



Xilinx XtremeDSP Newsletter, May 2007

Xilinx Launches New Low-Cost XtremeDSP Portfolio

At the Embedded Systems Conference (ESC) Silicon Valley, Xilinx introduced the low-cost Spartan™-DSP series, significantly expanding our offering of XtremeDSP™ solutions and establishing a new price-performance-power triad for digital signal processing (DSP). With the addition of the new Spartan-DSP series, the XtremeDSP silicon portfolio offers DSP-optimized platforms with an array of devices that provide DSP engineers with the flexibility to choose the right mix of features to match application requirements and easily migrate designs between platforms. We have received great feedback from our early engagements with customers and the industry and are ready to expand our reach to tap a new market opportunity.

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Top Story

Find Out More About the Buzz Xilinx XtremeDSP Solutions and New Spartan-DSP Series are Creating Xilinx Launches Spartan-DSP Series

- [Parts available on line](#)
- [Learn more about and purchase one of the development platforms](#)
- [Register for the latest DSP On-demand Webcast](#)

Learn More About the XtremeDSP Portfolio Platform

- [Get more information about XtremeDSP](#)
- [Start designing with Spartan-3A DSP](#)

Review the Latest Spartan-3A DSP Technical Material

- [View the Spartan-3A DSP data sheets](#)
- [View the Spartan-3A DSP user guides](#)

DSP Related Information

Challenging Your DSP Worldview

The DSP design community has never been more challenged or more intrinsically valuable to high-growth industries. Therefore, there has never been a greater opportunity for massive and sustained success.

- [Read complete article](#)

Researching FPGA Implementations of Baseband MIMO Algorithms Using AccelDSP™

FPGAs offer an attractive set of hardware features for WiMAX systems that can be difficult for systems engineers with

little FPGA design experience to leverage. DSP oriented FPGAs such as the Xilinx Virtex-5 family offer up to 640 programmable DSP blocks capable of running at 550 MHz for a raw peak performance in excess of 350 GMACs.

- [Learn More](#)

The Evolving Role of FPGAs in DSP Applications — BDTI

This article contains selected highlights from BDTI's new report, *FPGAs for DSP, Second Edition*.

- [Read complete report](#)

XtremeDSP Collateral

New XtremeDSP SP Selection Guide

Make sure you download the new XtremeDSP brochure view the new XtremeDSP and Spartan-3A DSP portfolio solution.

- [Download now](#)

Latest XtremeDSP/Spartan-3A DSP Overview Brochure

Make sure you get the new XtremeDSP and Spartan3A DSP solution information by downloading the latest Selection Guide.

- [Download now](#)

Latest Edition of the Xilinx DSP Magazine

Make sure you peruse the latest Xilinx DSP Magazine with links to interesting and informative articles, educational opportunities and a list of technical information including XtremeDSP application notes.

- [View the latest edition now](#)

XtremeDSP Solutions for Wireless Communications

XtremeDSP Solutions for Wireless Communications

FPGA Boards and System Generator

Alpha Data FPGA Boards and Xilinx System Generator enables rapid algorithm exploration and prototyping of Multiple Antenna Wireless Communications Systems.

- [Learn more](#)

XtremeDSP Solution for Video Processing

Merging Virtex™-4 FX with DSP Video Dexterity

Merge the Virtex-4 FX's raw power with the **TMS320DM642's DSP video dexterity**, using a development-to-production system designed for compact but expandable video processing.

- [Learn more](#)

XtremeDSP Solutions for Digital Communications

New WCDMA/WIMAX DFE/TD-SDMA Development Platform Reference Designs

WCDMA DFE Reference design updated to support Virtex5 SXT.

Key features:

- 3 carrier DUC
- 3 carrier CFR with output PAPR down to 5.6dB
- 3 carrier DDC (with receive Diversity)
- Low Power and Low cost

- [Register now](#)

WiMAX DFE Reference Design Released to Support Virtex-4 and Virtex-5

Key features:

- 1 carrier DUC/DDC supporting 3.5/5/7 and 10MHz carriers for IEEE802.16-2004 and IEEE802.16-2005
- CFR supporting PAPR reduction of 1.67dB at an EVM of 2%
- AGC included
- [Register now](#)

Radio Development Environment Available Now Supporting WCDMA + CPRI and WiMAX + OBSAI

Key features:

