

# IBM Power E1180

Built for the AI Era

*Autonomous. Secure. Resilient.*



## Highlights

- Continuous operations
- Quantum-safe security
- Optimized energy use
- Scalable and flexible growth

Across industries—from finance and healthcare to manufacturing and government—organizations are under pressure to innovate faster, operate more efficiently, and maintain robust security. As AI adoption accelerates and skilled IT talent becomes harder to find, many organizations are increasingly concerned about the impact of downtime and operational complexity.

The **IBM® Power® E1180** is designed for this new era of business agility. As the high-end system in the **IBM Power** portfolio, it is built to support large-scale, complex IT environments with up to 256 Power11 processor cores and 64 TB of DDR5 memory. The Power E1180 is intended to help organizations pursue business continuity, cyber resilience, and scalable growth while supporting hybrid IT strategies.

Power E1180 offers flexibility to modernize at your own pace with availability in IBM Power Virtual Server and upgrade paths that preserve existing investments. Its full-stack integration—from processor to cloud—is designed to support autonomous IT operations and help organizations achieve meaningful business outcomes across three pillars:

**Business Continuity:** A resilient foundation for mission-critical workloads across deployment models.

**Productivity & Efficiency:** Designed to maximize efficiency and reduce complexity.

**Scalable Growth for the AI Era:** Designed to support AI-driven innovation and workload expansion with a focus on security and consistency.



99.9999%  
uptime

with the most resilient  
server in the history of  
the IBM Power platform<sup>1</sup>

<1 minute  
guaranteed

ransomware  
threat detection with  
IBM Power Cyber Vault<sup>2</sup>



Figure 2. IBM Power E1180 – Exterior Back

## Business Continuity

In today's enterprise landscape, disruption can impact revenue, reputation, and resilience. As organizations scale and adopt AI, cloud, and hybrid models, maintaining continuous operations is increasingly vital. The IBM Power E1180 is designed to help support business continuity, reduce risk exposure, and enable operational agility.

### Continuous Availability for Maintenance

Traditionally, system updates and patches required planned downtime, interrupting services and increasing operational risk. The Power E1180 introduces capabilities that support maintenance without taking critical workloads offline. By leveraging advanced automation and platform intelligence, IT teams can perform updates with minimal disruption, helping maintain service continuity and freeing resources for strategic initiatives.

### Cyber Resilience with IBM Power Cyber Vault

Cyberattacks are growing more sophisticated, with ransomware often executing in under a minute. The Power E1180, in conjunction with IBM Storage and IBM Technology Expert Labs, supports advanced threat detection and automated recovery through IBM Power Cyber Vault. These capabilities are designed to help identify threats quickly and initiate system and data restoration workflows, supporting business continuity even in high-pressure scenarios.

### Quantum-Safe Protection for a Changing Threat Landscape

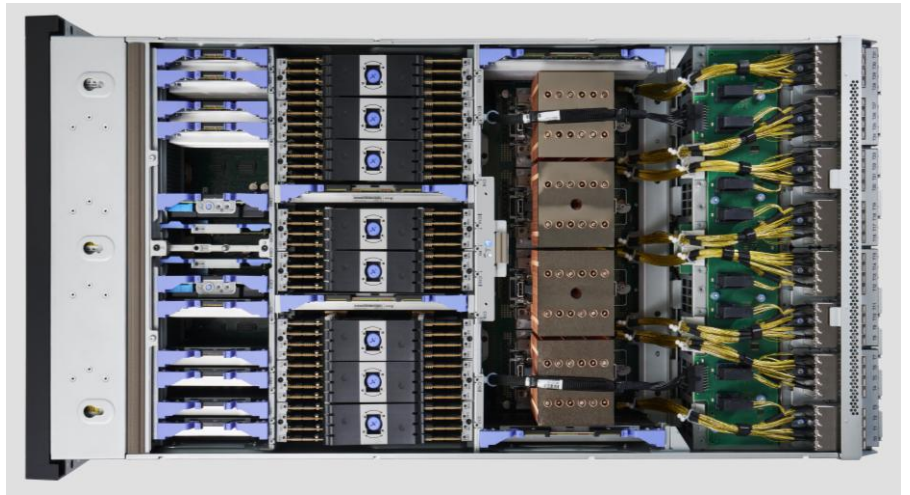
As quantum computing advances, traditional cryptographic protections may face new challenges. The Power E1180 builds on Transparent Memory Encryption (TME) and incorporates support for advanced cryptographic algorithms and a Crypto Card designed to enhance data protection during system reboot and live partition mobility and to assist with evolving compliance needs.

