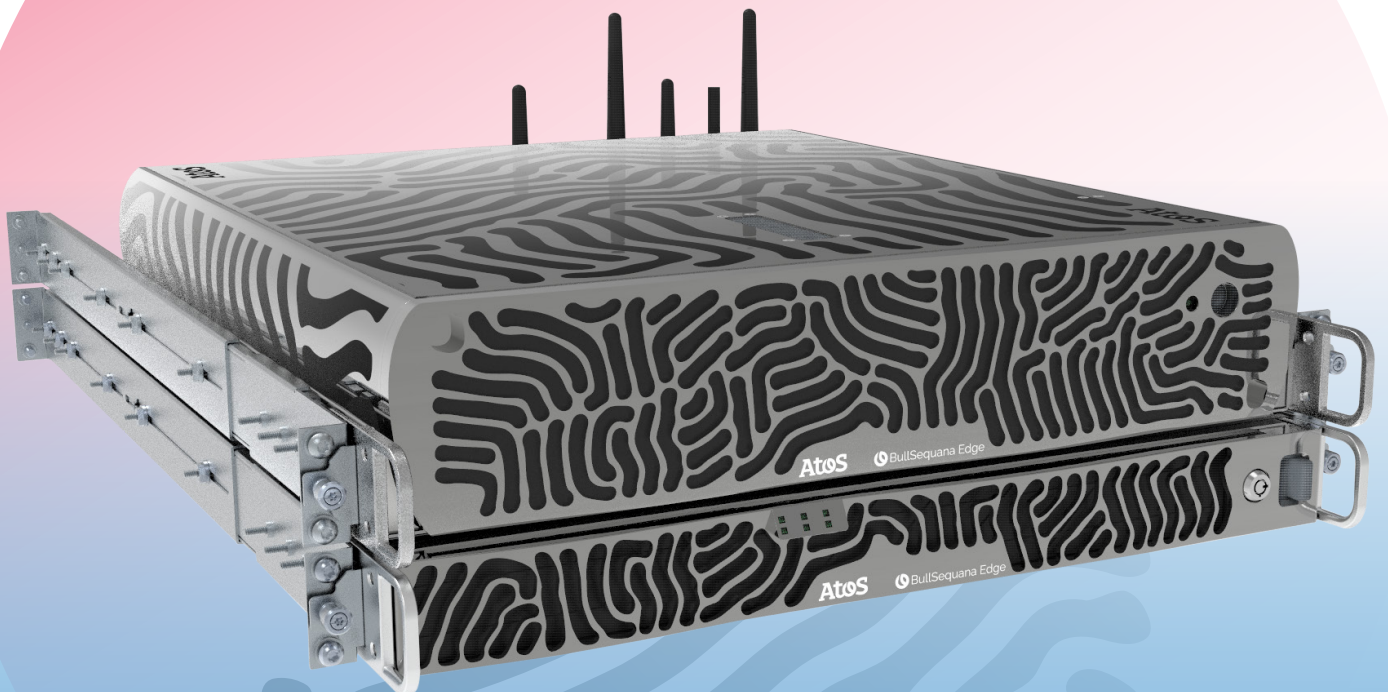
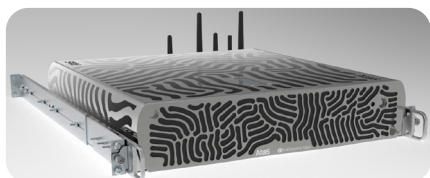


Envision trusted AI from edge to cloud



Atos has unveiled its next-generation Edge server, the BullSequana EX. It has been designed in two form factors: EXD for far edge and EXR for edge data center workloads. Both servers offer unprecedented flexibility with interchangeable CPUs and GPUs. This new edge computing series empowers business to build and deploy a variety of AI & latency-sensitive applications such as computer vision, immersive virtual reality (VR), gaming, leveraged by 5G from far edge to edge datacenter. Unlike the rest of the BullSequana E family, BullSequana EXR is at the frontier of business compute, able to run hyperconverged workloads in remote offices & the edge data center. These next-gen edge computing servers offer new fleet management simplicity, energy efficiency & highest trust and reliability. With BullSequana EX, you can leverage edge computing to fuel your innovative business strategy while protecting your data assets.



BullSequana Edge EXD



BullSequana Edge EXR

One server, endless possibilities

Deploying compute infrastructure at the edge comes along with temperature, power, space and configurability constraints. The BullSequana EX range has been designed to meet these challenges:

- **Temperature:** The BullSequana EX range of servers can operate in challenging extended temperature environments from 0 to 45° C.
- **Power budget:** BullSequana EX servers feature innovative power optimization modes supported by Intel SPR. They can dynamically reduce power consumption by up to 20% with only a minimal performance impact. Atos has also optimized its computer vision solutions in combination with customized BullSequana EX settings to reduce GPU power consumption.
- **Space constraints:** BullSequana EXR provides high density packaging for edge data centers through its space saving 1U form factor. The BullSequana EXD is optimized for far edge deployments outside of data centers and offers great flexibility with wall and desktop mount options.
- **Flexible compute, acceleration and storage capacity:** Both BullSequana EX servers have flexible compute capacity for AI inference. Easily choose between Nvidia GPUs (T4, L40, H100, A2 & A16), CPUs from 12 to 24 cores (Intel Sapphire Rapids) and storage capacity, while maintaining a low carbon footprint! However, if your needs change, you can still leverage your investment by keeping the server chassis and re-configuring it to run the use cases you need. Finally remote manageability & security are at the heart of these servers design allowing you to keep your business use-cases secured and managed even in remote locations.

