Sundance - 4G 4You!

eNews

June 2009

4G 4You

In the April issue of eNews we highlighted our latest 4G multiprocessing solution for LTE (Long Term Evolution) and our position one of the leading providers of development systems and production modules for 3G and now 4G technology (don't forget that we are also a pioneer of MIMO development).

To reinforce this message and to deliver more of our 4G roadmap, at the recent WiMAX Global Forum Congress we launched our new SMT703 WiMAX development system. This new WiMAX offer brings the processing power and re-programmability of very high density FPGAs and the modular flexibility of Sundance hardware to bear on next generation Fixed or Mobile wireless. Its performance, specification and capabilities are impressive!

For maximum flexibility and performance, the SMT703 is built around a user programmable FPGA architecture that features the latest Xilinx Virtex 5 FPGAs in the SXT, FXT or LXT variants. It is supported with two WiMAX RF transceivers that in turn are supported with a mixed signal front-end.

The Maxim WiMAX transceivers are IEEE802.16-2004 compliant and support OFDM up to 64-QAM. They operate at 2.3 - 2.7 GHz and integrate a power amplifier driver, receive/transmit mixer, low-noise amplifier, receive/transmit filters, synthesizer, VCO, receive gain control, and transmit power control. Each RF transceiver is coupled with the mixed-signal front end chip from Analog Devices that integrates two 12-bit ADCs (80MSPS) as well as two 12-bit DACs (200MSPS using interpolation), to provide analog and digital conversions.

For applications where increased processing logic is required or where the processing chain needs to be extended the SMT703 is supplied with High-Speed Bus and RocketIO Serial Link connectors to attach additional multiprocessing modules, or to interface to external signal generators or analyzers.

And if you need to accelerate your WiMAX design to market, tool support for our multiprocessor solutions lead the field. Our design ecosystem boasts an array of design solutions including Code Composer Studio from TI, 3L's Diamond, CoDeveloper from Impulse, RTW-EC and HDLCoder from The MathWorks™ and comprehensive VHDL and Verilog support from EDA vendors.

For more information on WiMAX, MIMO, LTE and the complete range of 4G Sundance solutions please get in touch with your nearest Sundance Office or visit www.sundance.com.

Introducing... Multiprocessor Interface Synthesis!

Creating tools that help the designer improve productivity is like walking a tight rope... it is a fine balancing act. On the one hand increasing design automation whilst on the other retaining designer control over critical elements of the design.

In the 3.2 release of the Diamond Multiprocessor Tool-Suite, we think our friends at 3L have got this balance just about right, and it's a big deal for Sundance customers. The 3.2 release sets a new benchmark in multiprocessor design. We've road-tested it on number of our modules and we like the new features, performance, capabilities and time saving efficiencies it delivers.

Diamond 3.2 automatically creates communications paths between processors on your Sundance hardware, it automatically generates simulation projects for HDL simulation and auto creates debug scripts for Code Composer Studio.

With Diamond 3.2, connections between attached processors on a Sundance platform can be handled automatically. Using the familiar Diamond IDE the designer places tasks, or self-contained blocks of code, onto the system processors and connects them with channels that do not require physical information. Diamond then manufactures the firmware needed for the interconnect, optimizes the design and creates the physical implementation.

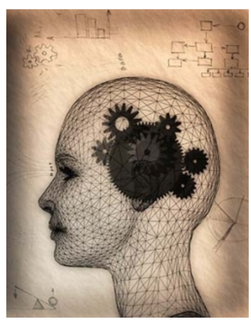
Integration with the TI design flow is better. For designers targeting TI's C6000 series, Diamond 3.2 automatically creates Code Composer Studio GEL scripts to allow easy debugging of multiple DSPs. You get 3L's latest TI DM642 Video Library that has faster code execution, improved internal memory utilization and more end-user design examples. If you're using TI C6455 DSP, the guys at 3L have bundled in a new and improved EDMA3 and sRIO drivers that deliver better communications performance.

And if that wasn't enough, to make the verification of your FPGA design that little bit easier, Diamond 3.2 is ISE10.1 ready and its HDL simulation capabilities have been improved with the automatic creation of simulation projects.

But don't just take our word for it, contact your local Sundance representative and get your hands on Diamond 3.2, you won't be disappointed.

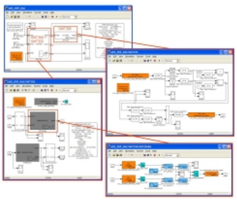
Sundance Bits and Bytes

IP Program Rolls-Out



Through the 2H08 and the 1H09 we announced to the market delivery elements of our IP roadmap via partnerships with specialist IP provider targeting DSP-FPGA multiprocessor systems.

- IP Specialist LogicDesign Solutions helped us to offer single-chip serial ATA II solutions for our 7-Series of Multiprocessor Modules.
- Working with Cadre Codesign our customers now have access to JPEG cores that are optimized for our DSP FPGA Multiprocessing Modules
- Our partnership with Dillon Engineering has made available benchmark FFT IP that outperforms any other industry solution
- 3L and DFCDesign combined their efforts to deliver the industry's first TCP/IP Stack that is totally optimized for multiprocessing systems As we enter 2H09 we are pleased to let you know that our IP roll-out, rolls on, with a raft of new cores and libraries to be announced. Keep a watching brief over the summer for news about a series of new, ultra-dense IP cores.



A Kick Start for MIMO and WiMAX

Inside our SMT6040 Simulink® Multi-DSP Multi-FPGA co-design and co-generation Toolbox we've added design examples for WiMAX and MIMO applications. The tool box and design examples complement our WiMAX and MIMO modular hardware solutions and help made model-based design just that little bit easier.

Coming Soon to a multiprocessor platform near you...

Interested in ***gigabit wireless*** networking? Developing next generation wireless products? Need ***60GHz wireless***? **Watch this space!**