- WCDMA, WiMAX, TD-SCDMA, CDMA2000 and 3GPP-LTE “ready”
- 2 Tx, 2 Rx and 2 DPD Rx
- Up to 100MHz DPD bandwidth
- 20MHz of Transmission Bandwidth
- Comes pre-integrated with CPRI + WCDMA or OBSAI + WiMAX
- Control GUI based over Ethernet or Telnet
- [Get more information](#)

TD-SCDMA DFE Reference Design Support for Up to Six Carriers

Key features:

- Support up to 6 carrier per antenna
- DUC
- DDC
- Small FPGA area
- [Register now](#)

Partner Programs

Industry Leaders Team-Up to Deliver X-Fest - a Worldwide Technical Seminar Series



X-Fest is brought to you by Xilinx, Avnet Electronics Marketing and a vast array of semiconductor industry leaders. X-Fest is a series of technical seminars offering practical how-to training for FPGA, DSP and Embedded system designers. The seminars begin in April and run across North America, Europe, Asia and Japan.

Each X-Fest site includes an all-day curriculum including:

- Keynote address: “The Future of the Xilinx System Solution”
- An array of 90-minute technical presentations and how-to demos
- Demonstrations and Exhibits
- [Learn more and register for a workshop in a city near you](#)

Online Technical Seminars

New Online Demo

Accelerating FPGA DSP Design with AccelDSP and System Generator for DSP

Key Features:

- Overview of the DSP Xilinx design tools including:

- AccelDSP with:
 - Floating point MATLAB algorithm
 - VHDL generation
 - Verilog model with a test bench
 - Floating point to fixed point conversion
 - System Generator for DSPTM based on Simulink
- [View Demo now](#)

XtremeDSP Software, Tools and General Purpose Solutions

See What is New in the Latest ISE 9.1 Software

ISE™ 9.1i, with *new* SmartCompile Technology, helps users achieve the industry's fastest FPGA performance in less time!

ISE 9.1i, the latest release of the industry-leading design tools from Xilinx, delivers an average 30% faster performance than available competing solutions. **New** SmartCompile Technology allows you to achieve timing closure faster and easier.

- [Evaluate ISE 9.1 and see what's new](#)

Evaluate the Latest Xilinx XtremeDSP Software Tools

Building optimal designs requires the latest DSP software whether you are an algorithm Developer, System Engineer or Hardware Engineer.

- [Evaluate System Generator for DSP 9.1.01 now](#)

The latest System Generator for DSP tool supports Xilinx 65nm Virtex-5 SXT and the new Spartan-3A DSP families **Don't miss the opportunity to get free online training from Xilinx for the latest version of System Generator for DSP**

- [Register now](#)

Evaluate the Latest AccelDSP Synthesis Tool

MATLAB is a language-based design tool for implementing high performance DSP systems!

AccelDSP Synthesis Tool is a high-level MATLAB language based tool for designing DSP blocks for Xilinx FPGAs. The tool automates floating-to-fixed-point conversion, generates synthesizable VHDL or Verilog, and creates a testbench for verification. You can also generate a fixed-point C++ model or System Generator block from a MATLAB algorithm.

AccelDSP Synthesis Tool is a key component of the Xilinx XtremeDSP solution that combines state-of-the-art FPGAs, design tools, intellectual property cores, and partnerships, as well as design and educational services.

- [Evaluate AccelDSP 9.1 now](#)

Take Advantage of the Xilinx *FREE* Online *Getting Started with AccelDSP* Training Class

The AccelDSP Synthesis Tool accelerates the migration of MATLAB algorithms into Xilinx FPGAs. This recorded e-learning training will provide a jump start for those who want to evaluate this flow.

- [Register now](#)

Get Started With the New XtremeDSP Development Boards and Starter Kits

Xilinx DSP development boards and starter kits provide the fastest path to implementing your systems or algorithms onto FPGAs.

Jump Start Your Low Cost High Performance Designs With a Spartan-3A DSP Development Board

The perfect platform for Spartan-3A DSP design development features the Spartan-3A DSP 3400 device complemented by a robust feature set that includes versatile and flexible expansion capabilities.

- [Buy online now](#)

Get Started With Virtex-5 SXT ML506 XtremeDSP Development Platform for High Performance Designs

Though economically priced, the Virtex-5 ML506 board is a feature-rich DSP and high speed serial development

platform utilizing the Virtex-5 DSP48E slices and RocketIO™ GTP transceivers.

- [Buy online now](#)

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