EVIDEN

Escala E3-1100 & E4-1100

11

Reliable, consistent and secured scale-out servers

The Escala E3-1100 and E4-1100 scale-out servers based on the Power11 processor have been designed to improve scale performance and security while delivering class-leading reliability and lowering IT costs through reduced footprint and lowered cooling and electrical costs, and the required agility for the unpredictability of today's business. Organizations can benefit from increased agility and deploy their business-critical workloads across private or hybrid cloud.

E3-1100

E4-1100

Up to 15-25%

core performance increase compared to Power10

26%

better server efficiency with the new Energy Efficiency mode compared to Maximum Performance mode on E4-1100

5-8 hours saved

Of IT staff time per ticket

Adapt to increasing client workloads and lower TCO

The Escala Power11 scale-out servers deliver new innovations and optimizations increasing both performance and energy efficiency compared to Power10 servers for the same workloads.

Improved performance

- Higher core frequencies, additional cores per server, and improved memory bandwidth with reduced memory latency offering up to 15-25% core performance increase and up to 8% increase at constant core count.

- Enhanced Software scaling, affinity, and efficiency.

New Resource Group capability

Maximize system utilization, improve workload isolation, and deliver up to 25% improved performance.

Reduce datacenter footprint

Enterprises can achieve 26% better server efficiency on E4-1100 and 13% on E3-1100 with the new Energy Efficiency mode compared to Maximum Performance.

This intelligent, programmable capability manages power consumption across the system, optimizing resource utilization without compromising performance or critical business Service Level Agreements (SLAs).

In-core AI capabilities permit running inferencing workloads inside the server without requiring additional accelerator hardware.

Built-in security

With applications and data now residing everywhere, security is an increasingly critical concern for CIOs and IT Managers and has always been a design priority for Power-based architecture, which has allowed them to be ranked highly in terms of end-to-end security.

The new Escala Power11 scale-out servers benefits advanced security features at every level of the system, strengthening data protection no matter where they are:

Key security features

- Transparent memory encryption with no management set up and no performance impact.

- Support of future cryptographic techniques, such as quantum-safe cryptography and fully homomorphic encryption.

- Rapid ransomware detection and automated recovery, helping minimize disruption and financial impact.

- Automated cryptographic inventory intended to help meet evolving compliance needs and robust data security.

- Quantum Safe protection for boot and LPM.

Additionally, organizations benefit from **centralized security management** through **PowerSC,** streamlining governance across workloads.

Industry-leading reliability and availability

For over 13 years, Power-based platforms have led industry in infrastructure reliability - and the **Escala Power11 scale-out servers** continues that legacy with innovations that maximize uptime and operational continuity.

Unmatched platform reliability

E3-1100 and E4-1100 features **advanced recovery and diagnostics,** along with **OMI-attached differential DIMMs** that deliver **twice the memory reliability and availability** compared to industry-standard DIMMs.

Resilience against failures

With **Active Memory Mirroring,** critical memory used by the PowerVM hypervisor is duplicated, allowing the system to continue operating even if a memory failure occurs. Plus, **two spare cores per socket** ensure computing continuity in the event of hardware issues.

Zero planned downtime

The Power11 generation introduces capabilities that allow **planned maintenance without taking critical workloads offline,** ensuring **continuous availability.**

Faster problem resolution

Automated diagnostic data collection can save your IT team **5 to 8 hours per support ticket,** dramatically accelerating problem identification and resolution and reducing mean time to repair and freeing up resources for strategic initiatives.

Built for virtualization and Cloud deployment

The Escala Power11 scale-out servers offer a VMWare alternative as they **include the PowerVM Enterprise Edition to deliver virtualized environments** and to support a frictionless hybrid cloud experience. Workloads can run the AIX, Linux and IBMi operating systems, and leverage container technology with Kubernetes or Red Hat OpenShift Container Platform.