### Built-In Resilience with Spare Core Technology

IBM Power E1180 can offer spare core capabilities at the silicon level, with a pool of idle processor cores that can be activated in response to detected faults. This design is intended to help sustain computing capacity and reduce the risk of processing interruptions in mission-critical environments.

## Up to 28%

better energy efficiency  
with the new Energy  
Efficient mode compared  
to Maximum Performance  
mode on Power11<sup>3</sup>



## Productivity and Efficiency

In a world where IT complexity is growing and skilled resources are stretched thin, enterprise leaders are rethinking how infrastructure can do more—automatically, intelligently, and efficiently. The IBM Power E1180 is designed to support this shift, helping organizations streamline operations, reduce manual overhead, and focus on strategic outcomes.

### **Intelligent Automation for Maintenance**

Routine maintenance has traditionally required extensive planning, specialized skills, and scheduled downtime. The Power E1180 introduces system-level automation designed to simplify this process.

### **Accelerated Support and Diagnostics**

When issues arise, time is critical. Power E1180 can help you automate data collection and streamline support workflows, so your teams can reduce time spent on troubleshooting and focus on higher-value initiatives.

### **Energy Optimization with Smart Scheduling**

Energy efficiency is no longer just a sustainability goal—it's a business imperative. The Power E1180 includes an intelligent energy mode with programmable scheduling features. These capabilities are designed to help optimize power usage across workloads while maintaining service levels, contributing to reduced operational costs and environmental impact.

### **Cryptographic Inventory and Compliance Readiness**

Managing cryptographic assets across a large infrastructure can be complex. With IBM PowerSC, the E1180 supports automated discovery and inventory of certificates, keys, and configurations. This helps IT teams monitor their cryptographic posture and align with evolving security policies and regulatory frameworks.

## Scalable and flexible growth

As digital transformation accelerates, enterprise infrastructure must be able to scale intelligently, securely, and without disruption. Whether expanding AI initiatives, modernizing applications, or extending workloads to the cloud, organizations need platforms that support growth without adding complexity. IBM Power E1180 is designed to support this evolution, offering architectural flexibility and workload portability across hybrid environments.

### Enterprise AI on IBM Power

AI is reshaping industries—from fraud detection and predictive maintenance to real-time personalization. Yet many organizations face challenges in deploying AI close to where data is generated. The Power E1180, built on Power11 technology, is designed to support AI integration directly into business workflows. With on-chip acceleration, high memory bandwidth, and parallel processing capabilities, it helps bring inference closer to the data, supporting performance and reducing data movement.

### Flexible Consumption with Shared Utility Capacity

Scaling infrastructure often means balancing performance with cost efficiency. IBM Power Private Cloud with Shared Utility Capacity provides a flexible model for resource consumption. Organizations can tailor system configurations with a mix of purchased and pay-per-use capacity, while usage is tracked the minute, promoting efficient utilization across the server pool. This model is designed to help reduce overprovisioning and simplify resource management across multiple systems.

### Power11 on IBM Power Virtual Server

For enterprises balancing on-prem control with cloud agility, the Power E1180 supports hybrid strategies through IBM Power Virtual Server. This environment enables AIX®, IBM i, and Linux® workloads to run in the cloud without requiring application refactoring. Integration with IBM Cloud® services supports automation, backup, and disaster recovery, helping organizations extend their infrastructure footprint while maintaining operational consistency.



# IBM Power E1180 - Technical Specifications

Configuration options	One system node	Four system nodes
Microprocessors	4 Power11 processors 10, 12 or 16 cores each	16 Power11 processors 10, 12 or 16 cores each
Threads per core	8	8
Cores	40, 48 or 64	160, 192 or 256
Level 2 (L2) cache per core	2 MB	2 MB
Level 3 (L3) cache per core	Up to 128 MB shared L3 cache (8 MB per core)	
Enterprise memory	64 DIMM slots Up to 16 TB buffered DDR5 DDIMMs	256 DIMM slots Up to 64 TB buffered DDR5 DDIMMs
USB ports	USB PCIe adapter must be used for enabling USB access 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 Gen5	32 PCIe Gen5
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 providers	2	
HMC ports	2	
POWER Hypervisor	PowerVM® Enterprise integrated	

