FAST DESIGN FOR SEMICONDUCTORS

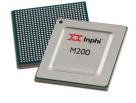## INPHI SPEEDS UP SEMICONDUCTOR DESIGN WITH ALTAIR ACCELERATOR

About the Customer

Inphi Corporation is a leader in high-speed data movement interconnects, producing high-speed semiconductor components and optical subsystems that enable big data to move quickly throughout the globe, both inside data centers and between broadly distributed computing facilities. Organizations across a wide range of industries rely on Inphi solutions to develop and build service provider infrastructure, cloud infrastructure, and the data centers of tomorrow. Inphi is focused on its customers' success and on delivering the highest-quality products available. Its innovative solutions help connect hundreds of thousands of computing servers worldwide.

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Weikei Sun, Associate Vice President, Engineering, Inphi

Inphi's coherent digital signal processors enable efficient data transmission over fiber-optic networks

Their Challenge

In today's competitive semiconductor design and electronic design automation (EDA) industry, winning organizations leverage high-performance computing (HPC) and high-end design software to stay ahead of the game. As these tools are often expensive, **maximizing utilization to ensure the design and development process runs quickly and efficiently** — and stays within budget — is the key to delivering innovative technologies to market faster than competitors. As the first-to-market with a 64Gbaud dual-channel linear TIA amplifier, a silicon photonics 100G DWDM platform in a QSFP28 form factor, and a 400G (4x100G PAM) Porrima™ Optics DSP platform, Inphi understands the importance of HPC and EDA software performance optimization. The right HPC solutions help Inphi speed up design and development, enabling more work to be done in less time without increasing team size, ultimately **enabling Inphi to send products to market faster.**

Our Solution

Inphi evaluated several solutions before selecting Altair Accelerator. Accelerator stood out among the competition for superior performance and Altair's reputation for excellent customer service. Accelerator is a high-throughput, high-efficiency job scheduler designed to meet the complex demands of the semiconductor industry. The HPC requirements of EDA tools make Accelerator an excellent solution to **achieve top performance and optimize EDA license and hardware expenditures**. It's a highly adaptable tool capable of managing compute infrastructures from small, dedicated server farms to complex, distributed HPC and cluster environments.

After implementing Accelerator, Inphi saw significant improvements in efficiency and cost savings. "The performance optimization benefits provided by Altair are significant in the semiconductor space, specifically regarding license utilization and scheduling speed," said Weikei Sun, associate vice president, engineering at Inphi. "**Altair Accelerator's scheduling speed is ten times that of the competitive solutions we have evaluated**. Performant license-based scheduling enables our designers and engineers to explore more designs, faster, so we maintain an agile team and optimize utilization of expensive EDA licenses."

Results

"Inphi has a history of being first-to-market with new high-speed data movement interconnects technology," said Sam Mahalingam, chief technology officer for cloud and HPC at Altair. "Altair is proud that our HPC technology remains an integral part of Inphi's toolset as they lead from ahead in this highly competitive industry with faster time to market." **With Inphi moving faster than ever, so can its customers.** Speeding up innovative product development and leading-edge design means Inphi can continue to fulfill its mission — helping make the vision of tomorrow a reality today.

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