Technical specifications

Model Name	Escala E3-1100		Escala E4-1100
Processor module Type	eSCM	DCM	DCM
Form factor	2U	2U	4U
# of sockets	1 or 2	1 or 2	1 or 2
Processor offerings GHz **(Cores/Socket)** | Max # of Cores	3.6 to 4.0 GHz **(4)** | 8 3.05 to 4.0 **(10)** | 20	3.0 to 4.2 GHz **(16)** | 32 2.65 to 4.15 **(24)** | 48 2.4 to 3.95 GHz **(30)** | 60	3.4 to 4.2 GHz **(16)** | 32 3.05 to 4.15 **(24)** | 48 2.8 to 3.95 GHz **(30)** | 60
Cache Per Core L2, L3	2 MB, 8 MB		
Processor Interconnect	4x2B @ 32 Gbps	4x2B @ 32 Gbps	4x2B @ 32 Gbps
# of memory channels	16 OMI channels	32 OMI channels	32 OMI channels
Max memory bandwidth 2U DDIMM DDR5	614 GB/s w/ 2x 32GB 1228 GB/s w/ 2x 64GB 1228 GB/s w/ 2x 128GB		614 GB/s w/ 2x 32GB 1228 GB/s w/ 2x 64GB 1228 GB/s w/ 2x 128GB 1228 GB/s w/ 2x 256GB
# of DIMMs	32 DDIMMs 4000MHz	32 DDIMMs 4000 or 48000 MHz	32 DDIMMs 4000 or 48000 MHz
Min - Max memory capacity	64GB - 4 TB		64GB - 8 TB
Acceleration ports	NA	6 ports @ 25 Gbps	6 ports @ 25 Gbps
PCIe slots	4 PCIe Gen4 x16 6 PCIe Gen4 x8	4 PCIe Gen5 x8 4 PCIe Gen4 x16 or Gen5 x8 2 PCIe Gen4 x8	4 PCIe Gen4 x16 or Gen5 x8 4 PCIe Gen5 x8 2 PCIe Gen4 x8
Slots for internal storage	General purpose	General purpose	General purpose
# internal drives	8 NVMe U.2		16 NVMe U.2
Internal storage capacity	up to 122.4 TB		up to 244.8 TB
I/O expansion drawer	1 PCIe4 NVMe or PCIe Gen4 4U		Up to 2 max 1 PCIe4 NVMe
AIX rPerf (max)	292.9 w/ 8-core 626.7 w/ 20-core	1040.3 w/ 32-core 1357.8 w/ 48-core 1531.9 w/ 60-core (0.835 rPerf/Watt)	1117.1 w/ 32-core 1529.0 w/ 48-core 1736.8 w/ 60-core (0.598 rPerf/Watt)

Eviden and IBM: a perfect fit

Since 1992, Eviden and IBM have built a unique relationship, with IBM leading to a highly productive technological cooperation. This has fundamentally strengthened the AIX ecosystem, by regularly generating innovations, in areas such as scalability, RAS, virtualization and cloud enablement.

Scale-out servers' common features:
- 1 USB Front Port
- EnergyScale.
- Capacity on Demand: mobile CoD, Power Enterprise Pool as an option
- RAS: Chipkill Memory, Hot-Swappable NVMe SSD Disks, Dynamic Processor Deallocation, Processor Instruction Retry, Hot-Plug Concurrent Maintenance PCIe Slots, Redundant Hot-Plug Power, Redundant Hot-Plug Cooling
- Dual VIOS Optional, Active Memory Mirroring.
- Service Processor: Enterprise BMC (eBMC)
- PowerVM™: Enterprise Edition included
- AIX support: 7.2, 7.3 or later
- Linux support: RHEL 8.6, 9.4, 9.6, 10, SLES 15 SP6 or later, Red Hat OpenShift Container Platform 4.19 or later
- HMC support: HMC CR2 or vHMC with Firmware v11.1.1110
- IBMi support: 7.4, 7.5, 7.6 or later - Contact Eviden representative for more details
- 3 years standard warranty.

Connect with us

in X O ▶

eviden.com