



AMAX + HPE Networking

AI & HPC Infrastructure for Semiconductor Manufacturing

AMAX ENGINEERING

At AMAX, engineering is at the heart of every AI Factory we deliver. We architect and integrate GPU compute, accelerated networking, high-performance storage and enterprise AI software into complete solutions validated for production, ready for diverse AI workloads at any scale.

Scalable Compute. High-Speed Data Center Networking.

Semiconductor organizations are running increasingly compute-intensive workloads across design, engineering, simulation, inspection, and manufacturing.

From EDA and design verification to computational lithography, wafer inspection, yield analysis, and manufacturing AI, these workloads require high compute performance, rapid data movement, and infrastructure that can scale with growing workloads and datasets.

AMAX designs and delivers AI and HPC infrastructure combining rack-scale accelerated computing, high-performance storage, advanced cooling, and **HPE Networking 400GbE and 800GbE Ethernet fabrics**.

HPE QFX5230 and QFX5240 switching provide high-bandwidth connectivity between compute, storage, and data center resources, while AMAX provides the system engineering, validation, manufacturing, and deployment expertise required to bring the complete infrastructure into production.

Accelerated Computing for Semiconductor Design

AMAX RackScale GPU platforms provide accelerated computing infrastructure for demanding semiconductor engineering and manufacturing applications.

Typical workloads include:

- EDA & Design Verification
- Computational Lithography
- Engineering & Process Simulation
- Wafer Inspection & Defect Classification
- Yield Analysis
- Manufacturing AI

GPU-accelerated computing can reduce processing time for simulation, analysis, and AI workloads, while high-speed networking supports rapid movement of large datasets between compute and storage resources.

AMAX can support both high-efficiency air-cooled systems and direct liquid-cooled rack-scale platforms based on system density, workload, and facility requirements.



AMAX // SOLUTION BRIEF

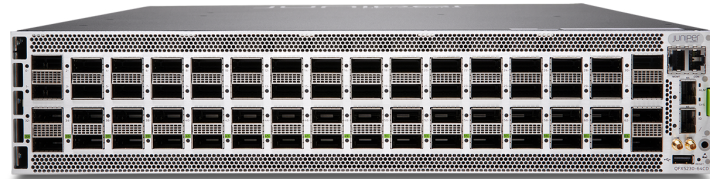
High-Speed Data Center Networking with HPE Juniper QFX

As AI and HPC environments grow, network bandwidth becomes increasingly important. GPU clusters, high-performance storage, simulation platforms, and engineering applications require high-speed Ethernet connectivity to move large datasets efficiently across the data center.



HPE Networking QFX5240

Up to 64 × 800GbE ports for high-density AI and HPC data center fabrics.



HPE Networking QFX5230

64 × 400GbE ports for high-performance spine-and-leaf data center architectures.

Together, **AMAX AI and HPC infrastructure** and **HPE Networking** provide a scalable foundation for semiconductor organizations expanding their compute environments as workload and data requirements grow.

From System Design to Deployment

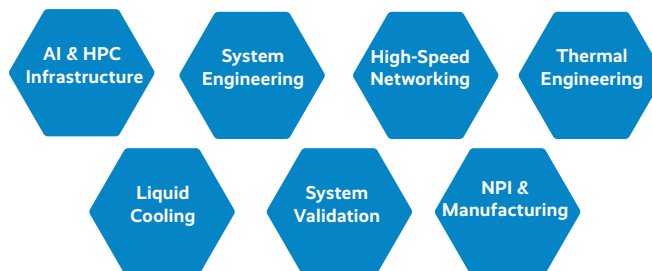
High-density AI and HPC infrastructure requires coordinated engineering across compute, networking, thermal design, power, cooling, and facility requirements.

AMAX provides expertise across:

- System Architecture & Engineering
- Rack-Scale AI & HPC Platforms
- High-Speed Networking
- Thermal Engineering & Simulation
- Direct Liquid Cooling
- System Validation & Burn-In
- NPI & Manufacturing
- On-Site Deployment

AMAX uses thermal analysis, engineering validation, and physical testing to evaluate system behavior under sustained workloads before deployment. This engineering experience also extends to specialized industrial HPC systems for semiconductor production environments, including demanding fab and sub-fab applications.

AMAX Expertise



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