

# Escala M8-1000

Business continuity  
and scalability  
strengthened  
by security and  
sustainability



## Escala M8-1000 is the new high-end enterprise server from Atos.

The Escala M8-1000, based on the Power10 processor, delivers exceptional performance, along with security and reliability, while providing seamless integration into existing infrastructures for a minimum of complexity and cost. Business continuity is assured thanks to Power and AIX's market-leading RAS features.

Clients looking for secure and efficient scaling of core operational applications, such as databases, and a cloud infrastructure for business-critical applications, will pull ahead of the competition by choosing this enterprise-grade server.

The Escala M8-1000 strengthens security by simplifying end-to-end encryption thanks to the hardware crypto-engines embedded in the Power10 processor. The Power10 processor's Matrix Math Accelerator architecture brings AI inferencing right where your data resides for faster insights. Sustainability is reinforced in this new server by providing 33% lower energy consumption for the same workload as the previous version.

Atos Server Name	Escala M8-1000	
System package per node	5U/node + 2U SCU, 19" rack	
System nodes	1 - 4	
Configuration options	One system node	System maximum (four system nodes)
Power10 (SMT8) Microprocessors/node Cores/socket	4 Power10 processors 10, 12 or 15-cores each	16 Power10 processors 10, 12 or 15-cores each
Cores	40, 48 or 60	160, 192, or 240
L2 cache / core	2 MB	
L3 cache / processor	8MB/core Up to 120MB per socket	
Power10 Processor Mode: GHz range/node Processor frequencies are dynamic by default: Performance Mode (Max or Dynamic) is set in Power Management	3.65 to 3.9 GHz (10)   40 3.60 to 4.15 GHz (12)   48 3.55 to 4.00 GHz (15)   60	3.65 to 3.9 GHz (10)   160 3.60 to 4.15 GHz (12)   192 3.55 to 4.00 GHz (15)   240
System memory (RAM)	64 DIMM slots Up to 16 TB DDR4 DDIMMs	256 DIMM slots Up to 64 TB DDR4 DDIMMs
Processor-to-memory bandwidth	409 GB/s per processor	
System memory: min / max / (min % active) 2933 MHz DDR4	256 GB / 16 TB / (50%)	1 TB / 64 TB / (50%)
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)
Internal storage	4 slots for NVMe U.2	16 slots for NVMe U.2
System Control Unit (2U)	1	
Flexible Service Processors	2	
HMC ports	2	
rPerf GHz (# of cores): perf	3.65 to 3.9 GHz (40): 1,367 3.60 to 4.15 GHz (48): 1,681 3.55 to 4.00 GHz (60): 2,000	(160): 5,467 (192): 6,722 (240): 7,998
PowerVM Enterprise (Integrated) - Hypervisor	LPAR, Dynamic LPAR; Virtual LAN (Memory to memory inter-partition communication 20 Micro-Partitions per processor; Multiple Shared Processor Pools; Virtual I/O Server; Shared Dedicated Capacity; Live Partition Mobility (LPM) and Active Memory Sharing (AMS); NovaLink (virtualization management agent)	
Reliability, Availability, and Serviceability (RAS) features	First failure data capture (FFDC), Processor instruction retry, L2 and L3 Cache ECC protection with cache line-delete, Core Checkstops, Dynamic processor deallocation, Chipkill protection for x4 DDIMMs, with DRAM sparing, Processor fabric and memory buses retry with data lane sparing and ½ bandwidth mode, High speed internode cables, with passive components and advanced fault isolation diagnostic capabilities, Guided FSP & SMP cable installation, Concurrent repair of external SMP cable, Redundant phase and spare phase for voltage regulator modules (VRMs) supplying processors, Spare Power Management Integrated Circuit (PMIC) for on DDIMM power regulation, Redundant system clocks with dynamic failover, 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, Concurrent repair of Time of Day Battery, Selective dynamic firmware updates, Active Memory Mirroring for Hypervisor	

### Atos and IBM: a perfect fit

For almost 30 years, Atos and IBM have built a unique relationship, based on an OEM partnership and a close, highly productive technological cooperation. This solid R&D collaboration has fundamentally strengthened the AIX® ecosystem, by regularly generating innovative functionality, in areas such as scalability, RAS, virtualization and cloud enablement.

To learn more on how you can benefit from Escala solutions, please visit [atos.net/Escala](https://atos.net/Escala)

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