<b>Reliability, Availability and Serviceability (RAS) features</b>				
<ul style="list-style-type: none"><li>– Quantum safe encryption for secure boot and LPM (Live Partition Migration)</li><li>– Spare Cores for increased availability (4 spare cores per drawer)</li><li>– Six 9’s availability</li><li>– First failure data capture</li><li>– Processor instruction retry</li><li>– L2 and L3 cache ECC protection with cache line-delete</li><li>– Core checkstops</li><li>– Dynamic processor deallocation</li><li>– Chipkill protection for x4 DDIMMs, with DRAM sparing</li><li>– Processor fabric and memory buses retry with data lane sparing and ½ bandwidth mode</li><li>– High-speed internode cables, with passive components and advanced fault isolation diagnostic capabilities</li><li>– Guided FSP and SMP cable installation</li><li>– Concurrent repair of the external SMP cable</li><li>– Redundant phase and spare phase for voltage regulator modules (VRMs) supplying processors</li><li>– Spare Power Management Integrated Circuit (PMIC) for DDIMM power regulation</li><li>– Redundant system clocks with dynamic failover</li><li>– Redundant, hot-swappable power supplies and cooling fans</li><li>– Concurrent add or repair of I/O drawers</li><li>– Extended error handling on PCIe slots</li><li>– Hot-plug and blind-swap PCIe adapter slots</li><li>– Concurrent repair of the Op-Panel</li><li>– Concurrent repair of the Time of Day Battery</li><li>– Selective dynamic firmware updates</li></ul>				
<b>Operating systems</b>		AIX, IBM i and Linux for Power (RHEL or SLES)		
<b>Power requirements</b>		Operating voltage: 200 to 240V AC		
<b>System dimensions</b>		System control unit	System node	PCIe expansion drawer
	Width	445.6 mm (17.54 in.)	445 mm (17.51 in.)	482 mm (19 in.)
	Depth	779.7 mm (30.7 in.)	866.95 mm (34.13 in.)	902 mm (31.6 in.)
	Height	86 mm (3.39 in.)	217.25 mm (8.55 in.)	173 mm (6.8 in.)
	EIA units	2 EIA units (2U)	5 EIA units (5U)	4 EIA units (4U)
<b>Warranty</b>		1 year, 24x7 same day response; onsite (varies by country) IBM Power Expert Care Warranty Service Upgrade and additional maintenance service options are available.		

# Conclusion

The IBM Power E1180 Server brings a bold step forward for enterprises that refuse to compromise between innovation and stability. It's more than a server—it's a platform for autonomous operations, secure hybrid cloud deployment, and scalable performance across your most critical workloads. Whether you're modernizing legacy infrastructure, integrating AI into business processes, or securing operations in a hybrid world, Power E1180 gives your organization the tools to move faster, adapt smarter, and operate with confidence. Now is the time to reimagine what your infrastructure can do for your business, your team, and your future.

## Why IBM?

IBM brings decades of experience helping enterprises modernize with trust, performance, and long-term support. With the Power11 platform, IBM continues that tradition, combining deep infrastructure expertise, innovation in hybrid cloud and AI, and a global ecosystem of partners and services. Choosing IBM Power means choosing infrastructure built to evolve with your business—secure by design, built for resilience, and ready for whatever comes next.

## For more information

To learn more about the [IBM Power E1180 Server](#), [contact your IBM representative](#) or IBM Business Partner.

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1. Based upon unplanned downtime of a single Power E1180 system as calculated in the POWER11 Processor-Based Systems RAS (see section: 99.9999% uptime) <https://www.ibm.com/downloads/documents/us-en/10a99803d9afd776>
2. This guarantee covers only the displaying of an alert in less than one minute. Remediation is in the form of drive replacement up to the cost of the Covered Product. Terms and conditions apply; full details can be found [here](#)
3. Based upon IBM measurements of performance per watt on servers comparing Maximum Performance Mode to Energy-Efficient Mode while running compute-, disk-, and memory-based workloads on Power11 systems with fully configured sockets and memory as follows: E1180 with 4x10c / 64x64GB DDIMM, E1150 with 4x16c / 64x32GB DDIMM, S1124 with 2x16c / 32x32GB DDIMM, S1122 with 2x16c / 32x32GB DDIMM

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