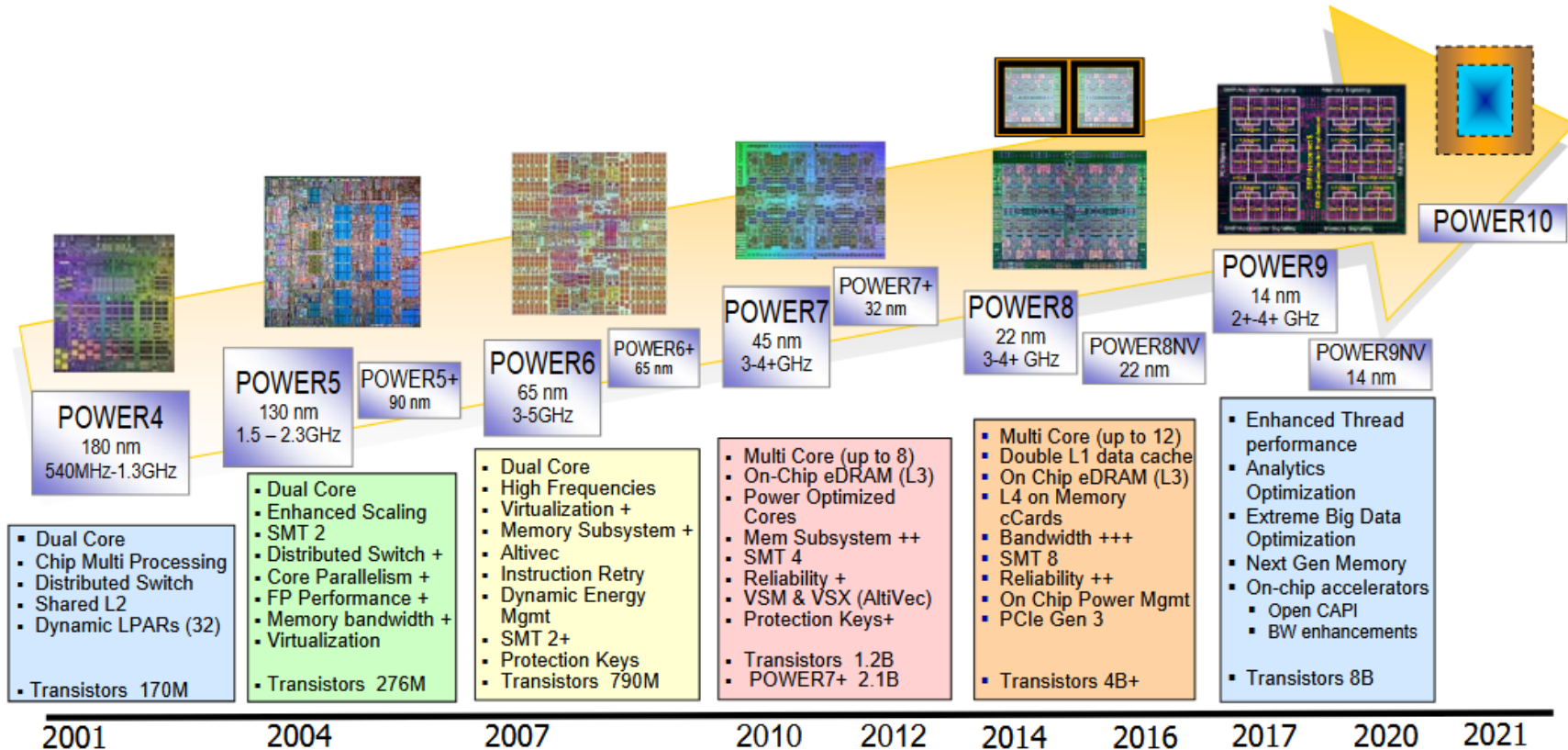
L922 9008-22L	S922 9009-22A	S914 9009-41A	S924 9009-42A	H922 9223-22H	H924 9223-42H
<ul style="list-style-type: none"> • 1,2-socket, 2U • 8,10,12 cores/ socket • 32 IS RDIMM slots • 4TB memory • 4 CAPI 2.0 Slots <ul style="list-style-type: none"> • Linux only • PowerVM • KVM (GA2) 	<ul style="list-style-type: none"> • 1,2-socket, 2U • 4, 8,10 cores/ socket • 32 IS RDIMM slots • 4TB memory • 4 CAPI 2.0 Slots <ul style="list-style-type: none"> • AIX, IBM i, & Linux • PowerVM 	<ul style="list-style-type: none"> • 1-socket, 4U & Tower • 4,6,8 cores/ socket • 16 IS RDIMM slots • 1TB memory • 2 CAPI 2.0 Slots • Internal RDX Media <ul style="list-style-type: none"> • AIX, IBM i, Linux • PowerVM 	<ul style="list-style-type: none"> • 2-socket, 4U • 8,10,12 cores/ socket • 32 IS RDIMM slots • 4TB memory • 4 CAPI 2.0 slots • Internal RDX Media <ul style="list-style-type: none"> • AIX, IBM i, Linux • PowerVM 	<ul style="list-style-type: none"> • 1,2-socket, 2U • 4, 8,10 cores/ socket • 32 IS RDIMM slots • 4TB memory • 4 CAPI 2.0 Slots <ul style="list-style-type: none"> • AIX, IBM i up to 25% • Linux • PowerVM 	<ul style="list-style-type: none"> • 2-socket, 4U • 8,10,12 cores/ socket • 32 IS RDIMM slots • 4TB memory • 4 CAPI 2.0 slots • Internal RDX Media <ul style="list-style-type: none"> • AIX, IBM i up to 25% • Linux • PowerVM
Technology Leadership	<ul style="list-style-type: none"> • Cloud enabled - Embedded virtualization capabilities with PowerVM • Up to 4TB in 2 socket - DDR4 Industry Standard memory RDIMMs • High Speed 25Gb/s external ports – one per socket • 2 Internal NVMe Flash boot adapters • Embedded Analytics and Algorithms on the chip help run POWER9 at an always optimized frequency 				

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POWER System Timeline






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Why move to POWER9?

Deliver better TCO(HW and SW) with an open, more flexible data infrastructure

 <p>Up to 1.5x Performance per core vs. P8*</p> <ul style="list-style-type: none"> • Better TCO for your infrastructure • Deploy more workloads • Performance per core leadership <p>Cloud ready</p> <ul style="list-style-type: none"> • Optimize your infrastructure • Deploy more workloads quickly <p>Technology leadership for a future forward infrastructure.</p> <ul style="list-style-type: none"> • PCIe Gen4 • 25 Gb/s high speed links 	 <p>Extends POWER's HANA advantage Up to 4 TB in a two-socket system, 33% more than x86. Industry standard DIMMs/pricing</p> <p><small>* Certification expected 2Q from SAP</small></p> <p>Flexibility - x86 heavily restricted in virtualized environments</p> <p>Resiliency - Failures of x86 servers often cited as reasons for delays in HANA 'go-live' projects. SAP Support loves Power for HANA</p> <p>Performance - Clients migrating from HANA on x86 to Power are reporting <u>at least 2x</u> better performance on POWER8</p>	 <p>Performance per core leadership *</p> <ul style="list-style-type: none"> • Save on software costs priced by the core <p>Cloud ready</p> <ul style="list-style-type: none"> • Seamlessly run Linux workloads in a PowerVC Cloud
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*Based on IBM Internal testing & projections as of 2-5-18. Initial testing indicates relative performance ratios between 1.2 to 1.5X for POWER8 to POWER9.

Call today to accurately determine your POWER9 system requirements!

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203-756-4243