IBM

IBM Power System E980 – Designed to support the most mission-critical applications

Highlights

- Enhance performance with 4X more threads per core in POWER9 vs. x86

- Slash time-to-insight with up to 64 TB of buffered DDR4 memory

- Simplify cloud deployment with PowerVC™ & built-in IBM PowerVM™ Enterprise

- Industry leading reliability with better than five-nines uptime

- Respond rapidly & simply to dynamic business needs with Capacity on Demand

- Lower TCO with Power Enterprise Pools to share resources/balance workloads

- Protect data at rest and in motion with accelerated encryption on the chip

The most powerful, reliable, secure and scalable POWER9 server

The IBM Power® System E980 is the ideal foundation for a world-class private or hybrid multicloud infrastructure, able to power the large-scale, mission-critical applications you need to transform data into a competitive advantage. Each Power E980 comes tailored to your unique requirements and ready to deploy—with enterprise-class security and efficient, built-in IBM PowerVM™ virtualization.

Massive throughput, performance and scalability in a modular high-end system with up to 192 POWER9 cores, up to 64TB memory, and the fastest POWER9 processors in the Power Systems portfolio. The E980 improves I/O throughput PCIe Gen4 (2x the bandwidth of PCIe Gen3), and it embeds analytics and algorithms on the chip to help the Power E980 run at an always-optimized dynamic frequency.

IBM Power Enterprise Pools 2.0 delivers enhanced multisystem resource sharing and by-the-minute consumption of on-premises compute resources for clients deploying and managing a private cloud infrastructure. This flexibility combined with the Power E980 security, reliability and scalability provide clients with the consumption-based-IT solution required in today's dynamic, hyper-competitive market. With Power Enterprise Pools 2.0, clients no longer need to worry about over-provisioning capacity to support growth.

Enable large-scale consolidation of older, under-utilized servers onto an ultra-efficient POWER9 high-end system with unprecedented levels of utilization and resource sharing to concurrently support AIX, IBM i and/or Linux applications.

Built with innovation that puts data to work, IBM Power Systems™ provides the foundation for organizations to bring insight to the point of impact quickly.

IBM Power System E980

IBM Power System E980 at a glance

System configurations	Model 9080-M9S	
Configuration options	One System Node	System maximum
Microprocessors	4 x POWER9 processors 8,10,11 or 12 cores each	16 x POWER9 processors 8, 10, 11 or 12 cores each
Threads per core	Eight	
Cores	32, 40, 44 or 48	128, 160, 176 or 192
Level 2 (L2) cache per core	512 K	
Level 3 (L3) cache per processor	Up to 120MB shared L3 cache (10MB/core)	
Level 4 (L4) cache per processor	128 MB off-chip eDRAM L4	
Memory bandwidth per processor	230 GB/s	
Enterprise Memory	32 DIMM slots Up to 16 TB buffered DDR4 CDIMMs	128 DIMM slots Up to 64 TB buffered DDR4 CDIMMs
USB Ports	2 x USB 3.0 per Node 1 x USB 3.0 in System Control Unit	5 x USB 3.0 in System Nodes 1-2 1 x USB 3.0 in System Control Unit
Internal storage	4 slots for non-volatile memory express (NVMe U.2)	16 slots for non-volatile memory express (NVMe U.2)
DVD	External DVDs (Optional) may be attached via USB	
Integrated PCIe adapter slots	8 PCIe x16 Gen4	32 PCIe x16 Gen4
PCIe I/O Expansion Drawers	Up to 4 (12 PCIe adapter slots each)	Up to 16 (12 PCIe adapter slots each)
System Control Unit	1	
Flexible Service Processors	2	
HMC ports	2	
POWER Hypervisor™	PowerVM Enterprise integrated	

Reliability, Availability, and Serviceability (RAS) features	First Failure Data Capture Processor instruction retry L2 and L3 Cache ECC protection with cache line-delete Extended cache line delete Core contained checkstops Dynamic processor deallocation Chipkill protection for x8 and x4 DIMMs, with DRAM sparing Processor fabric bus retry with data lane sparing Dynamic deallocation of SMP cable and ½ bandwidth mode Guided FSP & SMP cable installation Redundant phase and spare phase for voltage regulator modules (VRMs) supplying processors and DIMMS Redundant service processors with automatic failover and concurrent repair Redundant system clocks with dynamic failover Redundant and spare voltage regulator modules Redundant, hot-swappable power supplies and cooling fans Concurrent add/repair of I/O drawers Extended error handling on PCIe slots Hot-plug/blind-swap PCIe adapter slots Concurrent repair of Op-Panel Selective dynamic firmware updates Active Memory Mirroring for Hypervisor
Operating systems	AIX, IBM i and Linux for Power
Power requirements	Operating voltage: 200 to 240V AC
System dimensions	<table><tr><td></td><td>System Control Unit</td><td>System Node</td><td>PCIe Expansion Drawer</td></tr><tr><td>Width</td><td>445.6 mm (17.54 in.)</td><td>445.5 mm (17.54 in.)</td><td>447.3 mm (17.54 in.)</td></tr><tr><td>Depth</td><td>779.7 mm (30.7 in.)</td><td>867 mm (34.13 in.)</td><td>737 mm (30.7 in.)</td></tr><tr><td>Height</td><td>86 mm (3.39 in.)</td><td>218 mm (8.58 in.)</td><td>173 mm (6.8 in.)</td></tr><tr><td>EIA units</td><td>2 EIA units (2U)</td><td>5 EIA units (5U)</td><td>4 EIA units (4U)</td></tr></table>
Warranty	1 year, 24x7 same day response; onsite (varies by country) Warranty Service Upgrade and additional Maintenance Services options are available.

Why IBM?

For over a century, IBM has pioneered technologies and provided services that help companies manage and mine their valuable business data. And for 25 consecutive years, IBM has topped the annual list of US patent recipients—receiving a record-breaking 9,043 patents in 2017. In addition, IBM Power Systems are trusted by 78 percent of the Fortune 100. Further, every one of the top 10 banking firms have Power Systems, as do 80 percent of the top insurance and retail companies.

Next steps

→ Visit the product page

For more information

To learn more about the IBM Power System E980 please contact your IBM representative or IBM Business Partner, or visit the following website: https://www.ibm.com/us-en/marketplace/power-systems-E980. Additionally, IBM provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit IBM Global Financing.