Every enterprise faces digital transformation

- Customer contact is increasingly managed by intelligent automated routines.
- The Internet-of-Things impacts everything from building control to transport management.
- Mobile becomes the norm, with access to services and information demanding the highest standards of both performance and security.

In this new data-driven environment, every click and every transaction must feed back into increased insight and efficiency. Analytics and cognitive computing become ubiquitous, as does the sophistication of customer engagement, with near-human avatars already close to reality.

These new data-driven business and social practices need unprecedented levels of computing power. Financial services companies, retail chains, healthcare providers and manufacturing companies routinely demand computing power that, until recently, existed only within highly specialized scientific domains.

With the BullSequana S series, Atos introduces a new kind of enterprise server – ready to meet the accelerating demand for computing power experienced across every public and private sector enterprise.

Affordable, expandable and intelligent, the BullSequana S series delivers the computing power demanded by every forward-thinking enterprise.
Welcome to the family

The BullSequana S series is the latest addition to the BullSequana range of computers. With the S series, we have taken the exceptional computing power of the high-performance X series and applied it to the enterprise environment.

This gives your business access to the computing power and resilience that combines the best of supercomputers and mainframes. The X series, for example, has become the computing platform of choice in meteorology, genomics and aerospace.

The BullSequana family

- **S Series**: Enterprise servers for data-driven organizations.
- **X Series**: High performance computing for data-intensive scientific and academic environments.
- **M Series**: Mainframe class servers to support legacy application processing.
BullSequana S series: impeccable logic

When analytics and cognitive are integral to business process, it makes sense for the enterprise server to combine business computing and analytics in a single server architecture. In designing the BullSequana S series, Atos computer scientists looked beyond the straight “faster and smarter” progression. They asked what kind of computer power an enterprise needs to actively support and encourage data-driven business.

By combining high-performance GPU (Graphic Processing Units) and industry-standard X86 CPUs in the same server, the BullSequana S series deliver unprecedented levels of computing power for both traditional and new Artificial Intelligence applications.

- The GPUs do the heavy lifting, crunching through the most demanding cognitive workloads.
- The CPUs handle the traditional business processing, managing, for example, ERP, payments or HR processes.

The BullSequana S series is currently the only enterprise server with an easy 2-32 CPUs and up to 32 GPUs expansion to do this.

The innovative BullSequana S design delivers clear and critically important benefits:

**Power and scalability**

As enterprises invest in AI, in analytics and cognitive, access to powerful computing capacity is a prerequisite for success.

Enterprise computing requirements resulting from AI can change rapidly. Demand for capacity grows continually, but is not constant. Events, such as new product launches, can result in massive spikes in requirement.

The BullSequana S series delivers both power and scalability. It allows, for example, easy expansion from 2 – 32 CPUs.

**Reduced TCO**

Enterprises that continue to invest in separate servers for separate business functions carry the increased costs of managing multiple platforms. Through unification, the BullSequana S radically simplifies management, reducing costs accordingly.

This is not just about optimizing IT budgets. It is about ensuring that all IT resources are used to maximum effect.

You will also reduce collateral IT expenditure by adopting BullSequana S series enterprise servers. You will, for example reduce costs associated with areas as diverse as energy consumption, on the one hand, and security management, on the other.

**Future-ready**

As data-driven business becomes the norm, analytics and cognitive will be embedded in all process and practice.

Combining Artificial Intelligence and business process functions in a single server architecture establishes the foundation for a data-driven IT and business culture.

In purely practical terms, this means the BullSequana S series of enterprise servers actively supports and accelerates the development and implementation of new data-driven business and customer-engagement applications.
The BullSequana S series offers the degree of scalability making it an ideal server platform for enterprise use. The five models that make up the series can all be customized and configured to offer servers tailored to your exact enterprise requirements.

The S series scales:
- from 2 to 32 Intel® Xeon® Scalable processors
- up to 32 GPUs
- Up to 48TB RAM (up to 64TB NV RAM)
- Up to 2PB internal storage

Each enterprise server can be split into smaller units. This makes it possible to optimize resource allocation, running analytics and cognitive processing alongside more traditional business applications.

Scalability is not just about the ability to add processing power and storage easily according to current and future need.

It’s also about being able to balance the combination of CPUs and GPUs according to changing requirements. In an engineering enterprise, for example, exponential growth in the distribution of data sensors may require a corresponding increase in GPU capacity, while CPU power remains more stable.

Whatever combination and configuration you choose, all BullSequana computers are engineered to the highest standards and all are exceptionally energy efficient.

Note also, that your server can also be configured using software-defined hardware functions. This gives a near-instant response, for example, in the event of an unscheduled surge in data requiring immediate analysis.
Each model in the BullSequana S series uses the same modular construction, built on three key components:

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compute Unit</td>
<td>It comprises 2 CPUs, up to 3TB RAM, up to 8 disks (2.5&quot;) and hot plug/swap I/O cards</td>
</tr>
<tr>
<td>Storage Unit (optional)</td>
<td>It comprises 12 SAS/SSD, 4 NL-SAS disks, 4 NV-Mem for high I/O throughput</td>
</tr>
<tr>
<td>GPU Unit (optional)</td>
<td>It comprises 1 to 2 GPUs</td>
</tr>
</tbody>
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Putting your BullSequana S series enterprise server to work...

The S series enterprise servers are designed specifically to meet the demands of agile and innovative data-driven enterprises. Four specific and closely related functional areas stand out: artificial intelligence; analytics; real-time computing; and cloud delivery.

**Artificial intelligence**

Machine learning now becomes key to improved efficiency, decreased costs and smarter decision-making. By combining CPU and GPU processing power, the S series provides an integrated platform from which to launch AI-enabled business practices.

