

Technical specifications

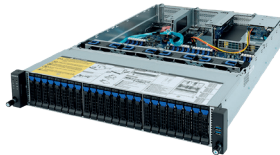
Within the BullSequana S series, the new BullSequana SA servers provide maximized storage density and unbeatable cost per TB to meet growing capacity challenges.

The BullSequana SA range consists of 3 models, storage-optimized and adapted to your business needs.

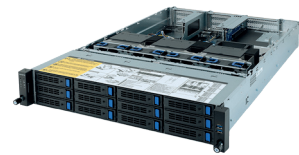
BullSequana SA10



BullSequana SA20



BullSequana SA20G



Here below are the key benefits of this range of servers.

Delivering outstanding storage density and cost per TB

The BullSequana SA rack servers powered by 2nd and 3rd Gen™ AMD EPYC™ processors bring a cost-effective balance of performance and storage capacity. By offering up to 100TB in a 2U form factor, and best-in class SAS/SATA and ultra-fast NVMe drives, they provide optimal performance for hyperconverged solutions such as the BullSequana Agility and Codex Datalake Engine. In addition, this outstanding density makes it possible to minimize the footprint and improve the energy efficiency. Storage on multiple hard disks allows data redundancy and performance improvement. RAID technology provides the right balance between reliability, availability, performance, capacity – and cost! It also brings higher performance in Datalake with data tiering using flexible HDD and SSD combination.

Designed for virtualization and Hybrid Cloud

Certified with the industry-leading HCI software stack from VMware, BullSequana SA servers enable IT to move towards a cloud operating model to take advantage of the agility of the public Cloud within their datacenter. The VMware HCI Software stack involves VMware vSphere® for compute virtualization, VMware vSAN™ for storage virtualization and VMware vCenter® for virtual infrastructure management. They are also certified with Red Hat® OpenStack® for Codex Datalake Engine. BullSequana SA vSAN ReadyNodes™ provide customers with the ability to scale, without disruption, both capacity and performance simultaneously by adding a new node to the cluster (scale-out architecture). As a result, they are perfectly sized to deliver the level of performance required by data-intensive workloads or graphic-intensive VDI environments.

Featuring best-in-class technologies

Atos close collaboration with key technology providers enables BullSequana SA servers to feature best-in-class latest technologies:

- Latest AMD processors with up to 64 cores/128 threads per CPU
- High memory speed, up to 3200MHz
- Wide storage technologies (Ultra-fast NVMe, SSD/HDD SATA/SAS)
- NVIDIA GPUs for Datalake analytics applications, enterprise graphic-intensive applications and virtual desktop deployments
- Full support of PCIe 4.0 technology, with a bandwidth of up to 64GB/s
- Certification with OpenStack and VMware's leading-edge technology
- Compliance to the latest RoHS environmental regulations

BullSequana SA technical specifications

BullSequana SA10 BullSequana SA10 NVMe BullSequana SA10 EL	BullSequana SA20 BullSequana SA20 NVMe	BullSequana SA20G BullSequana SA20G NVMe
--	---	---

Design

From factor	2U	2U	2U
-------------	----	----	----

Processors

Type	2 nd and 3 rd Gen AMD EPYC™ Processor, Socket SP3, 7 nm		
Numbers	1 max 64 cores/128 threads	2 max 128 cores/256 threads	2 max 128 cores/256 threads

Memory

Memory slots	16	32	32
Min / Max DRAM	64 GB – up to 1 TB	128 GB – up to 2 TB	128 GB – up to 2 TB
DRAM type	8-channel memory architecture RDIMM DDR4 16, 32 or 64 GB		
Memory speed	Up 3200 MHz		

Embedded I/O ports

Network interface controller	2 x 1GbE LAN ports (1 x Intel® I350-AM2)		
Management ports	1 x 10/100/1000 management LAN		
USB ports	5 USB 3.0 (2 front panel + 3 back panel)	4 USB 3.0 (2 front panel + 2 back panel)	4 USB 3.0 (2 front panel + 2 back panel)

I/O

I/O slots	Up to 6 low profile PCIe Gen4 / Gen3 expansion slots: - 3 x PCIe Gen4 x16 slots, HHHL - 1 x PCIe Gen4 x8 slot, HHHL - 2 x PCIe Gen3 x8 or 1 x PCIe Gen3 x16 slots, HHHL 1 x OCP 2.0 PCIe Gen3 x16	Up to 8 PCIe Gen4 expansion slots: - 2 x PCIe Gen4 x8 slots, HHHL - 2 x PCIe Gen4 x16 slots, FHHL - 4 x PCIe Gen4 x8 slots, FHHL 1 x OCP 3.0 PCIe Gen4 x16 1 x OCP 2.0 PCIe Gen3 x8	Up to 5 PCIe Gen4 x16 slot, FHFL 1 x OCP 3.0 PCIe Gen4 x16 1 x OCP 2.0 PCIe Gen3 x8
Expansion cards	NICs (dual port): 10GbE, 25GbE, 100GbE Fiber Channel HBAs (dual port): 16 and 32Gb/s SAS 12Gb/s / SATA 6Gb/s dual port HBAs		

