



BullSequana XH3500

Accelerate HPC simulations and AI factories with a converged supercomputer platform and its E2E solutions



One platform. Any workload. Unprecedented performance.

The rise of AI applications and increasingly complex simulations is pushing HPC to its limits. Customers now demand exascale-class performance, extreme density, technology flexibility, and energy efficiency.

BullSequana XH3500 meets these challenges with a modular, all-in-one hybrid supercomputer platform, combining large-scale AI and exascale simulation. It delivers **unmatched scalability, efficiency, flexibility, and resilience**, powered by Bull's decades of R&D and supercomputing expertise.

Unmatched scalability and future-readiness

- **Granular scalability** from blade to rack with an **all-in-one** modular architecture for fine-grain expansion.
- **Future-ready design** with substantially increased power and cooling.

Best-in-class energy efficiency

- **5th-generation 100% fanless Direct Liquid Cooling (DLC)** supporting up to **47 °C (117 °F) warm-water inlet at blade level** (depending on configuration), to maximise efficiency and deliver the lowest TCO.
- **Intelligent energy optimisation software suites** with BullSequana ARGOS and Smart Performance Management Suite for real-time power capping, carbon tracking, workload scheduling, and GPU-aware tuning, maximising performance per watt.
- **Dynamic resource optimisation** through software that monitors job efficiency, allocates resources, and fine-tunes performance, maximising utilisation and reducing scale-out needs.

Industry-leading density and flexibility

- **High-density** architecture providing industry-leading compute density.
- **Full flexibility** with interchangeable CPU/GPU compute blades and interconnect switch blades, supporting any leading technology to avoid technology vendor lock-in.

Trusted, sovereign and secured by design

- **N+1 redundancy** for power and cooling, covering pumps and controllers, ensures high availability and continuity even under stress or failure conditions.
- Security is embedded at the hardware level, with features such as a **hardware root of trust, secure boot, and secure firmware update**, protecting the system against unauthorised modification and attacks.
- All BullSequana software includes a **Software Bill of Materials (SBOM)** to identify and remediate vulnerabilities throughout the cluster lifecycle, ensuring maximum security from development to production.
- Trusted **global support** tailored to operational requirements, with optional **'made-in-local'** delivery to ensure sovereignty, reliability, and compliance worldwide.



Unmatched scalability & future readiness



Best-in-class energy efficiency



Industry-leading density & flexibility



Trusted, sovereign, and secure by design

Technical Specifications

BullSequana XH3500 Rack Specifications

Physical dimensions	<ul style="list-style-type: none">• With doors on castors/load spreader: H x W x D mm (in): 2270 (89.4) x 900 (35.4) x 1457 (57.4)• Or with Ultra Capacitor Module (UCM): H x W x D mm (in): 2490 (98.0) x 900 (35.4) x 1457 (57.4)
Weight	<ul style="list-style-type: none">• Basic configuration in kg (lbs): 1413 (3115.1)• Maximum configuration:<ul style="list-style-type: none">• In kg (lbs): 3211 (7079.0)• Or with UCM, in kg (lbs): 3449 (7603.7)
Cabinet maximum weight density on load spreader at maximum rack configuration	<ul style="list-style-type: none">• In kg/m² (lbs/ft²): 2717 (556.4)• Or with UCM, in kg/m² (lbs/ft²): 2918 (597.6)
Power requirements	<ul style="list-style-type: none">• AC compute: up to 284 kW (compute+1 pump)• DC compute: up to 264 Kw with N+1 PSU redundancy• Supported voltages: 400 V (EU), 415 V–480 V (US), and 380 V (Brazil, Korea)• Rack power connections, standard top feed, with accessories from bottom:<ul style="list-style-type: none">• 4x 125 A 230/400 V (EU) 3P+N+E• 2x 16 A 230/400 V (EU) 3P+E (one active pump, one backup)• Optional UCM
Cooling	<ul style="list-style-type: none">• 100% fanless Direct Liquid Cooling (DLC), in-rack Coolant Distribution Unit (CDU)• Depend on site environmental configuration and blade technology<ul style="list-style-type: none">• Support up to 40 °C (104 °F) rack inlet warm water temperature• Support up to 47 °C (117 °F) inlet warm water at blade level• Compliance: ASHRAE A2/W40• Redundancy: redundant parts include pumps, controllers, and primary regulation valves• Rack hydraulic connections: standard bottom feed, with accessories available from top feed• Connections:<ul style="list-style-type: none">• 2x DN38 (rack side)• 2x DN40 with insulated hoses (customer side)
Management switch	<ul style="list-style-type: none">• 2x DLC administration switch blades• 10 Gb/s ethernet uplinks• 1 Gb/s ethernet/Sideband (SBI) downlinks
Versatile rack slots	<ul style="list-style-type: none">• 38x 1RU• Can host blades in different sizes• Support compute, switch and UCM blades
Ultra Capacitor Module	<ul style="list-style-type: none">• Optional UCM provides the ability to withstand short power outages of up to 300 ms<ul style="list-style-type: none">• 8x UCM units can be installed on top of the rack• Additional UCM units can be installed in 1RU per unit (up to 8x), if needed

Technical Specifications

BullSequana XH3515B Accelerated Compute Blade Specifications

Blade technology	<ul style="list-style-type: none">• Single node NVIDIA GB200-NVL4
GPU	<ul style="list-style-type: none">• 4x NVIDIA Blackwell B200 with 186GB HBM3e
CPU	<ul style="list-style-type: none">• 2x NVIDIA Grace with 512GB LPDDR5x per CPU
Compute networking	<ul style="list-style-type: none">• 4x Bull BXI V3 400 Gb/s• Or 4x InfiniBand NDR 400 Gb/s• Or 4x InfiniBand XDR 800 Gb/s
Secondary networking	<ul style="list-style-type: none">• 1x InfiniBand NDR 400 Gb/s• Or 1x Ethernet 400 Gb/s
Node storage	<ul style="list-style-type: none">• Up to 9x E1.S NVMe SSD
Form factor, weight	<ul style="list-style-type: none">• 1RU, ~35 kg

