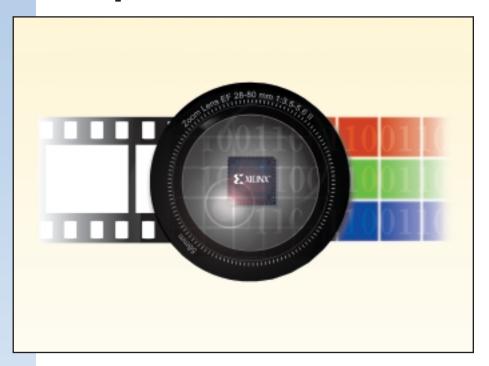


# From Picture to Pixel – Xilinx Provides the Complete Solution

Digital convergence is driving new consumer products that are impacting our lives in ways we never imagined. One of the most dramatic and exciting technologies spearheading this trend is in front of our very eyes. Digital video technology (DVT), with its promise of crisper and sharper images, is changing the way in which we are entertained and the way we look at the world. DVDs, PVRs, Flat Panel Displays, HDTVs and a host of other exciting new products based upon new digital video technologies are coming to market at a rapid pace.

How do you design these new consumer products today so they're on the shelf tomorrow? Xilinx is the answer. With a wide range of products and solutions, including the industry's first Web portal dedicated to accelerating digital video product development, digital video design couldn't be simpler.



# Digital Video, the Basics and the Basic Challenges

Digital video can be viewed as three distinct processes: capture, process, and display. However, this simplified view doesn't describe the complexities and challenges of designing a product that delivers almost life-like images.

Today's high-resolution images require DSP processing at rates in excess of gigabits per second – far beyond the reach of conventional DSPs. Further, at these rates, a whole new range of signaling standards including LVDS, HSTL and SSTL are required – LVTTL no longer suffices.

Multiple fragmented standards, frame rates, formats and resolutions further complicate product development, leaving you to guess which format will survive. In addition, each and every digital pixel needs to be protected so it can't be copied. Finally, customer expectations continue to accelerate, while time to market pressures increase and product life cycles continue to shrink.

Regardless of which portion of the digital video process you focus on, you need a solution that addresses these issues and more. Xilinx has led the digital video revolution in products and applications, from the studio to the home. A unique blend of high performance DSP capabilities, a rich feature set including high speed I/O signaling, and a complete suite of IP optimized for digital video applications means Xilinx solutions are unparalleled.



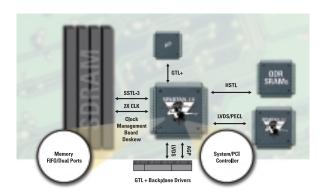
#### **High Performance Image Processing**

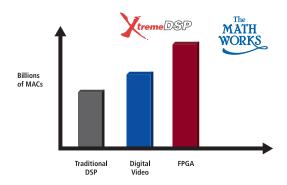
# **Performance and Flexibility**

Xilinx FPGAs combine the performance of dedicated ASSPs with the flexibility of programmable DSPs – an optimal solution for image processing algorithms. We deliver the DSP performance you need with the ability to upgrade and improve your design as standards and formats evolve. With an exclusive MatLab™-to-gates development flow and an extensive library of IP building blocks, you get an unmatched solution to your DSP challenges. You'll call it amazing, we call it Xtreme DSP.

## **System Integration**

Xilinx FPGAs excel at the critical task of integrating the wide disparity of system components that you will need in designing digital video products. With our SelectI/O™ capability, you have 17 different digital signaling standards to choose from. The Spartan-IIE series goes even further by adding support for LVDS and LVPECL, key requirements for high performance video applications. To round it all out, our devices feature embedded memory, FIFOs, and delay locked loops, and they are fully supported by a wide variety of predefined IP modules that jumpstart your design.





#### **Content Protection**

Content protection is a critical capability that requires high performance, yet is still highly fluid and not standardized. This makes any implementation fraught with risk and subject to change — except in an FPGA. Xilinx FPGAs with encryption IP deliver unparalleled performance in a flexible, field upgradeable, and affordable solution. No other technology is as well suited to address this critical and growing concern.

All of these solutions are brought together with eSP, the industry's first Web portal dedicated to accelerating all phases of your product development.

### **Xilinx is Your Solution**

Visit the eSP Web portal, and let us show you just how easy it is to develop your next digital video product more rapidly than you ever imagined possible. Xilinx delivers everything you need, including FPGAs and CPLDs, a wide array of Intellectual Property solutions, proven reference designs and development boards, software, and design services – your complete DVT solution is Xilinx.

Visit the esP website at: http://www.xilinx.com/esp

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