



RAPIDLY ADVANCING ELECTRONICS

ALTAIR SOLUTIONS ENABLE RAPID GROWTH FOR WIRED CONNECTIVITY LEADER KANDOU

About the Customer

Kandou is a rapidly growing leader in fast, energy-efficient wired connectivity. Its disruptive technologies include chip products and IP solutions designed to accelerate the evolution of electronics and enable increasingly small, energy efficient, cost-effective devices. The company's expertise includes Chord™ signaling — Kandou's own innovative signaling technology that lowers power consumption and improves chip-to-chip communications — plus forward error correction, analog/mixed-signal design, and retimers for signal conditioning. Kandou products include Matterhorn™ USB-C retimer solutions and Glasswing™ interconnect solutions.



Accelerator improved our time to market for the Matterhorn USB4 retimer. Being efficient in engineering keeps us on track with goals, tapeout dates, and milestones.

Anant Singh, VP Engineering, Kandou



Their Challenge

Faced with rapid growth, the team at Kandou needed to manage workloads and licensing for their expensive EDA tools. The engineering team grew from just a handful a few years ago to 80+ in 2020, spread out over 5 offices throughout Europe. Instead of working on only one project at a time, they now maintain several concurrently, each with a heavy workload. **What was once only a few simulations now runs into hundreds of thousands.** Balancing workloads and licensing across distributed infrastructure became increasingly challenging as Kandou grew. **The expense of EDA solutions came in second only to personnel in their budget**, and they needed a scheduler that would enable them to use those tools efficiently.

Rapid growth meant Kandou needed to scale up by implementing workload management and license monitoring solutions.

Our Solution

We set Kandou's team up with Altair Accelerator™ for job scheduling and Altair Monitor™ for real-time license monitoring and management. **With Accelerator, Kandou can handle high-throughput scheduling for multiple concurrent projects and heavy loads** for packaging, test, and verification, plus they can find gaps and utilize downtime that would otherwise have been lost. They use Accelerator to set job policies and priorities, determining which jobs should take precedence based on project requirements. Understanding peak-time usage, such as during the busy tapeout phase when wrapping up a project, is especially critical. It's important to understand how long a peak will last and who's using the EDA tools; it enables the Kandou team to fine-tune and optimize production license usage, resulting in the best value for their software dollars. **Monitor with Accelerator allows Kandou to do license-first scheduling by maximizing expensive license usage and extracting maximum value from software assets.** Kandou's EDA engineers use Monitor to view usage, plot graphs, and see which users are accessing which tools and when. That information is used to determine what tools should be added to the pool and at what time during a project.

Results

With complex designs that involve hundreds or thousands of elements that need to come together in just the right way, it would be impossible for the Kandou team to effectively manage the process without the right software tools. Altair solutions enabled them to **improve product development, get to market faster, and save money on expensive EDA tools.** Now optimally managing their software and workloads — based on real usage and taking advantage of resources that were previously lost to downtime — **Kandou continues to grow and scale up its business in this competitive field.** They're engaging with customers earlier, cutting software expenses, and innovating with world-class products that are unlike anything else on the market.