Escala

Growing your business with intelligent innovation

Escala end-to-end AI stack

Escala differentiates from competitors by delivering a complete SW stack for AI, making Machine Learning and Deep Learning accessible to a large public. Escala offers innovative, prepackaged and pre-optimized ML tools, with leading frameworks and libraries, drastically reducing implementation complexity, and offering unprecedented ease of use.

Convergence of cloud and AI

Escala offers a complete software stack for the end-to-end AI process. But in addition, proposes enterprise-ready cloud deployment with Red Hat OpenShift. With Escala it's possible to take advantage of the most economical private container cloud deployment infrastructure. This brings together a convergence of AI and Cloud, infusing AI into apps that can run anywhere.

ATOS OpenPOWER Member

The OpenPOWER Foundation is an open industry consortium, with 350+ members (including Google, Mellanox, IBM, Nvidia, Redhat and Atos) for developing and promoting the Power Architecture. Member companies provide innovations such as custom systems for large or warehouse scale data centers, workload acceleration through GPU, FPGA or advanced I/O, platform optimization for SW appliances, or advanced hardware technology exploitation. POWER9 is a key component of the OpenPOWER landscape.
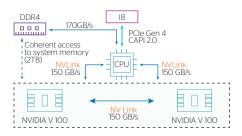
Escala: AI platform for business insights

Many companies are investigating Artificial Intelligence (AI) as a means to expand their business perspectives. Escala POWER9 servers and AI software provide the end-to-end platform to extract the business value from your data.

Big Data & AI workloads

Business data is growing exponentially and requires servers adapted to these huge volumes. POWER9 offers infrastructures capable of addressing new challenges such as massive data ingestion required for deep learning applications, thanks to the accelerated compute devices, networking and storage. The AI process involves data ingestion, training, and inference, each step with its specific technical requirements.

The POWER9 technology is uniquely designed for these data intensive AI workloads. With its market-unique coherent interconnect between CPUs, GPUs, FPGA adapters and main memory, POWER9 offers unprecedented capabilities for intelligent innovation based on Machine Learning, Deep learning and high-speed data processing.

Escala L3-OP90: Acceleration platform for AI training

The L3-OP90 is the most advanced platform for the AI training phase, with its specifically designed NVLink 2.0 GPU acceleration technology and its amazing CPU to GPU and GPU to GPU communications, greatly improving performance and data flow. Escala L3-OP90 is based on 2x POWER9 small cores (SMT4) with NVLink 2.0 CPUs and provides up to 2 TB of memory.

Escala LI-OP90: Exceptional data storage and AI inference

Escala LI-OP90 is ideally suited for data storage and AI inference needs. The Escala LI-OP90 is designed with cooptimized hardware and software, delivering the essential components for AI inference. By associating the Escala LI-OP90 for the data storage and the inference, with the Escala L3-OP90 for the training, Escala provides a highly performant end-to-end AI platform.

The Escala LI-OP90 is a powerful 2-socket server that offers 24, 32 or 40 fully activated cores. The LI-OP90 also provides I/O configuration flexibility, with 10 PCIe slots, as well as a significant amount of local storage, with 24 disk slots. The LI-OP90 is uniquely adapted for high-performance inference thanks to its six Nvidia T4 GPU accelerators.

Atos

Our Offers	Escala LI-OP90	Escala L3-OP90
System package	2U, 19" rack	2U, 19" rack
Microprocessors Cores	2x POWER9 SCM processors 24-core, 32-core, or 40-core	2x POWER9 SCM processors 32-cores, 40 cores
POWER9 Processor	POWER9 SMT4 12 24-cores – 2.8 GHz (3.8 GHz "turbo") 16 24-cores - 3.35 GHz (4.0 GHz "turbo") 20 40-cores - 2.9 GHz (3.8 GHz "turbo")	POWER9 SMT4 16-core - 2.7 GHz (3.3 GHz "turbo") 20-core - 2.4 GHz (3.0 GHz "turbo")
RAM (memory) Min - max. memory All memory is active	32 GB to 2048 GB, from 32 DDR4 RDIMM sockets	32 GB to 2048 GB, from 16 DDR4 RDIMM sockets
Processor-to-memory bandwidth	170 GB/s per socket, 340 GB/s per system	170 GB/s per socket, 340 GB/s per system
Internal disk storage System unit disk/SSD bays with standard or split backplane	3x 8 SFF-4 (2.5") disk drive bays for maximum 24 SAS/SATA disks	
GPU accelerators	Up to six Nvidia T4 GPU accelerators	
Maximum PCIe PCIe Gen3/Gen4 slots 1, 2 (with two procs)	10 PCIe slots, including: - Two PCIe x16 3.0 FHFL slots (supports double- wide accelerator) - Two PCIe x16 4.0 LP slot - Two PCIe x8 3.0 FHFL slots (physically x16) - Two PCIe x8 3.0 FHFL slots - Two PCIe x16 3.0 LP slots	PCIe Gen4 slots – Two PCIe x16 G4 LP slot, CAPI enabled – One PCIe x8 G4 LP slot, CAPI enabled – One PCIe x4 G4 LP slot
I/O ports	2x USB 3.0 ports in rear	2x USB 3.0, 2x 1 GB Eth, VGA
Linux support	Red Hat Enterprise Linux	Red Hat Enterprise Linux
Virtualization	Bare Metal	Bare Metal
Firmware	OpenBMC	OpenBMC

Atos and IBM: a perfect fit

For more than 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.

Atos is a global leader in digital transformation with approximately 110,000 employees in 72 countries and revenue of over € 11 billion. The European number one in Big Data, Cybersecurity, High performance Computing and Digital Workplace. Atos is also the number one European provider (Number 3 worldwide) of managed infrastructure services.

Why Atos?

We have early insight on new technologies, enabling us to develop new and innovative technical solutions, and to support the digital transformation of all our customers.

Our strong global footprint, and industry heritage gives us the understanding and the flexibility to easily adapt to our clients' culture whatever industry they work in and wherever they are in the world.

To learn more on how you can benefit from Escala solutions, please visit atos.net/Escala.

For more information: **atos.net/Escala**