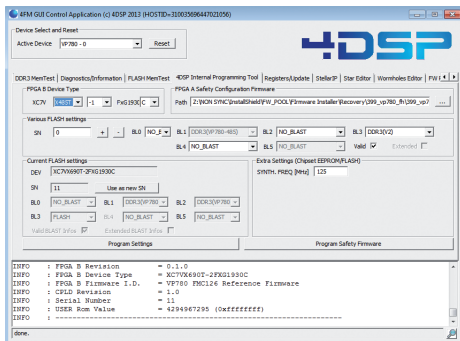
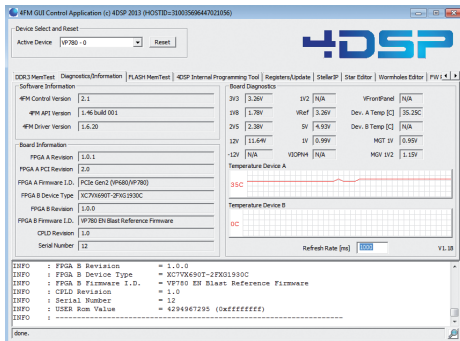


Maximize system performance, develop, deploy, reuse firmware and reduce project risk

Board Support Package

4DSP Tools make a difference, right out of the box
Multiple tools embedded in a single GUI



- Board information with SW/FW revisions
- Real time temperature and voltage monitoring
- On board memory and BLAST tests plug in
- PCIe bus bandwidth performance
- Access to software reference design source code and Visual Studio projects.
- Stellar IP FPGA development tool with ISE and Vivado support
- Stellar IP native interface or AMBA® AXI4 Interface Protocol support
- FPGA Firmware installer and update

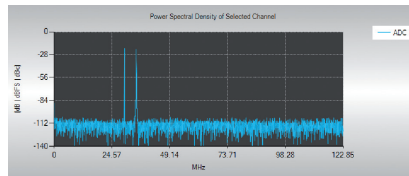
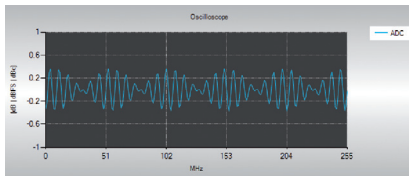
4DSP's Board Support Package (BSP) makes it possible for customers to start developing their embedded application right out of the box. FPGA based products and high end I/O cards require advanced command interfaces and flow through data paths that work seamlessly at both the software and hardware levels in order to offer the best performance for a given platform. The extensive modularity of 4DSP products have required the development of tools that take away the technology's complexity and associated risk in order to allow customers to focus on the core of their design.

4DSP supports hundreds of reference designs with high throughput interfaces such as PCIe, DDR3 SDRAM, QDR2 SRAM, Camera link and high speed A/D and D/A devices in a variety of form factors. IP cores developed by 4DSP are reused across many different reference applications thus guaranteeing reliability and efficient support. This proven software and FPGA firmware infrastructure, relying on man-years of engineering development, facilitates projects execution and ensures timely completion for the most demanding schedules.

4DSP engineers' design methodology is captured in the tools provided as part of the BSP. By using the same workflow offered to our customers, our engineers are able to regenerate reference designs for different solutions in a matter of hours when the traditional ways usually take weeks.

4DSP is proud to offer efficient development tools to our customer base and strives to make every project a success, on time and on budget.