Performance leap for next-gen AI use cases

Thanks to the extensive options for compute and storage, our servers have the potential to open a range of new use cases: AI inference for VR and AR solutions, smart glasses, drone applications and more. Benefit from low latency and better calibration of the AI models thanks to the flexible CPU/GPU acceleration. In addition, you can reduce the cost and complexity of edge installation and setup through customized factory pre-loads. We offer ready-to-run appliances for Ipsotek VISuite and DataSentic Quality Inspector and Shelf Inspector.

Hyperconverged infrastructure at the edge

Benefit from the performance, security, manageability and cost-efficiency for the compute and storage needs of applications in decentralized architecture (such as Mobile Edge Computing or remote offices and branches). Deploy workloads with high-performance, distributed storage needs such as real-time analytics, right at the edge.

Enhanced security, wherever you go

Computing at the edge requires enhanced security barriers. We designed BullSequana EX server to integrate *Atos Root of Trust*, a unique Atos solution to harden secured boot sequencing to prevent any alteration of the firmware. It also ensures that only Atos-signed firmware can be installed on the server. The BullSequana Edge also provides a physical intrusion detection mechanism, which can alert administrators to unauthorized access while disabling the device and ensuring that all data at rest is encrypted.

Keep your expectations high, but your carbon footprint low

BullSequana Edge is equipped with up to two highly efficient Titanium-grade power supplies. The system offers innovative power capping and energy saving modes. Due to its configurability, it helps avoid oversizing through a flexible choice of system components. All components have been carefully selected in order to meet the latest environmental responsibility standards. The system is assembled at the Atos factory in Angers, France. Its support for extended temperature ranges allows to minimize importantly cooling requirements even for BullSequana EXR rackable 1U server.

5G optimized and Wi-Fi

Support MEC, 5G core and VRAN workloads, thanks to optional embedded accelerators with Intel Sapphire Rapids CPUs. BullSequana EX is ideal to act as a powerful far edge inference server for AI applications due to its 5G and Wi-Fi 6 radio options.

BullSequana Edge hardware specifications

Form factor

	BullSequana Edge EXR	BullSequana Edge EXD
Rack	1U	2U
Standalone	-	Desktop, Wall mount

Processors

	BullSequana Edge EXR	BullSequana Edge EXD
CPU		
TDP max	185 Watt	185 Watt

Memory

	BullSequana Edge EXR	BullSequana Edge EXD
Min/max	Up to 8 memory slots	Up to 8 memory slots
Type	DDR5	DDR5

PCI slots

	BullSequana Edge EXR	BullSequana Edge EXD
PCI		
Type	PCIe 5	PCIe 5
2x FHFL	1x 350W or 2x 150W	1x 350W or 2x 150W

GPU options

	BullSequana Edge EXR	BullSequana Edge EXD
GPU		
2x	Nvidia A2, A4	Nvidia A2, A4
or 1x	Nvidia A16, A40, A100, L40	Nvidia A16, A40, A100, L40

Storage options

	BullSequana Edge EXR	BullSequana Edge EXD
Base	2x M.2 NVMe disks*	up to 8x M.2 NVMe disks***
optional extension	6x SATA or 8x NVMe disks**	

*no M.2 disks if wireless adapter is configured

**6 NVMe if Mezzanine is configured

***6x M.2 if Mezzanine network adapter or wireless adapter is used

Embedded I/O ports

	BullSequana Edge EXR	BullSequana Edge EXD
Network interface controller (NIC)	4x 1Gb RJ45	4x 1Gb RJ45
System management services	1x 1Gb RJ45	1x 1Gb RJ45
USB ports	6x USB3 type A, 2x USB3 type C	6x USB3 type A, 2x USB3 type C
VGA	1	1
COM1 (RS-232)	1	1

Mezzanine I/O expansion

	BullSequana Edge EXR	BullSequana Edge EXD
Network controller	2x 10Gb SFP optional or 2x 25Gb optional*	2x 10Gb SFP optional or 2x 25Gb optional*

*Available in Q3 2023

Power supply options

	BullSequana Edge EXR	BullSequana Edge EXD
Max power	800W or 1200W	1200 W
Optional redundancy	Yes	Yes
Efficiency rating	Titanium	Titanium

Wireless connectivity

	BullSequana Edge EXR	BullSequana Edge EXD
Connectivity	Wi-Fi 6.0, Bluetooth 5.0, LTE/5G and LORA	Wi-Fi 6.0, Bluetooth 5.0, LTE/5G and LORA

Operational conditions

	BullSequana Edge EXR	BullSequana Edge EXD
Operating temperature	0 to +45° C*	0 to +45° C*
Operating humidity	5% to 95%	5% to 95%

*limited to 40°C with high end GPUs

Ecosystem and certifications

	BullSequana Edge EXR	BullSequana Edge EXD
Software ecosystem certifications	RedHat 8/9 OpenShift Windows Server 2022	RedHat 8/9 OpenShift Windows Server 2022
Certification		

About Atos

Atos is a global leader in digital transformation with 112,000 employees and annual revenue of c. € 11 billion. European number one in cybersecurity, cloud and high performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea) and listed on Euronext Paris.

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Let's start a discussion together



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