

# Xilinx FPGA Platforms: Silicon Was Just the Beginning

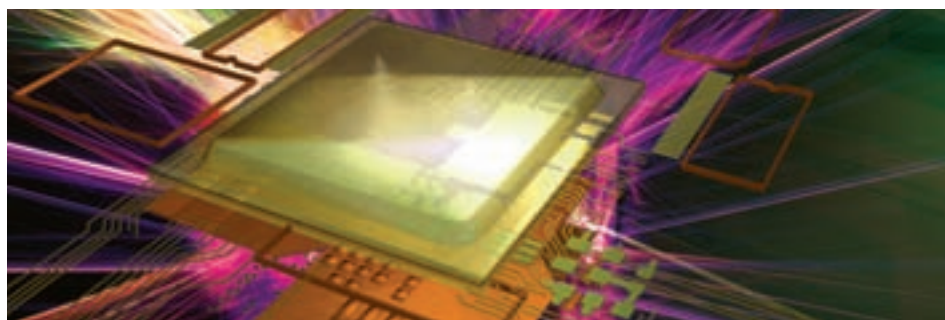
Demand for programmable logic is growing in a welter of new application realms. To seize these opportunities, Xilinx is working on all fronts to provide world-class silicon, tools and IP.



by Victor Peng  
Senior Vice President,  
Xilinx Silicon Engineering Group  
Xilinx, Inc.  
[victor.peng@xilinx.com](mailto:victor.peng@xilinx.com)

If you are a longtime customer of Xilinx, you'll probably notice that the company has started to use the term "Xilinx® FPGA Platforms" with greater regularity. It isn't just a marketing buzz phrase, but an expression that accurately captures the reality of what customers need today and what Xilinx is delivering. FPGA silicon is the engine of the platform, but it's the combination of silicon, software and IP that delivers our full value proposition. The value lies in enabling you to design your innovative products and get them to market quickly, and to deal with multiple, changing product requirements and standards, at a cost that factors less than designing an ASIC. Increasingly, the job takes world-class software design tools and embedded development tools, high-quality and reliable IP blocks, as well as world-class silicon.

Over the course of my career, I've worked on many IC design projects and, like many of you, have witnessed the progress of FPGA technology from the user perspective. At first, FPGA capacity was too small to address many applications that ASICs were handling, so design groups used them as glue logic or to prototype low-complexity ASICs. As FPGAs grew in capacity, they found their way into more applications and shipped in more end products. But the devices remained too slow for some applications.



Once vendors found ways to increase their clock rates, FPGAs really picked up momentum and their value proposition grew tremendously relative to the costly alternative of designing an ASIC. Vendors started to add a greater number of high-speed I/Os, including serdes, to their device families for a number of new applications. Then, a few years ago, FPGA vendors began to move into entirely new territory, offering tools to help embedded-software engineers and algorithm developers to use FPGAs. The number of users from the embedded-software engineering and algorithm development spaces is steadily increasing year over year.

Today, the FPGA business is at the dawning of a new age of growth as FPGA platforms become more sophisticated and more users realize the FPGA platform value proposition.

Indeed, a wider variety of engineers are using FPGAs to design an ever-growing number of applications in wired and wireless communications, automotive and ISM, and aerospace and defense.

Now that I'm at Xilinx, I've been very pleased to learn through many meetings with many of my former colleagues from the design world—and even former com-

petitors—that there is increasing demand for FPGAs in applications I'm sure Xilinx's founders only dreamed of.

While I can't reveal what those applications are, I can say that Xilinx is actively working on all fronts to seize new market opportunities, while actively building quality tools, IP, as well as state-of-the-art silicon to help our existing customers get their innovations to market quickly.

Much of this demand is driven by the simple fact that ASICs are becoming increasingly too expensive and complex to design on the latest process technologies. But customers still want to differentiate their products, in both hardware and software, in ways that go beyond the possibilities most ASSP vendors can give them. They want to build a single product they can offer to multiple customers, and rapidly customize it to support changing and multiple standards and specific customer requirements. Thanks to their hardware and software programmability, FPGAs give designers the greatest mix of flexibility while meeting performance, capacity and, increasingly, power requirements for a growing number of applications.

The wind is in our sails. We invite you to come along for the voyage. 🌈