Storage

Storage drives	Up to 26 x 2.5" SATA/SAS hot-swappable HDD/SSD (24 front side & 2 rear side) Up to 16 x 2.5" U.2 NVMe (front side) + 2 x 2.5" SATA/SAS hot-swappable HDD/SSD UP to 12 x 3.5" SATA/SAS hot-swappable HDD/SSD (front side, 2.5" HDD/SSD supported) + 2 x 2.5" SATA/SAS hot-swappable HDD/SSD (rear side)	Up to 26 x 2.5" SATA/SAS hot-swappable HDD/SSD (24 front side & 2 rear side) Up to 24 x 2.5" U.2 NVMe (front side) + 2 x 2.5" SATA/SAS hot-swappable HDD/SSD	Up to 12 x 2.5" SATA/SAS hot-swappable HDD/SSD Up to 10 x 2.5" U.2 NVMe + 2 x 2.5" SATA/SAS hot-swappable HDD/SSD
Storage bandwidth	SATAIII 6Gb/s or SAS 12Gb/s per port U.2 NVMe 32Gb/s per port		
Hardware RAID (optional)	RAID 0, 1, 5, 6, 10, 50, and 60		
Battery backup	CacheVault® Flash Cache Protection Module		

Video

Graphics controller	Integrated in Aspeed® AST2500 PCIe VGA/2D Controller - 1920x1200@60Hz 32bpp		
GPU	N/A	N/A	Up to 3 GPU Cards

BullSequana SA10 BullSequana SA10 NVMe BullSequana SA10 EL	BullSequana SA20 BullSequana SA20 NVMe	BullSequana SA20G BullSequana SA20G NVMe
--	---	---

Panels

Front	2 x USB 3.0 1 Power button with LED 1 ID button with LED 1 Reset button 1 NMI button 1 System status LED 1 HDD activity LED 2 x LAN activity LEDs		
Rear	3 x USB 3.0 1 x VGA 1 x COM 2 x Ethernet RJ45 ports 1 x RJ45 Management LAN port 1 x ID button with LED	2 x USB 3.0 1 x VGA 2 x Ethernet RJ45 ports 1 x RJ45 Management LAN port 1 x ID button with LED	2 x USB 3.0 1 x VGA 2 x Ethernet RJ45 ports 1 x RJ45 Management LAN port 1 x ID button with LED

Security

Security features	Optional TPM 2.0
-------------------	------------------

Power supply

Hot-swap Power Supply Unit (PSU)	2 x 800W	2 x 1600W redundant PSUs	2 x 2000W redundant PSUs
PSU type	80+ Platinum		
AC input	100-240V~/ 10-4A, 50-60Hz	100-120V~/ 12A, 50-60Hz 200-240V~/ 10.0A, 50-60Hz	100-120V~/ 12A, 50-60Hz 180-240V~/ 10A, 50-60Hz
DC input	240Vdc/ 4.5A	240Vdc/ 10A	240Vdc/ 10A

Cooling

Fan specifications	4 x 80x80x38mm (16,300rpm), hot-swappable
--------------------	---

Physical specifications

Dimensions (WxHxD)	438 x 87.5 x 660 mm	438 x 87 x 730 mm	438 x 87 x 730 mm
Weight	Net Weight: 16.68 kg Gross Weight: 23.66 kg	Net Weight: 18.5 kg Gross Weight: 25.5 kg	Net Weight: 18.5 kg Gross Weight: 25.5 kg
Operating properties	Operating / Non-operating temperature: 10°C to 35°C / -40°C to 60°C* Operating / Non-operating humidity: 8%-80% (non-condensing) / 20%-95% (non-condensing) <small>*For BullSequana SA20G, ambient temperature limited to 30°C if using 280W CPU</small>		

OS & software

Operating system	Red Hat Enterprise Linux 8.1 or later VMware ESXi 6.7 update3 or later Windows Server 2019 x64
------------------	--

System management

Management controller	Aspeed® AST2500
Management console	AMI MegaRAC SP-X web interface

Warranty

Standard warranty	3 years CRU
Warranty extension	Global Care

Regulator & safety

Conformity	Safety (CE, CSA-US certifications) Electromagnetic compatibility (FCC certification) Environment (RoHS II & WEEE directives, REACH regulation)
------------	--

About Atos

Atos is a global leader in digital transformation with 107,000 employees and annual revenue of over € 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), listed on Euronext Paris and included in the CAC 40 ESG and Next 20 Paris Stock Indexes.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

[Find out more about us](#)
[atos.net](#)
[atos.net/career](#)

Let's start a discussion together



For more information: XXXX@atos.net

Atos is a registered trademark of Atos SE, December 2021.
© Copyright 2021, Atos SE. Confidential Information owned by Atos group, to be used by the recipient only. This document, or any part of it, may not be reproduced, copied, circulated and/or distributed nor quoted without prior written approval of Atos.