Real time waveforms and spectrum with key signal characteristics

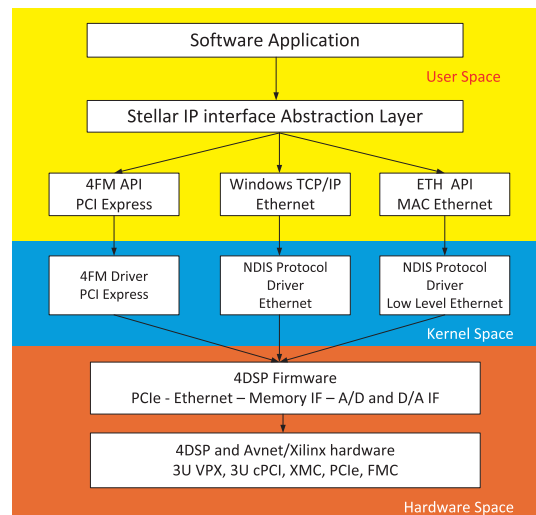


Support across multiple Operating Systems



A complete software/firmware/hardware infrastructure makes integration a breeze

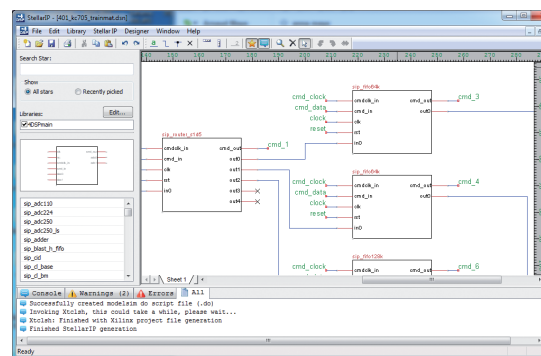
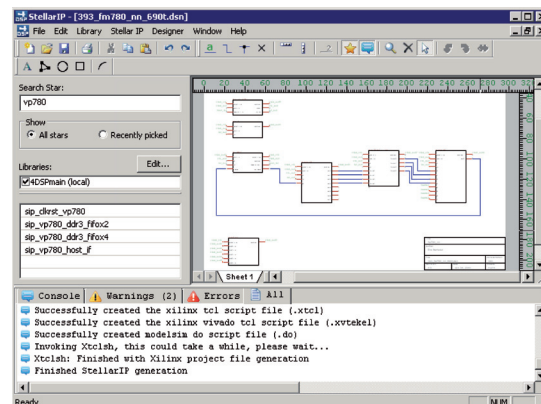
Embedded systems rely on several design layers that need to communicate efficiently and flawlessly. From software programming to hardware execution the API, drivers and FPGA firmware work together to offer flexibility while maintaining high performance. 4DSP's BSP provides users with ready to use examples that serve as the backbone of more complex applications. The BSP offers a ready to use framework that allows command distribution and fast data transfers between a Host computer and a firmware running in the FPGA. Out of the box low level control logic, A/D and D/A interfaces, memory controllers, FIFOs, scatter gather PCI Express DMA engines, API functions and reference code programs provide users with the opportunity to focus time and energy on their application development both at the software and FPGA firmware levels allowing for faster time to market. With support across several operating systems (Windows 7, Linux and VxWorks) and ready-to-be-used FPGA projects targeting Xilinx ISE and Vivado, 4DSP's Board Support Package embodies a complete design suite for the most advanced projects.



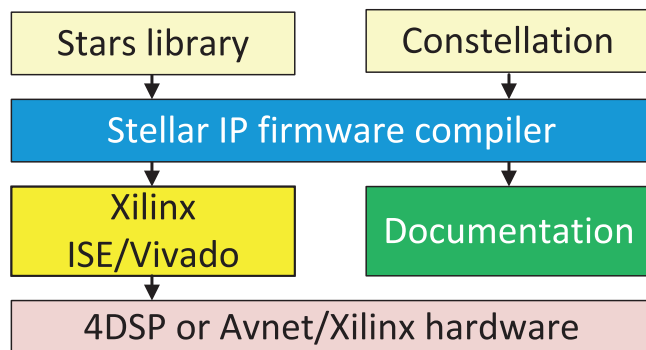
BSP layers

Stellar IP takes care of FPGA design - Period

Stellar IP simplifies FPGA firmware design by relying on proven and optimized IP cores. 4DSP reference designs leverage this extensive library of firmware to ensure that customers are up and running as soon as they receive their hardware. Based on a concept where each core is referred to as a star, the stars communicate via wormholes and where a collection of stars is named a constellation, Stellar IP allows FPGA firmware designers to easily add and connect their application specific code to an existing design. With ultra-fast PCIe DMA engines, advanced memory controllers, flexible A/D and D/A interfaces, Stellar IP based designs get any FPGA based hardware to yield to the maximum performance without compromise. Stellar IP offers a schematics entry tool to even simplify further the design process. Customers can add their own features (Digital Signal Processing core, Interfaces, logic, local memory, etc...) to the reference design provided as part of the BSP. All 4DSP cores are coded in VHDL while Stellar IP remains language agnostic. The Xilinx FPGA tools, ISE or Vivado, are supported by Stellar IP and projects are automatically created. On the host software side, users can easily access the address space for any of the cores present in the design, thus easily communicating with the hardware.



Stellar IP schematics entry



Stellar IP design flow