Highly scalable and completely modular, the S series enterprise servers give you the means to support AI initiatives effectively at both enterprise and departmental level.

As deep learning and AI grow in intensity across your enterprise, so the S series gives you the opportunity to increase capacity without system change.

**Data analytics**

In the data-driven enterprise, the demands made by analytics increase exponentially as millions of new data sources take shape. Whether focused on customer behavior in telecommunications and media, or the need to balance renewable energy across smart grids, analytics now takes on strategic business value for every enterprise.

The high storage capacity of the S series ensures that you are ready for any change in data volumes – and ready to process the most demanding algorithms for actionable business with scalable GPU capacity.

Analytics will continue to combine historic and real-time data from an increasingly wide array of proprietary and third-party sources. Whatever the mix, the S series is ready for the load, making easy work of new data lake, multi-format scenarios.

**In-memory applications**

In-memory computing is a prerequisite for the effective management of real-time analytics. In every sector of business and commerce, there are new instances in which real-time computing becomes an essential enabler. Examples include Network Function Virtualization in telecommunications; smart urban traffic control; and contextual personal avatars in financial services.

In-memory is a prerequisite for the effective adoption of the technologies which support the real-time analytics behind these business applications. SAP HANA dominates here, but other technologies are fast-emerging. Siemens MindSphere, for example, looks set to become the standard for industrial IoT.

**Cloud enablers**

Hybrid cloud models are rapidly becoming the standard enterprise architecture. Organizations are coming to recognize that only cloud models can deliver the required agility in a world in which mobility becomes the norm.

In a hybrid cloud model, the private cloud components must match public cloud services in performance and flexibility, while ensuring the highest standards of data security.

The S series enterprise servers give you everything you need as a motor for high-performance private cloud implementation.

Inherent scalability is particularly important here. During mergers and acquisitions, for example, when newly extended enterprises need to accelerate access to shared business resources, the S series makes it possible to establish a secured collaboration environment in minutes rather than months.
Business technology focus

Four business technology areas in particular are deeply relevant to your BullSequana S server choices. Atos has the specialist expertise needed to help you make the right decisions.

AI and Machine Learning
Solutions for advanced analytics, the Internet-of-Things, and cognitive computing are combined in Atos Codex. Our data scientists help enterprise customers craft visionary and effective AI strategies.

Built firmly on use cases, Atos Codex delivers accelerated access to data-driven innovation.

SAP and SAP HANA
Atos is an end-to-end service provider for SAP, with a special focus on the challenges and opportunities associated with SAP HANA.

With some 12,000 technical experts and 6,200 successful SAP implementations to date, there are few companies better qualified to ensure your enterprise servers a ready to deliver maximum value from SAP.

Hybrid Cloud
Atos delivers a rigorous and comprehensive suite of orchestrated hybrid cloud services.

Recognized as a leader in next generation infrastructure, Atos will ensure that the server choices you make for private cloud are effectively integrated across the wider hybrid cloud landscape.

Cybersecurity
Brand reputation and data are fast becoming your most valuable assets. As a leader in cyber-security, Atos offers practical and intelligent approaches to assured operation.

Our experts offer insight and guidance to all security and compliance-related issues associated with your enterprise server strategy.
Extending the horizon

The BullSequana S series of enterprise servers is available for immediate configuration and delivery. The experts behind this innovative server family work in close collaboration with business technology specialists from across Atos—and this extended expertise is readily available to help ensure you get the very best from your investment.

The server family is designed as the motor for forward-thinking, data-driven enterprises. Our wider circle of expertise helps ensure that the choices you make are the best for your enterprise.

With over 100,000 Business Technologists worldwide, Atos combines a deep knowledge of the specific markets it serves with technical expertise in the domains which underpin digital transformation.

With a practical and industrialized approach to effective innovation, we offer the Atos Digital Transformation Factory. Artificial Intelligence features prominently:

- Our leadership in high-performance, quantum computing combines with expertise in deep and machine learning. You gain direct benefit from our numerous R&D programs with partners including Siemens, Microsoft, SAP and Salesforce.

- We take a holistic approach to enterprise computational knowledge. We are especially focused on creating robust machine-learning models, applying business rules, and on clear visualization for actionable business insight.

- We offer both industry-specific and cross-industry use cases as a means to accelerate AI adoption. Examples include: fraud and risk management; prescriptive security operations; and contextual customer engagement.
What now?

The Atos experts are ready for engagement.

Whether you are a professional member of an enterprise IT team, or an infrastructure specialist serving enterprise clients, we are ready to give you our full support.

Atos always believes in the value of practical action.

The BullSequana S series is available for detailed study across the global network of Atos Business Technology Innovation Centers. We invite you to explore the enterprise servers, and indeed, to put them to the test.

With just a little forward planning, we can preload your own selected data for practical performance trials - giving you the chance to monitor and configure potential options.

We can take this further.

Combine your discovery of the BullSequana S series with an initial exploration of the Atos Digital Transformation factory, putting server acquisition in the wider context of the data-driven enterprise.
About Atos

Atos is a global leader in digital transformation with approximately 100,000 employees in 72 countries and annual revenue of around €12 billion. The European number one in Big Data, Cybersecurity, High Performance Computing and Digital Workplace. The Group provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies, digital expertise and industry knowledge, Atos supports the digital transformation of its clients across various business sectors: Defense, Financial Services, Health, Manufacturing, Media, Energy & Utilities, Public sector, Retail, Telecommunications and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos SE (Societas Europaea) is listed on the CAC40 Paris stock index.

Find out more about us
atos.net/BullSequanaS

Let’s start a discussion together