

## SUCCESS STORY:

# Convey Computer

Facilitates delivery of innovative hybrid-core systems with granular, adaptive and transparent licensing of high-value IP

**Customer Profile:** Convey Computer offers a powerful and unique solution for customers running compute-intensive applications ranging from bio-information to complex financial analyses. Convey delivers hybrid-core systems that uniquely optimize application performance by combining commercial, off-the-shelf processors with field programmable gate array (FPGA) technology to enable customers to save power and maintenance costs.

**Challenge:** Cost-effectively protect high-value intellectual property (IP)—both hardware and software—while making it easy for customers to trial and use the software and FPGA configurations they need.

**Solution:** With FlexNet Licensing technology, Convey Computer can ship a single, complete version of its hybrid-core system and associated SDK to all customers selectively enabling/disabling features for both the initial trial and any new requirements that emerge over time.

**Benefits:** Flexera Software licensing technology enables Convey Computer to better serve their customers and ensure proper compensation for value delivered through granular, adaptive and transparent control of digital IP entitlements.



In an increasingly virtualized world, IP means everything. Today high-tech enterprises have to rigorously protect their IP if they are going to realize optimized returns on their R&D investments. At the same time, they have to be able to quickly, flexibly and cost-effectively deliver that IP to their customers because, ultimately, that's how they realize revenue and build their customer base.

Convey Computer is a classic example of such an enterprise. Convey offers a powerful and unique solution for customers running compute-intensive applications ranging from bio-informatics to complex financial analyses. The solution is based on hybrid-core servers that combine commodity x86 processors with field-programmable gate arrays (FPGAs), integrated circuits that allow the hardware to be reconfigured "on the fly" as the system executes applications.

When a Convey server's FPGA is specifically configured to run the core

processes of a customer's compute-intensive application, that application can run literally hundreds of times faster than it does on multiple commodity processors running multiple virtual machines. As a result, the customer gets vastly superior performance without having to buy and manage large clusters of commodity servers.

"More than 90 percent of the work done by a complex modeling application typically consists of a few specialized routines that can run far, far faster on hardware that is tailored specifically to execute those routines," says Bob Masson, Convey's marketing director. "By putting FPGA technology in the hands of customers running these types of applications, we are radically transforming the economics of high-performance computing."

### An IP double play

Convey actually delivers value to customers via two categories of IP. The first category of IP is the particular logical configuration of the FPGA which Convey refers to as its "personality." Convey's expertise in optimally aligning an FPGA's configuration



*"There is absolutely no reason to build your own licensing mechanisms when Flexera Software offers everything you need to protect your IP and fulfill your customer's needs in today's complex, relentlessly evolving technology markets."*

Bob Masson  
Marketing Director  
Convey Computer



with key portions of a customer's application code is a big part of its overall proposition. This alignment is what ensures that the code runs at such exceptional speed.

Convey must therefore protect these application-optimized FPGA "personalities" across multiple dimensions—both hardware (in the form of FPGA "bitfiles") and application software. Customers can only be allowed to use a personality if they've paid for it. Convey also needs to be able to limit the duration of a personality license. Many customers, for example, want to trial a personality in their Convey server to make sure it lives up to its promise. Only by limiting the duration of such a license can Convey safely enable such a trial while safeguarding its IP.

Then there's the issue of which physical machine the configuration runs on. Convey needs to make sure it is properly compensated if a customer decides to replicate a personality on multiple devices, either because the application has to

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be run at multiple locations or because the customer wants to pursue even better application performance.

The second category of IP is Convey's software and personality development kits, which customers use to develop their own personalities. Again, these kits have various features and capabilities which Convey needs to license selectively based on its customers' needs and which it may also choose to limit in terms of time, number of developers, number of machines, etc.

"We deliver a complete solution that essentially empowers developers to create application-specific processors in their servers which will run their applications at unprecedented levels of performance," Masson explains. "It's an incredibly powerful model that revolves entirely around our differentiated IP."

### Licensing as protection and business enablement

FlexNet Licensing technology supports Convey's IP-centric business model by providing exactly the kind of granular entitlement controls it needs to ensure that customers only utilize authorized IP. FlexNet Licensing makes it easy for Convey developers to segment software and FPGA "personality" entitlements by simply associating a piece of code, such as a comment line, with a specific entitlement. This minimizes the amount of work required to define each entitlement, while eliminating any requirement to modify the code itself.

FlexNet Licensing also provides Convey with the ability to apply any type of licensing parameter to any given entitlement. So, for instance, Convey can create licenses that expire after any period of time, that can only be used on certain machines and that can "float" between machines as long as the number of simultaneous users remains below some designated maximum. Convey can also define any license enforcement mechanism it deems appropriate for any given entitlement, whether that mechanism is a mere alert or an automatic disablement of the feature.

This granular, flexible licensing capability doesn't just protect Convey's IP, it also makes it much easier and economical for Convey to package and ship its solutions and to manage those solutions in the field over time. With FlexNet Licensing, Convey can ship the same fully functional solution to every customer but selectively enable the particular features and functions the customer ordered.

This licensing-based order fulfillment benefits Convey in several ways. It reduces Convey's cost of goods by eliminating the need to custom-build every machine. Convey just flips each of its licensing "switches" as necessary for any given order. This approach also avoids the problem of misconfigured orders, since errors can easily be corrected by simply making any necessary corrections to the customer's entitlements.

Flexible, remotely-manageable licensing also makes it easier for Convey to cross-sell and up-sell its IP since new entitlements can be added to existing units in the field merely by activating them.

"FlexNet Licensing adds value to our entire solution lifecycle, from the way we segment our features and our price-points to the way we realize incremental revenue from existing installs," declares Masson. "It offers precisely what we need to effectively sell IP in a market where you have to constantly respond to new discoveries about what customers want and what they're willing to pay for it."

### The right partner for IP marketers

Masson is very frank about why Convey chose to do business with Flexera Software. "It was very clear to us right away that to try and build the license and entitlement management mechanisms ourselves would have been a colossal waste of time, money and effort," he explains. "Flexera Software is number one in this market, and they have all the capabilities you could ever want in a licensing solution, so we didn't do a lot of shopping around."

According to Masson, it is to Convey's advantage that customers are already

familiar with Flexera Software technology. "The last thing you want to do is create any kind of additional hurdle for the acceptance of your product in the marketplace," he notes. "Because Flexera Software's licensing mechanisms are very transparent to our customers, we don't have to ask our customers to learn or do something new."

Masson adds that Flexera Software's documentation is particularly impressive. "It's like reading a comprehensive manual on software licensing. Working with Flexera Software opens you up to all kinds of possibilities that you may not have even considered before."

And that comprehensive approach is vital to a relatively young company that is seeking to become a disruptive presence in the compute-intensive applications market with such a highly innovative solution. "As IT decision-makers begin to understand what we're offering, they are going to want to apply our IP in ways we may not have anticipated," Masson predicts. "With Flexera Software, we have the highest degree of confidence that we will be able to package and license our technology in whatever way is necessary to fully monetize these opportunities on a global scale while rigorously protecting our IP."

### About Flexera Software

Flexera Software is the leading provider of strategic solutions for Application Usage Management; solutions delivering continuous compliance, optimized usage and maximized value to application producers and their customers. Flexera Software is trusted by more than 80,000 customers that depend on our comprehensive solutions- from installation and licensing, entitlement and compliance management to application readiness and software license optimization - to strategically manage application usage and achieve breakthrough results realized only through the systems-level approach we provide. For more information, please go to: [www.flexerasoftware.com](http://www.flexerasoftware.com)



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