

February 2009

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## Monthly Spotlight

### [New Stratix IV GT, Arria II GX FPGAs Extend 40-nm Portfolio](#)

Stratix® IV GT FPGAs, the only FPGAs with 11.3-Gbps transceivers, and power- and cost-optimized Arria® II GX FPGAs are the newest entries to the market's full spectrum of 40-nm transceiver devices, joining Stratix IV GX FPGAs, now shipping, and low-risk HardCopy® IV GX ASICs.

### FPGAs, CPLDs & ASICs

#### [Webcast: Introducing Full Spectrum 40-nm Transceiver Portfolio](#)

Transceivers have become a key component in digital systems, driven by demand for higher bandwidth and data rates. In this 25-minute webcast, learn how Altera addresses these challenges with a full spectrum of transceiver solutions with speeds from 155 Mbps to 11.3 Gbps. View now!

#### [Using 10-Gbps Transceivers in 40G/100G Wireline Apps](#)

Targeted at wireline applications that provide multiservice provisioning platforms for MSPP, carrier, and data center services, Stratix IV GT FPGAs with 9.9–11.3-Gbps transceivers bring a new level of integration for IEEE 802.3ba-compliant 40- and 100-Gbps Ethernet MAC applications.

#### [Learn How 40-nm Transceiver Devices Meet Data Rate Needs](#)

Fast-evolving standards and increasing data rates make high-speed transceivers an important programmable logic component. Altera's FPGAs

and HardCopy ASICs with transceivers leverage 40-nm technology to meet data rate requirements and new and emerging standards. Read more today!

#### [Examine cost/performance trade-offs in high-speed serial links](#)

Dr. Eric Bogatin presents a Webinar series, "Practical Differential Pair Design," starting Feb. 25. The series explores cost/performance trade-offs of common problems in any high-speed serial link: losses, via discontinuities, mode conversion, and channel-to-channel cross-talk.

### Software, Intellectual Property & Development Kits

#### [Learn How Quartus II Software v9.0 Helps Finish Designs Faster](#)

The newest version of Quartus® software supports our new Arria II GX and Stratix IV GT FPGAs. The software also introduces SSN Analyzer for faster board design and ModelSim®-Altera® Starter Edition for faster verification. Learn about other new features from the link.

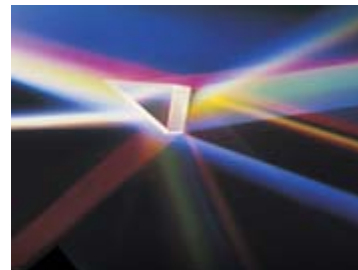
#### [Looking to Add a USB Host Controller to Your Design?](#)

SLS Corp., an Altera partner for USB intellectual property, has a new USB 2.0 host controller. The core supports a ULPI interface and includes demonstrations which enumerate USB devices and read from Mass Storage devices. Download and evaluate from SLS Corp. today.

### Technology & End Markets

#### [Find Out How Flexible FPGAs Enhance Motion Control Performance](#)

Motion control (or servo control) is widely used in industrial processes

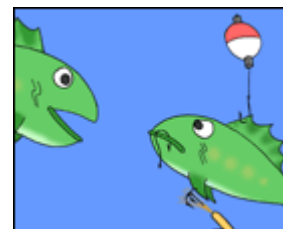
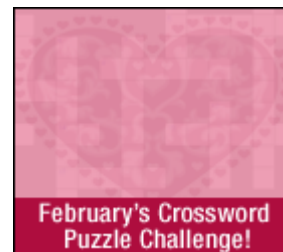


### Design Examples

[Zero-Bus Turnaround SRAM Controller](#)

[Compact Configuration System for Nios II Processor](#)

[Quartus II Design Space Explorer Custom Space](#)



[Click to enlarge](#)

such as production, assembly, packaging, robotics, CNC machine tools, and printing. Use an FPGA instead of a digital signal processing device or microcontroller for higher performance and greater flexibility.

### [Evaluate Motion Control Capabilities With New Development Kit](#)

The MotionFire Development Kit from Arrow Electronics includes a motor, power control module, Cyclone® III FPGA board, and a source code motor

control reference design--everything you need to evaluate motion control and industrial Ethernet. Learn more, and order your kit from Arrow.

### **Events & Training**

#### [See the Latest Embedded Technologies from Altera](#)

Nuremberg, Germany, March 3-5: See demonstrations of the latest in embedded systems technology for FPGA devices and the Nios® II processor at Embedded World 2009 at the Exhibition Centre Nuremberg. Meet with Altera in Hall 9, Booth 259.

#### [See Demos of New Transceiver Devices at IIC China](#)

Shenzhen, China, Feb. 26-27: Visit Altera at Booth 2K19 at IIC China at the Shenzhen Exhibition and Convention Centre, Hall 2. We will provide demonstrations and information about our transceiver device portfolio, end-market applications, and our new Stratix IV GX dev kit.

#### [Enhance Your Power Distribution Network Design Techniques](#)

Take Altera's new half-hour online course in power distribution network design for Stratix III and Stratix IV FPGAs and learn: common power distribution design challenges and solutions, PDN and other decoupling schemes, frequency domain target impedance method decoupling, and more.

### **Support & Literature**

#### [Learn More About 40-nm FPGAs Supporting SATA/SAS](#)

This paper provides an overview of Altera's solutions for SATA and SAS protocols, including examples of typical applications, FPGA hardware, and IP solutions and development platforms. Gain a fundamental understanding of these protocols and how Altera enables solution development.

#### [From the Forum: Programming External Memory Via FPGA Using JTAG](#)

Altera Forum user baldbloke asked how to program the external memory using JTAG. Read the comments and suggestions from other Forum users that helped answer his question, then post your own advice to gain Forum reputation points today!

#### [App Note: Learn Tips for Smooth Arria II GX Design Process](#)

Starting a design with the new Arria II GX device family? Read this application note to understand planning guidelines and learn tips to make your design process go smoothly. Try out the design checklist to make sure you've covered your bases. Review the app note today!

#### [De-Mystify Clock Domain Crossing and CDC Interface Verification](#)

Real Intent has released Meridian FPGA for Quartus II software to aid in verification of SOC designs implemented on Altera FPGAs. Read this white paper to better understand metastability, clock domain crossing challenges, and a CDC interface verification methodology.

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