BullSequana AI1242 Accelerated Compute Blade Specifications

Blade technology	<ul style="list-style-type: none">• Single node AMD Instinct™ MI355X
GPU	<ul style="list-style-type: none">• 8x AMD Instinct™ MI355X with 288GB HBM3e
CPU	<ul style="list-style-type: none">• 2x AMD 5th Gen EPYC™ with 12x memory channels of DDR5 6400MT/s per CPU
Compute networking	<ul style="list-style-type: none">• 8x Bull BXI V3 400 Gb/s• Or 8x Infiniband NDR 400 Gb/s• Or 8x Infiniband XDR 800 Gb/s
Secondary networking	<ul style="list-style-type: none">• 1x or 2x Bull BXI V3 400 Gb/s• 1x or 2x InfiniBand NDR 400 Gb/s• 1x or 2x Ethernet 400 Gb/s
Node storage	<ul style="list-style-type: none">• Up to 4x E1.S NVMe SSD
Form factor, weight	<ul style="list-style-type: none">• 2RU, ~80 kg

Maximising Bullsequana XH3500 with integrated solutions and expertise

Integrated Solutions and Expertise

Bull's HPC and AI ecosystem provides a fully integrated stack designed to accelerate innovation, from **real-world applications** and **use cases** through to infrastructure.

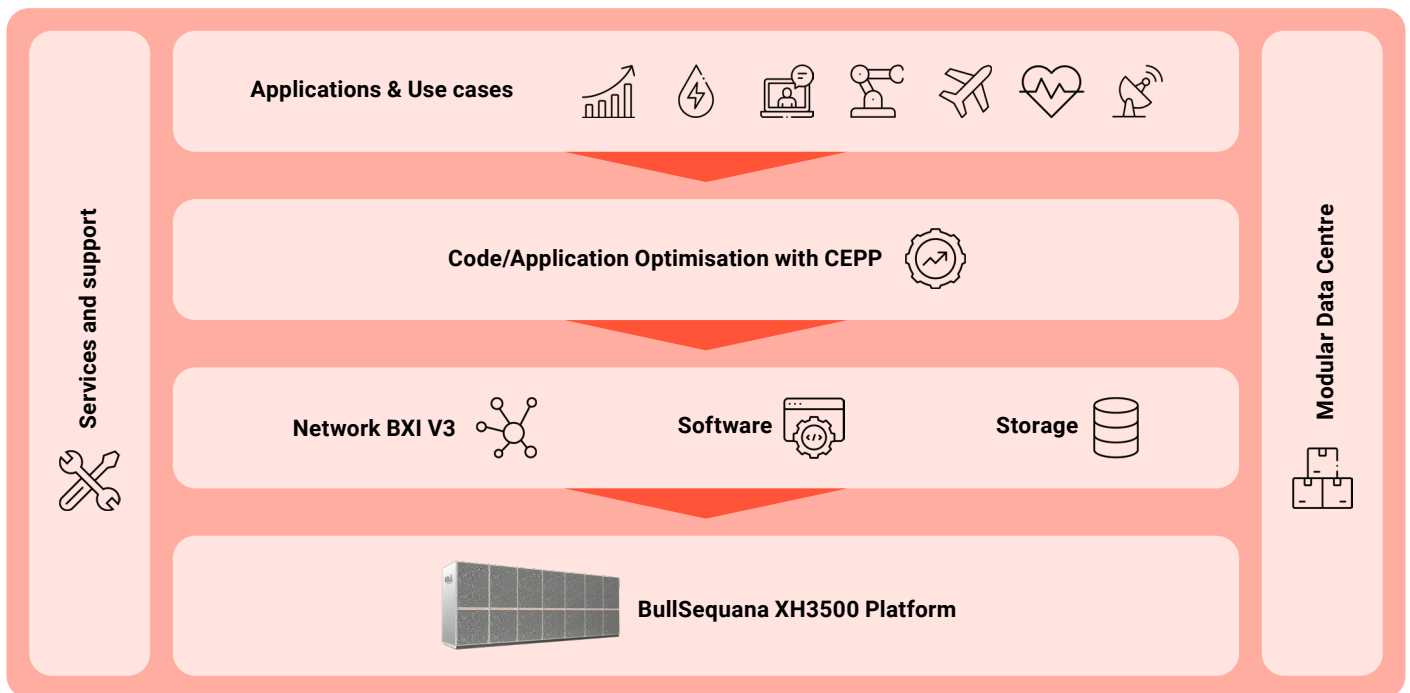
At the top layer, there are the applications and industry use cases that deliver measurable impact across sectors such as energy, manufacturing, aerospace, healthcare and telecommunications.

These applications and use cases are powered by Bull's Centre for Excellence in Performance Programming (**CEPP**), which fine-tunes code and applications to achieve optimal performance and efficiency.

The infrastructure layer brings together Bull's high-performance **BXI V3 interconnect**, advanced **software**, and **scalable storage**, providing the throughput and reliability required by intensive HPC and AI workloads.

At the foundation lies the **BullSequana XH3500** platform, delivering the compute power that fuels scientific simulation and AI.

At every layer, Bull's **Services and Support**, combined with its **Modular Data Center solutions**, enable flexible deployment, rapid implementation, and faster time-to-market for every customer.



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